Effective March 16, 2020, Governor Greg Abbott authorized the temporary suspension of certain statutory provisions of the Texas Open Meetings Act. This meeting of the City Council of the City of Midland is being held pursuant to such authorization and will limit face-to-face interactions for the purpose of slowing the spread of the coronavirus (COVID-19).

AGENDA FOR CITY COUNCIL MEETING
300 North Loraine
Midland, Texas
April 14, 2020 – 10:00 AM
Council Chamber - City Hall

The Midland City Council agenda is posted for public notice at least 72 hours prior to the Tuesday meetings. All requests to be placed on the Council agenda by the public must be submitted to the City Manager, in writing, at least one week before the Council meetings. Such written requests must be in sufficient detail to identify the subject matter as well as the contact person who will represent the matter before the Council. The City Council reserves the right to not consider matters over which the City has no jurisdiction.

Videoconference Information

Join Zoom Meeting
https://zoom.us/j/166868047?pwd=ZXVkTlh3bHpVbG56OEVJeGlYNEhFUT09

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OPENING ITEMS

1. Invocation – Mayor Patrick Payton

2. Pledge of Allegiance

CONSENT AGENDA

3. Consider a motion approving the following minutes:

   a. Regular Meeting of March 24, 2020

   b. Special Meeting of March 31, 2020

   c. Special Meeting of April 7, 2020

4. Consider a resolution ratifying and approving the emergency repair of a water main located on C Street between Louisiana Avenue and Cuthbert Avenue by Boler Equipment Service, Inc., for a total cost of $254,138.00; and approving $50,827.60 in contingency funds. (PURCHASING) (2020 - 071)

5. Consider a motion authorizing the City Manager or the City Manager's designee to advertise a request for bids for the Landfill Cells Five (5) and Six (6) Project. (PURCHASING) (041 - 2020)

6. Consider a resolution authorizing the sole-source purchase of fifty-three (53) electronic ticket writers for the Police Department from Tyler Technologies, Inc., for a total cost of $168,915.00. (PURCHASING) (2020 - 072)

7. Consider a resolution awarding a contract for the Various Traffic Signal Improvements Project to the sole bidder, Willis Electric Co., LP of Abilene, Texas, at a total cost of $1,008,397.50; appropriating funds; and authorizing payment. (PURCHASING) (2020 - 073)

8. Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate North, Terminal and South Apron Concrete Pavement Project. (AIRPORTS) (042 - 2020)

9. Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate Northwest Taxi Lane and Executive Apron Project. (AIRPORTS) (043 - 2020)

10. Consider a resolution authorizing legal fees related to oil and gas matters to be paid from the General Liability Fund (702730) Legal Fees (53410) budget account. (CITY ATTORNEY'S OFFICE) (2020 - 074)

11. Consider a resolution authorizing an operating certificate for Ridey Transportation Inc. dba Xpress Routes to operate a taxicab business; setting forth conditions accompanying the certificate; and establishing the terms of the certificate. (POLICE) (2020 - 075)

12. Consider a motion accepting a Fiscal Year 2019 grant award modification from the High Intensity Drug Trafficking Areas Program in the total amount of $53,552.00; and appropriating the amount of $53,552.00 from the General Fund (001) Unappropriated Fund Balance (35650) to the FY2019 HIDTA Grant Project (700224-005). (POLICE) (044 - 2020)

13. Consider a motion accepting a Fiscal Year 2020 grant award from the High Intensity Drug Trafficking Areas Program in the amount of $158,737.00; and appropriating the amount of $158,737.00 from the General Fund (001) Unappropriated Fund Balance (35650) to the FY2020 HIDTA Grant Project (700272). (POLICE) (045 - 2020)

14. Consider a motion authorizing the appropriation of $5,568.50 from the Police Technology and Equipment Fund (075) Unappropriated Fund Balance (35650) to the Minor Equipment / Tools (075110-52120) account; said funds being the proceeds from the sale of outdated service weapons and court-awarded firearms. (POLICE) (046 - 2020)

15. Consider a motion authorizing the execution of a Right-of-Way License between the City of Midland and Fasken Oil and Ranch, Ltd. regarding City-owned property described as Section 30, Block 39, Township 1 South, T&P RR Co. Survey, Midland County, Texas. (UTILITIES) (047 - 2020)

SECOND READINGS

16. Consider an ordinance on second reading establishing the initial zoning classification of the area indicated as being a 37.9539-acre tract of land out of Section 35, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas, as an MF-22, Multiple-Family Dwelling District; said tract being generally located on the west side of State Highway 158, approximately 2,372 feet north of State Highway 191; containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10064)

17. Consider an ordinance on second reading amending the Zoning District Map of the City of Midland to rezone Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas, from PD, Planned Development District for an Office Center to an Amended PD, Planned Development District for an Office Center (generally located at the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10065)

18. Consider an ordinance on second reading amending the Zoning District Map of the City of Midland to rezone Lot 9, Block 9, Greenwood Addition, Section 2, City and County of Midland, Texas, from C, Commercial District to SF-3, Single-Family Dwelling District (generally located on the east side of South Stonewall Street, approximately 173 feet south of East Indiana Avenue); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10066)

19. Consider an ordinance on second reading amending the Zoning District Map of the City of Midland to rezone Lot 7, Block 24, Greenwood Addition, Third, Fourth and Fifth Sections, City and County of Midland, Texas, from MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District (generally located at the northeast corner of the intersection of East New York Avenue and South Benton Street); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10068)

20. Consider an ordinance on second reading amending the zoning District map of the City of Midland to rezone Lots 15 and 16, Block 133, Southern Addition, City and County of Midland, Texas, from LI, Light Industrial District to SF-3, Single-Family Dwelling District (generally located on the east side of south Weatherford Street, approximately 86 feet north of East Washington Avenue); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10069)

21. Consider an ordinance on second reading amending the Zoning District Map of the City of Midland to rezone Lots 5A and 5B, Block 3, Westridge Park Addition, Section 14, City and County of Midland, Texas, from PD, Planned Development District for a Shopping Center to RR, Regional Retail District (generally located at the northwest corner of the intersection of Tradewinds Boulevard and Deauville Boulevard); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES)(First reading held on March 24, 2020)(10070)

22. Consider an ordinance on second reading of the City of Midland, Texas, amending the Tall City Tomorrow Comprehensive Plan as authorized by Chapter 213 of the Texas Local Government Code so as to revise the thoroughfare plan; providing a savings and severability clause; and providing an effective date of May 1, 2020. (ENGINEERING SERVICES)(First reading held on March 24, 2020)(10071)

PUBLIC HEARINGS

23. Hold a public hearing regarding the proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC for the drilling of the following oil and gas wells: Charger #H110WB; Charger #H115WA; Mustang #H145WA; Mustang #H150WB; Mustang #H155WA; and Mustang #H160WB; said wells being generally located between 862 feet and 2,050 feet west of Rankin Highway and between 590 feet and 620 feet north of Dayton Road. (DEVELOPMENT SERVICES) (048 - 2020)

24. Hold a public hearing regarding the proposed granting of an oil and gas well permit to Permian Deep Rock Oil Co., LLC for the drilling of the following oil and gas well: Charger #H125WA; said well being generally located 2,433 feet west of South Garfield Street and 320 feet north of West County Road 111. (DEVELOPMENT SERVICES) (049 – 2020)

25. Hold a public hearing regarding the proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. for the drilling of the following oil and gas wells: Bankhead 4-33 Unit 2A #253; Bankhead 4-33 Unit 2A #261; Bankhead 4-33 Unit 2A #271; Bankhead 4-33 Unit 2A #272; and Bankhead 4-33 Unit 2A #281; said wells being generally located between 590 feet and 591 feet north of West I-20 and between 1,179 feet and 1,279 feet east of South Midkiff Road. (DEVELOPMENT SERVICES) (050 – 2020)

26. Hold a public hearing and consider an ordinance vacating and abandoning a 0.2825-acre portion of alley right-of-way located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas (generally located on the north side of West Kansas Avenue, approximately 481 feet east of North Big Spring Street); adopting the appraisal by the City Manager of $24,608.00; and ordering recordation by the City Secretary. (DEVELOPMENT SERVICES) (10072)

27. Hold a public hearing and consider an ordinance amending the Zoning District Map of the City of Midland to rezone Lots 3 and 4, Block 2, Overstreet Addition, Section 2, City and County of Midland, Texas, from LI, Light Industrial District to C, Commercial District (generally located at the southwest corner of the intersection of Garden City Highway and King Street); containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two thousand dollars ($2,000.00); and ordering publication. (DEVELOPMENT SERVICES) (10073)

MISCELLANEOUS

28. Consider a motion making appointments to various Boards and Commissions.

EXECUTIVE SESSION

29. Pursuant to Texas Government Code §551.101, the Council will hold an Executive Session which is closed to the public to discuss the following matters as permitted under the following Texas Government Code Sections:

    a. Section 551.072, Deliberation Regarding Real Property

        a.1. Discuss the purchase, exchange, lease, or value of real property described as an 11.72-acre tract located in Section 13, Block 39, T-1-S, T&P RR Co. Survey, City and County of Midland, Texas.

Respectfully Submitted,

Courtney B. Sharp
City Manager

MEETING ASSISTANCE INFORMATION: The Midland City Hall and Council Chamber are wheelchair accessible. If you need special assistance to participate in this meeting, please contact the City Secretary's Office at (432) 685-7430. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

MIDLAND CITY COUNCIL
MINUTES
March 24, 2020

REGULAR SESSION
The City Council convened in regular session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m., March 24, 2020.

Council Members present: Mayor Patrick Payton, Mayor Pro Tem Spencer Robnett (At-Large), Council Member Michael Trost (At-Large), Council Member John Norman (District 2), Council Member Jack Ladd (District 3), and Council Member Lori Blong (District 4).

Council Members absent: Council Member Scott Dufford (District 1).

Staff members present at the annex table: City Attorney John Ohnemiller, Assistant City Manager Robert Patrick and Assistant City Manager Morris Williams.

The Agenda Items were heard in the following order: 1-3, 31-32, 36, 39, 4-5, 7-8, 11-17, 19-20, 22-25, 6, 9-10, 21, 18, 21, 26-30, 33-35, 37-38, 40.

Mayor Payton called the meeting to order at 10:00 a.m.

OPENING ITEMS

1. Invocation – Mayor Patrick Payton

2. Pledge of Allegiance

PRESENTATIONS

3. Presentation of special events, organizations, individuals, or periods of time including, but not limited to: None.

CONSENT AGENDA

Council Member Trost noted he spoke with the City Manager's Office about the items that have a lot of money attached to them. He found that they will be paid over a period, the whole amounts are not required to be paid up front.

Council Member Robnett moved to approve Consent Agenda items 4 - 25 excluding 6, 9, 10, 18, 21; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

4. Approved a motion approving the following minutes:

   a. Regular City Council Meeting of February 25, 2020

   b. Regular City Council Meeting of March 9, 2020

5. Approved a resolution approving the purchase of a Transit 350 Cargo Van with sewer equipment from Chastang Enterprises - Houston, LLC. dba Chastang Ford through

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Buyboard contract #601-19 for a total cost of $248,172.00 for the General Services Department. (PURCHASING)

RESOLUTION NO. 2020 - 056

RESOLUTION APPROVING THE PURCHASE OF A TRANSIT 350 CARGO VAN WITH ASSOCIATED SEWER EQUIPMENT FROM CHASTANG ENTERPRISES - HOUSTON, LLC, AT A TOTAL COST OF $248,172.00 THROUGH BUYBOARD

7. Approved a resolution awarding a master agreement for two (2) years for plastic meter box lids to Ferguson Waterworks DBA Ferguson Enterprise for the Municipal Warehouse Division. (PURCHASING)

RESOLUTION NO. 2020 - 058

RESOLUTION AWARDING A TWO-YEAR MASTER AGREEMENT FOR THE PURCHASE OF PLASTIC METER BOX LIDS TO FERGUSON WATERWORKS AT A TOTAL ANNUAL COST OF $108,360.00

8. Approved a resolution awarding the negotiation and execution of a master real estate broker services agreement for the sale of various City-owned properties to Real Estate One - Bill Scott, of Midland, Texas for the General Services Department. (PURCHASING)

RESOLUTION NO. 2020 - 059

RESOLUTION AUTHORIZING THE EXECUTION OF A MASTER REAL ESTATE BROKER SERVICES AGREEMENT FOR THE SALE OF VARIOUS CITY-OWNED REAL PROPERTIES TO REAL ESTATE ONE - BILL SCOTT, OF MIDLAND, TEXAS

11. Approved a resolution awarding a professional services agreement for Construction Material Testing Services for the Engineering Department. (PURCHASING)

RESOLUTION NO. 2020 - 062

RESOLUTION APPROVING THE SELECTION OF PAVETEX ENGINEERING, LLC AND BEYOND ENGINEERING & TESTING, LLC TO ASSIST CITY DEPARTMENTS BY PROVIDING PROFESSIONAL ENGINEERING SERVICES RELATED TO CONSTRUCTION MATERIALS TESTING AND SERVICES PROVIDED IN CONNECTION THEREWITH ON AN AS-NEEDED BASIS; AUTHORIZING THE NEGOTIATION AND EXECUTION OF A PROFESSIONAL SERVICES AGREEMENT WITH EACH FIRM; PROVIDING THAT EACH AGREEMENT SHALL BE FOR A TERM NOT TO EXCEED THREE YEARS; AUTHORIZING THE NEGOTIATION AND EXECUTION OF TASK ORDERS IN ACCORDANCE WITH SUCH AGREEMENTS; PROVIDING THAT THE PAYMENT FOR EACH TASK ORDER SHALL NOT EXCEED $150,000.00; PROVIDING THAT THE TOTAL COST TO THE CITY FOR ALL TASK ORDERS SHALL NOT EXCEED $300,000.00 PER AGREEMENT PER YEAR; AND AUTHORIZING PAYMENT

12. Approved a motion authorizing the execution of a professional services agreement with HDR Engineering, Inc., to provide evaluation and engineering services for the Primary Effluent Holding Ponds Project for the Utilities Department at a total cost not to exceed $169,530.00. (PURCHASING) (034-2020)

13. Approved a motion authorizing the execution of a professional services agreement with Parkhill, Smith & Cooper, Inc. (PSC), to provide design and engineering services for the

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Briarwood Water Main Relocation Project for the Utilities Department at a total cost not to exceed $121,611.00. (PURCHASING) (035-2020)

14. Approved a resolution amending the Agreement for Employee Health Care Center with Midland Memorial Hospital. (ADMINISTRATIVE SERVICES)

RESOLUTION NO. 2020 - 063

RESOLUTION AUTHORIZING THE EXECUTION OF THE FOURTH AMENDMENT TO THE INTERLOCAL MANAGEMENT SERVICES AGREEMENT BETWEEN THE CITY OF MIDLAND, TEXAS AND MIDLAND COUNTY HOSPITAL DISTRICT, DOING BUSINESS AS MIDLAND MEMORIAL HOSPITAL, FOR CERTAIN MEDICAL AND WELL-BEING SERVICES; SAID AMENDMENT ADJUSTING THE ANNUAL FEE AND PROVIDING FOR THE HOSTING OF INFLUENZA CLINICS; AND AUTHORIZING PAYMENT

15. Approved a motion to authorize the Director of Airports to advertise a request for proposals for janitorial services at the Midland International Air & Space Port and negotiate an agreement for said services; provided, however, that said agreement shall not become effective until approved by the City Council. (AIRPORTS) (036-2020)

16. Approved a motion authorizing the Director of Airports to negotiate and execute an amendment to the Lease Agreement with Signature Flight Support regarding certain City-owned real property described as a 0.411-acre tract out of Lot 1A, Block 13, Midland International Airport Industrial Park, City of Midland, Midland County, Texas; said amendment to provide for the expansion of the leased premises. (AIRPORTS) (037-2020)

17. Approved a resolution approving and adopting amended bylaws of the Midland Development Corporation. (CITY MANAGER'S OFFICE)

RESOLUTION NO. 2020 - 064

RESOLUTION APPROVING THE AMENDED BYLAWS OF THE MIDLAND DEVELOPMENT CORPORATION

19. Approved a motion authorizing the execution of an amendment to that certain Sponsorship License Agreement for the Baseball Stadium at the Scharbauer Sports Complex with American Momentum Bank (formerly known as Security Bank); said amendment shall provide for American Momentum Bank's assumption of Security Bank's rights, covenants and obligations under the Sponsorship License Agreement. (COMMUNITY SERVICES) (038-2020)

20. Approved a resolution approving the issuance of permits to Parsley Energy Operations, LLC, for the drilling of oil and gas wells, being Hogan 1-25-A-2601H, Massey Unit 2415H, Massey Unit 2614H, and Massey A Unit 2611H (said wells are generally located between 755 feet and 845 feet north of East Loop 250 North and between 389 and 390 feet east of North Lamesa Road). (DEVELOPMENT SERVICES)

RESOLUTION NO. 2020 - 066

RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PARSLEY ENERGY OPERATIONS, LLC ("OPERATOR") TO DRILL FOUR OIL AND GAS WELLS LOCATED IN SECTION 1, BLOCK X, H.P. HILLIARD SURVEY, CITY OF MIDLAND,

MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 755 FEET AND 845 FEET NORTH OF EAST LOOP 250 NORTH AND BETWEEN 389 AND 390 FEET EAST OF NORTH LAMESA ROAD); AND PROVIDING THAT SAID PERMITS DO NOT REQUIRE A NEW ROAD REPAIR AGREEMENT BUT SHALL BE CONSOLIDATED UNDER AN EXISTING ROAD REPAIR AGREEMENT

22. Approved a resolution modifying the restrictive covenants of Lots 12 through 22, Block 26, Crestview Addition, City and County of Midland Texas. (DEVELOPMENT SERVICES)

RESOLUTION NO. 2020 - 068

RESOLUTION APPROVING A MODIFICATION OF RESTRICTIVE COVENANTS APPLICABLE TO LOTS 12 THROUGH 22, BLOCK 26, CRESTVIEW ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS

23. Approved a resolution authorizing the City of Midland to submit a grant application for the Fiscal Year 2021 Edward Byrne Memorial Justice Assistance Grant Program through the Office of the Governor of Texas Criminal Justice Division. (POLICE)

RESOLUTION NO. 2020 - 069

RESOLUTION AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE OFFICE OF THE GOVERNOR, TEXAS CRIMINAL JUSTICE DIVISION, FOR FISCAL YEAR 2021 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM; SAID GRANT WILL BE USED TO PURCHASE THREE (3) NARCOTICS ANALYZERS AND EIGHT (8) NIGHT-VISION BINOCULARS FOR THE POLICE DEPARTMENT

24. Approved a resolution to accept the Fiscal Year 2019 grant award in the amount of $162,720 from the Southwest Border High Intensity Drug Trafficking Area (HIDTA) program. (POLICE)

RESOLUTION NO. 2020 - 070

RESOLUTION ACCEPTING A FISCAL YEAR 2019 GRANT AWARD FROM THE SOUTHWEST BORDER HIGH INTENSITY DRUG TRAFFICKING AREAS PROGRAM IN THE AMOUNT OF $162,720.00; SAID GRANT WILL BE USED TO ENHANCE AND COORDINATE DRUG CONTROL EFFORTS AMONG FEDERAL, STATE, AND LOCAL LAW ENFORCEMENT AGENCIES; AND APPROPRIATING FUNDS

25. Approved a motion authorizing the execution of an amendment to the right-of-way license between the City of Midland and Endeavor Energy Resources, L.P., regarding City-owned property described as Sections 4, 5, 9 and 10, Block 38, Township 2 South, T&P RR Co. Survey, Midland County, Texas. (UTILITIES) (039-2020)

The following items were pulled from Consent Agenda and considered individually.

6. Consider a resolution authorizing the sale of 101 East Florida Avenue dba Flash Tax building and legally described as Block 176, Lots 13 thru 18, Southern Addition a 0.482 acre tract, City of Midland, Midland County, Texas for the General Services Department. (PURCHASING)

RESOLUTION NO. 2020 - 057

RESOLUTION AUTHORIZING THE CONVEYANCE OF CERTAIN CITY-OWNED REAL PROPERTY TO MIDLAND VISIONS 2000; SAID REAL PROPERTY

DESCRIBED AS LOTS 13-18, BLOCK 176, SOUTHERN ADDITION, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY DESCRIBED AS 101 EAST FLORIDA AVENUE); AUTHORIZING THE CITY MANAGER TO NEGOTIATE, EXECUTE, AND FILE ALL AGREEMENTS AND DOCUMENTS NECESSARY FOR THE CONVEYANCE OF SAID PROPERTY; AND ORDERING THE CITY SECRETARY TO RECORD, OR ENSURE THAT THE TITLE COMPANY RECORDS, ALL INSTRUMENTS OF CONVEYANCE

Council Member Ladd asked if this was the best time to be selling property as property values have lowered. City Attorney John Ohnemiller clarified that bids were received on February 12. Purchasing Manager Erika Munoz noted it was being sold to a non-profit organization for their offices.

Council Member Ladd moved to adopt Resolution No. 2020 - 057; seconded by Council Member Trost. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

9. Consider a resolution awarding a contract for the Fiscal Year 2020 Slurry Seal Project for the Transportation Division. (PURCHASING)

RESOLUTION NO. 2020 - 060

RESOLUTION AWARDING A CONTRACT FOR THE FISCAL YEAR 2020 SLURRY SEAL PROJECT TO INTERMOUNTAIN SLURRY SEAL, INC. OF NORTH SALT LAKE, UTAH, AT A TOTAL COST OF $1,575,302.72; AND AUTHORIZING PAYMENT

Council Member Robnett questioned the immediate necessity of this project especially since it only received a single bid and asked if this was something that could wait. Purchasing Manager Erika Martinez reported the sole bidder has been the same sole bidder for the past three years. Assistant City Manager Robert Patrick noted the bid was lower than projected and suggested moving forward.

Council Member Ladd did not disagree but wondered if this would save money in the long run or hurt us because we didn't do it. Assistant City Manager Robert Patrick noted that prolonging items can bring about decay and nobody knows if it is rebid, if it would come in cheaper.

Council Member Trost asked what a 3-month delay would do. Director of Engineering Services Jose Ortiz reported the challenge is to ensure it is applied during the warmer months otherwise you miss your opportunity for a year. Delaying for a couple of months would not be an issue. Council Member Trost cautioned against delaying noting items were delayed by previous Council and the projects came in at a higher rate. He suggested not delaying if it can be helped.

Mayor Payton suggested deferring for 30-days and then go back out to rebid.

Council Member Robnett moved to adopt Resolution No. 2020 - 060; seconded by Council Member Trost. The motion failed by the following vote: AYE: None. NAY: Blong, Trost, Robnett, Payton, Ladd, Norman. ABSTAIN: None. ABSENT: Dufford.

City Attorney John Ohnemiller noted all bids would be rejected and rebid.

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10. Consider a resolution awarding a contract to the sole bidder, Willis Electric Company, LP for the Various Traffic Signal Improvements Project for a total cost of $1,008,397.50 for the Traffic Operations Division. (PURCHASING)

RESOLUTION NO. 2020 - 061

RESOLUTION AWARDING A CONTRACT FOR THE VARIOUS TRAFFIC SIGNAL IMPROVEMENTS PROJECT TO THE SOLE BIDDER, WILLIS ELECTRIC CO., LP OF ABILENE, TEXAS, AT A TOTAL COST OF $1,008,397.50; APPROPRIATING FUNDS; AND AUTHORIZING PAYMENT

Council Member Robnett moved to adopt Resolution No. 2020 - 061; seconded by Council Member Ladd. The motion failed by the following vote: AYE: None. NAY: Blong, Trost, Robnett, Payton, Ladd, Norman. ABSTAIN: None. ABSENT: Dufford.

City Attorney John Ohnemiller noted all bids would be rejected and rebid.

18. Consider a resolution ratifying and approving Mayor Patrick Payton's Order Declaring a Local State of Disaster for the City of Midland. (CITY MANAGER'S OFFICE)

RESOLUTION NO. 2020 - 065

RESOLUTION RATIFYING AND APPROVING MAYOR PATRICK N. PAYTON'S ORDER DECLARING A LOCAL STATE OF DISASTER FOR THE CITY OF MIDLAND, TEXAS; AND CONSENTING TO THE CONTINUATION OF SAID DECLARATION

Mayor Payton noted that City Attorney Ohnemiller is handing out a revised resolution that replaces his original order that includes everything in the Governor's order. It does not include an extensive list of exceptions as many other cities have put in place.

When asked if the Governor's order were to change tomorrow, would this new resolution change also, City Attorney John Ohnemiller reported the resolution language makes it clear that if the Governor modifies the existing order, then subject order would be modified as well. Currently the Governor's order was through April 3rd and the Mayor's authority will stay in place until terminated by the Council or the Mayor.

Discussion ensued about whether the Council should be stricter than the Governor's order and what those restrictions might include. The difficulty in enforcing restrictions was discussed. Mayor Payton noted that he has asked the Chamber of Commerce to reach out to stores to be more compliant with the Governor's order and has found the stores working to be compliant.

Council Member Trost suggested we go further and reach out to help small businesses and see what can be done to help them.

Council Member Ladd moved to amend the motion to have big box retailers self-regulate by limiting customers to no more than 100 at one time. The motion failed for lack of a second.

Council Member Ladd moved to amend the motion by mandating if a person is found to have been diagnosed with COVID-19 then all family members should also be required to shelter in place for 14-days to isolate themselves seconded by Council Member Trost. The motion failed by the following vote: AYE: Trost, Ladd. NAY: Blong, Robnett, Payton, Norman. ABSTAIN: None. ABSENT: Dufford.

Council Member Robnett moved to adopt Resolution No. 2020 - 065 including Governor's order for the City of Midland; seconded by Council Member Trost. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

Council Member Trost asked about the future of small businesses. Mayor Payton asked staff to put together a list of suggestions.

21. Consider a resolution granting a variance to Ordinance 8769 (January 1, 2010 Oil and Gas Well Drilling Ordinance), generally located at 4700 Trobaugh Boulevard, approximately 700 feet north of Briarwood Avenue and 510 feet east of Trobaugh Boulevard, by permitting construction of residential buildings where no portion of any structure is closer than 450 feet of an existing oil and gas well (Pecan Acres #22c #1). (DEVELOPMENT SERVICES)

RESOLUTION NO. 2020 - 067

RESOLUTION GRANTING A VARIANCE FOR LOT 7, BLOCK 1, KALPOWER ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF TROBAUGH BOULEVARD, APPROXIMATELY 700 FEET NORTH OF BRIARWOOD AVENUE), BY PERMITTING CONSTRUCTION OF A RESIDENCE AND ACCESSORY STRUCTURES WHERE NO PORTION OF ANY STRUCTURE IS CLOSER THAN 450 FEET OF AN OIL AND GAS WELL; AND AUTHORIZING ISSUANCE OF BUILDING PERMITS

Council Member Robnett noted he did not see an objection to the variance from the operator and suggested getting a letter on file. Development Service Director Chuck Harrington reported the homeowner got a verbal agreement from the operator but nothing in writing. City Attorney John Ohnemiller noted it has happened in the past that legal counsel does not want them to put it in writing.

Oil & Gas Compliance Officer Ron Jenkins reported they typically try to have letter from the operator. He spoke with Callon and heard that they do not intend to protest.

Council Member Robnett moved to adopt Resolution No. 2020 - 067; seconded by Council Member Trost. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

SECOND READINGS

26. Consider an ordinance on second reading on a request by Sara Bradshaw, for a zone change from PD, Planned District for an Office Center to O-1, Office District, (generally located on the southeast corner of the intersection of Andrews Highway and Tarleton Street). (DEVELOPMENT SERVICES) (First reading held on February 25, 2020)

ORDINANCE NO. 10058

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 3 AND 4, BLOCK 6, LILLY HEIGHTS ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER TO O-1, OFFICE DISTRICT (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF ANDREWS HIGHWAY AND TARLETON STREET); CONTAINING A CUMULATIVE CLAUSE;

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CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance No. 10058.

Council Member Robnett moved to approve the second and final reading of Ordinance No. 10058 in accordance with the Charter of the City of Midland; seconded by Council Member Ladd. The motion carried by the following vote: AYE: Blong, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Trost, Dufford.

27. Consider an ordinance on second reading on a request by Western International (BGC Midland DNTN Land Acquisition, LLC) for a vacation of the 0.496-acre portion of West Indiana Avenue right-of-way, generally located approximately 380 feet south of West Missouri Avenue between South Marienfeld Street and South Big Spring Street. (DEVELOPMENT SERVICES) (First reading held on February 25, 2020)

ORDINANCE NO. 10059

AN ORDINANCE VACATING AND ABANDONING A 0.496-ACRE PORTION OF WEST INDIANA AVENUE RIGHT-OF-WAY LOCATED ADJACENT TO BLOCKS 88 AND 93, ORIGINAL TOWN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED APPROXIMATELY 380 FEET SOUTH OF WEST MISSOURI AVENUE, BETWEEN SOUTH MARIENFELD STREET AND SOUTH BIG SPRING STREET); ADOPTING THE APPRAISAL BY THE CITY MANAGER OF $43,212.00; AND ORDERING RECORDATION BY THE CITY SECRETARY

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10059.

Council Member Robnett moved to approve the second and final reading of Ordinance No. 10059 in accordance with the Charter of the City of Midland; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Trost, Dufford.

28. Consider an ordinance on second reading on a request by Elsa Marquez for a zone change from a MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District generally located on the west side of North Tyler Street, approximately 100 feet south of East Texas Avenue. (DEVELOPMENT SERVICES) (First reading held on February 25, 2020)

ORDINANCE NO. 10060

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 3, LESS THE SOUTH 10 FEET, BLOCK 26, MOODY ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE WEST SIDE OF NORTH TYLER STREET, APPROXIMATELY 100 FEET SOUTH OF EAST TEXAS AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10060.

DRAFT

Council Member Robnett moved to approve the second and final reading of Ordinance No. 10060 in accordance with the Charter of the City of Midland; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Trost, Dufford.

29. Consider an ordinance on second reading amending Title II, "Commissions and Boards," Chapter 10, "Animal Control Advisory Commission," Section 2, "Membership," so as to increase the number of commission members to seven (7). (COMMUNITY SERVICES) (First reading held on February 25, 2020)

ORDINANCE NO. 10061

AN ORDINANCE AMENDING TITLE II, "COMMISSIONS AND BOARDS," CHAPTER 10, "ANIMAL CONTROL ADVISORY COMMISSION," SECTION 2, "MEMBERSHIP," OF THE CITY CODE OF MIDLAND, TEXAS, SO AS TO INCREASE THE NUMBER OF COMMISSION MEMBERS TO SEVEN (7); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10061.

Council Member Ladd moved to approve the second and final reading of Ordinance No. 10061 in accordance with the Charter of the City of Midland; seconded by Council Member Norman. The motion carried by the following vote: AYE: Blong, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: Trost. ABSENT: Dufford.

30. Consider an ordinance on second reading appointing the City of Midland Municipal Court Presiding Judge effective March 24, 2020. (ADMINISTRATIVE SERVICES) (First reading held on March 9, 2020)

ORDINANCE NO. 10063

AN ORDINANCE APPOINTING A NEW CITY OF MIDLAND MUNICIPAL COURT PRESIDING JUDGE EFFECTIVE MARCH 24, 2020; AND AUTHORIZING THE MAYOR TO EXECUTE AN EMPLOYMENT AGREEMENT WITH THE NEW PRESIDING JUDGE

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10063.

Council Member Ladd moved to approve the second and final reading of Ordinance No. 10063 in accordance with the Charter of the City of Midland; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

PUBLIC HEARINGS

31. Hold a public hearing and consider an ordinance on a request by Cumberland & Western Resources, LLC, for the initial zoning of a 37.9539 acre tract of land generally located on the west side of State Highway 158, approximately 2,372 feet north of State Highway 191 - Extraterritorial Jurisdiction. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10064

AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 37.9539-ACRE TRACT OF LAND OUT OF SECTION

DRAFT

35, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN MF-22, MULTIPLE-FAMILY DWELLING DISTRICT; SAID TRACT BEING GENERALLY LOCATED ON THE WEST SIDE OF STATE HIGHWAY 158, APPROXIMATELY 2,372 FEET NORTH OF STATE HIGHWAY 191; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10064.

Mayor Payton opened the public hearing at 10:04 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Trost moved approval of the first of two readings of Ordinance No. 10064 in accordance with the Charter of the City of Midland; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

32. Hold a public hearing and consider an ordinance on a request by Cornerstone Funding, LLC for a Zone Change from PD, Planned District for an Office Center to an Amended PD, Planned Development District for an Office Center generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10065

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1A, BLOCK 2, GRASSLAND ESTATES WEST, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER TO AN AMENDED PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HOMESTEAD BOULEVARD AND HEREFORD BOULEVARD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10065.

Mayor Payton opened the public hearing at 10:05 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Robnett moved approval of the first of two readings of Ordinance No. 10065 in accordance with the Charter of the City of Midland; seconded by Council Member Ladd. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

33. Hold a public hearing and consider an ordinance on a request by Midland Community Development Corporation for a Zone Change from C, Commercial District, to SF-3, Single Family Dwelling District, generally located on the east side of South Stonewall Street, approximately 173 feet south of East Indiana Avenue. (DEVELOPMENT SERVICES)

DRAFT

ORDINANCE NO. 10066

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 9, BLOCK 9, GREENWOOD ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM C, COMMERCIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF SOUTH STONEWALL STREET, APPROXIMATELY 173 FEET SOUTH OF EAST INDIANA AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10066.

Mayor Payton opened the public hearing at 11:24 a.m.

David Diaz, Midland Community Development Corporation, reported they received donated land and are making it available to someone here in town. They have completed 150 houses and two apartment complexes with the City's involvement. They have generated over $5 million worth of taxable real estate. He wanted to share this because in executive session MCDC has their name in the hat. As a non-profit they need the City's partnership to be able to continue to develop affordable housing.

There being no one else wishing to speak, the public hearing was closed at 11:26 a.m.

Council Member Robnett moved approval of the first of two readings of Ordinance No. 10066 in accordance with the Charter of the City of Midland; seconded by Council Member Ladd. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

34. Hold a public hearing and consider an ordinance on a request by 87th Street Partners, LLC, for the initial zoning of a 64.52-acre tract of land generally located approximately 733 feet west of the intersection of Tradewinds Boulevard and Thomason Drive - Extraterritorial Jurisdiction. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10067

AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 64.52-ACRE TRACT OF LAND OUT OF SECTION 48, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN MF-22, MULTIPLE-FAMILY DWELLING DISTRICT; SAID TRACT BEING GENERALLY LOCATED APPROXIMATELY 733 FEET WEST OF THE INTERSECTION OF TRADEWINDS BOULEVARD AND THOMASON DRIVE; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10067.

Mayor Payton opened the public hearing at 11:27 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Trost moved approval of the first of two readings of Ordinance No. 10067 in accordance with the Charter of the City of Midland; seconded by Council

DRAFT

Member Ladd. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

35. Hold a public hearing and consider an ordinance on a request by Edward Martinez for a zone change from a MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District generally located on the northeast corner of the intersection of East New York Avenue and South Benton Street. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10068

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 7, BLOCK 24, GREENWOOD ADDITION, THIRD, FOURTH AND FIFTH SECTIONS, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF EAST NEW YORK AVENUE AND SOUTH BENTON STREET); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10068.

Mayor Payton opened the public hearing at 11:28 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Robnett moved approval of the first of two readings of Ordinance No. 10068 in accordance with the Charter of the City of Midland; seconded by Council Member Ladd. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

36. Hold a public hearing and consider an ordinance on a request by Joe Dominguez, for a Zone Change from a LI, Light Industrial, to a SF-3, Single Family Dwelling, generally located on the east side of South Weatherford Drive, approximately 866 feet southwest of East Industrial Drive. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10069

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 15 AND 16, BLOCK 133, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM LI, LIGHT INDUSTRIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF SOUTH WEATHERFORD STREET, APPROXIMATELY 86 FEET NORTH OF EAST WASHINGTON AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10069.

Mayor Payton opened the public hearing at 10:06 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Ladd moved approval of the first of two readings of Ordinance No. 10069 in accordance with the Charter of the City of Midland; seconded by Council

DRAFT

Member Robnett. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

37. Hold a public hearing and consider an ordinance on a request by Irma Ogle for a zone change from PD, Planned District for a Shopping Center, to RR, Regional Retail District, generally located on the northwest corner of the intersection of Tradewinds Boulevard and Deauville Boulevard. (DEVELOPMENT SERVICES)

ORDINANCE NO. 10070

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 5A AND 5B, BLOCK 3, WESTRIDGE PARK ADDITION, SECTION 14, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF TRADEWINDS BOULEVARD AND DEAUVILLE BOULEVARD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10070.

Mayor Payton opened the public hearing at 11:29 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Ladd moved approval of the first of two readings of Ordinance No. 10070 in accordance with the Charter of the City of Midland; seconded by Council Member Blong. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

38. Hold a public hearing and consider an ordinance of the City of Midland, Texas, amending the Tall City Tomorrow Comprehensive Plan as authorized by Chapter 213 of the Texas Local Government Code to revise the thoroughfare plan. (ENGINEERING SERVICES)

ORDINANCE NO. 10071

AN ORDINANCE OF THE CITY OF MIDLAND, TEXAS, AMENDING THE TALL CITY TOMORROW COMPREHENSIVE PLAN AS AUTHORIZED BY CHAPTER 213 OF THE TEXAS LOCAL GOVERNMENT CODE SO AS TO REVISE THE THOROUGHFARE PLAN; PROVIDING A SAVINGS AND SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE OF MAY 1, 2020

Deputy City Secretary SueAnn Reyes read the caption of Ordinance 10071.

Mayor Payton opened the public hearing at 11:30 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Council Member Robnett moved approval of the first of two readings of Ordinance No. 10071 in accordance with the Charter of the City of Midland; seconded by Council Member Trost. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

DRAFT

MISCELLANEOUS

39. Consider a motion appealing the Building Official's denial of a sign permit application by Ginamarie Soto, generally located on the northwest corner of the intersection of North Midland Drive and West Loop 250 North. (DEVELOPMENT SERVICES)

Ginamarie Soto, 6004 Medina Drive, reported this a franchise of The Little Gym and they were following corporate guidelines for signage. Their contractor did not get a permit and the signs were put up without knowledge they needed a permit.

Development Services Director Chuck Harrington reported that temporary signs are intended for sales and were never intended to be permanent. If they are permanent, they are supposed to be included in the total count for the building. They are allowed 99.3 feet and their total is 165.1 feet. They were told the signs were to protect the mats from the sun. From staff perspective this is not a hardship as there are other ways to protect the interior of the building such as tinting the windows. The signage on the window is what is exceeding their total square footage.

Ginamarie Soto noted that the main reason for the window signs is to protect people from being able to look in and see the children. Protecting the children is 80% of the reason and the sun is 20%. It does get hot and the mats heat up so the children cannot sit in those areas.

Council Member Robnett noted that he felt this was a reasonable request and this is one type of signs that has gotten caught up in the sign code.

Council Member Robnett moved to appeal the Building Official's denial of a sign permit application by Ginamarie Soto, on Lot 5A, Block 33, Northgate Addition, Section 15, City and County of Midland, Texas (generally located on the northwest corner of the intersection of North Midland Drive and West Loop 250 North); seconded by Council Member Ladd. The motion carried by the following vote: AYE: Blong, Trost, Robnett, Payton, Ladd, Norman. NAY: None. ABSTAIN: None. ABSENT: Dufford.

EXECUTIVE SESSION

Mayor Payton recessed the meeting at 11:32 a.m. to go to Executive Session.

40. Pursuant to Texas Government Code §551.101, the Council will hold an Executive Session which is closed to the public to discuss the following matters as permitted under the following Texas Government Code Sections:

a. Section 551.072, Deliberation Regarding Real Property

a.1. Discuss the purchase, exchange, lease, or value of real property described as an 11.72 acre tract located in Section 13, Block 39, T-1-S, T&P RR Co. Survey, City and County of Midland, Texas.

All the business at hand having been completed, the meeting adjourned at 12:11 p.m.

DRAFT

PASSED AND APPROVED the 14th day of April 2020.

Patrick Payton, Mayor

ATTEST:

Amy M. Turner, City Secretary

DRAFT

MIDLAND CITY COUNCIL
MINUTES
March 31, 2020

The City Council convened in a Special Session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m. on March 31, 2020.

Council Members present: Mayor Patrick Payton, Mayor Pro Tem Spencer Robnett (At-Large), Council Member Scott Dufford (District 1), Council Member John Norman (District 2), Council Member Jack Ladd (District 3), and Council Member Lori Blong (District 4).

Council Members present via Zoom: Council Member Michael Trost (At-Large).

Mayor Payton called the meeting to order at 10:02 a.m.

MISCELLANEOUS

1. Discuss and consider the Mayor's issuance of an Order Declaring a Local State of Disaster for the City of Midland (the "Declaration") and the Resolution of the City Council ratifying and approving the Declaration and consenting to its continuation, and other matters related thereto. The City Council may take action on this matter. (CITY SECRETARY'S OFFICE)

   Mayor Payton welcomed everyone noting Council Member Trost was attending via Zoom. The current order from the Governor is in effect until Friday evening and he fully expects that he will extend his order. This is an opportunity for Council to express any concern about the order and to offer any suggestions for change.

   Dr. Pankaj “PK” Patel, a pulmonologist, made comments via Zoom. All doctors and staff in Midland are doing a great job. This same situation is happening all over the United States. There are currently 13 Covid-19 cases in Midland and 17 in the Permian Basin. This is of special concern for the elderly. The disease is different than the flu and most people are without symptoms for a couple of days when it can be spread all around. He expressed concern about false negatives. It is imperative that everyone work together to social distance to keep it from spreading. There are already 144,000 deaths in the United States including one in Midland and we can’t afford to lose any lives. The person who died in Midland was a relatively healthy person. We need a good solid plan for social distancing. Midland has been doing an excellent job and he wants to ensure that we continue.

   Mayor Payton opened up for the public to make comments.

   Dr. Summer Merritt echoed Dr. Patel’s comments noting that the entire board agrees on this issue. We cannot put our patients at risk. This is unprecedented. She commended Council for putting in the time to discuss this issue. The medical community wants to error on the side of caution. She would rather overreact than be sorry later. She has a 40-year-old friend who is a doctor and is currently on a ventilator. This person was completely healthy prior to contracting this virus. She is scared for her patients and the entire community.

DRAFT

City Attorney John Ohnemiller gave a brief history of what has taken place to date noting the Mayor declared a disaster and Council extended the declaration which is still in place. The Mayor has the right to issue orders similar to the governor. Today, Council can choose to make a vote on recommendations that the Mayor can implement through the order. Council cannot mandate the Mayor to do something, but they can put into place an ordinance.

Feedback was given about how businesses are changing to comply with the order. Staff noted that Dennis the Menace Park had to be shut down because too many people were congregating there. Staff has put in place other measures to calm the activity.

Council Member Blong noted that everyone seems to be stepping up to the plate and doing what is asked. She expressed concern that some people will get tired of doing the right thing.

Council Member Ladd expressed concern for social distancing. He is prepared to recommend that non-essential personnel such as hairdressers, nail salons and tattoo parlors be shut down. It only takes one asymptomatic person to spread the virus to several others.

Council Member Dufford noted that some of the big box stores have gotten carried away and are not allowing very many people in their stores at a time which is creating long lines outside. Bigger stores can accommodate more people as they have more room.

Council Member Trost noted that this virus is three times more likely to be transmitted than the regular flu. We need to be more aggressive. He asked what is going on at the airport.

Mayor Payton noted we are doing exactly what we have been told and screening passengers coming in from certain areas. Travel is down 85%.

Council Member Blong presented Council with a proclamation with two lines. One is asking for people to post on retail business places language substantially similar to the instructions to comply such as use wipes and don't crowd. The second is about how many people to allow in a business. If we assign 100 then a WalMart is substially different than an Auto Zone. Her request is to allow 20% occupancy. The occupancy number is based on square footage of the business and is not an arbitrary number. Right now, Walmart is only allowing 50 people into the store at a time which is causing longer lines outside of the store which is also a problem in keeping people 6 feet apart.

Mayor Payton noted he was prepared to make the proclamation allowing a percentage of a business's occupancy. As far as hair and nail salons they are unable to socially distance themselves from people so they will have to make the hard decision.

Dr. Adriana Nur suggested that businesses have a rope outside to guide people where to wait. She also suggested doing the same thing in stores making people all go in one direction, so people are not all congregating in one aisle. She also suggesting having cameras in a secured entrance that can tell a person's body temperature to keep people out who are running a fever.

DRAFT

When asked if the 20% would include employees, Mayor Payton noted the 20% would apply to customers only and the store needs to ensure that their customers are social distancing.

Discussion ensued that some businesses will not put anything in place until directed to do so by the City. When asked by the Police, they have been telling them 50 people per the Mayor's initial declaration of groups of no more than 50.

Mayor Payton noted he would be making a proclamation about mandatory self-quarantine of people who have tested positive and enact business requirements of posting signs, having hand sanitizer available and limiting customer base to 10% of occupancy.

All the business at hand having been completed, the meeting adjourned at 11:19 a.m.

PASSED AND APPROVED the 14th day of April 2020.

_____
Patrick Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

DRAFT

MIDLAND CITY COUNCIL
MINUTES
April 07, 2020

The City Council convened in a Special Session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m. on April 07, 2020.

Council Members present: Mayor Patrick Payton and Council Member Jack Ladd (District 3).

Council Members present via Zoom: Mayor Pro Tem Spencer Robnett (At-Large), Council Member Michael Trost (At-Large), Council Member Scott Dufford (District 1), Council Member John Norman (District 2), and Council Member Lori Blong (District 4).

Mayor Payton called the meeting to order at 10:00 a.m.

MISCELLANEOUS

1. Discuss and consider the Mayor's issuance of an Order Declaring a Local State of Disaster for the City of Midland (the "Declaration") and the Resolution of the City Council ratifying and approving the Declaration and consenting to its continuation, and other matters related thereto. The City Council may take action on this matter.

   Mayor Payton thanked all City staff for doing an amazing job. This morning's press conference had some great reports. The hospital continues to do a historical job. There are only 30 Covid-19 test results outstanding. Eleven of the 27 people infected have exceeded their self-isolation period. He emphasized that everybody needs to continue doing what they have been doing. He is happy to see when he is driving around that retailers are doing what they need to do. Midlanders have really stepped up to the plate and he is grateful.

   Council Member Trost asked if the City has the five-minute tests. Mayor Payton could not answer that question noting he thought it was taking 48 hours. Council Member Ladd noted he knows someone who has been tested and it is taking 72 hours to get results. Mayor Payton noted that over 500 people have been tested to date.

   Mayor Payton reported he is in conversations with Congressman Conaway and they are looking at what funding is available at state and local levels to leverage every dollar they can for both small businesses and the oil and gas community. He gave a final shout-out to the food bank noting they are serving 18 counties because some of the other counties don't have the ability to serve their people.

   He opened the floor for final questions. There was no one present or on zoom wishing to speak.

   A motion was made by Council Member Ladd and seconded by Council Member Trost to adjourn the meeting. The motion carried unanimously.

All the business at hand having been completed, the meeting adjourned at 10:06 a.m.

PASSED AND APPROVED the 14th day of April 2020.

_____
Patrick Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

DRAFT

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Erika Martinez, Purchasing Manager

SUBJECT: Consider a resolution ratifying the emergency repair of an 8" water main on C Street between Louisiana Avenue and Cuthbert Street for the Utilities Department.

Purpose:

Approval of a resolution ratifying the emergency repair of an 8" water main on C Street between Louisiana Avenue and Cuthbert Street.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

$254,138.00 with 20% contingency for a total possible cost of $304,965.60 from the Water and Sewer Fund.

Discussion:

Late February 2020, it was discovered that a water main had been broken in three places on C Street between Louisiana Avenue and Cuthbert Street and all roadwork had to stop on the project until the water line was replaced. Since Boler Equipment Services, Inc. is the on-call utility extension program contractor (Resolution 2017-212), they were called in to fix the damage at the site. Please see the attached memo from Carl Craigo, Utilities Director, for additional information.

Therefore, please consider a resolution ratifying the emergency repair of an 8" water main on C Street between Louisiana Avenue and Cuthbert Street and authorizing payment to Boler Equipment Services, Inc., of Midland, Texas for a cost of $254,138.00 with 20% contingency for a total possible cost of $304,965.60.

INTEROFFICE MEMORANDUM

TO: Erika Martinez, Purchasing Manager

FROM: Carl Craigo, PE, Utilities Director

SUBJECT: Consider a Resolution Ratifying the Emergency Repair of an 8" water main on C Street between Louisiana Avenue and Cuthbert Street.

DATE: April 14, 2020

Late February 2020, milling crews milled up the asphalt along C Street between Louisiana Avenue and Cuthbert Street as part of a bond project and an on-call milling contract. Once the road was milled up it was discovered that there was no subbase on this section of road and the waterline (only 12" deep) had been broken in three places. All roadwork had to be stopped on this project, leaving a ¾-mile dirt road, until the water line was repaired/replaced. With the main being, 12" below ground level the road construction equipment was too heavy to work around the line.

Boler, as the on-call UEP contractor was called in to repair/replace the 8" water main along C Street. The cost for Boler to repair/replace the water main is $254,138 with a 20% contingency for a total possible cost of $304,965.60. The contingency is necessary because other lines are crumbling as we try to connect to them. Contingency funds have been added to make up for the unknown. This will be paid for out of W&WW Operations budget (300335 54930).

RESOLUTION NO. _____

RESOLUTION RATIFYING AND APPROVING THE EMERGENCY REPAIR OF A WATER MAIN LOCATED ON C STREET BETWEEN LOUISIANA AVENUE AND CUTHBERT AVENUE BY BOLER EQUIPMENT SERVICE, INC., FOR A TOTAL COST OF $254,138.00; AND APPROVING $50,827.60 IN CONTINGENCY FUNDS

WHEREAS, it was discovered that an eight (8) inch water main was broken in three (3) places on C Street between Louisiana Avenue and Cuthbert Street; and

WHEREAS, Boler Equipment Service, Inc., was chosen to provide emergency repair services of said water main; and

WHEREAS, Boler Equipment Service, Inc., agreed to provide the emergency repair services for a total cost of $254,138.00, as shown on the bid attached hereto as Exhibit "A" and incorporated herein for all purposes; and

WHEREAS, the City Council finds and determines that said unforeseen damage to said water main constitutes unforeseen damage to public machinery, equipment, or other property as contemplated by TEX. LOC. GOV'T CODE § 252.022(a)(3); and

WHEREAS, the City Council finds it to be in the public interest to ratify and approve the emergency services provided by Boler Equipment Service, Inc., for the repair of said water main for a total cost of $254,138.00; and

WHEREAS, the City Council finds it to be in the public interest to approve $50,827.60 for contingencies;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the emergency repairs of said water main by Boler Equipment Service, Inc., at a total cost of $254,138.00 is hereby ratified and approved.

SECTION TWO. That the sum of $50,827.60 for contingencies is hereby approved.

SECTION THREE. That the City Comptroller is hereby authorized and directed to pay Boler Equipment Services, Inc., an amount not to exceed $304,965.60 from funds

available in the 2020 operating budget of the Water & Sewer Fund (300) upon proper receipt of invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2020, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Courtney Sharp, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller City Attorney

BOLER
equipment service, inc.

Job Name: COM - "C" Street WL Replacement
Location: "C." St. between Cuthbert Ave. and Michigan Ave. - Midland, TX
Engineer: COM
Bid Date: 3/11/2020

COM Engineering and Purchasing Departments
Attn: Carl Craigo, Cory Moose

We agree to furnish labor, equipment, and material for the following work:

BASE BID

Demo	Description	UOM	QTY	Unit Price	Ext. Price
1	Remove Existing Mains	LF	1275	$ 15.00	$ 19,125.00
	*footage as appears on plans, removal billed only as needed.				
	Demo Subtotal				**$ 19,125.00**
					$ -
Water	**Description**	**UOM**	**QTY**	**Unit Price**	**Ext. Price**
1	12" DR18 C900 PVC - for casing	LF	80	$ 54.00	$ 4,320.00
2	6" DR18 C900 PVC	LF	1580	$ 41.00	$ 64,780.00
3	Connect to Existing Main	EA	10	$ 485.00	$ 4,850.00
4	6" Gate Valve Assembly - Complete	EA	9	$ 1,525.00	$ 13,725.00
5	Fire Hydrant - 0'-5' depth	EA	1	$ 4,075.00	$ 4,075.00
6	Ductile Iron Fittings	LB	1358	$ 6.00	$ 8,148.00
7	6" Saddle	EA	7	$ 220.00	$ 1,540.00
8	1" Service Long >20'	EA	5	$ 1,925.00	$ 9,625.00
9	1" Service Short <20'	EA	2	$ 1,700.00	$ 3,400.00
10	Water Trench Depth 0'-5'	LF	1500	$ 22.00	$ 33,000.00
11	Water Trench Depth 5'-8'	LF	80	$ 25.00	$ 2,000.00
	Water Subtotal				**$ 149,463.00**
					$ -
Paving	**Description**	**UOM**	**QTY**	**Unit Price**	**Ext. Price**
1	Flowable Fill/2-Sack Backfill (20" thick)	SY	705	$ 110.00	$ 77,550.00
2	Erosion/Sediment Control - per block	EA	4	$ 1,000.00	$ 4,000.00
3	Job Site Safety - per block	EA	4	$ 1,000.00	$ 4,000.00
	Paving Subtotal				**$ 85,550.00**
					$ -
Total					**$ 254,138.00**

Final $ 254,138.00

Notes:

1.) BES to mobilize on site in no more than 7 working days after COM verbal or written agreement to proposal. Start date could be sooner pending line location, materials and COM traffic control plan set in place.

2.) HMAC repair or patching by others.

3.) Traffic Control by COM.

4.) All quantities quoted per BES interpretation of plans dated 3/3/2020 provided by COM.

Prepared by Emily Ford
Boler Equipment Service, Inc.

Emily Ford

Date

3/11/2020

City Council Agenda

Approved for Agenda:

City Manager's Office

MEETING DATE: 04/14/2020

TO: City Council / City Manager

FROM: Erika Martinez, Purchasing Manager

SUBJECT: Consider a motion to authorizing the City Manager or the City Manager's designee to advertise a request for bids for the Landfill Cells five (5) and six (6) Project.

Purpose:

Approval of a motion authorizing the City Manager or the City Manager's designee to advertise a request for bids for the Landfill Cells Five (5) and Six (6) Project.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

Funding is not required at this time.

Discussion:

Please consider approval of a motion authorizing the City Manager or the City Manager's designee to advertise a request for bids for the Landfill Cells Five (5) and Six (6) Project. Please see the attached memo from Jeffery Ahrlett, Director of Solid Waste, for additional information.

Therefore, please consider a motion authorizing the City Manager or the City Manager's designee to advertise a request for the Landfill Cells Five (5) and Six (6) Project.

MIDLAND
Solid Waste

INTEROFFICE MEMORANDUM

TO: **Erika Munoz, Purchasing Manager**

FROM: **Jeffery Ahrlett, Director of Solid Waste**

SUBJECT: **Request for bids for plans and specifications from Parkhill, Smith and Cooper for Landfill Cell 5 and 6 Project.**

DATE: **March 30, 2020**

CC: **Morris Williams Jr., Assistant City Manager**
Regina Stephenson, General Services Director

I am requesting the approval to go out for the request for bids for plans and specifications from the professional services agreement with Parkhill Smith and Cooper for the expansion of the City of Midland Landfill cell. We are at the point that it is necessary to begin the expansion of our next landfill cell. The expansion will create Cell 6 and a portion of Cell 5 to allow the Landfill to continue to accept waste as the current Cell 7 nears capacity. Constructing Cell 6 and a portion of Cell 5 will allow the Landfill to attach with Cell 7 and Cell 2; allowing a significant amount more of air space utilization.

This project has two phases; Design and Bid Phase - $211,915.00 and Construction Phase - $8,445,190.00. Council has previously approved these two phases and now we are ready to proceed with advertising for bids for the continuation of the project.

PROJECT MANUAL

City of Midland, Texas

City of Midland Solid Waste Landfill,

TCEQ MSW 1605B

Cells 5A & 6 Excavation and Liner Construction

March 2020

PSC Project #01287118

PARKHILLSMITH&COOPER

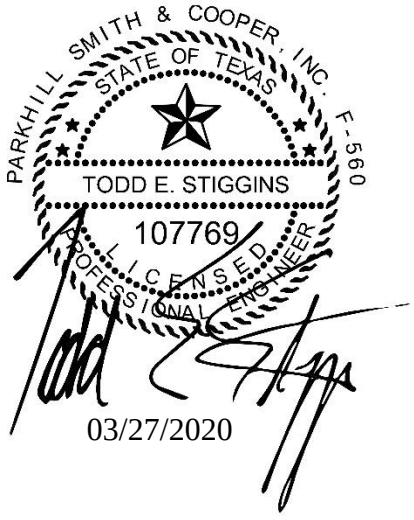
PROJECT MANUAL

City of Midland, Texas

City of Midland Solid Waste Landfill,

TCEQ MSW 1605B

Cells 5A & 6 Excavation and Liner Construction



March 2020

PSC Project #01287118

PARKHILLSMITH&COOPER

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00 11 13 Advertisement 1
00 21 13 Instructions to Bidders 9

Contract *(Provided by the City of Midland)*
Exhibit C – Bond Requirements *(Provided by the City of Midland)*
Exhibit D – Wage Scale Requirements *(Provided by the City of Midland)*
Bid Bond *(Provided by the City of Midland)*
Payment Bond *(Provided by the City of Midland)*
Performance Bond *(Provided by the City of Midland)*
Consideration of Location of Bidder's Principal Place of Business *(Provided by the City of Midland)*
Conflict of Interest Reporting Requirements and Questionnaire *(Provided by the City of Midland)*

00 41 00 Bid Form 5

DIVISION 01 – GENERAL REQUIREMENTS

01 10 00 Summary 2
01 20 00 Price and Payment Procedures 2
01 22 00 Measurement and Payment 5
01 25 00 Substitution Procedures 2
01 30 00 Administrative Requirements 3
01 32 16 Construction Progress Schedule 2
01 33 00 Submittal Procedures 4
01 40 00 Quality Requirements 3
01 50 00 Temporary Facilities and Controls 8
01 70 00 Execution and Closeout Requirements 8

DIVISION 03 - CONCRETE

03 30 00 Cast-In-Place Concrete 14

DIVISION 31 - EARTHWORK

31 05 13 Soils for Earthwork 2
31 05 19 Geosynthetic Clay Liners 7
31 05 19.13 Geotextile Fabrics 3
31 05 19.26 Geocomposite Drainage Layer 4
31 10 00 Site Clearing 3
31 23 00 Excavation and Fill 6
31 23 16.13 Trenching 3
31 90 20 Gravel Drainage Material 3
31 90 30 Protective Soil Cover 3
31 90 34 High-Density Polyethene (HDPE) Geomembrane Liner 10
31 90 40.10 Leachate Collection Systems 3

APPENDICES

APPENDIX A - SOIL AND LINER QUALITY CONTROL PLAN (SLQCP)
APPENDIX B – SOIL BORINGS

SECTION 00 11 13 - ADVERTISEMENT FOR BIDS

Sealed Bids for construction of Cells 5A & 6 Excavation and Liner Construction will be received by City of Midland, at 300 North Loraine, Midland, Texas 79701, until **2:00 p.m.** local time on **Wednesday, May 6, 2020**. All questions regarding this Project must be received by **5:00 p.m., Wednesday, April 29, 2020**. Any Bid received after closing time will be returned unopened. Bids will be tabulated and presented to City of Midland for action at a later date. Project consists of landfill cell excavation and landfill liner construction.

The issuing office for bidding documents is Parkhill, Smith & Cooper Inc., 4222 85th Street, Lubbock, Texas 79423, 806.473.2200.

Prospective Bidders may examine and obtain bidding documents at the issuing office as noted. Bidding Documents also may be examined at the office of 300 North Loraine, Midland, Texas 79701.

Printed copies of bidding documents may be obtained from the issuing office as follows:

1. Download documents (PDF file extension format) from the PSC Info Exchange web site after registering as a plan holder with issuing PSC office. **No cost or deposit required for this option**.
2. One set of paper copies for a non-refundable deposit of $50.00.
3. A digital copy (PDF file extension format) upon a non-refundable deposit of $20.00 per each CD.

Deposit shall be Bidder's or cashiers' check made payable to Parkhill, Smith & Cooper Inc. No partial sets issued. Neither Owner nor Engineer will be responsible for full or partial sets of bidding documents, including addenda if any, obtained from sources other than the issuing office.

Bid security shall be furnished in accordance with Section 00 21 13, "Instructions to Bidders."

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have meanings indicated here:

A. Issuing Office: Where Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the format stated in Section 00 11 13, "Advertisement."

2.02 Use complete sets of Bidding Documents in preparing Bids. Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.

2.03 In making copies of Bidding Documents available on aforementioned terms, Owner and Engineer do so only to obtain Bids for Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder qualifications to perform Work, Bidder shall submit with Bid (a) written evidence establishing qualifications such as financial data, previous experience, and present commitments; and (b) the following additional information:

A. Evidence of Bidder authority to do business in the state where Project is located.

B. Bidder's state or other contractor license number, if applicable.

C. Subcontractor and supplier qualification information. Coordinate with provisions of Article 12 - Subcontractors, Suppliers, and Others.

D. Other required information regarding qualifications.

3.02 Bidder failure to submit required qualification information may disqualify Bidder from receiving Award of Contract.

3.03 No requirement in Article 3 to submit information will prejudice Owner's right to seek additional, pertinent information regarding Bidder qualifications.

3.04 Bidder is advised to carefully review those portions of Bid Form requiring Bidder representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT SITE

4.01 Site and Other Areas

A. Site, identified in Bidding Documents, may include rights-of-way, easements, and other lands furnished by Owner for Contractor use. Contractor shall obtain and pay for any additional lands

required for temporary construction facilities, construction equipment, or storing materials and equipment, and any access needed for such additional lands.

4.02 Existing Site Conditions

A. Subsurface and Physical Conditions

1. Reports known to Owner of explorations and tests of subsurface conditions at or adjacent to Site are provided with this project manual;

2. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or other data, interpretations, opinions, or information contained in such Reports.

B. Underground Facilities: Information and data shown or indicated in Bidding Documents with respect to existing Underground Facilities at or contiguous to Site, are set forth in Contract Documents and based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

C. Utilities: Information and data shown or indicated in bidding documents with respect to existing utilities at or adjacent to the site, are set forth in Contract documents and based upon information and data furnished to Owner and Engineers by owners of such utilities, including owners or others.

4.03 Site Visit and Testing by Bidders

A. Bidder shall conduct required Site visit during normal working hours and not disturb any ongoing operations at Site.

B. Bidder is not required to conduct any subsurface testing or exhaustive investigations of Site conditions.

C. On request and to extent Owner has control over Site, and schedule permitting, Owner will provide Bidder access to Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner authority regarding Site.

D. Bidder shall comply with all applicable laws and regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner, property owners, or other entities controlling Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. Bidder shall fill all holes, clean up, and restore Site to former condition upon completion of such explorations, investigations, tests, and studies.

4.04 Owner’s Safety Program

A. Site visits and work may be governed by an Owner safety program.

ARTICLE 5 – BIDDER PRESENTATIONS

5.01 Before submitting a Bid, each Bidder has the responsibility to:

A. Examine and carefully study Bidding Documents and any data and reference items identified in Bidding Documents;

B. Visit Site, conduct a thorough, alert visual examination of Site and adjacent areas, and become familiar with and satisfy himself as to general, local, and Site conditions affecting cost, progress, and Work performance;

C. Become familiar with and satisfy himself as to all laws and regulations affecting cost, progress, and Work performance;

D. Carefully study all: exploration reports and subsurface condition tests at or adjacent to Site, and all physical condition drawings relating to existing surface or subsurface structures at Site;

E. Consider information known to Bidder himself; information commonly known to contractors doing business in Site locality; information and observations obtained from visits to Site; Bidding Documents; and Site-related reports and drawings identified in Bidding Documents, with respect to effect of such information, observations, and documents on (1) cost, progress, and Work performance; (2) means, methods, techniques, sequences, and construction procedures to be employed by Bidder; and (3) Bidder's safety precautions and programs;

F. Agree, based on information and observations previously referred to, at time of submitting Bid, no further examinations, investigations, explorations, tests, studies, or data are necessary for determination of Bid for Work performance at price bid, within times required, and per other terms and conditions of Bidding Documents;

G. Become aware of the general nature of work to perform by Owner and others at Site that relates to Work as indicated in Bidding Documents;

H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies Bidder discovers in Bidding Documents and confirm written resolution, thereof, by Engineer, is acceptable to Bidder;

I. Determine Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing Work; and

J. Agree the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder complied with every requirement of this Article, and without exception, Bid and all prices in Bid are premised upon performing and furnishing Work required by Bidding Documents.

ARTICLE 6 – PREBID CONFERENCE

6.01 Prebid conference, if any, will be held at time and location stated in Section 00 11 13, "Advertisement." Owner and Engineer representatives will be present to discuss Project. Engineer will transmit to all prospective Bidders of record, such Addenda as Engineer considers necessary, in response to questions arising at conference. Oral statements may not be relied upon and nor binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 Submit all questions about meaning or intent of Bidding Documents to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions, will be issued by Addenda delivered to all parties recorded as having received Bidding Documents. Questions received less than 10 days prior to date for opening Bids, may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications, will be without legal effect.

7.02 Issue Addenda to clarify, correct, supplement, or change Bidding Documents. Addenda will be issued to document holders by one of these methods:

A. Email notification to document holder with link to download addenda from the PSC Info Exchange web site.

B. For document holders without email, pick up Addenda at issuing PSC office or mail via United States Postal Service (USPS).

ARTICLE 8 – BID SECURITY

8.01 Bid must be accompanied by Bid security, payable to Owner, 5 percent of Bidder's maximum Bid price (determined by adding Base Bid), and by certified check, bank money order, or Bid bond issued by a surety.

8.02 Bid security of apparent Successful Bidder will be retained until Owner awards Contract and Bidder has executed Contract Documents, furnished required Contract security, and met other conditions of Notice of Award, whereupon Bid security will be released. If Successful Bidder fails to execute and deliver Contract Documents and furnish required Contract security within 15 days after Notice of Award, Owner may consider Bidder in default, annul Notice of Award, and Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

8.03 Bid security of other Bidders Owner believes have a reasonable chance of receiving award, may be retained by Owner until the earlier of seven days after Effective Date of Contract, or 61 days after Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders Owner believes DO NOT have a reasonable chance of receiving award, will be released within seven days after Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 Number of days or dates by which Work is to be substantially completed and ready for final payment, are set forth in Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or completion of Work, in readiness for final payment, are set forth in Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 Contract for Work, as awarded, will based on materials and equipment specified or described in Bidding Documents without consideration during bidding and Contract award process of possible substitute or "or-equal" items. When Contract allows Contractor to request Engineer to authorize use of substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to nor considered by Engineer until after Effective Date of Contract.

11.02 All prices Bidder sets forth in Bid shall be based on the presumption that Contractor will furnish materials and equipment specified or described in Bidding Documents, as supplemented by Addenda. Any assumptions regarding possibility of post-Bid approvals, "or-equal," or substitution requests, are made at Bidder's sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 Bidder shall prepare to retain specific subcontractors, suppliers, or other individuals/entities for Work performance if required by Bidding Documents (most commonly in Specifications) to do so. If prospective Bidder objects to retaining any such subcontractor, supplier, or other individual/entity, and concern is not relieved by Addendum, prospective Bidder should refrain from submitting Bid.

12.02 Subsequent to Bid submittal, Owner may not require Successful Bidder or Contractor to retain any subcontractor, supplier, or other individual/entity against which Contractor has reasonable objection.

12.03 Within five days after Bid opening, apparent Successful Bidder and any other Bidder so requested, shall submit to Owner a list of subcontractors or suppliers proposed for these portions of Work:

A. Liner manufacturer;
B. Liner installer;
C. Cast-in-place concrete.

12.04 If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such subcontractor, supplier, or other individual or entity. After due investigation, if Owner or Engineer, has reasonable objection to any proposed subcontractor, supplier, individual, or entity, Owner may, before Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit substitute, Bidder's Bid price will be increased/decreased by cost difference occasioned by substitution, and Owner may consider price adjustment in evaluating Bids and making Contract award.

12.05 If apparent Successful Bidder declines to make substitution, Owner may award Contract to next lowest Bidder who proposes to use acceptable subcontractors, suppliers, or other individuals/entities. Declining to make requested substitutions, will constitute grounds for Bid security forfeiture of Bidder. Any subcontractor, supplier, individual/entity so listed and against which Owner or Engineer makes no written objection prior to giving Notice of Award, will be deemed acceptable to Owner and Engineer subject to subsequent revocation of acceptance.

ARTICLE 13 – PREPARATION OF BID

13.01 Bid Form is included with Bidding Documents.

A. All blanks on Bid Form shall be completed and Bid Form signed in ink. Erasures or alterations shall be initialed in ink by person signing Bid Form. Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If Bid Form expressly indicates that submitting pricing on specific alternate item is optional and Bidder elects not to furnish pricing for such optional alternate item, Bidder may enter words "No Bid" or "Not Applicable."

13.02 Bid by corporation shall be executed in corporate name by corporate officer (whose title must appear under signature), accompanied by evidence of authority to sign. Show corporate address and state of incorporation.

13.03 Execute Bid by a partnership in partnership name and signed by a partner (whose title must appear under signature), accompanied by evidence of authority to sign. Show official address of partnership.

13.04 Execute Bid by a limited liability company in firm name by a member or other authorized person and accompanied by evidence of authority to sign. Show state of firm formation and official firm address.

13.05 Bid by an individual shall show Bidder's name and official address.

13.06 Execute Bid by a joint venture by an authorized representative of each joint venturer as indicated on Bid Form. Show official address of joint venture.

13.07 Print all names in ink below signatures.

13.08 Bid shall contain acknowledgment of receipt of all Addenda and numbers filled in on Bid Form.

13.09 Show postal and email addresses and phone number for communications regarding Bid.

13.10 Bid shall contain evidence of Bidder authority and qualification to do business in state where Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of Contract, and attach covenant to Bid. Also show Bidder's state contractor license number, if any, on the Bid Form.

ARTICLE 14 – BASIS OF BID

14.01 Unit Price

A. Bidders shall submit Bid on unit price basis for each item of Work listed in unit price section of Bid Form. City of Midland will consider the Project Competitive Sealed Proposal procurement method based on Texas Government Code, Section 2269.056 and as described in 2269.151. For clarification, "bid(s)" contained in Specifications shall imply "proposal(s)" and "Bidder(s)" imply "Offeror(s)."

B. "Bid Price" (or "extended price") for each unit price Bid item, will be the product of "Estimated Quantity" (which Owner or representative set forth in Bid Form) for item and corresponding "Bid

Unit Price" offered by Bidder. Total of all unit price Bid items will be the sum of these "Bid Prices;" total will be used by Owner for Bid comparison purposes.

C. Discrepancies between multiplication of Work units and unit prices, will be resolved in favor of unit prices. Discrepancies between indicated sum of any column of figures and correct sum thereof, will be resolved in favor of correct sum. I-14-01 gives several frequently used alternatives for defining basis and determination of Bid prices for comparison purposes of Bids. For particular project, a unique set of Articles may be necessary, following the concept shown. User should carefully review I-14.01 and compare to final Bid Form for clarity and consistency.

ARTICLE 15 – SUBMITTAL OF BID

15.01 Bidder shall submit Bid Form, Bid security and other documents required to submit under terms of Article 7 of Bid Form.

15.02 Bid shall be received no later than date and time prescribed and at place indicated in Section 00 11 13, "Advertisement," and enclose in plainly-marked package with Project title (and, if applicable, designated portion of Project Bid is submitted), name and address of Bidder, and shall be accompanied by Bid security and other required documents. If Bid is sent by mail or other delivery system, sealed envelope containing Bid shall be enclosed in a separate package, plainly-marked on outside with "*BID ENCLOSED*."

15.03 Bids received after date and time prescribed for Bid opening, or not submitted at correct location or in designated manner, will not be accepted and will be returned to Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 Bid may be withdrawn by appropriate document duly executed in same manner a Bid must be executed and delivered to place where Bids are to be submitted prior to date and time for Bid opening. Upon receipt of such notice, unopened Bid will be returned to Bidder.

16.02 If Bidder wishes to modify Bid prior to Bid opening, Bidder must withdraw initial Bid in manner specified in Article 16.01 and submit new Bid prior to date and time for Bid opening.

16.03 If within 24 hours after Bids are opened, any Bidder files a duly-signed, written notice with Owner and promptly thereafter demonstrates to reasonable satisfaction of Owner there was material and substantial mistake in Bid preparation, Bidder may withdraw Bid and Bid security returned. Thereafter, if Work is rebid, Bidder will be disqualified from further bidding on Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at time and place indicated in Section 00 11 13, "Advertisement," and unless obviously non-responsive, read aloud publicly. An abstract of amounts of base Bids and major Alternates, if any, will be made available to Bidders after Bid opening.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for time stated in Bid Form, but Owner may, at sole discretion, release any Bid and return Bid security prior to end of period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject Bid of any Bidder Owner finds, after reasonable inquiry and evaluation, not responsible. If Bidder purports to add terms or conditions to Bid, takes exception to any provision of Bidding Documents, or attempts to alter contents of Contract Documents for purposes of Bid, Owner will reject Bid as nonresponsive; provided Owner also reserves right to waive all minor informalities not involving price, time, or changes in Work.

19.02 If Owner awards contract for Work, award shall be to responsible Bidder submitting lowest, responsive Bid.

19.03 Evaluation of Bids

A. In evaluating Bids, Owner will consider if Bids comply with prescribed requirements, and such alternates, unit prices, and other data, as requested in Bid Form or prior to Notice of Award.

B. For determination of apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on aggregate basis of Bids for separate sections and Bids for combined sections that result in lowest total amount for all of Work.

C. For determination of apparent low Bidder when unit price bids are submitted, Bids will be compared on basis of product total of estimated quantity of each item and unit price Bid for item, together with any lump sum items.

19.04 In evaluating if Bidder is responsible, Owner will consider Bidder qualifications and may consider qualifications and experience of subcontractors and Suppliers proposed for portions of Work identity of subcontractors and Suppliers must be submitted as provided in Bidding Documents.

19.05 Owner may conduct investigations as Owner deems necessary to establish responsibility, qualifications, and financial ability of Bidder and any proposed subcontractor or Supplier.

19.06 In determining lowest possible Offeror, Owner will give serious consideration to information derived from Contractor Qualification Statement and Experience Record and information submitted on proposal form. Owner may consider items described in Texas Government Code, Section 2269.055.

19.07 Following proposal deadline, proposals will be evaluated in relation to selection criteria noted herein:

A. Following City ranking of offerors who offer the best value for the City based on published selection criteria, the City will attempt to negotiate an agreement with offeror who offers the best value to the City. The City of Midland may discuss options with the selected offeror who offers the best value to the city. The City may discuss options with the selected offeror for a scope or time modification and any price change associated with the modification. If the City is unable to negotiate an agreement with the selected offeror, City may begin the negotiation process with the second ranked offeror. This process shall continue until an agreement is negotiated with a ranked offeror or the City rejects all proposals.

B. The City reserves the right to verify accuracy and completeness of all responses by utilizing any information available to the City without regard to whether such information appears in Offeror's proposal.

C. Successful Contractor required to satisfy HB 1295 requirements and provide signed and notarized copy of Form 1295 (www.ethics.state.tx.us).

ARTICLE 20 – BONDS AND INSURANCE

20.01 When Successful Bidder delivers Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues Notice of Award to Successful Bidder, it shall be accompanied by unexecuted counterparts of Agreement along with other Contract Documents as identified in Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver required counterpart number of Agreement (and bonds and insurance documentation required by Contract Documents) to Owner. Within 10 days thereafter, Owner shall deliver one fully executed counterpart of Agreement to Successful Bidder.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from state sales and use taxes on materials and equipment to be incorporated in Work. Said taxes shall not be included in Bid.

THE CITY OF MIDLAND

CONTRACT

Contract No.

THIS CONTRACT, effective the ____ day of _____, 20__, by and between the City of Midland, hereinafter referred to as "City", and _____, hereinafter referred to as "Company", is made for the following considerations:

1. **Cost:** Total Proposal: $ _____ DOLLARS

2. **Scope of Work:** Company shall perform all work described for _____ in the following documents, attached hereto and incorporated herein by reference for all legal purposes.

EXHIBIT A..... Specifications, Proposal or Cost Summary
EXHIBIT B.....Intentionally Omitted
EXHIBIT C..... Bonding instructions for Public Works Contract of $50,000 and more
EXHIBIT D..... Wage Scale

3. **City:** The words "City's Representative" or "representative" shall mean _____ or the designee under whose supervision these contract documents, including the plans and specifications, were prepared, or who may inspect work performed under this Contract; or such other representative, supervisor, or inspector as may be authorized by City to act in any particular capacity under this Contract.

4. **City's Representative:** City's Representative may make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. City's representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, nor will such representative be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions incident thereto. City's representative will not be responsible for Company's failure to perform the work in accordance with the contract.

5. **Company:** Unless otherwise stipulated, Company shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation and all other facilities necessary for the execution and completion of the work covered by

the contract documents. Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of a good quality. Company shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

5.1. Company shall, at its expense, obtain all permits and licenses necessary for the performance of this contract and pay all fees and taxes required by law, and comply with all laws, ordinances, rules and regulations governing Company's performance of the contract, including all environmental laws and regulations, whether state or federal.

5.2. All work shall be done and all materials furnished in strict conformity with the contract and specifications.

6. **Minor Work Not Mentioned:** All minor detail of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of the work for which the prices are named in the contract. Company will not be entitled to any additional compensation therefor unless specifically stated otherwise. Otherwise the term "extra work" as used in this contract shall mean and include all work that may be required by City to be done by Company to accomplish any alteration or addition to the work as shown on the Specifications.

6.1. Company shall perform all extra work under the direction of City's Representative when presented with a written work order signed by City's Representative, subject, however, to the right of the Company to require written confirmation of such extra work order by City. Payment for extra work shall be as agreed in the work order.

7. **Safety:** Company shall at all times exercise reasonable precaution for the safety of employees and others on or near the work and shall comply with all applicable provisions of federal, state and municipal laws. All machinery and equipment and other physical hazards shall be guarded in accordance with federal, state or municipal laws or regulations.

8. **INDEMNITY: COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF COMPANY, THEIR AGENTS OR**

EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

8.1. **COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CITY, CITY'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH COMPANY OR COMPANY'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.**

8.2. **COMPANY AGREES THAT IT WILL INDEMNIFY AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS AND ALL SUPPLIES, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN CITY SO DESIRES, COMPANY SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. COMPANY, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS CITY AND ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF COMPANY OR ANY SUBCONTRACTOR, THEIR**

AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

9. **Start of Work:** Company shall commence work no later than ten (10) days after receipt of the execution of this document or other written release to proceed and shall complete such work no later than _____calendar days after release to proceed.

10. **Clean Up:** Company shall promptly remove from City's premises all materials condemned by City's Representative on account of failure to conform to the contract, whether actually incorporated in the work or not, and Company shall at its own expense promptly replace such condemned materials with other materials conforming to the requirements of the contract. Company shall also bear the expense of restoring all work of other contractors damaged by any such removal or replacement. If Company does not remove and replace any such condemned materials within a reasonable time after a written notice by City, City may remove and replace such at Company's expense.

11. **Warranty:** Neither the final payment nor any provision in this contract shall relieve Company of responsibility for faulty materials or workmanship, and he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of substantial completion. City shall give notice of observed defects with reasonable promptness.

12. **Remedy:** City may, on account of subsequently discovered evidence, withhold whole or part of any payment to such extent as may be necessary to protect itself from loss on account of:

12.1. Defective work not remedied; or

12.2. Claims filed or reasonable evidence indicating possible filing of claims; or

12.3. Failure of Company to make payments promptly to subcontractors or for material or labor which City may pay as an agent for the Company; or

12.4. Damages to another contractor or subcontractor.

When the above grounds to withhold payment are removed, or Company provides a surety bond satisfactory to City, which will protect City in the amount withheld, payment may be released.

13. **Funding Out:** In the event no funds or insufficient funds are appropriated and budgeted or are otherwise unavailable in any fiscal period for contract payments due under the contract, then this contract shall terminate on the last day of the fiscal period for which full appropriations were made, without penalty

or expense to City of any kind whatsoever.

14. **Wage Scale:** Company agrees to pay all workmen in his employ no less than the generally prevailing wage rate for employees of similar category in the Permian Basin Area, as is depicted in the wage rate scale attached hereto as EXHIBIT D, and incorporated herein by reference for all legal purposes.

14.1. If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

15. **Prompt Pay Act:** City and Company agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

16. **Payment; Retainage:** After all work is completed by Company, including all Change Orders altering the original scope and amount of the contract are completed, and the City has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, the City may thereafter issue payment to Company in the amount of the contract and all Change Orders. The City shall be the final judge of when the work is completed by Company. The City, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to the City's requirements.

16.1. The City may make periodic payments to Company; provided, however, such periodic payments may only be made pursuant to this section, and only after all work and all Change Orders are completed by Company and approved by the City. The approval shall be in the City's sole discretion. Requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the City or the City's representative, the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

17. **Late Completion; Liquidated Damages:** It is hereby understood and mutually agreed, by and between Company and the City, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed." Company agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between Company and the City,

that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

17.1. In the event Company shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then Company and Company's surety, if any, shall be liable for and does hereby agree, as a part consideration for the awarding of this contract, to pay to the City $500.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every day that Company shall be in default after the time stipulated in the contract for completing the work. Further, the City shall have the right to cancel this contract for such delay. In the event the City cancels this contract pursuant to the terms of this section, the City shall pay to Company only those monies deemed appropriate by the City, in its sole discretion, to compensate Company for any work actually performed, less any liquidated damages Company owes the City.

17.2. The said amount is fixed and agreed upon by and between Company and the City because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain, and said amount is agreed to be the amount of damages which the City would sustain and said amount shall be retained from time to time by the City from current periodical estimates.

17.3. It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that Company shall not be charged with liquidated damages or any excess cost when the City determines, in its sole discretion, that Company is without fault and Company's reasons for the time extension are acceptable to the City. Provided, further, that Company shall not be charged with liquidated damages of any excess cost when the delay in completion of the work is due:

a. To any preference, priority or allocation order duly issued by the Government;

b. To unforeseeable cause beyond the control and without the fault or negligence of Company, including, but not restricted to, acts of God, or of the public enemy, acts of the City, acts of another contractor in the performance of a contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

c. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

17.4. Provided, further, that Company shall, within ten (10) days from the beginning of such delay, unless the City shall, in its sole discretion grant a further period of time prior to the date of final

settlement of the contract, notify the City, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify Company within a reasonable time of its decision in the matter.

17.5. **COMPANY AGREES THAT THE PAYMENT OF SUCH LIQUIDATED DAMAGES MAY BE RECOVERED BY THE CITY FROM RETAINAGE HELD BY THE CITY. NOTWITHSTANDING ANY OTHER PROVISION HEREOF, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER ARISING FROM THE CITY WITHHOLDING PAYMENT FROM COMPANY AS LIQUIDATED DAMAGES FOR COMPANY'S FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE.**

17.6. **COMPANY SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO COMPANY OR ANY SUBCONTRACTOR OR SUPPLIER, ANY OTHER PERSON OR ANY SURETY FOR OR ANY EMPLOYEE OR AGENT OF ANY OF THEM, FOR ANY DAMAGES ARISING OUT OF OR ASSOCIATED WITH ANY DELAY OR HINDRANCE TO THE WORK, REGARDLESS OF THE SOURCE OF THE DELAY OR HINDRANCE, INCLUDING EVENTS OF FORCE MAJEURE, AND EVEN IF SUCH DELAY OR HINDRANCE RESULTS FROM, ARISES OUT OF OR IS DUE, IN WHOLE OR IN PART, TO THE NEGLIGENCE OF THE CITY. COMPANY'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.**

18. **No Third Party Beneficiary:** City's approval of this contract does not create a third party beneficiary. There is no third party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third party beneficiary or other rights hereunder.

19. **WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, COMPANY AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST CITY, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. COMPANY SPECIFICALLY**

AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, COMPANY AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH COMPANY MIGHT OTHERWISE BE ENTITLED.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. COMPANY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND COMPANY. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF GOVERNMENTAL IMMUNITY.

COMPANY AND CITY ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

20. **Governmental Immunity:** By executing this contract City is not waiving its right of governmental immunity. City is retaining its immunity from suit. City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.

21. **Insurance:**

Company shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):

-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit -

	Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on a claims-occurred basis. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Business Automobile Liability insurance provided by Company shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this Contract. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Workers' Compensation coverage provided by Company shall inure to the benefit of employees injured during the course and scope of their employment by Company pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name City as an additional insured on a claims occurred basis. City shall be provided the notice by Company's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Company shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, Company shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of City. City shall not be required to provide any insurance whatsoever pursuant to this Contract.

Company certifies that the certificate of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. Company shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of Company.

22. **Assignment**: Company shall not, either directly or indirectly, assign all or any part of this Contract or any interest, right or privilege herein, without the prior written consent of City. The issue on whether

or not to grant consent to an assignment is in the sole discretion of City.

23. **RELEASE: NOTWITHSTANDING ANY OTHER PROVISIONS, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE**.

24. **Governing Law and Venue:** This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way to the subject matter of this Contract, without regard to conflict on laws and rules that would direct application of the laws of another jurisdiction.

25. **Independent Contractor:** It is expressly understood and agreed that Company shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of City; that Company shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between City and Company, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between City and Company. No person performing any of the work and services described hereunder by Company shall be considered an officer, agent, servant or employee of the City. Further, it is specifically understood and agreed that nothing in this Contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Company shall be an independent contractor under this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. City does not have the power to direct the order in which the work is

done. City shall not have the right to control the means, methods or details of the Company's work. Company shall assume exclusive responsibility for the work. Company is entirely free to do the work in its own way.

26. **Notice of Alleged Breach; Statutory Prerequisites:** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Company or its legal representative, shall give the City Manager, or any other reasonable official of City, notice in writing (consisting of one original and seven copies of notice attached to a copy of this Contract) of such damages, duly verified, within one-hundred fifty (150) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Company will settle, the physical and mailing addresses of Company at the time and date the claim was presented and the physical and mailing addresses of Company for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Company relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except City from any liability whatsoever. City is under no obligation to provide notice to Company that Company's notice is insufficient. City reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Company's failure to comply with the requirements herein shall perpetually bar Company's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if City has actual or constructive notice or knowledge of said claim or alleged damages. Company agrees that the requirements of this entire Contract are reasonable.

27. **Consideration:** The terms of this Contract are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

28. **Termination At Will:** City may terminate this Contract at will for no or any reason upon giving at least one hundred eighty (180) days written notice to Company. The parties to this Contract understand and agree that it is in City's sole discretion to cancel the Contract during the term of the Contract without penalty to City. Company has no expectation and has received no guarantees that this Contract will not be terminated before the end of the Contract term. The parties have bargained for the flexibility of terminating

this Contract upon tender of the requisite notice at any time during the term of the Contract. All work and services under the Contract shall be suspended upon termination of the Contract becoming effective.

29. **Compliance:** Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

30. To the extent that Tex. Gov't Code section 2270.002 applies to this Contract, Company hereby verifies that Company does not boycott Israel and will not boycott Israel during the term of this Contract. If Tex. Gov't Code section 2270.002 does not apply to this Contract, such verification is not required, and Company shall be deemed to have not made such verification.

31. **Records Retention and Production of Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to City for the duration of the contract, (2) promptly provide to City any contracting information related to the Contract that is in the custody or possession of Company on request of City, and (3) on completion of the Contract, either (i) provide at no cost to City all contracting information related to the Contract that is in the custody or possession of Company, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to City.

32. **Public Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

33. **Conflict of Terms.** If a conflict of terms or language exists between (i) any of the provisions of this Contract and (ii) any of the provisions contained in Exhibit A, precedence shall be given to the provisions of this Contract. For the avoidance of any doubt, the provisions contained in this Contract shall supersede any and all conflicting provisions contained in Exhibit A.

EXECUTED IN DUPLICATE the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Courtney B. Sharp, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLYAS TO FORM

_____
John Ohnemiller, City Attorney

COMPANY:

By: _____

Name:_____

Title: _____

STATE OF _____ §

§

COUNTY OF_____ §

BEFORE ME, the undersigned authority, on this ____ day of _____, 20____ personally appeared, _____, an officer of _____, known to me to be the person and official whose name is subscribed to the forgoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____day of _____, 20____.

_____

Notary Public, State of Texas

EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, issued by a bank satisfactory to the Owner, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the owner, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

EXHIBIT D – HEAVY AND HIGHWAY – rev 01-05-18

General Decision Number: TX180007 01/05/2018 TX7

Superseded General Decision Number: TX20170007

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.36	
Structures	$ 13.52	
LABORER		
Asphalt Raker	$ 12.28	
Flagger	$ 9.30	
Laborer, Common	$ 10.30	
Laborer, Utility	$ 11.80	

Work Zone Barricade
Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
Asphalt Distributer.....$ 14.87
Asphalt Paving Machine.....$ 13.40
Broom and Sweeper.....$ 11.21
Crane, Lattice Boom 80
Tons or Less.....$ 16.82
Crawler Tractor Operator....$ 13.96
Excavator, 50,000 lbs or
less.....$ 13.46
Front End Loader Operator,
Over 3 CY.....$ 12.77
Front End Loader, 3CY or
less.....$ 12.28
Loader/Backhoe.....$ 14.18
Mechanic.....$ 20.14
Milling Machine.....$ 15.54
Motor Grader, Rough.....$ 16.15
Motor Grader, Fine.....$ 17.49
Pavement Marking Machine....$ 16.42
Reclaimer/Pulverizer.....$ 12.85
Roller, Asphalt.....$ 10.95
Roller, Other.....$ 10.36
Scraper.....$ 10.61
Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
Lowboy-Float.....$ 14.46
Single Axle.....$ 12.74
Single or Tandem Axle Dump..$ 11.33
Tandem Axle Tractor with
Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons

resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

BID BOND

THE STATE OF TEXAS §

SURETY NO. _____

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____

_____

(hereinafter called the Principal), as Principal, and _____

_____

_____

(hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____

_____ DOLLARS

($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written Contract with the obligee to_____

_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damages.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas

IN WITNESS THEREOF, THE SAID PRINCIPAL AND SURETY do sign and seal this instrument, this _____ day of _____, 20____.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PAYMENT BOND

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

SURETY'S NO. _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____,

_____

of the City of_____ County of_____,

and State of_____ as Principal, and _____

_____ (hereinafter

called the Surety(s)), as Surety(s), are held and firmly bound unto the City of Midland, Texas, a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of_____

DOLLARS, ($_____),for the payment whereof the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20____, to _____

_____,

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise, it is to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

PROVIDED further that this Payment Bond is submitted in compliance with Chapter 2253 of the Texas Government Code.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this

Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of this contract, assignment thereof, or to the work to be performed thereunder.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this _____ day of _____, 20_____.

_____	_____
Principal	Surety
By_____	By_____
Address_____	Address_____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____ , 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of _____ , specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PerfB 2

Consideration of Location of Bidder's Principal Place of Business
For Bids of $50,000 up to $100,000 for Services and $500,000 for Commodities
Affidavit of Eligibility

Pursuant to Texas Local Government Code 271.9051, in purchasing real property, personal property that is not affixed to real property, or services, if the City receives one or more bids from a bidder whose principal place of business is in the City of Midland and whose bid is within five percent (5%) of the lowest bid price received by the City from a bidder who is not a resident of the City of Midland, the City may enter into a contract with:

(1) the lowest bidder; or

(2) the bidder whose principal place of business is in the City of Midland if the City Council determines, in writing, that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City of Midland created by the contract award, including the employment of residents of the City of Midland and increased tax revenues to the City of Midland.

In order to receive consideration, bidders must submit this affidavit to:

Erika Martinez
Purchasing Manager
City of Midland
300 N. Loraine St.,
PO BOX 1152
Midland, TX 79702-1152

Complete all areas below. Incomplete affidavits may be rejected.

Local Business Name: _____

Local Address (must be within the City limits): _____

1. Is the above address the principal place of business for the business named above? ☐ Yes ☐ No
2. How many residents of the City of Midland are employed at the above business location? _____
3. Year your business was established in the City of Midland: _____
4. If you collect sales tax for ANY class of customer, provide the following Reseller information:

   Reseller Permit Number: _____

   Company Name and Address (as it appears on permit):

   _____

   _____

   _____

5. Does your business have more than one office in the State of Texas? ☐ Yes ☐ No
   If Yes, identify the office location considered as the point-of sale for the purpose of sales tax calculation:

   _____

   _____

6. Was the local business required to pay business and/or real property tax for the most recent tax year?

   ☐ Yes ☐ No

   If Yes, did the local business pay any of this tax to the City of Midland? ☐ Yes ☐ No

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct. It is further acknowledged that any person, firm, corporation or entity intentionally submitting false information to the City in an attempt to qualify for eligibility shall be prohibited from bidding on City of Midland products and services for a period of one (1) year.

Authorized Signature: _____ Date: _____

Printed Name and Title: _____

IMPORTANT NOTICE

Conflict Of Interest Reporting Requirements

Compliance with LOCAL GOVERNMENT CODE TITLE 5. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES SUBTITLE C. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES OF MORE THAN ONE TYPE OF LOCAL GOVERNMENT CHAPTER 176. DISCLOSURE OF CERTAIN RELATIONSHIPS WITH LOCAL GOVERNMENT OFFICERS; PROVIDING PUBLIC ACCESS TO CERTAIN INFORMATION.

Form CIQ: This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire shall be filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

Bidders are responsible for filing Conflict of Interest form "CIQ" in accordance with the above referenced statute. Failure to do so is a class C Misdemeanor. Contracts or Purchase Orders awarded to a vendor that has violated this law is subject to termination at such time that the violation is discovered with no recourse to the City of Midland. The bidder will be subsequently removed from the bidders list for a minimum of one year.

When there is no known conflict of interest as defined by the statute, it is not necessary to file/submit the Form CIQ. The form must be submitted if a conflict is subsequently discovered.

By submitting a response to this request, vendor represents that it complies with the requirements of Chapter 176 of the Texas Local Government Code.

For a current list of the local government officers go to: http://www.midlandtexas.gov/

Upon completion of the form, sign and submit with bid or mail to:

City of Midland
Attn: City Secretary
PO Box 1152
Midland, Texas 79702

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

_____ _____

Signature of vendor doing business with the governmental entity Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/COMPANY OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/COMPANY MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.

IF THE SELECTED BIDDER/COMPANY CANNOT MEET THE ABOVE REQUIREMENTS, THEN **THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER**.

IMPORTANT NOTICE – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/COMPANY MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE, WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.

COMPLIANCE: Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended. For further instructions on how to comply with Texas Government Code Section 2252.908 and Texas Local Government Code Section 176.006,

please go to https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm.

ANY VENDOR WHO FAILS TO COMPLY WITH THE TERMS OF THE AWARD **MAY BE DECLARED AN IRRESPONSIBLE VENDOR**. BIDS SUBMITTED BY SAID VENDOR SHALL NOT BE CONSIDERED AGAIN FOR A MINIMUM PERIOD OF SIX MONTHS AS DETERMINED BY THE CITY MANAGER.

SECTION 00 41 00 - BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Midland
300 North Loraine
Midland Texas 9701

1.02 Undersigned Bidder proposes and agrees, if Bid accepted, to enter Agreement with Owner in form included in Bidding Documents, to perform all Work as specified or indicated in Bidding Documents for prices and within times indicated in this Bid, per other terms and conditions of Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all terms and conditions of Section 00 21 13 "Instructions to Bidders," including without limitation, those dealing with disposition of Bid security. This Bid remains subject to acceptance 60 days after Bid opening, or for such longer time Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting Bid, Bidder represents:

A. Bidder examined and carefully studied Bidding Documents, and any data and reference items identified in Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date

B. Bidder visited the Site, conducted a thorough and alert visual examination of Site and adjacent areas, is familiar with and satisfied as to general, local, and Site conditions that may affect cost, progress, and performance of Work.

C. Bidder is familiar with and satisfied as to laws and regulations that may affect cost, progress, and performance of Work.

D. Bidder carefully studied all: reports of explorations and tests of subsurface conditions at or adjacent to Site and all drawings of physical conditions relating to existing surface or subsurface structures at Site.

E. Bidder considered: information known to Bidder, information commonly known to contractors doing business near Site, information and observations obtained from Site visits, Bidding Documents, and any Site-related reports and drawings identified in Bidding Documents, with respect to effect of such information, observations, and documents on (1) cost, progress, and

performance of Work; (2) means, methods, techniques, sequences, and procedures of construction employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on information and observations referred to in Article 3.01.E, no further examinations, investigations, explorations, tests, studies, or data are necessary to determine Bid for performance of Work at price Bid and within times required, per other terms and conditions of Bidding Documents.

G. Bidder is aware of general nature of work performed by Owner and others at Site that relates to Work as indicated in Bidding Documents.

H. Bidder gave Engineer written notice of all conflicts, errors, ambiguities, or discrepancies Bidder discovered in Bidding Documents, and confirms written resolution thereof by Engineer, is acceptable to Bidder.

I. Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing Work.

J. Submission of Bid constitutes an incontrovertible representation by Bidder that Bidder complied with every requirement of this Article, and without exception, Bid and all prices in Bid are premised upon performing and furnishing Work required by Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies:

A. Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity nor submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for Contract. For Article 4.01.D:

1. Corrupt Practice: Offering, giving, receiving, or soliciting anything of value likely to influence action of a public official in bidding process;

2. Fraudulent Practice: Intentional misrepresentation of facts made to (a) influence bidding process to detriment of Owner, (b) establish bid prices at artificial noncompetitive levels, or (c) deprive Owner of benefits of free and open competition;

3. Collusive Practice: Scheme or arrangement between two or more Bidders, with or without Owner knowledge, to establish bid prices at artificial, noncompetitive levels; and

4. Coercive Practice: Harming or threatening to harm, directly or indirectly, persons or property to influence participation in bidding process or affect Contract execution.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete Work per Contract Documents for the following price(s):

City of Midland Municipal Solid Waste Landfill Cell 5A & 6 Excavation & Liner Construction					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Total Price**
BASE BID					
Project Mobilization & Site Preparation					
1	Mobilization (3% Max.)	LS	1	$	$
2	Clearing and Grubbing	LS	1	$	$
3	Asphalt Pavement Removal	SY	6,380	$	$
4	Relocate Soil Borrow Material	CY	368,000	$	$
5	Erosion Control	LS	1	$	$
Cell Construction					
6	Excavation	CY	1,824,000	$	$
7	Embankment Fill	CY	8,000	$	$
8	Subgrade Preparation - Floor	SF	1,725,000	$	$
9	Subgrade Preparation - Side Slope	SF	86,460	$	$
10	Geosynthetic Clay Liner (GCL) - Floor	SF	1,725,000	$	$
11	Geosynthetic Clay Liner (GCL) - Side Slopes	SF	86,460	$	$
12	Geomembrane - Smooth	SF	1,725,000	$	$
13	Geomembrane - Textured	SF	86,460	$	$
14	Geocomposite Drainage Layer	SF	1,811,460	$	$
15	Protective Soil Cover	SF	1,811,460	$	$
16	Geotextile Fabric - 8oz	SF	27,000	$	$
17	Gravel Drainage Material	CY	820	$	$
18	6-Inch Leachate Collection Pipe	LF	2,000	$	$
19	Sump Pump, Control and Wiring	EA	1	$	$
20	Sump Access Structure (including all Appurtenances)	EA	1	$	$
21	24-Inch Riser Pipe	LF	170	$	$
22	48"x10' HDPE DR32.5 Temporary Sump (including all Appurtenances)	EA	1	$	$
23	Anchor Trench	LF	860	$	$
24	Relocate Existing Waste to Expose Tie-in	CY	1,610	$	$
25	Liner Tie-in	LF	1,960	$	$
26	GLER/GCLER Marker	EA	10	$	$
27	Cell 5 Protective Cover Berm (including sacrificial liner, gravel and all other appurtenances) as shown on the Sheet Set	LF	1,260	$	$
Base Bid Subtotal					**$**
Construction Grand Total					**$**

Bidder acknowledges (1) each Bid Unit Price includes an amount considered by Bidder adequate to cover Contractor overhead and profit for each separately identified item; and (2) estimated quantities are not guaranteed, solely to compare Bids, and final payment for all unit price Bid items based on actual quantities, determined as provided in Contract Documents.

Total of Lump Sum and Unit Price Bids = Total Bid Price **$** _____

Bidder acknowledges estimated quantities not guaranteed, solely to compare Bids, and final payment for all unit price Bid items based on actual quantities, determined as provided in Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees Work is substantially complete, completed, and ready for final payment on or before dates or within number of calendar days indicated in Agreement.

6.02 Bidder accepts provisions of Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 – DEFINED TERMS

8.01 Terms used in this Bid with initial capital letters have meanings stated in Sections 00 21 13 "Instructions to Bidders.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:*[Signature]* _____

[Printed name] _____

If Bidder is a corporation, limited liability company, partnership, or joint venture, attach evidence of authority to sign.

Attest:*[Signature]* _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for notices:

_____

_____

_____

Phone Number: _____

Fax Number: _____

Contact Name and email address: _____

_____

SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Work covered by Contract Documents.
   2. Contractor use of site and premises.
   3. Permits.
   4. Owner occupancy.
B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Identification: City of Midland Municipal Solid Waste Landfill, Cells 5 & 6 Excavation and Liner Construction.
B. Location: Midland, Texas.
C. Owner: City of Midland.
D. Work consists of site clearing, grading, excavating, compacting, and lining cell.

1.3 CONTRACTOR USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:
   1. Owner occupancy.
   2. Work by others and Owner.
   3. Public access.
B. Construction operations: Limited to areas noted on Drawings.
C. Time restrictions for performing Work:
   1. Work substantially completed within 270 days after Contract Times commence to run, completed and ready for final payment within 300 days after Contract Times commence to run.
D. Utility outages and shutdowns.
   1. Coordinate and schedule utility outages/shutdown.
   2. Allowed only at previously-agreed-upon times.
   3. Schedule at least one week before outage/shutdown.
   4. Submit outage/shutdown request to Engineer itemizing dates, times, and durations of early requested outage/shutdown.

1.4 PERMITS

Furnish all necessary permits for construction of work including stormwater permit and any other permit as Owner deems necessary.

1.5 OWNER OCCUPANCY

A. Owner will occupy premises during construction to conduct normal operations.
B. Cooperate with Owner to minimize conflict and facilitate Owner operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Schedule of Values.
   2. Application for Payment.
   3. Change Procedures.
   4. Measurement and payment - unit prices.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SCHEDULE OF VALUES

A. Submit Schedule of Values within 15 days after date established in Notice to Proceed.

B. Format: Utilize Table of Contents (TOC) of this Project Manual. Identify each line item with number and title of major Specifications. Identify site mobilization, bonds, and insurance as separate line items.

C. Include within each line item, a directly proportional amount of Contractor's overhead and profit.

D. Revise schedule to list approved Change Orders with each Application For Payment.

1.3 APPLICATIONS FOR PAYMENT

A. Submit application on Engineer-provided/-approved Application for Payment or Contractor’s standard form, approved by Engineer.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

C. Payment Period: As defined in Owner-Contractor agreement.

D. Complete Application for Payment includes Construction progress schedule, and submittal schedule, all required to process Application for Payment.

1.4 CHANGE PROCEDURES

A. Submittals: Submit name of person authorized to receive change documents and responsible for informing others in Contractor’s employ or subcontractors of changes to Work.

B. Carefully study and compare Contract Documents before proceeding with fabricating and installing Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.

C. Requests for Information (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer. Establish procedures for handling queries and clarifications.
   1. Use Contractor’s standard RFI or Engineer’s standard RFI for requesting information.
   2. Engineer may respond with a direct answer on RFI form.

D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Price or Time by issuing supplemental instructions.

E. Engineer may issue Change Order, including a detailed description of proposed change with supplementary or revised Drawings and Specifications for executing change. Contractor will prepare and submit proposed change in Contractor Price and/or Time within seven days.

F. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change, and its full effect on Work. Include a statement describing reason for change, effect on Contract Price and Time, with full documentation.
G. Stipulated Price Change Order: Based on Engineer's Change Order form and Contractor's fixed price quotation as recommended by Engineer and accepted by Owner and Contractor.
H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units not predetermined, execute Work under Change Order, as recommended by Engineer and accepted by Owner and Contractor.
I. Work Directive Change: Engineer may issue directive on Work Change Directive signed by Owner, instructing Contractor to proceed with change in Work, for subsequent inclusion in Change Order. Document will describe changes in Work and designate method of determining any change in Contract Price or Time. Promptly execute change.
J. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
K. Change Order Forms: Engineer-accepted Change Order form.
L. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
M. Correlation of Contractor Submittals:
    1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Price.
    2. Promptly revise Progress Schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of Work affected by change, and resubmit.
    3. Promptly enter changes in Record Documents.

1.5 UNIT PRICES

A. Authority: Measurement methods delineated in Section 01 22 00 "Measurement and Payment."
B. Take measurements and compute quantities. Engineer to verify.
C. Unit Quantities: Quantities and measurements indicated in Bid Form are for Contract purposes only. Quantities and measurements supplied or placed in Work determine payment. When actual Work requires more or fewer quantities than those indicated, provide required quantities at contracted unit prices.
D. Payment Includes:
    1. Full compensation for required labor, products, tools, equipment, plant, transportation, services, and incidentals;
    2. Erection, application, or installation of Work item;
    3. Overhead and profit.
E. Final payment for Work governed by unit prices will be made based on actual measurements and quantities accepted by Engineer multiplied by unit price for Work incorporated in or made necessary by Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Procedures for measurement and payment.
   2. Mobilization demobilization.
   3. Unit price items.
   4. Lump sum items.
   5. Bid Form-specific payment items.

B. Related Requirements:
   1. Section 00 41 00 “Bid Form.”
   2. Other Division 01 Specification Sections apply to Work of the Section.

1.2 PROCEDURES FOR MEASUREMENT AND PAYMENT

A. Unit price bid on each item as stated in Section 00 41 00 “Bid Form” includes furnishing all labor, superintendence, machinery, equipment, and materials, except as otherwise specified, necessary, or incidental to complete various item of Work per Drawings and Specifications.

B. Cost of Work or materials shown on Drawings or called for in Specifications and on which no separate payment is made, included in bid prices on various pay items.

C. Payment not made for any items not complete, including all associated incidental Work.

1.3 UNIT PRICE ITEMS

A. Unit price items, not otherwise included herein, paid at a unit price per unit.

B. Payment will include all work and material for installing unit price item as specified.

C. Measurement made in units shown on Section 00 41 00 “Bid Form.”

1.4 LUMP SUM ITEMS

A. Lump sum items include all work and materials for installing lump sum item as specified.

B. Payment based on percentage complete basis as agreed by Engineer and Contractor.

C. Payment includes all work and material for installing lump sum bid item as specified.

1.5 MOBILIZATION/DEMOBILIZATION (BID ITEM 1)

A. Payment made for mobilizing and demobilizing all equipment, tools, insurance, bonds, and all other job-related items to and from site. Price will be on a lump sum basis and include all equipment, labor, materials, superintendence, and all incidentals necessary to become fully mobilized at stat of project and demobilized when work is complete. This bid item shall not exceed 3 percent of contract price. Mobilization-related expenses including Contractor cost for:
   1. Obtaining construction staging area;
   2. Obtaining storage areas for equipment and construction office facilities;
   3. Obtaining and paying for electric power required for Construction;
   4. Obtaining and paying for phone service during Construction;
   5. Providing sanitary facilities for construction personnel;
   6. Obtaining and paying for water needed for Construction;

7. Providing and maintaining dust control over the project working areas; and
8. All other incidentals required for Contractor to complete mobilization.

1.6 BID FORM-SPECIFIC PAYMENT ITEMS

A. Site Preparation:
   1. Clearing/Grubbing (Bid Item 2):
      a. Payment made for removing surface debris, trees, shrubs, and other vegetation from the project area. Price will be on a lump sum basis and include all equipment, labor, materials, superintendence, and all incidentals necessary for site preparation.
   2. Asphalt Pavement Removal (Bid Item 3):
      a. Payment made for removing the existing asphalt pavement within the project area as shown on the Plans. Price will be on a per square yard basis and include all equipment, labor, materials, superintendence, and all incidentals necessary to remove the asphalt pavement, milled and stockpiled in the designated area as identified in the Plans or as directed by Engineer.
   3. Relocate Soil Borrow Material (Bid Item 4):
      a. Payment made for relocating borrow materials from an approximately 60-foot high soil stockpile within the project area to the designated soil stockpiling area as indicated on Plans or as directed by Engineer. Payment will be made on a cubic yard basis and include all equipment, labor, materials, superintendence, and all incidental necessary.
   4. Erosion Control (Bid Item 5):
      a. Payment made for providing, installing, and maintaining erosion control measures as shown on Plans on a lump sum basis and may including:
         1) Preparation of a formal Storm Water Pollution Prevention Plan (SWPPP) including preparation of NOI and NOT at end of Project (if required);
         2) Submitting and obtaining approval of formal SWPPP from required governing agencies (as required);
         3) Furnishing, installing, and maintaining approved SWPPP complete for project duration (as required);
         4) Implementing and maintaining best management practices (BMPs) and good housekeeping for control of drainage run-off over site:
         5) Silt-fences;
         6) Soil stabilization;
         7) Hay-bales;
         8) Fiber rolls; and
         9) All other incidentals required for Contractor to complete and implement the SWPPP requirements.

B. Cell Construction:
   1. Excavation (Bid Item 6):
      a. Payment made on a per cubic yard basis for providing all labor, equipment, materials, supplies, etc., necessary to excavate cell to elevations and grades shown on Plans to receive lining system. Contractor must provide survey control baseline survey before beginning work and finish survey measurements to verify amount of excavation for payment purposes.
   2. Embankment Fill (Bid Item 7):
      a. Payment made on a per cubic yard basis for providing all labor, equipment, materials, supplies, etc., necessary to fill areas shown to receive lining system and construct berms per Plans and Specifications. Contractor must provide

survey control baseline survey before beginning work and finish survey measurements to verify amount of fill for payment purposes.

3. Subgrade Preparation – Floor (Bid Item 8):
    a. Payment made on a per square foot basis for providing all labor, equipment, materials, supplies, etc., necessary to prepare floor areas to receive lining system and leachate collection system including all grading and compaction as shown on Plans and Specifications.
4. Subgrade Preparation – Side Slope (Bid Item 9):
    a. Payment: Made on a per square foot basis for providing all labor, equipment, materials, supplies, etc., necessary to prepare slope areas from toe of slope up to inside edge of anchor trench, to receive lining system as shown on Plans.
5. Geosynthetic Clay Liner (GCL) – Floor (Bid Item 10):
    a. Payment made for providing and installing reinforced GCL including all labor, equipment, materials, supplies, and superintendence necessary to install GCL as shown on Plans. Payment made for actual measured square footage of liner installed and in place. Payment made on net quantity of floor surface area covered. No additional quantity paid for material overlap.
6. Geosynthetic Clay Liner (GCL) – Side Slopes (Bid Item 11):
    a. Payment made for providing and installing reinforced GCL, constructing and backfilling anchor trench, including all labor, equipment, materials, supplies, and superintendence necessary to install reinforced GCL as shown on Plans. Payment made for actual measured square footage of liner installed and in place up to back edge of anchor trench. Payment made on net quantity of surface area covered. No additional quantity paid for material overlap.
7. Geomembrane – Smooth (Bid Item 12):
    a. Payment made for providing and installing a 60-mil thick, smooth high-density polyethylene (HDPE) liner including all labor, equipment, materials, supplies, etc., for complete installation. Payment made for actual measured square footage of liner installed and in place. No additional pay quantity made for sacrificial membrane. No additional quantity paid for material overlap.
8. Geomembrane – Textured (Bid Item 13):
    a. Payment made for providing and installing a 60-mil thick, textured HDPE liner including all labor, equipment, materials, supplies, etc., for complete installation. Price includes cost of anchor trench construction and compaction of backfill in anchor trench after liner installation. Payment made for actual measured square footage of liner installed and in place up to back edge of anchor trench. No additional pay quantity made for sacrificial membrane. Payment made on net quantity of surface area covered. No additional quantity paid for material overlap.
9. Geocomposite Drainage Layer (Bid Item 14):
    a. Payment made for providing and installing dual Geonet/Geotextile drainage geocomposite as shown on Plans. Price includes all material, labor, supplies, equipment, and superintendence necessary to install geotextile fabric as specified. Payment made on net quantity of gravel surface area covered on a per square foot basis. No additional quantity paid for material overlap.
10. Protective Soil Cover (Bid Item 15):
    a. Payment made to install soil cover material available onsite. Price includes all labor, material, equipment, and superintendence necessary to install soil. Payment made for actual measured square footage of 2-foot-thick (perpendicular from liner) protective floor cover up to toe of side slopes.

11. Geotextile Fabric – 8-oz (Bid Item 16):
    a. Payment made for providing and installing 8-oz geotextile fabric as shown on Plans. Price includes all material, labor, supplies, equipment, and superintendence necessary to install geotextile fabric as specified. Payment will be made on a per square foot basis. No additional quantity paid for material overlap.
12. Gravel Drainage Material (Bid Item 17):
    a. Payment made for providing and installing gravel drainage material as shown on Plans. Price includes all material, labor, supplies, equipment, and superintendence necessary to install gravel drainage material as specified. Payment will be made on a per cubic yard basis.
13. Leachate Collection Pipe (Bid Item 18):
    a. Payment made for providing and installing 6-inch HDPE piping as shown on Plans. Item includes all pipe along landfill floor up to collection sump. Pipe from collection sump up side slope to top of slope is considered part of sump assess structure Bid Item. Price includes all material, labor, supplies, equipment, and superintendence necessary to install 6-inch HDPE piping as specified. Payment will be made on a per linear foot basis.
14. Sump Pump, Control and Wiring (Bid Item 19):
    a. Payment made on a per each unit basis for complete and operable leachate sump and access structure. Unit bid price includes but not limited to leachate pump and cabling, valve boxes, control panel, rack, magmeter (flow meter) and appurtenances. Unit price per sump includes all materials, labor, supplies, equipment, and superintendence necessary for complete and operable leachate collection sump and access structure.
15. Sump Access Structure (Bid Item 20):
    a. Payment made for a complete and operable leachate sump and access structure. Unit Bid Price includes but not limited to discharge hoses, piping, pressure transducer, air release valve, check valve, isolation valves, 12-inch sump pipe, 6-inch cleanout pipe, 2-inch water pipe, valve boxes, additional soil cover over pipes, and appurtenances. Unit price per sump includes all materials, labor, supplies, equipment, and superintendence necessary for complete and operable leachate collection sump and access structure.
16. 24-Inch Riser Pipe (Bid Item 21):
    a. Payment made for providing and installing 24-inch HDPE piping as shown on Plans. Price includes all materials, labor, supplies, equipment and superintendence necessary to install HDPE piping as specified. Payment will be made on a per linear foot basis.
17. 48-Inch x 10-Foot HDPE DR32.5 Temporary Sump (Bid Item 22):
    a. Payment made on a per each unit basis for HDPE temporary sump structure as shown on Plans. Price includes all materials, labor, supplies, equipment, and superintendence necessary for complete and operable temporary leachate collection sump and access.
18. Anchor Trench (Bid Item 23):
    a. Payment made on a per linear foot basis for the anchor trench shown on Plans. Price includes excavation, hauling and placement of soil as specified in Plans and Specifications. Price shall include application of water for compaction and dust control. Estimated quantities stipulated in Bid Form are approximate and are only a basis for estimating probably cost of Work and for comparing Bids submitted for Work. Basis of payment will be the actual amount of Work completed.

19. Relocating Existing Waste to Expose Tie-In (Bid Item 24):
    a. Payment made on per cubic yard basis for relocating the waste to expose the linear tie-in as specified on the Plans. Estimated quantities stipulated in Bid Form are approximate and are only a basis for estimating probable cost of Work and for comparing Bids submitted for Work. Basis of payment will be the actual amount of Work completed.
20. Liner Tie-In (Bid Item 25):
    a. Payment made on a per linear foot basis for liner tie-in as shown on Plans. Price includes all materials, labor, supplies, equipment, and superintendence necessary for liner tie-in with the existing liners.
21. GLER/GCLER Marker (Bid Item 26):
    a. Payment made on a per each unit basis for the GLER/GCLER markers shown on Plans. Price includes all materials, labor, supplies, equipment, and superintendence necessary to complete markers.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality assurance.
   2. Product options.
   3. Product substitution procedures.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY ASSURANCE

A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.

B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.

C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless Owner accepts substitution and approves in writing.

1.3 PRODUCT OPTIONS

A. See Section 01 60 00 “Product Requirements.”

1.4 PRODUCT SUBSTITUTION PROCEDURES

A. Engineer will consider requests for substitutions only within 30 days after date established in Notice to Proceed.

B. Substitutions may be considered when product becomes unavailable through no fault of Contractor.

C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
   1. Manufacturer name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
   2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
   3. Reference to Article numbers in Specifications.
   4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
   5. Changes required in other Work.
   6. Availability of maintenance service and source of replacement parts, as applicable.
   7. Certified test data to show compliance with performance characteristics specified.
   8. Samples when applicable or requested.
   9. Other information as necessary to assist Engineer's evaluation.

D. A request constitutes a representation Contractor:
   1. Investigated proposed product and determined it meets/exceeds quality level of specified product.
   2. Will provide same warranty for substitution as specified product.
   3. Will coordinate installation and make changes to other Work required for Work to complete with no additional cost to Owner.
   4. Waives claims for additional costs/time extension that subsequently become apparent.

5. Will coordinate installation of accepted substitute, making required changes for Work to complete in all respects.
6. Will reimburse Owner for review/redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions not considered when indicated/implied on Shop Drawing or Product Data submittals without separate written request or acceptance requires revision to Contract Documents.

F. Substitution Submittal Procedure:
1. Submit requests for substitutions on Contractor-standard or Engineer-provided form.
2. Submit electronic files to Project website of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on Contractor.
4. Engineer will notify Contractor in writing of decision to accept/reject request.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Project Information Management.
   2. Coordination.
   3. Preconstruction meeting.
   4. Request for information.
   5. Progress meetings.
   6. Preinstallation meetings.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 PROJECT INFORMATION MANAGEMENT

A. Project Website:
   1. Use Newforma Info Exchange at https://projects.team-psc.com/UserWeb/Login to send and receive Project information.
   2. Contact Engineer to set up user name and password information.
   3. If Project is not listed when logged in, contact Engineer to add Project to your account.

B. Project information includes, but is not limited to:
   1. Product Submittals.
   2. Requests for Information (RFI).
   3. Applications for Payment.
   4. Schedules.
   5. Construction Change Requests (CCRs).
   6. Close-out Documents.
   7. Construction Document Files.

1.3 COORDINATION

A. Coordinate scheduling, submittals, and Work to assure efficient and orderly sequence of installation of construction elements.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing such equipment in service.

C. In finished building areas, except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements, as applicable.

D. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

E. After Owner occupancy of premises, coordinate access to site with Owner for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 PRECONSTRUCTION MEETING

A. Engineer will schedule a meeting after Notice to Proceed.

B. Attendance Required:
   1. Owner.
   2. Engineer.
   3. Contractor.
   4. Major subcontractors.

C. Agenda:
   1. Distribute Contract Documents.
   2. Submit lists of subcontractors and products, Schedule of Values, submittal schedule, and progress schedule.
   3. Designate personnel representing each party in Contract and Engineer.
   4. Procedures and processing field decisions, submittals, substitutions, Applications for Payments, proposal request, Change Orders, Request for Information (RFI), and Contract closeout procedures.
   5. Review Notice to Proceed and Substantial/Final Completion Dates.
   6. Workmen's identification and background checks.
   7. Stormwater Pollution and Prevention Plan (SWPPP), if necessary.
   8. Scheduling:
      a. Use of premises by Owner and Contractor.
      b. Owner's requirements.
      c. Construction facilities and controls provided by Owner.
      d. Temporary utilities provided by Owner.
      e. Security and housekeeping procedures.
      f. Construction progress meetings.
      g. Procedures for testing.
      h. Procedures for maintaining record documents.
      i. Requirements for start-up of equipment.
      j. Inspection and acceptance of equipment put into service during construction.
   9. Scheduling activities of Construction Material Testing lab.

D. Engineer shall record minutes and distribute copies to participants.

1.5 REQUEST FOR INFORMATION (RFI)

A. RFI requests from subcontractors or material suppliers will not be considered.

B. Information indicated on RFI shall be complete before submission. If Engineer determines request can be answered with information provided, Engineer will assign RFI tracking number. If Engineer determines request is not an RFI, request will be returned to Contractor electronically and deleted from Engineer's electronic tracking software without assigning an RFI tracking number. A transmittal document returning denied RFI request will be provided with a response indicating action to be taken by Contractor.

C. RFIs may contain more than one item when items are related. Otherwise, only one item shall be addressed on each RFI request.

D. Allow seven days for Engineer's response to each RFI.

E. Response to RFI will be issued to Contractor and Owner per Section 01 33 00 "Submittal Procedures."

F. Responses from Engineer are not changes unless issued with a change per Section 01 20 00 "Price and Payment Procedure."

1.6 PROGRESS MEETINGS

A. Schedule and administer meetings monthly or as necessary throughout Work progress, at minimum.

B. Engineer will Arrange meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required:
   1. Owner.
   2. Job superintendent.
   3. Major subcontractors.
   4. Suppliers.
   5. Engineer.
   6. As appropriate to agenda topics for each meeting.

D. Agenda:
   1. Review minutes of previous meetings.
   2. Review Work progress.
   3. Field observations, problems, and decisions.
   4. Identify problems which impede planned progress.
   5. Review submittal schedule and status of submittals.
   6. Review off-site fabrication and delivery schedules.
   7. Maintenance of progress schedule.
   8. Corrective measures to regain projected schedules.
   9. Planned progress during succeeding Work period.
   10. Coordinate projected progress.
   11. Maintenance of quality and work standards.
   12. Effect of proposed changes on progress schedule and coordination.
   13. Testing as necessary.
   14. Other business relating to Work.

E. Record minutes and distribute copies within five days to Engineer, participants, and those affected by decisions made.

1.7 PREINSTALLATION MEETING

A. When required in individual Specifications, convene a preinstallation meeting at site before installing Work.

B. Require attendance of parties directly affecting, or affected by, Work.

C. Notify Primary Designer 14 days in advance of meeting date.

D. Prepare agenda and preside at meeting.
   1. Review conditions of installation, preparation, and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within five days after meeting to participants and copy Engineer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittals.
   2. Bar/Gantt chart schedules.
   3. Review and evaluation.
   4. Updating schedules.
   5. Distribution.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTALS

A. Post as electronic file to Project website.

B. Submit initial progress schedule for Engineer review within 15 days after established Notice to Proceed date.

C. Schedule Updates:
   1. Submit with each Application for Payment.
   2. Projected and actual percent of completion.
   3. Completion progress by listed activity and subactivity, to within five working days prior to submittal.
   4. Changes in Work scope and activities modified since submittal.
   5. Delays in submittals or resubmittals, deliveries, or Work.
   6. Adjusted or modified sequences of Work.
   7. Other identifiable changes.
   8. Revised projections of progress and completion.

D. Narrative Progress Report:
   1. Submit with each Application for Payment.
   2. Summary of Work completed during past period between reports.
   3. Work planned during next period.
   4. Explanation of differences between summary of Work completed and Work planned in previously-submitted report.
   5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
   6. Corrective action taken or proposed.

1.3 BAR/GANTT CHART SCHEDULES

A. Format Bar/Gantt chart Schedule, to include at least:
   1. Identification and listing, in chronological order, activities reasonably required to complete Work, including:
      a. Subcontract Work.
      b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
      c. Move-in and other preliminary activities.

d. Equipment and equipment system test and startup activities.
e. Project closeout and cleanup.
f. Work sequences, constraints, and milestones.

2. Listings identified by Specification Section number.
3. Identification of:
   a. Horizontal time frame by year, month, and week.
   b. Duration, early start, and completion for each activity and subactivity.
   c. Critical activities and Project float.
   d. Sub-schedules to further define critical portions of Work.

1.4 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of schedules with Engineer at each Progress Meeting or Application for Payment submittals.
B. Evaluate Project status to determine Work behind and ahead of schedule.
C. After review, revise schedules incorporating results of review, and resubmit within 10 working days.

1.5 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.
B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work with each pay application.
C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
D. Upon approval of Change Order, include change in next schedule submittal.
E. Indicate changes required to maintain Date of Substantial Completion.
F. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and effect including effects of changes on schedules of separate contractors.

1.6 DISTRIBUTION

A. Following joint review, distribute copies to subcontractors, suppliers, Engineer, Owner, and other concerned parties.
B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittal procedures.
   2. Resubmittal requirements.
   3. Proposed products list.
   4. Shop Drawings.
   5. Product data.
   6. Samples.
   7. Test reports.
   8. Certificates.
   9. Manufacturers' instructions.
   10. Manufacturer’s Field Reports.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTAL PROCEDURES

A. Submit to Engineer for review to check for conformance with information given and design concept expressed in Contract Documents.

B. Produce copies and distribute in accordance with this Article.

C. Use Project website to submit record documents as described in Section 01 70 00 "Execution and Closeout Requirements."

D. Transmit each submittal separately with Contractor's standard transmittal letter including Contractor's name, address, and phone number. Each submittal shall contain only one Specification Section.

E. Sequentially number transmittal forms using Section number or Contractor’s other sequential numbering system.

F. Identify Project, Contractor, subcontractor, or supplier, pertinent Drawing sheet and detail number(s), and Specification Section number appropriate to submittal.

G. Apply Contractor's stamp, signed or initialed certifying review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is per requirements of Work and Contract Documents.

H. Schedule submittals to expedite Project and deliver to Engineer. Coordinate submission of related items.

I. For each submittal for review, allow 10 working days excluding delivery time to and from Contractor.

J. Identify variations from Contract Documents and product or system limitations detrimental to successful performance of completed Work. Information, comments, field verifications, responses, or other notations marked on submittals by Contractor shall be in blue or green colors only.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

L. Unrequested Submittals will not be recognized or processed.

M. Format:
   1. Submit all submittals digitally using PDF file extension. Each submittal shall be a single PDF file including transmittal letter. Multiple files for same submittal will not be accepted.
   2. Submittals in any other format, including ZIP files, will be rejected.
   3. Hard copies, not accepted.
   4. To ensure each page is legible, PDF pages of Drawings shall be same size/scale as hard copy. Where applicable, provide scale symbols to indicate scale. Illegible submittals will be rejected.
   5. Upload submittals to Project website.

N. Submittal procedures described herein apply to construction progress schedule, products list, shop Drawings, product data, samples (actual samples and digital files of same), design data, test reports, certificates, manufacturer's instructions and field reports, erection Drawings, RFIs, and other submittals submitted to Engineer.

1.3 RESUBMITTAL REQUIREMENTS

A. Revise submittals as required and resubmit to meet requirements specified and noted on submittal reviews.
B. Mark as *Resubmittal*.
C. Reuse original transmittal number and supplement with sequential alphabetical or numeric suffix for each resubmittal.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 REQUIREMENTS FOR COMPLETE SHOP DRAWINGS

A. Printable Image Size: Minimum 8 1/2 x 11 inches, maximum 30 x 42 inches.
B. Draw details to a noted scale.
C. Draw site plans to same scale indicated on Contract Drawings.
D. Engineer-issued Construction Documents (electronic or paper format) cannot be used in any shape, form, or fashion in creating and developing Shop Drawings, except electronic files containing floor, site plans, or layout plans purchased from Engineer may be used as backgrounds for Contractor, subcontractors, sub-subcontractors, and material suppliers in Shop Drawing process.
E. Electronic Files: Available upon request. See Project Manager.
   1. Electronic AutoCAD drawing files are available for purchase from Engineer upon request. Cost of files plus applicable taxes are:
      a. 1 - 3 sheets: $100.00 per sheet.
      b. 4 - 6 sheets: $400.00 flat fee.
      c. 7 - 9 sheets: $500.00 flat fee.
   2. Contractor, subcontractors, and/or sub-subcontractors may purchase electronic file. Electronic file will be provided in software release currently used by Engineer. File provided via Project website.
   3. Before file delivery, purchaser shall sign an Electronic File Transfer Release Form. Payment for an electronic file shall occur upon delivery of file to purchaser.

4. Only use electronic file for production of information required by Project and not any other form (in whole or part).
5. In creation and publication of Shop Drawings, under no circumstances shall Engineer's seal or title block of drawing be reproduced. Shop drawings must be original works from Contractor subcontractors, sub-subcontractors, and material suppliers.

1.6 PRODUCT DATA

A. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to Project.
B. Include recommendations for application and use, and reference to compliance with specified standards of trade associations and testing agencies.
C. After review, distribute per Article 1.2 “Submittal Procedures,” and provide copies for Record Documents described in Section 01 70 00 "Execution and Closeout Requirements."

1.7 SAMPLES

A. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Accompany physical sample with color digital image (photo or scanned PDF) of sample. Coordinate sample submittals for interfacing work.
B. Unless otherwise specified, submit samples of finishes from manufacturers' full range of standard colors, textures, and patterns, for Engineer selection.
C. Where variations in color, pattern, or texture are inherent in material or product, submit multiple samples to indicate approximate range or variations.
D. Include full Project information and identification of manufacturer, model number, type, style and color on each sample.
E. Submit number of samples specified in individual Specifications, one of which retained by Engineer.
F. Reviewed samples which may remain as part of Work indicated in individual Specifications.
G. Do not use Samples for testing unless specifically stated in individual Specifications.

1.8 TEST REPORTS

A. Submit for Engineer’s knowledge as Contract Administrator or Owner.
B. Submit test reports for information to assess conformance with information given and design concept expressed in Contract Documents.

1.9 CERTIFICATES

A. When specified in individual Specifications, submit certification by manufacturer, installation/application subcontractor, or Contractor, to Engineer.
B. Indicate material or product conforms to/exceeds specified requirements. Submit supporting reference data, affidavits, and certifications, as appropriate.
C. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

1.10 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specifications, submit manufacturer-printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.
B. Identify conflicts between manufacturers' instructions and Contract Documents.

C. Indicate special procedures, conditions requiring special attention and special environmental criteria required for application or installation.

1.11 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Engineer's benefit as contract administrator or for Owner.
B. Submit report within 30 days of observation to Engineer for information.
C. Submit for information to assess conformance with information given and design concept expressed in Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality control.
   2. Tolerances.
   3. References.
   4. Testing and inspection services.
   5. Manufacturers' field services.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturer’s instructions. If manufacturer’s instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Perform Work using persons qualified to produce required and specified quality.

D. Products, materials, and equipment may be subject to inspection by Engineer at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.

E. Supervise performance of Work to ensure Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or required by applicable codes.

B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.

C. Obtain copies of standards and maintain onsite when required by product Specifications.

D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

E. Neither contractual relationships, duties, or responsibilities of parties in Contract, nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 TESTING AND INSPECTION SERVICES

A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.
B. Independent firm will perform tests, inspections, and other services specified in individual Specifications and as required by Engineer.
C. Testing, inspections, and source quality control may occur on or off Project site. Perform off-site testing as required by Engineer.
D. Submit reports to Engineer, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
E. Cooperate with independent firm. Furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor, as requested.
    1. Notify Engineer and independent firm 24 hours before expected time for operations requiring services.
    2. Pay for additional Samples and tests required for Contractor use.
F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work per requirements of Contract Documents.
G. Retesting or Re-inspection Required Because of Nonconformance with Specified or Indicated Requirements: Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
H. Independent Firm Responsibilities:
    1. Test Samples of mixes submitted by Contractor.
    2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.
    3. Perform indicated sampling and testing of products per specified standards.
    4. Ascertain compliance of materials and mixes with Contract Document requirements.
    5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.
    6. Perform additional tests required by Engineer.
    7. Attend preconstruction and progress meetings.
I. Independent Firm Reports. After each test, promptly submit report to Engineer and Contractor and provide interpretation of test results. Include:
    1. Date issued.
    2. Project title and number.
    3. Name of inspector.
    4. Date and time of sampling or inspection.
    5. Identification of product and Specifications.
    6. Location in Project.
    7. Type of inspection or test.
    8. Date of test.
    9. Results of tests.
    10. Conformance with Contract Documents.

1.6 MANUFACTURER'S FIELD SERVICES

A. When specified in individual Specifications, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, and initiate instructions when necessary.
B. Submit qualifications of observer to Engineer 30 days before required observations. Observer is subject to Engineer approval.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
D. Refer to Section 01 33 00 “Submittal Procedures,” Article 1.11 - Manufacturer's Field Reports.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Temporary Utilities:
      a. Electricity.
      b. Lighting.
      c. Ventilation.
      d. Communication services.
      e. Water.
      f. Sanitary.
   2. Construction Facilities:
      a. Field offices and sheds.
      b. Employee residential occupancy.
      c. Vehicular access.
      d. Parking.
      e. Progress cleaning.
      f. Project identification.
      g. Traffic regulation.
   3. Temporary Controls:
      a. Barriers.
      b. Fencing.
      c. Security.
      d. Water control.
      e. Dust control.
      f. Erosion and sediment control.
      g. Pest and rodent control.
      h. Pollution control.
      i. Protect Work.
   4. Remove utilities, facilities, and controls.

B. Related Requirements:
   1. Other Divisions 01 Specification Sections apply to Work of this Section.

1.2 ELECTRICITY

A. Provide and pay for required power service from existing electrical utility source.
B. Provide temporary electric feeder from existing electrical service as directed. Power consumption shall not disrupt Owner's need for continuous service.
C. Provide separate metering and pay utility provider for cost of energy used.

1.3 LIGHTING

A. Do not utilize existing building lighting during construction. Provide and maintain 1-watt-per-square-foot lighting to exterior staging and storage areas after dark for security purposes.
B. Provide and maintain 0.25-watt-per-square-foot HID lighting to interior work areas after dark for security purposes.

C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps, as required.
D. Maintain lighting and provide routine repairs.

1.4 VENTILATION

A. Ventilate enclosed areas to assist cure of materials, dissipate humidity, and prevent accumulation of dust, fumes, vapors, or gases.
B. Provide temporary fan units required to maintain clean air for construction operations.

1.5 COMMUNICATION SERVICES

A. Do not use Owner's communication systems.
B. At minimum, provide cell phone service for onsite superintendent.

1.6 WATER

A. Provide, maintain, and pay for suitable quality water service required for construction operations. Extend branch piping with outlets located so water is available by hoses with threaded connections.
B. Provide temporary pipe insulation to prevent freezing.

1.7 SANITARY

A. Provide and maintain required facilities and enclosures.

1.8 FIELD OFFICES AND SHEDS

A. Office
    1. Construction
        a. Portable/mobile building(s) or buildings constructed with floors raised above ground, securely fixed to foundations with steps and landings at entrance doors.
        b. Structurally-sound, secure, weathertight enclosure to maintain environmental conditions specified.
        c. Maintain during progress of Work.
        d. Temperature Transmission Resistance of Floors, Walls, and Ceilings: Compatible with occupancy and storage requirements.
        e. Exterior Materials: Weather resistant.
    2. Fire Extinguishers: Provide appropriate-type fire extinguisher.
    3. Office Heating, Cooling, and Ventilating: Automatic equipment to maintain comfort conditions.
B. Prepare: Fill/grade sites for temporary structures sloped for drainage away from buildings.
C. Install office spaces ready for occupancy 15 days after date fixed in Notice to Proceed.
D. Maintenance and Cleaning:
    1. Periodic cleaning and maintenance for office and storage areas as required.
    2. Maintain approach walks free of mud, water, and snow.
E. Removal: At Work completion remove buildings, foundations, utility services, and debris. Restore areas to original condition.

1.9 EMPLOYEE RESIDENTIAL OCCUPANCY

A. Not allowed on Owner property.

1.10 VEHICULAR ACCESS

A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
C. Extend and relocate vehicular access as Work progress requires, providing necessary detours for unimpeded traffic flow.
D. Location as indicated on Drawings or approved by Engineer.
E. Provide unimpeded access for emergency vehicles. Maintain 20-foot-wide driveways with turning space between and around combustible materials.
F. Provide and maintain access to fire hydrants and control valves free of obstructions.
G. Provide means of removing mud from vehicle wheels before entering onsite paved areas and public streets.
H. Use existing onsite roads for construction traffic, as designated or directed.

1.11 PARKING

A. Provide temporary parking areas to accommodate construction personnel.
B. Locate as approved by Engineer.
C. When site space is not adequate, provide additional off-site parking.
D. Use of existing onsite streets and driveways for construction traffic is permitted.
E. Using designated areas of existing parking facilities by construction personnel is not permitted.
F. Do not allow heavy or tracked vehicles or construction equipment in parking areas.
G. Do not allow vehicle parking on existing pavement.
H. Permanent Pavements And Parking Facilities:
    1. Bases for permanent roads and parking areas may be used for construction traffic.
    2. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.
    3. Use of permanent parking structures not permitted.
I. Maintenance:
    1. Maintain traffic and parking areas in sound condition.
    2. Maintain existing paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.
J. Removal, Repair:
    1. Remove temporary materials and construction when permanent paving is usable before Substantial Completion.
    2. Remove underground work and compacted materials to 2-foot depth. Fill and grade site as specified.
    3. Repair existing facilities damaged by use, to original condition.
K. Mud from Site Vehicles: Provide way to remove mud from wheels before entering streets.

1.12 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain a clean and orderly site.
B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing space.
C. Sweep and vacuum interior areas clean before surface finishing and continue cleaning to eliminate dust.
D. Remove waste materials, debris, and rubbish from site and dispose off-site as required to maintain clean site.

1.13 PROJECT IDENTIFICATION

A. Project Identification Sign
   1. Size: Provide one 8 feet wide x 4 feet high.
   2. Materials: 3/4-inch-thick exterior-grade plywood and solid-wood frame.
   3. Background Paint: Exterior quality, two coats; sign background of color as selected.
   4. Lettering: Exterior paint of quality adequate to withstand weathering, fading, and chipping for construction duration, contrasting colors as selected with exhibit lettering by professional sign painter.
   5. Lettering: Precut vinyl self-adhesive products.
   6. Design: Design indicated in Drawings.
   7. Content
      a. Project title, as indicated on Contract Documents.
      b. Owner's name and logo.
      c. Names and titles of Engineer and consultants.
      d. Name of Prime Contractor.
      e. Name of major subcontractors.
   8. Lettering: Series C of Standard Alphabet for Traffic Control Devices *Manual on Uniform Traffic Control Devices for Streets and Highways*, Federal Highway Administration.
B. Project Informational Signs
   1. If required by other documents or Specifications, provide weather-protected signs for site-safety procedures, wage rates, and stormwater pollution prevention plan (SWPPP).
   2. Erect sign on or adjacent to field office, if required.
C. Design sign and structure to withstand 90-mile-per-hour wind velocity.
D. Installation:
   1. Install project identification sign within 15 days after date fixed by Notice to Proceed.
   2. Erect at location of high public visibility adjacent to site's main entrance.
   3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
   4. Install sign surface plumb and level with butt joints. Anchor securely.
   5. Paint exposed surfaces of sign supports and framing.
E. No other signs allowed without Owner permission except those required by law.
F. Maintain clean signs and supports. Repair deterioration and damage.
G. Remove signs, framing, supports, and foundations at completion of Project and restore area.

1.14 TRAFFIC REGULATION

A. Signs, Signals, And Devices:
   1. Post- and Wall-Mounted Traffic Control and Informational Signs: As approved by authority having jurisdiction and/or Texas Manual on Uniform Traffic Control Devices (TMUTCD) and/or TxDOT Standards shown in Plans.
   2. Automatic Traffic Control Signals: As approved by local jurisdictions.
   3. Traffic Cones and Drums: As approved by authority having jurisdiction.
   4. Flares and Lights: As approved by authority having jurisdiction.
   5. Flagperson Equipment: As required by authority having jurisdiction.

B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

C. Flares and Lights: Use during hours of low visibility to delineate traffic lanes and guide traffic.

D. Haul Routes:
   1. Drawings indicate haul routes designated by authorities having jurisdiction for use of construction traffic.
   2. Confine construction traffic to designated haul routes.
   3. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.

E. Traffic Signs And Signals:
   1. Provide signs at approaches to site and onsite, crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
   2. Provide, operate, and maintain automatic traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor operations.
   3. Relocate as Work progresses to maintain effective traffic control.

F. Removal:
   1. Remove equipment and devices when no longer required.
   2. Repair damage caused by installation.
   3. Remove post settings to 2-foot depth.

1.15 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas as well as protect existing facilities and adjacent properties from damage from construction operations and demolition. Allow for Owner's use of site.

B. Provide barricades and covered walkways required by authorities having jurisdiction for:
   1. Public rights-of-way.
   2. Public access to existing buildings.

C. Replace damaged items condition to original condition and protect items designated to remain:
   1. Trees.
   2. Shrubbery.
   3. Lawns.

D. Protect site improvements including but not limited to pavements, walkways, and drainage structures from damage. Replace damaged site improvements to original condition.

E. Protect non-owned vehicular traffic and stored materials from damage.

1.16 FENCING

A. Construction: Contractor option commercial-grade chain-link fence.
B. Provide 6-foot-high fence around construction site equipped with vehicular and pedestrian gates with locks.

1.17 SECURITY

A. Security Program:
   1. Protect Work, existing premises, and Owner operations from theft, vandalism, and unauthorized entry.
   2. Initiate program in coordination with Owner's existing security system at Project mobilization.
   3. Maintain program throughout construction period until directed by Engineer or Owner.
B. Entry Control:
   1. Restrict entrance of persons and vehicles into Project site.
   2. Allow entrance only to authorized persons with proper identification.

1.18 WATER CONTROL

A. Grade site to drain.
B. Maintain excavations free of water.
C. Provide, operate, and maintain pumping equipment.
D. Protect site from puddling and running water. Provide water barriers required to protect site from soil erosion.

1.19 DUST CONTROL

A. Execute Work to minimize raising dust from construction operations.
B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.20 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction to control surface drainage from cuts, fills, borrow, and waste disposal areas. Prevent erosion and sedimentation. Implement structural measures to divert flows from exposed soils, temporarily store flows, or otherwise limit run-off and discharge of pollutants from exposed areas of site in a timely manner during construction to minimize erosion and sediment run-off.
B. Minimize surface area of bare soil exposed at one time. Implement and maintain best management practices (BMPs) and good housekeeping for control of drainage run-off over project area by taking necessary measures i.e. silt-fences; soil stabilization; hay-bales; fiber rolls; and any other incidentals required for Contractor to complete and implement SWPPP requirements, as necessary.
C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow resulting in erosion.
D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.
F. Provide stabilized access to/from construction site as soon as practical.
G. Ensure any soil tracked off-site is cleaned from existing roads, alleys, and any adjacent properties as soon as possible. Check for any pollutants (mud, silt, sand, cement,

construction materials, etc.) tracked or washed off-site and perform necessary clean-up measures at the end of each workday.

H. Provide silt fences and/or diversion berms as a temporary structural practice to minimize erosion and sediment runoff, as necessary. Properly install silt fences and/or diversion berms to effectively retain sediment immediately after completing each phase of work where erosion would occur as sheet and rill erosion (clearing and grubbing, excavation, embankment, grading, etc).

I. Provide sand/gravel bags as a temporary structural practice to minimize erosion and sediment runoff. Properly place bags to effectively retain sediment immediately after completing each phase of work (clearing and grubbing, excavation, embankment, grading, etc.) in each independent runoff area (after clearing and grubbing between ridge and drain, place bags as work progresses, remove/replace/relocate bags as needed for work to progress in drainage area). Replace sand/gravel bags no longer in good condition, as needed.

1.21 PEST AND RODENT CONTROL

A. Provide methods, means, and facilities to prevent the following from damaging Work:
   1. Pests.
   2. Insects.
   3. Rodents.

1.22 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.23 PROTECT WORK

A. Protect installed Work and provide special protection where specified in Specifications.

B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

C. Provide protective coverings at openings in walls, roof, and soffits.

D. Protect finished walkways, drives, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic/activity necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.24 REMOVE UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above-grade utilities, equipment, facilities, and materials as soon as permanent facilities can be utilized.

B. Backfill excavations as specified in other sections and grade site as indicated.

C. Clean and repair damage caused by installation or temporary work.

D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
E. Remove when no longer needed:
    1. Office.
    2. Storage sheds.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Surveying.
   2. Closeout procedures.
   3. Testing, adjusting, and balancing.
   4. Project record documents.
   5. Operation and maintenance data.
   6. Manual for materials and finishes.
   7. Manual for equipment and systems.
   8. Spare parts and maintenance products.
   9. Product warranties and product bonds.
   10. Examination.
   11. Preparation.
   12. Execution.
   13. Protecting installed construction.
   14. Final cleaning.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SURVEYING

A. Employ land surveyor registered in State of Texas.
B. Locate and protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.
C. Control datum for survey is indicated on Drawings.
D. Verify setbacks, easements, and rights of way. Confirm Drawing dimensions and elevations.
E. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.
F. Submit copy of Site Drawing signed by land surveyor certifying elevations and locations of Work are per Contract Documents.
G. Maintain complete and accurate log of control and survey Work as Work progresses.
H. Protect survey control points before starting Site Work. Preserve permanent reference points during construction.
I. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.3 CLOSEOUT PROCEDURES

A. Prerequisites to Substantial Completion. Complete following items before requesting Certification of Substantial Completion, either for entire Work or portions of Work:
   1. Submit maintenance manuals, Project record documents, and other similar final record data per this Section.
   2. Complete facility startup, testing, adjusting, balancing systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified per this Section.
   3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to complete or correct, value of incomplete or nonconforming Work, reason for incompletion, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
   4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
   5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
   6. Change locks and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
   7. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
   8. Perform final cleaning per this Section.

B. Substantial Completion Inspection:
   1. When Contractor considers Work substantially complete, submit to Engineer and Owner:
      a. Written certificate that Work, or designated portion, is substantially complete.
      b. List of items to complete or correct (initial punch list).
   2. Within seven days after receipt of request for Substantial Completion, Engineer and Owner will inspect to determine if Work or designated portion is substantially complete.
   3. If Engineer and Owner determine Work is NOT substantially complete:
      a. Engineer and Owner will promptly notify Contractor in writing, stating reasons for opinion.
      b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer and Owner.
      c. Engineer and Owner will reinspect Work.
      d. Repeat until Work passes inspection.
   4. When Engineer and Owner finds Work is substantially complete, they will:
      a. Prepare Certificate of Substantial Completion on EJCDC C-625 - Certificate of Substantial Completion, accompanied by Contractor's list of items to complete or correct as verified and amended by Engineer and Owner (final punch list).
      b. Submit Certificate to Owner and Contractor for written acceptance of responsibilities assigned in Certificate.
   5. After Work is substantially complete, Contractor shall:
      a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
      b. Complete Work listed for completion or correction within time stipulated.

C. Prerequisites for Final Completion. Complete following items before requesting final acceptance and final payment.
   1. When Contractor considers Work complete, submit written certification that:
      a. Contract Documents were reviewed.
      b. Work was examined for compliance with Contract Documents.
      c. Work was completed per Contract Documents.
      d. Work is complete and ready for final inspection.
   2. Submit:
      a. Final punch list indicating all items are complete or correct.
      b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations, where required.
      c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
      d. Accounting statement for final changes to Contract Sum.
      e. Contractor's affidavit of payment of debts and claims on Contractor's Affidavit of Payment of Debts and Claims form.
      f. Contractor affidavit of release of liens on Contractor's Affidavit of Release of Liens form.
      g. Consent of surety to final payment on Contractor’s Consent of Surety to Final Payment form.
   3. Perform final cleaning for Contractor-soiled areas per this Section.

D. Final Completion Inspection:
   1. Within seven days after receipt of request for final inspection, Engineer and Owner will inspect to determine if Work or designated portion is complete.
   2. If Engineer and Owner consider Work incomplete or defective:
      a. Engineer and Owner will promptly notify Contractor in writing, listing incomplete or defective Work.
      b. Contractor shall remedy stated deficiencies and send second written request to Engineer and Owner that Work is complete.
      c. Engineer and Owner will reinspect Work.
      d. Redo and Inspect Deficient Work: Repeated until Work passes inspection.
      e. Engineer and Owner inspection.

1.4 TESTING, ADJUSTING, AND BALANCING

A. Owner will appoint, employ, and pay for services of independent firm to perform testing, adjusting, and balancing.

B. Reports will be submitted by independent firm to Engineer indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

1.5 PROJECT RECORD DOCUMENTS

A. Maintain onsite, one set of these record documents and record actual revisions to Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to Contract.
   5. Reviewed Shop Drawings, product data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.
C. Store record documents separate from documents used for construction.
D. Record information concurrent with construction progress, not less than weekly.
E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including:
    1. Manufacturer's name, product model and number.
    2. Product substitutions or alternates used.
    3. Changes made by Addenda and modifications.
F. Record Drawings. Legibly mark each item to record actual construction as:
    1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in Work, and change orders.
    2. Include locations of concealed elements of Work.
    3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components parallel to utilities.
    4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
    5. Identify and locate existing buried or concealed items encountered during Project.
    6. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
    7. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of Work.
    8. Field changes of dimension and detail.
    9. Details not on original Drawings.
G. Submit marked-up paper copy documents to Engineer with claim for final Application for Payment.
H. Submit PDF electronic files of marked-up documents to Engineer with claim for final Application for Payment.

1.6 OPERATION AND MAINTENANCE DATA

A. Submit in PDF composite electronic indexed file.
B. Submit data bound in 8 1/2- x 11-inch text pages, three, D-side-ring or capacity-expansion binders with durable plastic covers.
C. Prepare binder cover with printed *Operation and Maintenance Instructions*, title of Project, and subject matter of binder when multiple binders required.
D. Internally subdivide binder contents with permanent page dividers, logically organized as described, with tab titling clearly printed under reinforced laminated plastic tabs.
E. Drawings: Provide with reinforced punched binder tab. Bind in with text. Fold larger drawings to size of text pages.
F. Contents: Prepare Table of Contents (TOC) for each volume, with each product or system description identified, typed on white paper, in three parts as:
    1. Part 1: Directory, listing names, addresses, and phone numbers of Engineer, Contractor, subcontractors, and major equipment suppliers.
    2. Part 2: O&M instructions, arranged by process flow and subdivided by Specification Section. For each category, identify names, addresses, and phone numbers of subcontractors and suppliers. Include:
        a. Significant design criteria.
        b. List of equipment.
        c. Parts list for each component.
        d. Operating instructions.
        e. Maintenance instructions for equipment and systems.

f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
g. Safety precautions to take when operating and maintaining or working near equipment.

3. Part 3: Project documents and certificates, including:
   a. Shop Drawings and product data.
   b. Certificates.
   c. Originals of warranties.

1.7 MANUAL FOR MATERIALS AND FINISHES

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
B. For equipment or component parts of equipment put into service during construction and operated by Owner, submit documents within 10 days after acceptance.
C. Submit one copy of completed volumes 15 days before final inspection. Draft copy reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required before final submission.
D. Submit two sets of revised final volumes within 10 days after final inspection.
E. Submit in PDF composite electronic indexed file of final manual within 10 days after final inspection.
F. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations.
G. Instructions for Care and Maintenance: Include manufacturer recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
H. Moisture Protection and Weather-Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
I. Additional requirements as specified in individual product Specifications.
J. Include listing in TOC for design data, with tabbed fly sheet and space for insertion of data.

1.8 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before Work. Engineer will review draft and return one copy with comments.
B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within 10 days after acceptance.
C. Submit one copy of completed volumes 15 days before final inspection. Draft copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required before final submission.
D. Submit two sets of revised final volumes within 10 days after final inspection.
E. Submit in PDF composite electronic indexed file of final manual within 10 days after final inspection.
F. Each Item of Equipment and Each System: Include description of unit/system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, complete nomenclature, and model number of replaceable parts.
G. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; by label machine.
H. Include color-coded wiring diagrams as installed.

I. Operating Procedures: Include startup, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and special operating instructions.
J. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
K. Include servicing and lubrication schedule and list of lubricants required.
L. Include manufacturer's printed operation and maintenance instructions.
M. Include sequence of operation by controls manufacturer.
N. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
O. Include control diagrams by controls manufacturer as installed.
P. Include Contractor's coordination drawings with color-coded piping diagrams as installed.
Q. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
R. Include list of original manufacturer's spare parts, current prices, and recommended quantities maintained in storage.
S. Include test and balancing reports per Section 01 40 00 “Quality Requirements.”
T. Additional requirements as specified in individual product Specifications.
U. Include listing in TOC for design data with tabbed dividers and space for insertion of data.

1.9 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specifications.
B. Deliver to place in location as directed by Owner. Obtain receipt before final payment.

1.10 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed by responsible subcontractors, suppliers, and manufacturers within 10 days after completion of applicable item of Work.
B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
C. Verify documents are in proper form, contain full information, and notarized.
D. Co-execute submittals when required.
E. Include TOC and assemble in three, D-side-ring binder with durable plastic cover.
F. Submit before final Application for Payment.
G. Time of Submittals:
    1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
    2. Make other submittals within 10 days after date of Substantial Completion, before final Application for Payment.
    3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within 10 days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify existing Site conditions and substrate surfaces are acceptable for subsequent Work.
B. Beginning new Work means acceptance of existing conditions.
C. Verify existing substrate can structurally support or attach new Work applied.
D. Examine and verify specific conditions described in individual Specifications.
E. Verify utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces before applying next material or substance per manufacturer instructions.
B. Seal cracks or openings of substrate before applying next material or substance.
C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner before applying new material or substance in contact or bond.

3.3 EXECUTION

A. Comply with manufacturer installation instructions, performing each step, in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
C. Verify field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
    1. Secure Work true-to-line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
    2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
    3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.
E. Allow for expansion of materials and building movement.
F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
    1. Isolate each unit of Work from incompatible Work necessary to prevent deterioration.
    2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
G. Mounting Heights: Where not indicated, mount individual units of Work at industry-recognized standard mounting heights for particular application indicated.
    1. Refer questionable mounting heights choices to Engineer for final decision.
    2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.
H. Adjust operating products and equipment to ensure smooth and unhindered operation.
I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction. Lubricate operable components recommended by manufacturer.

3.4 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified.
B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
D. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
F. Prohibit traffic from landscaped areas.

3.5 FINAL CLEANING

A. Execute final cleaning before final Project assessment. Employ experienced personnel or professional cleaning firm.
B. Clean interior and exterior glass and surfaces exposed to view. Remove temporary labels, stains, and foreign substances. Polish transparent and glossy surfaces and vacuum carpeted and soft surfaces.
C. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
D. Clean filters of operating equipment.
E. Clean debris from roofs, gutters, downspouts, and drainage systems.
F. Clean site. Sweep paved areas and rake landscaped surfaces clean.
G. Remove waste and surplus materials, rubbish, and construction facilities from site.

END OF SECTION

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. All Work required for constructing the sump access structure.
   2. Concrete for this Project shall conform to the requirements of this Section. The Contractor shall furnish all materials, equipment, tools, labor, superintendence, and incidentals necessary to perform the Work in accordance with the Drawings and these Specifications.
   3. Cast-in place concrete including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.3 SUBMITTALS

A. Product data for each type of manufactured material and product indicated:
   1. Reinforcement accessories.
   2. Admixtures.
   3. Waterstops.
   4. Curing materials.
   5. Floor and slab treatments.
   6. Bonding agents.
   7. Adhesives.
   8. Vapor retarders.
   9. Epoxy joint filler.
   10. Joint-filler strips.
   11. Repair materials.

B. Design mixes for each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments. Submitted compressive test results must be less than six months old. Indicate amounts of mix water to withhold for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared per ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment. Manufacturer must be certified per National Ready Mixed Concrete Association's Certification of Ready Mixed Concrete Production Facilities.

C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified per ASTM C1077 and E329 to conduct testing indicated, as documented per ASTM E548. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, per ACI CP-1 or equivalent certification program.

D. Source Limitations: Obtain each type or class of cementitious material of same brand from same manufacturer's plant, each aggregate from one source, and each admixture from same manufacturer.

E. For ACI Publications, comply with these, unless more stringent provisions indicated:
   1. ACI 301, "Specification for Structural Concrete."
   2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Section 01 30 00 "Administrative Requirements." Before placing concrete, hold a preinstallation conference meeting involving the Superintendent, Engineer, applicable subcontractors, and testing lab. Meeting will include these subjects (minimum):
   1. Site preparation.
   2. Grades and drainage.
   3. Installation of auxiliary materials (vapor retarders, ducts, pipes, etc.).
   4. Coordination with other subcontractors.
   5. Type of floor and thickness.
   6. Forming.
   7. Bulk head locations.
   8. Reinforcement, placement, and clearances.
   9. Joints.
   10. Flatness and levelness.
   11. Concrete materials.
   12. Hot weather and cold weather placement.
   13. Compaction of soil.
   14. Adding water.
   15. Placement method.
   16. Finishing tools and finishing.
   17. Curing.
   18. Sealing/hardeners.
   19. Testing and inspection.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels to provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
   1. Plywood, metal, or other approved panel materials.
B. Rough-Formed Finished Concrete: Plywood, lumber, metal, earth, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
C. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4-inch, minimum.
D. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces nor impair subsequent treatments of concrete surfaces. Formulate form-release agent with rust inhibitor for steel form-facing materials.
E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
   1. Furnish units to leave no corrodible metal closer than 1 inch to plane of exposed concrete surface.
   2. Furnish ties that, when removed, will leave holes no larger than 1-inch in diameter in concrete surface.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A615, Grade 60, deformed.
B. Low-Alloy-Steel Reinforcing Bars: ASTM A706, deformed.
C. Steel Bar Mats: ASTM A184, assembled with clips.
   1. Steel Reinforcement: ASTM A615, Grade 60, deformed bars.
   2. Steel Reinforcement: ASTM A706, deformed bars.

2.3 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, and spacers for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Manufacture bar supports per CRSI "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber reinforced concrete of greater compressive strength than concrete, and for concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected or CRSI Class 2 stainless-steel bar supports. Plastic, wood, concrete or clay blocks and other devices not permissible.
B. Joint Dowel Bars: Plain-steel bars, ASTM A615/A615M, Grade 60. Cut bars true to length with ends square and free of burrs.
C. Joint Dowel System: Diamond dowel system from PNA Construction Technologies (800.542.0214).

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C150, Types I, II, or I/II.
B. Fly Ash: ASTM C618, Class C.
C. Normal-Weight Aggregate: ASTM C33, uniformly graded, and:
   1. Class: Moderate weathering region, but not less than 3M.
   2. Nominal Maximum Aggregate Size: 1-inch.
D. Water: Potable and complying with ASTM C94.

2.5 ADMIXTURES

A. Admixtures certified by manufacturer to contain no more than 0.1 percent water-soluble chloride ions by mass of cementitious material and compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.
B. Air-Entraining Admixture: ASTM C260.
C. Water-Reducing Admixture: ASTM C494, Type A.
D. High-Range, Water-Reducing Admixture: ASTM C494, Type F.
E. Water-Reducing and Accelerating Admixture: ASTM C494, Type E.
F. Water-Reducing and Retarding Admixture: ASTM C494, Type D.

2.6 WATERSTOPS

A. Self-Expanding Strip Waterstops: Manufactured rectangular or trapezoidal strip, sodium bentonite, or other hydrophilic material for adhesive bonding to concrete.

2.7 VAPOR BARRIERS

A. Vapor Barrier (Under Slab): Shall conform to ASTM E1745, Class A with a maximum water vapor permeance of 0.01 perms [grains/(ft^2*hr*in. Hg)] before and after mandatory conditioning tests ASTM E1745 Section 7. Vapor barrier component no less than 15 mils thick per ACI 302, 1R-96.
B. Granular Fill: Narrowly-graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D448; coarse-aggregate size 89; with 100 percent passing a 1/2-inch sieve and 0-5 percent passing a No. 50 sieve.

2.8 FLOOR AND SLAB TREATMENTS

A. Penetrating Liquid Floor Treatment: Chemically-reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; colorless; penetrates, hardens, and densifies concrete surfaces.

2.9 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete. Dayton Superior - Sure Film J-74 or equal.
B. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.
C. Water: Potable.
D. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C309, Type 1, Class B.
E. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C1315, Type 1, Class A.

2.10 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.
B. Epoxy Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Shore A hardness of 80 per ASTM D2240.
C. Bonding Agent: ASTM C1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

2.11 REPAIR MATERIALS

A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product applied in thicknesses from 1/8-inch and feathered at edges to match adjacent floor elevations.
   1. Cement Binder: ASTM C150, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C219.
   2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
   3. Aggregate: Well-graded, washed gravel, 1/8-1/4 inch or coarse sand as recommended by underlayment manufacturer.
   4. Compressive Strength: Not less than 4,100 psi at 28 days when tested per ASTM C109.

2.12 CONCRETE MIXES

A. Prepare design mixes for each type and strength of concrete determined by laboratory trial mix or field test data bases, as:
   1. Proportion normal-weight concrete per ACI 211.1 and 301.
   2. For each design mix submitted that includes use of fly ash, submit an alternate design mix excluding fly ash. Provide alternate design mix for concrete placements that occur during cold weather as defined by ACI 306.1.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for laboratory trial mix basis.

C. Footings: Proportion normal-weight concrete mix as:
   1. Compressive Strength (28 Days): 3,000 psi.
   2. Minimum Slump: 3 inches.
   3. Maximum Slump: 5 inches.
   4. Maximum Slump for Concrete Containing High-Range Water-Reducing Admixture: 8 inches after admixture is added to concrete with 2- to 4-inch slump.
   5. Maximum water-cementitious material ratio: 0.55.

D. For sump access structure, proportion normal-weight concrete mix as:
   1. Compressive Strength (28 Days): 4,000 psi.
   2. Minimum Slump: 3 inches
   3. Maximum Slump: 6 inches.
   4. Maximum water-cementitious material ratio: 0.45.
   5. Cementitious material shall be 15 percent fly ash by weight.

E. Cementitious Materials: For concrete exposed to deicers, limit percentage, by weight, of cementitious materials other than Portland cement per ACI 301 requirements.

F. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as fly ash 20 percent.

G. Air Content: Add air-entraining admixture at manufacturer-prescribed rate to result in concrete at point of placement with air content of 2-4 percent, unless otherwise indicated.

H. Do not air entrain concrete to trowel-finished interior floors and suspended slabs. Do not allow entrapped air content to exceed 3 percent.

I. Admixtures with chloride-ions are prohibited.

J. Admixtures: Use admixtures per manufacturer-written instructions.
   1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.
   2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

2.13 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement per CRSI "Manual of Standard Practice."

2.14 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete per ASTM C94, C1116, and furnish batch ticket information. When air temperature is 85-90 degrees F, reduce mixing and delivery time from 90 to 75 minutes. When air temperature is above 90 degrees F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, per ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads applied, until concrete structure can support such loads.
B. Construct formwork so concrete members and structures are size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as:
   1. Class A, 1/8-inch.
   2. Class B, 1/4-inch.
   3. Class C, 1/2-inch.
   4. Class D, 1-inch.
D. Construct forms tight enough to prevent loss of concrete mortar.
E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal. Do not use rust-stained steel form-facing material.
F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
H. Chamfer exterior corners and edges of permanently exposed concrete.
I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in Work. Determine sizes and locations from trades providing items.
J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
L. Coat contact surfaces of forms with form-release agent, per manufacturer-written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instructions, and directions furnished with items to be embedded. Install anchor bolts, accurately located, to elevations required.

3.3 REMOVING AND REUSING FORMS

A. Remove formwork, for sides of beams, walls, columns, and similar parts of Work, not supporting weight of concrete after cumulatively curing not less than 50 degrees F for 24 hours after placing concrete if concrete is hard enough not to be damaged by form-removal operations and curing and protection operations maintained.

B. Leave formwork, for beam soffits, joists, slabs, and other structural elements, that supports weight of concrete in place until concrete achieves at least 70 percent of 28-day design compressive strength.
   1. Determine compressive strength of in-place concrete by testing representative field- or laboratory-cured test specimens per ACI 301.
   2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

C. Clean and repair surfaces of forms reused in Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.

D. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

3.4 VAPOR BARRIER

A. Vapor Barrier: Place, protect, and repair vapor-retarder sheets per ASTM E1643 and manufacturer-written instructions.

3.5 STEEL REINFORCEMENT

A. Comply with CRSI "Manual of Standard Practice" for placing reinforcement. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. All reinforcement to be in place before placing concrete. Equipment not allowed to drive over reinforcement.

3.6 JOINTS

A. Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete not impaired, where indicated or as approved by Engineer.
   1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.

2. Form from preformed galvanized steel, plastic keyway-section forms, or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1 1/2 inches into concrete.
3. Use a bonding agent at locations where fresh concrete is placed against hardened or partially-hardened concrete surfaces.

C. Contraction Joints in Sump Access Structure: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as:
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to 1/8-inch radius. Repeat grooving contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form contraction joints with early entry power saw. Cut 1/8-inch wide joints into concrete within 1-2 hours after finishing process and before final set.

D. Isolation Joints in Sump Access Structure: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, (column pedestals, foundation walls, grade beams, and other locations, as indicated).
1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
2. Terminate full-width joint-filler strips not less than 1/2 nor more than 1 inch below finished concrete surface where joint sealants, specified in Section 07 92 00 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Dowel Joints: Install dowel sleeves and dowels or dowel bar and support assemblies at joints where indicated. Use dowel sleeves or lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.7 WATERSTOPS

A. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated, per manufacturer-written instructions, bonding or mechanically fastening and firmly pressing into place. Install in longest lengths practicable.

3.8 CONCRETE PLACEMENT

A. Before placing concrete, verify installation of formwork, reinforcement, and embedded items are complete and required inspections performed.

B. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by Engineer.

C. Before placing concrete, add water at Project site, subject to limitations of ACI 301.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mix.
2. Do not add water to concrete beyond the limit of water withheld from plant.

D. Deposit concrete continuously or in layers of thickness that no new concrete will be placed on concrete hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.

E. Deposit concrete in forms in horizontal layers no deeper than 24 inches and to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.
   1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.
   2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than visible effectiveness of vibrator. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that begin to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
   1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
   2. Maintain reinforcement in position on chairs during concrete placement.
   3. Screed slab surfaces with a straightedge and strike off to correct elevations.
   4. Slope surfaces uniformly to drains where required.
   5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or bleedwater appears on surface. Do not further disturb slab surfaces before finishing operations.

G. Cold-Weather Placement: Comply with ACI 306.1. Protect concrete work from physical damage or reduced strength caused by frost, freezing actions, or low temperatures.
   1. When air temperature falls to or is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature not less than 50 nor more than 80 degrees F at point of placement.
   2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

H. For Hot-Weather Placement, place concrete per recommendations in ACI 305R and as follows, when hot-weather conditions exist:
   1. Cool ingredients before mixing to maintain concrete temperature below 90 degrees F at time of placement. Use chilled mixing water or chopped ice to control temperature, if water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor option.
   2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
   3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding ACI 347R limits for class of surface specified.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged orderly and symmetrical with minimum seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch in height.
   1. Apply to concrete surfaces exposed to public view or covered with a coating or covering material applied directly to concrete, (waterproofing, dampproofing, veneer plaster, or painting).
   2. Do not apply rubbed finish to smooth-formed finish.

C. Rubbed Finish, apply a grout-cleaned finish to smooth-formed finished concrete. Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part Portland cement to one and half part fine sand with a 1:1 mixture of bonding admixture and water. Add white Portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray at least 36 hours.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.10 FINISHING FLOORS AND SLABS

A. Comply with recommendations in ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that was screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes. Apply scratch finish to surfaces indicated and to surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, Portland cement terrazzo, and other bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture. Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

D. Trowel Finish: After applying float finish, apply first trowel finish and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
   1. Apply a trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system
   2. Finish surfaces to these tolerances, measured within 24 hours per ASTM E1155 for a randomly-trafficked floor surface:
      a. Specified overall values of flatness, F(F) 25; and levelness, F(L) 20; with minimum local values of flatness, F(F) 17; and levelness, F(L) 15.
   3. Finish and measure surface so gap at any point between concrete surface and an unleveled freestanding 10-foot long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed:
      a. 1/4-inch.
      b. 3/16-inch.
      c. 1/8-inch.

E. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is installed by thickset or thin-set method. Immediately after second troweling and when concrete is still plastic, slightly scarify surface with a fine broom.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Engineer before application.

3.11 MISCELLANEOUS CONCRETE ITEMS

A. Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates of manufacturer furnishing machines and equipment.

D. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items. Cast-in inserts and accessories as shown on Drawings. Screed, tamp, and trowel-finish concrete surfaces.

3.12 CONCRETE PROTECTION AND CURING

A. Protect freshly-placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305R for hot-weather protection during curing.

B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing as with unformed surfaces. Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces, by:

1. Initial curing period of four days:
    a. Moisture Curing: Keep surfaces continuously moist no less than seven days with:
        1) Water.
        2) Continuous water-fog spray.
        3) Absorptive cover, water saturated, kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
    b. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, place in widest practicable width, with sides and ends lapped at least 12 inches, and seal by waterproof tape or adhesive. Cure not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
        1) Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.

2) Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
3) Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing manufacturer-recommended compound for use with floor coverings.

2. Secondary curing period of three days:
   a. Curing Compound: Apply uniformly in continuous operation by power spray or roller per manufacturer-written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
   b. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller per manufacturer-written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.13 JOINT FILLING

A. Prepare, clean, and install joint filler per manufacturer-written instructions. Defer joint filling until concrete ages at least six months. Do not fill joints until construction traffic permanently ceases.
B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
C. Install semirigid epoxy joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.14 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer approval.
B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland cement to two-and-a-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.
C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on surface, and stains and other discolorations not removed by cleaning.
   1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent dries. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
   2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
   3. Repair defects on concealed formed surfaces that affect concrete durability and structural performance as determined by Engineer.

D. Repairing Unformed Surfaces: Test unformed surfaces, (floors and slabs), for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
   1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
   2. After concrete cures at least 14 days, correct high areas by grinding.
   3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
   4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer per manufacturer-written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
   5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure minimum 1/4-inch repair topping depth to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer per manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
   6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
   7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent dries. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist at least 72 hours.

E. Perform structural repairs of concrete, subject to Engineer approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified may be used, subject to Engineer approval.

3.15 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include those specified herein.

B. Testing Services: Perform testing of composite samples of fresh concrete obtained per ASTM C172 per:
   1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mix exceeding 5 but less than 25 cubic yards, plus one set for each additional 50 cubic yard or fraction thereof.
   2. Slump: ASTM C143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.

3. Air Content: ASTM C231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
4. Concrete Temperature: ASTM C1064; one test hourly when air temperature is 40 degrees F and below and when 80 degrees F and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C31; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C39; test two laboratory-cured specimens at seven days and two at 28 days. A compressive-strength test shall be average compressive strength from two specimens obtained from same composite sample and tested at age indicated.
7. Take testing specimens after all admixtures/field-added water is added and incorporated into concrete.

C. Strength of each concrete mix will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

D. Report test results in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both seven- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but not used as sole basis for approval or rejection of concrete.

F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate slump, air entrainment, compressive strengths, or other requirements are not met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders per ASTM C42 or other methods as directed by Engineer.

END OF SECTION

SECTION 31 05 13 – SOILS FOR EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes removal and proper utilization of materials secured from sources obtained by Contractor and approved by Engineer.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 23 00 “Excavation and Fill.”

1.2 REFERENCES

A. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates.
B. ASTM D422 - Particle-Size Analysis of Soils.
C. ASTM D1140 - Amount of Material in Soils Finer than the No. 200 Sieve.
D. ASTM D1556 - Density and Unit Weight of Soil in Place by the Sand-Cone Method.
E. ASTM D1557 - Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft^3).
F. ASTM D2487 - Classification of Soils for Engineering Purposes (Unified Soil Classification System).
G. ASTM D2922 - Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
H. ASTM D3017 - Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
I. ASTM D4318 - Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.3 SUBMITTALS

A. Material Reports
   1. Classification per ASTM D2487 of borrow soil material.
   2. Laboratory compaction curve per ASTM D698 for borrow soil material.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Class A (Select Borrow): This material consists of sand or other suitable granular material, free from vegetation or other objectionable matter and reasonably free from lumps of earth, and when tested by ASTM laboratory methods, shall meet the following requirements:
   1. Liquid limits shall not exceed 45.
   2. Plasticity index shall not be less than 4 nor more than 15.
B. Class B: This material shall consist of suitable non-swelling (soils with a plasticity index less than 20) earth material (loam, clay, etc.) that form a stable embankment.
C. Topsoil: This material consists of approved topsoil material with clean, friable soil able to support plant life. This material shall also be free of stones and other debris. Topsoil for a particular location shall closely match original topsoil removed from that particular location in terms of color, Atterberg limits, and texture.

PART 3 - EXECUTION

3.1 METHODS OF CONSTRUCTION

A. Before commencing Work, all erosion control and environmental measures required shall be in place.
B. Use all suitable materials removed from excavation insofar as practicable.
C. All complicated excavation grade work shall conform to established alignment, grades, and cross-section required of Contractor by borrow pit owner.
D. Contractor shall arrange for borrow from:
    1. Existing borrow pit;
    2. New borrow pit; and/or
    3. Surplus excavated material from a site with all required permits.
E. Contractor shall notify Engineer three weeks before opening pit to allow necessary testing for approval of materials. All borrow sites shall comply with permit requirements.
F. During construction, keep borrow sources drained insofar as practicable to allow final cross sections taken, when required.
G. Maintain borrow sites to minimize impact on appearance of natural topographic features and at no time create a potential hazard to the public.

END OF SECTION

SECTION 31 05 19 - GEOSYNTHETIC CLAY LINERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Geosynthetic Clay Liner (GCL).
   2. Installation of GCL.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19.13 “Geotextile Fabrics.”
   3. Section 31 05 19.26 “Geocomposites Drainage Layer.”
   4. Section 31 23 00 “Excavation and Fill.”
   5. Section 31 90 20 “Gravel Drainage Material.”
   6. Section 31 90 30 “Protective Soil Cover.”
   7. Section 31 90 34 “HDPE Geomembrane Liner.”
   8. Section 31 90 40.10 “Leachate Collection Systems.”

1.2 REFERENCES

A. These applicable publications form part of this Specification to extent referenced and are referred to in text by basic designation only. Latest publication in use at time of executed contract will govern this project.
   1. ASTM D4354 - Standard Practice for Sampling Geosynthesis for Testing.
   2. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
   3. ASTM 5084 – Standard Test Method for Measurement of Hydraulic Conductivity of Geosynthetic Clay Liner.
   4. ASTM D5261 – Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
   5. ASTM D5321 - Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method.
   6. ASTM D5887 - Test Method for Measurement of Index Flux through Saturated Geosynthetic Clay Liner Specimens Using Flexible Water Permeameter.
   7. ASTM D5890 - Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners.
   8. ASTM D5891 – Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners.
   9. ASTM D5993 – Standard Test Method for Measuring the Mass per Unit Area of Geosynthetic Clay Liners.
   10. ASTM D6243 - Standard Test Method for Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by the Direct Shear Method.
   11. ASTM D6496 - Standard Test Method for Average Bonding Peel Strength between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners.
   12. ASTM D6768 - Standard Test Method for Tensile Strength of Geosynthetic Clay Liners.
   13. MSW Permit - Owner's TCEQ MSW Permit.
   14. Owner's Soil and Liner Quality Control Plan (SLQCP).
   15. TCEQ - Municipal Solid Waste Regulations, 30 TAC Chapter 330.

1.3 QUALITY ASSURANCE

A. Manufacturing shall have at least four years' continuous experience in manufacture of GCL rolls and/or experience totaling 5,000,000 square feet of manufactured GCL. Manufacturer shall permit Owner and Engineer to visit manufacturing plant.

B. Installation

1. Installation Contractor shall have successfully installed a minimum 1,000,000 square feet of similar lining material in solid waste containment structures, and submit evidence of ability and capacity to perform this work. Installation Contractor can meet these criteria by teaming with subcontractor identified in Bid along with firm experience.
2. Installation shall be performed under constant direction of a Field Installation Supervisor who shall remain onsite and responsible, throughout liner installation, for liner layout, patching, testing, repairs, and all other activities by Installer. This installation supervisor shall have installed or supervised installation of minimum 1,000,000 square feet of GCL.

1.4 SUBMITTALS

A. Manufacturer

1. Quality control program and manual or descriptive documentation.
2. List of material properties and samples of GCL including data pertaining to typical interface friction angles for various products.
3. List documenting no less than five completed facilities totaling minimum 5,000,000 square feet.
4. Copy of quality control certificates per with Soil Liner Quality Control Plan (SLQCP).

B. Installation Contractor

1. Certification that Installation Supervisor for Installer reviewed Quality Assurance and Project Plans, and Specifications.
2. A list of at least five completed facilities, totaling minimum 1,000,000 square feet, where Contractor installed a GCL.
3. Proposed Installation Panel layout identifying seams and details. Layout plan must be approved by Engineer at least 10 days before materials are ordered. Panel layout must provide a numbering scheme used in quality control/assurance procedures and provide:
   a. Seams run up and down slopes.
   b. Field seam lengths to minimize.
   c. GCL shall not have any penetrations.
4. Written certification that installer can perform all necessary construction testing as required by TCEQ.
5. Installer shall submit any proposed variance or deviation from these documents in writing to Engineer minimum seven working days before scheduled start of GCL installation and accepted/rejected by Engineer before installation activities.
6. Herein, "facilities" are defined as municipal solid waste (MSW) facilities with "Subtitle D" composite liner systems, or TCEQ-approved alternates, installed and tested per regulations set forth by TCEQ MSW regulations 30 TAC §330 or other EPA-delegated state MSW regulatory authorities. Facilities not meeting this definition, are not acceptable. Contractor must provide this information before Bid approval and Contract award.

1.5 WARRANTY

A. Obtain written warranty from Manufacturer (for material) and Installation Contractor (for workmanship). These documents shall warrant quality of in-place liner.
   1. Manufacturer: Furnish a written warranty on a pro rata basis for five years. Warranty shall be against manufacturing defects or workmanship and against deterioration due to ozone, ultraviolet or other normal weather aging. Warranty shall be limited to replacement of material only and not cover installation.
   2. Installation Contractor: Furnish a written warranty that entire lining installed free of defects in material and workmanship and installed pursuant to Owner's Soil and Liner Quality Control Plan (SLQCP) for two years following date of Certificate of Completion. Contractor shall agree to repair or replace that necessary by defects in materials or workmanship evident during two-year warranty period.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Transportation: Package GCL rolls or panels individually, in relatively impermeable and opaque protective covers, and ship by appropriate means so no damage is caused. Repair tears in protective covers immediately. Transportation is responsibility of Installer.
B. Delivery: Off-loading and storage of GCL rolls is responsibility of Installer. Installer responsible for replacing any damaged or unacceptable material at no cost to Owner. No off-loading done unless Engineer is present. Damage during off-loading documented by Engineer and Installer. Separate all damaged rolls from undamaged rolls until proper disposition of that material is determined by Owner representative. Owner representative is final authority on determination of damage.
C. Onsite Storage
   1. Store GCL material in accordance with Manufacturer's recommendation, to be protected from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat, or other damage.
   2. Store rolls on prepared surface (not wooden pallets). Do not stack GCLs consisting of bentonite supported by geotextiles more than four rolls high or as recommended by manufacturer. Do not stack GCLs consisting of bentonite supported by geomembranes more than two rolls high or as recommended by manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS

A. GCL consists of natural sodium bentonite encapsulated between two geotextiles.
B. Accessory bentonite for seaming and detail work shall be same material as in GCL sheets and as recommended by manufacturer.
C. Geotextiles will consist of woven or non-woven materials. At least one side of GCL must be made of non-woven material.
D. On slopes less than seven horizontal to one vertical (7:1), GCL must be lightly reinforced by needle-punching or lock-stitching.
E. On side slopes steeper than seven horizontal to one vertical (7:1), GCL must be reinforced by either needle punching or lock-stitching for internal shear strength reinforcement. Interface shear testing is applicable for slopes steeper than 7H:1V, but will not be required for any cell utilizing the same material that were used for a previous cell, if the test results for these materials are available and were satisfactory.

F. Install GCL on side slopes comparable to Solmax Bentoliner NSL, or approved equal. GCL installed on floor area shall be comparable to Solmax Bentoliner EC, or approved equal.

2.2 RAW MATERIALS

A. GCL shall be manufactured of new, first-quality products and specifically for intended purpose.

2.3 ROLLS

A. GCL shall be supplied in rolls with minimum 15-foot width. Rolls in lengths greater than 125 feet may be 12 feet in width. Labels on each roll shall identify:
   1. Manufacturer.
   2. Product identification.
   3. Roll number.
   4. Roll dimensions.
   5. Roll weight.

B. Maximize roll length to provide largest manageable sheet for fewest field seams.

C. Manufactured GCL sheets shall be constructed so bentonite not displaced during transportation, storage, and installation.

2.4 MANUFACTURER'S CERTIFIED TESTING

A. Material Testing: Before use, manufacturer shall certify material in writing. Certificate must include roll identification number, testing procedure, and test results. Report these parameters:

Table 1 - BENTONITE MATERIAL

Property	Test Method	Value	Unit	Frequency
Free Swell	ASTM D5890	24 min.	ml/2g	once every 50 tons and every truck or railcar
Fluid Loss	ASTMD 5891	18 max.	ml	once every 50 tons and every truck or railcar

Table 2 - GEOTEXTILE MATERIAL (SLOPED AREAS)

Property	Test Method	Value	Unit	Frequency
Woven Mass/Unit Area	ASTM D5261	3.1 min	oz/yd^2	1/200,000 $ft.^2$
Nonwoven Mass/Unit Area	ASTM D5261	6.0 min	oz/yd^2	1/200,000 $ft.^2$

Table 3 - GEOTEXTILE MATERIAL (FLOOR AREAS)

Property	Test Method	Value	Unit	Frequency
Woven Mass/Unit Area	ASTM D5261	3.1 min	oz/yd^2	1/200,000 $ft.^2$
Nonwoven Mass/Unit Area	ASTM D5261	3.0 min	oz/yd^2	1/200,000 $ft.^2$

Table 4 - BENTONITE/GEOTEXTILE COMPOSITE MATERIAL (SLOPED AREAS)				
Property	**Test Method**	**Value**	**Units**	**Frequency**
Clay Mass/Unit Area	ASTM D5993(1)	0.8 min	psf	1/40,000 ft.^{2}
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	weekly
Grab Tensile Strength (2)	ASTM D4632	30	lbs/in	1/200,000 ft.^{2}
Bentonite Moisture Content	ASTM D2216			1/40,000 ft. ^{2}
(1) Measured at 0-percent dry moisture content (2) Tested in machine direction				

Table 5 - BENTONITE/GEOTEXTILE COMPOSITE MATERIAL (FLOOR AREAS)				
Property	**Test Method**	**Value**	**Units**	**Frequency**
Clay Mass/Unit Area	ASTM D5993(1)	0.8 min	psf	1/40,000 ft.^{2}
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	weekly
Grab Tensile Strength (2)	ASTM D4632	30	lbs/in	1/200,000 ft.^{2}
(1) Measured at 0 percent dry moisture content (2) Tested in machine direction				

B. Quality Control Inspection: For needle-punched GCL, manufacturer must provide written certification that material is "needle free" by continuous inspections for presence of broken needles using a metal detector.

2.5 SEAM OVERLAP

A. Imprint match lines on both edges of upper geotextile fabric for bentonite/geotextile GCLs to provide quality assurance of overlap within manufacturer's recommendations. Lines shall be printed so they are easily visible and at lap distances recommended by manufacturer.

B. Additional line, 12 inches from edge, included for overlap in leachate collection lines. Sheets will be overlapped minimum 12 inches at leachate collection sumps.

2.6 QUALITY CONTROL SPECIFICATIONS

A. Sample Selection: Upon delivery to installation site, Owner shall obtain test samples to verify conformance to Project Plans, Specifications, and manufacturer certifications. Take samples from selected rolls by removing protective cover and cutting full-width, 3-foot-long strip. One revolution of GCL may be discarded before cutting sample. Rewrap sample roll and store with other rolls. Identify sample strips by type, style, lot, and roll number. Note machine direction with waterproof marker.

B. Conformance Testing: Owner shall test samples for conformance with properties shown in Table 6.

Table 6 - GCL ON SITE CONFORMANCE TESTS				
Property	**Test Method**	**Value**	**Unit**	**Frequency**
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	1/100,000 ft^2
Clay Mass/Unit Area	ASTM D5993	0.8 min	psf	1/100,000 ft^2
Direct Shear (Internal)	ASTM D5321	22 (2)	degrees	one
Direct Shear (Interface)	ASTM D5321	22 (2)	degrees	(1)
(1) Once per interface type (2) Peak value				

C. See Section 01 30 00 “Submittal Procedures,” for submittal information on direct shear requirements.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before placing GCL, Contractor shall provide written documentation that surfaces to receive GCL were inspected and acceptable for lining installation. Acceptable surface conditions described in Section 31 23 00 “Excavation and Fill,” and in SLQCP with no excessive cracking (defined as cracks at least 1 inch in depth and 12 inches in length).

3.2 ANCHOR TRENCH

A. Excavate anchor trenches as specified before liner system placement.

3.3 PLACEMENT

A. Place sheets to reduce field seams to minimum.
B. Proof-roll subgrade before GCL placement. To minimize subgrade degradation, GCL placement will commence within four hours of proof-rolling.
C. Installer responsible for:
    1. No equipment or tools shall damage GCL by handling, trafficking, etc.
    2. No personnel working on GCL shall smoke, wear damaging shoes, or engage in other activities that damage GCL.
    3. Method used to unroll panels shall not cause crimps or other damage to GCL.
    4. Method used to place panels shall minimize wrinkles. Identify wrinkles as to proper location and compensation identified on Contractor and Engineer Drawings. Use ballast to prevent relocation of compensating wrinkles by wind.
    5. Place adequate loading (sand bags or similar items that will not damage GCL) to prevent uplift by wind (in case of high winds, continuous loading recommended along edges of panels to minimize risk of wind flow under panels).
    6. Minimize direct contact with GCL, (GCL in traffic areas is protected by geotextiles, excess geomembrane, or other suitable materials, etc.).
    7. No objects which potentially harm GCL or overlying layers remain under, within, or on top of GCL (tools, needles, stones, etc.).
    8. Avoid dragging GCL material on subgrade.
D. Weather Limitations: Do not place GCL during any precipitation or impending precipitation, when relative humidity exceeds 80 percent, or in excessive winds, as determined by installation supervisor. Do not place GCL in surface moisture (dew, frost, etc.) or on ponded water. Replace GCL which becomes hydrated before covered.
E. GCL Protection: Limit GCL placement to amount installed and cover with geomembrane in one working day. GCL will not be left uncovered and exposed to elements at end of any day.
F. Damaged Material Replacement: Remove and replace GCL, hydrated before covered.

3.4 FIELD SEAMING

A. Seam Overlap and Bentonite Fillet: Overlap seams as recommended by manufacturer. For bentonite/geotextile GCLs, overlaps shall extend to manufacturer-printed match line. Pour fillet of dry granular bentonite at 1/4 pound per linear foot, or as recommended by GCL manufacturer non-woven geotextile encasement, along entire length of all overlap seams. Overlap sheets minimum 12 inches at leachate collection sumps.

B. Seams on Slopes: Orient panels so long edges are parallel to direction of maximum slope. Avoid lateral field seams on side slopes if possible; however, if extremely long side slopes (longer than maximum length of roll GCL material is available or manufactured) are included in project, seams along face of side slopes considered under these circumstances:
   1. If seams required across side slopes, Engineer will be contacted by product manufacturer during Bid phase of Project.
   2. In all cases, if lateral seams required on side slopes, product manufacturers products, product installers, Contractor, Geotechnical Professional, and Design Engineer will review situation and recommend as to integrity of seaming method and entire lining system as it relates to lateral seams.
   3. Overlap GCL panels 3 feet minimum with uppermost panel overlapping lower panel. Apply water-resistant adhesive in overlapped areas.

3.5 SIDE SLOPES

A. On side slopes, place non-woven geotextile material facing down.

3.6 REPAIRS

A. Make any necessary repairs to GCL by placing patch of same material extending at least 1 foot beyond flaw or damaged area. Add granular bentonite to overlapped area at uniform rate of at least 1/4 pound per linear foot. Use adhesive of type approved by manufacturer to keep patches in place during placement of overlying materials.

3.7 LEACHATE COLLECTION SUMP AND DITCH LINING

A. Overlap sheets at least 1 foot at leachate collection sumps and ditches. Place an extra layer of GCL material at bottom of leachate collection sumps.

3.8 GCL ACCEPTANCE

A. Installer shall retain all ownership and responsibility for GCL until acceptance by Owner.

B. GCL shall be accepted by Owner when these conditions are met:
   1. Installation is finished.
   2. Verify adequacy of all field seams and repairs is complete.
   3. Installer provides Engineer written certification, including "as-built" drawing(s).
   4. Documentation of completed installation, including all reports is complete.
   5. Acceptance of "Soil and Liner Evaluation Report" by TCEQ.

END OF SECTION

SECTION 31 05 19 - GEOSYNTHETIC CLAY LINERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Geosynthetic Clay Liner (GCL).
   2. Installation of GCL.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19.13 “Geotextile Fabrics.”
   3. Section 31 05 19.26 “Geocomposites Drainage Layer.”
   4. Section 31 23 00 “Excavation and Fill.”
   5. Section 31 90 20 “Gravel Drainage Material.”
   6. Section 31 90 30 “Protective Soil Cover.”
   7. Section 31 90 34 “HDPE Geomembrane Liner.”
   8. Section 31 90 40.10 “Leachate Collection Systems.”

1.2 REFERENCES

A. These applicable publications form part of this Specification to extent referenced and are referred to in text by basic designation only. Latest publication in use at time of executed contract will govern this project.
   1. ASTM D4354 - Standard Practice for Sampling Geosynthesis for Testing.
   2. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
   3. ASTM 5084 – Standard Test Method for Measurement of Hydraulic Conductivity of Geosynthetic Clay Liner.
   4. ASTM D5261 – Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
   5. ASTM D5321 - Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method.
   6. ASTM D5887 - Test Method for Measurement of Index Flux through Saturated Geosynthetic Clay Liner Specimens Using Flexible Water Permeameter.
   7. ASTM D5890 - Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners.
   8. ASTM D5891 – Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners.
   9. ASTM D5993 – Standard Test Method for Measuring the Mass per Unit Area of Geosynthetic Clay Liners.
   10. ASTM D6243 - Standard Test Method for Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by the Direct Shear Method.
   11. ASTM D6496 - Standard Test Method for Average Bonding Peel Strength between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners.
   12. ASTM D6768 - Standard Test Method for Tensile Strength of Geosynthetic Clay Liners.
   13. MSW Permit - Owner's TCEQ MSW Permit.
   14. Owner's Soil and Liner Quality Control Plan (SLQCP).
   15. TCEQ - Municipal Solid Waste Regulations, 30 TAC Chapter 330.

1.3 QUALITY ASSURANCE

A. Manufacturing shall have at least four years' continuous experience in manufacture of GCL rolls and/or experience totaling 5,000,000 square feet of manufactured GCL. Manufacturer shall permit Owner and Engineer to visit manufacturing plant.

B. Installation
   1. Installation Contractor shall have successfully installed a minimum 1,000,000 square feet of similar lining material in solid waste containment structures, and submit evidence of ability and capacity to perform this work. Installation Contractor can meet these criteria by teaming with subcontractor identified in Bid along with firm experience.
   2. Installation shall be performed under constant direction of a Field Installation Supervisor who shall remain onsite and responsible, throughout liner installation, for liner layout, patching, testing, repairs, and all other activities by Installer. This installation supervisor shall have installed or supervised installation of minimum 1,000,000 square feet of GCL.

1.4 SUBMITTALS

A. Manufacturer
   1. Quality control program and manual or descriptive documentation.
   2. List of material properties and samples of GCL including data pertaining to typical interface friction angles for various products.
   3. List documenting no less than five completed facilities totaling minimum 5,000,000 square feet.
   4. Copy of quality control certificates per with Soil Liner Quality Control Plan (SLQCP).

B. Installation Contractor
   1. Certification that Installation Supervisor for Installer reviewed Quality Assurance and Project Plans, and Specifications.
   2. A list of at least five completed facilities, totaling minimum 1,000,000 square feet, where Contractor installed a GCL.
   3. Proposed Installation Panel layout identifying seams and details. Layout plan must be approved by Engineer at least 10 days before materials are ordered. Panel layout must provide a numbering scheme used in quality control/assurance procedures and provide:
      a. Seams run up and down slopes.
      b. Field seam lengths to minimize.
      c. GCL shall not have any penetrations.
   4. Written certification that installer can perform all necessary construction testing as required by TCEQ.
   5. Installer shall submit any proposed variance or deviation from these documents in writing to Engineer minimum seven working days before scheduled start of GCL installation and accepted/rejected by Engineer before installation activities.
   6. Herein, "facilities" are defined as municipal solid waste (MSW) facilities with "Subtitle D" composite liner systems, or TCEQ-approved alternates, installed and tested per regulations set forth by TCEQ MSW regulations 30 TAC §330 or other EPA-delegated state MSW regulatory authorities. Facilities not meeting this definition, are not acceptable. Contractor must provide this information before Bid approval and Contract award.

1.5 WARRANTY

A. Obtain written warranty from Manufacturer (for material) and Installation Contractor (for workmanship). These documents shall warrant quality of in-place liner.
   1. Manufacturer: Furnish a written warranty on a pro rata basis for five years. Warranty shall be against manufacturing defects or workmanship and against deterioration due to ozone, ultraviolet or other normal weather aging. Warranty shall be limited to replacement of material only and not cover installation.
   2. Installation Contractor: Furnish a written warranty that entire lining installed free of defects in material and workmanship and installed pursuant to Owner's Soil and Liner Quality Control Plan (SLQCP) for two years following date of Certificate of Completion. Contractor shall agree to repair or replace that necessary by defects in materials or workmanship evident during two-year warranty period.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Transportation: Package GCL rolls or panels individually, in relatively impermeable and opaque protective covers, and ship by appropriate means so no damage is caused. Repair tears in protective covers immediately. Transportation is responsibility of Installer.
B. Delivery: Off-loading and storage of GCL rolls is responsibility of Installer. Installer responsible for replacing any damaged or unacceptable material at no cost to Owner. No off-loading done unless Engineer is present. Damage during off-loading documented by Engineer and Installer. Separate all damaged rolls from undamaged rolls until proper disposition of that material is determined by Owner representative. Owner representative is final authority on determination of damage.
C. Onsite Storage
   1. Store GCL material in accordance with Manufacturer's recommendation, to be protected from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat, or other damage.
   2. Store rolls on prepared surface (not wooden pallets). Do not stack GCLs consisting of bentonite supported by geotextiles more than four rolls high or as recommended by manufacturer. Do not stack GCLs consisting of bentonite supported by geomembranes more than two rolls high or as recommended by manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS

A. GCL consists of natural sodium bentonite encapsulated between two geotextiles.
B. Accessory bentonite for seaming and detail work shall be same material as in GCL sheets and as recommended by manufacturer.
C. Geotextiles will consist of woven or non-woven materials. At least one side of GCL must be made of non-woven material.
D. On slopes less than seven horizontal to one vertical (7:1), GCL must be lightly reinforced by needle-punching or lock-stitching.

E. On side slopes steeper than seven horizontal to one vertical (7:1), GCL must be reinforced by either needle punching or lock-stitching for internal shear strength reinforcement. Interface shear testing is applicable for slopes steeper than 7H:1V, but will not be required for any cell utilizing the same material that were used for a previous cell, if the test results for these materials are available and were satisfactory.

F. Install GCL on side slopes comparable to Solmax Bentoliner NSL, or approved equal. GCL installed on floor area shall be comparable to Solmax Bentoliner EC, or approved equal.

2.2 RAW MATERIALS

A. GCL shall be manufactured of new, first-quality products and specifically for intended purpose.

2.3 ROLLS

A. GCL shall be supplied in rolls with minimum 15-foot width. Rolls in lengths greater than 125 feet may be 12 feet in width. Labels on each roll shall identify:
   1. Manufacturer.
   2. Product identification.
   3. Roll number.
   4. Roll dimensions.
   5. Roll weight.

B. Maximize roll length to provide largest manageable sheet for fewest field seams.

C. Manufactured GCL sheets shall be constructed so bentonite not displaced during transportation, storage, and installation.

2.4 MANUFACTURER'S CERTIFIED TESTING

A. Material Testing: Before use, manufacturer shall certify material in writing. Certificate must include roll identification number, testing procedure, and test results. Report these parameters:

Table 1 - BENTONITE MATERIAL

Property	Test Method	Value	Unit	Frequency
Free Swell	ASTM D5890	24 min.	ml/2g	once every 50 tons and every truck or railcar
Fluid Loss	ASTMD 5891	18 max.	ml	once every 50 tons and every truck or railcar

Table 2 - GEOTEXTILE MATERIAL (SLOPED AREAS)

Property	Test Method	Value	Unit	Frequency
Woven Mass/Unit Area	ASTM D5261	3.1 min	oz/yd^2	1/200,000 $ft.^2$
Nonwoven Mass/Unit Area	ASTM D5261	6.0 min	oz/yd^2	1/200,000 $ft.^2$

Table 3 - GEOTEXTILE MATERIAL (FLOOR AREAS)				
Property	**Test Method**	**Value**	**Unit**	**Frequency**
Woven Mass/Unit Area	ASTM D5261	3.1 min	oz/yd^2	1/200,000 $ft.^2$
Nonwoven Mass/Unit Area	ASTM D5261	3.0 min	oz/yd^2	1/200,000 $ft.^2$

Table 4 - BENTONITE/GEOTEXTILE COMPOSITE MATERIAL (SLOPED AREAS)				
Property	**Test Method**	**Value**	**Units**	**Frequency**
Clay Mass/Unit Area	ASTM D5993(1)	0.8 min	psf	1/40,000 $ft.^2$
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	weekly
Grab Tensile Strength (2)	ASTM D4632	30	lbs/in	1/200,000 $ft.^2$
Bentonite Moisture Content	ASTM D2216			1/40,000 $ft.^2$
(1) Measured at 0-percent dry moisture content (2) Tested in machine direction				

Table 5 - BENTONITE/GEOTEXTILE COMPOSITE MATERIAL (FLOOR AREAS)				
Property	**Test Method**	**Value**	**Units**	**Frequency**
Clay Mass/Unit Area	ASTM D5993(1)	0.8 min	psf	1/40,000 $ft.^2$
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	weekly
Grab Tensile Strength (2)	ASTM D4632	30	lbs/in	1/200,000 $ft.^2$
(1) Measured at 0 percent dry moisture content (2) Tested in machine direction				

B. Quality Control Inspection: For needle-punched GCL, manufacturer must provide written certification that material is "needle free" by continuous inspections for presence of broken needles using a metal detector.

2.5 SEAM OVERLAP

A. Imprint match lines on both edges of upper geotextile fabric for bentonite/geotextile GCLs to provide quality assurance of overlap within manufacturer's recommendations. Lines shall be printed so they are easily visible and at lap distances recommended by manufacturer.

B. Additional line, 12 inches from edge, included for overlap in leachate collection lines. Sheets will be overlapped minimum 12 inches at leachate collection sumps.

2.6 QUALITY CONTROL SPECIFICATIONS

A. Sample Selection: Upon delivery to installation site, Owner shall obtain test samples to verify conformance to Project Plans, Specifications, and manufacturer certifications. Take samples from selected rolls by removing protective cover and cutting full-width, 3-foot-long strip. One revolution of GCL may be discarded before cutting sample. Rewrap sample roll and store with other rolls. Identify sample strips by type, style, lot, and roll number. Note machine direction with waterproof marker.

B. Conformance Testing: Owner shall test samples for conformance with properties shown in Table 6.

Table 6 - GCL ON SITE CONFORMANCE TESTS

Property	Test Method	Value	Unit	Frequency
Permeability (5 psi)	ASTM D5084	$5.0x10^{-9}$ max	cm/sec	1/100,000 ft^2
Clay Mass/Unit Area	ASTM D5993	0.8 min	psf	1/100,000 ft^2
Direct Shear (Internal)	ASTM D5321	22 (2)	degrees	one
Direct Shear (Interface)	ASTM D5321	22 (2)	degrees	(1)

(1) Once per interface type

(2) Peak value

C. See Section 01 30 00 "Submittal Procedures," for submittal information on direct shear requirements.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before placing GCL, Contractor shall provide written documentation that surfaces to receive GCL were inspected and acceptable for lining installation. Acceptable surface conditions described in Section 31 23 00 "Excavation and Fill," and in SLQCP with no excessive cracking (defined as cracks at least 1 inch in depth and 12 inches in length).

3.2 ANCHOR TRENCH

A. Excavate anchor trenches as specified before liner system placement.

3.3 PLACEMENT

A. Place sheets to reduce field seams to minimum.
B. Proof-roll subgrade before GCL placement. To minimize subgrade degradation, GCL placement will commence within four hours of proof-rolling.
C. Installer responsible for:
   1. No equipment or tools shall damage GCL by handling, trafficking, etc.
   2. No personnel working on GCL shall smoke, wear damaging shoes, or engage in other activities that damage GCL.
   3. Method used to unroll panels shall not cause crimps or other damage to GCL.
   4. Method used to place panels shall minimize wrinkles. Identify wrinkles as to proper location and compensation identified on Contractor and Engineer Drawings. Use ballast to prevent relocation of compensating wrinkles by wind.
   5. Place adequate loading (sand bags or similar items that will not damage GCL) to prevent uplift by wind (in case of high winds, continuous loading recommended along edges of panels to minimize risk of wind flow under panels).
   6. Minimize direct contact with GCL, (GCL in traffic areas is protected by geotextiles, excess geomembrane, or other suitable materials, etc.).
   7. No objects which potentially harm GCL or overlying layers remain under, within, or on top of GCL (tools, needles, stones, etc.).
   8. Avoid dragging GCL material on subgrade.

D. Weather Limitations: Do not place GCL during any precipitation or impending precipitation, when relative humidity exceeds 80 percent, or in excessive winds, as determined by installation supervisor. Do not place GCL in surface moisture (dew, frost, etc.) or on ponded water. Replace GCL which becomes hydrated before covered.

E. GCL Protection: Limit GCL placement to amount installed and cover with geomembrane in one working day. GCL will not be left uncovered and exposed to elements at end of any day.

F. Damaged Material Replacement: Remove and replace GCL, hydrated before covered.

3.4 FIELD SEAMING

A. Seam Overlap and Bentonite Fillet: Overlap seams as recommended by manufacturer. For bentonite/geotextile GCLs, overlaps shall extend to manufacturer-printed match line. Pour fillet of dry granular bentonite at 1/4 pound per linear foot, or as recommended by GCL manufacturer non-woven geotextile encasement, along entire length of all overlap seams. Overlap sheets minimum 12 inches at leachate collection sumps.

B. Seams on Slopes: Orient panels so long edges are parallel to direction of maximum slope. Avoid lateral field seams on side slopes if possible; however, if extremely long side slopes (longer than maximum length of roll GCL material is available or manufactured) are included in project, seams along face of side slopes considered under these circumstances:

1. If seams required across side slopes, Engineer will be contacted by product manufacturer during Bid phase of Project.
2. In all cases, if lateral seams required on side slopes, product manufacturers products, product installers, Contractor, Geotechnical Professional, and Design Engineer will review situation and recommend as to integrity of seaming method and entire lining system as it relates to lateral seams.
3. Overlap GCL panels 3 feet minimum with uppermost panel overlapping lower panel. Apply water-resistant adhesive in overlapped areas.

3.5 SIDE SLOPES

A. On side slopes, place non-woven geotextile material facing down.

3.6 REPAIRS

A. Make any necessary repairs to GCL by placing patch of same material extending at least 1 foot beyond flaw or damaged area. Add granular bentonite to overlapped area at uniform rate of at least 1/4 pound per linear foot. Use adhesive of type approved by manufacturer to keep patches in place during placement of overlying materials.

3.7 LEACHATE COLLECTION SUMP AND DITCH LINING

A. Overlap sheets at least 1 foot at leachate collection sumps and ditches. Place an extra layer of GCL material at bottom of leachate collection sumps.

3.8 GCL ACCEPTANCE

A. Installer shall retain all ownership and responsibility for GCL until acceptance by Owner.
B. GCL shall be accepted by Owner when these conditions are met:
    1. Installation is finished.
    2. Verify adequacy of all field seams and repairs is complete.
    3. Installer provides Engineer written certification, including "as-built" drawing(s).
    4. Documentation of completed installation, including all reports is complete.
    5. Acceptance of "Soil and Liner Evaluation Report" by TCEQ.

END OF SECTION

SECTION 31 05 19.13 - GEOTEXTILE FABRICS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes geotextile fabric specification and installation.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19.26 “Geocomposite Drainage Layer.”
   3. Section 31 90 20 “Gravel Drainage Material.”
   4. Section 31 90 34 “HDPE Geomembrane Liner.”
   5. Section 31 90 40.10 “Leachate Collection Systems.”

1.2 REFERENCES

A. ASTM D3776 – Standard Test Method for Mass Per Unit Area (Weight) of Fabric.
B. ASTM D3786 - Standard Test Method for Bursting Strength of Textile Fabrics; Diaphragm Bursting Strength Test Method.
C. ASTM D4354 - Standard Practice for Sampling of Geosynthetics for Testing.
D. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles from Exposure to Light, Moisture, and Heat in a Xenon Arc Type Apparatus.
E. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
F. ASTM D4533 - Standard Test Method for Trapezoidal Tearing Strength of Geotextiles.
G. ASTM D4632 - Test Method for Grab Breaking Load and Elongation of Geotextiles.
H. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile
I. ASTM D4833 - Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
J. ASTM D5034 - Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test).
K. ASTM D5035 - Standard Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)
L. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
M. ASTM D5261 - Standard Test Method for Measuring Mass per Unit Area of Geotextile.
N. ASTM D6241 - Test Method for Static Puncture Strength of Geotextiles and Geotextile Related Product Using a 50-mm Probe.

1.3 SUBMITTALS

A. Shop Drawings and Product Data:
   1. Manufacturer's product data.
B. Manufacturer Certification: Manufacturer must certify all geotextile fabric is inspected and no broken needles present in each roll of material.
C. Contractor's Experience Record:
   1. Indicate experience of installing manufacturer product.
   2. Provide at least five reference names with recent phone numbers on past MSW landfill projects.

1.4 QUALITY ASSURANCE

A. Manufacturer:
   1. Certify company has at least five years' experience.
   2. Certify upon job completion, fabric was installed per manufacturer recommendations and Contract Specifications.

1.5 PACKAGING AND STORAGE

A. Rolled on a cardboard core and wrapped in plastic with sealed ends.
B. Cover material covered to block sunlight.
C. Store material to avoid contact with soil.

PART 2 - PRODUCTS

2.1 GEOTEXTILE FABRIC

A. Nonwoven fabric.
B. Acceptable Material: Polypropylene.

2.2 GEOTEXTILE COMPONENTS

A. Geotextile Filter. Encompass gravel drainage material for leachate collection system.

2.3 GEOTEXTILE FILTER SPECIFICATIONS

Property	Unit	Test Method	Frequency	Minimum Average Roll Value
Fabric Weight	oz/yd^2	ASTM D5261	1 per 100,000 ft^2	8.0 oz
Thickness	mils	ASTM D5199	1 per 100,000 ft^2	80
Grab Tensile Strength	lbs	ASTM D5035	1 per 100,000 ft^2	220
Grab Elongation	%	ASTM D5035	1 per 100,000 ft^2	50
Puncture Strength	lbs	ASTM D4833	1 per 100,000 ft^2	120
Permittivity	cm/sec	ASTM D4491	1 per 100,000 ft^2	1.30

PART 3 - EXECUTION

3.1 EQUIPMENT

A. All equipment, tools, and machines used in work performance is subject to approval before commencement of work. Maintain equipment in satisfactory working condition at all times.

3.2 CONSTRUCTION INSPECTION

A. Contractor shall conduct a visual inspection of each panel or sheet as unrolled. Notify Engineer of any damage.

3.3 GEOTEXTILE PLACEMENT

A. Place material in locations shown on Plans. Conduct placement by experienced and trained personnel, including supervisors, foreman, and skilled laborers qualified and approved by geotextile manufacturer. All placement shall be per geotextile manufacturer recommendations. Perform placement to provide a complete sheet without holes, tears, excessive wrinkles, creases, or other imperfections.

3.4 FIELD SEAMS

A. Place geotextile fabric by overlapping edges minimum 18 inches or sewing a 2- to 4-inch overlapped seam. Contractor shall replace any geomembrane liner damaged as a result of sewing process.

3.5 BALLAST

A. To protect installation from excessive wind, protect all geotextile fabric in place by ballasting fabric with weighted sandbags. Place sandbags as fabric installed and do not remove until gravel drainage material is ready to place.

3.6 REPAIRS

A. Repair damaged geotextile fabric per geotextile manufacturer recommendations.

END OF SECTION

SECTION 31 05 19.26 – GEOCOMPOSITE DRAINAGE LAYER

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes dual geotextile HDPE drainage geonet geocomposite specification and installation.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 90 34 “HDPE Geomembrane Liner.”
   3. Section 31 90 40.10 “Leachate Collection Systems.”

1.2 REFERENCES

A. ASTM D413 – Standard Test Methods for Rubber Property-Adhesion to Flexible Substrate.
B. ASTM D1238 - Standard Test Methods for Melt Flow Rates of Thermoplastic by Extrusion Plastometer.
C. ASTM D1505 – Standard Test Method for Density of Plastics by the Density-Gradient Technique.
D. ASTM D1603 - Standard Test Methods for Carbon Black in Olefin Plastics.
E. ASTM D3776 - Standard Test Methods for Mass per Unit Area (Weight) of Fabric.
F. ASTM D3786 - Standard Test Methods for Bursting Strength of Textile Fabrics – Diaphragm Bursting Strength Testing Method.
G. ASTM D4218 - Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds by the Muffle Furnace Technique.
H. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus.
I. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permitting.
J. ASTM D4533 - Standard Test Methods for Trapezoidal Tearing Strength of Geotextiles.
K. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
L. ASTM D4716 - Standard Test Method for Determining the (In-Place) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Thread.
M. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile.
N. ASTM D4833 - Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products.
O. ASTM D5034 - Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)
P. ASTM D5035 - Standard Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)
Q. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
R. ASTM D5261 - Standard Test Method for Measuring the Mass Per Unit Area of Geotextiles
S. ASTM D6241 - Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe.
T. ASTM D7005-03 - Standard Method for Determining the Bond Strength (Ply-Adhesion) of Geocomposites.
U. ASTM D7179 - Standard Test Method for Determining Geonet Breaking Force.

1.3 SUBMITTALS

A. Shop Drawings and Product Data
   1. Manufacturer's product data.
   2. Manufacturer's installation instructions.
B. Manufacturer's Certification: Manufacturer must certify all geotextile geocomposite was inspected and no broken needles present in each roll of material.
C. Contractor's Experience Record
   1. Indicate experience of installing manufacturer product.
   2. Provide at least five reference names with recent phone numbers on past MSW landfill projects.

1.4 QUALITY ASSURANCE

A. Manufacturer:
   1. Certify company has at least five years' experience.
   2. Certify upon job completion geocomposite was installed per manufacturer recommendations and Contract Specifications.
B. Contractor: Certify experience exceeds 2,000,000 square feet geocomposite in past five years.

1.5 MANUFACTURER'S CERTIFICATION

A. Manufacturer submits certification indicating material delivered meets Project Specifications.
B. Heat-bonded HDPE drainage geonet/dual geotextile geocomposite supplied in rolls tagged as:
   1. Manufacturer name.
   2. Product identification.
   3. Lot number.
   4. Roll number.
   5. Dimensions of roll.

1.6 STORAGE

A. Wrap material in plastic with sealed ends.
B. Cover material to block sunlight.
C. Store material to avoid contact with soil.

PART 2 - PRODUCTS

2.1 TYPE

A. Dual geotextile/geonet geocomposite comparable to Solmax Fabrinet (200mil. 8oz/sy), or approved equal.

2.2 GENERAL

A. Manufacturing Procedure: Supplied geonet/geotextile geocomposite manufactured by heat bonding geotextile to both sides of geonet. No glue, adhesive, or other foreign substance permitted. No product exhibiting burned through geotextiles permitted.
B. Manufacturing Requirements: Supplied geonet/geotextile geocomposite manufactured to exhibit a bond between HDPE drainage net and geotextile, or geotextiles, greater than that

between soil and geotextile (average peel strength shall be 1 pound per inch per ASTM D413). Test peel strength minimum once every 50,000 square feet of material manufactured.

2.3 HDPE DRAINAGE GEONET CORE

A. Manufacture Information: Make HDPE drainage geonet core by continuous extrusion of web, forming geometry required to provide specified transmissivity as homogeneous 3-D structure. Resin selected to provide optimum combination of strength, environmental resistance, and resistance to high-compressive loads that reduce transmissivity. Geonet shall contain stabilizers to prevent ultraviolet light degradation.

B. HDPE Drainage Geonet Core Properties: Core shall be no less than 7.5 linear feet wide. Other than listed material properties, core material shall meet or exceed these properties:

Property	Test Method	Frequency	Minimum Value	Units
Carbon Black Content (Range)	ASTM D1603/4218	1 per 100,000 ft^2	2-3	%
Unit Weight (Nominal)	ASTM D3776 (Option C)	1 per 100,000 ft^2	0.94	g/cm^3
Tensile Strength MD (Range)	ASTM D7179	1 per 100,000 ft^2	45	ppi
Transmissivity @10,000 psf (Min)	ASTM D4716	1 per 100,000 ft^2	2 x 10^{-3}	m^2/sec

C. Geotextile Fabric Properties: Geotextile fabric bonded to drainage geonet shall be a nonwoven, needle punched polyester or polypropylene fabric. All geotextile shall conform to:

Property	Test Method	Frequency	Minimum Value	Units
Unit Weight (MARV)	ASTM D5261	1 per 100,000 ft^2	8.0	oz/yd^2
Grab Tensile (MARV)	ASTM D4632	1 per 100,000 ft^2	220	lbs
Puncture Resistance	ASTM D4833	1 per 100,000 ft^2	120	lbs
Permittivity	ASTM D4491	1 per 100,000 ft^2	1.3	1/sec
Transmissivity	ASTM D4716	1 per 100,000 ft^2	$1x10^4$	m^2/sec
Ply Adhesion	ASTM D7005	1 per 100,000 ft^2	1.0	lbs/in

MARV = Minimum Average Roll Value

PART 3 - EXECUTION

3.1 GENERAL

A. Exhibit care in keeping geocomposite free of debris and clean before installation. If not free from soil and debris, clean just before installation. Place dual geotextile geocomposite over entire lined area.

3.2 FIELD SEAMS

A. Field seams shall be parallel to maximum slope direction.

B. When deploying, butt adjacent rolls net-to-net or overlap and upper layer of geotextile heat tacked every 4-5 linear feet or sewn. If butted, secure net with plastic ties provided by manufacturer approximately every 4-5 linear feet along roll length. If overlapped, one tie every

5 linear feet is sufficient. Do not use metallic ties. Tie horizontal seams at 1 linear foot intervals.

C. After securing net, geotextile can be overlapped and heat tacked every 4-5 linear feet, or sewn. Where sewn, geotextile overlap, beyond edge of HDPE geonet, before sewing, shall exhibit a minimum average roll value of 6 inches. Do not weld geocomposite to geomembrane.

3.3 PLACING

A. Contractor shall handle geocomposite to ensure against damage in any form. Install over geomembrane liner keeping tension on geocomposite. Position by hand, if necessary, to minimize wrinkles.

B. Do not place geocomposite across slope (in horizontal direction).

3.4 BALLAST

A. Take care to avoid wind problems. Weight with sand bags, or equivalent, during installation and do not remove weight materials until cover material is in place.

3.5 DAMAGE TO GEOMEMBRANE LINER

A. Contractor shall repair any damage to GML at Contractor expense per Section 31 90 34 “HDPE Geomembrane Liner.”

3.6 GEOCOMPOSITE MATERIAL PROTECTION

A. Contractor will protect completed geocomposite and liner system after installation is complete. Protective soil cover must be placed within 14 calendar days of geocomposite installation.

END OF SECTION

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes preparing jobsite for construction operations by removal and disposal of surface debris, trees, shrubs, and other vegetations, pavement, concrete and stone rubble, abandoned utilities, and miscellaneous debris.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 23 00 “Excavation and Fill.”

1.2 DEFINITIONS

A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch in diameter; and free of weeds, roots, and other deleterious materials.

1.3 MATERIALS OWNERSHIP

A. Except for materials indicated to stockpile or remain Owner property, cleared materials shall become Contractor property and removed from site.

1.4 SUBMITTALS

A. Record Drawings: Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.5 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
B. Salvable Improvements: Carefully remove items indicated to salvage and store on Owner premises where indicated.
C. Notify utility locator service where Project is located before site clearing.

PART 2 - PRODUCTS

2.1 GENERAL

A. Furnish all materials, equipment, tools, labor, superintendence, and incidentals required to perform Work as indicated on Drawings, directed by Engineer, and specified herein.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.
B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
C. Protect existing site improvements to remain from damage during construction. Restore damaged improvements to original condition, as acceptable to Owner.

3.2 UTILITIES

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under noted conditions, then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Engineer not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Engineer's written permission.

3.3 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
   1. Do not remove trees, shrubs, and other vegetation indicated to remain or relocated.
   2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
   3. Completely remove stumps, roots, obstructions, and debris extending to 18 inches below exposed subgrade.
   4. Use only hand methods for grubbing within drip line of remaining trees.
B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated. Place fill material in horizontal layers not exceeding 8-inch loose depth, and compact each layer to density equal to adjacent original ground.

3.4 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.
B. Strip topsoil to depths encountered to prevent intermingling with underlying subsoil or other waste materials. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
C. Harvest and stockpile all existing topsoil onsite affected by grade changes/construction to provide minimum 6-inch topsoil depth after compaction in all areas to receive lawns and grasses or exterior plants. Harvest topsoil during site clearing before cut/fill operations if topsoil quantities insufficient to provide 6-inch depth. Supplement with imported topsoil approved by Engineer.
D. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   1. Limit height of topsoil stockpiles to 72 inches.
   2. Do not stockpile topsoil within drip line of remaining trees.
   3. Stockpile surplus topsoil and allow respreading deeper topsoil.

3.5 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated in the Drawings and Specifications and necessary to facilitate new construction.
B. Remove slabs, paving, and aggregate base as indicated. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

3.6 DISPOSAL

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose off Owner's property.

END OF SECTION

SECTION 31 23 00 - EXCAVATION AND FILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes earthwork:
   1. Miscellaneous grading to repair erosion and proof rolling subgrades.
   2. General excavation and filling for all areas to new contours.
   3. Excavating and backfilling anchor trenches.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19 “Geosynthetic Clay Liners.”
   3. Section 31 90 34 “HDPE Geomembrane Liner.”

1.2 REFERENCES

A. These publications form part of this Specification to extent referenced and are referred to in text by basic designation, title, or used to establish criteria. Latest publication in use at time of executed contract shall be used on this Project.
   1. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft).
   2. ASTM D4318 – Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity of Soils.
   3. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate.
   4. TCEQ, 30 TAC Chapter 330 - Texas Commission on Environmental Quality, Municipal Solid Waste Regulation.

1.3 DEFINITIONS

A. Backfill: Specified material used in refilling cut, trench, over excavation, or other excavation, placed at a specified degree of compaction.

B. Compaction: Process of mechanically stabilizing material by increasing density at controlled-moisture condition.
   1. Degree of Compaction: Percentage of maximum density obtained by test procedure described in ASTM D698 for general soil types abbreviated herein as "95-percent ASTM D698 maximum density."

C. Embankment: A fill having a top is higher than adjoining ground.

D. Excavation: Removal of material encountered to subgrade elevations and reuse or disposal of materials removed.

E. Fill: Specified material placed at specified degree of compaction to obtain indicated grade or elevation.

F. Hard Material: Weathered rock, dense consolidated deposits, or conglomerate materials, (excluding manmade materials like concrete), not included in definition of "rock" but usually requires use of heavy excavation equipment with ripper teeth or jack hammers for removal.

G. In Situ Soil: Existing in-place soil.

H. Lift: Layer (or course) of soil placed on top of previously-prepared or -placed soil.

I. Rock: Solid, homogeneous, interlocking crystalline material with firmly cemented, laminated, or foliated masses or conglomerate deposits, not removed without systematic drilling and blasting, drilling, expansion jacks or feather wedges, or backhoe-mounted pneumatic hole

punchers or rock breakers; also large boulders, buried masonry, or concrete other than pavement, exceeding 1 cubic yard in volume. Removal of "hard material" not considered rock excavation because of intermittent drilling and blasting performed merely to increase production.

J. Soil: Surface material of earth's crust resulting from chemical and mechanical weathering of rock and organic material.

K. Subgrade:
   1. Material in excavation (cuts) and fills (embankments) immediately below any subbase, base, liner, or other improvement.
   2. Also the level below work above referenced.

L. Subgrade: Uppermost surface of excavation or top surface of fill or backfill immediately below geocomposite clay liner.

M. Topsoil: In natural or undisturbed soil formations, fine-grained, weathered material on surface or directly below any loose or partially-decomposed organic matter. Topsoil may be a dark-colored, fine, silty, or sandy material with high content of well-decomposed organic matter, often containing traces of parent rock material. Gradation and material requirements specified herein apply to all topsoil references in Contract. Material shall be representative of productive soils in vicinity.

N. Unauthorized Excavation: Removing materials beyond indicated subgrade elevations or dimensions without Engineer direction. Unauthorized excavation, as well as remedial work directed by Engineer, shall be at Contractor expense.

O. Unsatisfactory Material:
   1. Existing, in situ soil or other material identified with insufficient strength characteristics or stability to carry intended loads in fill or embankment without excessive consolidation or loss of stability.
   2. Also includes manmade fills, refuse, frozen material, uncompacted backfills from previous construction, unsound rock or soil lenses, or other deleterious or objectionable material.

P. Working Platform: Layer of compacted crushed rock or natural stone that replaces in situ soil to provide a stable, uniform bearing foundation for construction equipment to facilitate further site construction.

1.4 DELIVERY AND STORAGE

A. Deliver and store materials as needed to prevent contamination or segregation.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Perform earthwork per requirements of authorities having jurisdiction.

1.6 CRITERIA FOR BIDDING

A. Excavate Cell 5 & 6 on the following criteria:
   1. Surface elevations as indicated.
   2. Character of material excavated or used for subgrade is as indicated. Hard material not considered as rock and removal of such material not give cause for claim for additional compensation regardless of hardness or difficulty in removing. Rock (defined in Article 1.3.I), will not be encountered.
   3. Suitable backfill and fill material in quantities required is available at Project site.
   4. Blasting not permitted. Remove material by drilling, expansion jacks, feather wedges, backhoe-mounted pneumatic hole punchers, rock breakers, or as Engineer approves.

PART 2 - PRODUCTS

2.1 REQUIRED EQUIPMENT

A. No equipment allowed within limits of lining system without prior approval from Engineer. Submit all equipment used within limits of liner per Section 01 33 00 "Submittal Procedures," including equipment weights, ground pressures, required lift thickness, etc.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protection and Restoration of Surfaces: Protect newly-graded areas from traffic, erosion, and settlements. Repair and reestablish damaged or eroded slopes, elevations, or grades and restore surface construction before acceptance. Protect existing streams, ditches, and storm drain inlets from waterborne soil by straw bale dikes or filter fabric dams, as needed. Conduct work per requirements specified in Section 01 50 00 "Temporary Facilities and Controls."
B. Stockpile Excavated Material: Where shown on Plans so it will not obstruct flow of runoff, streams, endanger a partly-finished structure, impair efficiency or appearance of facilities, or detrimental to completed work.

3.2 SURFACE PREPARATION

A. Clearing: Brush, refuse, stumps, roots, and unmerchantable timber shall become Contractor property and removed as directed by Engineer. Conduct work per requirements in Section 01 50 00 "Temporary Facilities and Controls."
B. Stockpiling Topsoil: Strip approved topsoil from site where excavation or grading indicated and stockpile separately from other excavated material. Locate topsoil as shown on Plans so material can be used readily for finished grading. Protect and store in segregated piles until needed.
C. Unsatisfactory Material: Remove organic matter, sod, muck, rubbish, and unsuitable soils under limits of construction. Typical depth of removal of such unsuitable material will not be less than 12 inches.
D. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
E. Provide erosion control measures to prevent erosion or displacement of soils.

3.3 DEWATERING

A. Prevent surface water from entering excavations, ponding on prepared subgrades, and flooding Project site and surrounding area.
B. Protect subgrades from softening and damage by rain or water accumulation.

3.4 GENERAL EXCAVATION

A. Excavate to indicated slopes, lines, depths, and elevations. Engineer will verify excavation was performed per Project Drawings. Stockpile excavated material in area indicated on Project Drawings. Prepare subgrade per Article 3.6 - Preparation of Subgrade and Compacted Berms.

B. In excavating process over existing lining system, waste will not likely be encountered. If waste is encountered, Contractor shall dispose waste on active working face, as directed by Owner, and cover any remaining exposed waste with minimum 6 inches of clean soil of same type used for protective cover.
C. Unclassified Excavation: Excavation is unclassified and includes excavation to required subgrade elevations regardless of character of materials and obstructions encountered.
D. Keep excavations free from water while construction in progress. Notify Engineer immediately in writing if necessary to remove rock, hard material, or other material defined as unsatisfactory to depth greater than indicated. Refill excavations cut below required subgrade elevations.

3.5 EXCAVATION FOR ANCHOR TRENCHES

A. Excavate trenches to indicated slopes, lines, depths, and elevations. Engineer shall verify trench was constructed according to Project Drawings.
B. Excavate anchor trenches to uniform widths shown on Project Drawings. Excavate trench walls vertically from trench bottom to top, except rounded edges provided where liner materials enter anchor trenches to avoid sharp bends in geosynthetic materials.
C. If trench is located in clay susceptible to desiccation, only excavate amount of trench required for one day of installation to minimize desiccation of trench soils.

3.6 PREPARATION OF SUBGRADE AND COMPACTED BERMS

A. Fine-grade subgrade to smooth, uniform, and compacted conditions, to elevations shown on Project Drawings. Remove all stones larger than 3/4 inch in diameter and other objects which could damage overlying geosynthetic materials.
B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer.
C. Proof roll subgrade with self-propelled smooth drum roller or methods acceptable to Engineer to remove clods and non-uniform subgrade.
D. Construct berms to grades shown. Use suitable fill materials from onsite as Owner directs and compact in loose lifts not to exceed 6 inches to 95-percent standard proctor density (ASTM D698). Control development of rills, repairing any that occur, and maintain side slopes for Project duration.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavations as directed by Engineer.

3.8 ANCHOR TRENCH BACKFILL

A. Backfill anchor trench and compact in loose lifts not to exceed 8 inches. Compact using light, rubber-tired equipment or other light-compaction equipment. Prevent damage to geosynthetic materials. At no time shall construction equipment come into direct contact with geosynthetic clay liner, geomembrane, or geonet. If damage occurs, Contractor shall repair per Specifications before completion of backfilling.
B. Compact anchor trench to 95-percent maximum dry density per ASTM D698.

3.9 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade or backfill layer before compaction to within ±2 percent of optimum moisture content or higher.
   1. Do not place backfill or fill material on muddy, frozen, frosty, or icy surfaces.
   2. Remove and replace, or scarify and air-dry, satisfactory soil material too wet to compact to specified density. Stockpile or spread and dry removed wet satisfactory soil material.

3.10 GRADING

A. Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated. Provide a smooth transition between existing adjacent grades and new grades. Correct and control wind and water erosion.
B. Site Grading: Grade to finished grades indicated within 0.10 foot. No rock will protrude above finished grade elevation. Remove rock that protrudes below grade then backfill and compact void to ASTM D698 (95 percent). Grade areas to drain where possible. Restore existing grades to remain but disturbed by Contractor operations to preconstruction condition.
C. Protect Surfaces: Protect newly-graded areas from traffic, erosion, and settlements that may occur and as required in Section 01 50 00 “Temporary Facilities and Controls.” and specified in Article 3.1.A - Protection and Restoration of Surfaces. Repair or reestablish damaged grades, elevations, or slopes before work will be accepted.

3.11 FIELD QUALITY CONTROL

A. Contractor will allow Engineer to inspect and test each subgrade and each fill or backfill layer. Do not proceed until test results for previously-completed work verify compliance with requirements.
   1. Subgrade: Proof roll to smooth surface so no ruts or other surface indentions exceed 1 inch in depth.
   2. Trench Backfill: In each compacted initial and final backfill layer, perform at least one field in-place density test for each 150 feet or less of trench, but no fewer than two tests.
   3. Access Roadway: One field density test per 50 linear feet of roadway.
B. When test results report subgrades, fills, or backfills are below specified density, scarify and moisten or aerate, or remove and replace soil to depth required, recompact and retest until required density obtained.

3.12 PROTECTION

A. Protect newly-graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
B. Repair and re-establish grades to specified tolerances where completed or partially-completed surfaces become eroded, rutted, settled, or lose compaction due to subsequent construction operations or weather conditions. Scarify or remove and replace material to depth directed by Engineer; reshape and recompact at optimum moisture content to required density.
C. Settling: Where settling occurs during Project correction period, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.13 DISPOSE SURPLUS AND WASTE MATERIALS

A. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner property. Stockpile or spread soil as directed by Engineer. Remove waste material, including unsatisfactory soil, trash, and debris, and dispose on active face as directed by Engineer.

END OF SECTION

SECTION 31 23 16.13 - TRENCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Excavating trenches for utilities from 5 feet outside building to municipal utilities.
   2. Compacted fill from top of utility bedding to subgrade elevations.
   3. Backfilling and compaction.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
B. ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
C. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. Rammer and 18-inch Drop.
D. ASTM D2167 - Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
E. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
F. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.

1.3 DEFINITIONS

A. Utility: Any buried pipe, duct, conduit, or cable.

1.4 FIELD MEASUREMENTS

A. Verify survey bench mark, control point, and intended elevations for Work are as shown on Drawings.

1.5 COORDINATION

A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

A. Trench backfill in areas for Project may be rock crusher fines or most granular material from excavated trench spoils. Only use material passing through 2-inch screen size and free of organic material.

PART 3 - EXECUTION

3.1 PREPARATION

A. Identify required lines, levels, contours, and datum locations.
B. Protect plant life, lawns, and other features remaining as a portion of final landscaping.
C. Protect bench marks, fences, paving, and curbs from excavating equipment and vehicular traffic.
D. Maintain and protect above and below grade utilities to remain.
E. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent backfill material.

3.2 EXCAVATING

A. Excavate subsoil required for utilities.
B. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
C. Do not interfere with 45-degree bearing splay of foundations.
D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
E. Remove lumped subsoil, boulders, and rock.
F. Correct areas over excavated per Article 3.1.E.

3.3 BACKFILLING

A. Backfill trenches to contours and elevations with unfrozen fill materials.
B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
C. Place and compact materials in equal continuous layers not exceeding 8 inches compacted depth.
D. Employ a placement method that does not disturb or damage existing or planned facilities.
E. Maintain optimum moisture content of fill materials to attain required compaction density.
F. Transport surplus fill materials off Project site for lawful disposal.

3.4 TOLERANCES

A. Top Surface of Backfilling Under Paved Areas: ±1/2 inch from required elevations.
B. Top Surface of General Backfilling: ±1 inch from required elevations.

3.5 FIELD QUALITY CONTROL

A. Perform compaction testing per ASTM D698, D2922, and D3017, and at Engineer discretion, ASTM D1556 and D2167.
B. Backfill loose lifts = 12 inch maximum.
    1. Density requirements: Top 4 feet of trench below subgrade at 95-percent ASTM D698. Trench levels below 4 feet at 90-percent ASTM D698.
C. If tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.
D. Frequency of Tests: One test per 250 feet of trench, at lift level chosen by Engineer.

3.6 PROTECTION OF FINISHED WORK

A. Protect finished Work.
B. Reshape and recompact fills subjected to vehicular traffic during construction.

END OF SECTION

SECTION 31 90 20 - GRAVEL DRAINAGE MATERIAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes gravel drainage material and installation.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19.13 “Geotextile Fabrics.”
   3. Section 31 05 19.26 “Geocomposite Drainage Layer.”
   4. Section 31 90 34 “HDPE Geomembrane Liner.”
   5. Section 31 90 40.10 “Leachate Collection Systems.”

1.2 REFERENCES

A. These publications form part of this specification to extent referenced. Publications are referred to in text by basic designation only. Latest publication in use at time of executed contract governs this project.
   1. ASTM C33 – Standard Test Methods for Specification for Concrete Aggregates.
   2. ASTM C88 – Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
   3. ASTM C131 – Standard Test Method for Resistance of Degradation of Small Size Coarse Aggregates by Abrasion and Impact in the Los Angeles Machine.
   4. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Course Aggregates.
   5. ASTM D75 – Standard Test Method for Sampling Aggregates.
   6. ASTM D2434 – Standard Test Method for Permeability of Granular Soils (Constant Head).
   7. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes.
   8. ASTM D4373 – Standard Test Method for Rapid Determination of Carbonate Content of Soils.

1.3 QUALITY ASSURANCE

A. Provide written certification that drainage gravel meets/exceeds performance requirements herein.
B. Provide all necessary documentation as specified.

1.4 SUBMITTALS

A. Obtain and submit this information according to Division 01 provisions for submittal procedures:
   1. Gravel material to be used. Minimum 5-gallon bucket.
   2. Gradation results.
   3. Soundness and Loss Test Results.
   4. Permeability Test Results.
   5. Calcium carbonate contents.

PART 2 - PRODUCTS

2.1 GRAVEL

A. Gravel shall consist of clean, sound, hard, durable, round particles of stone or gravel per ASTM C33. Gravel shall be free of silt and clay as defined by ASTM D487, vegetable matter, and other objectionable materials or coatings.

B. Gravel Quality: Crushed materials not acceptable.

Property	Test Method	Maximum Loss %
Soundness	ASTM C88	18
% Loss	ASTM C131	40

C. Gradation: Gravel should meet gradation requirements of ASTM D448 size number 467, 57, 67, or 7 or as approved by Engineer. Maximum gravel size shall not exceed 2 inches. Gradation may be adjusted to meet/exceed permeability requirements.

Sieve	% Passing
1 inch	100
3/4 inch	90-100
1/2 inch	20-55
3/8 inch	0-15
No. 4	0-5

D. Permeability: 1.0×10^{-2}cm/sec or higher. (ASTM D2434 at field density).

E. Calcium Carbonate: Not to exceed 15 percent by weight in accordance with JLT-S-105-89 or ASTM D 3042 modified to use a solution of hydrochloric acid having a pH of 5.

F. Test gravel for gradation (ASTM D 422) at a minimum of one test per 3,000 cubic yards or per lined area.

PART 3 - EXECUTION

3.1 GENERAL

A. Place gravel drainage material to prevent damage to underlying geotextile fabric, geomembrane, or geocomposite clay liner. Repair or replace any damage to geotextile fabric, geomembrane, or geocomposite clay liner per specifications at Contractor expense.

3.2 PLACEMENT

A. Place gravel drainage material per Section 31 90 40.10 “Leachate Collection Systems.”

B. Gravel around leachate pipe to prevent deflection/loading of pipe.

3.3 COMPLETION

A. Following gravel installation, cover gravel with encompassing geotextile fabric so ends of geotextile fabric overlap at least 18 inches, as shown on plans.

3.4 THICKNESS VERIFICATION

A. Required thickness of drainage materials verified by surveyed methods on established grid system with not less than one verification point per 5,000 square feet of area.

END OF SECTION

SECTION 31 90 30 - PROTECTIVE SOIL COVER

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes protective soil cover specification and installation.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. These publications form part of this Specification to extent referenced and are referred to in text by basic designation only.
   1. TCEQ, 30 TAC Chapter 330 - Texas Commission on Environmental Quality, Municipal Solid Waste Regulations.
   2. MSW Permit - Owner's TCEQ MSW Permit 1605B.

1.3 WEATHER LIMITATION

A. Construct protective soil cover when atmospheric temperature is above 35 degrees F. When temperature falls below 35 degrees F, Contractor shall protect all areas of completed protective soil cover by approved methods against detrimental effects of freezing. Correct areas of completed protective soil cover damaged by freezing, rainfall, or other weather conditions to meet specified requirements. Protective soil cover placement shall not occur on rainy days or when rain is imminent.

1.4 SUBMITTALS

A. Submit list of all equipment proposed for use in placing and maintaining protective cover. No equipment allowed within limits of liner system without approval of Engineer.
B. Submit per Section 01 33 00 “Submittal Procedures,” including equipment weight, ground pressure information, required lift thickness information, etc. Unapproved equipment operating on liner system floor or side slopes, not allowed.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Material used is a coarse sand stockpiled onsite near Project limits. All material shall be free of debris and rocks larger than 2 inches in diameter.

2.2 EQUIPMENT

A. Tracked equipment used to place soil cover on horizontal portion of liner system must be low ground pressure type (5.0 psi maximum track pressure). Protective cover shall be placed in lifts using low ground pressure equipment as shown below.

Equipment Ground Pressure	Minimum Lift Thickness
psi	in
<4	12
4 - 8	18
8 - 16	24
>16	36

B. Equipment that exerts ground pressures higher than 5.0 psi on lining system not approved unless Contractor can certify conditions can be met with specific lift thickness of protective cover. Submit calculations to document certification.

C. Only low ground pressure equipment (<5.0 psi) equipment allowed on lining system sideslope. Submit list of equipment used on sideslopes, including equipment weights, ground pressures, required lift thicknesses, etc. for Engineer approval before placing equipment on sideslopes. Contractor holds responsibility to demonstrate equipment used on sideslopes will not damage liner or cause "sliding" failure.

D. Spread protective cover placed on slopes by pushing up slope. Spread protective cover with minimum 12 inches of soil between spreading equipment and installed geosynthetics. Under no circumstances shall construction equipment come in direct contact with installed geosynthetics.

PART 3 - EXECUTION

3.1 STOCKPILING MATERIAL

A. If necessary, stockpile materials as designated. Before stockpiling, clear, drain, and level storage sites. Stockpile approved material available from excavation or grading as designated.

3.2 GRADE CONTROL

A. Finished and completed protective soil cover shall conform to grades, lines, cross sections, and dimensions shown.

3.3 LAYER THICKNESS

A. Complete thickness of protective soil cover as indicated. Place protective soil cover so top surface, during spreading operations, is minimum 2 feet perpendicular above geocomposite material.

3.4 COMPACTION

A. Compaction control not required; however, should be stable for construction and disposal equipment.

3.5 THICKNESS CONTROL

A. Measure thickness of select-material subbase course at intervals providing at least one measurement for each 5,000 square feet or major fraction thereof of protective soil cover. Measure thickness by survey. Provide survey control during construction. Owner will provide final thickness survey after Contractor notifies Owner protective soil cover is placed and ready for verification survey by Owner. Any areas of inadequate thickness requiring a resurvey done at Contractor expense.

3.6 HYDRAULIC CONDUCTIVITY

A. Preconstruction and conformance testing for protective cover soils will include minimum hydraulic conductivity with minimum conformance testing frequency of one analysis per 100,000 square feet of cover surface area. Hydraulic conductivity shall be no less than $1x10^{-4}$ cm/sec.

3.7 PLACEMENT

A. Protect completed liner system after installation is complete. No portion of liner system will remain exposed more than 15 days after installation is complete and system is accepted by Owner and Engineer.

B. Place protective cover material with machinery that, in Engineer opinion, will not damage any portion of liner system or leachate collection system or cause "sliding" of lining system or any part of system. Equipment used to place protective cover must not exert a ground pressure load greater than 5-psi on liner or leachate collection system and must be approved by Engineer before utilization on system.

3.8 MAINTENANCE

A. Maintain protective soil cover in satisfactory condition until accepted.

END OF SECTION

SECTION 31 90 34 - HIGH-DENSITY POLYETHENE (HDPE) GEOMEMBRANE LINER

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. High-density polyethylene (HDPE) geomembrane liner (GML).
   2. Installation of HDPE GML.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 23 00 “Excavation and Fill.”

1.2 REFERENCES

A. These publications form part of this Specification to extent referenced and are referred to in text by basic designation only. Latest publication in use at time of executed contract will govern this Project.
   1. ASTM D792 - Standard Test Methods for Density and Specific Gravity (relative density) of Plastics by Displacements.
   2. ASTM D1004 – Standard Test Method for Tear Resistance of Plastic Film and Sheeting.
   3. ASTM D1238 - Standard Test Method for Flow Rates of Thermoplastic by Extrusion Plastometer.
   4. ASTM D3895 - Standard Test Methods for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry.
   5. ASTM D4218 - Standard Test Method for Determination of Carbon Black Conduit in Polyethylene Compounds by the Muffle-Furnace Technique.
   6. ASTM D4833 - Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembrane, and Related Products.
   7. ASTM D5199 - Standard Test Method for Measuring Nominal Thickness of Geotextile and Geomembranes.
   8. ASTM D5397 - Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes using Notched Constant Tensil Load Test.
   9. ASTM D5596 – Standard Test Method for Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics.
   10. ASTM D5721 – Standard Practice for Air-Oven Aging of Polyolefin Geomembranes.
   11. ASTM D5885 – Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High-Pressure Differential Scanning Calorimetry.
   12. ASTM D5994 – Standard Test Method for Measuring Core Thickness of Textured Geomembrane.
   13. ASTM D6392 – Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods.
   14. ASTM D6693 - Tensile Properties of Plastics.
   15. ASTM D7466 – Standard Test Method for Measuring the Asperity Height of Textured Geomembranes.
   16. GRI GM 13 - HDPE Liners.
   17. TCEQ, 30 TAC Chapter 330 - Texas Commission on Environmental Quality, Municipal Solid Waste Regulations.
   18. MSW Permit - Owner's TCEQ MSW Permit No. 1605B.

1.3 QUALITY ASSURANCE

A. Manufacturing: Manufacturer shall have at least five years' continuous experience in manufacture of HDPE geomembrane rolls and/or experience totaling 100,000 square feet of manufactured HDPE geomembrane. Manufacturer shall allow Owner and Engineer to visit manufacturing plant.

B. Installation
   1. Installation Contractor shall be manufacturer or approved contractor trained and licensed to install manufacturer geomembrane.
   2. Install under constant direction of a Field Installation Supervisor who shall remain onsite and responsible, throughout liner installation, for liner layout, seaming, patching, testing, repairs, and all other activities by Installer. Installation Supervisor shall have installed or supervised installation and seaming of minimum 100,000 square feet of HDPE geomembrane. Perform actual seaming under direction of Master Seamer (who may also be Installation Supervisor) who seamed minimum 100,000 square feet of HDPE geomembrane, using same type of seaming apparatus specified in Project. Installation Supervisor and/or Master Seamer shall be present when seaming performed.

1.4 SUBMITTALS

A. Manufacturer
   1. Quality control program and manual or descriptive documentation.
   2. List of material properties and samples of liner.
   3. List documenting minimum 100,000 square feet.
   4. Certification all resin used in geomembrane manufacture for this job meets Specifications.
   5. Copy of quality control certificates issued by HDPE resin supplier.
   6. Certification e geomembrane and extrudate produced for Project have same properties.

B. Installation Contractor
   1. Certification Installation Supervisor for Installer and Master Seamer reviewed Project Plans and Specifications.
   2. List of completed facilities, totaling minimum 100,000 square feet which Contractor installed HDPE geomembrane in the last five years.
   3. Herein, "facilities" are defined as municipal solid waste (MSW) facilities with "Subtitle D" composite liner systems, or TCEQ-approved alternates, installed and tested per regulations set forth by TCEQ MSW regulations 30 TAC §330 or other EPA-delegated state MSW regulatory authorities. Facilities not meeting this definition, are not acceptable. Contractor must provide this information before Bid approval and Contract award.

1.5 WARRANTY

A. Obtain a written Warranty from Manufacturer (for material) and Installation Contractor (for workmanship). Documents shall warrant quality of in-place liner.

B. Manufacturer: Furnish a written warranty on a pro-rata basis for 20 years. Warranty shall be against manufacturing defects, workmanship, and deterioration due to ozone, ultraviolet, or other normal-weather aging. Warranty shall be limited to replacement of material only and not cover installation.

C. Installation Contractor: Furnish a written warranty that entire lining installed is free of defects in material and workmanship for two years following date of Certificate of Substantial Completion. Contractor shall agree to repair or replace that necessary by defects in materials or workmanship which become evident during two-year warranty period.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Transportation: Package and ship geomembrane rolls or panels appropriately so no damage is caused. Transportation is Installer responsibility.
B. Delivery: Off-loading and storage of geomembrane is Installer responsibility. Installer is responsible for replacing any damaged or unacceptable material at no cost to Owner. No off-loading unless Engineer is present. Engineer and Installer shall document damage during off-loading. Separate all damaged rolls from undamaged rolls until proper disposition of material is determined by Owner representative, the final authority on determination of damage.
C. Onsite Storage
    1. Store geomembrane to protected from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat, or other damage.
    2. Store rolls on prepared surface (not wooden pallets), not stacked more than two rolls high.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Geomembrane shall be HDPE.
B. Textured HDPE will have a coefficient of friction of GML to geosynthetic clay liner and geocomposite drainage layer not less than 22 degrees as determined by third-party conformance testing.
C. Use double-side textured HDPE geomembrane on side slopes.

2.2 GEOMEMBRANE RAW MATERIALS

A. Geomembrane shall be manufactured of new, first-quality resin, compounded, and manufactured specifically for intended purpose. Add carbon black (minimum 2 percent per ASTM D4218) to resin if not compounded for ultra-violet resistance. Resin manufacturer shall certify each batch for properties shown in Tables 1 and 2.

2.3 ROLLS

A. Geomembrane supplied in rolls with minimum 15-foot width. Labels on each roll shall identify material thickness, length and width of roll, batch and roll numbers, and name of manufacturer. Roll length shall be maximized to provide largest manageable sheet for fewest field seams.
B. Geomembrane rolls shall meet properties shown on Table 1 for smooth membrane material, and Table 2 for textured membrane material.
C. Before use, material shall be certified in writing by manufacturer to meet minimum physical properties shown on Tables 1 and 2. Certificate must include roll identification number, testing procedure, and test results. Test results are required for every 100,000 square feet of material, every resin lot, or as required by SLQCP.

TABLE 1
TYPICAL PROPERITIES: 60 mil, Smooth Liner

		TEST RESULTS		
Property	**Test Method**	**Nominal (1)**	**Minimum (2)**	**Test Frequency**
*Thickness (mils)	ASTM D5199	60	54	Once Per Roll
*Sheet Density (g/cc)	ASTM D1505		0.940	1/200,000 lbs.
*Melt Index (g/10 minutes)	ASTM D1238		≤ 1.0	1/100 sf and 1/resin lot
*Carbon Black Content, (%)	ASTM D1603		2-3	1/20,000 lbs.
* Carbon Black Dispersion	ASTM D5596		(3)	1/45,000 lbs.
TENSILE PROPERTIES:				
*Tensile Strength at Yield, ppi	ASTM D638		126	1/20,000 lbs.
*Tensile Strength at Break, ppi			228	
*Elongation at Yield, %			12	
*Elongation at Break, (2.0" G.L.)%			700	
*Tear Strength, lbs.	ASTM D1004		42	1/45,000 lbs.
*Puncture Resistance, lbs.	ASTM D4833		108	1/45,000 lbs.
*Stress Crack Resistance, hr.	ASTM D5397		300	Per GRI-GM 10
*Oxidative Induction Time, mins.	ASTM D3895		>100	1/200,000 lbs.
SEAM PROPERTIES – Fusion Weld (4)				
Shear Strength, ppi	ASTM D6392		120	
Peel Strength, ppi			78	
SEAM PROPERTIES – Extrusion Weld (4)				
Shear Strength, ppi	ASTM D6392		120	
Peel Strength, ppi			78	
1. Nominal values are average lot property values.				
2. Minimum values, unless otherwise specified, are average roll values as reported by specified test method.				
3. 9 of 10 Views in Categories 1 or 2 and 1 of 10 views in Category 3.				
4. Seam properties to be field tested and tested by independent third party. See Article 2.4.				
* Denotes independent third party conformance test in addition to manufacturer's certification.				

TABLE 2
TYPICAL PROPERITIES: 60 mil, Textured Liner

		TEST RESULTS		
Property	**Test Method**	**Nominal (1)**	**Minimum (2)**	**Test Frequency**
*Thickness (mils)	ASTM D5994	60	54	Once Per Roll
*Sheet Density (g/cc)	ASTM D1505		0.940	1/200,000 lbs.
*Melt Index (g/10 minutes)	ASTM D1238		≤ 1.0	1/100 sf and 1 resin lot
*Carbon Black Content, (%)	ASTM D1603		2-3	1/20,000 lbs.
* Carbon Black Dispersion	ASTM D5596		(3)	1/45,000 lbs.
TENSILE PROPERTIES:				
*Tensile Strength at Yield, ppi	ASTM D638		126	1/20,000 lbs.
*Tensile Strength at Break, ppi			228	
*Elongation at Yield, %			12	
*Elongation at Break, (2.0" G.L.)%			700	
*Tear Strength, lbs.	ASTM D1004		42	1/45,000 lbs.
*Puncture Resistance, lbs.	ASTM D4833		108	1/45,000 lbs.
*Stress Crack Resistance, hr.	ASTM D5397		300	Per GRI-GM 10
*Oxidative Induction Time, mins.	ASTM D3895		>100	1/200,000 lbs.
SEAM PROPERTIES – Fusion Weld (4)				
Shear Strength, ppi	ASTM D6392		120	
Peel Strength, ppi			78	
SEAM PROPERTIES – Extrusion Weld (4)				
Shear Strength, ppi	ASTM D6392		120	
Peel Strength, ppi			78	
1. Nominal values are average lot property values.				
2. Minimum values, unless otherwise specified, are average roll values as reported by specified test method.				
3. 9 of 10 Views in Categories 1 or 2 and 1 of 10 views in Category 3.				
4. Seam properties to be field tested and tested by independent third party. See Article 2.4.				
* Denotes independent third party conformance test in addition to manufacturer's certification.				

2.4 FIELD SEAMS

A. Test field seams as follows:
   1. Shear seam specimens are 1 inch wide, with a grip separation of 4 inches plus seam width. Center seam between clamps. Grip separation rate is 2-ipm.
   2. Run both shear seam strength and peel tests on five replicate specimens. A break through weld or at weld-sheet interface is considered a Non-FTB (failure) in both seam strength (shear) and peel strength tests.
   3. Approved field seaming processes are hot-shoe fusion and extrusion welding.
   4. Welding rods or beads used for extrusion welding shall be HDPE and physical properties shall be same as resin used in manufacture of HDPE geomembrane.

2.5 QUALITY CONTROL SPECIFICATIONS

A. Raw Materials
   1. Resin: All for use in geomembrane must pass a candidate preapproval process before eligible for use. Each incoming rail car shall be sampled by compartment with following density testing performed per ASTM D792, Method B and compare to manufacturer's specifications, not less than 1 test per 100,000 sq. ft. or 1 test per resin lot.
   2. Additives: All additives and concentrates must pass a candidate preapproval process. Statistically sample all incoming materials with following testing performed and compared to manufacturer specifications:
      a. Density: ASTM D792, Method B.
      b. Carbon Black Content: ASTM D1603/ D4218.

B. On-Line During Production
   1. Inspection Performed on Each Roll:
      a. Thickness: Cut a full-width sample from end of each roll and check thickness across entire sample.
      b. Appearance - Constantly monitor:
         1) Sheet surface appearance.
         2) Knife-cut edge.
         3) Folds, holes, creases, abrasions, or other damage.
   2. Roll Identification. Q.C. Engineer controls all paperwork including roll tags. Four tags per roll shall be used:
      a. Inside core.
      b. On production roll sample.
      c. On roll surface.
   3. Out-of-Specification Material: Any roll not meeting Specification for any noted inspection shall be placed on hold.

C. Post-Production and Finished Product
   1. Sampling: Obtain test samples from rolls of material delivered to site for conformance testing. Test samples for note requirements at rates specified in Tables 1 and 2.
   2. Testing Requirements for shall meet the following specifications listed in Table 3.
   3. Reporting: Log all results into batch file. Any testing that yields "out-of-spec" results shall be brought to immediate attention of Q.C. Manager. Retrieve all material produced after last sample meeting all specifications and place on hold.

D. Laboratory Post-Production Reporting: Log all results into batch file. These results are official properties for that batch. Place any batch that fails any specification on hold for further evaluation.

PART 3 - EXECUTION

3.1 ANCHOR TRENCH

A. Excavate anchor trench as specified before liner system placement.

3.2 PLACEMENT

A. Installer responsible for:
   1. No equipment or tools shall damage geomembrane by handling, trafficking, etc.
   2. No personnel working on geomembrane shall smoke, wear damaging shoes, or engage in other activities that damage geomembrane.
   3. Method used to unroll panels shall not cause scratches or crimps in geomembrane nor cause indentations in supporting soil greater than 1 inch deep or damage to underlying geosynthetic clay liner.
   4. Method used to place panels shall minimize wrinkles. Identify wrinkles identified as to proper location and compensation on Contractor and Engineer Drawings. Use ballast to prevent relocation of compensating wrinkles by wind.
   5. Place adequate loading (sand bags or similar items that not damage geomembrane) to prevent uplift by wind (for high winds, continuous loading is recommended along edges of panels to minimize risk of wind flow under panels).
   6. Minimize direct contact geomembrane, (geomembrane in traffic areas protected by geotextiles, extra geomembrane, or other suitable materials).

B. Weather Limitations
   1. Geomembrane deployment shall proceed between ambient temperatures of 32-90 degrees F. Below 40 degrees F, preheat GML.
   2. Do not place geomembrane during any precipitation, in excessive moisture (fog, rain, dew, frost), or in excessive winds, as determined by Installation Supervisor.
   3. Geomembrane must undergo oven aging at 85° following standard test method ASTM D5721, ASTM D3895, or ASTM 5885 if geomembrane will be exposed to sun an weather without protective cover for longer than a six-month period. Oven age testing will be performed at least once per formulation by the manufacturer and a third party testing laboratory.

C. Factory Seam Quality Verifications: Engineer will require Contractor to test up to 20 percent of factory-fusion welds (non-destructive air pressure and/or vacuum test) in the field to verify factory test results. Additional testing at Installer's expense required if failed tests obtained in the field.

3.3 FIELD SEAMING

A. Orient seams parallel to line of maximum slope,(orient down, not across slope). In corners and odd-shaped geometric locations, minimize number of field seams.

B. No base T-seam shall be closer than 5 feet from toe of slope. Align seams with least possible number of wrinkles and "fishmouths." If a fishmouth or wrinkle is found, relieve and cap-strip.

C. Seam Overlap
   1. Panels of geomembrane must have a finished overlap of minimum 4 inches for hot-shoe fusion welding and 3 inches for extrusion welding, but sufficient overlap provided to allow peel tests performed on seam.
   2. Do not use solvent or adhesive unless product is approved by Owner representative. Submit samples to Design Engineer for testing and evaluation.

3. Procedure used to temporarily bond adjacent panels together shall not damage geomembrane; in particular, temperature of hot air at nozzle of any spot-welding apparatus shall be controlled so geomembrane is not damaged.

D. Seaming Equipment and Accessories: Approved equipment for field seaming are hot-shoe fusion and extrusion welders.
   1. Hot Shoe Welder, 110 Volt, 10 Amps.
   2. Extrusion Welder, 220 Volt, 19 Amps.
   3. High-speed, 10,000 rpm, 42-inch side grinder with 80-grit discs.
   4. 7.5 KW generator, single-phase with 110/220 volt outputs.
   5. Power cord, minimum S.O. type, 10 OSHA-approved electrical cord with OSHA-approved twist-type plugs and connections.
   6. Seam Vacuum Tester for non-destructive seam and patch testing.
   7. Field Tensiometer, able to perform seam and peel adhesion tests for quantitative testing onsite.

E. Test Seams:
   1. Conduct field test seams on geomembrane liner to verify seaming conditions are satisfactory. Conduct test seams for each seamer at beginning of each seaming period, at Engineer discretion, and at least once each 4 hours, for each seaming apparatus use that day.
   2. All test seams shall be made at a location selected by Engineer in the area of the seaming and in contact with the subgrade. Test seam samples shall be 12 inches wide and 10 feet long for hot shoe welding and 4 feet long for extrusion welding with seam centered lengthwise. Specimens 1 inch wide shall be cut from each opposite end of test seam by Engineer. Engineer shall use a tensionmeter provided by Installer to test these specimens for shear and peel. If a test seam fails to meet field seam Specifications, do not accept nor use seaming apparatus/seamer for seaming until deficiencies are corrected and two consecutive successful full test seams achieved.
   3. At the very least, peel adhesion and bonded shear strength must be 62 and 95 percent respectively, strength of parent material, but no less than 78 and 120 ppi respectively.

F. Non-Destructive Seam Testing: Installer shall non-destructively test all field seams over full length. All test equipment including but not limited to these, furnished by Installer:
   1. Vacuum Box Testing
      a. Equipment for testing single wedge fusion and extrusion seams comprised of:
         1) Vacuum box assembly consisting of rigid housing, transparent viewing window, soft rubber gasket attached to bottom, port hole, or valve assembly, and vacuum gauge.
         2) Steel vacuum tank and pump assembly equipped with pressure controller and pipe connections.
         3) Rubber pressure/vacuum hose with fittings and connections.
         4) Plastic bucket and wide paint brush.
         5) Soapy solution.
      b. Installer shall:
         1) Trim away excess sheet overlap.
         2) Clean window, gasket surfaces, and check for leaks.
         3) Energize vacuum pump and reduce tank pressure to 5 psi.
         4) Wet strip of geomembrane approximately 12 x 48 inches (length of box) with soapy solution.
         5) Place box over wetted area and compress.
         6) Close bleed valve and open vacuum valve.
         7) Ensure leak-tight seal created.

8) For approximately 15 seconds, examine geomembrane through viewing window for presence of soap bubbles.
9) If no bubbles appear after 15 seconds, close vacuum valve and open bleed valve, move box over next adjoining area with minimum 3-inch overlap and repeat.
10) Mark and repair all areas where soap bubbles appear then retest.

c. These procedures apply where seams cannot be non-destructively tested, as determined by Engineer:
1) If seam is accessible to testing equipment before final installation, seam shall be non-destructively tested before final installation.
2) If seam cannot be tested before final installation, seaming operations shall be observed by Engineer for uniformity and completeness.

2. Air Pressure Testing (double-fusion seam only):
a. These procedures are applicable to processes which produce a double seam with enclosed space. Equipment for testing double fusion seams comprised of :
1) Air pump equipped with pressure gauge to generate and sustain a 25-30 psi pressure and mount on cushion to protect geomembrane.
2) Manometer equipped with sharp hollow needle, or other approved pressure feed device.

b. Installer shall:
1) Seal one end of seam to test.
2) Insert needle or other approved pressure feed device through sealed end of channel created by double-wedge fusion weld.
3) Energize air pump to verify unobstructed passage of air through channel.
4) Seal other end of channel.
5) Energize air pump to a 30-psi pressure, close valve, and sustain pressure approximately five minutes.
6) If loss of pressure exceeds 4 psi or does not stabilize, locate faulty area, repair, and retest.
7) Remove needle or other approved pressure feed device and seal.

G. Destructive Seam Testing: Installer shall provide Engineer with a minimum of one destructive test sample per 500 feet of seam length from a location specified by Engineer. Installer shall not be informed in advance of the sample location.

1. Sampling Procedure: ln order 10 obtain test results prior 10 completion of liner installation. samples shall be cut by Installer as the seaming progresses. A destructive test must be done for each welding machine used for seaming or repairs. Sampling times and locations shall be determined by Engineer. Engineer must witness the obtainment of all field test samples and Installer shall mark all samples with their location roll and scam number. Installer shall also record in written form the date, time, location, roll seam number, ambient temperatures, and pass or fail description. A copy of the information must be attached to each sample portion. All holes in the geomembrane resulting from obtaining the seam samples shall be immediately repaired. All patched shall be vacuum tested.
2. Size. and Disposition of Samples: Samples shall be 12 inches wide by 48 inches long with seam centered length wise. Sample shall be cut into two equal length pieces, and given to Engineer.
3. Field Testing: Installer shall cut six 1-inch wide replicate specimens from his sample and these shall be tested by Engineer. Installer shall test two specimens (four when possible for testing both tracks dual tracks on dual-track fusion welded scams) for peel strength. All tests to be witnessed by Engineer. To be acceptable, both test specimens

must pass. Any specimen that fails through the weld or by adhesion at the weldsheet interface is a Non-FTB break and shall be considered a failure.

4. Independent Laboratory Testing: Engineer will package and ship all destructive seam samples to an independent testing Laboratory for determination and verification of all field shear and peel strengths. Test method and procedures used by Independent Laboratory shall be same used in field testing, where seam samples are 1-inch wide, and the grip separation rate is 2-ipm. The minimum passing criteria for independent laboratory testing are all three of the following:
    a. All scam samples tested in the peel mode must fail in FTB.
    b. At least four of live seam samples from each peel and shear determination must meet the minimum specified value.
    c. Average value from all five seam samples from each peel and shear determination must meet minimum specified value.
    d. Noted criteria apply to both tracks from each dual-crack fusion welded seam before considered passing. ALL FAILED LAB TESTS PAID BY INSTALLER.
5. Archive Samples: Installer will package and ship the remaining samples to Engineer for archival Samples shall include information to indicate where sample was taken.
6. Procedures for Destructive Test Failure. The following procedures shall apply whenever a sample fails field destructive test:
    a. Installer shall cap strip seam between failed location and any passed test location.
    b. Installer can retrace welding path to an intermediate location (at minimum 10 feet from location of failed test), at Engineer discretion, and take a small sample for an additional field test. If test passes, cap strip seam between that location and original failed location. If test fails, repeat process.
    c. Over the length of scam failure, cut out old seam, reposition panel and reseam or add a cap strip, as required by Engineer.
    d. After reseaming or placement of cap strip, take additional destructive field tests within reseamed area. Reseamed sample shall be found acceptable if test results approved by Engineer. If test results unacceptable, repeat process until reseamed length is judged satisfactory by Engineer.
    e. If a sample fails a laboratory destructive test, follow noted procedures considering laboratory tests exclusively.
    f. Engineer will document all actions taken in conjunction with destructive test failures.

H. Defects and Repairs: Engineer shall inspect all seams and non-seam areas of geomembrane for defects, holes, blisters, undispersed raw materials, and any sign of contamination by foreign matter. Because light reflected by geomembrane helps detect defects, geomembrane surface shall be clean at time of inspection. Installer shall brush, blow, or wash geomembrane surface if amount of dust or mud inhibits inspection. Engineer decides if cleaning geomembrane is needed to facilitate inspection.
    1. Evaluation: Non-destructively test each suspect location in seam and non-seam areas as appropriate in Engineer presence. Engineer shall mark each location that fails non-destructive testing and repair accordingly.
    2. Repair Procedures:
        a. Restart/reseam defective seams as described herein.
        b. Repair small holes by extrusion cap welding. If hole is larger than 3 inches, patch.
        c. Repair tears by patching. Where tear is on a slope or area of stress with a sharp end, round before patching.

d. Repair blisters, large holes, undispersed raw materials, and contamination by foreign matter by patches.
e. Abrade and clean surfaces of HDPE to patch no more than 15 minutes before repair. Remove no more than 10 percent of thickness.
f. Patches shall be round or oval in shape, made of same geomembrane, and extend minimum 6 inches beyond edge of defects. All patches shall be same compound and thickness as geomembrane specified. All patches shall have top edge beveled with an angle grinder before placement on geomembrane. Apply patches using approved methods only.

3. Restart/Reseaming Procedures: Restart welding process by grinding existing seam and rewelding a new seam. Welding commences where grinding started and must overlap previous seam by at least 2 inches. Reseaming over existing seam without regrinding is not permitted.
4. Verification of Repairs:
   a. Non-destructively test each repair except when Engineer requires destructive seam sample obtained from repaired seam. Take repairs that pass non-destructive test as an indication of adequate repair. Failed tests indicate repair shall be repeated and retested until passing test results achieved.
   b. Record Results: Installer shall provide daily documentation of all non-destructive and destructive testing to Engineer. This documentation shall identify all seams that initially failed test and include evidence seams were repaired and successfully retested.

3.4 GEOMEMBRANE ACCEPTANCE

A. Installer retains all ownership and responsibility for geomembrane until Owner accepts. Geomembrane surface shall not have striations, roughness, pinholes, or bubbles and free of holes, blisters, undispersed raw materials, or any contamination by foreign matter; except, if in Engineer opinion, blemish will not adversely affect properties and use of geomembrane, Engineer may accept geomembrane after sufficient laboratory test data provided to support such acceptance, and further, if all such testing is at sole expense of Installer.

B. Owner shall accept geomembrane liner when these conditions are met:
   1. Installation is finished.
   2. Verify adequacy of all field seams and repairs, including associated testing, is complete.
   3. Written certification, including "as built" drawing(s) is provided by installer to Engineer.
   4. Documentation of complete installation, including all reports are complete.
   5. Acceptance of "Geomembrane Liner Evaluation Report" by TCEQ.

END OF SECTION

SECTION 31 90 40.10 – LEACHATE COLLECTION SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes polyethylene (PE) pipe material and installation.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 05 19.13 “Geotextile Fabrics.”
   3. Section 31 05 19.26 “Geocomposite Drainage Layer.”
   4. Section 31 90 20 “Gravel Drainage Material.”
   5. Section 31 90 34 “HDPE Geomembrane Liner.”

1.2 REFERENCES

A. ASTM D1248 – Standard Specification for Polyethylene Plastics Molding Extrusion Materials for Wire and Cable.
B. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes.
C. ASTM D2837 – Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products.
D. ASTM D3350 – Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
E. M 252 – Standard Specification for Corrugated Polyethylene Drainage Pipe.

1.3 SUBMITTALS

A. Shop Drawings and Product Data:
   1. Provide piping layout with all bends, tees, elbows, etc.
   2. Pipe manufacturer's data.
   3. Pipe manufacturer's installation data.
B. Manufacturer's Certification: Manufacturer must certify materials supplied meet all Specification requirements.
C. Contractor's Experience Record: Indicate past experience installing manufacturer's product.

1.4 QUALITY ASSURANCE

A. Manufacturer
   1. Certify company manufactured this product at least five years.
   2. Certify material meets or exceeds requirements specified herein.
B. Contractor: Provide experience record for installing manufacturer's product; minimum five years’ experience.

1.5 FIELD MEASUREMENTS

A. Verify field measurements are as indicated on Shop Drawings.

1.6 HANDLING OF PIPE

A. Store pipe on clean, level ground to prevent undue scratching or gouging pipe. If pipe must be stacked for storage, stacking per pipe manufacturer recommendations. Handle pipe to not damage by dragging over sharp objects or cut by chokers or lifting equipment.

B. Handle joined segments of pipe to avoid damage to pipe or joining system. When lifting sections of pipe, avoid chains or cable-type chokers. Nylon slings preferred. Use spreader bars when lifting long-fused sections. Avoid cutting or gouging pipe.

1.7 REPAIR DAMAGED SECTIONS

A. Cut and remove segments of pipe having cuts or gouges in excess of 10 percent of wall thickness of pipe. Rejoin undamaged portions of pipe using a method identified as approved by specifying Engineer.

PART 2 - PRODUCTS

2.1 POLYETHYLENE PIPE

A. Must be ASTM D1248, Type III, Class C, Grade P-34, Category 5.
B. PPI rating of PE-3408.
C. Cell Classification: ASTM D3350, 345434C.
D. Hydrostatic Design Basis shall not be less than 1600 psi (11.03 MPA) per ASTM D2837.
E. Minimum Standard Dimension Ratio (SDR): 17.

2.2 FITTINGS

A. Type: Same as pipe.
B. Bends: Only long radius bends acceptable.
C. Dissimilar Pipe Connections: Make connections between corrugated pipe and smooth heat fusion pipe with flange adaptors and slip-on metal flanges. Metal flanges shall be cast or ductile iron. Bolts and nuts shall be stainless steel.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Place 6-inch-thick layer of gravel on top geotextile material across entire length/width of trench.
B. Do not drive heavy vehicles/equipment on top of material to avoid damage to geomembrane liner.
C. Using handheld mechanical tampers to carefully consolidate material.
D. Place pipe in center of trench and place gravel.
E. Place gravel under pipe haunches in 2-inch lifts followed by handheld mechanical compaction up to pipe springline.
F. Above springline, lifts of gravel may be 4 inches thick, followed by handheld mechanical compaction.
G. After gravel placed to full depth, cover top with geotextile fabric, overlapping minimum 18 inches.

3.2 PIPE JOINING

A. Join sections of polyethylene pipe into continuous sections on job site using manufacturer recommended methods.
B. Joining method shall be heat-fusion method performed per manufacturer recommendations.

C. Heat-fusion equipment used should meet all conditions recommended by pipe manufacturer, including but not limited to temperature requirements, alignment, and fusion pressures.
D. All bends, tees, and fittings may be shop-made per manufacturer recommendations.

3.3 PIPE JOINING CORRUGATED POLYETHYLENE PIPE

A. Place sections of corrugated polyethylene pipe into continuous sections on job site using manufacturer-recommended methods.
B. Join pipe using manufacturer coupling pieces and ties.

END OF SECTION

APPENDIX A

SOIL AND LINER QUALITY CONTROL PLAN (SLQCP)

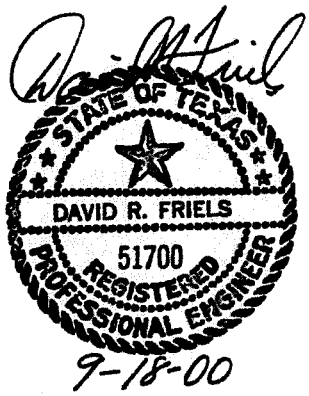
CITY OF MIDLAND LANDFILL
MIDLAND COUNTY, TEXAS
TNRCC PERMIT NO. 1605-B

SITE DEVELOPMENT PLAN PART III
ATTACHMENT 10
SOILS AND LINER QUALITY CONTROL PLAN

Prepared for

City of Midland

September 2000



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Liner Construction and Testing Handbook

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1 INTRODUCTION

1.1 Purpose

This Soils and Liner Quality Control Plan (SLQCP) has been prepared to provide the Owner, Design Engineer, Construction Quality Assurance Professional of Record, the Contractor, and the Geosynthetics Contractor the means to govern the construction quality and to satisfy the environmental protection requirements. This document conforms to the current Texas Natural Resource Conservation Commission (TNRCC) Municipal Solid Waste Rules (MSWR) and the current TNRCC Liner Construction and Testing Handbook.

The City of Midland incorporates by reference the current version of the "Liner Construction and Testing Handbook" (LCTH) published in accordance with §330.6 Municipal Solid Waste Regulations (30 Texas Administrative Code, Chapter 330) as a part of the permit Soils and Liner Quality Control Plan (SLQCP) for the Midland Landfill. The LCTH specifically addresses soil liners and flexible membrane liners and does not cover leachate collection systems. Therefore, additional sections have been included to supplement the LCTH. A copy of the latest revision, dated July 1, 1994, of the LCTH is included as Appendix A.

1.2 Definitions

Whenever the terms listed below or in the TNRCC Liner Construction and Testing Handbook are used, the intent and meaning shall be interpreted as indicated.

Construction Quality Assurance Professional of Record (POR)

The POR is an authorized representative of the owner and has overall responsibility for construction quality assurance and confirmation that the facility was constructed in general accordance with plans and specifications approved by the permitting agency. The POR will be registered as a Professional Engineer in Texas or an engineering geologist certified by the American Institute of Professional Geologists (AIPG) with a registered specialty in Engineering Geology. Experience and education should include geotechnical engineering, engineering geology, soil mechanics, geotechnical laboratory testing, construction quality assurance, quality control testing, and hydrogeology. The POR will show competency and experience in certifying like installations, be approved by the permitting agency, and be presently employed by or practicing as a geotechnical engineer

or as an engineering geologist in a recognized geotechnical/environmental engineering organization. The credentials of the POR will meet or exceed the minimum requirements of the permitting agency.

The POR may also be known as or referred to as the Construction Quality Assurance (CQA) Engineer, Resident Project Representative, the Geotechnical Quality Control/ Quality Assurance Professional (GQCP), or the Geotechnical Professional (GP).

Any references to monitoring, testing, or observations to be performed by the POR should be interpreted to mean the POR or CQA monitors working under the POR's direction.

Conformance Tests

These are tests of materials which are conducted prior to installation on the project. Conformance test samples are samples either submitted or obtained specifically for conformance testing.

Construction Tests

These are tests of materials or constructed products that occur during construction.

Construction Quality Assurance Monitors

These are representatives of the POR who work under direct supervision of the POR. The CQA monitor is responsible for quality assurance monitoring and performing on-site tests and observations. The CQA monitor is on site full time during construction and reports directly to the POR. Any references to monitoring, testing, or observations to be performed by the POR should be interpreted to mean the POR or CQA monitors working under the POR's direction. The CQA monitor performing daily QA/QC observation and testing shall be NICET - certified in geotechnical engineering technology at level 2 or higher for soils and geomembrane testing; or have a minimum of four years of directly related experience; or be a graduate engineer or geologist with one year of directly related experience.

Contract Documents

These are the official set of documents issued by the owner. The documents include bidding requirements, contract forms, contract conditions, specifications, contract drawings, addenda, and contract modifications.

Contract Specifications (Specifications)

These are the qualitative requirements for products, materials, and workmanship upon which the contract is based.

Contractor

This is the person or persons, firm, partnership, corporation, or any combination, private or public, who, as an independent contractor, has entered into a contract with the owner, and who is referred to throughout the contract documents by singular number and masculine gender.

Design Engineer

These individuals or firms are responsible for the design and preparation of the project construction drawings and specifications. Also referred to as "designer" or "engineer."

Geomembrane

See Flexible Membrane Liner (FML) in the TNRCC Liner Construction and Testing Handbook. Geomembrane liner (GL) and FML are used interchangeably.

Geosynthetics Contractor

This individual is also referred to as the "contractor," and is the person or firm responsible for geosynthetic installation. This definition applies to any person installing geosynthetic clay, geomembrane, geocomposite, or geotextile, even if not his primary function.

Seasonal High Water Table

The highest measured or calculated water level in an aquifer during investigations for a permit application and/or any groundwater characterization studies at a site. The seasonal high water table is determined from a compilation of the highest measured water level from each applicable monitor well and piezometer screened in the aquifer.

Nonconformance

This is a deficiency in characteristic, documentation, or procedure that renders the quality of an item or activity unacceptable or indeterminate. Examples of non-conformance include, but are not limited to, physical defects, test failures, and inadequate documentation.

Operator

The organization that will operate the disposal unit (i.e., City of Midland).

Operator's Representative

This is the person that is an official representative of the operator responsible for planning, organizing, and controlling the design and construction activities.

Panel

This is a unit area of the geomembrane (FML) that will be seamed in the field.

Quality Assurance

This is a planned and systematic pattern of procedures and documentation to ensure that items of work or services meet the requirements of the contract documents. Quality assurance includes documentation of quality control. Quality assurance activities will be performed by the POR, the CQA monitor, and independent laboratories.

Quality Control

These actions provide a means to measure and regulate the characteristics of an item or service to comply with the requirements of the contract documents. Quality control will be performed by the contractor or his suppliers.

2 CONSTRUCTION QUALITY ASSURANCE FOR SUBGRADE AND GENERAL FILL

2.1 Subgrade

Subgrade refers to a surface that is exposed after stripping topsoil, filling low areas, or excavating to establish the grade directly beneath the liner system.

Prior to beginning liner construction, the subgrade area will be stripped to a depth sufficient to remove all loose surface soils or soft zones within the exposed excavation. The liner subgrade area will be proof-rolled with heavy rubber tired construction equipment or a heavy compactor to detect soft zones or areas subject to pumping. Areas of soft soils will be recompacted and areas subject to pumping will be undercut to firm material and backfilled with suitable compacted earth fill.

Because the subgrade consists of in situ dense sand or caliche and unacceptable areas are expected to be infrequent and relatively small, visual examination of the subgrade preparation and documentation by the POR (or CQA monitor) will generally be sufficient to evaluate its suitability as a foundation for the soil or geosynthetic clay (GCL) liner. Typical criteria that may be used for this evaluation include:

- No rutting or pumping under construction traffic or during proofrolling
- No seepage over a period of time of at least one week
- No softening of the excavation surface
- No softness or sheen within secondary features
- No water accumulation in shallow test probes

Physical testing may also be used to evaluate the prepared subgrade or fill placed in large areas if considered desirable by the CQA monitor.

The CQA monitor will approve the prepared subgrade prior to the placement of soil or GCL liner or structural fill. Approval will be based on proof rolling observations, a review of test information, if applicable, and monitoring of the subgrade preparation.

2.2 General Fill

General fill material will be used in the establishment of proper subgrade elevations and in the construction of perimeter embankments. General fill will be placed in uniform lifts which do not exceed 8 inches in loose thickness and are compacted to at least 90 percent of standard Proctor (ASTM D 698) at a moisture content ranging from two percentage points below optimum to three percentage points above optimum (-2 to +3).

2.3 Surveying

Surveys will be conducted to verify the lines and grade of the liner system. A survey grid will be established with a minimum of one point per 5,000 square feet of surface area for thickness verification of the various liner components. The allowable vertical tolerance for the finished subgrade is + or – 0.2 feet or as approved by the engineer.

The survey will be used to establish as-built information and verify that the:

- Subgrade (bottom of liner system) complies with design grades and does not extend below the approved permit grades (within accepted construction tolerances)
- Individual components meet the minimum thickness requirements at each of the grid points
- Top of liner, protective cover, and leachate collection system (LCS) trenches comply with the design grades
- Coordinates of the constructed cell

3 CONSTRUCTION QUALITY ASSURANCE FOR SOIL LINER

City of Midland has adopted the current version of the "Liner Construction and Testing Handbook" (LCTH), published by the TNRCC, as a part of the SLQCP. Soil liner construction quality assurance is addressed in the LCTH. A copy of the latest version of the LCTH is included as Appendix A.

4 GEOSYNTHETIC CLAY LINER

4.1 Delivery

The Geosynthetic Clay Liner (GCL) shall be shipped in rolls which are wrapped individually in relatively impermeable and opaque protective covers. The rolls may be stacked only as allowed by manufacturer's recommendations. The GCL rolls must be stored above ground and protected from moisture.

4.2 Conformance Testing

The GCL shall consist of sodium bentonite contained between geotextiles or adhered to a geomembrane. A certificate of analysis for each clay lot shall be submitted as part of the quality control documentation. The finished GCL must have a permeability no greater than $5x10^{-9}$ cm/sec (test method ASTM D5084 or GR1 GCL-2), have a free swell (test method ASTM D5890) of at least 24 ml/2g, and a fluid loss (test method ASTM D5891) no greater than 18 ml. The manufacturer shall provide recommended seaming procedures and supporting test documentation showing the GCL seams are no more permeable than the GCL itself at a confining pressure anticipated in the field.

GCL testing shall be performed by the manufacturer and the third-party independent laboratories. The POR will review the manufacturer's certification (quality control certificate) and verify that the GCL meets the values given in the plans or specifications for those tests listed in Table 4-1.

4.3 Installation

All installation of GCL shall be monitored continuously during construction by the POR or CQA Monitor. All references to the POR in this section shall mean the POR and/or the CQA Monitor under his direct supervision. The installer shall provide a panel layout plan which will be reviewed by the POR prior to any material deployment.

4.3.1 Subgrade Preparation

The subgrade surface shall be relatively smooth and free of foreign and organic material, sharp objects, exposed soil or aggregate particles greater than 1 inch, or other deleterious materials. GCL will not be placed over a wet subgrade or ponded water.

Prior to GCL installation, the POR will verify the following:

- The finish grades have been verified by the surveyor.
- The subgrade has been sprayed with water (if dry) and proof-rolled with a minimum of two passes of heavy, rubber tired construction equipment or a heavy compactor.
- The subgrade surface has been rolled with a smooth drum roller to provide a uniform surface that does not contain materials which could damage the GCL or adjacent layer.

4.3.2 Deployment

Equipment used to deploy GCL over soil shall not cause excessive rutting of the subgrade. GCL placed over geosynthetics shall be placed by hand or using light equipment with low contact pressure rubber tires. Deployed GCL panels should contain no folds or excessive slack. Generators, gasoline or solvent cans, tools, or supplies shall not be placed directly on GCL. Installation personnel shall not smoke or wear damaging shoes when working on GCL.

GCL on sidewalls shall not be unrolled perpendicular to the slope. GCL should be anchored at the top of the slope and then unrolled downslope to prevent wrinkles and folds. Horizontal seams shall not be allowed on slopes except where the roll length is less than the slope length as specified herein.

The POR shall observe the GCL as it is deployed for thin spots, or other panel defects. The POR shall record all defects and the disposition of the defects (panel rejected, patch installed, etc.). All repairs are to be made in accordance with the specifications at the discretion of the POR. The POR shall verify that only panels which can be covered in one day are deployed and that the GCL panels are not placed during wet, rainy weather. In accordance with the construction specifications, the POR shall also verify the following:

- Proper GCL deployment techniques.
- Proper overlap.

- Seams are constructed per manufacturer's recommendations.
- Defects are patched and overlapped properly.
- On sidewalls, the GCL is anchored at the top and then unrolled.

On occasion where the manufactured roll length is less than the slope length (i.e., length from anchor trench to 5 feet past the toe) it will be necessary to have end laps. Horizontal seems may be used only on the sidewalls where a full roll length is too short to extend from the anchor trench to 5 feet past the toe of the slope. Horizontal seems are to be constructed as follows:

- Horizontal seems will be located in the lower half of the slope
- There will be a minimum overlap of 3 feet, shingled in the down slope direction
- Seems will be staggered; i.e., the horizontal seems will be at least 20 feet apart for any two adjacent panels

The POR shall observe the GCL for premature hydration. All GCL that has prematurely hydrated shall be removed and replaced with new GCL. These observations will be documented in the Geosynthetic Clay Liner Evaluation Report (GCLER) or Geomembrane Liner Evaluation Report (GLER). Premature hydration occurs when the GCL is saturated prior to placement of the cover or drainage aggregate. A typical guide for premature hydration would be material that is displaced under normal foot traffic.

4.3.3 Protection

Construction equipment on the GCL (or composite liner system) shall be minimized to reduce the potential for damage or puncture. The POR shall verify that small equipment such as generators are placed on scrap geomembrane material (rub sheets). The POR shall verify that the GCL is not displaced while overlying materials are being placed.

4.4 Repairs

Repairs shall be constructed in accordance with the manufacturer's recommendations. Repairs shall extend at least 12 inches beyond the extent of damage.

4.5 Documentation

GCL installation will be documented in a GCLER. The GCLER may be submitted as a separate document upon completion of the installation of geosynthetics, or combined with the GLER and submitted upon completion of protective cover installation.

Table 4-1

Standard Tests on GCL Material

Tester	Test	Type of Test	Standard Test Method	Frequency of Testing
Supplier or GCL Manufacturer	Bentonite	Free Swell	ASTM D5890	per 50 tons and every truck or railcar
		Fluid Loss	ASTM D5891	per 50 tons and every truck or railcar
	GCL Product	Clay Mass/Unit Area @ 0% moisture	ASTM D5993	per 40,000 ft^2
		Grab Tensile Strength	ASTM D4632	per 200,000 ft^2
		Bentonite Moisture Content	ASTM D 2216 or D 4643	per 40,000 ft^2
		Permeability (1)	GRI GCL-2 or ASTM D5084	Per week for each production line
	Geomembrane	Mass per Unit Area	ASTM D 1505 or ASTM D 5261	per 100,000 ft^2
		Thickness	ASTM D 5199 or ASTM D 5994	per 200,000 ft^2
		Tensile Properties	ASTM D 638	per 200,000 ft^2
Independent Laboratory	GCL Product	Clay Mass/Unit Area @ 0% moisture	ASTM D5993	per 100,000 ft^2
		Permeability (1)	GRI GCL-2 or ASTM D5084	per 100,000 ft^2
		Interface Shear (2)	ASTM D 5321	per GCL/adjoining material type and GCL Internal Shear(1)

(1) Not required for geomembrane backed GCL, but manufacturer certification must be provided.

(2) Interface shear testing is applicable for slopes steeper than 7H:1V, but will not be required for any cell utilizing the same materials that were used for a previous cell if test results for these materials are available and were satisfactory. Test samples shall be hydrated unless a geomembrane is installed on both sides of the GCL. Test results developed for construction of the Pit 3, Phase 1 liner are provided in Appendix C.

5 CONSTRUCTION QUALITY ASSURANCE FOR GEOMEMBRANE LINERS

City of Midland has adopted the current version of the "Liner Construction and Testing Handbook" (LCTH), published by the TNRCC, as a part of the SLQCP. Construction Quality Assurance for Geomembrane liners (GL) is addressed in the LCTH. A copy of the latest revision of the LCTH is included as Appendix A.

The LCTH includes a requirement for manufacturer's quality control test and third party conformance test of geomembrane materials to be conducted in accordance with NSF 54. Subsequent to publication of the LCTH, NSF 54 has been replaced with GRI GM13. Therefore, geomembrane testing will be conducted in accordance with GRI GM13 and as outlined in Table 5-1. Oven aging testing is not required unless the installed geomembrane panels will be exposed to sun and weather without protective cover for longer than a six-month period.

Table 5-1
Required Contractor's Quality Control Testing Submittals for Geomembranes

Test	Type of Test	Standard Test Method	Frequency of Testing (Minimum)
Resin	Specific Gravity/Density	ASTM D 792, Method A or ASTM D 1505	Per 100,000 SF and every resin lot
	Melt Flow Index	ASTM D 1238	Per 100,000 SF and every resin lot
Manufacturer's Quality Control	Thickness	ASTM D 5199 (smooth) or D5994 (textured)	Per Roll of Geomembrane
	Specific Gravity/Density	ASTM D 1505/D 792	Per 200,000 pounds
	Carbon Black Content	ASTM D 1603	Per 20,000 pounds
	Carbon Black Dispersion	ASTM D 5596	Per 45,000 pounds
	Tensile Properties	ASTM D 638 / Type IV	Per 20,000 pounds
	Tear	ASTM D 1004	Per 45,000 pounds
	Puncture	ASTM D 4833	Per 45,000 pounds
	Stress Crack Resistance	D 5397	Per GRI-GM 10
	Oxidative Induction Time	D 3895 or D 5885	Per 200,000 pounds
	Oven Aging @ 85°	D 5721 and D 3895 or D 5885	Per each formulation

6 CONSTRUCTION QUALITY ASSURANCE FOR GEOCOMPOSITE

6.1 Delivery

The drainage geocomposite shall be shipped in rolls which are wrapped with protective covering. Each roll shall be marked with the manufacturers name, lot number, roll number, and roll dimensions. The rolls shall be protected from mud, soil, dirt, dust, debris, cutting, or impact forces. Damaged rolls shall be rejected and removed from the site or stored at a location separate from accepted rolls.

6.2 Quality Control Testing

The drainage geocomposite manufacturer (or supplier) shall conduct quality control testing and certify that all materials delivered to the site comply with project specifications. The material certifications shall be reviewed by the POR to verify that the geocomposite meets the values given in the plans or specifications. Third party conformance testing will not be required.

6.3 Installation

All installation of geocomposite shall be monitored continuously during construction by the CQA Monitor working under the direct supervision of the POR.

6.3.1 Surface Preparation

Prior to geocomposite installation, the CQA Monitor shall verify the following:

- Lines and grades have been verified by the surveyor.
- Debris, soil, and other materials have been removed from the geomembrane surface.
- The underlying geomembrane installation, including all required documentation, has been completed for the area being covered.

- If placed directly on clay liner, the surface does not contain stones that could damage the geocomposite or the geomembrane.

6.3.2 Deployment

During deployment of the geocomposite, the CQA Monitor shall verify the following:

- Disposition of any defects (panel rejected, patch installed, etc.) All repairs are to be made in accordance with the specifications.
- That equipment used to deploy the geocomposite does not damage the geocomposite or underlying geomembrane.
- That people working on the geocomposite do not smoke, wear shoes that could damage the geocomposite, or engage in activities that could damage the geocomposite or underlying geomembrane.
- That the geocomposite is anchored to prevent movement by the wind.
- That the geocomposite remains free of contaminants such as soil, grease, fuel, etc.
- That the geocomposite is relatively free of tension, stress, folds, wrinkles, or creases.
- That adjacent rolls of geocomposite are overlapped, tied, and seamed in accordance with the specifications or manufacture's recommendations.

6.4 Repairs

Holes or tears in the drainage geocomposite shall be repaired by placing a geocomposite patch extending 2 feet beyond the edges of the hole or tear and tying the patch every 6 inches or heat bonding the geotextiles. A hole only in the upper geotextile shall be patched with a piece of geotextile in a similar manner, except the patch should be heat bonded to the underlying geotextile.

7 CONSTRUCTION QUALITY ASSURANCE FOR PIPING

7.1 Delivery

The POR will verify that upon delivery, the pipe and pipe fittings are in compliance with the requirements of the construction specifications. Stacking or insertion of the other construction materials onto or into the pipe and pipe fittings shall be prohibited. The contractor shall use pliable straps, slings, or rope to lift the pipe. The contractor shall use at least two support points when lifting pipe sections greater than 20 feet in length.

7.2 Quality Control Testing

Prior to the installation of pipe, the pipe manufacturer will provide a quality control certificate for each lot or batch of pipe delivered. The quality control certificate will be signed by a responsible party employed by the pipe manufacturer. The quality control certificate will include:

- Property data sheet including all specified properties, measured using test methods indicated in the specifications, or equivalent.
- A certification that property values given in the property data sheet are minimum values and are guaranteed by the pipe manufacturer.

The POR or the CQA Monitor shall verify that:

- The property values certified by the pipe manufacturer meet all of the specifications.
- The measurements of properties by the pipe manufacturer are properly documented and that the test methods used are acceptable.
- Pipe perforations are the correct size and spacing according to the project specifications and are in compliance with the filter requirements for the drainage aggregate to be used as given in Section 8.

7.3 Installation

All installation of pipe shall be monitored continuously during construction by the POR or CQA Monitor working under the direct supervision of the POR.

7.3.1 Surface Preparation

Prior to pipe installation, the CQA Monitor shall verify the following:

- Lines and grades have been verified by the surveyor.
- The pipe trenches are free of any deleterious material that may damage the pipe or underlying geomembrane or may clog the pipe.

7.3.2 Deployment

During pipe and fitting installation, the POR shall verify that:

- Pipes and fittings are not broken, cracked, or otherwise damaged or unsatisfactory.
- Prior to fusing (if required), the pipe installer will provide a fusion surface area which is clean and free of moisture, dust, dirt, debris of any kind, and foreign material. Prior to gluing (if required), the pipe and fittings are clean and dry.
- Pipe and fittings are being installed in accordance with specifications, manufacturer's recommendations, and accepted practices.
- People and equipment utilized to install the pipe do not damage the pipe or any other component of the liner system.
- Bedding has been placed for the pipe in accordance with project plans and specifications.

8 CONSTRUCTION QUALITY ASSURANCE FOR DRAINAGE AGGREGATE

8.1 Materials

Granular drainage material around the leachate collection pipes will consist of durable particles of natural gravel, crushed stone or expanded shale light weight aggregate. The material shall be free of conspicuous amounts of clay or other unsuitable materials. The aggregate shall have a loss of mass due to calcium carbonate of less than 15 percent in accordance with JLT-S-105-89 or ASTM D 3042 modified to use a solution of hydrochloric acid having a pH of 5. The drainage aggregate shall meet ASTM D 448, size number 467, 57, 67, or 7. Drainage materials not complying with the above gradations may also be approved by the POR if demonstrated to have a hydraulic conductivity of at least $1x10^{-2}$ cm/sec. The drainage aggregate gradation shall conform to the filter requirements consistent with the perforations in the leachate collection pipe. At a minimum, the drainage aggregate will meet the following criteria:

For circular holes:

$$\frac{\text{85 Percent Size of Filter Material}}{\text{Hole Diameter}} > 1.7$$

For slots:

$$\frac{\text{85 Percent Size of Filter Material}}{\text{Slot Width}} > 2.0$$

Aggregate (sand or gravel) may also be used as an alternate to the geocomposite drainage layer. The aggregate will have a minimum hydraulic conductivity of $1x10^{-2}$ cm/sec. If the aggregate includes particles greater than $^3/_8$ inch size, the geomembrane will be protected by geotextile prior to placing the drainage layer. The material will be placed and spread with low ground pressure equipment that will not damage the underlying geomembrane. Under no circumstances shall there be less than 12 inches of material between the spreading equipment and the geomembrane.

8.2 Testing

The coarse aggregate shall be tested for gradation (ASTM D 422) at a minimum of 1 test per 3,000 cubic yards or per lined area. The aggregate shall be free of organics, clay, foreign objects, or other deleterious materials. The physical characteristics of the aggregate shall be evaluated through visual observation and laboratory classification testing before construction and visual observation during construction. The coarse aggregate may be be sampled more frequently at the discretion of the CQA monitor. The test results for the coarse aggregate used in leachate collection system will be included in the GLER.

9 CONSTRUCTION QUALITY ASSURANCE FOR GEOTEXTILES

9.1 Delivery

Geotextile shall be shipped in rolls that are wrapped in opaque covers. Each roll shall be marked with the manufacturer's name, lot number, roll number, and roll dimensions. Materials shall be stored in a location that will protect the rolls from precipitation, mud, dirt, dust, puncture, cutting, or any other damaging conditions. Damaged rolls shall be rejected and removed from the site or stored at a location separate from accepted rolls.

9.2 Quality Control Testing

The geotextile manufacturer shall conduct quality control testing and certify that the materials delivered to the site comply with project specifications. The material certification shall be reviewed by the POR and accepted for the project prior to placement of any of the material.

9.3 Installation

All installation of geotextile shall be monitored continuously during construction by the CQA Monitor.

9.3.1 Surface Preparation

Prior to geotextile installation, the CQA Monitor shall verify the following:

- Lines and grades have been verified by the surveyor.
- Debris, soil, dust, and other materials are removed from the surface being prepared for geotextile deployment.
- That all geomembrane defects have been repaired.
- That required destructive and nondestructive testing of the geomembrane and seams have been completed.

9.3.2 Deployment

During geotextile placement, the CQA Monitor shall verify the following:

- Defects are repaired in accordance with the specifications.
- That equipment used does not damage the geotextile.
- That people working on the geotextile do not smoke, wear shoes that could damage the geotextile, or engage in activities that could damage the geotextile.
- That the seams are overlapped in accordance with the specifications.
- That seams are continuously sewn or heat bonded in accordance with the specifications and consistent with the manufacturer's recommendations.

9.4 Repairs

Repair procedures include:

- Patching - used to repair holes, tears, and large defects
- Removal - used to replace areas with large defects where the preceding method is not appropriate

If located on a slope, a panel with a defect, hole, or tear, which exceeds 10 percent of the width of the panel, shall be removed and replaced. Otherwise, a patch with a minimum 12-inch overlap in all directions shall be heat bonded or sewn in place.

10 CONSTRUCTION QUALITY ASSURANCE FOR PROTECTIVE COVER

10.1 Materials

The protective cover shall consist of soil or a soil aggregate mixture that is free of organics, large angular rocks, foreign objects, or other deleterious materials that could damage the underlying geosynthetics. The protective cover material shall have a hydraulic conductivity of at least $1x10^{-4}$ cm/sec or chimney drains may be used. Chimney drains, when used, will be constructed by extending the gravel in the LCS trench and sump through the protective cover. The minimum width of aggregate (at the top of the chimney) will be at least 1.5 feet, and at all points across the trench there will be a minimum of 2 feet of gravel or soil over the geomembrane. Chimney drains will be constructed over the sumps by extending the chimney from the trench laterally across the sump. Where it is necessary for hauling or compacting equipment to travel directly over the trenches, the chimney drain will be interrupted for approximately 20 feet and the aggregate will be covered with at least 2 feet of soil.

10.2 Quality Assurance Testing

If chimney drains are not used to provide flow paths to the LCS, soil testing must be conducted to verify that the hydraulic conductivity of protective cover soil is at least $1x10^{-4}$ cm/sec. Hydraulic conductivity tests shall be conducted at a minimum frequency of 1 test for each 100,000 square feet of cover surface area (horizontal projection). Testing of protective cover will not be required if chimney drains are used.

10.3 Installation

All installation of protective cover shall be monitored continuously during construction by the CQA Monitor.

Drainage aggregates and protective cover shall be placed in lifts using low ground pressure equipment as shown below.

Equipment Ground Pressure (psi)	Minimum Lift Thickness (in.)
<4	12
4 - 8	18
8 - 16	24
>16	36

During installation of the protective cover, the CQA Monitor shall verify the following:

- The protective cover layer is spread using low ground pressure equipment.
- The protective cover is spread with a minimum of 12 inches of soil between the spreading equipment and the installed geosynthetics. Under no circumstances shall construction equipment come in direct contact with the installed geosynthetics.
- Protective cover placed on slopes shall be spread by pushing up the slope.
- The thickness of the protective cover has been verified with surveying procedures of a minimum of 1 survey point per 5,000 square feet with a minimum of 2 survey points regardless of size.
- That underlying geosynthetic installations are not damaged during placement operations.

11 LINERS CONSTRUCTED BELOW GROUNDWATER

11.1 Applicability

Liners that are constructed below groundwater may experience uplift from the hydrostatic force of the groundwater. In such cases, appropriate groundwater control measures will be implemented until adequate ballast has been placed.

The analyses, design, and construction of any liner constructed below groundwater will be accomplished in accordance with TAC 330.203 and the latest TNRCC Guidance Document (which at this time is the *Liners Constructed Below the Seasonal High Water Table,* April 1997).

11.2 Seasonal High Water Elevations

A Seasonal High Groundwater Elevation Map has been developed using water level data representing the highest recorded water levels at the various monitoring wells across the landfill site and is included in Appendix B. The current Seasonal High Groundwater Elevation Map shall be used to evaluate and design the liners for short-term and long-term stability. Prior to construction of a new cell, the map will be updated by checking groundwater elevations from all monitoring events subsequent to the date of the last revision.

The current Seasonal High Groundwater Elevation Map will be submitted with each GCLER or GLER along with an evaluation of the need for soil ballast to overcome hydrostatic pressure on the bottom of the liner.

11.3 Excavation Below the Groundwater Level

A Sectorized Fill Layout which shows permitted excavation contours has been included for reference in Appendix B. Based on the current Seasonal High Groundwater Elevation Map, the liner subgrade will be above the seasonal high groundwater levels and groundwater will not be encountered during the excavation of any future cells. During construction, the subgrade must be kept at a surface-dry condition to provide a firm and unyielding subgrade for construction of the soil liner system. If seepage is encountered, construction measures as discussed below in Section 11.4 will be employed.

11.4 Control of Seepage During Construction

The base of the proposed excavation has been designed to fall within the caliche strata above the highest expected groundwater level. Isolated soft spots or wet zones, if encountered, will be over-excavated and sealed with low-permeability materials before commencing liner system construction. It is not anticipated that mechanical dewatering techniques will be required.

The POR shall observe the liner subgrade to confirm that the liner system will not undergo uplift from hydrostatic forces during construction. Among other criteria to be used, the subgrade shall be free of seepage and rutting and there should be no soft or wet areas. Additionally, the POR will periodically observe and evaluate the liner system construction to verify that no failure of the liner system due to uplift has occurred.

11.5 Required Ballast Thickness

As noted above, it is <u>not</u> anticipated that additional ballast will be required for the liner system in any of the future cells since the excavations will not extend below the current seasonal high water level, and the groundwater levels have generally been decreasing during the monitoring period. If, however, groundwater elevations change and an isolated area requires ballast in excess of the permitted protective cover (or LCS aggregate), ballast will be provided by additional soil protective cover and documented in the GLER.

12 REPORTS ACCEPTABILITY DETERMINATION

All field and laboratory sampling and testing of components of the liner or geomembrane and its construction must be under the direct supervision of a POR or his qualified representative. Any completed lined area that fails to meet the minimum specified conditions of the required tests for a liner or geomembrane must be reworked or replaced to achieve the required results. Inability to achieve the required results through reworking shall be cause for rejection of the area in question. All reworked areas shall be retested to prove adequacy to meet all the applicable requirements.

In accordance with §330.206(b), no area may be used for the receipt of solid waste until the Commission has given confirmation of its acceptance of the required liner evaluation report(s) (i.e., SLER and GLER or GCLER), or fourteen days from the date(s) of arrival of the GLER or GCLER at the Municipal Solid Waste Division, TNRCC have lapsed.

APPENDIX B

SOIL BORINGS

PART III

ATTACHMENT 4

APPENDIX 6

TRINITY ENGINEERING TESTING CORPORATION REPORT (1995)

CITY OF MIDLAND SOLID WASTE LANDFILL NO. 1605-B

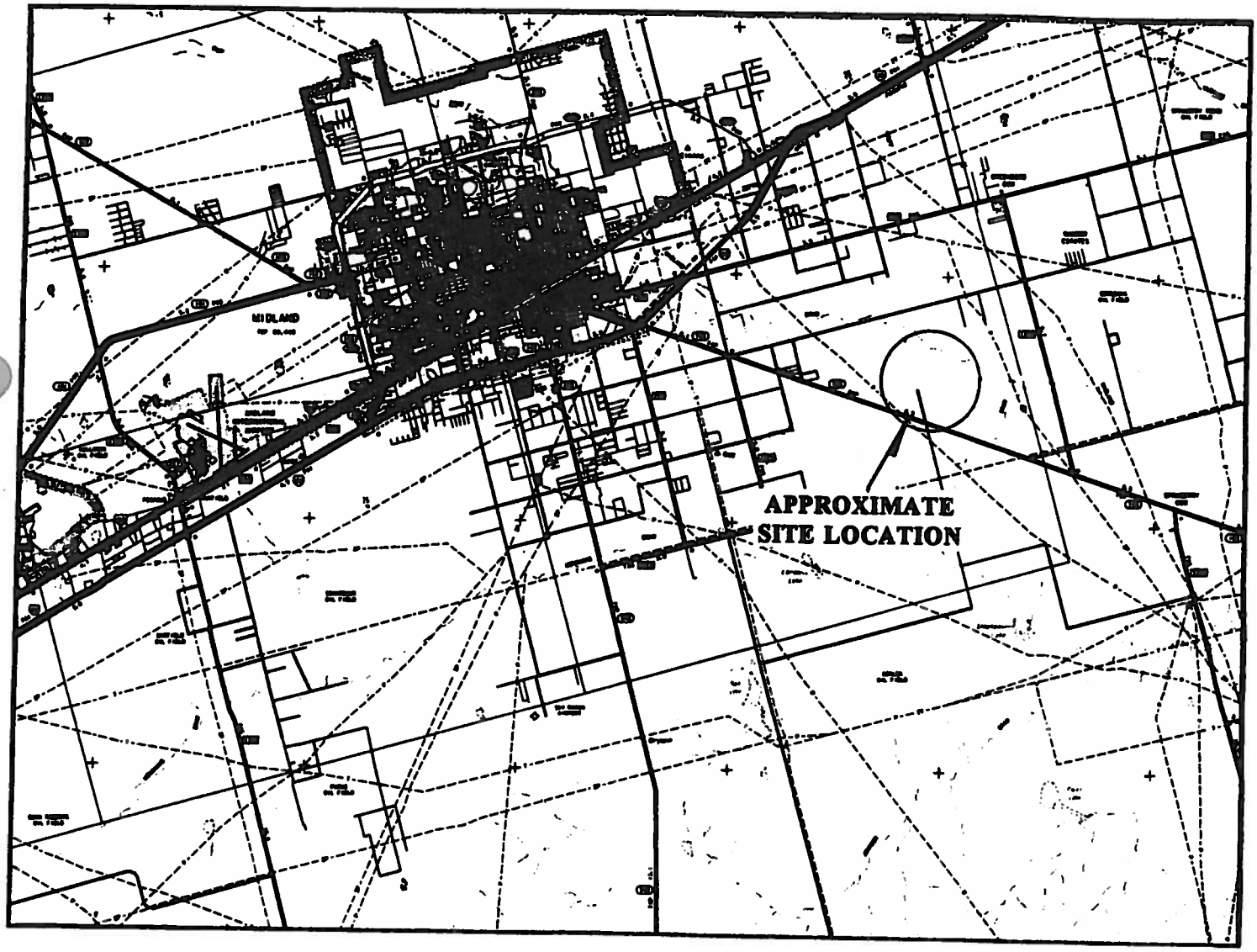
MIDLAND COUNTY, TEXAS

Trinity Engineering Testing Corporation

Plate I

Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

SITE VICINITY MAP

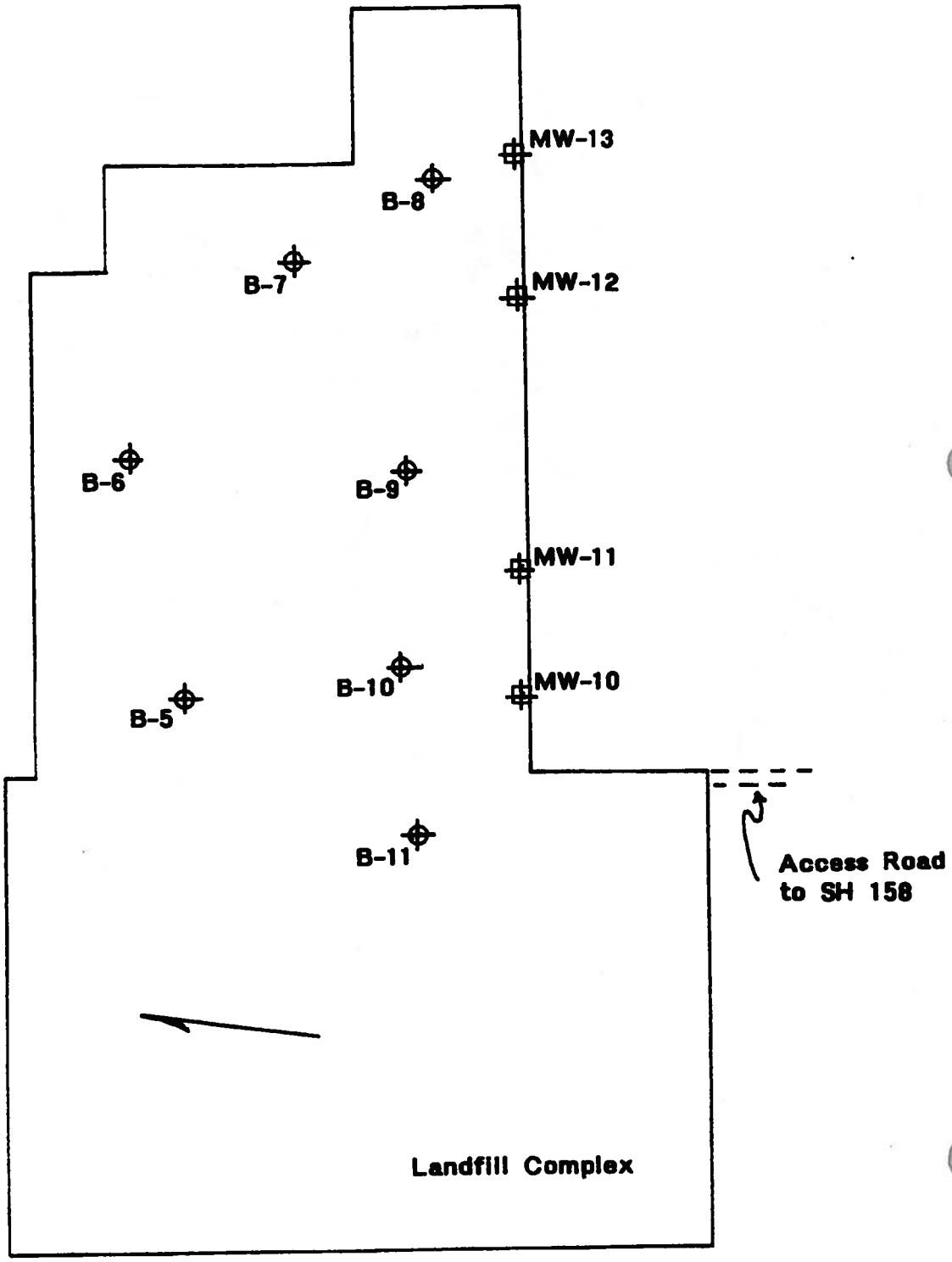


Trinity Engineering Testing Corporation

Plate II

Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

APPROXIMATE BORING LOCATIONS



Trinity Engineering Testing Corporation

Plate III

Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

SUMMARY OF SOIL CLASSIFICATION TEST RESULTS

Boring Number	Depth in feet	Liquid Limit %	Plasticity Index %	% Passing 200-mesh Sieve	Natural Moisture Content %	Classification	Material Description
HDR-5	10.0-11.5	23	5	30.6	6.6	SC-SM	Red-Tan SILTY CLAYEY SAND
HDR-5	20.0-21.5	28	6	31.1	13.4	SC-SM	White-Tan SILTY CLAYEY SAND
HDR-5	30.0-30.4	NP*	NP*	27.1	4.9	SM	Red SILTY SAND
HDR-5	55.0-56.5	NP*	NP*	8.7	19.0	SP-SM	Tan SILTY SAND
HDR-5	65.0-66.5	22	4	5.3	18.6	SP-SC	Tan POORLY-GRADED SAND
HDR-6	10.0-11.5	50	19	18.2	16.2	SM	Tan SILTY SAND with Gravel
HDR-6	15.0-16.5	47	12	22.6	20.6	SM	Tan SILTY SAND with Gravel
HDR-6	25.0-25.2	73	50	49.9	20.1	SC	Pink CLAYEY SAND
HDR-6	50.0-50.5	NP*	NP*	10.3	16.8	SP-SM	Tan SAND with Silt
HDR-7	15.0-16.5	NP*	NP*	13.8	10.6	SM	Red-Tan SILTY SAND
HDR-7	20.0-21.5	22	7	35.1	15.5	SC-SM	Red-Tan SILTY CLAYEY SAND
HDR-7	25.0-26.5	26	14	48.5	16.8	SC	Tan-White CLAYEY SAND
HDR-7	30.0-31.5	24	10	38.9	18.4	SC	Tan-White CLAYEY SAND
HDR-7	50.0-51.0	26	1	16.7	22.7	SM	Tan-White SILTY SAND

*Non-plastic

Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

SUMMARY OF SOIL CLASSIFICATION TEST RESULTS (cont'd)

Boring Number	Depth in feet	Liquid Limit %	Plasticity Index %	% Passing 200-mesh Sieve	Natural Moisture Content %	Classification	Material Description
HDR-7	80.0-80.8	30	11	12.3	15.2	SC	White-Tan CLAYEY SAND
HDR-8	15.0-16.5	32	20	43.6	19.2	SC	Tan CLAYEY SAND
HDR-8	25.0-26.5	NP*	NP*	4.2	34.3	SW	Tan SAND
HDR-8	60.0-61.5	32	15	39.4	27.0	SC	Tan CLAYEY SAND
HDR-9	5.0-6.5	47	29	41.7	14.8	SC	Red-Tan CLAYEY SAND
HDR-9	35.0-35.2	61	28	27.3	38.5	SM	Tan-White SILTY SAND
HDR-9	40.0-41.5	23	7	31.5	27.2	SC-SM	Red-Tan SILTY CLAYEY SAND
HDR-9	55.0-56.5	30	12	4.3	20.1	SP	Red-Tan SAND
HDR-10	10.0-11.5	23	5	30.6	6.6	SC-SM	White-Tan SILTY CLAYEY SAND
HDR-10	25.0-25.9	29	NP*	21.2	11.2	SM	White-Tan SILTY SAND with Gravel
HDR-10	45.0-45.6	29	9	12.8	24.3	SC	Pink-White CLAYEY SAND with Gravel
HDR-11	5.0-6.5	20	3	30.5	6.5	SM	Red-Brown SILTY SAND
HDR-11	25.0-25.4	24	1	18.6	7.9	GM	White-Pink CLAYEY SAND
HDR-11	40.0-41.5	19	NP*	31.9	14.4	SM	Tan SILTY SAND

*Non-plastic

Plate III

Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

SUMMARY OF SOIL CLASSIFICATION TEST RESULTS (cont'd)

Boring Number	Depth in feet	Liquid Limit %	Plasticity Index %	% Passing 200-mesh Sieve	Natural Moisture Content %	Classification	Material Description
HDR-11	50.0-51.3	NP*	NP*	27.7	18.5	SM	Pink-Tan SILTY SAND
HDR-11	60.0-61.5	22	3	15.7	19.7	SM	Pink-Tan SILTY SAND
MW-10	5.0-6.5	19	3	34.6	4.7	SM	Orange-Brown SILTY SAND
MW-10	15.0-15.4	32	10	39.6	8.9	SC	White-Tan CLAYEY SAND
MW-10	55.0-56.5	25	8	37.7	20.2	SC	Tan CLAYEY SAND
MW-11	10.0-11.5	33	9	36.7	13.7	SM	White-Tan SILTY SAND
MW-11	25.0-26.5	30	7	29.4	11.5	SC-SM	White-Tan SILTY CLAYEY SAND
MW-12	15.0-15.5	28	15	36.2	8.9	SC	Tan CLAYEY SAND
MW-12	35.0-36.5	37	8	22.7	15.0	SM	Tan SILTY SAND with Gravel
MW-12	50.0-50.4	23	9	21.9	24.2	SC	Tan CLAYEY SAND
MW-13	10.0-11.5	22	8	35.4	8.1	SC	Red-Tan CLAYEY SAND
MW-13	20.0-21.5	NP*	NP*	20.3	3.2	SM	Tan SILTY SAND
MW-13	25.0-25.5	23	6	33.4	7.3	SC-SM	White-Tan SILTY CLAYEY SAND
MW-13	40.0-41.5	NP*	NP*	26.7	12.6	SM	White-Tan SILTY SAND
MW-13	45.0-45.9	26	4	28.0	14.4	SM	White SILTY SAND
MW-13	65.0-66.5	42	23	44.3	25.0	SC	Tan CLAYEY SAND

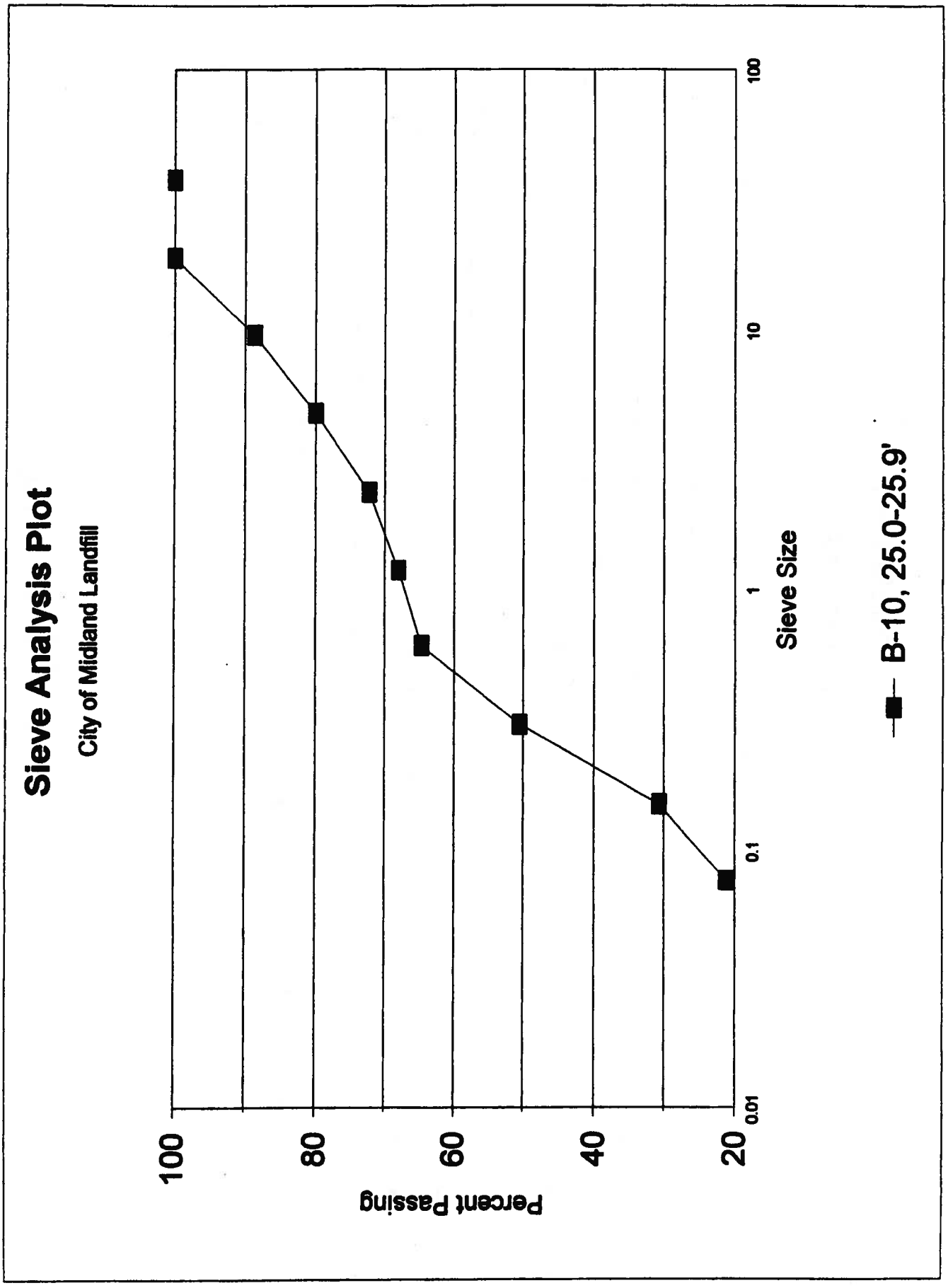
*Non-plastic

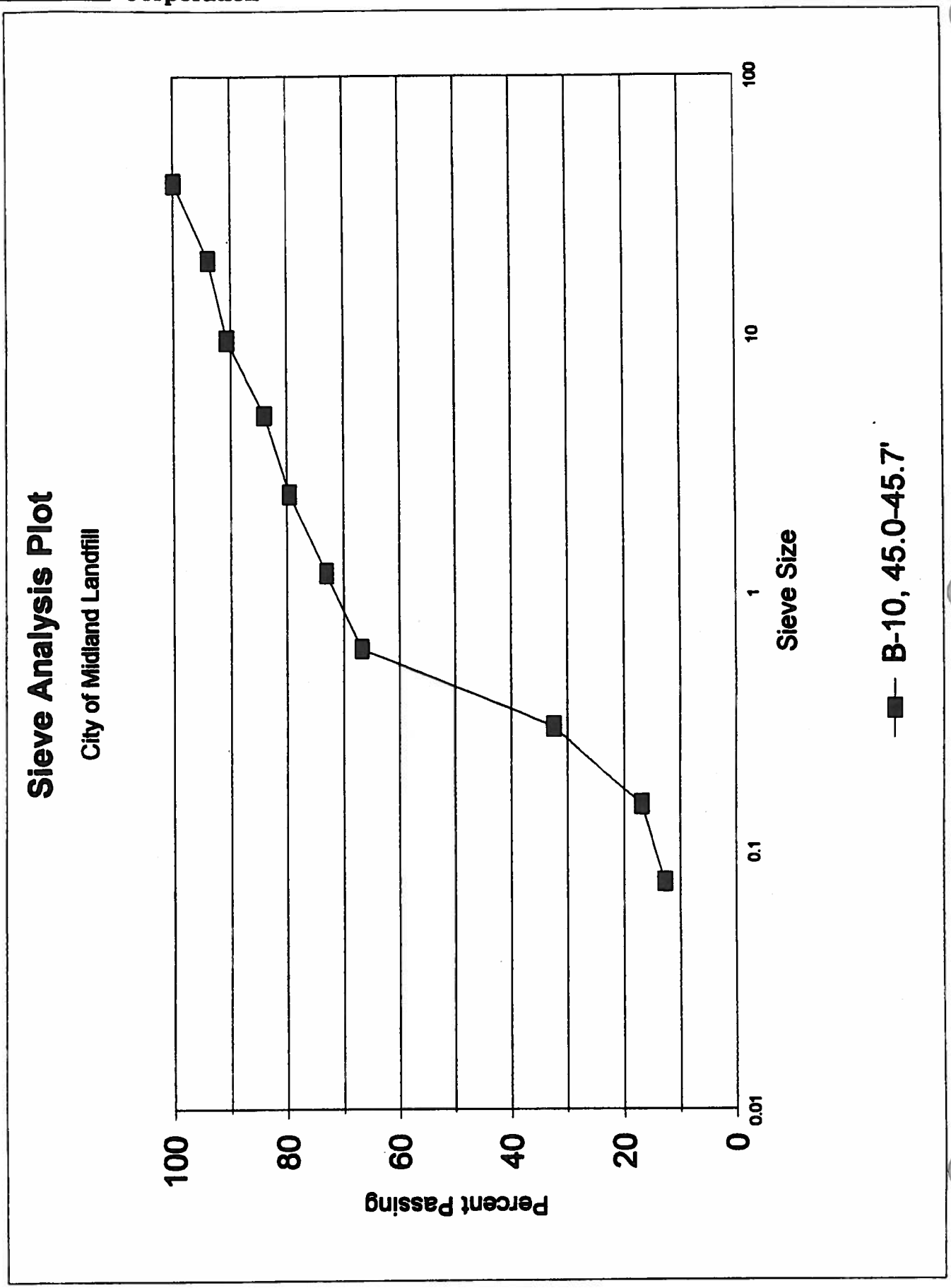
Municipal Solid Waste Landfill No. 1605
City of Midland, Texas

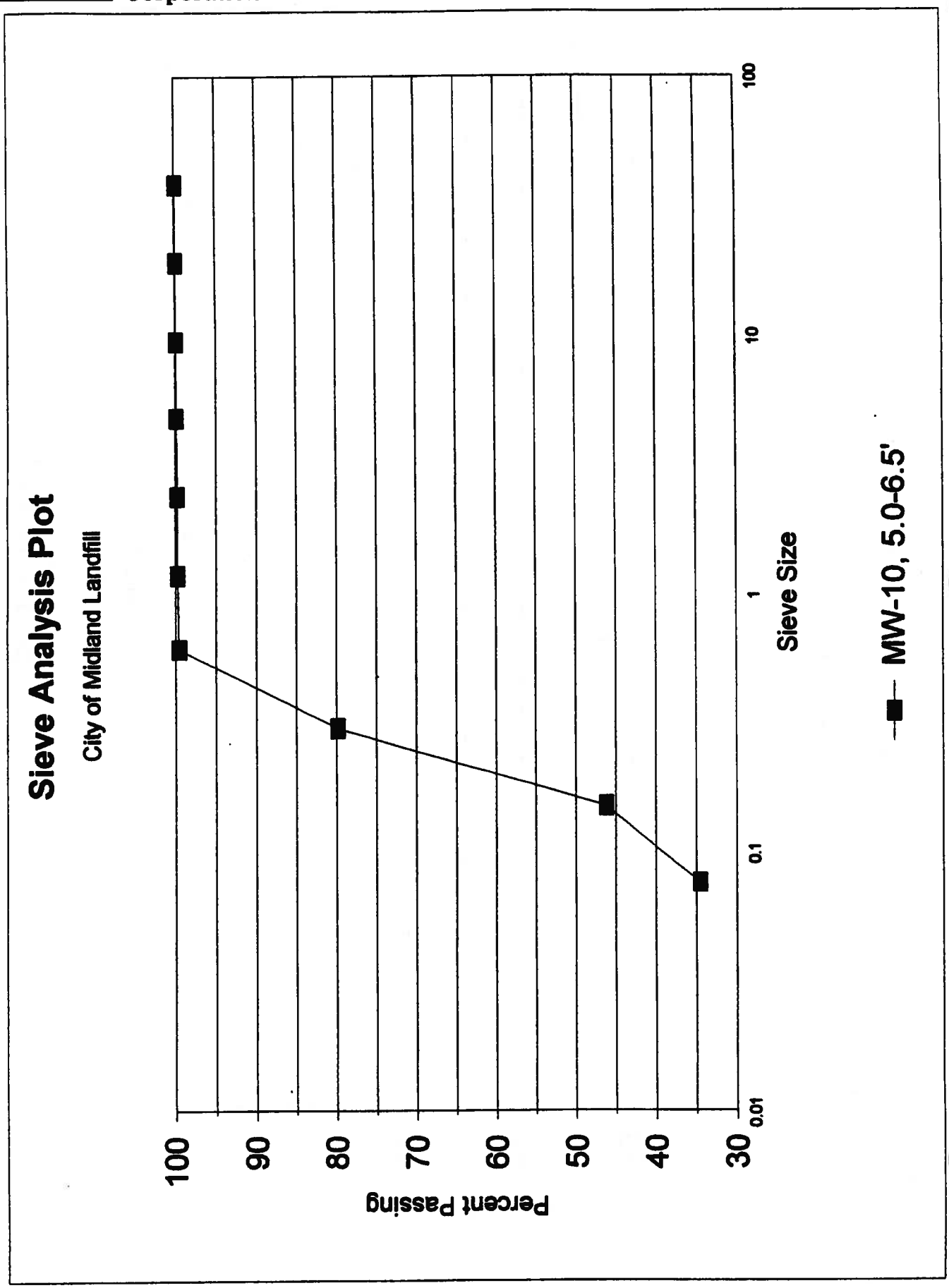
SUMMARY OF UNIT DRY WEIGHT, MOISTURE CONTENT, AND UNCONFINED COMPRESSION RESULTS

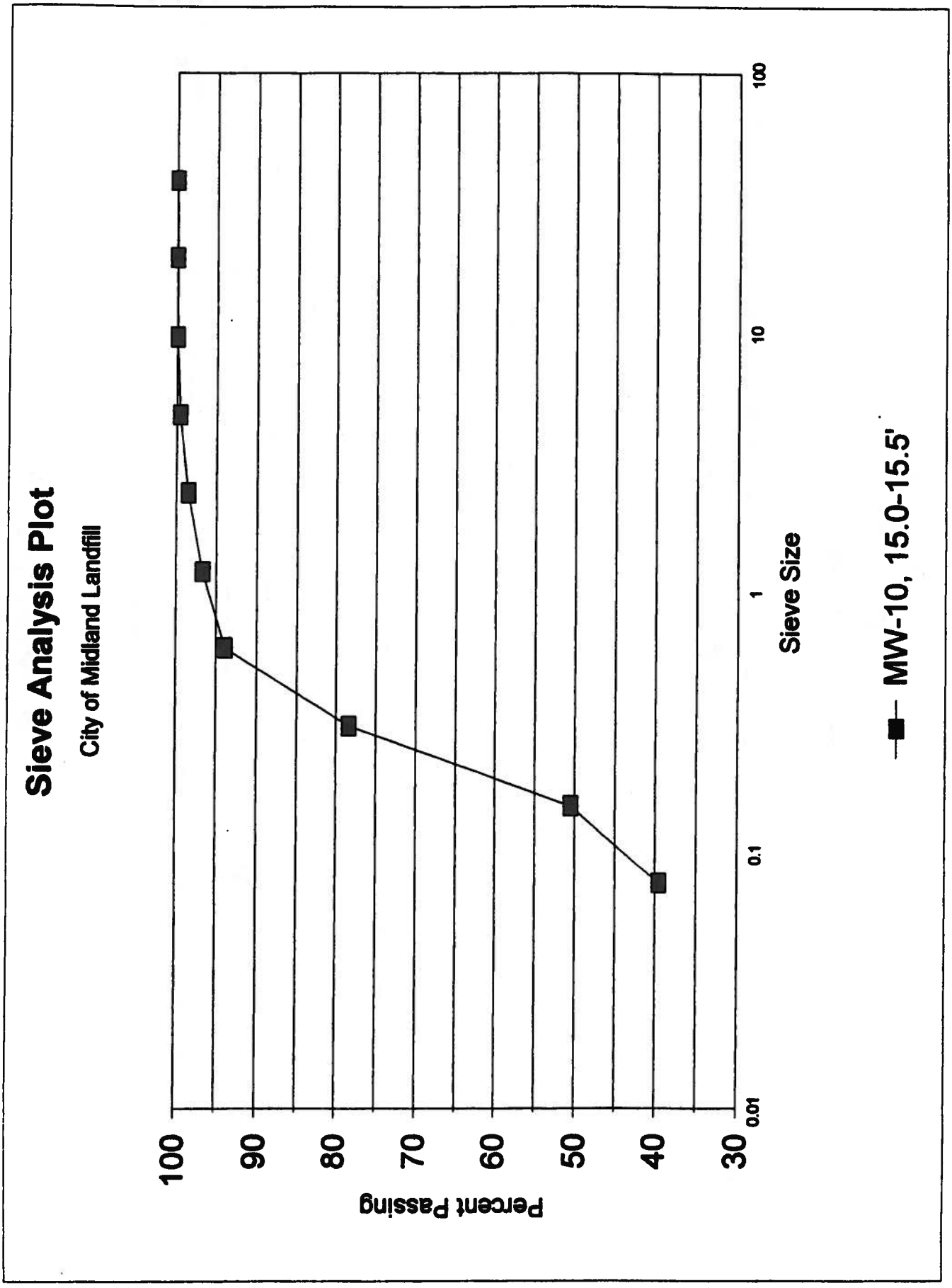
Boring Number	Depth in feet	Unit Dry Weight, pcf*	Natural Moisture Content, %	Air Voids, %	Q_u, tsf**	Material Description
HDR-5	72.5	130.6	8.5	3.0	45.8	Red SHALE
HDR-7	84.0	---	---	---	16.0	Red-Brown SHALE
HDR-10	75.0	---	---	---	8.9	Red SHALE
MW-10	45.0	---	---	---	34.3	Tan-White SANDSTONE
MW-11	45.0	---	---	---	50.8	Pink SANDY LIMESTONE

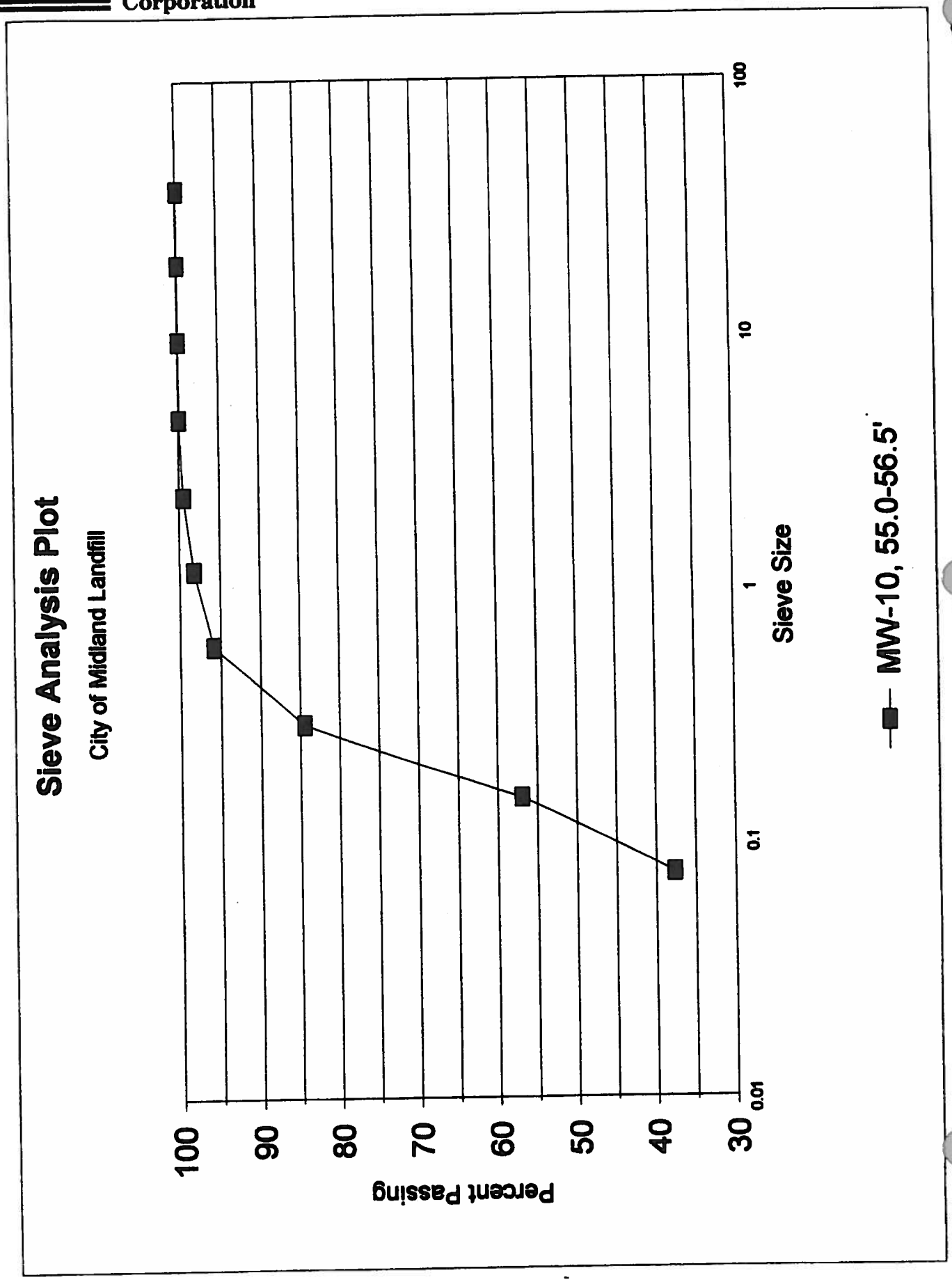
*pounds per cubic foot
**tons per square foot


Sieve Analysis Plot
City of Midland Landfill
Percent Passing
100
80
60
40
20
0.01
0.1
1
10
100
Sieve Size
B-10, 25.0-25.9'


Sieve Analysis Plot
City of Midland Landfill
Percent Passing
100
80
60
40
20
0
0.01
0.1
1
10
100
Sieve Size
B-10, 45.0-45.7'

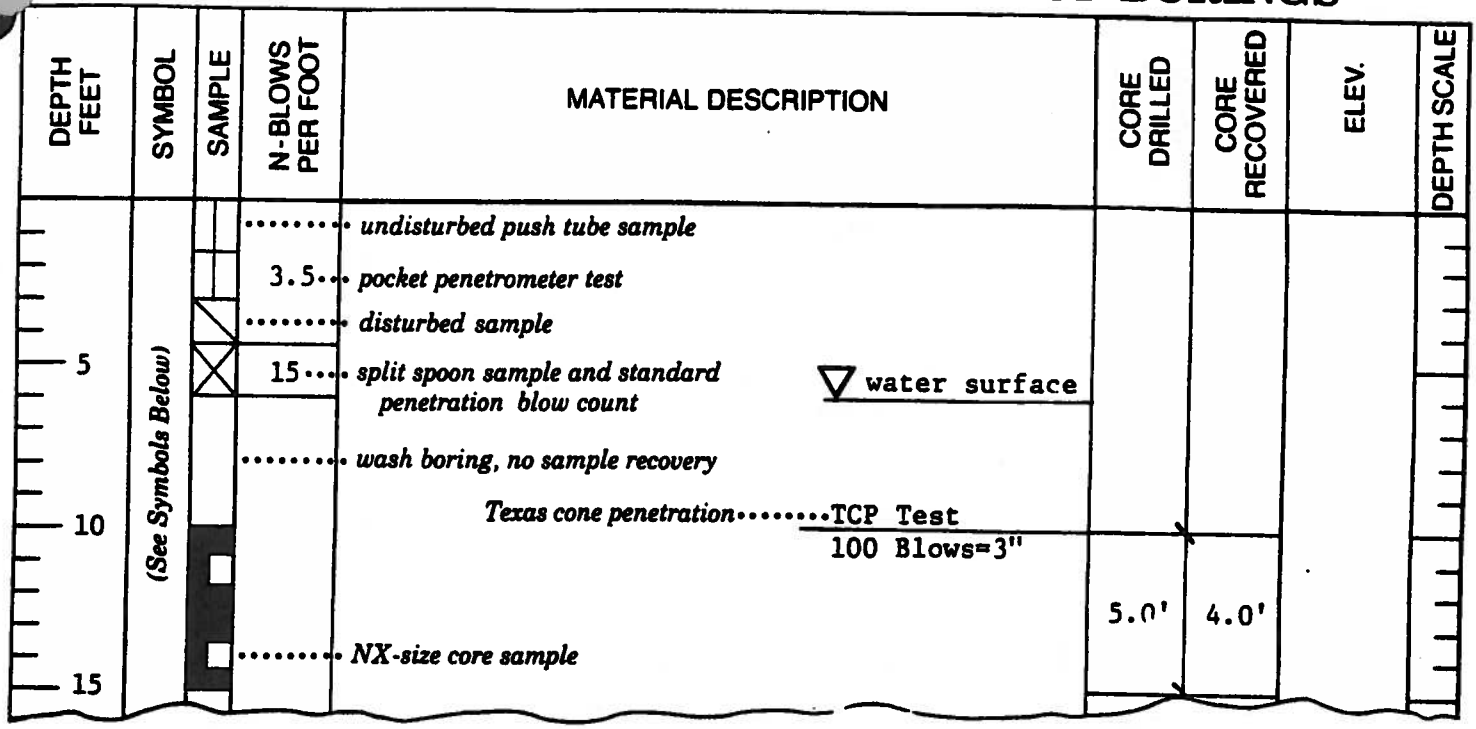

Sieve Analysis Plot
City of Midland Landfill
Percent Passing
100
90
80
70
60
50
40
30
0.01
0.1
1
10
100
Sieve Size
MW-10, 5.0-6.5'


Sieve Analysis Plot
City of Midland Landfill
Percent Passing
100
90
80
70
60
50
40
30
0.01
0.1
1
10
100
Sieve Size
MW-10, 15.0-15.5'


Sieve Analysis Plot
City of Midland Landfill
Percent Passing
100
90
80
70
60
50
40
30
0.01
0.1
1
10
100
Sieve Size
MW-10, 55.0-56.5'

Trinity Engineering Testing Corporation

EXPLANATION OF SYMBOLS AND TERMS USED ON LOGS OF BORINGS



TYPICAL SOIL AND ROCK SYMBOLS

- Well-Graded Gravel (GW)
- Poorly-Graded Gravel (GP)
- Silty Gravel (GM)
- Clayey Gravel (GC)
- Well-Graded Sand (SW)
- Poorly-Graded Sand (SP)
- Silty Sand (SM)
- Clayey Sand (SC)
- Silt (ML)
- Lean Clay (CL)
- Elastic Silt (MH)
- Fat Clay (CH)
- Shale
- Sandy Shale
- Weathered Shale
- Sandstone
- Conglomerate
- Caliche
- Limestone
- Shaley Limestone
- Weathered Limestone
- Dolomite
- Fill Material
- Asphaltic Concrete

DEGREE OF WEATHERING

Unweathered . . Rock in its natural state without visible sign of decomposition or discoloration

Slightly Weathered . . . . Slight discoloration without visible sign of decomposition

Weathered . . . . Complete discoloration with zones of slightly decomposed rock

Severely Weathered . . . . Complete discoloration and decomposition, approaching soil texture and appearance

SOIL STRUCTURE

Calcareous . . . . Containing calcium carbonate

Slickensided . . . The presence of planes of weakness having a slick and glossy appearance

Fissured . . . . . Breaks along definite planes of fracture with little resistance to fracturing

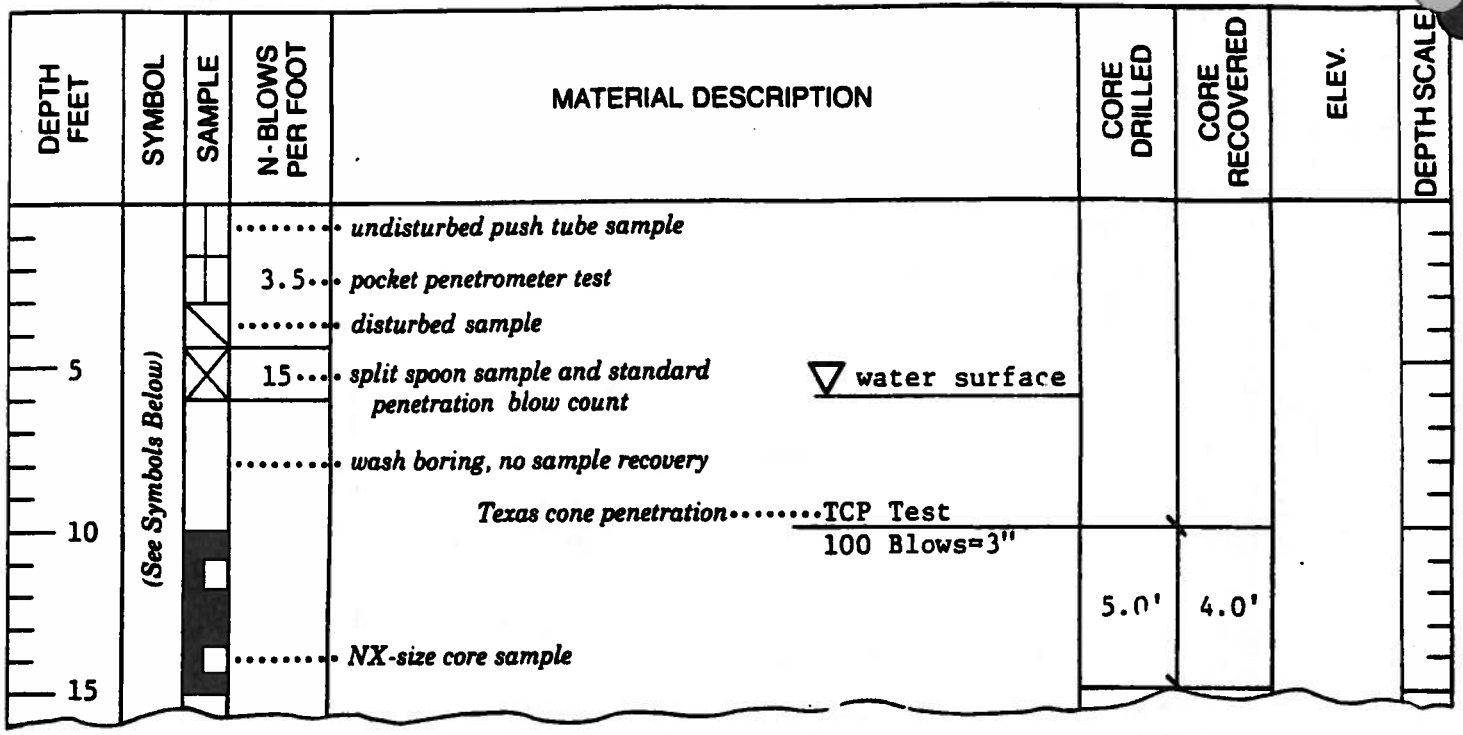
Laminated . . . . Alternating thin layers or lenses of varying material or color

Interbedded . . . Alternating layers of varying material

The Log of Boring is a representation of the subsurface materials at the specific boring location and within the depth explored. The transition between strata may be gradual and variations in material types and depths between borings can be expected. Water level observations represent those conditions at the time of exploration and may vary with time and location on the site.

Trinity Engineering Testing Corporation

EXPLANATION OF SYMBOLS AND TERMS USED ON LOGS OF BORINGS



TYPICAL SOIL AND ROCK SYMBOLS

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- Poorly-Graded Gravel (GP)
- Silty Gravel (GM)
- Clayey Gravel (GC)
- Well-Graded Sand (SW)
- Poorly-Graded Sand (SP)
- Silty Sand (SM)
- Clayey Sand (SC)
- Silt (ML)
- Lean Clay (CL)
- Elastic Silt (MH)
- Fat Clay (CH)
- Shale
- Sandy Shale
- Weathered Shale
- Sandstone
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- Limestone
- Shaley Limestone
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The Log of Boring is a representation of the subsurface materials at the specific boring location and within the depth explored. The transition between strata may be gradual and variations in material types and depths between borings can be expected. Water level observations represent those conditions at the time of exploration and may vary with time and location on the site.

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

Location: Midland, Texas **Date:** 08-30-95 **Type:** Core

SFC Elev. : 2,694.9

Boring No. HDR10

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
5			39	Red - Brown CLAYEY SAND, fine grained, quartz						
			19							
10				Pink SILTY SAND, fine grained, calcareous						
			40	White - Tan SILTY SAND, fine to coarse grained, calcareous, some gravel			23	5	30.6	SC-SM
15										
			56							
20										
			50	= 5 1/2"						
25										
			50	= 5 1/2"			29	NP	21.2	SM
30										
			50	= 4"						
				Pink SANDSTONE						
35				Tan - White SANDY LIMESTONE with Chert	4.5'	0.9'				
40				▽ Water Surface 08-30-95						
			50	= 2 1/2"						
45				Pink - White SANDY LIMESTONE with Chert	5.0'	1.5'				
				Continued						

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

SFC Elev. : 2

Location: Midland, Texas **Date:** 08-30-95 **Type:** Core **Boring No.** HDR10

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
			50	= 1" Pink - White SANDY LIMESTONE with Chert	4.5'	1.0'				
50			50	= 3 1/2"	4.5'	0'				
55			38	Pink - White SAND with Gravel, coarse, calcareous and quartz						
60			60							
65			46							
70			32							
75										
80			50	= 3.5" Red SHALE	5.0'	4.5'				
				Total Depth of Boring = 80.0 Feet						

Note: The boring was advanced to 40.0 feet below the ground surface without using drilling fluid and groundwater was encountered at that depth.

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

SFC Elev. : 2,697.3

Location: Midland, Texas **Date:** 09-28-95 **Type:** Core **Boring No.** MW10

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
			8	Brown SILTY SAND, fine grained, quartz						
5			21	Orange - Brown SILTY SAND, fine grained, quartz			19	3	34.6	SM
10			32	White - Tan CLAYEY SAND, fine grained calcareous						
15			50	= 4 1/2"			32	10	39.6	SC
20			50	= 4"						
25			50	= 4"						
30			50	= 1" Tan SILTY SAND,fine grained, calcareous						
35			50	= 4" Tan - White SILTY SAND, fine grained, calcareous						
40				▽ Water Surface 09-28-95						
			50	= 1" Tan White SANDSTONE with Chert, calcareous	5.0'	0'				
45				Continued						

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

SFC Elev.: 2,6

Location: Midland, Texas **Date:** 09-28-95 **Type:** Core **Boring No.** MW10

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
50				Tan - White SANDSTONE with Chert, calcareous	5.0'	0'				
			50	= 1/2"						
55			65	Tan CLAYEY SAND, coarse to fine grained, calcareous and quartz			25	8	37.7	SC
60			50	= 3"						
65			50	= 3"						
			50	= 4"						
				Total Depth of Boring = 68.5 Feet						

Note: The boring was advanced to 40.5 feet below the ground surface without using drilling fluid and groundwater was encountered at that depth.

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

SFC Elev. : 2,692.2

Location: Midland, Texas **Date:** 09-27-95 **Type:** Core **Boring No.** MW11

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
5			16	Red - Brown SILTY SAND, fine grained, quartz						
			14	Orange - Brown SILTY SAND, fine grained, quartz						
10			23	White - Tan SILTY SAND, fine grained, quartz and calcareous						
15			45							
20			50							
25			50	= 3"						
30			50	= 2"						
35			50	= 2" ▽ Water Surface 09-27-95						
40			50	Tan SANDY LIMESTONE with Chert = 3 1/2"						
45					4.5'	2.5'				
				Continued						

Trinity Engineering Testing Corporation

LOG OF BORING

Project: City of Midland Landfill

SFC Elev. : 2,69

Location: Midland, Texas **Date:** 09-27-95 **Type:** Core **Boring No.MW11**

DEPTH FEET	SYMBOL	SAMPLE	TEST RESULTS	MATERIAL DESCRIPTION	CORE DRILLED	CORE RCVRD	LL	PI	% -200	SOIL CLASS.
				Pink SANDY LIMESTONE	5.0'	0.5'				
50			50	= 5"						
				Pink - Tan SILTY SAND, fine to coarse grained, quartz and calcareous						
55			53							
60			67							
			50	= 5"						
				Total Depth of Boring = 63.0 Feet						

Note: The boring was advanced to 36.0 feet below the ground surface without using drilling fluid and groundwater was encountered at that depth.

THE CITY OF MIDLAND

CONTRACT

Contract No.

THIS CONTRACT, effective the ____ day of _____, 20__, by and between the City of Midland, hereinafter referred to as "City", and _____, hereinafter referred to as "Company", is made for the following considerations:

1. **Cost:** Total Proposal: $ _____ DOLLARS

2. **Scope of Work:** Company shall perform all work described for _____ in the following documents, attached hereto and incorporated herein by reference for all legal purposes.

EXHIBIT A..... Specifications, Proposal or Cost Summary
EXHIBIT B.....Intentionally Omitted
EXHIBIT C..... Bonding instructions for Public Works Contract of $50,000 and more
EXHIBIT D..... Wage Scale

3. **City:** The words "City's Representative" or "representative" shall mean _____ or the designee under whose supervision these contract documents, including the plans and specifications, were prepared, or who may inspect work performed under this Contract; or such other representative, supervisor, or inspector as may be authorized by City to act in any particular capacity under this Contract.

4. **City's Representative:** City's Representative may make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. City's representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, nor will such representative be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions incident thereto. City's representative will not be responsible for Company's failure to perform the work in accordance with the contract.

5. **Company:** Unless otherwise stipulated, Company shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation and all other facilities necessary for the execution and completion of the work covered by

the contract documents. Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of a good quality. Company shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

5.1. Company shall, at its expense, obtain all permits and licenses necessary for the performance of this contract and pay all fees and taxes required by law, and comply with all laws, ordinances, rules and regulations governing Company's performance of the contract, including all environmental laws and regulations, whether state or federal.

5.2. All work shall be done and all materials furnished in strict conformity with the contract and specifications.

6. **Minor Work Not Mentioned:** All minor detail of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of the work for which the prices are named in the contract. Company will not be entitled to any additional compensation therefor unless specifically stated otherwise. Otherwise the term "extra work" as used in this contract shall mean and include all work that may be required by City to be done by Company to accomplish any alteration or addition to the work as shown on the Specifications.

6.1. Company shall perform all extra work under the direction of City's Representative when presented with a written work order signed by City's Representative, subject, however, to the right of the Company to require written confirmation of such extra work order by City. Payment for extra work shall be as agreed in the work order.

7. **Safety:** Company shall at all times exercise reasonable precaution for the safety of employees and others on or near the work and shall comply with all applicable provisions of federal, state and municipal laws. All machinery and equipment and other physical hazards shall be guarded in accordance with federal, state or municipal laws or regulations.

8. **INDEMNITY: COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF COMPANY, THEIR AGENTS OR**

EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

8.1. **COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CITY, CITY'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH COMPANY OR COMPANY'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.**

8.2. **COMPANY AGREES THAT IT WILL INDEMNIFY AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS AND ALL SUPPLIES, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN CITY SO DESIRES, COMPANY SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. COMPANY, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS CITY AND ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF COMPANY OR ANY SUBCONTRACTOR, THEIR**

AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

9. **Start of Work:** Company shall commence work no later than ten (10) days after receipt of the execution of this document or other written release to proceed and shall complete such work no later than _____calendar days after release to proceed.

10. **Clean Up:** Company shall promptly remove from City's premises all materials condemned by City's Representative on account of failure to conform to the contract, whether actually incorporated in the work or not, and Company shall at its own expense promptly replace such condemned materials with other materials conforming to the requirements of the contract. Company shall also bear the expense of restoring all work of other contractors damaged by any such removal or replacement. If Company does not remove and replace any such condemned materials within a reasonable time after a written notice by City, City may remove and replace such at Company's expense.

11. **Warranty:** Neither the final payment nor any provision in this contract shall relieve Company of responsibility for faulty materials or workmanship, and he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of substantial completion. City shall give notice of observed defects with reasonable promptness.

12. **Remedy:** City may, on account of subsequently discovered evidence, withhold whole or part of any payment to such extent as may be necessary to protect itself from loss on account of:

12.1. Defective work not remedied; or

12.2. Claims filed or reasonable evidence indicating possible filing of claims; or

12.3. Failure of Company to make payments promptly to subcontractors or for material or labor which City may pay as an agent for the Company; or

12.4. Damages to another contractor or subcontractor.

When the above grounds to withhold payment are removed, or Company provides a surety bond satisfactory to City, which will protect City in the amount withheld, payment may be released.

13. **Funding Out:** In the event no funds or insufficient funds are appropriated and budgeted or are otherwise unavailable in any fiscal period for contract payments due under the contract, then this contract shall terminate on the last day of the fiscal period for which full appropriations were made, without penalty

or expense to City of any kind whatsoever.

14. **Wage Scale:** Company agrees to pay all workmen in his employ no less than the generally prevailing wage rate for employees of similar category in the Permian Basin Area, as is depicted in the wage rate scale attached hereto as EXHIBIT D, and incorporated herein by reference for all legal purposes.

14.1. If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

15. **Prompt Pay Act:** City and Company agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

16. **Payment; Retainage:** After all work is completed by Company, including all Change Orders altering the original scope and amount of the contract are completed, and the City has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, the City may thereafter issue payment to Company in the amount of the contract and all Change Orders. The City shall be the final judge of when the work is completed by Company. The City, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to the City's requirements.

16.1. The City may make periodic payments to Company; provided, however, such periodic payments may only be made pursuant to this section, and only after all work and all Change Orders are completed by Company and approved by the City. The approval shall be in the City's sole discretion. Requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the City or the City's representative, the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

17. **Late Completion; Liquidated Damages:** It is hereby understood and mutually agreed, by and between Company and the City, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed." Company agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between Company and the City,

that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

17.1. In the event Company shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then Company and Company's surety, if any, shall be liable for and does hereby agree, as a part consideration for the awarding of this contract, to pay to the City $500.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every day that Company shall be in default after the time stipulated in the contract for completing the work. Further, the City shall have the right to cancel this contract for such delay. In the event the City cancels this contract pursuant to the terms of this section, the City shall pay to Company only those monies deemed appropriate by the City, in its sole discretion, to compensate Company for any work actually performed, less any liquidated damages Company owes the City.

17.2. The said amount is fixed and agreed upon by and between Company and the City because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain, and said amount is agreed to be the amount of damages which the City would sustain and said amount shall be retained from time to time by the City from current periodical estimates.

17.3. It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that Company shall not be charged with liquidated damages or any excess cost when the City determines, in its sole discretion, that Company is without fault and Company's reasons for the time extension are acceptable to the City. Provided, further, that Company shall not be charged with liquidated damages of any excess cost when the delay in completion of the work is due:

a. To any preference, priority or allocation order duly issued by the Government;

b. To unforeseeable cause beyond the control and without the fault or negligence of Company, including, but not restricted to, acts of God, or of the public enemy, acts of the City, acts of another contractor in the performance of a contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

c. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

17.4. Provided, further, that Company shall, within ten (10) days from the beginning of such delay, unless the City shall, in its sole discretion grant a further period of time prior to the date of final

settlement of the contract, notify the City, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify Company within a reasonable time of its decision in the matter.

17.5. **COMPANY AGREES THAT THE PAYMENT OF SUCH LIQUIDATED DAMAGES MAY BE RECOVERED BY THE CITY FROM RETAINAGE HELD BY THE CITY. NOTWITHSTANDING ANY OTHER PROVISION HEREOF, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER ARISING FROM THE CITY WITHHOLDING PAYMENT FROM COMPANY AS LIQUIDATED DAMAGES FOR COMPANY'S FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE.**

17.6. **COMPANY SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO COMPANY OR ANY SUBCONTRACTOR OR SUPPLIER, ANY OTHER PERSON OR ANY SURETY FOR OR ANY EMPLOYEE OR AGENT OF ANY OF THEM, FOR ANY DAMAGES ARISING OUT OF OR ASSOCIATED WITH ANY DELAY OR HINDRANCE TO THE WORK, REGARDLESS OF THE SOURCE OF THE DELAY OR HINDRANCE, INCLUDING EVENTS OF FORCE MAJEURE, AND EVEN IF SUCH DELAY OR HINDRANCE RESULTS FROM, ARISES OUT OF OR IS DUE, IN WHOLE OR IN PART, TO THE NEGLIGENCE OF THE CITY. COMPANY'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.**

18. **No Third Party Beneficiary:** City's approval of this contract does not create a third party beneficiary. There is no third party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third party beneficiary or other rights hereunder.

19. **WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, COMPANY AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST CITY, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. COMPANY SPECIFICALLY**

AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, COMPANY AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH COMPANY MIGHT OTHERWISE BE ENTITLED.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. COMPANY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND COMPANY. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF GOVERNMENTAL IMMUNITY.

COMPANY AND CITY ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

20. **Governmental Immunity:** By executing this contract City is not waiving its right of governmental immunity. City is retaining its immunity from suit. City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.

21. **Insurance:**

Company shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):

-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit -

	Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on a claims-occurred basis. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Business Automobile Liability insurance provided by Company shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this Contract. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Workers' Compensation coverage provided by Company shall inure to the benefit of employees injured during the course and scope of their employment by Company pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name City as an additional insured on a claims occurred basis. City shall be provided the notice by Company's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Company shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, Company shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of City. City shall not be required to provide any insurance whatsoever pursuant to this Contract.

Company certifies that the certificate of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. Company shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of Company.

22. **Assignment**: Company shall not, either directly or indirectly, assign all or any part of this Contract or any interest, right or privilege herein, without the prior written consent of City. The issue on whether

or not to grant consent to an assignment is in the sole discretion of City.

23. **RELEASE: NOTWITHSTANDING ANY OTHER PROVISIONS, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE**.

24. **Governing Law and Venue:** This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way to the subject matter of this Contract, without regard to conflict on laws and rules that would direct application of the laws of another jurisdiction.

25. **Independent Contractor:** It is expressly understood and agreed that Company shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of City; that Company shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between City and Company, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between City and Company. No person performing any of the work and services described hereunder by Company shall be considered an officer, agent, servant or employee of the City. Further, it is specifically understood and agreed that nothing in this Contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Company shall be an independent contractor under this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. City does not have the power to direct the order in which the work is

done. City shall not have the right to control the means, methods or details of the Company's work. Company shall assume exclusive responsibility for the work. Company is entirely free to do the work in its own way.

26. **Notice of Alleged Breach; Statutory Prerequisites:** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Company or its legal representative, shall give the City Manager, or any other reasonable official of City, notice in writing (consisting of one original and seven copies of notice attached to a copy of this Contract) of such damages, duly verified, within one-hundred fifty (150) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Company will settle, the physical and mailing addresses of Company at the time and date the claim was presented and the physical and mailing addresses of Company for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Company relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except City from any liability whatsoever. City is under no obligation to provide notice to Company that Company's notice is insufficient. City reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Company's failure to comply with the requirements herein shall perpetually bar Company's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if City has actual or constructive notice or knowledge of said claim or alleged damages. Company agrees that the requirements of this entire Contract are reasonable.

27. **Consideration:** The terms of this Contract are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

28. **Termination At Will:** City may terminate this Contract at will for no or any reason upon giving at least one hundred eighty (180) days written notice to Company. The parties to this Contract understand and agree that it is in City's sole discretion to cancel the Contract during the term of the Contract without penalty to City. Company has no expectation and has received no guarantees that this Contract will not be terminated before the end of the Contract term. The parties have bargained for the flexibility of terminating

this Contract upon tender of the requisite notice at any time during the term of the Contract. All work and services under the Contract shall be suspended upon termination of the Contract becoming effective.

29. **Compliance:** Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

30. To the extent that Tex. Gov't Code section 2270.002 applies to this Contract, Company hereby verifies that Company does not boycott Israel and will not boycott Israel during the term of this Contract. If Tex. Gov't Code section 2270.002 does not apply to this Contract, such verification is not required, and Company shall be deemed to have not made such verification.

31. **Records Retention and Production of Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to City for the duration of the contract, (2) promptly provide to City any contracting information related to the Contract that is in the custody or possession of Company on request of City, and (3) on completion of the Contract, either (i) provide at no cost to City all contracting information related to the Contract that is in the custody or possession of Company, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to City.

32. **Public Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

33. **Conflict of Terms.** If a conflict of terms or language exists between (i) any of the provisions of this Contract and (ii) any of the provisions contained in Exhibit A, precedence shall be given to the provisions of this Contract. For the avoidance of any doubt, the provisions contained in this Contract shall supersede any and all conflicting provisions contained in Exhibit A.

EXECUTED IN DUPLICATE the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Courtney B. Sharp, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLYAS TO FORM

_____
John Ohnemiller, City Attorney

COMPANY:

By: _____

Name:_____

Title: _____

STATE OF _____ §
§
COUNTY OF_____ §

BEFORE ME, the undersigned authority, on this ____ day of _____, 20____ personally appeared, _____, an officer of _____, known to me to be the person and official whose name is subscribed to the forgoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____day of _____, 20____.

_____
Notary Public, State of Texas

EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, or irrevocable letter of credit issued by a bank satisfactory to the City, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the City, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check or irrevocable letter of credit issued by a bank satisfactory to the City for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

BID BOND

THE STATE OF TEXAS §

SURETY NO. _____

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____

_____

(hereinafter called the Principal), as Principal, and _____

_____

_____

(hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____

_____ DOLLARS

($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written Contract with the obligee to_____

_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damages.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas

IN WITNESS THEREOF, THE SAID PRINCIPAL AND SURETY do sign and seal this instrument, this _____ day of _____, 20____.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____ , 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of _____ , specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____
City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PerfB 2

EXHIBIT D – HEAVY AND HIGHWAY – rev 01-05-18

General Decision Number: TX180007 01/05/2018 TX7

Superseded General Decision Number: TX20170007

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.36	
Structures	$ 13.52	
LABORER		
Asphalt Raker	$ 12.28	
Flagger	$ 9.30	
Laborer, Common	$ 10.30	
Laborer, Utility	$ 11.80	

Work Zone Barricade
Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
Asphalt Distributer.....$ 14.87
Asphalt Paving Machine.....$ 13.40
Broom and Sweeper.....$ 11.21
Crane, Lattice Boom 80
Tons or Less.....$ 16.82
Crawler Tractor Operator....$ 13.96
Excavator, 50,000 lbs or
less.....$ 13.46
Front End Loader Operator,
Over 3 CY.....$ 12.77
Front End Loader, 3CY or
less.....$ 12.28
Loader/Backhoe.....$ 14.18
Mechanic.....$ 20.14
Milling Machine.....$ 15.54
Motor Grader, Rough.....$ 16.15
Motor Grader, Fine.....$ 17.49
Pavement Marking Machine....$ 16.42
Reclaimer/Pulverizer.....$ 12.85
Roller, Asphalt.....$ 10.95
Roller, Other.....$ 10.36
Scraper.....$ 10.61
Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
Lowboy-Float.....$ 14.46
Single Axle.....$ 12.74
Single or Tandem Axle Dump..$ 11.33
Tandem Axle Tractor with
Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons

resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

IMPORTANT NOTICE

Conflict Of Interest Reporting Requirements

Compliance with LOCAL GOVERNMENT CODE TITLE 5. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES SUBTITLE C. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES OF MORE THAN ONE TYPE OF LOCAL GOVERNMENT CHAPTER 176. DISCLOSURE OF CERTAIN RELATIONSHIPS WITH LOCAL GOVERNMENT OFFICERS; PROVIDING PUBLIC ACCESS TO CERTAIN INFORMATION.

Form CIQ: This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire shall be filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

Bidders are responsible for filing Conflict of Interest form "CIQ" in accordance with the above referenced statute. Failure to do so is a class C Misdemeanor. Contracts or Purchase Orders awarded to a vendor that has violated this law is subject to termination at such time that the violation is discovered with no recourse to the City of Midland. The bidder will be subsequently removed from the bidders list for a minimum of one year.

When there is no known conflict of interest as defined by the statute, it is not necessary to file/submit the Form CIQ. The form must be submitted if a conflict is subsequently discovered.

By submitting a response to this request, vendor represents that it complies with the requirements of Chapter 176 of the Texas Local Government Code.

For a current list of the local government officers go to: http://www.midlandtexas.gov/

Upon completion of the form, sign and submit with bid or mail to:

City of Midland
Attn: City Secretary
PO Box 1152
Midland, Texas 79702

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

_____ _____

Signature of vendor doing business with the governmental entity Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Consideration of Location of Bidder's Principal Place of Business
For Bids of $50,000 up to $100,000 for Services and $500,000 for Commodities
Affidavit of Eligibility

Pursuant to Texas Local Government Code 271.9051, in purchasing real property, personal property that is not affixed to real property, or services, if the City receives one or more bids from a bidder whose principal place of business is in the City of Midland and whose bid is within five percent (5%) of the lowest bid price received by the City from a bidder who is not a resident of the City of Midland, the City may enter into a contract with:

(1) the lowest bidder; or

(2) the bidder whose principal place of business is in the City of Midland if the City Council determines, in writing, that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City of Midland created by the contract award, including the employment of residents of the City of Midland and increased tax revenues to the City of Midland.

In order to receive consideration, bidders must submit this affidavit to:

Erika Martinez
Purchasing Manager
City of Midland
300 N. Loraine St.,
PO BOX 1152
Midland, TX 79702-1152

Complete all areas below. Incomplete affidavits may be rejected.

Local Business Name: _____

Local Address (must be within the City limits): _____

1. Is the above address the principal place of business for the business named above? ☐ Yes ☐ No
2. How many residents of the City of Midland are employed at the above business location? _____
3. Year your business was established in the City of Midland: _____
4. If you collect sales tax for ANY class of customer, provide the following Reseller information:

   Reseller Permit Number: _____

   Company Name and Address (as it appears on permit):

   _____

   _____

   _____

5. Does your business have more than one office in the State of Texas? ☐ Yes ☐ No
   If Yes, identify the office location considered as the point-of sale for the purpose of sales tax calculation:

   _____

   _____

6. Was the local business required to pay business and/or real property tax for the most recent tax year?

   ☐ Yes ☐ No

   If Yes, did the local business pay any of this tax to the City of Midland? ☐ Yes ☐ No

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct. It is further acknowledged that any person, firm, corporation or entity intentionally submitting false information to the City in an attempt to qualify for eligibility shall be prohibited from bidding on City of Midland products and services for a period of one (1) year.

Authorized Signature: _____ Date: _____

Printed Name and Title: _____

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/COMPANY OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/COMPANY MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.

IF THE SELECTED BIDDER/COMPANY CANNOT MEET THE ABOVE REQUIREMENTS, THEN **THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER**.

IMPORTANT NOTICE – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/COMPANY MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE, WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.

COMPLIANCE: Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended. For further instructions on how to comply with Texas Government Code Section 2252.908 and Texas Local Government Code Section 176.006,

please go to https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm.

ANY VENDOR WHO FAILS TO COMPLY WITH THE TERMS OF THE AWARD **MAY BE DECLARED AN IRRESPONSIBLE VENDOR**. BIDS SUBMITTED BY SAID VENDOR SHALL NOT BE CONSIDERED AGAIN FOR A MINIMUM PERIOD OF SIX MONTHS AS DETERMINED BY THE CITY MANAGER.

MIDLAND LANDFILL

MUNICIPAL SOLID WASTE LANDFILL
TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

MARCH 2020

PARKHILL SMITH & COOPER

4222 85th Street
Lubbock, Texas 79423
806.473.2200

PARKHILLSMITH&COOPER

TODD E. STIGGINS
107769
03/18/2020

MUNICIPAL SOLID WASTE LANDFILL
TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

COVER SHEET

G-001

I:\8\2871.1\803_DSGN\01_DWG\050_CIVIL\G-001-2871-18.dwg LAYOUT NAME: G-001 PRINTED: Thursday, March 26, 2020 - 11:55am USER: gmolinar

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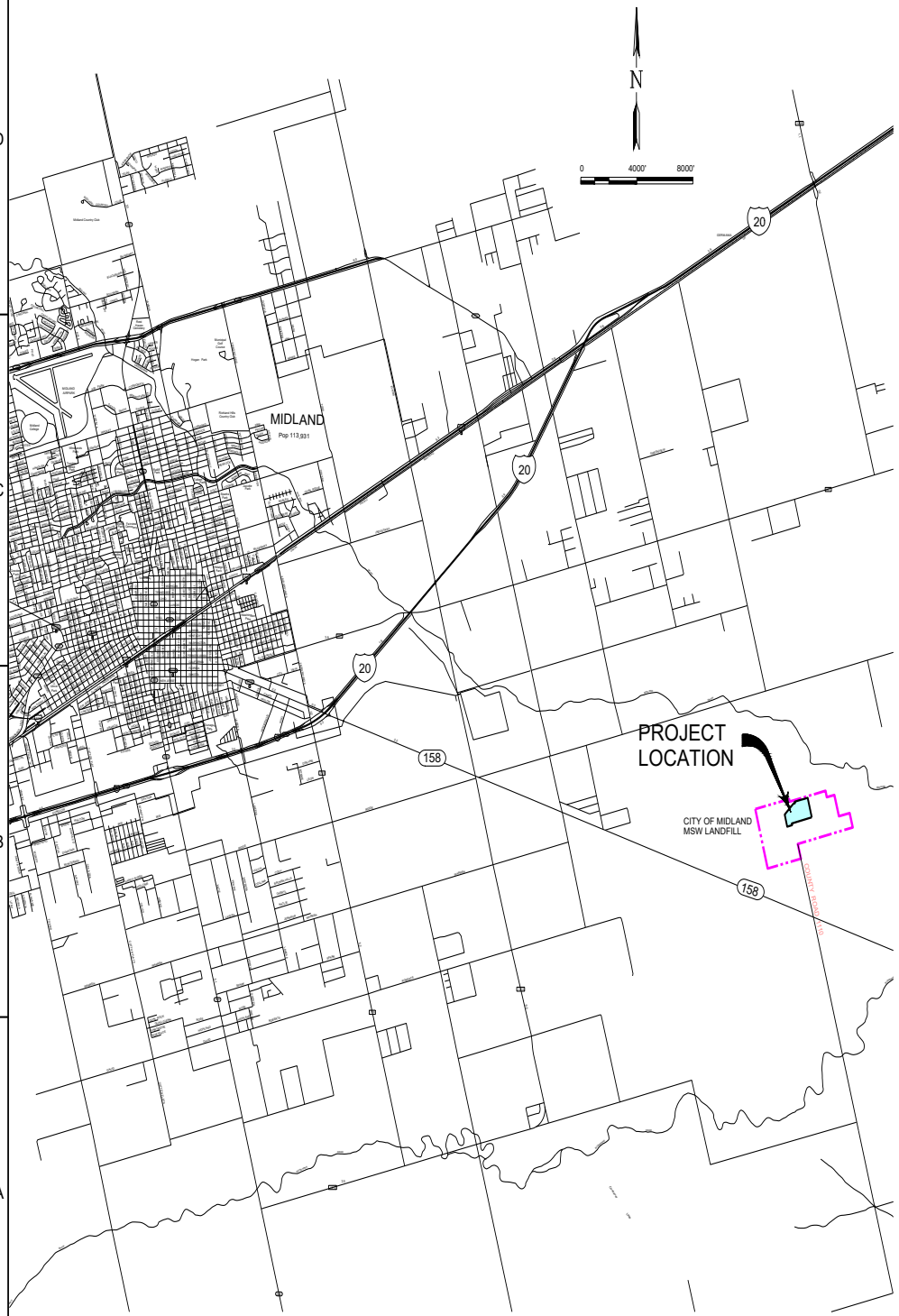
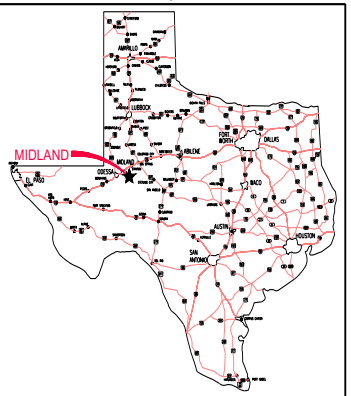


PROJECT LOCATION



VICINITY MAP

OWNER:
CITY OF MIDLAND
300 N. LORAINE
MIDLAND, TEXAS 79701
(432) 685-7100

ENGINEER:
PARKHILL, SMITH & COOPER, INC.
4222 85TH STREET
LUBBOCK, TEXAS 79423
(806) 473-2200

PIPELINE OWNER:
DCP-MIDSTREAM
10 DESTA DRIVE, SUITE 400W
MIDLAND, TEXAS 79705
(432) 620-4000

"ONE CALL" UTILITY LOCATING COMPANIES:
TEXAS811: CALL BEFORE YOU DIG
1-800-DIGTESS (344-8377)

SHEET INDEX

SHEET NO.	SHEET TITLE
G-001	COVER SHEET
G-002	PROJECT LOCATION MAP, VICINITY MAP & SHEET INDEX
G-003	GENERAL NOTES & STANDARD ABBREVIATIONS
V-001	TOPOGRAPHIC SURVEY
C-001	OVERALL SITE PLAN
C-002	PROJECT LAYOUT PLAN
C-003	SITE UTILITY PLAN
C-004	EXISTING SITE CONDITIONS
C-005	DEMOLITION PLAN
C-006	EROSION CONTROL PLAN
C-101	SUBGRADE CONTROL PLAN
C-102	SUBGRADE CONTROL POINT TABLES
C-103	SUBGRADE CONTROL POINT TABLES
C-104	CELL LINER & LEACHATE SYSTEM CONTROL PLAN
C-301	SUBGRADE CROSS-SECTIONS
C-501	LINER & LEACHATE COLLECTION DETAILS
C-502	LEACHATE SUMP PLAN & PROFILE
C-503	MISCELLANEOUS DETAILS
C-504	MISCELLANEOUS DETAILS

PSC
PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-560
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

MIDLAND
Feel the Energy!

MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

PROJECT LOCATION MAP VICINITY MAP & SHEET INDEX

G-002

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STANDARD ABBREVIATIONS			STANDARD ABBREVIATIONS	
%	PERCENT		S	SOUTH
&	AND		SCH	SCHEDULE
@	AT		SDL	SAND DRAINAGE LAYER
APPROX	APPROXIMATELY		SDR	STANDARD DIMENSION RATIO
ASPH	ASPHALT		SEC	SECTION
BLDG	BUILDING		SHT	SHEET
BOE	BOTTOM OF EXCAVATION		SLQCP	SOIL AND LINER QUALITY CONTROL PLAN
BOL	BOTTOM OF LINER		SP	STEEL PIPE
BTM	BOTTOM		SQ	SQUARE
CFS	CUBIC FEET PER SECOND		SS	STAINLESS STEEL
CL	CENTERLINE		STA	STATION
CMP	CORRUGATED METAL PIPE		TL	TANGENT LENGTH
CO	CLEAN OUT		TOPC	TOP OF PROTECTIVE COVER
CY	CUBIC YARD		TOFC	TOP OF FINAL COVER
DET	DETAIL		TOS	TOE OF SLOPE
DIA	DIAMETER		X	BY
DWG	DRAWING		TS	TOP SLOPE
E	EAST		TEMP	TEMPORARY
EL/ELEV	ELEVATION		TYP	TYPICAL
EXC	EXCAVATION		VERT	VERTICAL
EXIST	EXISTING		VLDPE	VERY LOW DENSITY POLYETHYLENE
FL	FLOW LINE		W	WEST
FML	FLEXIBLE MEMBRANE LINER		W/	WITH
FT	FEET		YD	YARD
CON	CONSTRUCTION			
CONC	CONCRETE			
CP	CONTROL POINT			
GAL	GALLON			
GCDL	GEOCOMPOSITE DRAINAGE LAYER			
GCL	GEOSYNTHETIC CLAY LINER			
GCLER	GEOSYNTHETIC CLAY LINER EVALUATION REPORT			
GDL	GRAVEL DRAINAGE LAYER			
GLER	GEOMEMBRANE LINER EVALUATION REPORT			
GML	GEOMEMBRANE LINER			
GMP	GAS MONITORING POINT			
GND	GROUND			
GNDL	GEONET DRAINAGE LAYER			
GP	GAS PROBE			
HDPE	HIGH DENSITY POLYETHYLENE			
HORIZ	HORIZONTAL			
ID	INSIDE DIAMETER			
IE	INVERT ELEVATION			
IN	INCHES			
LB	POUND			
LCP	LEACHATE COLLECTION PIPE			
LCPR	LEACHATE COLLECTION PIPE RISER			
LCS	LEACHATE COLLECTION SYSTEM			
LF	LINEAR FEET			
LFG	LANDFILL GAS			
LG	LONG			
MAX	MAXIMUM			
MH	MANHOLE			
MIL	0.001 INCHES			
MIN	MINIMUM			
MSL	MEAN SEA LEVEL			
MW	MONITORING WELL			
N	NORTH			
NO	NUMBER			
NTS	NOT TO SCALE			
OC	ON CENTER			
OZ	OUNCE			
PC	POINT OF CURVATURE			
PERF	PERFORATED			
PGV	PASSIVE GAS VENT			
PLCP	PERFORATED LEACHATE COLLECTION PIPE			
PT	POINT OF TANGENCY			
PVI	POINT OF VERTICAL INTERSECTION			
PZ	PIEZOMETER			
Q	FLOW			
QTY	QUANTITY			
R	RADIUS			
RCP	REINFORCED CONCRETE PIPE			
RD	ROAD			
REF	REFERENCE			

GENERAL NOTES

1. ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
2. ALTHOUGH EFFORTS HAVE BEEN MADE TO INDICATE ALL MAJOR EXISTING UTILITIES ON DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE & PROTECT ALL SAID UTILITIES AS WELL AS SERVICE CONNECTIONS (WHETHER OR NOT INDICATED ON DRAWINGS) PRIOR TO AND DURING CONSTRUCTION. SERVICE CONNECTIONS ARE NOT SHOWN ON THE DRAWINGS.
3. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO VERIFY LOCATION OF EXISTING UTILITIES AND CONTRACTOR SHALL CALL THE RESPECTIVE "ONE-CALL" NUMBER FOR SUCH UTILITIES.
4. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH GAS, OIL, ELECTRIC, TELEPHONE, FIBER OPTIC, CABLE TV, SEWER AND WATER UTILITIES OWNERS ETC. FOR ANY RELOCATION AND/OR PROTECTION OF EXISTING LINES OR CABLES AS REQUIRED, DUE TO CONSTRUCTION ACTIVITIES.
5. CONTRACTOR SHALL NOT EXCAVATE WITHIN 6 FEET OF ANY EXISTING OVERHEAD ELECTRIC POLES. IF EXCAVATION NEEDS TO TAKE PLACE WITHIN THE 6 FOOT LIMIT CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC COMPANY PRIOR TO EXCAVATING.
6. CONTRACTOR SHALL MAINTAIN FUEL STORAGE TANKS IN DESIGNATED STAGING AREA OR AS INSTRUCTED BY OWNER OR ENGINEER.
7. WATER WILL BE PROVIDED BY THE OWNER.
8. THE DRAWINGS INDICATE HORIZONTAL AND VERTICAL CONTROL REFERENCE POINTS ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER, OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
9. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH THE CURRENT SAFETY CODES AND STANDARDS HAVING JURISDICTION OVER THE PROJECT.
10. THE PROJECT'S INTERNAL AND PERIMETER HORIZONTAL CONTROL IS BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE 4203, NORTH AMERICAN DATUM OF 1983. VERTICAL ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
11. UNDERGROUND UTILITIES WERE LOCATED VISUALLY AND FROM AS-BUILT RECORDS. THERE WERE NO EXPOSURES OF UNDERGROUND CONDUCTED FOR THIS LOCATION.
12. THE CONTRACTOR WILL NOT BE ALLOWED TO WORK BEYOND THE LANDFILL HOURS OF OPERATION AND WILL BE RESPONSIBLE FOR SECURING THE LANDFILL PREMISES AT THE PROJECT SITE.
13. IF AT ANY TIME CONSTRUCTION INHIBITS NORMAL LANDFILL TRAFFIC, THEN IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A FLAGMAN OR SIGNS FOR TRAFFIC CONTROL.

!!! CONTRACTOR TO LOCATE AND PROTECT ALL GROUNDWATER MONITORING WELLS AND GAS PROBES !!!

PSC
PARKHILLSMITH&COOPER

PARKHILL SMITH & COOPER, INC. STATE OF TEXAS F-550
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

MIDLAND
Feel the Energy!

MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

GENERAL NOTES & STANDARD ABBREVIATIONS

G-003

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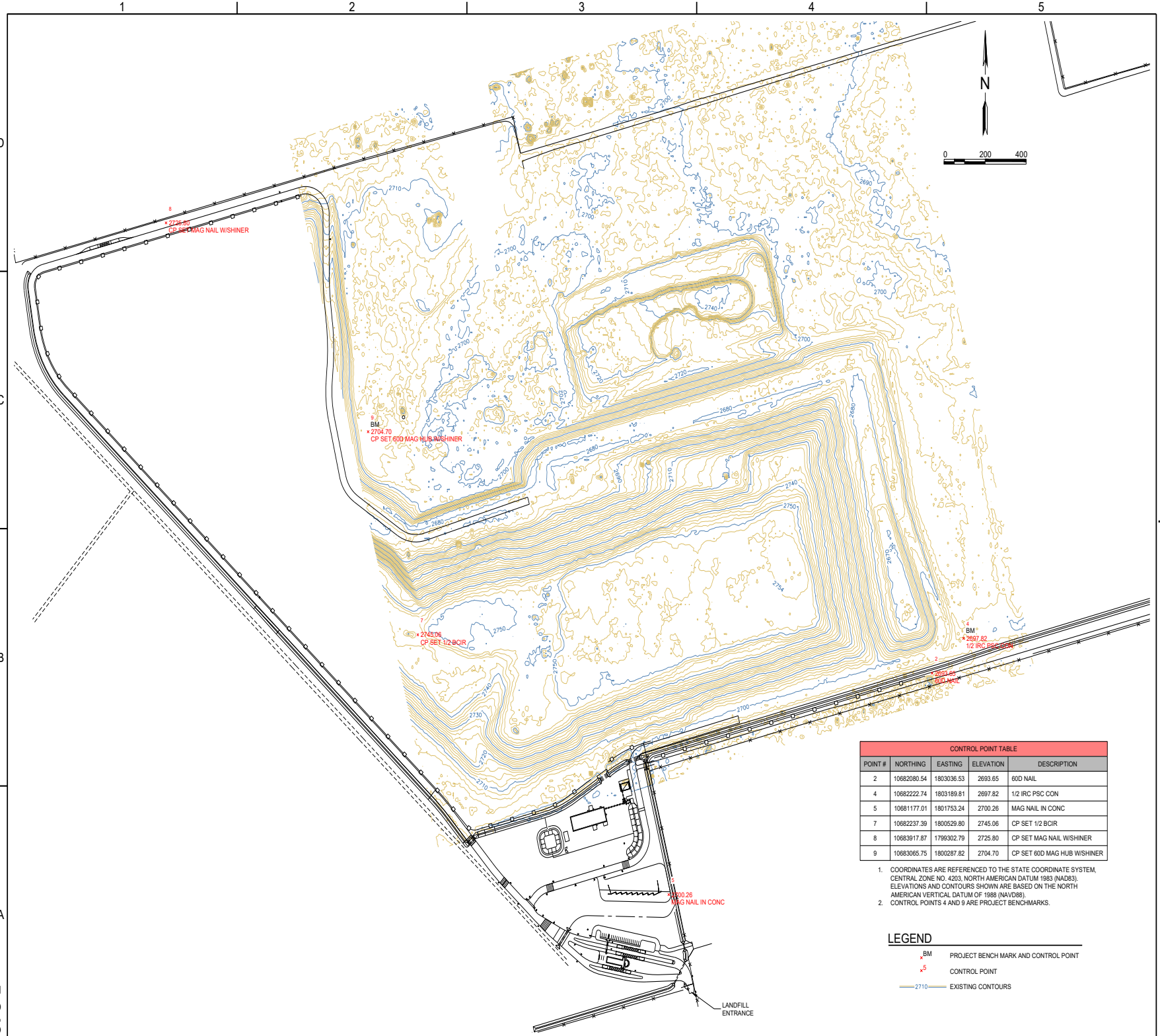

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
2	10682080.54	1803036.53	2693.65	60D NAIL
4	10682222.74	1803189.81	2697.82	1/2 IRC PSC CON
5	10681177.01	1801753.24	2700.26	MAG NAIL IN CONC
7	10682237.39	1800529.80	2745.06	CP SET 1/2 BCIR
8	10683917.87	1799302.79	2725.80	CP SET MAG NAIL W/SHINER
9	10683065.75	1800287.82	2704.70	CP SET 60D MAG HUB W/SHINER

1. COORDINATES ARE REFERENCED TO THE STATE COORDINATE SYSTEM, CENTRAL ZONE NO. 4203, NORTH AMERICAN DATUM 1983 (NAD83). ELEVATIONS AND CONTOURS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. CONTROL POINTS 4 AND 9 ARE PROJECT BENCHMARKS.

LEGEND

- BM — PROJECT BENCH MARK AND CONTROL POINT
- 5 — CONTROL POINT
- 2710 — EXISTING CONTOURS

PSC PARKHILLSMITH&COOPER

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TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

TOPOGRAPHIC SURVEY

V-001

5.243

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PSC
PARKHILLSMITH&COOPER

PARKHILL SMITH & COOPER, INC. STATE OF TEXAS F-550
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

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MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

OVERALL SITE PLAN

C-001

5.244

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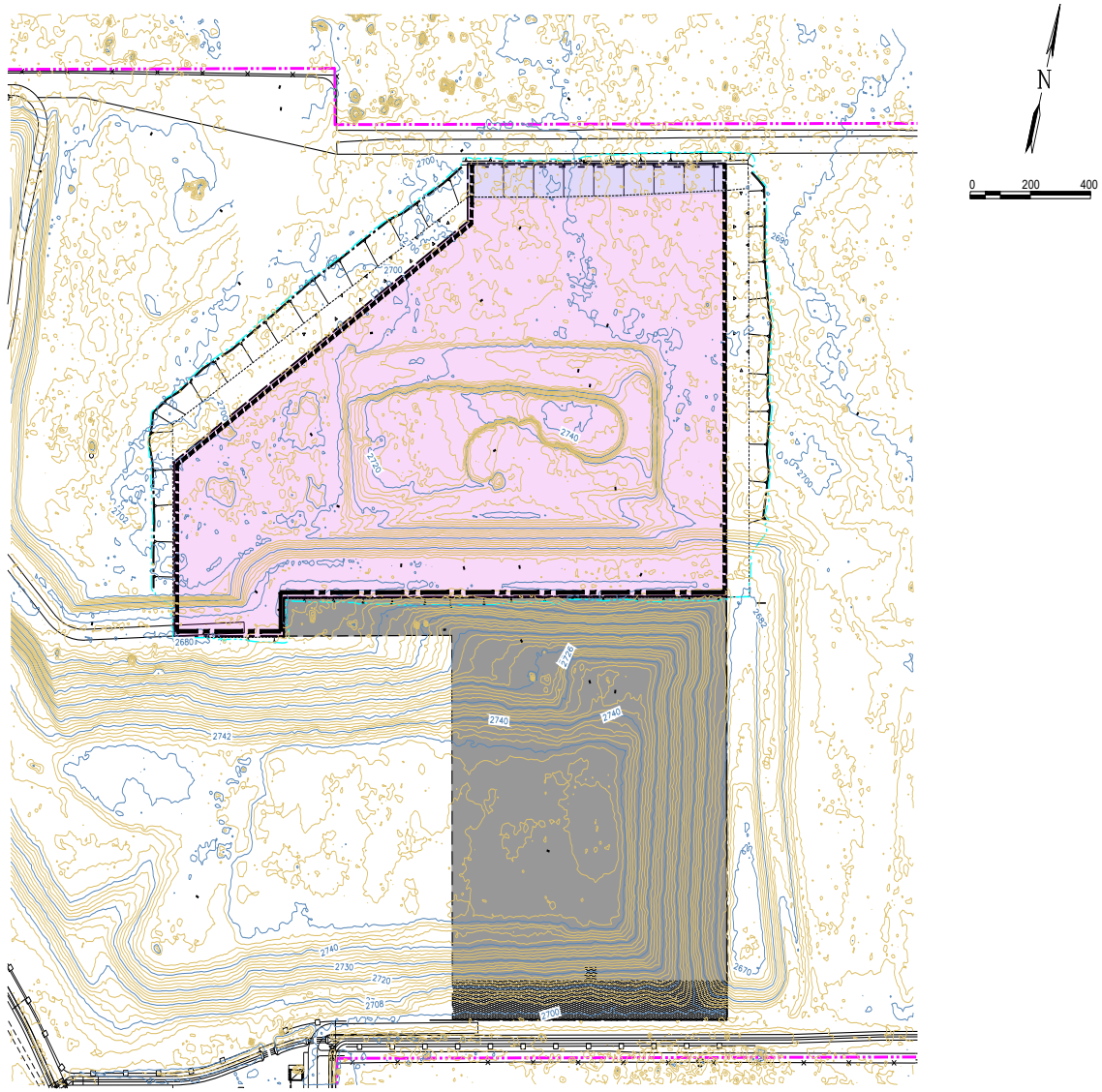

LEGEND

- PROPERTY LINE
- 2700 EXISTING CONTOURS
- FUTURE TIE-IN LINE
- TIE-IN LINE (THIS PROJECT)
- PREVIOUSLY LINED AREA
- NON-REINFORCED GCL, SMOOTH GML
- REINFORCED GCL, TEXTURED GML

PSC

PARKHILLSMITH&COOPER

PARKHILL SMITH & COOPER, INC. F-560 STATE OF TEXAS TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER 03/18/2020

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MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

PROJECT LAYOUT PLAN

C-002

I18\2871.18\03_DSGN\01_DWG\050_CIVIL\C-002-2871-18.dwg LAYOUT NAME: C-002 PRINTED: Thursday, March 26, 2020 - 11:48am USER: gmolinar

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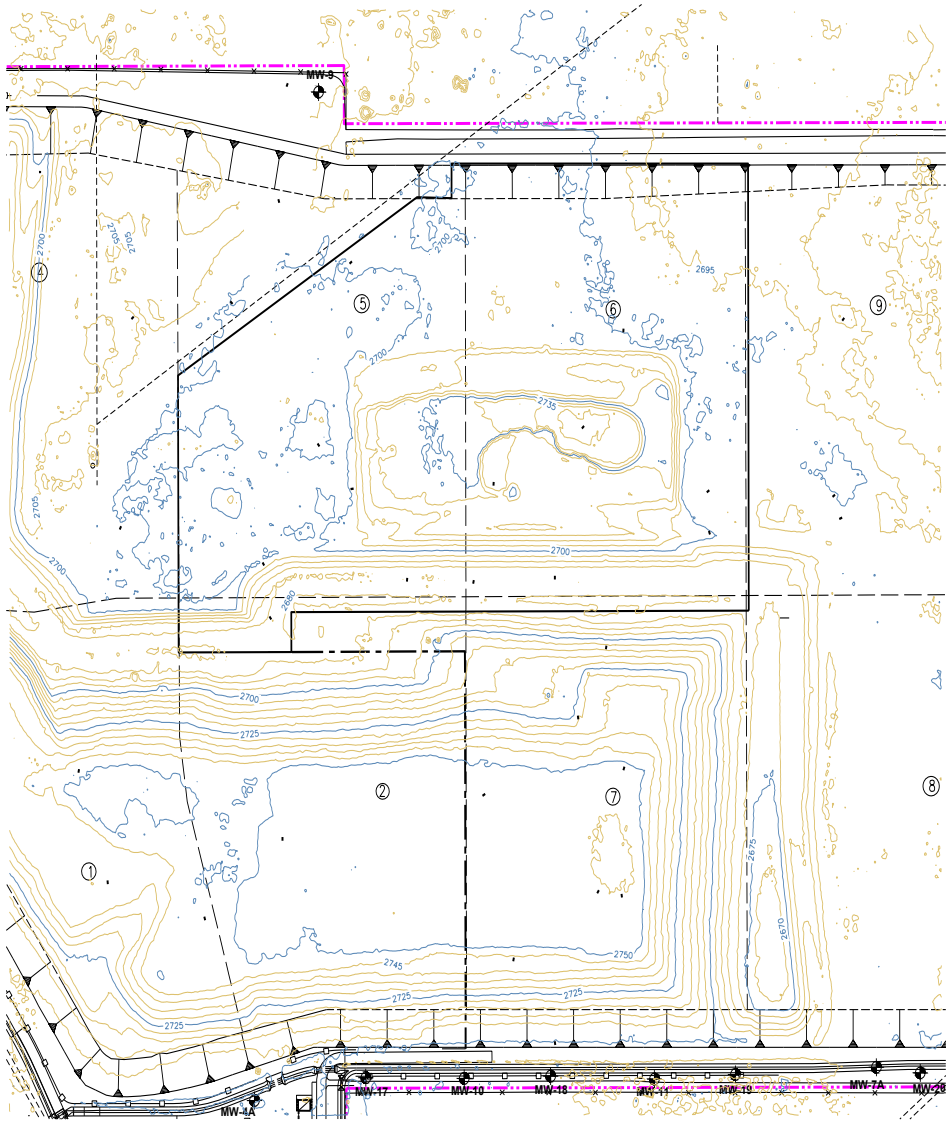

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NOTES

1. ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
3. ALTHOUGH EFFORTS HAVE BEEN MADE TO SHOW ALL MAJOR UTILITIES ON THE DRAWING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL SAID UTILITIES AS WELL AS SERVICE CONNECTIONS. SERVICE CONNECTIONS ARE NOT SHOWN ON DRAWINGS.
4. PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO VERIFY LOCATIONS OF EXISTING UTILITIES.

!!! CONTRACTOR TO LOCATE AND PROTECT ALL GROUNDWATER MONITORING WELLS AND GAS PROBES !!!

LEGEND

- PROPERTY/PERMITTED AREA
- CELL LIMITS
- PIPELINES
- ⑦ CELL DESIGNATION NUMBER
- MW-20 MONITORING WELLS

PSC

PARKHILLSMITH&COOPER

PARKHILL SMITH & COOPER, INC. TEXAS REGISTERED ENGINEERING FIRM F-560
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

MIDLAND
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MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

SITE UTILITY PLAN

C-003

I:\2871.1\803_DSGN\01_DWG\050_CIVIL\C-003-2871-18.dwg LAYOUT NAME: C-003 PRINTED: Thursday, March 26, 2020 - 11:48am USER: gmolinar

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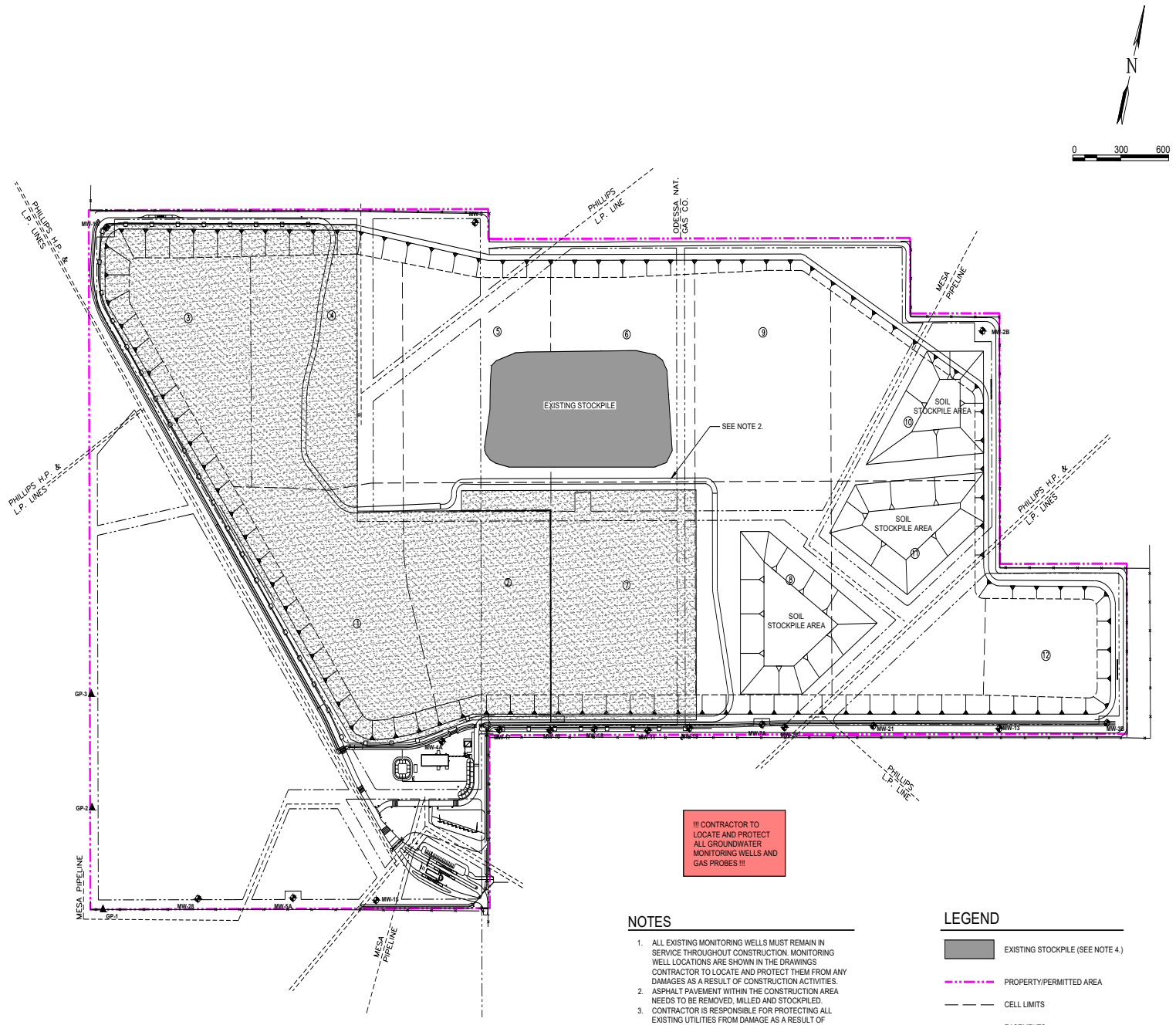

NOTES

1. ALL EXISTING MONITORING WELLS MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. MONITORING WELL LOCATIONS ARE SHOWN IN THE DRAWINGS CONTRACTOR TO LOCATE AND PROTECT THEM FROM ANY DAMAGES AS A RESULT OF CONSTRUCTION ACTIVITIES.
2. ASPHALT PAVEMENT WITHIN THE CONSTRUCTION AREA NEEDS TO BE REMOVED, MILLED AND STOCKPILED.
3. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
4. CONTRACTOR TO RELOCATE THE EXISTING STOCKPILE LOCATED WITHIN THE CONSTRUCTION AREA BEFORE THE CONSTRUCTION BEGINS.
5. CONTRACTOR IS RESPONSIBLE FOR EXPOSING THE EXISTING LINER TO TIE-IN. CONTRACTOR TO RELOCATE WASTE, IF NEEDED, TO EXPOSE THE EXISTING LINER TIE-IN.

LEGEND

- EXISTING STOCKPILE (SEE NOTE 4.)
- PROPERTY/PERMITTED AREA
- CELL LIMITS
- EASEMENTS
- PIPELINES
- ⑦ CELL DESIGNATION NUMBER
- MW-20 MONITORING WELLS
- GP-1 GAS PROBES

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PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. TEXAS REGISTERED ENGINEERING FIRM F-450
TODD E. STIGGINS
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LICENSED PROFESSIONAL ENGINEER
03/18/2020

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300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

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EXISTING SITE CONDITIONS

C-004

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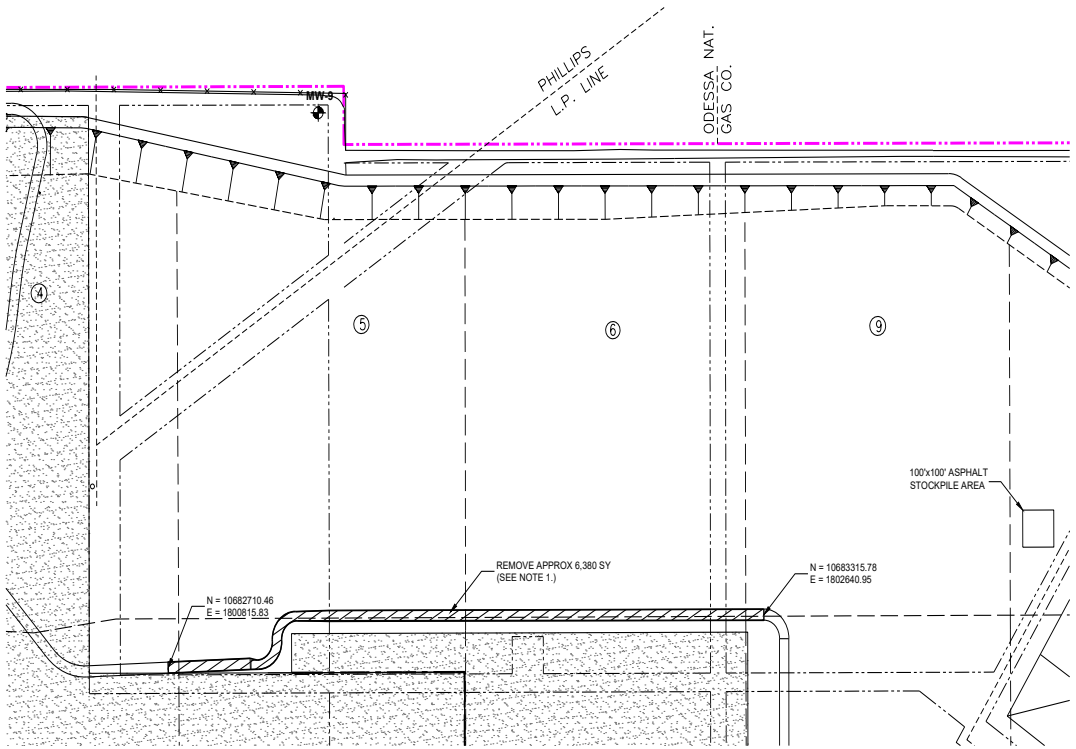

!!! CONTRACTOR TO LOCATE AND PROTECT ALL GROUNDWATER MONITORING WELLS AND GAS PROBES !!!

NOTES

1. REMOVE AND STOCKPILE OWNER'S ASPHALT PAVEMENT AS SHOWN IN THE DRAWING.
2. STOCKPILE LOCATION WILL BE WITHIN THE PERMITTED BOUNDARY, AS IDENTIFIED IN THE SITE PLAN.
3. CONTRACTOR IS RESPONSIBLE FOR CLEARING AND GRUBBING OF EXISTING SURFACE WITHIN THE PROJECT LIMITS. SHRUBS, GRASS AND VEGETATION REMOVED FROM CLEARING AND GRUBBING, SHALL BE DISPOSED AT THE WORKING FACE UNLESS DIRECTED OTHERWISE BY THE OWNER.
4. CONTRACTOR TO LOCATE AND PROTECT ALL UTILITIES AND MONITORING WELLS.

LEGEND

- PREVIOUSLY LINED CELLS
- PROPERTY/PERMITTED AREA
- CELL LIMITS
- EASEMENTS
- PIPELINES
- ⑦ CELL DESIGNATION NUMBER
- MW-20 MONITORING WELLS

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PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-550
TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER
03/18/2020

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300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

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1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

DEMOLITION PLAN

C-005

I:\2871.1\803_DSGN\01_DWG\050_CIVIL\C-005-2871-18.dwg LAYOUT NAME: C-005 PRINTED: Thursday, March 26, 2020 - 11:48am USER: gmolinar

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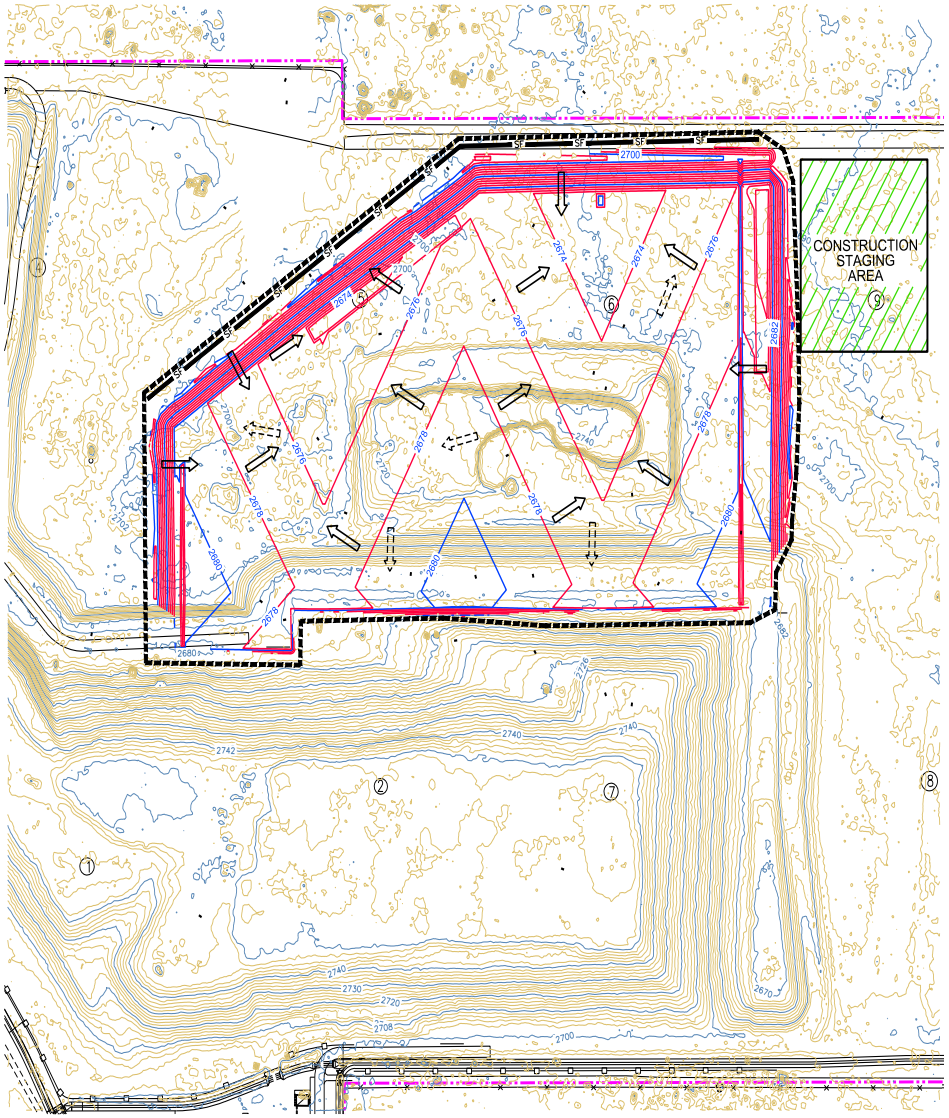

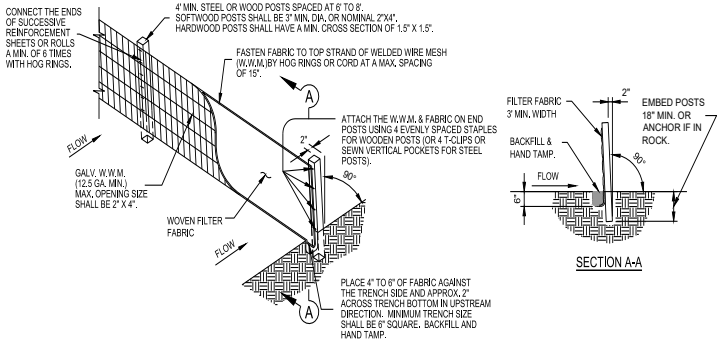

A3 SILT FENCE DETAIL
NO SCALE

NOTES:

1 CONTRACTOR WILL BE AN "OPERATOR" ON THIS PROJECT AND WILL BE REQUIRED TO OBTAIN COVERAGE UNDER A TPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, IF REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT CONTRACTOR'S ACTIVITIES ARE IN COMPLIANCE WITH ALL APPLICABLE PERMIT CONDITIONS. SHOULD ANY FIELD INSPECTIONS BY THE CONTRACTOR, OWNER'S REPRESENTATIVE, OR OTHER AUTHORITY HAVING JURISDICTION INDICATE THAT CONTRACTOR'S MEASURES OR ACTIVITIES ARE NOT IN COMPLIANCE WITH PERMIT CONDITIONS, CONTRACTOR SHALL IMPLEMENT WHATEVER MEASURES NECESSARY TO BRING THE PROJECT INTO COMPLIANCE.

2 LOCATION OF CONSTRUCTION STAGING AREA IS TO BE COORDINATED WITH OWNER. IF CONSTRUCTION STAGING AREA IS LOCATED OUTSIDE LIMITS OF DISTURBANCE, THEN THE ADDITIONAL AREA SHALL BE ADDED TO THE LIMITS OF DISTURBANCE SHOWN ON PLANS. EROSION CONTROL PLAN TO BE ADJUSTED BY CONTRACTOR AS NECESSARY.

3 TURN ALL SILT FENCES 45° UP SLOPE AT END OF REACH FOR A MINIMUM OF 15 FEET.

4 CONSTRUCTION STAGING AREA TO BE RETURNED TO PRE-CONSTRUCTION CONDITIONS UPON COMPLETION OF CONSTRUCTION.

5 NO WET LANDS ON SITE. NO OFF-SITE BORROW AREAS.

LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- SF — SILT FENCE, A3/C-006
- FLOW DIRECTION (PROPOSED)
- FLOW DIRECTION (EXISTING)
- 2700 — EXISTING CONTOURS

TOTAL DISTURBED AREA = 51.1 ACRES

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PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-550
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CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

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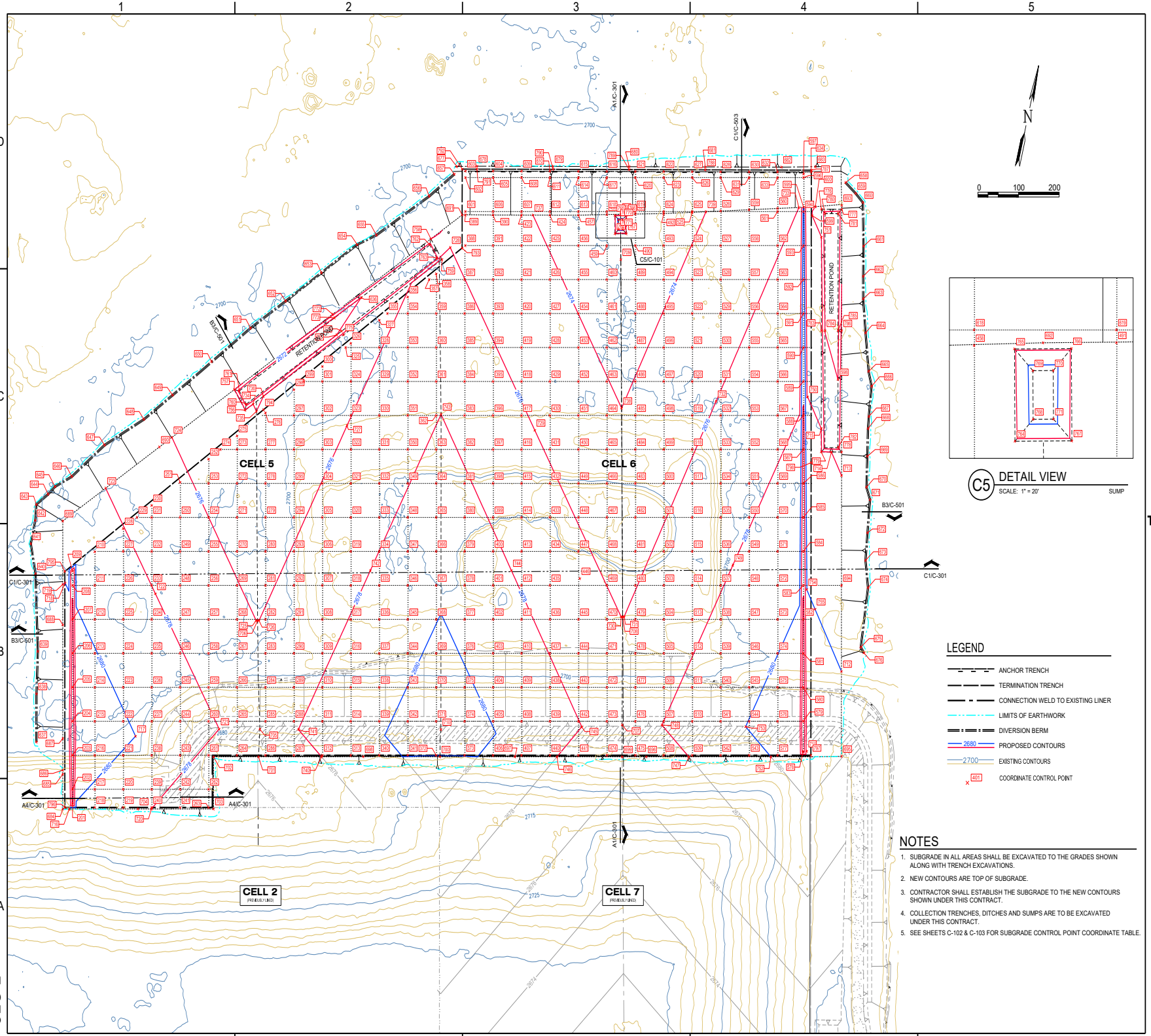
ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

EROSION CONTROL PLAN

C-006

I:\2871.18\03_DSGN\01_DWG\050_CIVIL\C-006-2871-18.dwg LAYOUT NAME: C-006 PRINTED: Thursday, March 26, 2020 - 11:50am USER: gmolnar



C5 DETAIL VIEW
SCALE: 1" = 20' SUMP

LEGEND

- ANCHOR TRENCH
- TERMINATION TRENCH
- CONNECTION WELD TO EXISTING LINER
- LIMITS OF EARTHWORK
- DIVERSION BERM
- 2680 PROPOSED CONTOURS
- 2700 EXISTING CONTOURS
- 401 COORDINATE CONTROL POINT

NOTES

1. SUBGRADE IN ALL AREAS SHALL BE EXCAVATED TO THE GRADES SHOWN ALONG WITH TRENCH EXCAVATIONS.
2. NEW CONTOURS ARE TOP OF SUBGRADE.
3. CONTRACTOR SHALL ESTABLISH THE SUBGRADE TO THE NEW CONTOURS SHOWN UNDER THIS CONTRACT.
4. COLLECTION TRENCHES, DITCHES AND SUMPS ARE TO BE EXCAVATED UNDER THIS CONTRACT.
5. SEE SHEETS C-102 & C-103 FOR SUBGRADE CONTROL POINT COORDINATE TABLE.

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03/18/2020

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ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

SUBGRADE CONTROL PLAN

C-101

5,250

18\2871.1803_DSGN\01_DWG\050_CIVIL\C-101-2871-18.dwg LAYOUT NAME: C-101 PRINTED: Thursday, March 26, 2020 - 11:50am USER: gmolnar

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
201	10682716.40	1800867.34	2684.03	FLOOR
202	10682745.00	1800860.08	2684.30	FLOOR
203	10682812.85	1800842.86	2685.07	FLOOR
204	10682880.69	1800825.63	2685.30	FLOOR
205	10682948.54	1800808.41	2684.94	FLOOR
206	10683016.39	1800791.18	2684.56	FLOOR
207	10683084.24	1800773.96	2684.20	FLOOR
208	10683152.08	1800756.73	2683.85	FLOOR
209	10683180.81	1800749.44	2683.66	FLOOR
210	10683232.63	1800792.59	2678.96	FLOOR
211	10683165.51	1800809.63	2679.33	FLOOR
212	10683097.67	1800826.86	2679.70	FLOOR
213	10683029.82	1800844.08	2680.06	FLOOR
214	10682961.97	1800861.31	2680.42	FLOOR
215	10682894.12	1800878.53	2680.79	FLOOR
216	10682826.28	1800895.76	2680.57	FLOOR
217	10682758.43	1800912.98	2679.82	FLOOR
218	10682722.08	1800922.21	2679.43	FLOOR
219	10682739.30	1800990.06	2678.73	FLOOR
220	10682775.65	1800980.83	2679.13	FLOOR
221	10682843.50	1800963.60	2679.88	FLOOR
222	10682911.35	1800946.38	2680.13	FLOOR
223	10682978.20	1800929.15	2679.77	FLOOR
224	10683047.04	1800911.93	2679.40	FLOOR
225	10683114.89	1800894.70	2679.04	FLOOR
226	10683182.74	1800877.48	2678.66	FLOOR
227	10683250.59	1800860.25	2678.29	FLOOR
228	10683296.09	1800848.70	2678.04	FLOOR
229	10683326.76	1800875.82	2677.61	FLOOR
230	10683359.55	1800904.81	2677.16	FLOOR
231	10683335.66	1800910.87	2677.28	FLOOR
232	10683267.81	1800928.10	2677.64	FLOOR
233	10683199.96	1800945.33	2678.00	FLOOR
234	10683132.12	1800962.55	2678.37	FLOOR
235	10683064.27	1800979.78	2678.74	FLOOR
236	10682996.42	1800997.00	2679.11	FLOOR
237	10682928.57	1801014.23	2679.47	FLOOR
238	10682860.73	1801031.45	2679.16	FLOOR
239	10682792.88	1801048.68	2678.42	FLOOR
240	10682756.53	1801057.91	2678.02	FLOOR
241	10682773.75	1801125.75	2677.33	FLOOR
242	10682810.10	1801116.53	2677.71	FLOOR
243	10682877.95	1801099.30	2678.43	FLOOR
244	10682945.80	1801082.07	2678.82	FLOOR
245	10683013.65	1801064.85	2678.45	FLOOR
246	10683081.49	1801047.62	2678.08	FLOOR
247	10683149.34	1801030.40	2677.72	FLOOR
248	10683217.19	1801013.17	2677.36	FLOOR
249	10683285.04	1800995.95	2677.00	FLOOR
250	10683352.88	1800978.72	2676.64	FLOOR
251	10683423.00	1800960.92	2676.28	FLOOR
252	10683486.46	1801017.03	2675.45	FLOOR
253	10683437.96	1801029.34	2675.68	FLOOR
254	10683370.11	1801046.57	2676.00	FLOOR
255	10683302.26	1801063.79	2676.36	FLOOR
256	10683234.42	1801081.02	2676.71	FLOOR
257	10683166.57	1801098.25	2677.07	FLOOR
258	10683098.72	1801115.47	2677.43	FLOOR
259	10683030.87	1801132.70	2677.80	FLOOR
260	10682963.02	1801149.92	2678.05	FLOOR
261	10682895.18	1801167.15	2677.71	FLOOR
262	10682827.33	1801184.37	2677.02	FLOOR
263	10682790.98	1801193.60	2676.65	FLOOR
264	10682912.40	1801234.99	2677.03	FLOOR
265	10682980.25	1801217.77	2677.71	FLOOR
266	10683048.10	1801200.54	2677.20	FLOOR
267	10683115.95	1801183.32	2676.85	FLOOR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
268	10683183.79	1801166.09	2676.43	FLOOR
269	10683251.64	1801148.87	2676.07	FLOOR
270	10683319.49	1801131.64	2675.74	FLOOR
271	10683387.34	1801114.42	2675.41	FLOOR
272	10683455.18	1801097.19	2675.09	FLOOR
273	10683523.03	1801079.97	2674.76	FLOOR
274	10683513.01	1801040.51	2675.11	FLOOR
275	10683549.92	1801073.14	2674.64	FLOOR
276	10683613.38	1801129.25	2674.20	FLOOR
277	10683540.26	1801147.81	2674.54	FLOOR
278	10683472.41	1801165.04	2674.85	FLOOR
279	10683404.56	1801182.26	2675.17	FLOOR
280	10683336.71	1801199.49	2675.49	FLOOR
281	10683268.87	1801216.72	2675.81	FLOOR
282	10683201.02	1801233.94	2676.13	FLOOR
283	10683133.17	1801251.17	2676.66	FLOOR
284	10683065.32	1801268.39	2677.10	FLOOR
285	10682997.48	1801285.62	2677.50	FLOOR
286	10682929.63	1801302.84	2676.98	FLOOR
287	10682946.85	1801370.69	2677.37	FLOOR
288	10683014.70	1801353.46	2677.88	FLOOR
289	10683082.55	1801336.24	2677.47	FLOOR
290	10683150.40	1801319.01	2677.12	FLOOR
291	10683218.24	1801301.79	2676.77	FLOOR
292	10683286.09	1801284.56	2676.43	FLOOR
293	10683353.94	1801267.34	2676.08	FLOOR
294	10683421.79	1801250.11	2675.76	FLOOR
295	10683489.63	1801232.89	2675.44	FLOOR
296	10683557.48	1801215.66	2675.12	FLOOR
297	10683625.33	1801198.44	2674.80	FLOOR
298	10683676.83	1801185.36	2674.56	FLOOR
299	10683699.27	1801205.20	2674.69	FLOOR
300	10683740.29	1801241.47	2674.92	FLOOR
301	10683710.40	1801249.06	2675.07	FLOOR
302	10683642.55	1801266.28	2675.39	FLOOR
303	10683574.71	1801283.51	2675.71	FLOOR
304	10683506.86	1801300.73	2676.03	FLOOR
305	10683438.01	1801317.96	2676.38	FLOOR
306	10683371.16	1801335.18	2676.72	FLOOR
307	10683303.32	1801352.41	2677.07	FLOOR
308	10683235.47	1801369.64	2677.42	FLOOR
309	10683167.62	1801386.86	2677.76	FLOOR
310	10683099.77	1801404.09	2678.11	FLOOR
311	10683031.93	1801421.31	2678.47	FLOOR
312	10682964.08	1801438.54	2678.05	FLOOR
313	10682981.30	1801506.38	2678.73	FLOOR
314	10683049.15	1801489.16	2679.03	FLOOR
315	10683117.00	1801471.93	2678.77	FLOOR
316	10683184.85	1801454.71	2678.41	FLOOR
317	10683252.69	1801437.48	2678.06	FLOOR
318	10683320.54	1801420.26	2677.71	FLOOR
319	10683388.39	1801403.03	2677.36	FLOOR
320	10683456.24	1801385.81	2677.02	FLOOR
321	10683524.08	1801368.58	2676.67	FLOOR
322	10683591.93	1801351.36	2676.33	FLOOR
323	10683659.78	1801334.13	2675.98	FLOOR
324	10683727.63	1801316.91	2675.66	FLOOR
325	10683792.39	1801287.54	2675.23	FLOOR
326	10683803.75	1801297.58	2675.30	FLOOR
327	10683867.20	1801353.69	2675.67	FLOOR
328	10683812.70	1801367.53	2675.94	FLOOR
329	10683744.85	1801384.75	2676.28	FLOOR
330	10683677.01	1801401.98	2676.62	FLOOR
331	10683609.16	1801419.20	2676.97	FLOOR
332	10683541.31	1801436.43	2677.31	FLOOR
333	10683473.46	1801453.65	2677.66	FLOOR
334	10683405.62	1801470.88	2678.01	FLOOR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
335	10683337.77	1801488.11	2678.35	FLOOR
336	10683269.92	1801505.33	2678.71	FLOOR
337	10683202.07	1801522.56	2679.06	FLOOR
338	10683134.23	1801539.78	2679.40	FLOOR
339	10683066.38	1801557.01	2679.74	FLOOR
340	10682998.53	1801574.23	2679.42	FLOOR
341	10683015.76	1801642.08	2680.05	FLOOR
342	10683083.60	1801624.85	2680.36	FLOOR
343	10683151.45	1801607.63	2680.02	FLOOR
344	10683219.30	1801590.40	2679.68	FLOOR
345	10683287.15	1801573.18	2679.34	FLOOR
346	10683354.99	1801555.95	2678.99	FLOOR
347	10683422.84	1801538.73	2678.64	FLOOR
348	10683490.69	1801521.50	2678.30	FLOOR
349	10683558.54	1801504.28	2677.95	FLOOR
350	10683626.38	1801487.05	2677.61	FLOOR
351	10683694.23	1801469.83	2677.26	FLOOR
352	10683762.08	1801452.60	2676.92	FLOOR
353	10683829.93	1801435.37	2676.57	FLOOR
354	10683897.77	1801418.15	2676.23	FLOOR
355	10683885.52	1801369.89	2675.78	FLOOR
356	10683930.66	1801409.80	2676.06	FLOOR
357	10683978.65	1801452.23	2676.36	FLOOR
358	10683994.12	1801465.91	2676.46	FLOOR
359	10683915.00	1801486.00	2676.87	FLOOR
360	10683847.15	1801503.22	2677.21	FLOOR
361	10683779.30	1801520.45	2677.56	FLOOR
362	10683711.46	1801537.67	2677.90	FLOOR
363	10683643.61	1801554.90	2678.24	FLOOR
364	10683575.76	1801572.12	2678.58	FLOOR
365	10683507.91	1801589.35	2678.93	FLOOR
366	10683440.07	1801606.57	2679.27	FLOOR
367	10683372.22	1801623.80	2679.61	FLOOR
368	10683304.37	1801641.03	2679.95	FLOOR
369	10683236.52	1801658.25	2680.29	FLOOR
370	10683168.68	1801675.48	2680.64	FLOOR
371	10683100.83	1801692.70	2680.98	FLOOR
372	10683032.98	1801709.93	2680.02	FLOOR
373	10683050.21	1801777.77	2680.03	FLOOR
374	10683118.05	1801760.55	2680.56	FLOOR
375	10683185.90	1801743.32	2680.22	FLOOR
376	10683253.75	1801726.10	2679.88	FLOOR
377	10683321.60	1801708.87	2679.54	FLOOR
378	10683389.44	1801691.65	2679.20	FLOOR
379	10683457.29	1801674.42	2678.86	FLOOR
380	10683525.14	1801657.20	2678.51	FLOOR
381	10683592.99	1801639.97	2678.17	FLOOR
382	10683660.83	1801622.75	2677.82	FLOOR
383	10683728.68	1801605.52	2677.46	FLOOR
384	10683796.53	1801588.30	2677.10	FLOOR
385	10683864.38	1801571.07	2676.74	FLOOR
386	10683932.22	1801553.84	2676.38	FLOOR
387	10684000.07	1801536.62	2676.01	FLOOR
388	10684068.39	1801521.25	2675.67	FLOOR
389	10684129.54	1801505.85	2675.37	FLOOR
390	10684146.13	1801571.76	2674.81	FLOOR
391	10684085.14	1801587.24	2675.10	FLOOR
392	10684017.30	1801604.47	2675.42	FLOOR
393	10683949.45	1801621.69	2675.75	FLOOR
394	10683881.60	1801638.92	2676.08	FLOOR
395	10683813.75	1801656.14	2676.44	FLOOR
396	10683745.91	1801673.37	2676.80	FLOOR
397	10683678.06	1801690.59	2677.16	FLOOR
398	10683610.21	1801707.82	2677.52	FLOOR
399	10683542.36	1801725.04	2677.87	FLOOR
400	10683474.52	1801742.27	2678.22	FLOOR
401	10683406.67	1801759.50	2678.57	FLOOR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
402	10683338.82	1801776.72	2678.92	FLOOR
403	10683270.97	1801793.95	2679.26	FLOOR
404	10683203.13	1801811.17	2679.60	FLOOR
405	10683135.28	1801828.40	2679.94	FLOOR
406	10683067.43	1801845.62	2679.62	FLOOR
407	10683084.66	1801913.47	2678.87	FLOOR
408	10683152.50	1801896.24	2679.26	FLOOR
409	10683220.35	1801879.02	2678.98	FLOOR
410	10683288.20	1801861.79	2678.62	FLOOR
411	10683356.05	1801844.57	2678.27	FLOOR
412	10683423.89	1801827.34	2677.92	FLOOR
413	10683491.74	1801810.12	2677.57	FLOOR
414	10683559.59	1801792.89	2677.22	FLOOR
415	10683627.44	1801775.67	2676.86	FLOOR
416	10683695.28	1801758.44	2676.51	FLOOR
417	10683763.13	1801741.22	2676.15	FLOOR
418	10683830.98	1801723.99	2675.81	FLOOR
419	10683898.83	1801706.76	2675.49	FLOOR
420	10683966.67	1801689.54	2675.16	FLOOR
421	10684034.52	1801672.31	2674.84	FLOOR
422	10684102.37	1801655.09	2674.52	FLOOR
423	10684163.22	1801639.64	2674.23	FLOOR
424	10684180.32	1801707.52	2673.65	FLOOR
425	10684119.60	1801722.94	2673.94	FLOOR
426	10684051.75	1801740.16	2674.26	FLOOR
427	10683983.90	1801757.39	2674.58	FLOOR
428	10683916.05	1801774.61	2674.90	FLOOR
429	10683848.21	1801791.84	2675.22	FLOOR
430	10683780.36	1801809.06	2675.55	FLOOR
431	10683712.51	1801826.29	2675.87	FLOOR
432	10683644.66	1801843.51	2676.22	FLOOR
433	10683576.82	1801860.74	2676.57	FLOOR
434	10683508.97	1801877.96	2676.92	FLOOR
435	10683441.12	1801895.19	2677.27	FLOOR
436	10683373.27	1801912.42	2677.62	FLOOR
437	10683305.43	1801929.64	2677.97	FLOOR
438	10683237.58	1801946.87	2678.32	FLOOR
439	10683169.73	1801964.09	2678.68	FLOOR
440	10683101.88	1801981.32	2678.20	FLOOR
441	10683119.11	1802049.16	2677.52	FLOOR
442	10683186.96	1802031.94	2678.00	FLOOR
443	10683254.80	1802014.71	2677.68	FLOOR
444	10683322.65	1801997.49	2677.33	FLOOR
445	10683390.50	1801980.26	2676.98	FLOOR
446	10683472.94	1801963.04	2676.53	FLOOR
447	10683526.19	1801945.81	2676.28	FLOOR
448	10683594.04	1801928.59	2675.93	FLOOR
449	10683661.89	1801911.36	2675.61	FLOOR
450	10683729.74	1801894.14	2675.28	FLOOR
451	10683797.58	1801876.91	2674.96	FLOOR
452	10683865.43	1801859.69	2674.64	FLOOR
453	10683933.28	1801842.46	2674.32	FLOOR
454	10684001.13	1801825.23	2673.99	FLOOR
455	10684068.97	1801808.01	2673.67	FLOOR
456	10684136.82	1801790.78	2673.35	FLOOR
457	10684197.41	1801775.40	2673.06	FLOOR
458	10684215.71	1801842.98	2672.84	FLOOR
459	10684154.05	1801858.63	2672.73	FLOOR
460	10684086.20	1801875.86	2673.08	FLOOR
461	10684018.35	1801893.08	2673.41	FLOOR
462	10683950.50	1801910.31	2673.73	FLOOR
463	10683882.66	1801927.53	2674.05	FLOOR
464	10683814.81	1801944.76	2674.37	FLOOR
465	10683746.96	1801961.98	2674.70	FLOOR
466	10683679.11	1801979.21	2675.02	FLOOR
467	10683611.27	1801996.43	2675.35	FLOOR
468	10683543.42	1802013.66	2675.67	FLOOR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
469	10683475.57	1802030.89	2676.00	FLOOR
470	10683407.72	1802048.11	2676.34	FLOOR
471	10683339.88	1802065.34	2676.81	FLOOR
472	10683272.03	1802082.56	2677.19	FLOOR
473	10683204.18	1802099.79	2677.65	FLOOR
474	10683136.33	1802117.01	2676.95	FLOOR
475	10683153.56	1802184.86	2676.94	FLOOR
476	10683221.41	1802167.63	2677.63	FLOOR
477	10683289.25	1802150.41	2677.17	FLOOR
478	10683357.10	1802133.18	2676.78	FLOOR
479	10683424.95	1802115.96	2676.29	FLOOR
480	10683492.80	1802098.73	2675.95	FLOOR
481	10683560.64	1802081.51	2675.64	FLOOR
482	10683628.49	1802064.28	2675.32	FLOOR
483	10683696.34	1802047.06	2675.00	FLOOR
484	10683764.19	1802029.83	2674.68	FLOOR
485	10683832.03	1802012.61	2674.37	FLOOR
486	10683899.88	1801995.38	2674.05	FLOOR
487	10683967.73	1801978.15	2673.73	FLOOR
488	10684035.58	1801960.93	2673.42	FLOOR
489	10684103.42	1801943.70	2673.10	FLOOR
490	10684171.27	1801926.48	2672.74	FLOOR
491	10684234.01	1801910.55	2672.92	FLOOR
492	10684252.32	1801978.12	2673.10	FLOOR
493	10684188.50	1801994.33	2673.40	FLOOR
494	10684120.65	1802011.55	2673.72	FLOOR
495	10684052.80	1802028.78	2674.03	FLOOR
496	10683984.95	1802046.00	2674.35	FLOOR
497	10683917.11	1802063.23	2674.67	FLOOR
498	10683849.26	1802080.45	2674.98	FLOOR
499	10683781.41	1802097.68	2675.30	FLOOR
500	10683713.56	1802114.90	2675.62	FLOOR
501	10683645.72	1802132.13	2675.94	FLOOR
502	10683577.87	1802149.35	2676.27	FLOOR
503	10683510.02	1802166.58	2676.61	FLOOR
504	10683442.17	1802183.81	2676.96	FLOOR
505	10683374.33	1802201.03	2677.30	FLOOR
506	10683306.48	1802218.26	2677.65	FLOOR
507	10683238.63	1802235.48	2678.00	FLOOR
508	10683170.78	1802252.71	2677.44	FLOOR
509	10683188.01	1802320.55	2678.11	FLOOR
510	10683255.86	1802303.33	2678.65	FLOOR
511	10683323.70	1802286.10	2678.32	FLOOR
512	10683391.55	1802268.88	2677.96	FLOOR
513	10683459.40	1802251.65	2677.62	FLOOR
514	10683527.25	1802234.43	2677.28	FLOOR
515	10683595.09	1802217.20	2676.94	FLOOR
516	10683662.94	1802199.98	2676.59	FLOOR
517	10683730.79	1802182.75	2676.26	FLOOR
518	10683798.64	1802165.53	2675.93	FLOOR
519	10683866.48	1802148.30	2675.61	FLOOR
520	10683934.33	1802131.08	2675.29	FLOOR
521	10684002.18	1802113.85	2674.97	FLOOR
522	10684070.03	1802096.62	2674.65	FLOOR
523	10684137.88	1802079.40	2674.34	FLOOR
524	10684205.72	1802062.17	2674.02	FLOOR
525	10684272.11	1802045.32	2673.71	FLOOR
526	10684291.97	1802112.50	2674.34	FLOOR
527	10684222.95	1802130.02	2674.64	FLOOR
528	10684155.10	1802147.25	2674.96	FLOOR
529	10684087.25	1802164.47	2675.28	FLOOR
530	10684019.41	1802181.70	2675.60	FLOOR
531	10683951.56	1802196.92	2675.91	FLOOR
532	10683883.71	1802216.15	2676.24	FLOOR
533	10683815.86	1802233.37	2676.57	FLOOR
534	10683748.02	1802250.60	2676.91	FLOOR
535	10683680.17	1802267.82	2677.25	FLOOR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
536	10683612.32	1802285.05	2677.58	FLOOR
537	10683544.47	1802302.28	2677.93	FLOOR
538	10683476.63	1802319.50	2678.28	FLOOR
539	10683408.78	1802336.73	2678.64	FLOOR
540	10683340.93	1802353.95	2679.00	FLOOR
541	10683273.08	1802371.18	2679.24	FLOOR
542	10683205.24	1802388.40	2678.79	FLOOR
543	10683222.46	1802456.25	2679.49	FLOOR
544	10683290.31	1802439.02	2680.00	FLOOR
545	10683358.16	1802421.80	2679.67	FLOOR
546	10683426.00	1802404.57	2679.31	FLOOR
547	10683493.85	1802387.35	2678.95	FLOOR
548	10683561.70	1802370.12	2678.60	FLOOR
549	10683629.55	1802352.90	2678.24	FLOOR
550	10683697.39	1802335.67	2677.89	FLOOR
551	10683765.24	1802318.45	2677.55	FLOOR
552	10683833.09	1802301.22	2677.22	FLOOR
553	10683900.94	1802284.00	2676.89	FLOOR
554	10683968.78	1802266.77	2676.55	FLOOR
555	10684036.63	1802249.54	2676.23	FLOOR
556	10684104.48	1802232.32	2675.90	FLOOR
557	10684172.33	1802215.09	2675.58	FLOOR
558	10684240.17	1802197.87	2675.26	FLOOR
559	10684311.71	1802179.71	2674.93	FLOOR
560	10684331.62	1802246.87	2675.58	FLOOR
561	10684325.25	1802248.49	2675.57	FLOOR
562	10684257.40	1802265.72	2675.89	FLOOR
563	10684189.55	1802282.94	2676.21	FLOOR
564	10684121.70	1802300.17	2676.54	FLOOR
565	10684053.86	1802317.39	2676.86	FLOOR
566	10683986.01	1802334.62	2677.19	FLOOR
567	10683918.16	1802351.84	2677.52	FLOOR
568	10683850.31	1802369.07	2677.85	FLOOR
569	10683782.47	1802386.29	2678.20	FLOOR
570	10683714.62	1802403.52	2678.55	FLOOR
571	10683646.77	1802420.74	2678.91	FLOOR
572	10683578.92	1802437.97	2679.27	FLOOR
573	10683511.08	1802455.20	2679.62	FLOOR
574	10683443.23	1802472.42	2679.98	FLOOR
575	10683375.38	1802489.65	2680.34	FLOOR
576	10683307.53	1802506.87	2680.70	FLOOR
577	10683239.69	1802524.10	2680.19	FLOOR
578	10683262.96	1802583.19	2684.91	FLOOR
579	10683323.05	1802567.99	2685.34	FLOOR
580	10683390.91	1802550.83	2684.95	FLOOR
581	10683458.78	1802533.66	2684.59	FLOOR
582	10683526.64	1802516.50	2684.23	FLOOR
583	10683594.50	1802499.33	2683.88	FLOOR
584	10683662.36	1802482.16	2683.52	FLOOR
585	10683730.23	1802465.00	2683.16	FLOOR
586	10683798.09	1802447.83	2682.81	FLOOR
587	10683865.95	1802430.66	2682.45	FLOOR
588	10683933.81	1802413.50	2682.10	FLOOR
589	10684001.68	1802396.33	2681.76	FLOOR
590	10684069.54	1802379.17	2681.44	FLOOR
591	10684137.40	1802362.00	2681.11	FLOOR
592	10684205.26	1802344.83	2680.77	FLOOR
593	10684273.13	1802327.67	2680.41	FLOOR
594	10684340.99	1802310.50	2680.05	FLOOR
595	10684349.60	1802308.32	2680.00	FLOOR
596	10684408.85	1802293.33	2699.55	SIDESLOPE
597	10684415.98	1802291.53	2701.90	SIDESLOPE
598	10684026.59	1802477.71	2674.00	CONTOUR
599	10684338.16	1802333.03	2676.00	CONTOUR
600	10684357.81	1802336.16	2676.00	CONTOUR
601	10684136.27	1801504.16	2677.59	SIDESLOPE
602	10684204.15	1801487.07	2699.91	SIDESLOPE

PSC
PARKHILLSMITH&COOPER
PARKHILL SMITH & COOPER, INC. STATE OF TEXAS TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER
03/18/2020

MIDLAND
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MUNICIPAL SOLID WASTE LANDFILL

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MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

SUBGRADE CONTROL POINT TABLES

C-102

18\2871.18\03_DSGN\01_DWG\050_CIVIL\C-102-2871-18.dwg LAYOUT NAME: C-102 PRINTED: Thursday, March 26, 2020 - 11:51am USER: gmolnar

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
603	10684217,25	1801483,77	2704,00	SIDESLOPE
604	10684233,78	1801549,51	2703,79	SIDESLOPE
605	10684220,84	1801552,79	2699,51	SIDESLOPE
606	10684152,99	1801570,02	2677,08	SIDESLOPE
607	10684170,22	1801637,86	2676,56	SIDESLOPE
608	10684238,06	1801620,64	2699,15	SIDESLOPE
609	10684250,86	1801617,39	2703,41	SIDESLOPE
610	10684267,95	1801685,27	2703,04	SIDESLOPE
611	10684255,29	1801688,48	2698,80	SIDESLOPE
612	10684187,44	1801705,71	2676,04	SIDESLOPE
613	10684204,67	1801773,56	2675,52	SIDESLOPE
614	10684272,52	1801756,33	2698,46	SIDESLOPE
615	10684284,97	1801753,17	2702,67	SIDESLOPE
616	10684301,99	1801821,07	2702,29	SIDESLOPE
617	10684288,74	1801824,18	2698,11	SIDESLOPE
618	10684221,89	1801841,41	2674,95	SIDESLOPE
619	10684239,12	1801909,25	2674,67	SIDESLOPE
620	10684306,97	1801892,03	2697,81	SIDESLOPE
621	10684319,01	1801888,97	2701,92	SIDESLOPE
622	10684336,06	1801956,86	2701,55	SIDESLOPE
623	10684324,19	1801959,88	2697,52	SIDESLOPE
624	10684256,34	1801977,10	2674,47	SIDESLOPE
625	10684273,57	1802044,95	2674,20	SIDESLOPE
626	10684341,42	1802027,72	2697,21	SIDESLOPE
627	10684353,11	1802024,75	2701,17	SIDESLOPE
628	10684370,16	1802092,65	2700,80	SIDESLOPE
629	10684358,64	1802095,57	2696,90	SIDESLOPE
630	10684387,22	1802160,54	2700,43	SIDESLOPE
631	10684375,87	1802163,42	2696,60	SIDESLOPE
632	10684404,28	1802228,42	2700,05	SIDESLOPE
633	10684393,09	1802231,27	2696,29	SIDESLOPE
634	10684424,52	1802308,96	2698,90	SIDESLOPE
635	10683812,36	1801259,86	2672,00	CONTOUR
636	10683901,57	1801299,14	2672,00	CONTOUR
637	10682817,51	1800750,10	2703,06	BERM CL
638	10682913,81	1800725,84	2702,71	BERM CL
639	10682999,39	1800707,45	2701,11	BERM CL
640	10683152,86	1800662,64	2702,27	BERM CL
641	10683209,94	1800636,14	2702,91	BERM CL
642	10683259,20	1800635,06	2702,24	BERM CL
643	10683291,66	1800629,52	2701,91	BERM CL
644	10683319,17	1800652,24	2701,55	BERM CL
645	10683336,64	1800664,93	2701,32	BERM CL
646	10683368,92	1800699,88	2700,85	BERM CL
647	10683451,60	1800762,10	2703,10	BERM CL
648	10683526,66	1800842,74	2699,40	BERM CL
649	10683592,46	1800898,94	2699,46	BERM CL
650	10683683,01	1800974,88	2700,04	BERM CL
651	10683773,56	1801050,81	2702,01	BERM CL
652	10683848,65	1801121,00	2702,29	BERM CL
653	10683926,83	1801191,84	2702,57	BERM CL
654	10684005,01	1801262,68	2702,86	BERM CL
655	10684035,41	1801303,80	2701,80	BERM CL
656	10684144,79	1801409,95	2701,45	BERM CL
657	10684204,31	1801458,86	2702,75	BERM CL
658	10684424,33	1802396,07	2693,37	BERM CL
659	10684408,85	1802425,52	2693,85	BERM CL
660	10684394,99	1802447,39	2693,25	BERM CL
661	10684308,01	1802471,10	2693,20	BERM CL
662	10684247,71	1802485,57	2693,69	BERM CL
663	10684202,91	1802497,01	2693,89	BERM CL
664	10684136,28	1802519,94	2696,25	BERM CL
665	10684061,41	1802546,62	2698,42	BERM CL
666	10684033,40	1802561,36	2700,12	BERM CL
667	10683971,22	1802570,07	2699,63	BERM CL
668	10683946,66	1802574,26	2698,04	BERM CL
669	10683891,01	1802586,62	2698,06	BERM CL

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
670	10683828,83	1802600,31	2698,57	BERM CL
671	10683805,87	1802615,18	2701,16	BERM CL
672	10683738,46	1802625,80	2700,32	BERM CL
673	10683682,07	1802635,11	2700,22	BERM CL
674	10683629,04	1802654,94	2700,12	BERM CL
675	10683505,74	1802667,81	2695,40	BERM CL
676	10683496,60	1802678,18	2697,65	BERM CL
677	10684220,92	1801460,78	2704,00	BERM EDGE
678	10684233,80	1801508,64	2704,00	BERM EDGE
679	10684279,54	1801690,33	2703,00	BERM EDGE
680	10684325,07	1801872,06	2702,00	BERM EDGE
681	10684370,70	1802053,76	2701,00	BERM EDGE
682	10684416,33	1802235,47	2700,00	BERM EDGE
683	10684437,86	1802316,05	2699,14	BERM EDGE
684	10682699,83	1800846,79	2680,03	BTM TOE
685	10682769,37	1800829,13	2680,83	BTM TOE
686	10682777,45	1800827,08	2680,92	BTM TOE
687	10682840,50	1800811,08	2681,71	BTM TOE
688	10683067,39	1800753,47	2680,46	BTM TOE
689	10683274,70	1800700,84	2679,31	BTM TOE
690	10683480,95	1800893,64	2676,38	BTM TOE
691	10684127,59	1801498,10	2675,44	BTM TOE
692	10684225,10	1801875,54	2673,00	BTM TOE
693	10684376,51	1802398,47	2675,84	BTM TOE
694	10683617,63	1802590,44	2679,14	BTM TOE
695	10683276,24	1802676,80	2680,04	BTM TOE
696	10683157,33	1802211,94	2677,00	BTM TOE
697	10683077,79	1801898,65	2679,00	BTM TOE
698	10682986,27	1801536,82	2679,00	BTM TOE
699	10683142,66	1802154,16	2676,83	BTM TOE
700	10683032,40	1801719,83	2679,92	BTM TOE
701	10682922,54	1801287,13	2676,92	BTM TOE
702	10682895,31	1801179,86	2677,56	BTM TOE
703	10682791,09	1801206,25	2676,50	BTM TOE
704	10682745,36	1801026,12	2678,34	BTM TOE
705	10682978,52	1801276,33	2677,50	LOW POINT
706	10683193,96	1801215,90	2676,00	LOW POINT
707	10683206,30	1802138,15	2677,50	LOW POINT
708	10683422,39	1802084,51	2676,00	LOW POINT
709	10684134,47	1801899,10	2672,60	LOW POINT
710	10683087,43	1801708,22	2681,16	RIDGE
711	10683265,64	1802591,60	2681,09	RIDGE
712	10683445,86	1802633,89	2680,00	CONTOUR
713	10683837,01	1802534,95	2678,00	CONTOUR
714	10683877,84	1802498,80	2678,00	CONTOUR
715	10683918,51	1802462,75	2678,00	CONTOUR
716	10682703,76	1800862,28	2680,00	CONTOUR
717	10682889,19	1800983,45	2680,00	CONTOUR
718	10683152,67	1800737,72	2680,00	CONTOUR
719	10683148,22	1800732,95	2680,00	CONTOUR
720	10682753,49	1801058,14	2678,00	CONTOUR
721	10682954,23	1801179,14	2678,00	CONTOUR
722	10683185,61	1800958,62	2678,00	CONTOUR
723	10683366,28	1800786,44	2678,00	CONTOUR
724	10683507,75	1800918,69	2676,00	CONTOUR
725	10683193,11	1801212,44	2676,00	CONTOUR
726	10683194,80	1801219,37	2676,00	CONTOUR
727	10683636,89	1801330,27	2676,00	CONTOUR
728	10684055,38	1801486,18	2676,00	CONTOUR
729	10683741,62	1801780,58	2676,00	CONTOUR
730	10683421,43	1802081,03	2676,00	CONTOUR
731	10683423,34	1802088,00	2676,00	CONTOUR
732	10683909,14	1802198,15	2676,00	CONTOUR
733	10684346,35	1802297,29	2676,00	CONTOUR
734	10683623,32	1801095,47	2674,00	CONTOUR
735	10683610,95	1801107,04	2674,00	CONTOUR
736	10683645,40	1801116,11	2674,00	CONTOUR

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
737	10684170,09	1801666,92	2674,00	CONTOUR
738	10683838,32	1801976,27	2674,00	CONTOUR
739	10684281,70	1802077,85	2674,00	CONTOUR
740	10682960,69	1801437,38	2678,00	CONTOUR
741	10683001,19	1801368,33	2678,00	CONTOUR
742	10683361,82	1801459,31	2678,00	CONTOUR
743	10683716,82	1801548,90	2678,00	CONTOUR
744	10683447,42	1801795,84	2678,00	CONTOUR
745	10683178,03	1802042,78	2678,00	CONTOUR
746	10683103,24	1801998,88	2678,00	CONTOUR
747	10683183,04	1802313,22	2678,00	CONTOUR
748	10683230,01	1802233,08	2678,00	CONTOUR
749	10683592,23	1802321,13	2678,00	CONTOUR
750	10683973,77	1802413,87	2678,00	CONTOUR
751	10684300,66	1802366,10	2676,00	CONTOUR
752	10683232,74	1802508,97	2680,00	CONTOUR
753	10683277,49	1802433,52	2680,00	CONTOUR
754	10683588,39	1802509,62	2680,25	CONTOUR
755	10683554,19	1802539,44	2680,00	CONTOUR
756	10683606,51	1801079,77	2674,22	POND
757	10683640,81	1801043,07	2674,25	POND
758	10684060,87	1801435,73	2675,99	POND
759	10684026,57	1801472,42	2676,32	POND
760	10683619,23	1801079,34	2671,22	POND
761	10683641,24	1801055,79	2671,25	POND
762	10684048,15	1801436,16	2672,99	POND
763	10684026,14	1801459,70	2673,32	POND
764	10684182,41	1801872,14	2672,36	SUMP
765	10684219,18	1801862,56	2672,23	SUMP
766	10684226,24	1801889,66	2672,23	SUMP
767	10684189,47	1801899,24	2672,36	SUMP
768	10684193,39	1801878,58	2669,32	SUMP
769	10684212,74	1801873,54	2669,23	SUMP
770	10684215,26	1801883,22	2669,23	SUMP
771	10684195,91	1801888,26	2669,32	SUMP
772	10683850,64	1801239,40	2674,64	POND
773	10683844,70	1801245,98	2671,64	POND
774	10683822,69	1801269,52	2672,07	POND
775	10683816,54	1801276,09	2675,07	POND
776	10684356,45	1802351,98	2675,71	POND
777	10684368,71	1802400,45	2675,23	POND
778	10683883,98	1802523,06	2677,75	POND
779	10683871,72	1802474,59	2678,25	POND
780	10684349,93	1802362,91	2672,71	POND
781	10684357,78	1802393,93	2672,23	POND
782	10683890,50	1802512,13	2674,75	POND
783	10684114,08	1802413,28	2676,98	POND
784	10684116,29	1802422,01	2673,98	POND
785	10684124,14	1802453,03	2673,49	POND
786	10684126,35	1802461,76	2676,49	POND
787	10684428,40	1802307,99	2699,24	TRENCH
788	10684364,85	1802055,11	2701,00	TRENCH
789	10684319,22	1801873,40	2702,00	TRENCH
790	10684273,69	1801691,68	2703,00	TRENCH
791	10684227,96	1801509,99	2704,00	TRENCH
792	10684219,18	1801475,03	2704,00	TRENCH
793	10684061,43	1801514,75	2675,76	TRENCH
794	10683618,37	1801122,99	2674,13	TRENCH
795	10683175,32	1800731,23	2679,83	TRENCH
796	10682703,97	1800850,90	2680,10	TRENCH
797	10683259,86	1802603,58	2680,88	TRENCH
798	10683844,13	1802455,78	2678,60	TRENCH

I:\2871.1803_DSGN\01_DWG\050_CIVIL\C-103-2871-18.dwg LAYOUT NAME: C-103 PRINTED: Thursday, March 26, 2020 - 11:52am USER: gmolnar

5,252

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PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-560
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

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MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

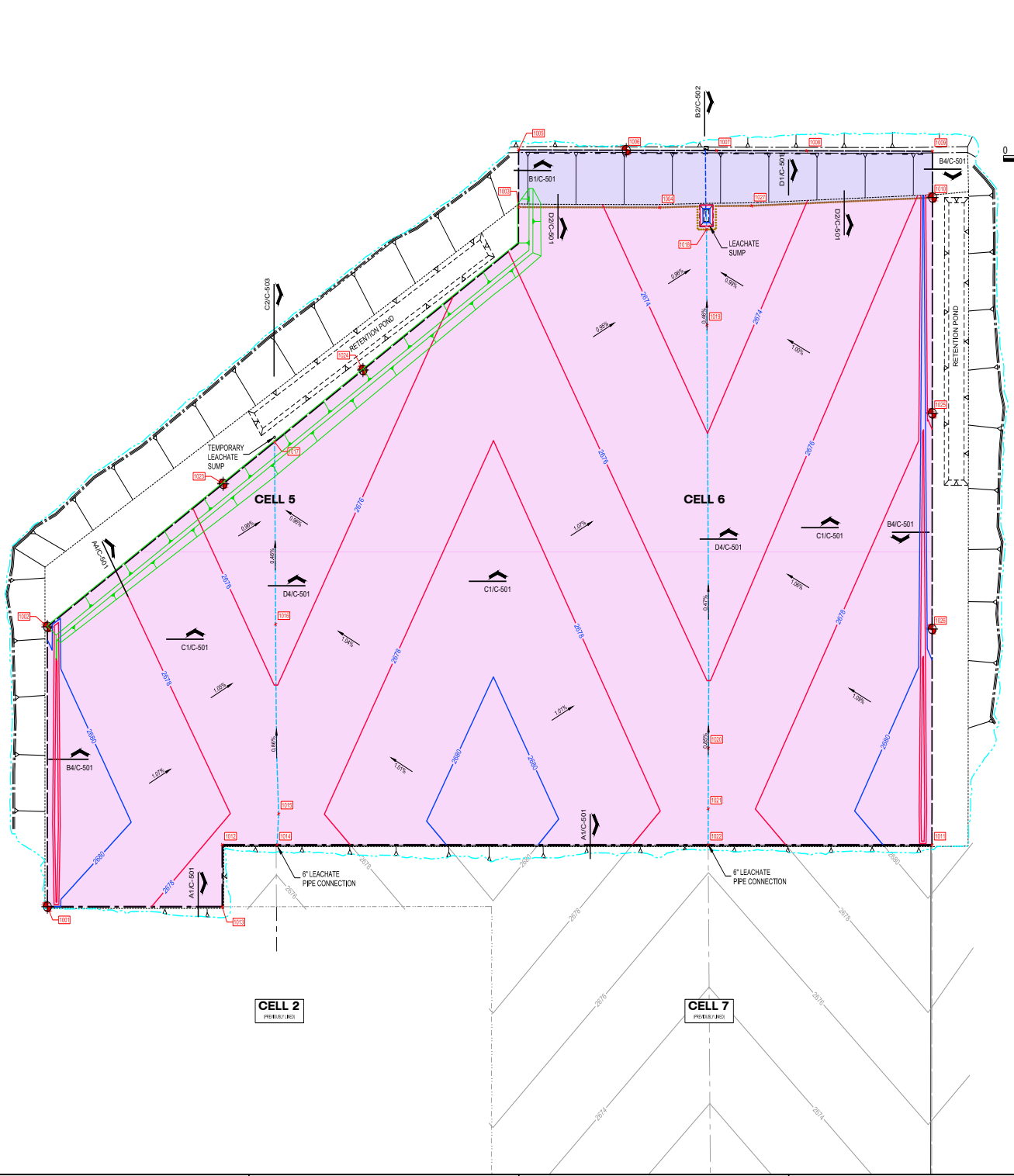
KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

SUBGRADE CONTROL POINT TABLES

C-103



CONTROL POINT TABLE			
POINT #	NORTHING	EASTING	DESCRIPTION
1001	10682703.97	1800850.90	LINER/MARKER
1002	10683175.32	1800731.23	LINER/MARKER
1003	10684122.74	1801499.32	LINER
1004	10684194.31	1801783.58	LINER
1005	10684219.18	1801475.03	LINER
1006	10684273.69	1801691.68	LINER/MARKER
1007	10684319.22	1801873.40	LINER
1008	10684364.85	1802055.11	LINER
1009	10684428.40	1802307.99	LINER
1010	10684350.32	1802327.74	LINER/MARKER
1011	10683259.86	1802603.58	LINER
1012	10682897.48	1801176.22	LINER
1013	10682793.26	1801202.61	LINER
1014	10682925.50	1801286.56	6" PIPE
1015	10682978.52	1801276.33	6" PIPE
1016	10683296.20	1801189.20	6" PIPE
1017	10683602.75	1801109.18	6" PIPE
1018	10684181.10	1801886.95	6" PIPE
1019	10684020.36	1801928.84	6" PIPE
1020	10683308.70	1802112.37	6" PIPE
1021	10683206.30	1802138.15	6" PIPE
1022	10683145.58	1802153.43	6" PIPE
1023	10683506.02	1801023.64	LINER/MARKER
1024	10683769.02	1801256.19	LINER/MARKER
1025	10683986.83	1802419.68	LINER/MARKER
1026	10683623.35	1802511.83	LINER/MARKER
1027	10684244.11	1801967.97	LINER

LEGEND

- ANCHOR TRENCH
- TERMINATION TRENCH
- CONNECTION WELD TO EXISTING LINER
- PROPOSED 6" PERFORATED LEACHATE PIPE
- PROPOSED 24" SUMP RISER PIPE
- TEXTURED/SMOOTH LINER WELD
- LIMITS OF EARTHWORK
- DIVERSION BERM
- 2680 PROPOSED CONTOURS
- PROTECTIVE COVER BERM
- NON-REINFORCED GCL, SMOOTH GML
- REINFORCED GCL, TEXTURED GML
- PROPOSED LINER MARKER, SEE B2/C-504
- 1001 COORDINATE CONTROL POINT

NOTES

1. SUBGRADE IN ALL AREAS SHALL BE EXCAVATED TO THE GRADES SHOWN ALONG WITH TRENCH EXCAVATIONS.
2. NEW CONTOURS ARE TOP OF SUBGRADE/TOP OF LINER.
3. CONTRACTOR SHALL ESTABLISH THE SUBGRADE TO THE NEW CONTOURS SHOWN UNDER THIS CONTRACT.
4. COLLECTION TRENCHES, DITCHES AND SUMPS ARE TO BE EXCAVATED UNDER THIS CONTRACT.
5. NEW CONTOURS SHOWN ONLY ON FLOOR AREA FOR CLARITY SEE SUBGRADE CONTROL PLAN (C-101) AND SUBGRADE CONTROL POINT COORDINATE TABLES (C-102 AND C-103).

PSC
PARKHILLSMITH&COOPER

PARKHILL SMITH & COOPER, INC. TEXAS REGISTERED ENGINEERING FIRM F-560
TODD E. STIGGINS
107769
LICENSED PROFESSIONAL ENGINEER
03/18/2020

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TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

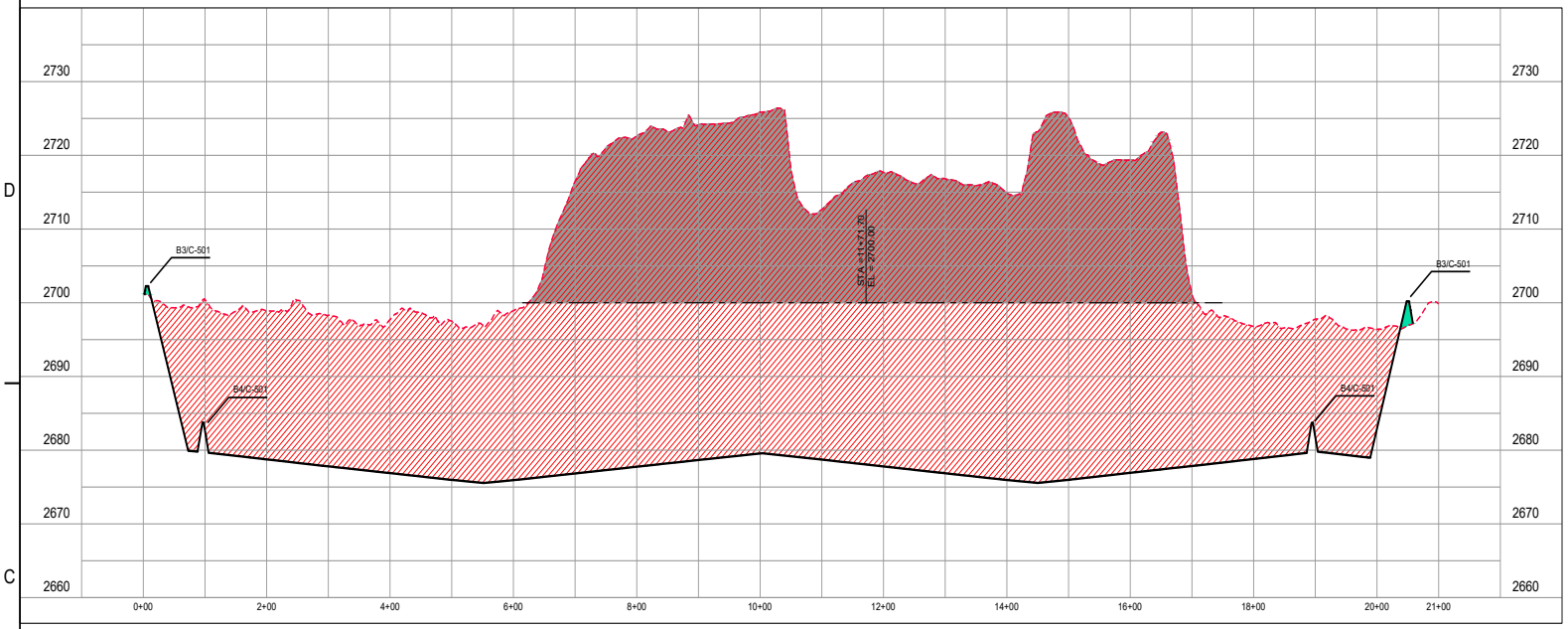
ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

CELL LINER & LEACHATE SYSTEM CONTROL PLAN

C-104

5,253

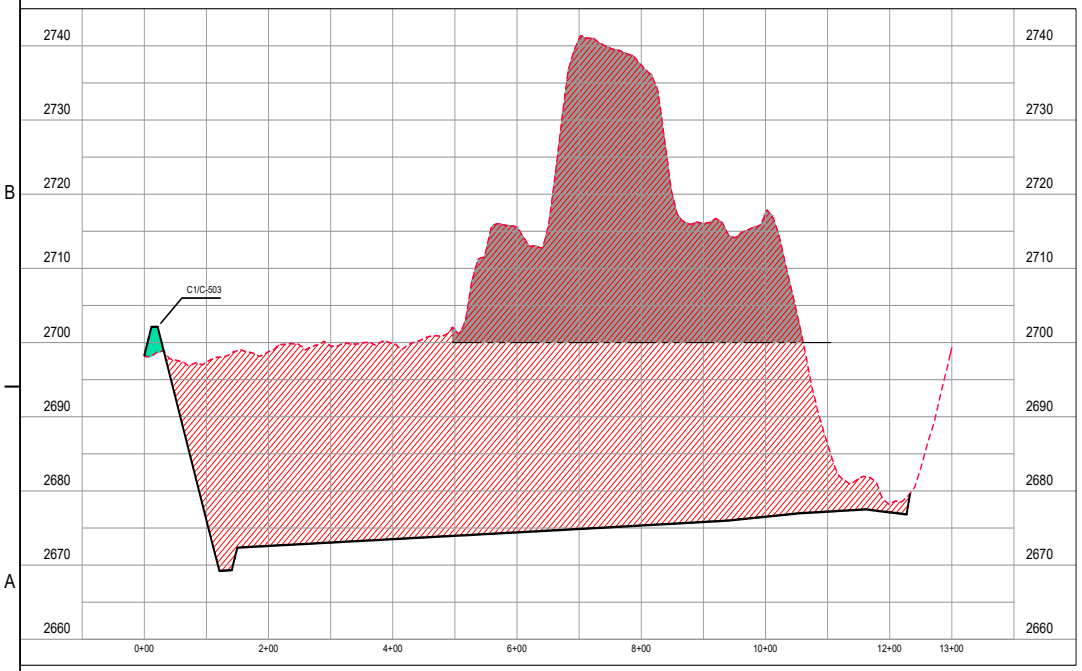
18\2871.1803_DSGN\01_DWG\050_CIVIL\C-104-2871-18.dwg LAYOUT NAME: C-104 PRINTED: Thursday, March 26, 2020 - 11:52am USER: gmolnar



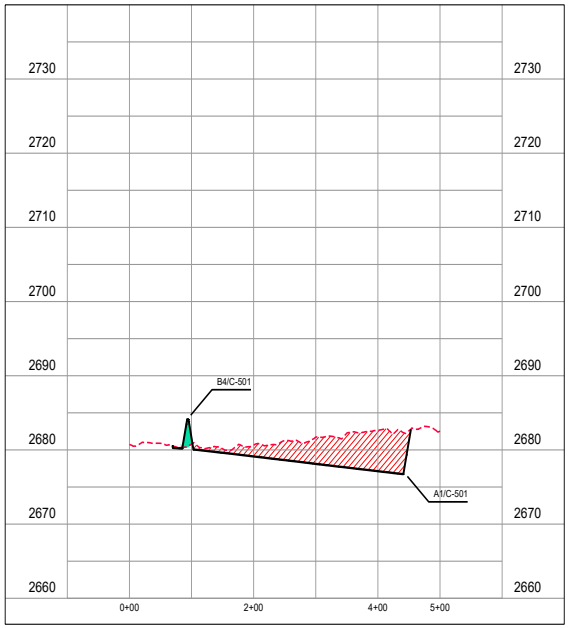
C1 CROSS SECTION
SCALES: HORIZ 1" = 100' VERT 1" = 10' WEST-EAST

LEGEND
- EXISTING SOIL STOCKPILE
- CELL EXCAVATION
- EMBANKMENT
- EXISTING GRADE
- STOCKPILE CUT ELEV = 2700
- NEW SUBGRADE

REFER TO SUBGRADE CONTROL PLAN SHEET C-101



A1 CROSS SECTION
SCALES: HORIZ 1" = 100' VERT 1" = 10' NORTH-SOUTH



A4 CROSS SECTION
SCALES: HORIZ 1" = 100' VERT 1" = 10' WEST-EAST

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MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

SUBGRADE CROSS-SECTIONS

C-301

I:\2871.18\03_DSGN\01_DWG\050_CIVIL\C-301-2871-18.dwg LAYOUT NAME: C-301 PRINTED: Thursday, March 26, 2020 - 11:53am USER: gmolinar

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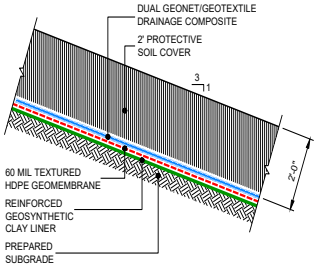
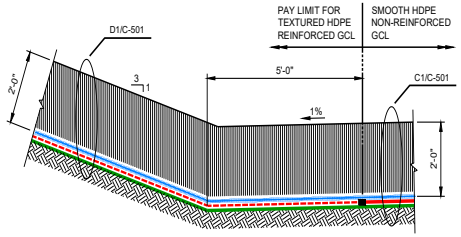
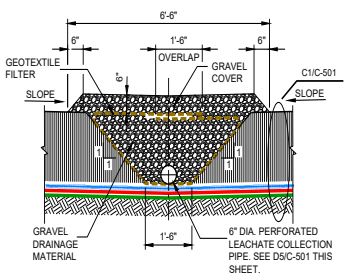


D1 TYPICAL SIDE SLOPE LINER DETAIL
1/2"=1'-0"

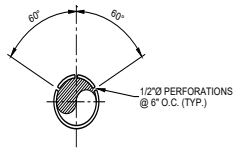


NOTE:
REINFORCED GCL FOR SIDE SLOPES DIFFERS FROM NON-REINFORCED GCL TO BE PLACED ON FLOOR. SEE SPECIFICATION SECTION 310519.

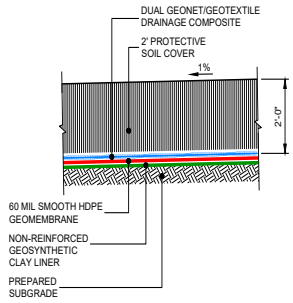
D2 LINER TRANSITION
1/2"=1'-0"



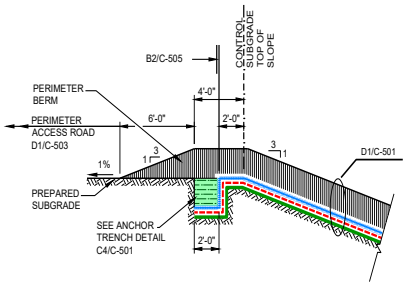
D4 LEACHATE COLLECTION PIPE
1/2"=1'-0"



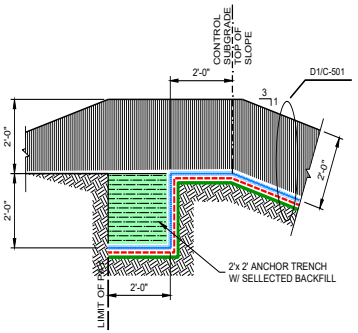
D5 TYP. 6" PERFORATED
NOT TO SCALE LEACHATE COLLECTION PIPE



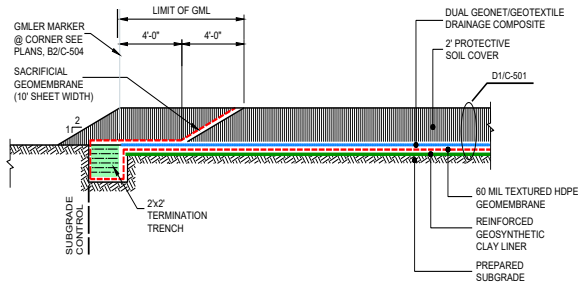
C1 TYPICAL BOTTOM LINER DETAIL
1/2"=1'-0"



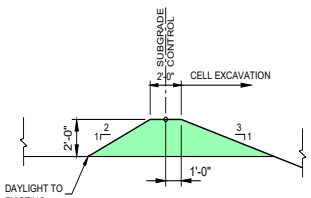
C2 TYPICAL ANCHOR TRENCH AT PERIMETER
1"=5'-0"



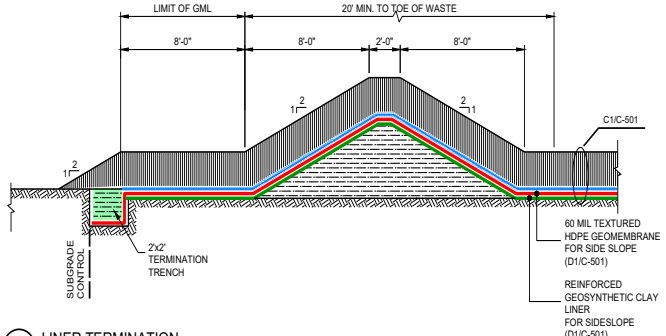
C4 ANCHOR TRENCH DETAIL
1/2"=1'-0"



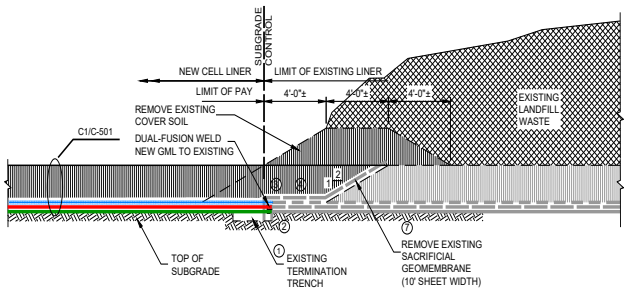
B1 LINER TERMINATION - LANDFILL SIDESLOPE
1/4"=1'-0"



B3 DIVERSION BERM
1/4"=1'-0"

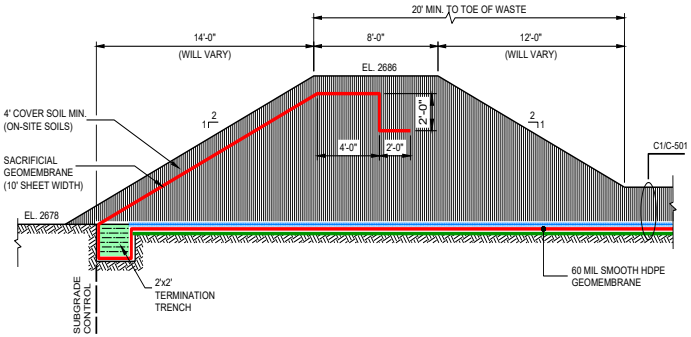


B4 LINER TERMINATION
1/4"=1'-0"



A1 LINER WELD TO EXISTING LINER
1/4"=1'-0"

1. REMOVE EXISTING LINER FROM TERMINATION TRENCH. REPLACE SOIL AND COMPACT TO SMOOTH GRADE.
2. RAISE EXISTING GML AND OVERLAP NEW GCL 12-INCHES OVER EXISTING GCL. ADD GRANULAR BENTONITE AT SPECIFIED RATE.
3. CLEAN EXISTING GML AND DUAL FUSION WELD NEW GML TO EXISTING GML.
4. OVERLAP NEW GEONET/GEOTEXTILE DRAINAGE COMPOSITE 12-INCHES OVER EXISTING GEONET/GEOTEXTILE DRAINING COMPOSITE.
5. CONTRACTOR TO DEMOLISH THE EXISTING ASPHALT ROAD WITHIN THE CONSTRUCTION AREA AND EXPOSE THE LINER TIE-IN.
6. REINFORCED GCL ON SIDE SLOPES OF CELL DIFFERS FROM NON-REINFORCED GCL ON FLOOR OF CELL. SEE SPEC SECTION 310519 GEOSYNTHETIC CLAY LINER.
7. CONTRACTOR IS RESPONSIBLE FOR EXPOSING THE EXISTING LINER TIE-IN. CONTRACTOR MIGHT NEED TO RELOCATE WASTE TO EXPOSE THE EXISTING LINER TIE-IN.



A4 LINER TERMINATION
1/4"=1'-0"

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PARKHILL, SMITH & COOPER, INC. TEXAS REGISTERED ENGINEERING FIRM F-2600
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CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

LINER & LEACHATE COLLECTION DETAILS

C-501

5.255

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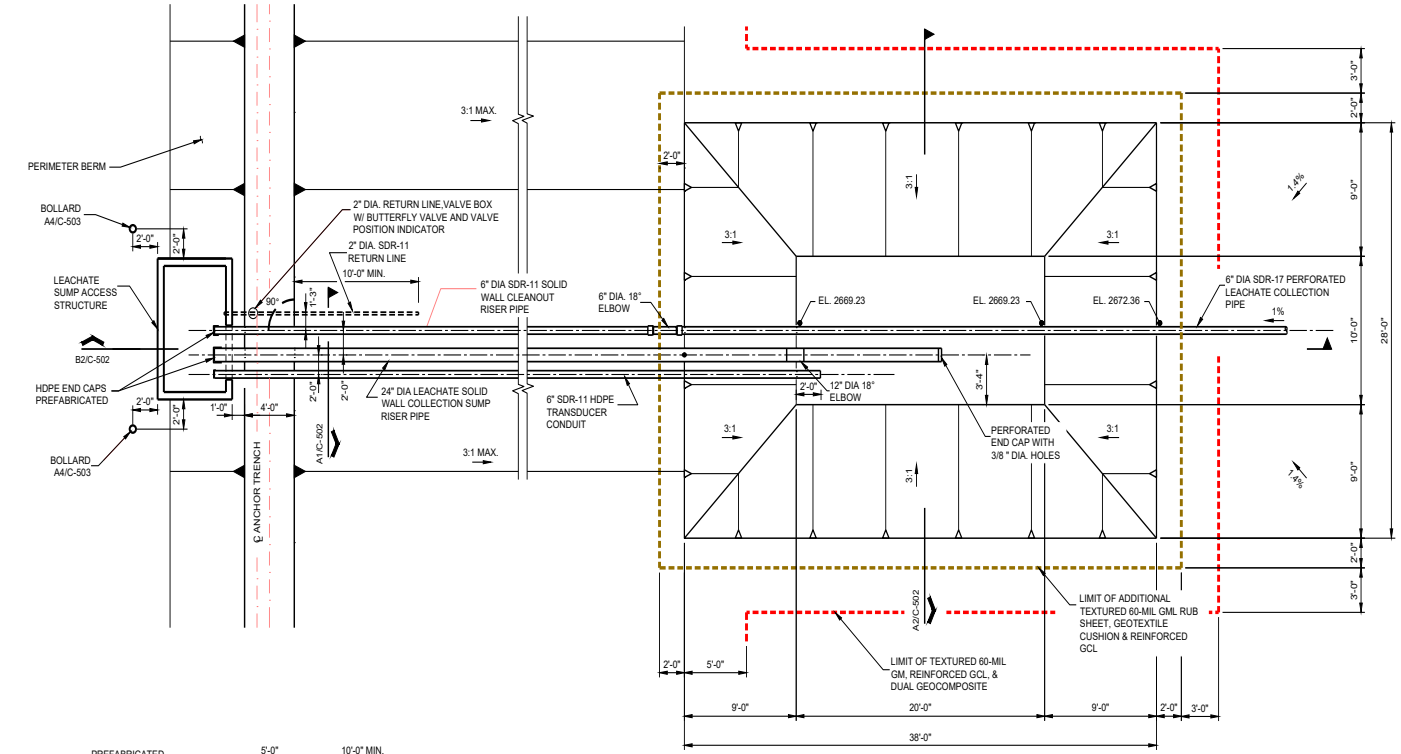
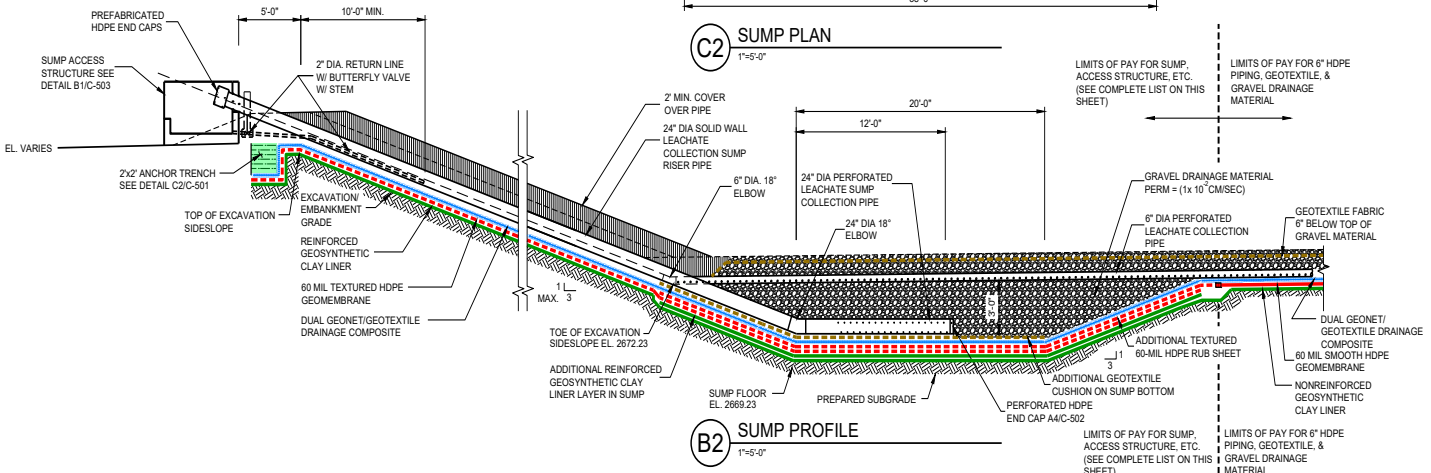
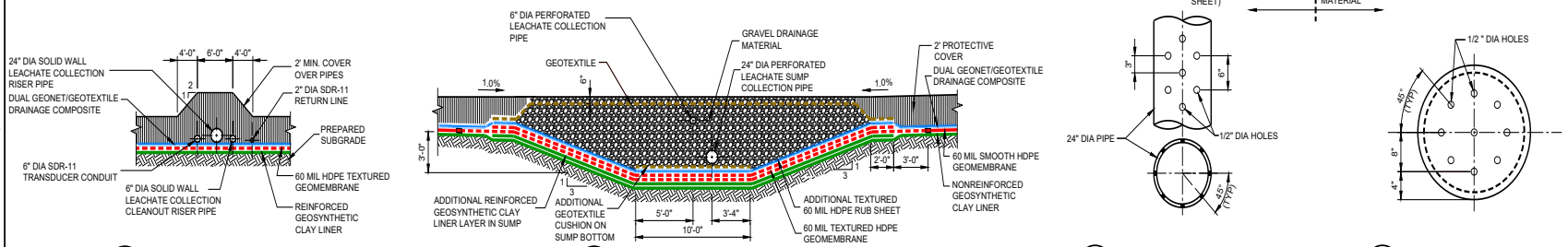


C2 SUMP PLAN
1"=5'-0"



B2 SUMP PROFILE
1"=5'-0"



A1 LEACHATE RISER SECTION
NOT TO SCALE

A2 LEACHATE SUMP SECTION
1"=5'-0"

A4 LEACHATE COLLECTION SUMP
NOT TO SCALE — PERFORATION DETAIL

A5 END CAP
NOT TO SCALE — PERFORATION DETAIL

PSC PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-560 TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER 03/18/2020

MIDLAND Feel the Energy!

MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

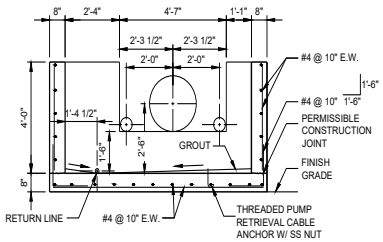
ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

LEACHATE SUMP PLAN & PROFILE

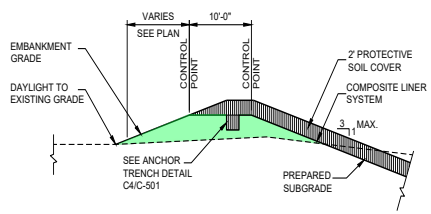
C-502

5.256

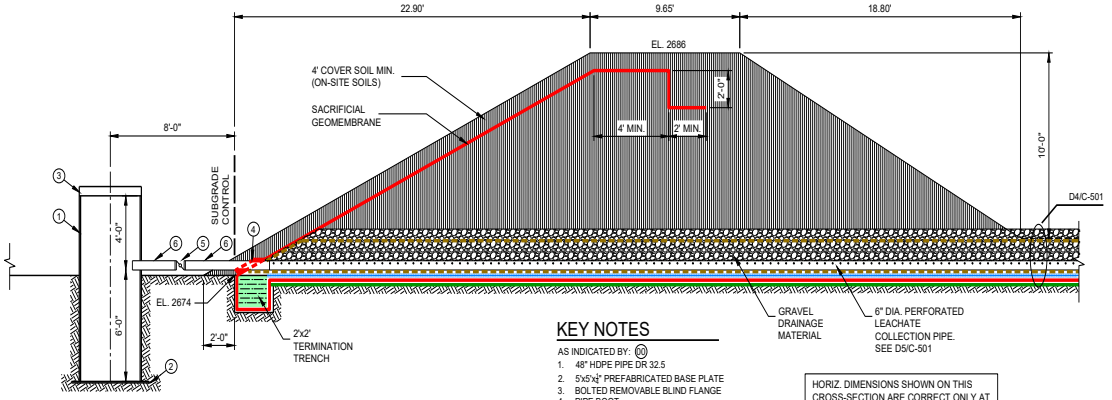
I:\B\2871.18\03_DSGN\01_DWG\050_CIVIL\C-502-2871-18.dwg, LAYOUT NAME: C-502, PRINTED: Thursday, March 26, 2020 - 11:54am USER: gmolinar



D1 LEACHATE SUMP ACCESS
3/8"=1'-0" SECTION



C1 TYPICAL SECTION ALONG TOP OF CELL
1"=10'-0"



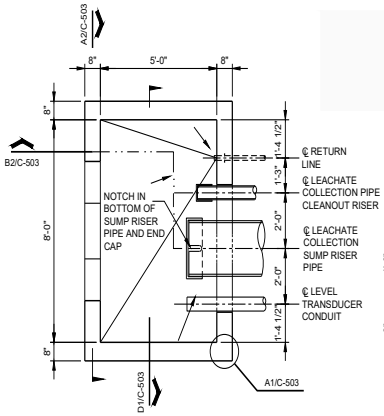
KEY NOTES

AS INDICATED BY: (X)

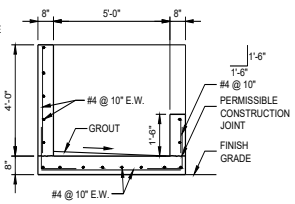
1. 48" HDPE PIPE DR 32.5
2. 5'x5'x¾" PREFABRICATED BASE PLATE
3. BOLTED REMOVABLE BLIND FLANGE
4. PIPE BOOT
5. 6" BUTTERFLY VALVE
6. 6" DIA NON-PERFORATED HDPE PIPE

HORIZ. DIMENSIONS SHOWN ON THIS CROSS-SECTION ARE CORRECT ONLY AT THE LOCATION AND DIRECTION OF VIEW SHOWN ON PLAN. SEE SHEET C-104

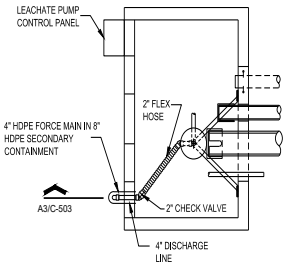
C2 LINER TERMINATION AT TEMPORARY COLLECTION
1/4"=1'-0"



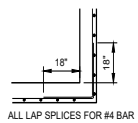
B1 LEACHATE SUMP ACCESS
3/8"=1'-0" PLAN



B2 LEACHATE SUMP ACCESS
3/8"=1'-0" SECTION

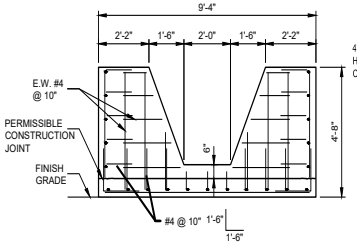


C5 SUMP ACCESS-PLAN
NO SCALE

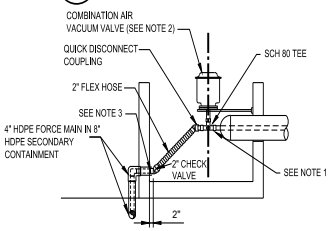


ALL LAP SPLICES FOR #4 BAR

A1 TYPICAL CORNER REINFORCING
NOT TO SCALE



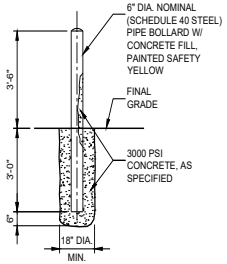
A2 LEACHATE SUMP ACCESS - SECTION
3/8"=1'-0"



NOTES:

1. REMOVE AND DISPOSE OF EXISTING PVC DISCHARGE LINE FROM THIS POINT TO THE EXTERIOR OF THE STRUCTURE. (INCLUDE AS PART OF UNIT PRICE FOR COMBINATION AIR VALVE).
2. SUPPORT AIR VACUUM VALVE TO STRUCTURE.
3. SEAL END OPENING AROUND CARRIER PIPE, WITH DUAL CONTAINMENT FITTING.

A3 SUMP ACCESS-SECTION B
NO SCALE



A4 TYPICAL BOLLARD DETAIL
3/8"=1'-0"

CONCRETE NOTES

1. ALL CONCRETE SHALL HAVE 4000PSI COMPRESSIVE STRENGTH @ 28 DAYS, NORMAL WEIGHT.
2. ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENT FOR REINFORCED CONCRETE" ACI-318 LATEST EDITION.
3. REINFORCING BARS SHALL CONFORM TO SPECIFICATIONS FOR "DEFORMED BILLET-STEEL FOR CONCRETE REINFORCEMENT" WITH 60KSI YIELD STRENGTH; ASTM A615 GRADE 60.
4. ALL EXPOSED CORNERS SHALL HAVE 1 IN CHAMFER, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHAPES & PLATES SHALL MEET THE REQUIREMENTS OF ASTM A36 UNLESS OTHERWISE NOTED.
2. DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS.
3. WELDING SHALL CONFORM TO THE REQUIREMENT OF THE "STRUCTURAL WELDING CODE-STEEL (AWS D1.1) OF THE AMERICAN WELDING SOCIETY" CLASS 70 SERIES ELECTRODES.
4. STRUCTURAL BOLTS TO CONFORM TO ASTM A490 HIGH STRENGTH BOLTS. MINIMUM SIZE: 3/4 IN.
5. HEADED STUDS TO CONFORM TO ASTM A108, AUTOMATICALLY END WELD HEADED STUDS AND REBARS IN ACCORDANCE WITH THE AWS CODE AND MANUFACTURER'S RECOMMENDATIONS. FILLET WELDING OF HEADED STUDS AND REBARS IS NOT ALLOWED. ALL ANCHOR BOLTS SHALL BE HOT DIP GALVANIZED.
6. COVER ON ALL REINFORCEMENT SHALL BE 3 INCHES.
7. ANCHOR BOLTS TO MEET THE REQUIREMENT OF ASTM A36.

PSC PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER 03/18/2020

MIDLAND Feel the Energy!

MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

MISCELLANEOUS DETAILS

C-503

5.257

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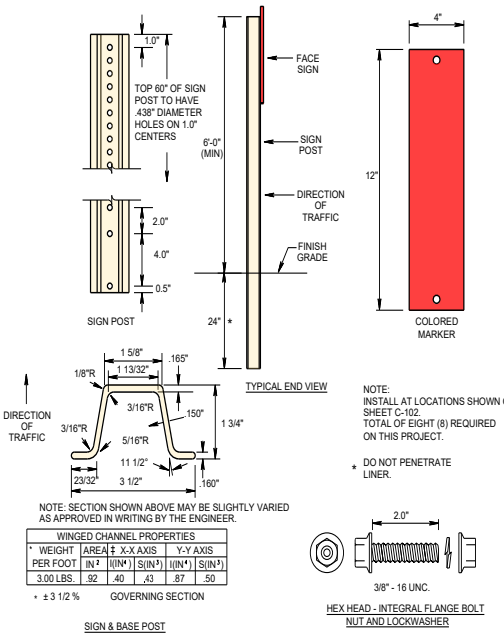

B2 TYPICAL LANDFILL MARKER DETAILS

NO SCALE

GENERAL NOTES FOR WINGED CHANNEL SUPPORT

1. SIGN POST SHALL BE WINGED CHANNEL SECTION, HIGH STRENGTH RAIL STEEL MEETING REQUIREMENTS OF ASTM A499-81 MODIFIED TO 70-KSI MINIMUM YIELD STRENGTH.
2. THE FINISH FOR THE SIGN POST SHALL BE HOT DIP GALVANIZING MEETING REQUIREMENTS OF ASTM A123 OR A525 (G-90 OR BETTER). GALVANIZING SHALL BE APPLIED AFTER FABRICATION IS COMPLETED.
3. THE WEIGHT OF EACH BASE OF SIGN POST BEFORE PUNCHING SHALL BE 3.00 LB/FT, PLUS OR MINUS 3-1/2%. SIGN POST LENGTHS SHALL BE IN 1-FOOT INCREMENTS THROUGH 15-FEET WITH A TOTAL LENGTH TOLERANCE OF PLUS OR MINUS 1.5-INCHES.
4. ALL POSTS SHALL BE MACHINE STRAIGHTENED AND HAVE A SMOOTH UNIFORM FINISH FREE FROM INJURIOUS DEFECTS AFFECTING STRENGTH OR APPEARANCE. BOLT HOLES OF 0.438 INCH DIAMETER SHALL BE CAREFULLY SPACED, VERTICALLY AND HORIZONTALLY, SO HOLES WILL ALIGN FOR EASY ASSEMBLY. ALL BOLT HOLES AND SHEARED ENDS SHALL BE COMMERCIALLY FREE FROM BURRS.
5. RETAINER SPACER STRAP SHALL BE FABRICATED FROM AISI 1020 STEEL AND GALVANIZED TO ASTM A123 SPECIFICATION.
6. BOLTS AND NUTS SHALL BE HEX HEAD INTEGRAL FLANGE TYPE, 3/8-INCH BY 16 UNC. BOLTS - ASTM A354 GRADE BD. NUTS - ASTM A563 GRADE DH.
7. LOCKWASHERS SHALL BE 3/8-INCH EXTRA DUTY HELICAL SPRING. BOLTS, NUTS, AND LOCKWASHERS SHALL BE GALVANIZED IN ACCORDANCE TO ASTM DESIGNATION: B695 CLASS 50, OR A153 CLASS C OR D.
8. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THE SELECTION OF WINGED CHANNEL SUPPORT MAY REQUIRE SIGN PANEL MOUNTING HOLE SPACING TO BE CONTRARY TO THOSE DETAILED ELSEWHERE IN THE PLANS OR THOSE SHOWN IN THE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS.

SPECIFICATION REFERENCE TABLE

MATERIALS AND TESTS DIVISION SPECIFICATIONS	
PLYWOOD SIGN BLANKS	D-9-7100
REFLECTIVE SHEETING, TYPE A (ENGINEER GRADE) (FOR BLACK AND WHITE SIGNS ON THIS SHEET)	D-9-8300
REFLECTIVE SHEETING, TYPE C (HIGH SPECIFIC INTENSITY) (FOR RED SERIES SIGNS ON THIS SHEET)	D-9-8300
VINYL NON-REFLECTIVE DECAL SHEETING	D-9-8320

PSC PARKHILLSMITH&COOPER

PARKHILL, SMITH & COOPER, INC. STATE OF TEXAS F-560 TODD E. STIGGINS 107769 LICENSED PROFESSIONAL ENGINEER 03/18/2020

MIDLAND Feel the Energy!

MUNICIPAL SOLID WASTE LANDFILL

TCEQ MSW PERMIT NO. 1605 B

CELL 5A & 6 EXCAVATION & LINER CONSTRUCTION

300 N LORAINE
MIDLAND, TEXAS 79701

KEY PLAN

NO	DATE	DESCRIPTION
1	03/18/2020	ISSUED FOR BIDS

ISSUING OFFICE: LUBBOCK PROJECT NO: 2871.18

MISCELLANEOUS DETAILS

C-504

I:\2871.1\803_DSGN\01_DWG\050_CIVIL\C-504-2871-18.dwg LAYOUT NAME: C-504 PRINTED: Thursday, March 26, 2020 - 11:55am USER: gmolnar

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Erika Martinez, Purchasing Manager

SUBJECT: Consider a resolution approving the sole source purchase of eCitation software and fifty-three (53) electronic ticket writers from Tyler Technologies, Inc. for the Police Department.

Purpose:

Approval of a resolution approving the sole source purchase of eCitation software and fifty-three (53) electronic ticket writers from Tyler Technologies, Inc.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

$168,915.00 from funds available in the 2020 Justice Assistance Grant (JAG).

Discussion:

Resolution 2019-381, accepted a grant in the amount of $170,000.00 from the fiscal year 2020 Edward Byrne Memorial Justice Assistance Grant Program provided by the Governor's Office. Staff recommends the purchase of eCitation software and fifty-three (53) electronic ticket writers from Tyler Technologies, Inc. for the Police Department. According to Texas Local Government Code 252.022 (a)(7)(A), competitive bidding requirements do not apply to items that are available from only one source because of patents, copyrights, secret processes, or natural monopolies. Staff recommends awarding a sole source purchase to Tyler Technologies, Inc. Please see the attached memo from Seth Herman, Police Chief, for additional information.

Therefore, please consider a resolution approving the sole source purchase of eCitation software and fifty-three (53) electronic ticket writers from Tyler Technologies, Inc. of Dallas, Texas for the total cost of $168,915.00.

City of Midland

Midland Police Department

Interoffice Memorandum

Date: **March 30, 2019**

To: **Erika Munoz**

From: **Seth Herman, Chief of Police**

Subject: **Tyler Technologies Purchase Request**

Please accept this correspondence as my official notification that funds derived from the 2020 Edward Byrne memorial Justice Assistance Grant are to be allocated for the purchase of Electronic Ticket Writers from Brazos, a product subsidiary of Tyler Technologies identified as the sole source supplier of both hardware and software merchandise.

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF FIFTY-THREE (53) ELECTRONIC TICKET WRITERS FOR THE POLICE DEPARTMENT FROM TYLER TECHNOLOGIES, INC., FOR A TOTAL COST OF $168,915.00

WHEREAS, the City of Midland approved the sole-source bid for fifty-three (53) electronic ticket writers for the Police Department; and

WHEREAS, the sole-source provider of said electronic ticket writers, Tyler Technologies, Inc., submitted a total bid of $168,915.00, as shown on the quote attached hereto as Exhibit A and incorporated herein for all purposes; and

WHEREAS, said electronic ticket writers are available only from Tyler Technologies, Inc.; and

WHEREAS, the City Council finds the price proposed for said electronic ticket writers to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of said electronic ticket writers from Tyler Technologies, Inc.;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase said electronic ticket writers from Tyler Technologies, Inc., for the Police Department at a total cost of $168,915.00.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Tyler Technologies, Inc., from funds available in the 2020 Electronic Ticket Writers Grant Project (700269-005) upon proper receipt of invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2020, by

the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Courtney Sharp, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Quoted By:	James Mulvey
Quote Expiration:	5/6/2020
Quote Name:	Midland Police Dept. - 53 TC-70X with
Quote Number:	Brother printers
Quote Description:	- BZ 2020-105217

Sales Quotation For
Midland Police Department
300 N Loraine ATTN: Lt. Angell
Midland , TX 79701-4743
Phone: +1 (432) 685-7484

Tyler Software

Description	Quantity	License	Software Total	Year One Maintenance
Brazos				
eCitation - Brazos Rapid Extension Framework - PDA	43	$32,250	$32,250	$6,773
TOTAL:			**$32,250**	**$6,773**

Tyler Software and Related Services - Annual

Description	Quantity	Unit Price	Annual Fee
Brazos			
Brazos Hosting Fee	1	$2,258	$2,258
TOTAL:			**$2,258**

Third Party Hardware, Software and Services

Description	Quantity	Unit Price	Unit Discount	Total Price	Maintenance
RDM01U5-CASE / Brother, Paper, Standard Receipt, 36 rolls per case	2	$110	$0	$220	$0
LB3692 / Brother, PocketJet, Car Adapter-wired	53	$26	$0	$1,378	$0
CRD-TC7X-SE5EU1-01 / Zebra EVM, TC7X, 5 Bay Ethernet Cradle	2	$472	$0	$944	$0
CHG-TC7X-CLA1-01 / Zebra EVM, TC7X, Auto Charger-Cigarette Adapter	53	$77	$0	$4,081	$0
CBL-DC-382A1-01 / Zebra EVM, TC7X, MC67, US DC Line Cord, Multi-Slot CRD	2	$19	$0	$38	$0
PWR-BGA12V108W0WW / Zebra EVM, TC7X, Power Supply, Multi-Slot CRD	2	$67	$0	$134	$0
23844-00-00R / Zebra EVM, US AC Line Cord, grounded	2	$10	$0	$20	$0
Brother, Printer, Rugged Jet RJ4230BL, Bluetooth (RJ4230BL)	53	$569	$0	$30,157	$0
PA-CR-002 / Brother, Acc-Printer, RJ4200 Series, Docking/Mounting Station w Power and USB connectivity	53	$156	$0	$8,268	$0
Z1AE-TC70XX-5C00 / Zebra EVM, Warranty, TC70, 5 year	53	$505	$0	$26,765	$0
Zebra EVM, HH, TC70X w/GMS, no cellular (TC700K-02B22B0-US)	53	$1,220	$0	$64,660	$0
TOTAL:				**$136,665**	

Summary	One Time Fees	Recurring Fees
Total Tyler Software	$32,250	$6,773
Total Tyler Annual	$0	$2,258
Total Tyler Services	$0	$0
Total Third Party Hardware, Software and Services	$136,665	$0
Summary Total	**$168,915**	**$9,031**

Unless otherwise indicated in the contract or amendment thereto, pricing for optional items will be held for six (6) months from the Quote date or the Effective Date of the contract, whichever is later.

Client Approval: _____ Date: _____

Print Name: _____ P.O.#: _____

Comments

Client agrees that items in this sales quotation are, upon Client's signature or approval of same, hereby added to the existing agreement ("Agreement") between the parties and subject to its terms. Additionally, payment for said items, as applicable but subject to any listed assumptions herein, shall conform to the following terms:

- License fees for Tyler and third party software are invoiced upon the earlier of (i) deliver of the license key or (ii) when Tyler makes such software available for download by the Client;
- Fees for hardware are invoiced upon delivery;
- Fees for year one of hardware maintenance are invoiced upon delivery of the hardware;
- Annual Maintenance and Support fees, SaaS fees, Hosting fees, and Subscription fees are first payable when Tyler makes the software available for download by the Client (for Maintenance) or on the first day of the month following the date this quotation was signed (for SaaS, Hosting, and Subscription), and any such fees are prorated to align with the applicable term under the Agreement, with renewals invoiced annually thereafter in accord with the Agreement.
- Fees for services included in this sales quotation shall be invoiced as indicated below.
  - Implementation and other professional services fees shall be invoiced as delivered.
  - Fixed-fee Business Process Consulting services shall be invoiced 50% upon delivery of the Best Practice Recommendations, by module, and 50% upon delivery of custom desktop procedures, by module.
  - Fixed-fee conversions are invoiced 50% upon initial delivery of the converted data, by conversion option, and 50% upon Client acceptance to load the converted data into Live/Production environment, by conversion option. Where conversions are quoted as estimated, Tyler will invoice Client the actual services delivered on a time and materials basis.
  - Except as otherwise provided, other fixed price services are invoiced upon complete delivery of the service. For the avoidance of doubt, where "Project Planning Services" are provided, payment shall be invoiced upon delivery of the Implementation Planning document. Dedicated Project Management services, if any, will be invoiced monthly in arrears, beginning on the first day of the month immediately following initiation of project planning.
  - If Client has purchased any change management services, those services will be invoiced in accordance with the Agreement.
  - Notwithstanding anything to the contrary stated above, the following payment terms shall apply to services fees specifically for migrations: Tyler will invoice Client 50% of any Migration Fees listed above upon Client approval of the product suite migration schedule. The remaining 50%, by line item, will be billed upon the go-live of the applicable product suite. Tyler will invoice Client for any Project Management Fees listed above upon the go-live of the first product suite.
- Expenses associated with onsite services are invoiced as incurred.
-
- ASSUMPTION TO TERMS
-
- "Tyler will invoice Client for the License Fees listed above upon delivery of the software. Maintenance and Hosting Fees listed above will be invoiced upon one (1) year from the effective date and annually thereafter on the anniversary of that date. The first year's maintenance and hosting fees are waived. All payment terms are net thirty (30) days."
-
- RETURN POLICY: Tyler will accept return of delivered hardware only within thirty (30) days of the date of delivery to you, and only if the hardware is returned sealed in its original packaging. Tyler will not issue any refund or credit for returned hardware that is not sealed in its original packaging and/or returned more than thirty (30) days after the date of delivery to you.
-

Quoted By:	James Mulvey
Quote Expiration:	5/6/2020
Quote Name:	Midland Police Dept. - 53 TC-70X with
Quote Number:	Brother printers
Quote Description:	- BZ 2020-105217

Sales Quotation For
Midland Police Department
300 N Loraine ATTN: Lt. Angell
Midland , TX 79701-4743
Phone: +1 (432) 685-7484

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CBL-DC-382A1-01 / Zebra EVM, TC7X, MC67, US DC Line Cord, Multi-Slot CRD	2	$19	$0	$38	$0
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23844-00-00R / Zebra EVM, US AC Line Cord, grounded	2	$10	$0	$20	$0
Brother, Printer, Rugged Jet RJ4230BL, Bluetooth (RJ4230BL)	53	$569	$0	$30,157	$0
PA-CR-002 / Brother, Acc-Printer, RJ4200 Series, Docking/Mounting Station w Power and USB connectivity	53	$156	$0	$8,268	$0
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Zebra EVM, HH, TC70X w/GMS, no cellular (TC700K-02B22B0-US)	53	$1,220	$0	$64,660	$0
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Client Approval: _____ Date: _____

Print Name: _____ P.O.#: _____

Comments

Client agrees that items in this sales quotation are, upon Client's signature or approval of same, hereby added to the existing agreement ("Agreement") between the parties and subject to its terms. Additionally, payment for said items, as applicable but subject to any listed assumptions herein, shall conform to the following terms:

- License fees for Tyler and third party software are invoiced upon the earlier of (i) deliver of the license key or (ii) when Tyler makes such software available for download by the Client;
- Fees for hardware are invoiced upon delivery;
- Fees for year one of hardware maintenance are invoiced upon delivery of the hardware;
- Annual Maintenance and Support fees, SaaS fees, Hosting fees, and Subscription fees are first payable when Tyler makes the software available for download by the Client (for Maintenance) or on the first day of the month following the date this quotation was signed (for SaaS, Hosting, and Subscription), and any such fees are prorated to align with the applicable term under the Agreement, with renewals invoiced annually thereafter in accord with the Agreement.
- Fees for services included in this sales quotation shall be invoiced as indicated below.
  - Implementation and other professional services fees shall be invoiced as delivered.
  - Fixed-fee Business Process Consulting services shall be invoiced 50% upon delivery of the Best Practice Recommendations, by module, and 50% upon delivery of custom desktop procedures, by module.
  - Fixed-fee conversions are invoiced 50% upon initial delivery of the converted data, by conversion option, and 50% upon Client acceptance to load the converted data into Live/Production environment, by conversion option. Where conversions are quoted as estimated, Tyler will invoice Client the actual services delivered on a time and materials basis.
  - Except as otherwise provided, other fixed price services are invoiced upon complete delivery of the service. For the avoidance of doubt, where "Project Planning Services" are provided, payment shall be invoiced upon delivery of the Implementation Planning document. Dedicated Project Management services, if any, will be invoiced monthly in arrears, beginning on the first day of the month immediately following initiation of project planning.
  - If Client has purchased any change management services, those services will be invoiced in accordance with the Agreement.
  - Notwithstanding anything to the contrary stated above, the following payment terms shall apply to services fees specifically for migrations: Tyler will invoice Client 50% of any Migration Fees listed above upon Client approval of the product suite migration schedule. The remaining 50%, by line item, will be billed upon the go-live of the applicable product suite. Tyler will invoice Client for any Project Management Fees listed above upon the go-live of the first product suite.
- Expenses associated with onsite services are invoiced as incurred.
-
- ASSUMPTION TO TERMS
-
- "Tyler will invoice Client for the License Fees listed above upon delivery of the software. Maintenance and Hosting Fees listed above will be invoiced upon one (1) year from the effective date and annually thereafter on the anniversary of that date. The first year's maintenance and hosting fees are waived. All payment terms are net thirty (30) days."
-
- RETURN POLICY: Tyler will accept return of delivered hardware only within thirty (30) days of the date of delivery to you, and only if the hardware is returned sealed in its original packaging. Tyler will not issue any refund or credit for returned hardware that is not sealed in its original packaging and/or returned more than thirty (30) days after the date of delivery to you.
-

tyler technologies

One Tyler Drive
Yarmouth, ME 04096

P: 800.772.2260
F: 207.781.2459

www.tylertech.com

March 30, 2020

Midland Police Department
Attn: Kayci La Duke
601 N. Loraine
Midland, TX 79701

Via e-mail: kladuke@midlandtexas.gov

Dear Ms. La Duke:

Please allow this letter to confirm that Brazos is a product of Tyler Technologies, which we develop and license to our customers. Tyler is the sole source for the development, implementation, maintenance and support of the Brazos software.

Tyler appreciates the trust that the Midland Police Department has placed in our company and products, and we will continue to work diligently to ensure your complete satisfaction with our software, service and support throughout the life of this partnership.

Please do not hesitate to contact me with any questions regarding the foregoing.

Sincerely,

Sherry Clark

Sherry Clark
Senior Corporate Attorney

RESOLUTION NO. 2019-381

RESOLUTION ACCEPTING A GRANT IN THE AMOUNT OF $170,000.00 FROM THE FISCAL YEAR 2020 EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE GRANT PROGRAM PROVIDED BY THE GOVERNOR'S OFFICE; SAID GRANT FUNDS SHALL BE USED TO PURCHASE AN ACCIDENT RECONSTRUCTION TECHNOLOGY SYSTEM AND ELECTRONIC TICKET WRITERS FOR THE POLICE DEPARTMENT

WHEREAS, the City of Midland, Texas, Police Department has received notice that it has been awarded $170,000.00 through the Fiscal Year 2020 Edward Byrne Memorial Justice Assistance Grant Program;

WHEREAS, said grant funds will be used to purchase updated electronic ticket writing systems for the Police Department; and

WHEREAS, the City Council finds it to be in the public interest to accept the grant award and to appropriate the grant funds;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City of Midland hereby accepts the grant award of $170,000.00 awarded by the Governor's Office through the Fiscal Year 2020 Edward Byrne Memorial Justice Assistance Grant Program. Said grant funds shall be used to purchase updated electronic ticket writing systems for the Police Department.

SECTION TWO. That the City Manager, or his designee, is hereby authorized and directed to evidence the City of Midland's acceptance by executing all necessary documents in order to accept the grant award.

SECTION THREE. That the Fiscal Year 2020 Edward Byrne Memorial Justi

On motion of Council member Love, seconded by Council member Robnett, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the 10th day of December, A.D., 2019, by the following vote:

Council members voting "AYE": Trost, Hotchkiss, Love, Morales, Dufford, Robnett

Council members voting "NAY": None

Jerry F. Morales, Mayor

ATTEST:

Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

Courtney Sharp, City Manager

Jennifer Fung, Interim Director of Finance

APPROVED AS TO CONTENT
AND COMPLETENESS:

Seth Herman, Police Chief

2019-381

City Council Agenda

☑ APPROVED

Approved for Agenda:
CSharp
City Manager's Office

MEETING DATE: 12/10/2019

TO: City Council / City Manager

FROM: Kayci La Duke, Compliance Manager

SUBJECT: Consider a resolution to accept and appropriate funds awarded through the FY2020 Edward Byrne Memorial Justice Assistance Grant Program

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Purpose:

Consider a resolution to accept and appropriate funds awarded through the FY2020 Edward Byrne Memorial Justice Assistance Grant Program by the Office of the Governor of Texas Criminal Justice Division.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

That the Office of the Governor of Texas Criminal Justice Division's FY2020 Edward Byrne Memorial Justice Assistance Grant in the amount of $170,000.00 is hereby accepted and directed to be deposited into the General Fund (001) of the City, and;

That the sum of $170,000.00 is hereby appropriated from the General Fund (001) Unappropriated Fund Balance (35650) to the 2020 Electronic Ticket Writers Grant Project (700269-005).

Discussion:

The Midland Police Department will use grant funding to obtain updated electronic ticket writing systems. The electronic ticket writing systems will significantly enhance the safety, effectiveness, and efficiency of issuing traffic citations.

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Erika Martinez, Purchasing Manager

SUBJECT: Consider a resolution awarding a contract to the sole bidder, Willis Electric Co., LP for the Various Traffic Signal Improvement Project for a total cost of $1,008,397.50 for the Traffic Operations Division.

Purpose:

Approval of a resolution awarding a contract for the Various Traffic Signal Improvement Project.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

- Part A - $387,642.00 from project 900291, Downtown Intersection Update
- Part B - $559,355.50 from project 98111, Bankhead Highway Paving Bond
- Part C - $61,400.00 from project 900254, Citywide Radio System

For the total not to exceed the amount of $1,008,397.50

Discussion:

The City Manager approved plans and specifications and authorized advertisement for bids for the Various Traffic Signal Improvement Project. The bid request was sent to twenty-four (24) companies. We received one (1) bid from Willis Electric Company, LP. Staff recommends awarding a contract to the sole bidder based on unit prices for a not to exceed amount of $1,008,397.50. Please see the attached memo from Michael Pacelli, Traffic Engineer, for more information.

Therefore, please consider a resolution awarding a contract for the Various Traffic Signal Improvement Project to the sole bidder, Willis Electric Company, LP of Abilene, Texas for a not to exceed amount of $1,008,397.50.

INTEROFFICE MEMORANDUM

TO: Lizbeth Sanchez, Buyer

Erika Munoz, Purchasing Manager

FROM: Michael Pacelli, P.E., PTOE, City Traffic Engineer

SUBJECT: Various Traffic Signal Improvements – Award Recommendation

DATE: March 6, 2020

Traffic Operations staff has reviewed the bid tabulation for the Various Traffic Signal Improvements project. Willis Electric Co. of Abilene, Texas, is the sole bidder, and therefore is the apparent low bidder.

Willis Electric Co. has an established history in the City of Midland and has performed to the City's satisfaction throughout the course of previous traffic signal projects.

Therefore, Staff recommends awarding the Various Traffic Signal Improvements project to Willis Electric Co. for a total amount not to exceed $1,008,397.50.

Following the allocation of additional funds to project 98111 (Bankhead Highway Paving Bond) as part of the award resolution for this contract, funding will be available as follows:

- Part A - $ 387,642.00 from project 900291-005 (Downtown Intersection Update)
- Part B - $ 559,355.50 from project 98111 (Bankhead Highway Paving Bond)
- Part C - $ 61,400.00 from project 900254-305 (Citywide Radio System)

Thank you for your assistance.

City of Midland - Bid Tabulation

BID #: 20001930 **VARIOUS TRAFFIC SIGNAL IMPROVEMENT PROJECT** **OPENED: MARCH 4, 2020**	WILLIS ELECTRIC COMPANY, LP BOX 7109 ABILENE, TX 79608 (325) 698-3444

PART A - Traffic Signal Improvements for N. Colorado St. at W. Texas Ave. and N. Loraine St. at W. Texas Ave.

NO.	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT BID
A1	500 6001	MOBILIZATION Fifty Thousand dollars and no cents per lump sum.	LS	1	$ 50,000.00	$ 50,000.00
A2	CITY	REMOVING TRAFFIC SIGNALS Forty-five Hundred dollars and no cents per lump sum.	LS	1	$ 4,500.00	$ 4,500.00
A3	416 6031	DRILL SHAFT (TRF SIG POLE) (30 IN) Three Hundred Ninety dollars and no cents per linear foot.	LF	20	$ 390.00	$ 7,800.00
A4	416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN) Four Hundred Twenty-five dollars and no cents per linear foot.	LF	10	$ 425.00	$ 4,250.00
A5	502 6025	BARR, SIGNS, TRAFFIC HANDLING Eighty-five Hundred dollars and no cents per lump sum.	LS	1	$ 8,500.00	$ 8,500.00
A6	618 6029	CONDT (PVC) (SCH 40) (3") Forty dollars and no cents per linear foot.	LF	545	$ 40.00	$ 21,800.00
A7	620 6009	ELEC CONDR (NO.6) BARE Two dollars and no cents per linear foot.	LF	545	$ 2.00	$ 1,090.00

A8	620 6010	ELEC CONDR (NO.6) INSULATED Two dollars and Fifty cents per linear foot.	LF	220	$ 2.50	$ 550.00
A9	624 6009	GROUND BOX TY D (162922) Fifteen Hundred dollars and no cents per each.	EA	11	$ 1,500.00	$ 16,500.00
A10	680 6002	INSTALL HWY TRF SIG (ISOLATED) Twenty-five Thousand dollars and no cents per each.	EA	2	$ 25,000.00	$ 50,000.00
A11	682 6001	VEH SIG SEC (12")LED(GRN) Three Hundred dollars and no cents per each.	EA	7	$ 300.00	$ 2,100.00
A12	682 6002	VEH SIG SEC (12")LED(GRN ARW) Three Hundred dollars and no cents per each.	EA	2	$ 300.00	$ 600.00
A13	682 6003	VEH SIG SEC (12")LED(YEL) Three Hundred dollars and no cents per each.	EA	9	$ 300.00	$ 2,700.00
A14	682 6005	VEH SIG SEC (12")LED(RED) Three Hundred dollars and no cents per each.	EA	9	$ 300.00	$ 2,700.00
A15	682 6018	PED SIG SEC (LED)(COUNTDOWN) Eight Hundred Fifty dollars and no cents per each.	EA	8	$ 850.00	$ 6,800.00
A16	682 6035	BACK PLATE (12")(3 SEC)(VENTED)ALUM Seventy-five dollars and no cents per each.	EA	9	$ 75.00	$ 675.00
A17	684 6030	TRF SIG CBL (TY A)(14 AWG)(3 CONDR) Three dollars and no cents per linear foot.	LF	172	$ 3.00	$ 516.00

A18	684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR) Four dollars and no cents per linear foot.	LF	470	$ 4.00	$ 1,880.00
A19	684 6042	TRF SIG CBL (TY A)(14 AWG)(20 CONDR) Twelve dollars and no cents per linear foot.	LF	245	$ 12.00	$ 2,940.00
A20	6000 6128	INSTALL LUMINAIRE (LED) Twelve Hundred Fifty dollars and no cents per each.	EA	5	$ 1,250.00	$ 6,250.00
A21	686 6147	INS TRF SIG PL AM(S)2 ARM(40-36')LUM Sixty-five Hundred dollars and no cents per each.	EA	1	$ 6,500.00	$ 6,500.00
A22	686 6036	INS TRF SIG PL AM(S)1 ARM(32')LUM&ILSN Fifty-five Hundred dollars and no cents per each.	EA	2	$ 5,500.00	$ 11,000.00
A23	687 6001	PED POLE ASSEMBLY Forty-five Hundred dollars and no cents per each.	EA	3	$ 4,500.00	$ 13,500.00
A24	6025 6001	RADAR PRESENCE DETECTOR Thirteen Thousand dollars and no cents per each.	EA	2	$ 13,000.00	$ 26,000.00
A25	6025 6002	RADAR PRESENCE DETECTOR COMM CABLE Three dollars and no cents per linear foot.	LF	205	$ 3.00	$ 615.00
A26	621 6003	TRAY CABLE (3 CONDR) (10 AWG) Three dollars and no cents per linear foot.	LF	600	$ 3.00	$ 1,800.00
A27	6089 6002	CAT 5 ETHERNET CABLE Three dollars and no cents per linear foot.	LF	50	$ 3.00	$ 150.00
A28	636 6001	ALUMINUM SIGNS (TY A) One Hundred Fifty dollars and no cents per each.	SF	25.5	$ 150.00	$ 3,825.00

A29	CITY	SAW CUT Eleven dollars and no cents per linear foot.	LF	181	$ 11.00	$ 1,991.00
A30	CITY	EXISITING CONCRETE REMOVAL Fifteen dollars and no cents per square yard.	SY	127	$ 15.00	$ 1,905.00
A31	CITY	EXISTING SIDEWALK REMOVAL Fifteen dollars and no cents per square yard.	SY	52	$ 15.00	$ 780.00
A32	CITY	EXISTING CURB AND GUTTER REMOVAL Fifteen dollars and no cents per linear foot.	LF	105	$ 15.00	$ 1,575.00
A33	CITY	8" FLUME WITH GRATE Three Hundred Fifty dollars and no cents per linear foot.	LF	105	$ 350.00	$ 36,750.00
A34	CITY	NEW SIDEWALK Two Hundred dollars and no cents per square yard.	SY	69	$ 200.00	$ 13,800.00
A35	CITY	CURB RAMP Two Hundred Sixty dollars and no cents per square yard.	SY	21	$ 260.00	$ 5,460.00
A36	CITY	PAVER SECTION (PAVERS SAND, 8" BASE) Two Hundred Seventy-five dollars and no cents per square yard.	SY	50	$ 275.00	$ 13,750.00
A37	CITY	NEW CURBING 6" INCLUDES TRANSITION Forty dollars and no cents per linear foot.	LF	111	$ 40.00	$ 4,440.00

A38	CITY	HEAVY DUTY CONCRETE Two Hundred Seventy-five dollars and no cents per square yard.	SY	6	$ 275.00	$ 1,650.00
A39	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Fifty thousand dollars and no cents per lump sum.	LS	1	$ 50,000.00	$ 50,000.00
PART A SUBTOTAL					$	387,642.00

PART B - Traffic Signal Improvements for
Midkiff Rd. at Bankhead Hwy. and Industrial Ave.

NO.	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT BID
B1	500 6001	MOBILIZATION One Hundred Thousand dollars and no cents per lump sum.	LS	1	$ 100,000.00	$ 100,000.00
B2	677 6001	ELIM EXT PAV MRK & MRKS (4") One dollars and Fifty cents per linear foot.	LF	62	$ 1.50	$ 93.00
B3	677 6003	ELIM EXT PAV MRK & MRKS (8") Two dollars and Fifty cents per linear foot.	LF	17	$ 2.50	$ 42.50
B4	677 6007	ELIM EXT PAV MRK & MRKS (24") Six dollars and Fifty cents per linear foot.	LF	75	$ 6.50	$ 487.50
B5	CITY	REMOVING TRAFFIC SIGNALS Seventy-five Hundred dollars and no cents per lump sum.	LS	1	$ 7,500.00	$ 7,500.00
B6	416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN) Four Hundred Twenty-five dollars and no cents per linear foot.	LF	15	$ 425.00	$ 6,375.00
B7	416 6034	DRILL SHAFT (TRF SIG POLE) (48 IN) Eight Hundred dollars and no cents per linear foot.	LF	40	$ 800.00	$ 32,000.00
B8	502 6025	BARR, SIGNS, TRAFFIC HANDLING Twenty Thousand dollars and no cents per lump sum.	LS	1	$ 20,000.00	$ 20,000.00
B9	618 6023	CONDT (PVC) (SCH 40) (2") Fifteen dollars and no cents per linear foot.	LF	240	$ 15.00	$ 3,600.00

B10	618 6024	CONDT (PVC) (SCH 40) (2") (BORE) Fifty dollars and no cents per linear foot.	LF	595	$ 50.00	$ 29,750.00
B11	618 6029	CONDT (PVC) (SCH 40) (3") Twenty-five dollars and no cents per linear foot.	LF	425	$ 25.00	$ 10,625.00
B12	618 6030	CONDT (PVC) (SCH 40) (3") (BORE) Sixty dollars and no cents per linear foot.	LF	715	$ 60.00	$ 42,900.00
B13	618 6033	CONDT (PVC) (SCH 40) (4") Thirty-five dollars and no cents per linear foot.	LF	10	$ 35.00	$ 350.00
B14	618 6070	CONDT (RM) (2") Thirty-five dollars and no cents per linear foot.	LF	20	$ 35.00	$ 700.00
B15	620 6009	ELEC CONDR (NO.6) BARE Two dollars and no cents per linear foot.	LF	2145	$ 2.00	$ 4,290.00
B16	620 6010	ELEC CONDR (NO.6) INSULATED Two dollars and Fifty cents per linear foot.	LF	45	$ 2.50	$ 112.50
B17	624 6009	GROUND BOX TY D (162922) Fifteen Hundred dollars and no cents per each.	EA	2	$ 1,500.00	$ 3,000.00
B18	624 6010	GROUND BOX TY D (162922)W/APRON Eighteen Hundred dollars and no cents per each.	EA	7	$ 1,800.00	$ 12,600.00
B19	680 6002	INSTALL HWY TRF SIG (ISOLATED) Thirty Thousand dollars and no cents per each.	EA	1	$ 30,000.00	$ 30,000.00
B20	682 6001	VEH SIG SEC (12")LED(GRN) Three Hundred dollars and no cents per each.	EA	8	$ 300.00	$ 2,400.00

B21	682 6002	VEH SIG SEC (12")LED(GRN ARW) Three Hundred dollars and no cents per each.	EA	4	$ 300.00	$ 1,200.00
B22	682 6003	VEH SIG SEC (12")LED(YEL) Three Hundred dollars and no cents per each.	EA	8	$ 300.00	$ 2,400.00
B23	682 6004	VEH SIG SEC (12")LED(YEL ARW) Three Hundred dollars and no cents per each.	EA	8	$ 300.00	$ 2,400.00
B24	682 6005	VEH SIG SEC (12")LED(RED) Three Hundred dollars and no cents per each.	EA	8	$ 300.00	$ 2,400.00
B25	682 6006	VEH SIG SEC (12")LED(RED ARW) Three Hundred dollars and no cents per each.	EA	8	$ 300.00	$ 2,400.00
B26	682 6018	PED SIG SEC (LED)(COUNTDOWN) Seven Hundred Fifty dollars and no cents per each.	EA	12	$ 750.00	$ 9,000.00
B27	682 6035	BACK PLATE (12")(3 SEC)(VENTED)ALUM Seventy-five dollars and no cents per each.	EA	8	$ 75.00	$ 600.00
B28	682 6037	BACK PLATE (12")(5 SEC)(VENTED)ALUM One Hundred dollars and no cents per each.	EA	4	$ 100.00	$ 400.00
B29	684 6030	TRF SIG CBL (TY A)(14 AWG)(4 CONDR) Three dollars and no cents per linear foot.	LF	2225	$ 3.00	$ 6,675.00
B30	684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR) Three dollars and Fifty cents per linear foot.	LF	1000	$ 3.50	$ 3,500.00
B31	684 6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR) Four dollars and no cents per linear foot.	LF	2565	$ 4.00	$ 10,260.00

B32	684 6038	TRF SIG CBL (TY A)(14 AWG)(12 CONDR) Eight dollars and no cents per linear foot.	LF	670	$ 8.00	$ 5,360.00
B33	684 6042	TRF SIG CBL (TY A)(14 AWG)(16 CONDR) Ten dollars and no cents per linear foot.	LF	1895	$ 10.00	$ 18,950.00
B34	686 6045	INS TRF SIG PL AM(S)1 ARM(44') Five Thousand dollars and no cents per each.	EA	1	$ 5,000.00	$ 5,000.00
B35	686 6064	INS TRF SIG PL AM(S)1 ARM(60')LUM&ILSN Seventy-five Hundred dollars and no cents per each.	EA	1	$ 7,500.00	$ 7,500.00
B36	686 6068	INS TRF SIG PL AM(S)1 ARM(65')LUM&ILSN Seventy-five Hundred dollars and no cents per each.	EA	1	$ 7,500.00	$ 7,500.00
B37	687 6001	PED POLE ASSEMBLY Forty-five Hundred dollars and no cents per each.	EA	9	$ 4,500.00	$ 40,500.00
B38	6025 6002	RADAR PRESENCE DETECTOR COMM CABLE Three dollars and no cents per linear foot.	LF	2185	$ 3.00	$ 6,555.00
B39	6054 6003	HELIAX CABLE Five dollars and no cents per linear foot.	LF	230	$ 5.00	$ 1,150.00
B40	636 6001	ALUMINUM SIGNS (TY A) One Hundred dollars and no cents per square foot.	SF	30	$ 100.00	$ 3,000.00
B41	666 6035	REFL PAV MRK TY I (W)8"(SLD)(090MIL) Seven dollars and no cents per linear foot.	LF	70	$ 7.00	$ 490.00
B42	666 6047	REFL PAV MRK TY I (W)24"(SLD)(090MIL) Nineteen dollars and no cents per linear foot.	LF	460	$ 19.00	$ 8,740.00

B43	666 6137	REFL PAV MRK TY I (Y)8"(SLD)(090MIL) Seven dollars and no cents per linear foot.	LF	350	$ 7.00	$ 2,450.00
B44	531 6010	CURB RAMPS (TY 7) Twenty-seven Hundred Fifty dollars and no cents per each.	EA	10	$ 2,750.00	$ 27,500.00
B45	531 6034	CURB RAMPS (TY 7)(MOD) Thirty-three Hundred dollars and no cents per each.	EA	2	$ 3,300.00	$ 6,600.00
B46	CITY	RAILROAD EXPENSES (SEE PAY NOTES) Twenty thousand dollars and no cents per lump sum.	LS	1	$ 20,000.00	$ 20,000.00
B47	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Fifty thousand dollars and no cents per lump sum.	LS	1	$ 50,000.00	$ 50,000.00
PART B SUBTOTAL					$	559,355.50

PART C - ITS Improvements for LP 250 at SH 191						
NO.	**ITEM NO.**	**DESCRIPTION**	**UNIT**	**ESTIMATED QUANTITY**	**UNIT PRICE**	**TOTAL AMOUNT BID**
C1	416 6006	DRILL SHAFT (TRF SIG POLE) (48 IN) Twelve Hundred dollars and no cents per linear foot.	LF	14	$ 1,200.00	$ 16,800.00
C2	Install per Spec for 606 46055	INSTALL ITS POLE (60 FT)(90 MPH) Forty-five Hundred dollars and no cents per each.	EA	1	$ 4,500.00	$ 4,500.00
C3	624 6010	GROUND BOX TY D (162922) W/APRON Eighteen Hundred dollars and no cents per each.	EA	2	$ 1,800.00	$ 3,600.00
C4	618 6024	CONDT (PVC) (SCH 40) (2") (BORE) Fifty-five dollars and no cents per linear feet.	LF	300	$ 55.00	$ 16,500.00
C5	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Twenty thousand dollars and no cents per lump sum.	LS	1	20000	$ 20,000.00
PART C SUBTOTAL					$	61,400.00

PART A SUBTOTAL	$	387,642.00
PART B SUBTOTAL	$	559,355.50
PART C SUBTOTAL	$	61,400.00
TOTAL BID AMOUNT	**$**	**1,008,397.50**

Delivery: 150 Calendar Days

Bidding Summary:

24 **Bid requests were issued.**

1 **Bids listed above**

0 **NO BIDS were received.**

23 **Bidders did not respond.**

RESOLUTION NO. _____

RESOLUTION AWARDING A CONTRACT FOR THE VARIOUS TRAFFIC SIGNAL IMPROVEMENTS PROJECT TO THE SOLE BIDDER, WILLIS ELECTRIC CO., LP OF ABILENE, TEXAS, AT A TOTAL COST OF $1,008,397.50; APPROPRIATING FUNDS; AND AUTHORIZING PAYMENT

WHEREAS, the City Manager advertised for competitive bids for the Various Traffic Signal Improvements Project (the "Project"); and

WHEREAS, Bid No. 20001930 was opened on March 4, 2020,with the sole bid and the lowest, most responsible bid being submitted by Willis Electric Co., LP of Abilene, Texas ("Contractor"), having submitted a bid of $1,008,397.50 as shown on the bid tabulation attached hereto as Exhibit "A" and incorporated herein for all legal purposes; and

WHEREAS, the total cost of the work to be completed, according to the previously advertised plans and specifications and the unit prices in Exhibit "A", shall not exceed $1,008,397.50; and

WHEREAS, the City Council finds it to be in the public interest to execute a contract with Contractor for said Project;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager and City Secretary are hereby authorized and directed to execute and attest, respectively, on behalf of the City of Midland, a contract with Contractor for said Project at a total cost of $1,008,397.50, said contract being on file in the office of the City Secretary, referenced by the date and number of this resolution.

SECTION TWO. That the sum of $700,000.00 is hereby appropriated from the 2019 GO Bond (180) (Road Bond 2nd Installment) unappropriated fund balance to the Bankhead Highway Road Bond Project (98111).

SECTION THREE. That the City Comptroller is hereby authorized and directed to pay Contractor pursuant to the terms of said contract in an amount not to exceed

$1,008,397.50 upon receipt of proper invoices or statements approved by the City Manager from funds available as follows:

A. $387,642.00 from the Downtown Intersection Update Project (900291) for work performed under "PART A" of the contract bid (traffic signal improvements for intersections of North Colorado Street at West Texas Avenue and North Loraine Street at West Texas Avenue);

B. $559,355.50 from the Bankhead Road Bond Paving Project (98111) for work performed under "PART B" of the contract bid (traffic signal improvements for the intersections of Midkiff Road at Bankhead Highway and Midkiff Road at Industrial Avenue); and

C. $61,400.00 from Citywide Radio System Project (900254) for work performed under "PART C" of the contract bid (ITS improvements for the intersection of Loop 250 at State Highway 191).

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2020, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Courtney Sharp, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

_____
Jose Ortiz, Engineering Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

THE CITY OF MIDLAND
CONTRACT
20001930

THIS CONTRACT, effective the 25th day of March, 2020, by and between the City of Midland, hereinafter referred to as "City", and Willis Electric Company LP, hereinafter referred to as "Company", is made for the following considerations:

1. **Cost:** Total Proposal: $1,008,397.50 DOLLARS

2. **Scope of Work:** Company shall perform all work described for Various Traffic Signal Improvements of this Contract in the following documents, attached hereto and incorporated herein by reference for all legal purposes.

EXHIBIT A..... Specifications, Proposal or Cost Summary
EXHIBIT B.....Intentionally Omitted
EXHIBIT C..... Bonding instructions for Public Works Contract of $50,000 and more
EXHIBIT D..... Wage Scale

1. **City:** The words "City's Representative" or "representative" shall mean Jose Ortiz or the designee under whose supervision these contract documents, including the plans and specifications, were prepared, or who may inspect work performed under this Contract; or such other representative, supervisor, or inspector as may be authorized by City to act in any particular capacity under this Contract.

2. **City's Representative:** City's Representative may make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. City's representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, nor will such representative be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions incident thereto. City's representative will not be responsible for Company's failure to perform the work in accordance with the contract.

3. **Company:** Unless otherwise stipulated, Company shall provide and pay for all materials,

supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation and all other facilities necessary for the execution and completion of the work covered by the contract documents. Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of a good quality. Company shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

3.1. Company shall, at its expense, obtain all permits and licenses necessary for the performance of this contract and pay all fees and taxes required by law, and comply with all laws, ordinances, rules and regulations governing Company's performance of the contract, including all environmental laws and regulations, whether state or federal.

3.2. All work shall be done and all materials furnished in strict conformity with the contract and specifications.

4. **Minor Work Not Mentioned:** All minor detail of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of the work for which the prices are named in the contract. Company will not be entitled to any additional compensation therefor unless specifically stated otherwise. Otherwise the term "extra work" as used in this contract shall mean and include all work that may be required by City to be done by Company to accomplish any alteration or addition to the work as shown on the Specifications.

4.1. Company shall perform all extra work under the direction of City's Representative when presented with a written work order signed by City's Representative, subject, however, to the right of the Company to require written confirmation of such extra work order by City. Payment for extra work shall be as agreed in the work order.

5. **Safety:** Company shall at all times exercise reasonable precaution for the safety of employees and others on or near the work and shall comply with all applicable provisions of federal, state and municipal laws. All machinery and equipment and other physical hazards shall be guarded in accordance with federal, state or municipal laws or regulations.

6. **INDEMNITY: COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES**

OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF COMPANY, THEIR AGENTS OR EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

6.1. **COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CITY, CITY'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH COMPANY OR COMPANY'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.**

6.2. **COMPANY AGREES THAT IT WILL INDEMNIFY AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS AND ALL SUPPLIES, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN CITY SO DESIRES, COMPANY SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. COMPANY, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS CITY AND ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY**

INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF COMPANY OR ANY SUBCONTRACTOR, THEIR AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

7. **Start of Work:** Company shall commence work no later than ten (10) days after receipt of the execution of this document or other written release to proceed and shall complete such work no later than 150 calendar days after release to proceed.

8. **Clean Up:** Company shall promptly remove from City's premises all materials condemned by City's Representative on account of failure to conform to the contract, whether actually incorporated in the work or not, and Company shall at its own expense promptly replace such condemned materials with other materials conforming to the requirements of the contract. Company shall also bear the expense of restoring all work of other contractors damaged by any such removal or replacement. If Company does not remove and replace any such condemned materials within a reasonable time after a written notice by City, City may remove and replace such at Company's expense.

9. **Warranty:** Neither the final payment nor any provision in this contract shall relieve Company of responsibility for faulty materials or workmanship, and he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of substantial completion. City shall give notice of observed defects with reasonable promptness.

10. **Remedy:** City may, on account of subsequently discovered evidence, withhold whole or part of any payment to such extent as may be necessary to protect itself from loss on account of:

10.1. Defective work not remedied; or

10.2. Claims filed or reasonable evidence indicating possible filing of claims; or

10.3. Failure of Company to make payments promptly to subcontractors or for material or labor which City may pay as an agent for the Company; or

10.4. Damages to another contractor or subcontractor.

When the above grounds to withhold payment are removed, or Company provides a surety bond satisfactory to City, which will protect City in the amount withheld, payment may be released.

11. **Funding Out:** In the event no funds or insufficient funds are appropriated and budgeted or are

otherwise unavailable in any fiscal period for contract payments due under the contract, then this contract shall terminate on the last day of the fiscal period for which full appropriations were made, without penalty or expense to City of any kind whatsoever.

12. **Wage Scale:** Company agrees to pay all workmen in his employ no less than the generally prevailing wage rate for employees of similar category in the Permian Basin Area, as is depicted in the wage rate scale attached hereto as EXHIBIT D, and incorporated herein by reference for all legal purposes.

12.1. If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

13. **Prompt Pay Act:** City and Company agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

14. **Payment:** After all work is completed by Company, including all Change Orders altering the original scope and amount of said contract are completed, and City has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, City shall thereafter issue payment to Company in the amount of the contract and all Change Orders. City shall be the final judge of when the work is completed by Company. City, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to City's requirements. City may make periodic payments to Company, however such periodic payments may only be made pursuant to this paragraph, and only after all work and all Change Orders are completed by Company and approved by City. For contracts exceeding $25,000 and construction time exceeds ninety days, requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the Owner's Representative the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

15. **No Third Party Beneficiary:** City's approval of this contract does not create a third party beneficiary. There is no third party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third party beneficiary or other rights hereunder.

16. **WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, COMPANY AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST CITY, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH**

ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. COMPANY SPECIFICALLY AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, COMPANY AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH COMPANY MIGHT OTHERWISE BE ENTITLED.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. COMPANY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND COMPANY. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF GOVERNMENTAL IMMUNITY.

COMPANY AND CITY ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

17. **Governmental Immunity:** By executing this contract City is not waiving its right of governmental immunity. City is retaining its immunity from suit. City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.

18. **Insurance:**

Company shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):

-Personal Injury: $1,000,000.00 per person

$1,000,000.00 per occurrence

-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit - Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on a claims-occurred basis. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Business Automobile Liability insurance provided by Company shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this Contract. This insurance shall name City as an additional insured and waive subrogation in favor of City.

The Workers' Compensation coverage provided by Company shall inure to the benefit of employees injured during the course and scope of their employment by Company pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name City as an additional insured on a claims occurred basis. City shall be provided the notice by Company's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Company shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, Company shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of City. City shall not be required to provide any insurance whatsoever pursuant to this Contract.

Company certifies that the certificate of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. Company shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of Company.

19. **Assignment**: Company shall not, either directly or indirectly, assign all or any part of this Contract or any interest, right or privilege herein, without the prior written consent of City. The issue on whether or not to grant consent to an assignment is in the sole discretion of City.

20. **RELEASE: NOTWITHSTANDING ANY OTHER PROVISIONS, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE**.

21. **Governing Law and Venue:** This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way to the subject matter of this Contract, without regard to conflict on laws and rules that would direct application of the laws of another jurisdiction.

22. **Independent Contractor:** It is expressly understood and agreed that Company shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of City; that Company shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between City and Company, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between City and Company. No person performing any of the work and services described hereunder by Company shall be considered an officer, agent, servant or employee of the City. Further, it is specifically understood and agreed that nothing in this Contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Company shall be an independent contractor under

this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. City does not have the power to direct the order in which the work is done. City shall not have the right to control the means, methods or details of the Company's work. Company shall assume exclusive responsibility for the work. Company is entirely free to do the work in its own way.

23. **Notice of Alleged Breach; Statutory Prerequisites:** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Company or its legal representative, shall give the City Manager, or any other reasonable official of City, notice in writing (consisting of one original and seven copies of notice attached to a copy of this Contract) of such damages, duly verified, within one-hundred fifty (150) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Company will settle, the physical and mailing addresses of Company at the time and date the claim was presented and the physical and mailing addresses of Company for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Company relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except City from any liability whatsoever. City is under no obligation to provide notice to Company that Company's notice is insufficient. City reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Company's failure to comply with the requirements herein shall perpetually bar Company's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if City has actual or constructive notice or knowledge of said claim or alleged damages. Company agrees that the requirements of this entire Contract are reasonable.

24. **Consideration:** The terms of this Contract are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

25. **Termination At Will:** City may terminate this Contract at will for no or any reason upon giving at least one hundred eighty (180) days written notice to Company. The parties to this Contract understand and agree that it is in City's sole discretion to cancel the Contract during the term of the Contract without

penalty to City. Company has no expectation and has received no guarantees that this Contract will not be terminated before the end of the Contract term. The parties have bargained for the flexibility of terminating this Contract upon tender of the requisite notice at any time during the term of the Contract. All work and services under the Contract shall be suspended upon termination of the Contract becoming effective.

26. **Compliance:** Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

27. To the extent that Tex. Gov't Code section 2270.002 applies to this Contract, Company hereby verifies that Company does not boycott Israel and will not boycott Israel during the term of this Contract. If Tex. Gov't Code section 2270.002 does not apply to this Contract, such verification is not required, and Company shall be deemed to have not made such verification.

28. **Records Retention and Production of Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to City for the duration of the contract, (2) promptly provide to City any contracting information related to the Contract that is in the custody or possession of Company on request of City, and (3) on completion of the Contract, either (i) provide at no cost to City all contracting information related to the Contract that is in the custody or possession of Company, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to City.

29. **Public Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Company agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

30. **Conflict of Terms.** If a conflict of terms or language exists between (i) any of the provisions of this Contract and (ii) any of the provisions contained in Exhibit A, precedence shall be given to the provisions of this Contract. For the avoidance of any doubt, the provisions contained in this Contract shall supersede any and all conflicting provisions contained in Exhibit A.

EXECUTED IN DUPLICATE the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Courtney B. Sharp, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLYAS TO FORM

_____
John Ohnemiller, City Attorney

COMPANY:

By: _____

Name:_____

Title: _____

STATE OF _____ §
§
COUNTY OF_____ §

BEFORE ME, the undersigned authority, on this ____ day of _____, 20____ personally appeared, _____, an officer of Willis Electric Company LP, known to me to be the person and official whose name is subscribed to the forgoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____day of _____, 20____.

_____
Notary Public, State of Texas

Exhibit A

CITY OF MIDLAND

PURCHASING DIVISION DATE: 01/31/20

BID REQUEST PAGE: 01

(THIS IS NOT AN ORDER) **BID NO: 20001930**

OPENING TIME: 2:00 PM **CLOSING DATE: ~~02/26/20~~ 3-4-20**

CITY OF MIDLAND
300 NORTH LORAINE
P. O. BOX 1152
MIDLAND, TX 79702

BIDS WILL BE RECEIVED IN THE OFFICE OF THE City Secretary, 300 N. Loraine, Suite 330, Midland Texas UNTIL 2:00 P.M. 02/26/20 FOR GOODS AND SERVICES DESCRIBED BELOW WHICH WILL BE DELIVERED TO: Various Locations

ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
			Various Traffic Signal Improvements in accordance with the attached pay items, pay notes, drawings and contract	1,008,397 50	
				TOTAL	1,008,397 50

NOTICE TO BIDDERS:

1. FAILURE TO RESPOND WITH EITHER A BID OR "NO BID" WILL SUBJECT YOUR FIRM TO REMOVAL FROM THE BID LIST FOR THIS TYPE OF MATERIAL, EQUIPMENT OR SUPPLY ITEM.
2. BIDS SHALL BE DELIVERED TO THE CITY IN A SEALED PACKAGE (ENVELOPE, ETC) **UNLESS THE CITY STATES** THAT THE BID MAY BE FAXED OR E-MAILED, OTHERWISE, BIDS FAXED OR E-MAILED DIRECTLY TO THE CITY WILL BE REJECTED. A SEALED BID MAY BE FAXED TO A THIRD PARTY FOR SEALED DELIVERY TO THE CITY. PLEASE CALL FOR MORE INFORMATION.
3. IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED CONTRACT AND INSURANCE REQUIREMENTS ARE **NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/CONTRACTOR OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/CONTRACTOR MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.
4. IF THE SELECTED BIDDER/CONTRACTOR CANNOT MEET THE REQUIREMENTS OF PARAGRAPH 3, THEN THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER.
5. **IMPORTANT NOTICE** – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/CONTRACTOR MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.
6. BIDDER/CONTRACTOR/COMPANY IS RESPONSIBLE FOR ACQUIRING AND ACKNOWLEDGING ALL ADDENDA.
7. **Public Information.** To the extent that Bidder is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, Bidder agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

FOR ADDITIONAL INFORMATION, CONTACT (432) 685-7234 OR 685-7233. FAX NO. (432) 685-0523

NOTE: EACH BIDDER IS TO INDICATE BRAND NAME PRODUCT NUMBER AND ATTACH DESCRIPTIVE LITERATURE CLEARLY MARKED TO SHOW EACH ITEM ON THIS BID.

THE UNDERSIGNED HEREBY OFFERS TO FURNISH AND DELIVER THE ARTICLES OR SERVICE AS SPECIFIED ABOVE AT THE PRICES AND TERMS HEREIN STATED AND IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND CONDITIONS OF BIDDING ALL WHICH ARE MADE A PART OF THIS OFFER. THIS OFFER IS NOT SUBJECT TO WITHDRAWAL WITHOUT PERMISSION.

COMPANY NAME: Willis Electric Co LP
ADDRESS Box 7109
CITY Abilene ST TX ZIP 79608
PHONE NO. 325-698-3444 FAX NO. 325-698-3446
EMAIL: Tommy@willisLP.com

CASH DISCOUNT: _____ % _____ DAYS
DELIVERY CAN BE MADE 150 Calendar Days
AUTHORIZED SIGNATURE [signature]

PLEASE READ CONDITIONS FOR BIDDING ON BACK BEFORE SUBMITTING

BID BOND

Travelers Casualty and Surety Company of America
Hartford, CT 06183

KNOWN ALL BY THESE PRESENTS, That we, **Willis Electric Co., LP**, as Principal, and **Travelers Casualty and Surety Company of America**, as Surety, are held and firmly bound unto **City of Midland, TX**, as Obligee, in the sum of **Five (5) Percent of the Greatest Amount Bid** Dollars (**5%GAB**) for the payment of which we bind ourselves, and our successors and assigns, jointly and severally, as provided herein.

WHEREAS, Principal has submitted or is about to submit a bid to the Obligee on a contract for **VARIOUS TRAFFIC SIGNAL IMPROVEMENTS - BID NO.: 20001930** ("Project").

NOW, THEREFORE, the condition of this bond is that if Obligee accepts Principal's bid, and Principal enters into a contract with Obligee in conformance with the terms of the bid and provides such bond or bonds as may be specified in the bidding or contract documents, then this obligation shall be void; otherwise Principal and Surety will pay to Obligee the difference between the amount of Principal's bid and the amount for which Obligee shall in good faith contract with another person or entity to perform the work covered by Principal's bid, but in no event shall Surety's and Principal's liability exceed the penal sum of this bond.

Signed this **26th** day of **February**, **2020**.

Willis Electric Co., LP
(Principal)

By: _____

SIGN HERE

Travelers Casualty and Surety Company of America

By: _____
Linda K. Edwards Attorney-in-Fact

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Linda K Edwards** of **FT WORTH** , **Texas** , their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **17th** day of **January**, **2019.**

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **17th** day of **January**, **2019**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2021**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **26th** day of **February** , **2020** .

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.

CITY OF MIDLAND

ADDENDUM

BID # 20001930

TO ALL BIDDERS ON THE SUBJECT BID:

ADDENDUM # 1

DATE: February 20, 2020

The following changes have been made to the specifications.

The bid opening date has been extended to Wednesday, March 4th 2020 in the Office of the City Secretary.

PLEASE RETURN THIS ADDENDUM WITH YOUR BID BY THE CLOSING DATE.

All other terms and conditions shall remain the same.

Willis Electric Co LP
Company Name

Bidder Authorized Signature

2-25-20
Date

Tommy Willis
Please Print Above Name

325-698-3444
Phone

CITY OF MIDLAND

ADDENDUM

BID # 20001930

TO ALL BIDDERS ON THE SUBJECT BID:

ADDENDUM # 2

DATE: February 25, 2020

The following changes have been made to the specifications.

Please replace the current proposal table with the updated document.

The following questions were raised by one or more of the proposers. The answers are provided as a matter of clarification for all proposers as follows:

Part "A" Intersections of N. Colorado & W. Texas, and N. Loraine & W. Texas:

Q1. There are no removal items for light poles/foundations. Removal quantity is for 3 each.

A1. The proposal has been revised to change Item A2, REMOVING TRAFFIC SIGNALS, from a TxDOT "per each" item to a City item to be paid "per lump sum" for all signal removal required to complete work under Part A.

Q2. There are no new foundation items for light poles.

A2. No unique TxDOT item number was found for this item. Therefore, the proposal has been revised for Item A3, DRILL SHAFT (TRF SIG POLE) (30 IN), to increase the bid quantity by 12 LF to account for two new luminaire pole foundations at 6 LF each.

Q3. Bid quantities for foundations are for only 2 traffic signal poles. There are 3 new poles at the locations.

A3. The foundations in the quantities are for the signal mast arm poles on the northeast and southwest corners at Texas/Colorado. The foundation on the northeast corner at Texas/Loraine was installed by a separate project to get it in place prior to pouring of the sidewalk on that corner, so only the pole installation will be required there.

Q4. Bid quantity for ped poles is not correct.

A4. The quantity shown for Item A23, PED POLE ASSEMBLY, as "3 each" is correct. This includes Pole P-4 (southeast corner) at Texas/Colorado and Poles P-2 (southwest corner) and P-3 (southeast corner) at Texas/Loraine. The POLE AND HEAD CHART for Texas/Loraine incorrectly identifies Pole P-4 (northwest corner) as a ped pole, but it correctly shows that it has a luminaire. Pole P-4 should have been listed as a street light pole rather than a ped pole.

Q5. TS-FD-12 is not correct.

A5. No Drawing TS-FD-12 was included for Part "A", but it is assumed the comment was meant to apply to Part "B". Since those plans were prepared and sealed by an outside consultant, it will take some time to get a revised drawing. The Contractor will be provided with a corrected TS-FD-12 prior to construction. The foundation quantities shown in the Proposal should be bid and the Contractor will be paid based on the actual quantities used.

Q6. There are no bid items for bores on conduits like there is on Part B and Part C.

A6. Due to the tight confines of the work area in Part "A", the presence of conflicting underground utilities, and the relatively poor condition of the existing pavement, the City assumes that open trenching of the conduit will be the most practical installation method, so boring was not included in this part. The Contractor may choose to bore at their own option.

On Part "B" Intersection of Midkiff Road at Bankhead & Industrial:

Q7. There is no bid item for the new electrical service Ty PS.

A7. Include all work related to the electrical service as part of the cabinet pay item, Item B19, 680.6002 INSTALL HWY TRF SIG (ISOLATED).

Q8. Removal quantity is for 1 each and there are 3 to be removed.

A8. The proposal has been revised to change Item B5, REMOVING TRAFFIC SIGNALS, from a TxDOT "per each" item to a City item to be paid "per lump sum" for all signal removal required to complete work under Part B.

Q9. Do the same notes about what the City is furnishing on Part A apply to parts B and C? There is a note at the bottom of the Special Provisions that state all other items to be furnished by the City shall be as listed in the plans for each respective part.

A9. The SCOPE OF WORK in the Special Provisions states: "The City will furnish to the Contractor for installation ALL poles and posts, including anchor bolts, as called for in ALL THREE PARTS of this project, regardless of what is shown on the plans." For all items that are NOT poles, the notes on the plans for each part apply to the work in that part. Each part of this project is to be treated independently of the other parts.

On Part "C" Intersection of LP 250 & SH 191:

Q10. Multiple items needed have no bid items. These include Barricades, Wire items, Mobilization, CCTV Cameras (these are not subsidiary to the ITS Pole), Electrical Service, or aprons on the Ground Box item.

A10. The scope of this part includes installation of the ITS Pole and related conduit and ground boxes to provide a path to the existing traffic signal cabinet. No cameras, cabling, electrical service, or related work are included in this task. The City intends to follow up with its own forces to furnish and install all cabling and electronics.

Due to the very small size of this task, the City chose not to include typical lump sum items such as Traffic Control and Mobilization. For Part "C", these items will be considered incidental to all other bid items for that part.

The proposal has been revised to change the description of Item C3, 624.6009 - GROUND BOX TY D (162922) to 624.6010 - GROUND BOX TY D (162922)W/APRON.

Q11. Also who's furnishing the ITS 60' pole?

A11. The SCOPE OF WORK in the Special Provisions states: "The City will furnish to the Contractor for installation ALL poles and posts, including anchor bolts, as called for in ALL THREE PARTS of this project, regardless of what is shown on the plans." This includes the ITS Pole in Part "C".

PLEASE RETURN THIS ADDENDUM WITH YOUR BID BY THE CLOSING DATE.

All other terms and conditions shall remain the same.

Willis Electric Co LP
Company Name

Bidder Authorized Signature

2.25.2020
Date

Tommy Willis
Please Print Above Name

325-698-3444
Phone

PART A - Traffic Signal Improvements for N. Colorado St. at W. Texas Ave. and N. Loraine St. at W. Texas Ave.

NO.	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT BID
A1	500 6001	MOBILIZATION Fifty Thousand dollars and No cents per lump sum.	LS	1	$ 50,000 00	$ 50,000 00
A2	CITY	REMOVING TRAFFIC SIGNALS Forty Five Hundred dollars and No cents per lump sum.	LS	1	$ 4500 00	$ 4500 00
A3	416 6031	DRILL SHAFT (TRF SIG POLE) (30 IN) Three Hundred Ninty dollars and No cents per linear foot.	LF	20	$ 390 00	$ 7800 00
A4	416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN) Four Hundred Thirty Five dollars and No cents per linear foot.	LF	10	$ 425 00	$ 4250 00
A5	502 6025	BARR, SIGNS, TRAFFIC HANDLING Eighty Five Hundred dollars and No cents per lump sum.	LS	1	$ 8500 00	$ 8500 00
A6	618 6029	CONDT (PVC) (SCH 40) (3") Forty dollars and No cents per linear foot.	LF	545	$ 40 00	$ 21,800 00
A7	620 6009	ELEC CONDR (NO.6) BARE Two dollars and No cents per linear foot.	LF	545	$ 2 00	$ 1090 00
A8	620 6010	ELEC CONDR (NO.6) INSULATED Two dollars and Fifty cents per linear foot.	LF	220	$ 2 50	$ 550 00

A9	624 6009	GROUND BOX TY D (162922) Fifteen Hundred dollars and No cents per each.	EA	11	$ 1500 co/	$ 16,500 co/
A10	680 6002	INSTALL HWY TRF SIG (ISOLATED) Twenty Five Thousand dollars and No cents per each.	EA	2	$ 25,000 co/	$ 50,000 co/
A11	682 6001	VEH SIG SEC (12")LED(GRN) Three Hundred dollars and No cents per each.	EA	7	$ 300 co/	$ 2100 co/
A12	682 6002	VEH SIG SEC (12")LED(GRN ARW) Three Hundred dollars and No cents per each.	EA	2	$ 300 co/	$ 600 co/
A13	682 6003	VEH SIG SEC (12")LED(YEL) Three Hundred dollars and No cents per each.	EA	9	$ 300 co/	$ 2700 co/
A14	682 6005	VEH SIG SEC (12")LED(RED) Three Hundred dollars and No cents per each.	EA	9	$ 300 co/	$ 2700 co/
A15	682 6018	PED SIG SEC (LED)(COUNTDOWN) Eight Hundred Fifty dollars and No cents per each.	EA	8	$ 850 co/	$ 6800 co/
A16	682 6035	BACK PLATE (12")(3 SEC)(VENTED)ALUM Seventy Five dollars and No cents per each.	EA	9	$ 75 co/	$ 675 co/
A17	684 6030	TRF SIG CBL (TY A)(14 AWG)(3 CONDR) Three dollars and No cents per linear foot.	LF	172	$ 3 co/	$ 516 co/

A18	684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR) Four dollars and No cents per linear foot.	LF	470	$ 4.00	$ 1880.00
A19	684 6042	TRF SIG CBL (TY A)(14 AWG)(20 CONDR) Twelve dollars and No cents per linear foot.	LF	245	$ 12.00	$ 2940.00
A20	6000 6128	INSTALL LUMINAIRE (LED) Twelve Hundred Fifty dollars and No cents per each.	EA	5	$ 1250.00	$ 6250.00
A21	686 6147	INS TRF SIG PL AM(S)2 ARM(40-36')LUM Sixty Five Hundred dollars and No cents per each.	EA	1	$ 6500.00	$ 6500.00
A22	686 6036	INS TRF SIG PL AM(S)1 ARM(32')LUM&ILSN Fifty Five Hundred dollars and No cents per each.	EA	2	$ 5500.00	$ 11,000.00
A23	687 6001	PED POLE ASSEMBLY Forty Five Hundred dollars and No cents per each.	EA	3	$ 4500.00	$ 13,500.00
A24	6025 6001	RADAR PRESENCE DETECTOR Thirteen Thousand dollars and No cents per each.	EA	2	$ 13,000.00	$ 26,000.00
A25	6025 6002	RADAR PRESENCE DETECTOR COMM CABLE Three dollars and No cents per linear foot.	LF	205	$ 3.00	$ 615.00
A26	621 6003	TRAY CABLE (3 CONDR) (10 AWG) Three dollars and No cents per linear foot.	LF	600	$ 3.00	$ 1800.00

A27	6089 6002	CAT 5 ETHERNET CABLE Three dollars and No cents per linear foot.	LF	50	$ 3 00	$ 150 00
A28	636 6001	ALUMINUM SIGNS (TY A) One Hundred Fifty dollars and No cents per each.	SF	25.5	$ 150 00	$ 3825 00
A29	CITY	SAW CUT Eleven dollars and No cents per linear foot.	LF	181	$ 11 00	$ 1991 00
A30	CITY	EXISITING CONCRETE REMOVAL Fifteen dollars and No cents per square yard.	SY	127	$ 15 00	$ 1905 00
A31	CITY	EXISTING SIDEWALK REMOVAL Fifteen dollars and No cents per square yard.	SY	52	$ 15 00	$ 780 00
A32	CITY	EXISTING CURB AND GUTTER REMOVAL Fifteen dollars and No cents per linear foot.	LF	105	$ 15 00	$ 1575 00
A33	CITY	8" FLUME WITH GRATE Three Hundred Fifty dollars and No cents per linear foot.	LF	105	$ 350 00	$ 36,750 00
A34	CITY	NEW SIDEWALK Two Hundred dollars and No cents per square yard.	SY	69	$ 200 00	$ 13,800 00
A35	CITY	CURB RAMP Two Hundred Sixty dollars and No cents per square yard.	SY	21	$ 260 00	$ 5460 00

A36	CITY	PAVER SECTION (PAVERS SAND, 8" BASE) Two Hundred Seventy Five dollars and no cents per square yard.	SY	50	$ 275.00	$ 13,750.00
A37	CITY	NEW CURBING 6" INCLUDES TRANSITION Forty dollars and no cents per linear foot.	LF	111	$ 40.00	$ 4440.00
A38	CITY	HEAVY DUTY CONCRETE Two Hundred Seventy Five dollars and no cents per square yard.	SY	6	$ 275.00	$ 1650.00
A39	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Fifty thousand dollars and no cents per lump sum.	LS	1	$ 50,000.00	$ 50,000.00
PART A SUBTOTAL					$ 387,642.00	

PART B - Traffic Signal Improvements for Midkiff Rd. at Bankhead Hwy. and Industrial Ave.

NO.	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT BID
B1	500 6001	MOBILIZATION One Hundred Thousand dollars and no cents per lump sum.	LS	1	$ 100,000 00	$ 100,000 00
B2	677 6001	ELIM EXT PAV MRK & MRKS (4") One dollars and Fifty cents per linear foot.	LF	62	$ 1 50	$ 93 00
B3	677 6003	ELIM EXT PAV MRK & MRKS (8") Two dollars and Fifty cents per linear foot.	LF	17	$ 2 50	$ 42 50
B4	677 6007	ELIM EXT PAV MRK & MRKS (24") Six dollars and Fifty cents per linear foot.	LF	75	$ 6 50	$ 487 50
B5	CITY	REMOVING TRAFFIC SIGNALS Seventy Five Hundred dollars and no cents per lump sum.	LS	1	$ 7500 00	$ 7500 00
B6	416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN) Four Hundred Twenty Five dollars and no cents per linear foot.	LF	15	$ 425 00	$ 6375 00
B7	416 6034	DRILL SHAFT (TRF SIG POLE) (48 IN) Eight Hundred dollars and no cents per linear foot.	LF	40	$ 800 00	$ 32,000 00
B8	502 6025	BARR, SIGNS, TRAFFIC HANDLING Twenty Thousand dollars and no cents per lump sum.	LS	1	$ 20,000 00	$ 20,000 00

B9	618 6023	CONDT (PVC) (SCH 40) (2") Fifteen dollars and No cents per linear foot.	LF	240	$ 15.00	$ 3600.00
B10	618 6024	CONDT (PVC) (SCH 40) (2") (BORE) Fifty dollars and No cents per linear foot.	LF	595	$ 50.00	$ 29,750.00
B11	618 6029	CONDT (PVC) (SCH 40) (3") Twenty Five dollars and No cents per linear foot.	LF	425	$ 25.00	$ 10,625.00
B12	618 6030	CONDT (PVC) (SCH 40) (3") (BORE) Sixty dollars and No cents per linear foot.	LF	715	$ 60.00	$ 42,900.00
B13	618 6033	CONDT (PVC) (SCH 40) (4") Thirty Five dollars and No cents per linear foot.	LF	10	$ 35.00	$ 350.00
B14	618 6070	CONDT (RM) (2") Thirty Five dollars and No cents per linear foot.	LF	20	$ 35.00	$ 700.00
B15	620 6009	ELEC CONDR (NO.6) BARE Two dollars and No cents per linear foot.	LF	2145	$ 2.00	$ 4290.00
B16	620 6010	ELEC CONDR (NO.6) INSULATED Two dollars and Fifty cents per linear foot.	LF	45	$ 2.50	$ 112.50
B17	624 6009	GROUND BOX TY D (162922) Fifteen Hundred dollars and No cents per each.	EA	2	$ 1500.00	$ 3000.00

B18	624 6010	GROUND BOX TY D (162922)W/APRON Eighteen Hundred dollars and no cents per each.	EA	7	$ 1800 00/	$ 12,600 00/
B19	680 6002	INSTALL HWY TRF SIG (ISOLATED) Thirty Thousand dollars and no cents per each.	EA	1	$ 30,000 00/	$ 30,000 00/
B20	682 6001	VEH SIG SEC (12")LED(GRN) Three Hundred dollars and no cents per each.	EA	8	$ 300 00/	$ 2400 00/
B21	682 6002	VEH SIG SEC (12")LED(GRN ARW) Three Hundred dollars and no cents per each.	EA	4	$ 300 00/	$ 1200 00/
B22	682 6003	VEH SIG SEC (12")LED(YEL) Three Hundred dollars and no cents per each.	EA	8	$ 300 00/	$ 2400 00/
B23	682 6004	VEH SIG SEC (12")LED(YEL ARW) Three Hundred dollars and no cents per each.	EA	8	$ 300 00/	$ 2400 00/
B24	682 6005	VEH SIG SEC (12")LED(RED) Three Hundred dollars and no cents per each.	EA	8	$ 300 00/	$ 2400 00/
B25	682 6006	VEH SIG SEC (12")LED(RED ARW) Three Hundred dollars and no cents per each.	EA	8	$ 300 00/	$ 2400 00/
B26	682 6018	PED SIG SEC (LED)(COUNTDOWN) Seven Hundred Fifty dollars and no cents per each.	EA	12	$ 750 00/	$ 9000 00/

B27	682 6035	BACK PLATE (12")(3 SEC)(VENTED)ALUM Seventy Five dollars and No cents per each.	EA	8	$ 75.00	$ 600.00
B28	682 6037	BACK PLATE (12")(5 SEC)(VENTED)ALUM One Hundred dollars and No cents per each.	EA	4	$ 100.00	$ 400.00
B29	684 6030	TRF SIG CBL (TY A)(14 AWG)(4 CONDR) Three dollars and No cents per linear foot.	LF	2225	$ 3.00	$ 6675.00
B30	684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR) Three dollars and Fifty cents per linear foot.	LF	1000	$ 3.50	$ 3500.00
B31	684 6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR) Four dollars and No cents per linear foot.	LF	2565	$ 4.00	$ 10,260.00
B32	684 6038	TRF SIG CBL (TY A)(14 AWG)(12 CONDR) Eight dollars and No cents per linear foot.	LF	670	$ 8.00	$ 5360.00
B33	684 6042	TRF SIG CBL (TY A)(14 AWG)(16 CONDR) Ten dollars and No cents per linear foot.	LF	1895	$ 10.00	$ 18,950.00
B34	686 6045	INS TRF SIG PL AM(S)1 ARM(44') Five Thousand dollars and No cents per each.	EA	1	$ 5000.00	$ 5000.00
B35	686 6064	INS TRF SIG PL AM(S)1 ARM(60')LUM&ILSN Seventy Five Hundred dollars and No cents per each.	EA	1	$ 7500.00	$ 7500.00

B36	686 6068	INS TRF SIG PL AM(S)1 ARM(65')LUM&ILSN Seventy Five Hundred dollars and No cents per each.	EA	1	$ 7500.00	$ 7500.00
B37	687 6001	PED POLE ASSEMBLY Forty Five Hundred dollars and No cents per each.	EA	9	$ 4500.00	$ 40,500.00
B38	6025 6002	RADAR PRESENCE DETECTOR COMM CABLE Three dollars and No cents per linear foot.	LF	2185	$ 3.00	$ 6555.00
B39	6054 6003	HELIAX CABLE Five dollars and No cents per linear foot.	LF	230	$ 5.00	$ 1150.00
B40	636 6001	ALUMINUM SIGNS (TY A) One Hundred dollars and No cents per square foot.	SF	30	$ 100.00	$ 3000.00
B41	666 6035	REFL PAV MRK TY I (W)8"(SLD)(090MIL) Seven dollars and No cents per linear foot.	LF	70	$ 7.00	$ 490.00
B42	666 6047	REFL PAV MRK TY I (W)24"(SLD)(090MIL) Nineteen dollars and No cents per linear foot.	LF	460	$ 19.00	$ 8740.00
B43	666 6137	REFL PAV MRK TY I (Y)8"(SLD)(090MIL) Seven dollars and No cents per linear foot.	LF	350	$ 7.00	$ 2450.00
B44	531 6010	CURB RAMPS (TY 7) Twenty Seven Hundred Fifty dollars and No cents per each.	EA	10	$ 2750.00	$ 27,500.00

B45	531 6034	CURB RAMPS (TY 7)(MOD) Thirty Three Hundred dollars and no cents per each.	EA	2	$ 3300 00	$ 6600 00
B46	CITY	RAILROAD EXPENSES (SEE PAY NOTES) Twenty thousand dollars and no cents per lump sum.	LS	1	$ 20,000.00	$ 20,000.00
B47	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Fifty thousand dollars and no cents per lump sum.	LS	1	$ 50,000.00	$ 50,000.00
PART B SUBTOTAL						$ 559,355 50

PART C - ITS Improvements for LP 250 at SH 191

NO.	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT BID
C1	416 6006	DRILL SHAFT (TRF SIG POLE) (48 IN) Twelve Hundred dollars and no cents per linear foot.	LF	14	$ 1200 00	$ 16,800 00
C2	Install per Spec for 606 46055	INSTALL ITS POLE (60 FT)(90 MPH) Forty Five Hundred dollars and no cents per each.	EA	1	$ 4500 00	$ 4500 00
C3	624 6010	GROUND BOX TY D (162922) W/APRON Eighteen Hundred dollars and no cents per each.	EA	2	$ 1800 00	$ 3600 00
C4	618 6024	CONDT (PVC) (SCH 40) (2") (BORE) Fifty Five dollars and no cents per linear feet.	LF	300	$ 55 00	$ 16,500 00
C5	CITY	OWNER'S ALLOWANCE (SEE PAY NOTES) Twenty thousand dollars and no cents per lump sum.	LS	1	$ 20,000.00	$ 20,000.00
PART C SUBTOTAL					$ 61,400 00	

Bid Tabulation:		
A.	PART A SUBTOTAL	$ 387,642 00/
B.	PART B SUBTOTAL	$ 559,355 50/
C.	PART C SUBTOTAL	$ 61,400 00/
TOTAL BID AMOUNT		$ 1,008,397 50/

In addition to providing the individual prices for the items above, Contractor shall write the total bid amount in the sum of:

One Million Eight Thousand Three Hundred Ninety Seven dollars

and Fifty cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected Bidder will receive written notice to proceed.

Bidder agrees to substantially complete all work within **150 calendar days after receipt of notice to proceed**. Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for:

5% of greatest Amount Bid dollars

and _____ cents total. ($ 5%)

which is agreed shall be collected and retained by the Owner as liquidated damages in the event this proposal is accepted by the Owner within thirty day (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the Owner, under the conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

Willis Electric Co LP
Name of Contractor

Tom Willis — Tommy Willis General Partner
Submitted By — Print Name and Title

Box 7109
Mailing Address

Abilene — TX — 79608
City — State — Zip Code

Bidder's Initial's [ ]

EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, or irrevocable letter of credit issued by a bank satisfactory to the City, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the City, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check or irrevocable letter of credit issued by a bank satisfactory to the City for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

PAY NOTES

Unless otherwise directed, all items with Texas Department of Transportation (TxDOT) item numbers shall conform to relevant TxDOT specifications, and all items labelled as “CITY” shall conform to relevant City of Midland specifications.

Item B46, RAILROAD EXPENSES, is an allowance to reimburse the Contractor for direct expenses paid for railroad permits, right of entry, certified flaggers, and other expenses that must be paid directly to Union Pacific Railroad or its authorized contractors. The Contractor shall submit invoices for these expenses and will be directly reimbursed for the actual amount expended. Any overhead expenses for processing this work shall be incidental to all other pay items. This is an allowance for railroad-related expenses only, and no amount of work under this item is guaranteed.

Items A39, B47 and C5, OWNER’S ALLOWANCE, are intended to allow for the City to adjust or expand the scope of work as needed based on field conditions or conflicts that may arise. Any work to be paid under this item MUST be authorized in advance, in writing, by the City. This is an allowance for additional work only, and no amount of work under this item is guaranteed.

SPECIAL PROVISIONS

1. SCOPE OF WORK:

The work to be accomplished under this Contract is located at various locations in the City of Midland, Texas, and consists of municipal public works projects as set forth in the proposal.

The project consists of three (3) parts, as follows:

- **PART A – Traffic Signal Improvements for N. Colorado St. at W. Texas Ave. and N. Loraine St. at W. Texas Ave.**

  This part generally includes the removal of existing traffic signal infrastructure, pavement, curb, and sidewalk, and the construction of curb bulb-outs, minor sidewalk extensions, and pedestrian ramps at both intersections. It also includes the construction of a new traffic signal at N. Colorado St. at W. Texas Ave., and the construction of a pedestrian crossing warning system at N. Loraine St. at W. Texas Ave.

- **PART B – Traffic Signal Improvements for Midkiff Rd. at Bankhead Hwy. and Industrial Ave.**

  This part generally includes the modification of the existing traffic signal, including replacement of three mast arm poles, addition of pedestrian signals, replacement of the controller cabinet, and complete re-cabling at the subject intersection. The construction of minor sidewalk extensions and pedestrian ramps is also included. The existing traffic signal, including the railroad pre-emption interface, shall remain in service throughout the project except when absolutely necessary for work occurring, as coordinated with and approved by the City.

  Note that the Contractor must obtain a "Contractor's Right-of-Entry" from Union Pacific Railroad Company (UPRR). A copy of the application form is included in this packet with the plans. The Contractor is advised that the plans have already been reviewed and approved by UPRR. The Contractor shall be responsible for meeting all UPRR requirements for work within their right-of-way, including providing the necessary insurance documentation and hiring certified railroad flaggers. The Contractor shall be responsible to pay all costs and coordinate all work directly with UPRR or their designated contractors and shall be reimbursed by the City for actual costs under the appropriate pay item. See the pay item notes for additional details.

- **PART C – ITS Improvements for LP 250 at SH 191**

  This part generally includes the installation of a new 60 ft TxDOT-standard camera pole, as well as associated conduit and cabling.

The City will furnish to the Contractor for installation ALL poles and posts, including anchor bolts, as called for in ALL THREE PARTS of this project, regardless of what is shown on the plans. The Contractor will be responsible to pick up the poles at the City of Midland storage yard opposite 1602 E. Orchard Ln, Midland, Texas, once notified of their availability. All other items to be furnished by the City shall be as listed in the plans for each respective part.

Notice to Proceed will be issued only once the City receives the signal poles and they are available for the Contractor to pick up.

The location and details for the construction and related work are shown upon the drawings included with this Request for Bids. These drawings and plans, together with the specifications, form a part of the Contract. Where figures are shown on the drawings, they shall take precedence over scaled distances and dimensions.

2. CONTRACT DEADLINE:

The deadline for substantial completion of the entire project is **150 calendar days** starting from the Notice to Proceed date, except as follows:

- **Part A** is a high priority task and all work MUST be complete within **90 calendar days** from the Notice to Proceed date.

- **Parts B and C** may be completed at any time within the overall contract period, except that once work commences at a given location, construction activity shall proceed in a reasonably expeditious manner so as to complete the work without creating an undue impact on surrounding properties or the travelling public. Work shall not be left in a partially completed condition for extended periods of time.

Notice to Proceed will be issued only once the City receives the signal poles and they are available for the Contractor to pick up.

Extensions of the project deadline may be requested by the Contractor for documented conditions such as weather days, delays due to conflicts with existing franchise utility lines, etc. which are reasonably beyond the Contractor's control. Any and all deadline extensions must be submitted by the Contractor in writing to Engineer for review, and the approval or denial of the request rests solely with the Engineer.

Unless specifically granted in writing by the Engineer, there will be no suspension of project time between phases of construction.

3. ORDER OF PRECEDENCE:

The Special Provisions take precedence over the General Conditions in this bid packet anywhere these two sections are not in agreement.

Any changes or revisions made as part of an Addendum for this project take precedence over the original bid packet and construction drawing set where the documents are in conflict.

In the construction drawing set any written or noted dimension takes precedence over dimensions measured based on the drawing scale unless otherwise directed by the Engineer.

The Contractor is to bid the quantities in the Proposal section of the bid packet even if there is a discrepancy between the Proposal quantities and those noted or measured in the construction drawing set.

4. EXAMINATION OF SITE:

Prospective bidders shall make a careful examination of the entire site of the project and shall make such explorations as may be necessary to determine the subsoil and/or water conditions to be encountered; improvements and obstructions which may be encountered; methods of providing ingress-egress to private as

well as public property; methods of handling traffic during construction and maintenance of the entire project as well as any section thereof, protection of all existing structures both above and below ground; and how the plans fit the proposed project and especially if any discrepancies exist.

5. PAYMENT:

Payment and retainage (five percent, 5%) shall be per the General Conditions.

Payment will be made for material installed and complete in place, not for material delivery or materials on hand.

6. TRAFFIC CONTROL:

All proposed traffic control shall be approved by the City where applicable. All traffic control plans must be submitted to and approved by the Traffic Operations Division no less than two (2) business days prior to starting the construction work. Traffic control for each phase of work must be approved prior to starting that work.

Generic traffic control plans or typical details may be submitted for shoulder work on any class of roadway, or for work on local or collector streets that does not require the closure of any travel lanes (i.e., all lanes are open to traffic on striped roadways, or adequate width remains available for two-way traffic on unstriped roadways). Once a generic traffic control plan or typical detail for a certain type of setup has been approved one time, the Contractor shall only be responsible for notifying the Traffic Operations Division of the location, type of setup, and dates on which they intend to utilize the pre-approved traffic control for the duration of the contract. No additional plan submittals will be required in these cases, except that the City reserves the right to suspend this exception at its discretion. For any work not fitting the above exception, or in the event that the exception is suspended by the City, a site-specific traffic control plan will be required for each work location and time period.

1. All temporary traffic control shall be in general conformance with the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) (latest edition as adopted by the Texas Department of Transportation), except as specifically directed by the City Engineer or City Traffic Engineer.
2. All temporary traffic control shall be designed, installed, and maintained by competent and qualified personnel with adequate experience in traffic control.
3. All temporary traffic control involving multiple lane closures or traffic shifts, full closures of collector or arterial streets, traffic control extending through a railroad crossing, or any setup reasonably determined by the City to be “complex”, shall be implemented only by a contractor with specific experience and expertise in the field of traffic control (i.e., a qualified “barricade company”).
4. A Traffic Control Plan (TCP) shall be submitted to the Engineering Services Department, Traffic Operations Division, in advance of any work in the right-of-way that impacts traffic. No work shall occur until an approved TCP has been returned to the Contractor.
5. A copy of the approved TCP shall be kept in the possession of the person responsible for supervising the traffic control at all times while working in the right-of-way. The approved TCP shall be presented to City staff or law enforcement upon demand at any time.
6. Depending on site conditions and the nature of the work, temporary traffic control may be approved by the City for either of the following:
    a. All Times – All traffic control, including closures, may remain in place 24 hours per day until expiration of the approved TCP.
    b. Off-Peak Only – Lane or road closures are NOT permitted from 6:00-9:00 AM and 4:00-7:00 PM on weekdays (Monday through Friday). Other traffic control not related to lane or road closures may remain in place 24 hours per day until expiration of the approved TCP.

7. The contractor setting the temporary traffic control shall be responsible for the maintenance and upkeep of all signs, barricades, and other devices, at all times.
    a. All temporary traffic control setups shall be maintained at least one time per day, including weekends and holidays.
    b. More frequent maintenance shall be performed as needed, with particular emphasis to following up after severe weather events or during times of high winds.
    c. Maintenance shall include:
        i. Verifying and correcting the location and orientation of all signs, barricades, and other devices;
        ii. Keeping signs and reflective areas of barricades and other devices clean and free of dirt buildup so as to maintain appropriate visibility and legibility; and
        iii. Ensuring the proper location, orientation, and operation of arrow boards or message boards, if present.
8. Arrow boards shall be required for lane closures under the following conditions:
    a. On roadways with a posted speed limit of 55 MPH or greater, for closures lasting more than one (1) hour;
    b. On roadways with a posted speed limit of 45 MPH or greater, for closures lasting more than four (4) hours;
    c. On any roadway if lanes will remain open to traffic travelling in the same direction on both sides of a closed lane during any overnight hours (from 7:00 PM to 6:00 AM); and
    d. At other times as shown on the approved TCP, or as otherwise directed by the City.

7. DETOURS:

The Contractor shall prosecute his work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

8. PROPERTY AND RIGHT-OF-WAY ACCESS:

Access to adjacent property shall be maintained at all times unless otherwise directed by the Engineer. If the contractor will not be working in an area for a period of one week or more, special care should be taken to address any unsafe conditions such as excavated areas or obstructions outside the worked area that could be tripping hazards, etc.

9. CONSTRUCTION MATERIALS:

The Contractor is to only provide new materials for permanent installation in any and all parts of this project, and all such materials must comply with the General Conditions, the Bid Packet Specifications, and all applicable City of Midland Standards and Specifications.

Concrete is only to be placed when the ambient temperature is between 40 degrees and 95 degrees Fahrenheit and the ambient temperature in the shade is higher than 40 degrees Fahrenheit or is 40 degrees Fahrenheit and rising.

No construction materials are to be placed or installed during rain events unless they are necessary to resolve an emergency situation or to facilitate the project site erosion control measures.

10. EROSION CONTROL:

Erosion control is the responsibility of the Contractor and erosion control measures are to be implemented so as to prevent sediment erosion from wind, rain, and other elements from the project site. Should the Engineer determine that supplementary erosion control measures are required in addition to those implemented by the Contractor then the Contractor will include additional erosion control measures within reason to the Owner's satisfaction and/or TCEQ requirements.

Reasonable erosion control measures include but are not limited to: construction entrance(s), concrete washout(s), perimeter silt fence or fiber wattle, rock rip-rap dams for concentrated runoff control, gutter and inlet protection measures such as sand bags, and stabilization of the construction area surfaces when construction work is not actively occurring by means of vegetative cover or seeded erosion control blankets.

Supplemental erosion control measures are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Site cleanup work is to be done for this project as soon as possible as per the General Conditions and will be ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes. Site cleanup is to take place throughout the project's construction as needed to maintain a clean and professional looking work area. No more than three calendar days are to elapse after completion of construction before the final roadway and right-of-way cleanup has been completed to the satisfaction of the Engineer.

11. WASTE MATERIAL:

Excess material from excavation and other construction or demolition activity will become the property of the Contractor. Excess excavation will be disposed of at locations secured by the Contractor and if necessary, approved by the Engineer. No material is to be placed on private property or City property without the approval of the Engineer and the property owner. Removal of excess material, excavation, and waste material are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Excess concrete material must be washed out in a concrete washout within the project's job site area, or else any and all other concrete material washout must occur away from the job site area in the Contractor's or concrete Supplier's own operation yards or properties. Under no circumstances are concrete trucks allowed to washout in any job site excavations, channels, public right-of-way, or on private property.

12. TESTING

It is the Contractor's responsibility to perform all required testing for any and all materials and workmanship performed or installed as part of the project's work. The cost of all such testing shall be borne solely by the Contractor unless required by the Engineer for work or materials that had previously been tested and approved and had not experienced any change in condition since that time as a result of the Contractor's work or actions; or unless additional testing outside of the project scope is performed at the request of the Engineer.

Required testing includes:

Concrete Pavement – A Slump Test is required for every cylinder set (3 test cylinders), and no less than 1 cylinder set per day when concrete is placed. Test results are to be given to the engineer upon completion of each test, with 1 cylinder set for:

A. Every 50 cubic yards of concrete placed for concrete pavement between street intersections.

B. Every 50 cubic yards of concrete placed for concrete pavement at a street intersection.

C. Every 2 sets of fillets and valley gutters at street approaches. (1 set = 2 fillets and 1 valley gutter)

D. Every 4 alley approaches or driveway approaches.

E. There will be no testing for curb, ramps, and sidewalks.

Concrete Pavement for Trench Repair – A Slump Test is required only if directed by the Engineer for pavement patches that are equal to or greater than 50 cubic yards (roughly equal to an 8' wide by 340' long by 6" thick pavement section). The slump test is to be performed once for every cylinder set (3 cylinders), and no less than 1 cylinder set per day when concrete is placed. Test results are to be given to the engineer upon completion of each test. There will be no testing for curb, ramps, and sidewalks.

Asphalt Hot-Mix Pavement – A Nuclear Gauge Density Test is required for either each day that asphalt hot-mix is placed or for every 250 linear feet of asphalt hot-mix pass, whichever results in more frequent testing. The laboratory density limits will be a minimum limit of 96%, a maximum limit of 98%, and an optimum limit of 97%. The acceptable field density range for construction of this project is 93% - 98% with a target density of 95%. Test results are to be given to the Engineer upon completion of each test.

Asphalt Hot-Mix Pavement for Trench Repair – A Nuclear Gauge Density Test is required only if directed by the Engineer for pavement patches that are equal to or greater than 620 square yards (roughly equal to an 8' wide by 700' long pavement section). The laboratory density limits will be a minimum limit of 96%, a maximum limit of 98%, and an optimum limit of 97%. The acceptable field density limit will be a minimum limit of 93%, a maximum limit of 98%, and an optimum limit of 95%. Test results are to be given to the Engineer upon completion of each test.

13. COMPLIANCE:

It is the responsibility of the Contractor to comply with all applicable provisions of the laws and building and construction codes of the City of Midland and the State of Texas, and with any regulations for the protection of workers which may be promulgated by the Government, and shall protect such work with all necessary lights, barriers, safeguards, and warnings as provided for in said specifications and the Ordinance regulations.

It is the responsibility of the Contractor to comply at all times with Occupational Safety and Health Administration (OSHA) and all other applicable safety regulations and requirements throughout the course of the project's work.

14. PERSONNEL:

It is the Contractor's responsibility to have a supervising representative of the Contractor on the construction site any time that construction work is taking place. The Contractor's representative must be on the Contractor's direct payroll. Sub-contractors or paid consultants will not satisfy this requirement.

It is also the Contractor's responsibility to provide the City with a reliable contact for issue escalation coordination. Such contacts would include the Contractor's site foreman, the Contractor's construction project manager, etc.

15. WARRANTY PERIOD:

There is a one (1) year calendar warranty period on this project for all work performed or materials installed effective immediately upon acceptance of the improvements by the Owner. The warranty period will be based on the acceptance date of the project as a whole, and not any individual phases of the project.

CITY OF MIDLAND, TEXAS

Plans for the Construction of

TRAFFIC SIGNAL IMPROVEMENTS

For

INTERSECTIONS OF N. COLORADO ST. AND W. TEXAS AVENUE AND N. LORAINE ST. AND W. TEXAS AVENUE

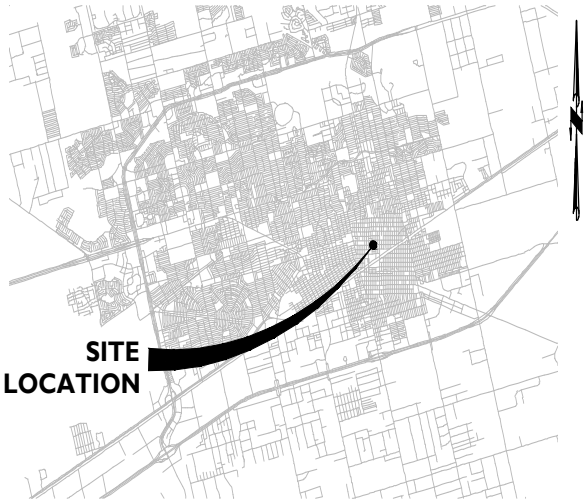
CONTRACTOR_____
DATE CONTRACTOR BEGAN WORK_____
DATE WORK WAS COMPLETED_____
DATE WORK WAS ACCEPTED_____
FINAL CONTRACT COST_____

INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
1	COVER PAGE
2	DEMO AND REMOVAL PLAN COLORADO AND TEXAS
3	DEMO AND REMOVAL PLAN LORAINE AND TEXAS
4	PAVING PLAN COLORADO AND TEXAS
5	PAVING PLAN LORAINE AND TEXAS
6	PAVING DETAILS
7	PAVING DETAILS
8	PAVING DETAILS
9	PAVING DETAILS
10	PAVING DETAILS
11	PAVING DETAILS
12	QUANTITIES
13	EXISTING TRAFFIC SIGNAL COLORADO AND TEXAS
14	EXISTING TRAFFIC SIGNAL LORAINE AND TEXAS
15	PROPOSED TRAFFIC SIGNAL COLORADO AND TEXAS
16	SIGNAL CHARTS COLORADO AND TEXAS
17	PROPOSED TRAFFIC SIGNAL LORAINE AND TEXAS
18	SIGNAL CHARTS LORAINE AND TEXAS
19	ADA RAMP MODIFICATIONS COLORADO AND TEXAS
20	ADA RAMP MODIFICATIONS LORAINE AND TEXAS

PATRICK PAYTON
MAYOR

COURTNEY SHARP
CITY MANAGER

1 - SCOTT DUFFORD 2 - VACANT
3 - JACK LADD 4 - LORI BLONG
AT LARGE - MICHAEL TROST
AT LARGE - SPENCER ROBNETT
COUNCIL MEMEBERS



VICINITY MAP
N.T.S.

JOSE E. ORTIZ
DIRECTOR, ENGINEERING SERVICES DEPARTMENT

MICHAEL PACELLI, P.E., PTOE
CITY TRAFFIC ENGINEER

100% SUBMITTAL

MIDLAND Engineering Services

JANUARY 2020

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
01/13/2020

Andrew L. Mellen, P.E.
PROJECT ENGINEER

DATE 01/13/2020

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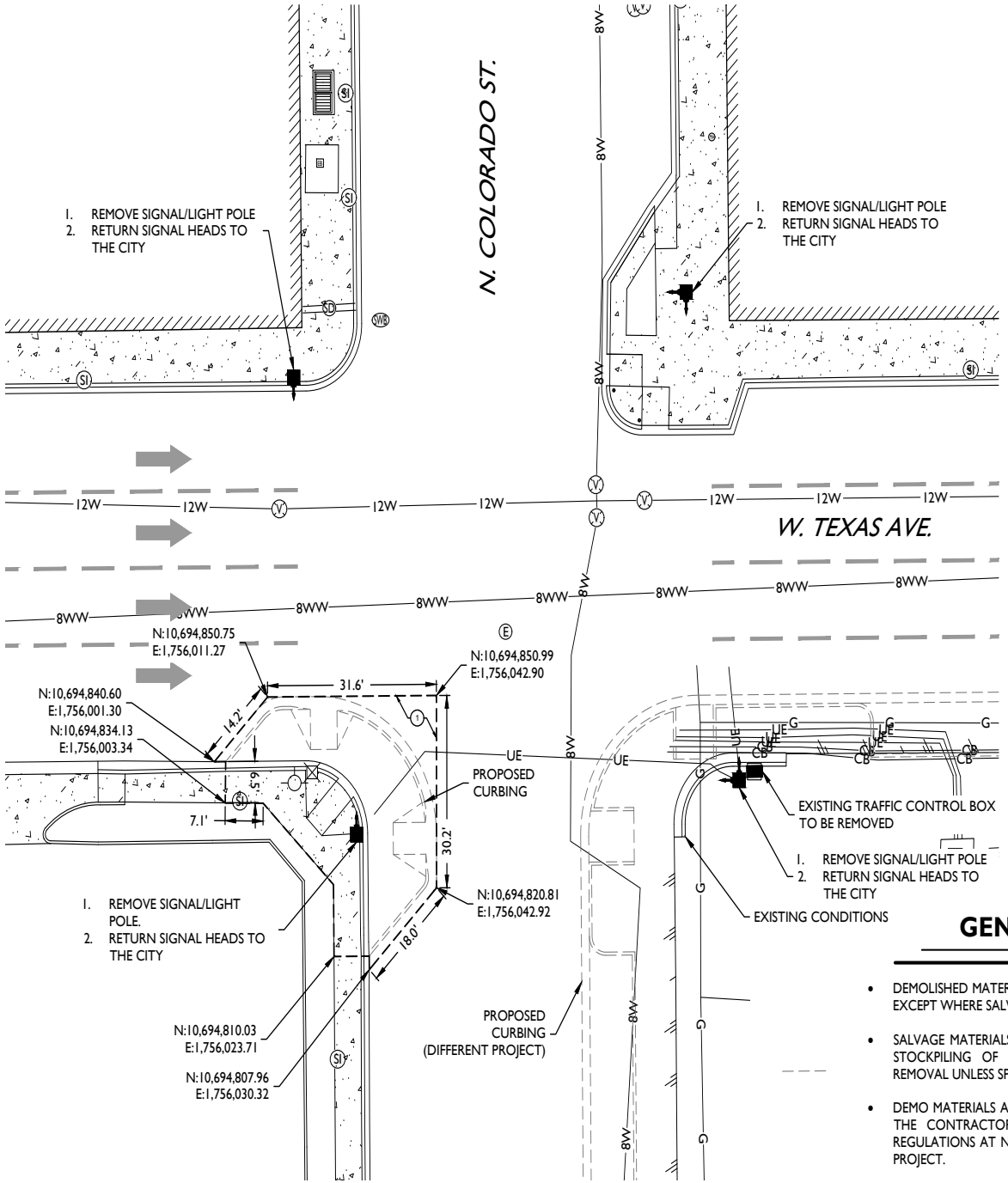

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SCALE 1" = 20'

LEGEND

- DENOTES EXISTING ELECTRICAL BOX
- DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING LIGHT POLE
- DENOTES EXISTING WATER VALVE
- DENOTES EXISTING SIGN
- DENOTES EXISTING ELECTRICAL MANHOLE
- DENOTES EXISTING MANHOLE
- DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- DENOTES EXISTING STORM DRAIN
- DENOTES EXISTING TRAFFIC SIGNAL
- DENOTES EDGE OF ASPHALT
- DENOTES EXISTING 8" WATER LINE
- DENOTES EXISTING 12" WATER LINE
- DENOTES EXISTING 8" WASTEWATER LINE
- DENOTES EXISTING GAS LINE (ATMOS)
- DENOTES EXISTING UNDERGROUND ELECTRIC LINE
- DENOTES EXISTING UNDERGROUND CABLE LINE
- DENOTES FUTURE PROPOSED CURBING

DEMO KEY NOTES:

TYP. (1.) CONTRACTOR IS TO SAWCUT NEATLY ALONG EDGE OF LIP AND AS SHOWN. USE EXISTING CONCRETE PAVEMENT AS FORM. CONTRACTOR IS TO TAKE EXTRA CARE NOT TO DAMAGE PAVEMENT WITH VEHICLE TRAFFIC OR EQUIPMENT.

GENERAL DEMO NOTES:

- DEMOLISHED MATERIALS WILL BECOME THE PROPERTY OF THE CONTRACTOR, EXCEPT WHERE SALVAGE MATERIALS ARE NOTED OTHERWISE.
- SALVAGE MATERIALS ARE TO BE STOCKPILED AS INDICATED BY THE OWNER. STOCKPILING OF SALVAGE MATERIALS IS CONSIDERED INCIDENTAL TO REMOVAL UNLESS SPECIFICALLY NOTED OTHERWISE.
- DEMO MATERIALS ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER / ENGINEER OR PROJECT.
- ANY HAZARDOUS MATERIALS ENCOUNTERED SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER / ENGINEER.

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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APPROVED BY: AMH
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JOB#: 190896
DATE: 01/13/2020

MIDLAND Engineering Services

DEMO AND REMOVAL PLAN COLORADO AND TEXAS

02
02 OF 20

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GENERAL DEMO NOTES:

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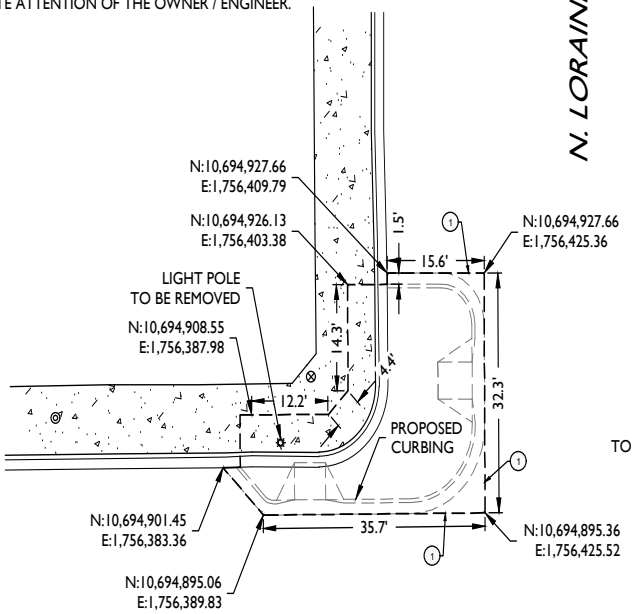
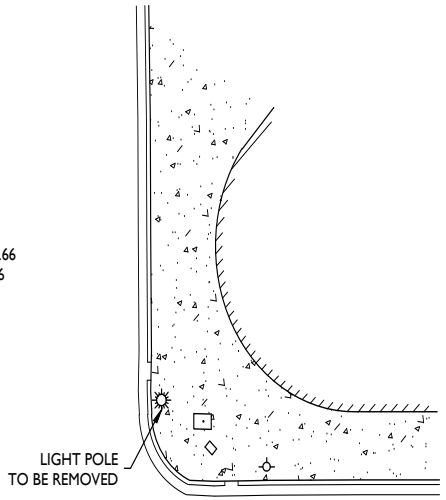
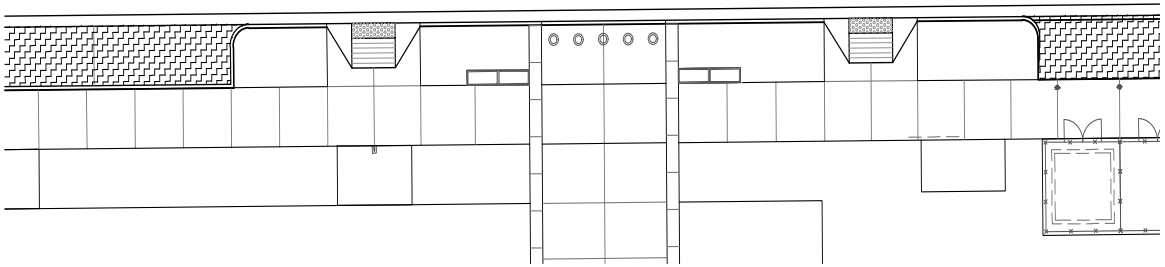


N. LORAINE ST.



W. TEXAS AVE.



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SCALE 1" = 20'

LEGEND

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- CB — DENOTES EXISTING UNDERGROUND CABLE LINE
- DENOTES FUTURE PROPOSED CURBING

DEMO KEY NOTES:

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STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
01/13/2020

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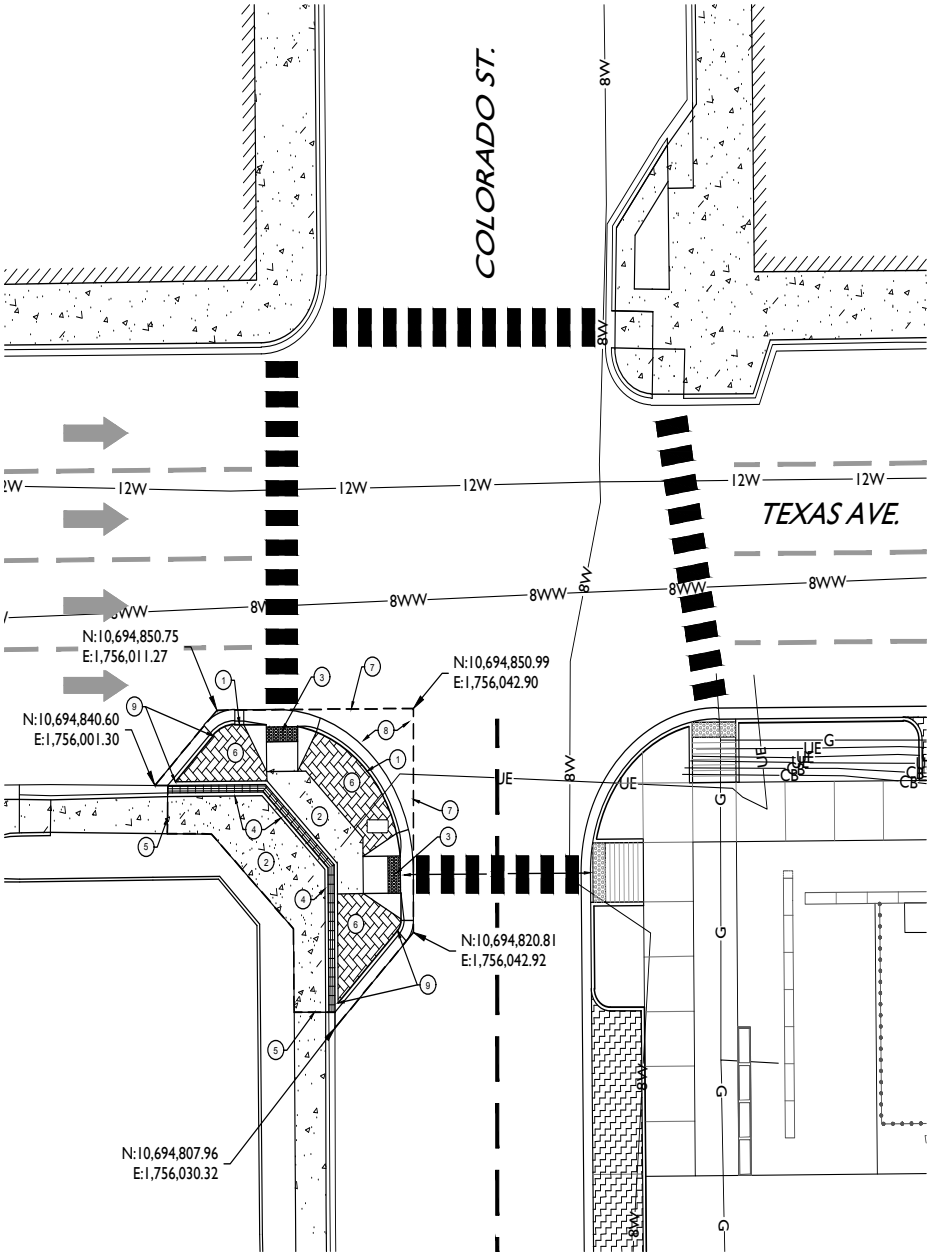
MIDLAND Engineering Services

DEMO AND REMOVAL PLAN LORAINE AND TEXAS

03
03 OF 20



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LEGEND

	DENOTES FOUND BENCHMARK AS NOTED
	DENOTES EXISTING WATER VALVE
SI	DENOTES EXISTING SIGN
8WW	DENOTES EXISTING 8" WASTE WATER LINE
8W	DENOTES EXISTING 8" WATER LINE
12W	DENOTES EXISTING 12" WATER LINE
PL	DENOTES EXISTING PIPELINE
G	DENOTES EXISTING GAS LINE
CB	DENOTES EXISTING UNDERGROUND CABLE LINE
UE	DENOTES EXISTING UNDERGROUND ELECTRIC LINE

PAVING NOTES:

TYP. 1. CONSTRUCT STANDARD (RAISED LIP) TYPE "A" CURB PER DETAIL 205 OF THE CITY OF MIDLAND'S STANDARD CONSTRUCTION DETAILS, INCLUDED ON SHEET 06.

2. CONSTRUCT STANDARD FIBERMESH REINFORCED SIDEWALK PER DETAIL 225 OF THE CITY OF MIDLAND'S STANDARD CONSTRUCTION DETAILS, INCLUDED ON SHEET 07.
3. CONSTRUCT ADA RAMP PER DETAIL 232, INCLUDED ON SHEET 08.
4. CONSTRUCT 1' WIDE FLUME W/ NEENAH R-4999-CX, P-TYPE GRATE OR EQUIVALENT. SEE DETAIL 01 ON SHEET 11.
5. REMOVE EXISTING SIDEWALK TO NEAREST JOINT. SIDEWALK IS TO BE SAWCUT FULL DEPTH. PLACE NEW SIDEWALK UP TO CUT WITH EXPANSION JOINT MATERIAL PER SIDEWALK DETAIL
6. INSTALL PAVERS PER DETAIL 01 ON SHEET 09.
7. SAWCUT LINE. SEE DEMO PLAN.
8. INSTALL HEAVY DUTY CONCRETE PAVEMENT PER DETAIL 01 ON SHEET 10.
9. TRANSITION CURB HEIGHT FROM 6" TO 8" OVER THIS LENGTH.

CONCRETE JOINTING NOTE:

MAVERICK DOES NOT TYPICALLY PROVIDE A JOINT LAYOUT PLAN WITH CONCRETE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THEIR OWN JOINT LAYOUT PLAN. MAVERICK CAN PROVIDE THIS SERVICE TO THE CONTRACTOR AT AN ADDITIONAL EXPENSE. PLEASE CONTACT MAVERICK FOR MORE INFORMATION ON THIS ADDITIONAL DESIGN SERVICE.

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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MIDLAND Engineering Services

PAVING PLAN
COLORADO AND
TEXAS

04
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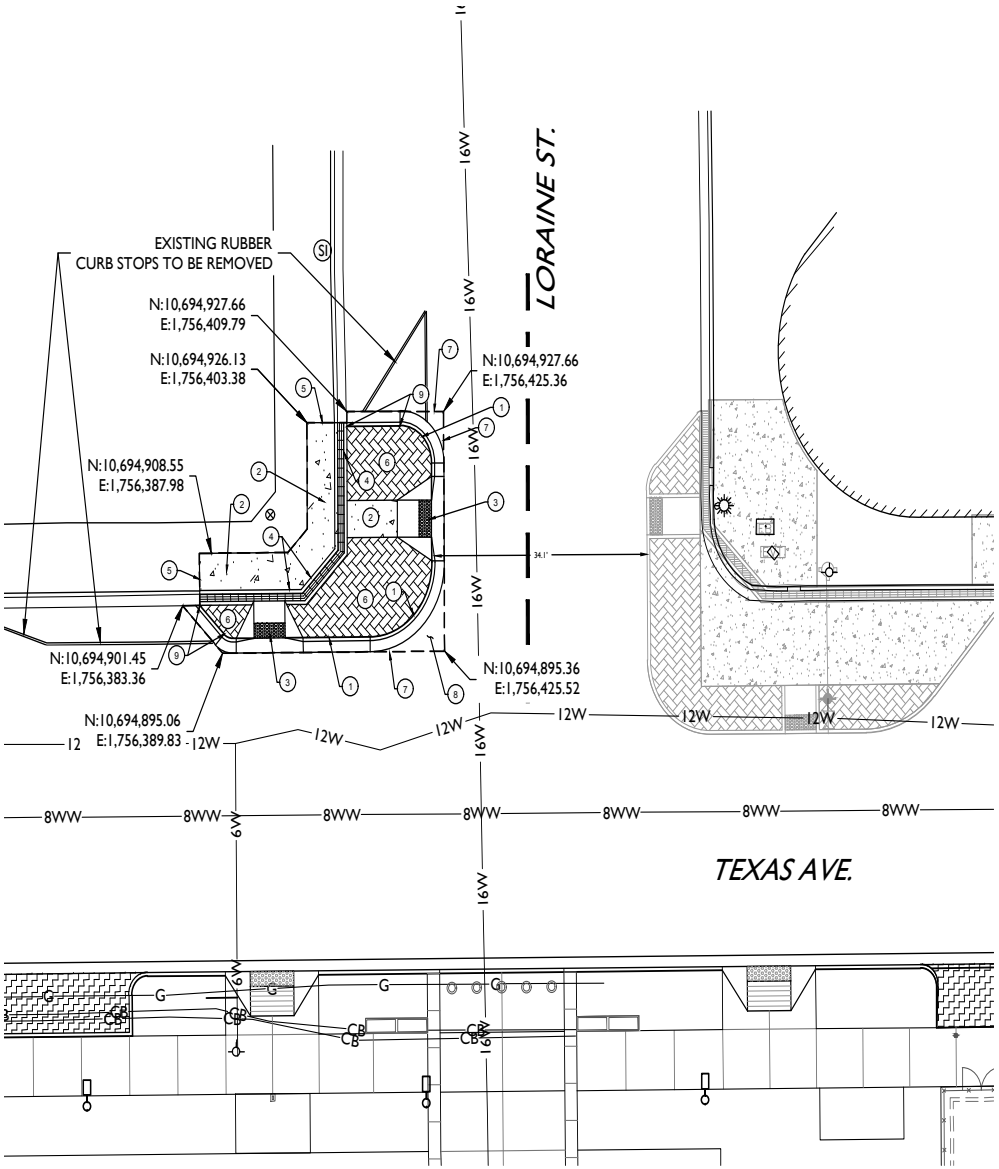

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- CB — DENOTES EXISTING UNDERGROUND CABLE LINE

PAVING NOTES:

TYP. (1.) CONSTRUCT STANDARD (RAISED LIP) TYPE "A" CURB PER DETAIL 205 OF THE CITY OF MIDLAND'S STANDARD CONSTRUCTION DETAILS, INCLUDED ON SHEET 06.

2. CONSTRUCT STANDARD FIBERMESH REINFORCED SIDEWALK PER DETAIL 225 OF THE CITY OF MIDLAND'S STANDARD CONSTRUCTION DETAILS, INCLUDED ON SHEET 07.
3. CONSTRUCT ADA RAMP PER DETAIL 232, INCLUDED ON SHEET 08.
4. CONSTRUCT 1' WIDE FLUME W/ NEENAH R-4999-CX, P-TYPE GRATE OR EQUIVALENT. SEE DETAIL 01 ON SHEET 11.
5. REMOVE EXISTING SIDEWALK TO NEAREST JOINT. SIDEWALK IS TO BE SAWCUT FULL DEPTH. PLACE NEW SIDEWALK UP TO CUT WITH EXPANSION JOINT MATERIAL PER SIDEWALK DETAIL
6. INSTALL PAVERS PER DETAIL 01 ON SHEET 09.
7. SAWCUT LINE. SEE DEMO PLAN.
8. INSTALL HEAVY DUTY CONCRETE PAVEMENT PER DETAIL 01 ON SHEET 10.
9. TRANSITION CURB HEIGHT FROM 6" TO 8" OVER THIS LENGTH.

CONCRETE JOINTING NOTE:

MAVERICK DOES NOT TYPICALLY PROVIDE A JOINT LAYOUT PLAN WITH CONCRETE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THEIR OWN JOINT LAYOUT PLAN. MAVERICK CAN PROVIDE THIS SERVICE TO THE CONTRACTOR AT AN ADDITIONAL EXPENSE. PLEASE CONTACT MAVERICK FOR MORE INFORMATION ON THIS ADDITIONAL DESIGN SERVICE.

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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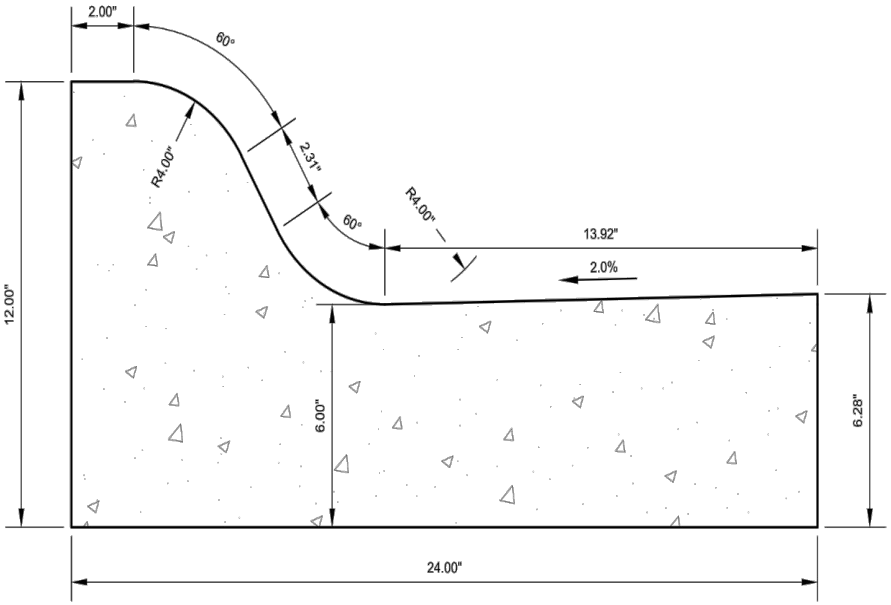
MIDLAND Engineering Services

PAVING PLAN LORAINE AND TEXAS

05
05 OF 20

7.63



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 205
		TYPE A STANDARD CURB AND GUTTER		

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ANDREW L. MELLEN
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PROFESSIONAL ENGINEER
01/13/2020

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06
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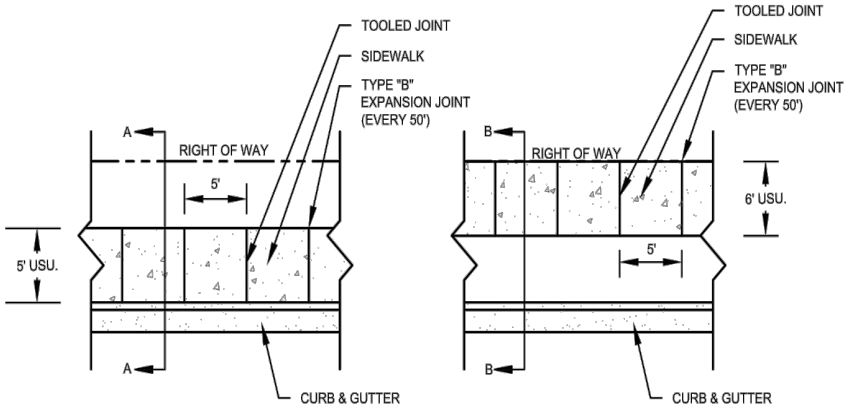
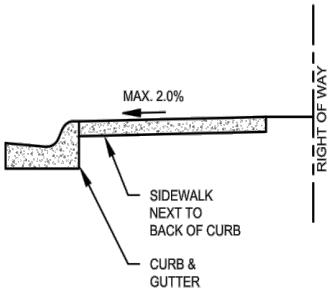
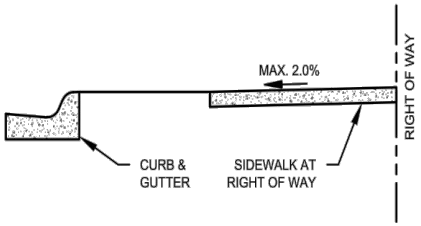


ATTACHED SIDEWALK PLACEMENT



SECTION A - A

DETACHED SIDEWALK PLACEMENT



SECTION B - B

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" AND HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SIDEWALK TO BE A MINIMUM OF 5' WIDE AND 4" THICK.
3. SIDEWALKS TO HAVE TYPE A SAWCUT JOINTS OR TOOLED JOINTS EVERY 5'.
4. TYPE "B" EXPANSION JOINTS TO BE LOCATED AT ALL PEDESTRIAN ACCESS RAMPS AND WHEREVER NEW SIDEWALK IS PLACED ADJACENT TO EXISTING CONCRETE.
5. ATTACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE BACK OF CURB.
6. DETACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE RIGHT-OF-WAY.
7. SIDEWALK CROSS-SLOPE MAY NOT EXCEED 2.0%.
8. ALL EXPOSED SIDEWALK EDGES TO HAVE A 1/2" RADIUS.
9. WHERE OBSTRUCTION IN SIDEWALK EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE. SIDEWALK LOCATION MAY BE SHIFTED WITH THE APPROVAL OF THE CITY ENGINEER.
10. ALL SIDEWALKS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE CITY ENGINEER.
11. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
12. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.
13. SIDEWALKS IN DOWNTOWN PER CENTRAL BUSINESS DISTRICT POLICY.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
		STANDARD SIDEWALK		225

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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MIDLAND Engineering Services

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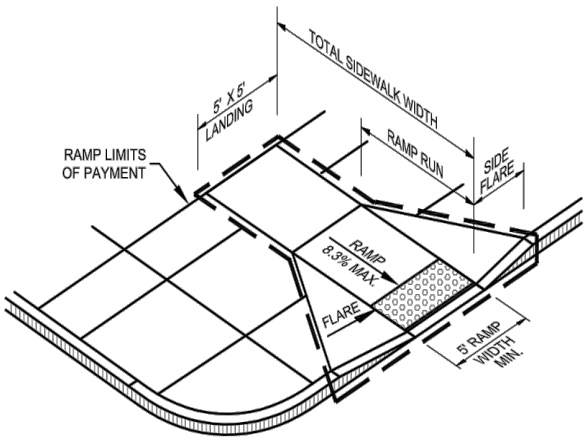

TYPE 1

PERPENDICULAR CURB RAMP

CURB RAMP NOTES:

1. ADJUST CURB RAMP LOCATION AND OR TYPE SO THAT NO OBSTRUCTION IS LOCATED WITHIN THE LANDING AREA.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
3. LANDINGS SHALL BE 5'X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION. WHERE OBSTRUCTIONS EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE IN WIDTH AND LENGTH OF THE LANDING.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND TO THE ENTIRE OUTSIDE OF THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
8. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS,OR AS DIRECTED BY THE ENGINEER.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
10. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.
11. ALL RAMPS AND LANDINGS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE ENGINEER.
12. PLACE 6" OF CONCRETE IN RAMPS, LANDINGS, AND FLARES THAT ARE LOCATED AT THE RETURNS ADJACENT TO THE BACK OF CURB OF ARTERIAL STREETS AND COMMERCIAL SITES.

GENERAL NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" WITH A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE THROUGHOUT.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE DIRECTED BY ADA STANDARDS AND RESOURCES.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	PERPENDICULAR CURB RAMP		232
APPROVED: MCC			

STATE OF TEXAS
ANDREW L. MELLEN
106572
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PROFESSIONAL ENGINEER
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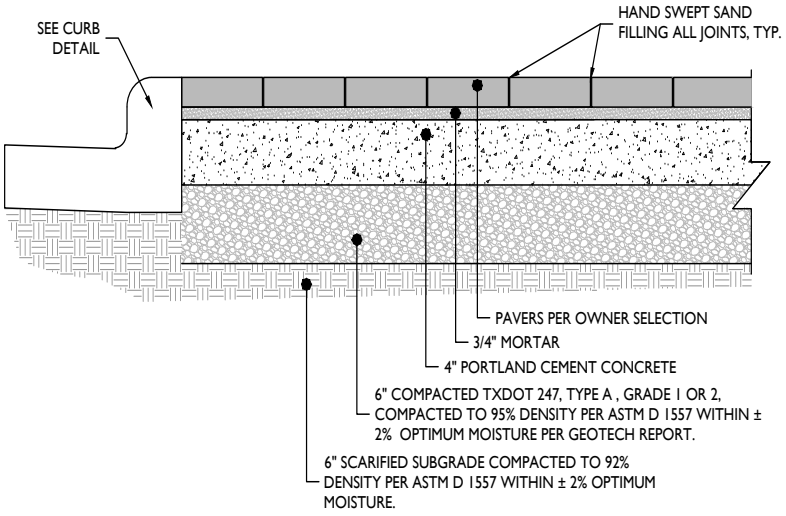

NOTES:

- 3,600 COMPRESSIVE STRENGTH @ 28 DAYS, REINFORCED WITH #3 BARS @ 16" ON CENTER.
- THE MAXIMUM CONTROL JOINT SPACING SHOULD BE HELD AT A RANGE FROM 24 TO 36 TIMES THE SLAB THICKNESS, WITH A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5.

1 PAVERS ON NEW CONCRETE BASE

N.T.S.

STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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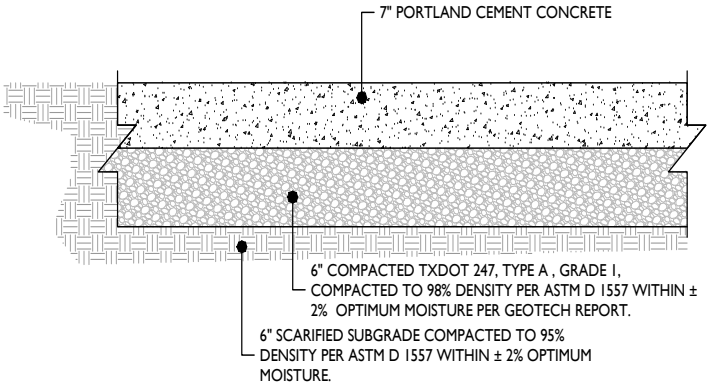

NOTES:

- WHERE NOT SPECIFIED ELSEWHERE, CONCRETE IS TO HAVE THE FOLLOWING PROPERTIES;
  - 3,600 COMPRESSIVE STRENGTH @ 28 DAYS, REINFORCED WITH #3 BARS @ 16" ON CENTER.
  - COARSE AGGREGATE IS TO BE ASTM C33, GRADE NO. 67 COMPLIANT.
  - CEMENT IS TO BE ASTM C150 TYPE I OR II COMPLIANT.
- THE MAXIMUM CONTROL JOINT SPACING SHOULD BE HELD AT A RANGE FROM 24 TO 36 TIMES THE SLAB THICKNESS, WITH A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5.
- CONCRETE IS TO BE PLACED IN ACCORDANCE WITH TXDOT ITEM 421.

1 CONCRETE PAVEMENT - HEAVY DUTY

N.T.S.

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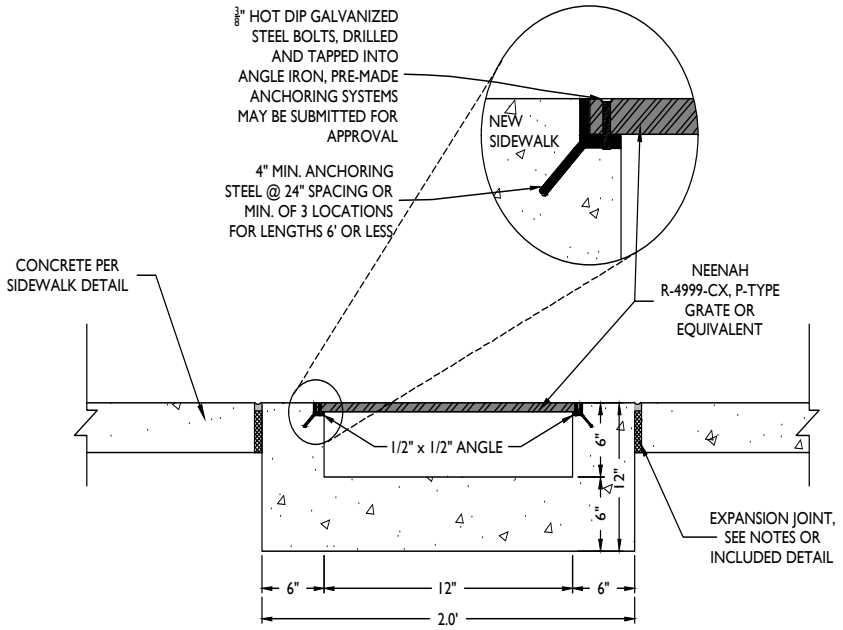


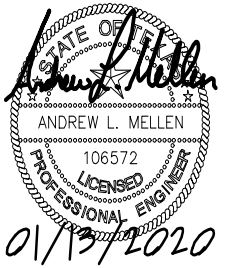
PROFILE VIEW

NOTES:

- MINIMUM COMPRESSIVE STRENGTH 3,000 PSI @ 28 DAYS
- SIDEWALK SLOPES MUST COMPLY WITH ADA GUIDELINES. MAXIMUM CROSS SLOPE IS 2.00%.
- EXPANSIONS JOINT MATERIAL (1/2") IS TO BE PLACED TO EITHER SIDE OF DRAINAGE FLUME.
- REINFORCE WITH FIBERMESH (TYP) SYNTHETIC FIBER REINFORCEMENT - FIBERMESH 150 MATERIAL: 100 PERCENT VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS, CONTAINING NO REPROCESSED OLEFIN MATERIALS. CONFORMANCE: ASTM C 1116, TYPE III. APPLICATION RATE: 1.5 POUNDS PER CUBIC YARD OF CONCRETE (OR APPROVED EQUAL).

1 SIDEWALK DRAINAGE FLUME

N.T.S.



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MIDLAND Engineering Services

PAVING DETAILS

11
11 OF 20

7.69

	SAWCUT	EXISTING CONCRETE REMOVAL	EXISTING SIDEWALK REMOVAL	EXISTING CURB AND GUTTER REMOVAL
UNIT	LF	SY	SY	LF
DEPTH	6"	6"+/-	-	8"
SHEET 02	94	53	32	50
SHEET 03	87	74	20	55
SHEET 04	0	0	0	0
SHEET 05	0	0	0	0
TOTALS:	181	127	52	105

	8" FLUME WITH GRATE	NEW SIDEWALK	CURB RAMP	PAVER SECTION (PAVERS, SAND, 8" BASE)	NEW CURBING 6" INCLUDES TRANSITION	HEAVY DUTY CONCRETE
UNIT	LF	SY	SY	SY	LF	SY
DEPTH	8"	4"	4"	4"	6"	12"
SHEET 02	0	0	0	0	0	0
SHEET 03	0	0	0	0	0	0
SHEET 04	50	24	11	20	54	3
SHEET 05	55	45	10	30	57	3
TOTALS:	105	69	21	50	111	6

	CROSSWALK
UNIT	LF
DEPTH	100 MIL
SHEET 02	0
SHEET 03	0
SHEET 04	162
SHEET 05	0
TOTALS:	162

ANDREW L. MELLEN
106572
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
01/13/2020

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QUANTITIES

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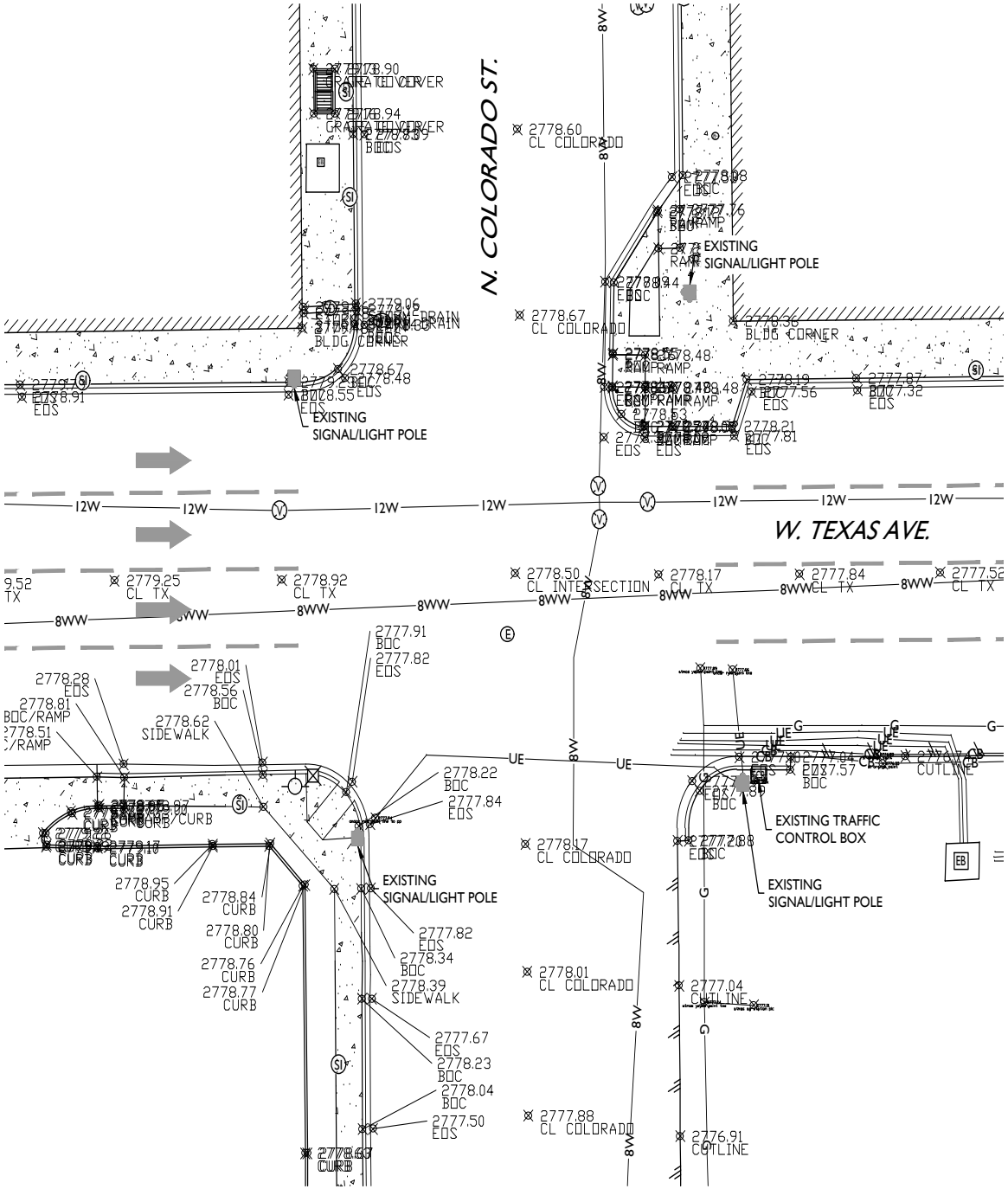

0' 20' 40' 60'

SCALE 1" = 20'

LEGEND

EB	DENOTES EXISTING ELECTRICAL BOX
TCB	DENOTES EXISTING TRAFFIC CONTROL BOX
	DENOTES EXISTING FIRE HYDRANT
	DENOTES EXISTING LIGHT POLE
V	DENOTES EXISTING WATER VALVE
SI	DENOTES EXISTING SIGN
E	DENOTES EXISTING ELECTRICAL MANHOLE
M	DENOTES EXISTING MANHOLE
SWB	DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
SD	DENOTES EXISTING STORM DRAIN
	DENOTES EXISTING TRAFFIC SIGNAL
	DENOTES EDGE OF ASPHALT
8W	DENOTES EXISTING 8" WATER LINE
12W	DENOTES EXISTING 12" WATER LINE
8WW	DENOTES EXISTING 8" WASTEWATER LINE
G	DENOTES EXISTING GAS LINE
UE	DENOTES EXISTING UNDERGROUND ELECTRIC LINE
CB	DENOTES EXISTING UNDERGROUND CABLE LINE
PL	DENOTES EXISTING PIPELINE ATMOS

STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
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EXISTING TRAFFIC SIGNAL COLORADO AND TEXAS

13

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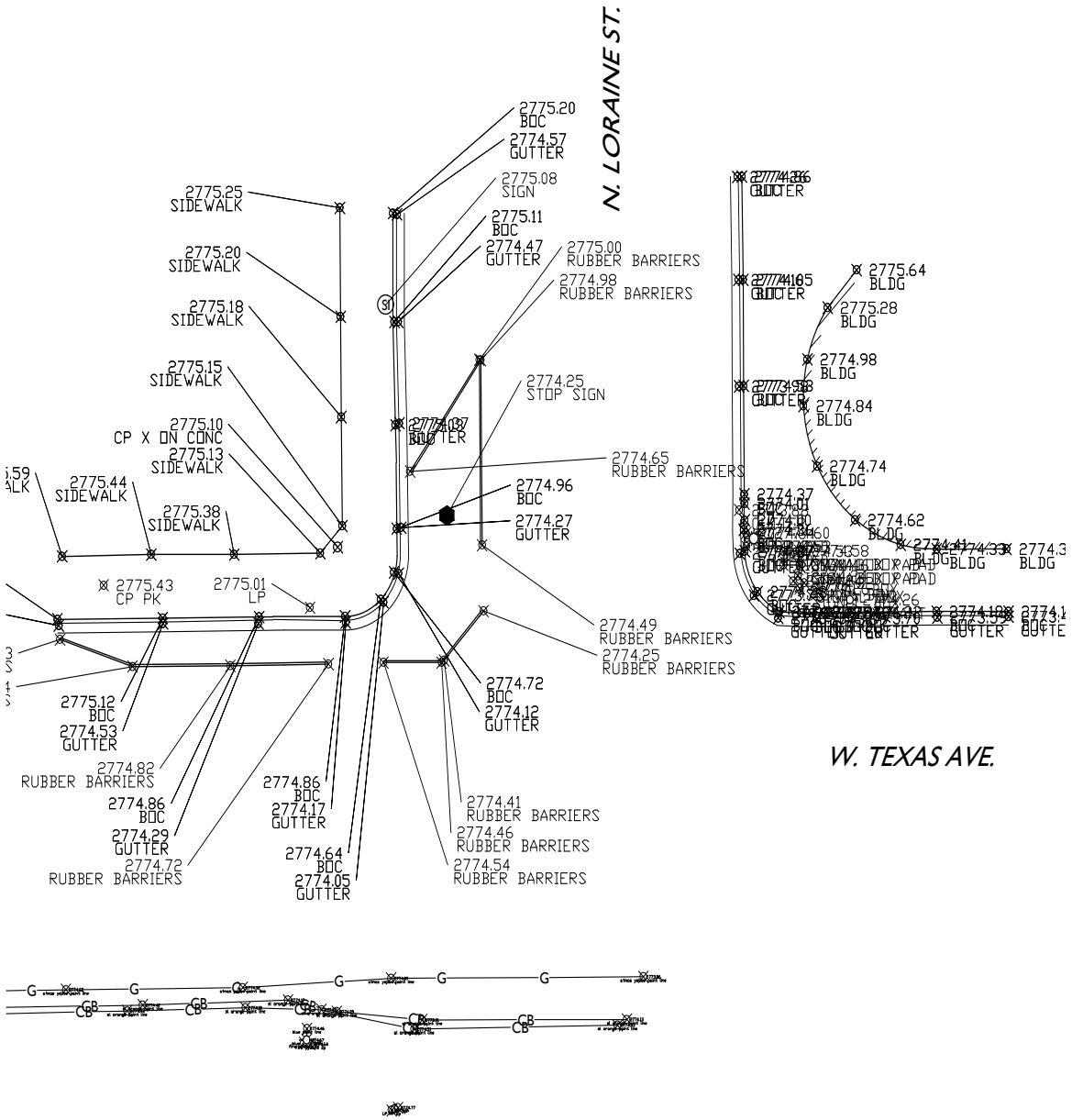

0' 20' 40' 60'

SCALE 1" = 20'

LEGEND

- EB — DENOTES EXISTING ELECTRICAL BOX
- TCB — DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING LIGHT POLE
- V — DENOTES EXISTING WATER VALVE
- SI — DENOTES EXISTING SIGN
- E — DENOTES EXISTING ELECTRICAL MANHOLE
- MH — DENOTES EXISTING MANHOLE
- SWB — DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- SD — DENOTES EXISTING STORM DRAIN
- DENOTES EXISTING TRAFFIC SIGNAL
- DENOTES EDGE OF ASPHALT
- 8W — DENOTES EXISTING 8" WATER LINE
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STATE OF TEXAS
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106572
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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EXISTING TRAFFIC SIGNAL LORAINE AND TEXAS

14
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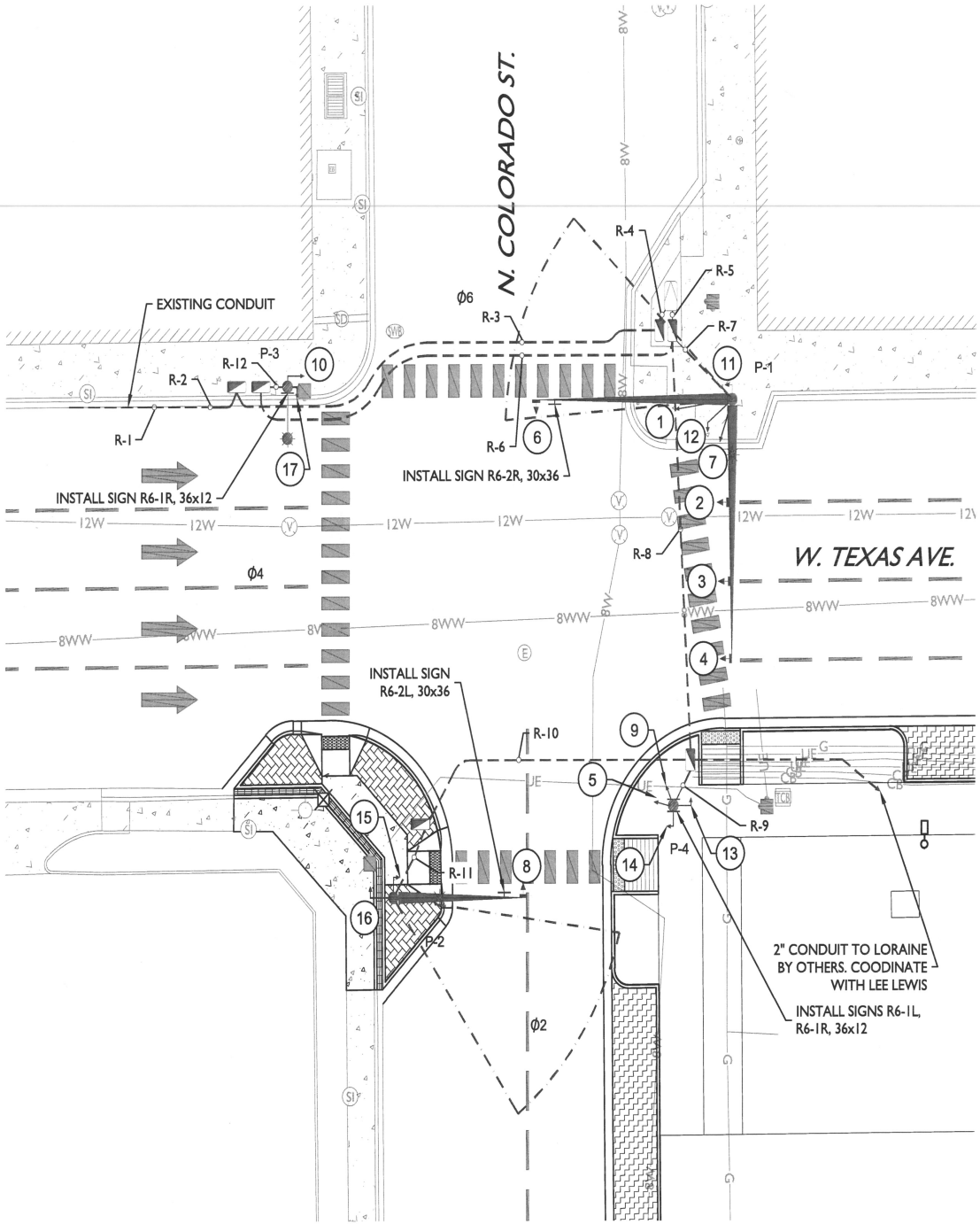

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LEGEND

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- G — DENOTES EXISTING GAS LINE
- UE — DENOTES EXISTING UNDERGROUND ELECTRIC LINE
- CB — DENOTES EXISTING UNDERGROUND CABLE LINE
- DENOTES EXISTING SIGNAL CONDUIT
- DENOTES PROPOSED LUMINAIRE
- DENOTES PROPOSED STEEL POLE AND MAST ARM
- DENOTES PROPOSED CONTROLLER BOX
- DENOTES PROPOSED GROUND BOX
- DENOTES PROPOSED PEDESTRIAN SIGNAL & NO.
- DENOTES PROPOSED SIGNAL HEAD & NO.
- DENOTES PROPOSED SIGNAL CONDUIT RUN (R)
- DENOTES PROPOSED DETECTION ZONE

NEW CROSSWALKS TO BE INSTALLED BY CITY OF MIDLAND.

STATE OF TEXAS
MICHAEL J. PACELLI
108082
LICENSED
PROFESSIONAL ENGINEER
01/13/2020

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PROPOSED TRAFFIC SIGNAL COLORADO AND TEXAS

15
15 OF 20

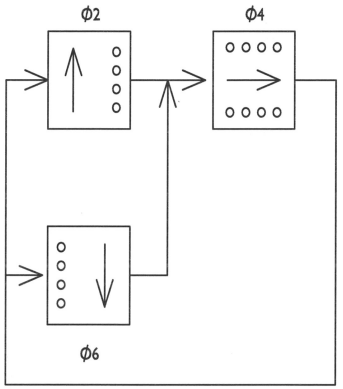
SIGNAL NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING SIGNAL / LIGHT POLES (4) AND CONTROLLER CABINET (1). CITY WILL COORDINATE WITH ONCOR FOR REMOVAL OF OVERHEAD STREET LIGHT POWER IN ADVANCE OF WORK. POLE FOUNDATIONS ON NW, NE, AND SW CORNERS TO BE BROKEN DOWN TO 12" BELOW SIDEWALK GRADE.
2. EXISTING CONDUIT FROM ELECTRIC SERVICE POINT TO BE INTERCEPTED AND EXTENDED ON NW CORNER APPROXIMATELY AS SHOWN ON PLANS.
3. CONTROLLER, CABINET, BATTERY BACKUP, POLES, ANCHOR BOLTS, APS PUSH BUTTONS, LED STREET LIGHT HEADS, AND ILSN SIGNS SHALL BE FURNISHED BY CITY AND INSTALLED BY CONTRACTOR. ALL OTHER ITEMS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
4. THE COMMUNICATIONS RADIO SHALL BE FURNISHED AND INSTALLED BY THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE CAT 5 CABLE TO POLE P-1, AND SHALL COIL SLACK CABLE IN BASE OF POLE OR NEAREST PULLBOX UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL THE WAVETRONIX DETECTION SYSTEM, INCLUDING ONE STOPLINE PRESENCE UNIT EACH ON POLES P-1 AND P-2, ONE 4-CHANNEL PROCESSOR IN THE CABINET, AND ALL RELATED CABLE AND ACCESSORIES. THE CITY WILL BE RESPONSIBLE FOR CONFIGURING THE EQUIPMENT FOLLOWING INSTALLATION.
6. CONTRACTOR IS ADVISED THAT EXISTING PAVEMENT THICKNESS IS UNKNOWN, BUT IS VERY THICK, AND THAT SOILS BELOW THE ROAD BED ARE VERY HARD. USE OF A ROCK SAW FOR CONDUIT INSTALLATION WILL LIKELY BE REQUIRED.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DETAILS UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

SIGNAL CONDUIT AND CABLES

RUN NO.	QTY / SIZE	LENGTH (FT)	BORE (B) TRENCH(T) EXISTING	BARE #6 GROUND	XHHW #6 BLACK	XHHW #6 WHITE	2 COND. #14 TWISTED	5 COND. #14	20 COND. #14	TRAY CABLE ILLUMINATI	TRAY CABLE ILSN	6 COND.	WAVETRONI CAT 5	ETHERNET
R-1	1-UNK	-	E	EXIST	EXIST	EXIST								
R-2	1-3"	5	T	1	1	1								
R-3	1-3"	80	T	1	1	1								
R-4	1-3"	5	T	1	1	1								
R-5	2-3"	5	T	1			8	1	3	3	3	2	1	
R-6	1-3"	80	T	1			2	1		1				
R-7	1-3"	15	T	1			2		1	1	2	1	1	
R-8	1-3"	65	T	1			4		2	1	1	1		
R-9	1-3"	5	T	1			2		1					
R-10	1-3"	55	T	1			2		1	1	1	1		
R-11	1-3"	10	T	1			2		1	1	1	1		
R-12	1-3"	5	T	1			2	1		1				
CABLE TOTALS (FT)				330	90	90	640	90	230	245	175	155	20	
CONDUIT TOTALS (FT), 3" TRENCHED				330										

SEQUENCE DIAGRAM



CABLE / WIRE INSIDE POLE

POLE NUMBER	2 COND. #14 TWISTED	3 COND. #14	5 COND. #14	20 COND. #14	TRAY CABLE ILLUMINATI	TRAY CABLE ILSN	6 COND.	WAVETRONI CAT 5	ETHERNET
P-1	20	20	265	5	45	70	25	30	
P-2	20	20	70	5	45	35	25	-	
P-3	20	20	5	-	45	-	-	-	
P-4	20	20	40	5	-	-	-	-	
TOTAL	80	80	380	15	135	105	50	30	

POLE AND HEAD CHART

POLE NUMBER	P-1								P-2		P-3		P-4			
POLE TYPE / SIGNAL ARM LEN	DMA 40' / 36'								SMA 24'		ST LT 30'H		PED 12-16'H			
FOUNDATION TYPE	36-A								30-A		30-RIF		24-A			
LUMINAIRES	1								1		1		-			
ILSN ARMS	2								1		-		-			
SIZE OF LENS	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"
SIGNAL TYPE	V3	H3	H3	H3	H3	V3	PED	PED	H3	PED	PED	PED	PED	V3	V3	PED	PED
SIGNAL FACE NO.	1	2	3	4	6	7	11	12	8	15	16	10	17	5	9	13	14
SIGNAL INDICATIONS	R	R	R	R	R	R	W	W	R	W	W	W	W	R	R	W	W
	Y	Y	Y	Y	Y	Y	DW	DW	Y	DW	DW	DW	DW	Y	Y	DW	DW
	G	G	G	G	G↑	G			G↑					G	G		

STATE OF TEXAS
MICHAEL J. PACELLI
108082
LICENSED
PROFESSIONAL ENGINEER
01/13/2020

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DESCRIPTION	BY	DATE	REV. NO.

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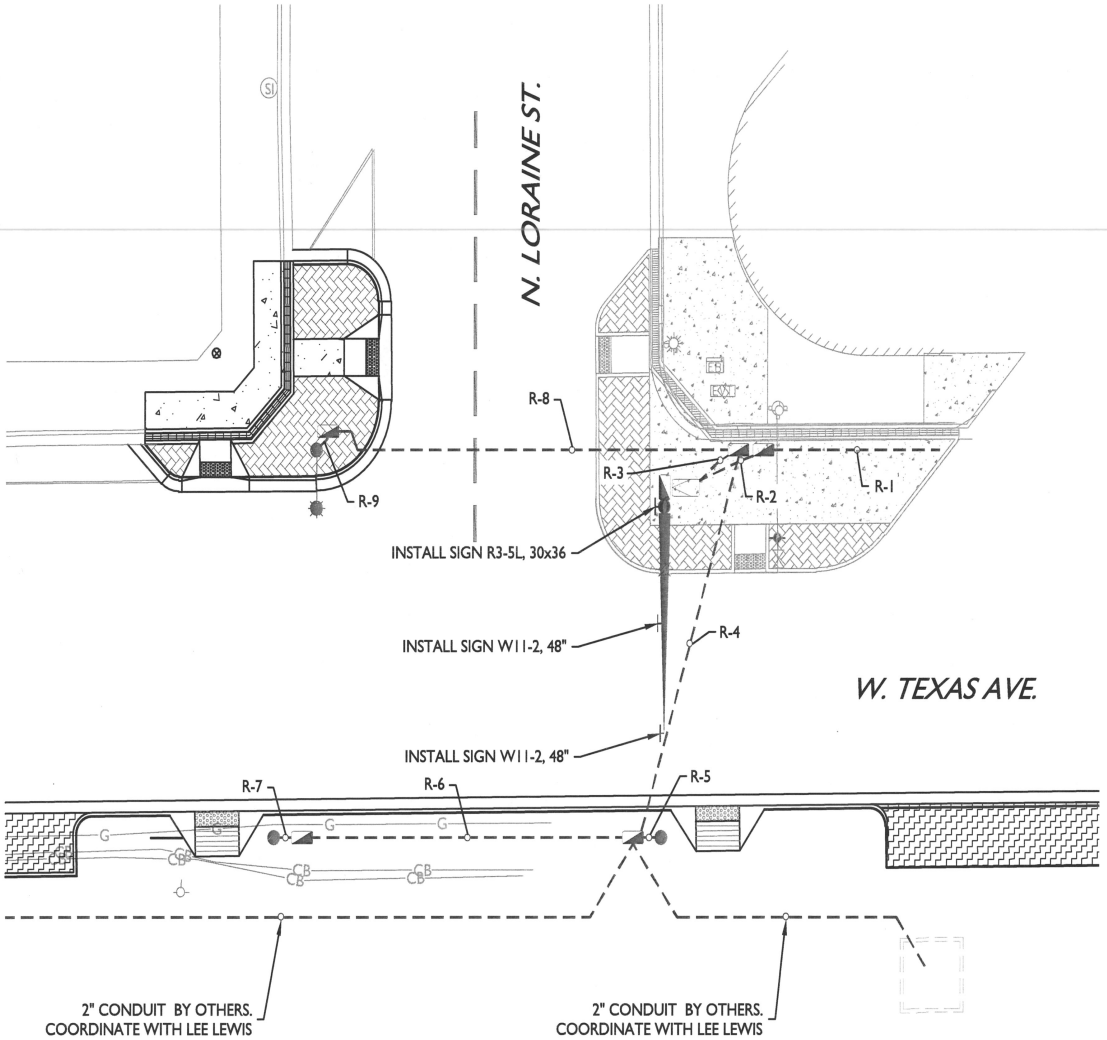
CHECKED BY: AMH
APPROVED BY: AMH
SCALE: 1:20
JOB#: 1900896
DATE: 01/13/2020

MIDLAND Engineering Services

SIGNAL CHARTS COLORADO AND TEXAS

16
16 OF 20

7.74



0' 20' 40' 60'

SCALE 1" = 20'

LEGEND

- EB — DENOTES EXISTING ELECTRICAL BOX
- TCB — DENOTES EXISTING TRAFFIC CONTROL BOX
- DENOTES EXISTING FIRE HYDRANT
- DENOTES EXISTING LIGHT POLE
- V — DENOTES EXISTING WATER VALVE
- SI — DENOTES EXISTING SIGN
- E — DENOTES EXISTING ELECTRICAL MANHOLE
- MH — DENOTES EXISTING MANHOLE
- SWB — DENOTES EXISTING SOUTHWESTERN BELL MANHOLE
- SD — DENOTES EXISTING STORM DRAIN
- DENOTES EXISTING TRAFFIC SIGNAL
- DENOTES EDGE OF ASPHALT
- 8W — DENOTES EXISTING 8" WATER LINE
- 12W — DENOTES EXISTING 12" WATER LINE
- 8WW — DENOTES EXISTING 8" WASTEWATER LINE
- G — DENOTES EXISTING GAS LINE
- UE — DENOTES EXISTING UNDERGROUND ELECTRIC LINE
- CB — DENOTES EXISTING UNDERGROUND CABLE LINE
- DENOTES EXISTING SIGNAL CONDUIT
- DENOTES PROPOSED LUMINAIRE
- DENOTES PROPOSED STEEL POLE AND MAST ARM
- DENOTES PROPOSED CONTROLLER BOX
- DENOTES PROPOSED GROUND BOX
- DENOTES PROPOSED PEDESTRIAN SIGNAL & NO.
- DENOTES PROPOSED SIGNAL HEAD & NO.
- DENOTES PROPOSED SIGNAL CONDUIT RUN (R)
- DENOTES PROPOSED DETECTION ZONE

NEW CROSSWALKS TO BE INSTALLED BY CITY OF MIDLAND.

STATE OF TEXAS
MICHAEL J. PACELLI
108082
LICENSED PROFESSIONAL ENGINEER
01/13/2020

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MIDLAND Engineering Services

PROPOSED TRAFFIC SIGNAL LORAINE AND TEXAS

17
17 OF 20

7.75

SIGNAL NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING SIGNAL / LIGHT POLES (4) AND CONTROLLER CABINET (1). CITY WILL COORDINATE WITH ONCOR FOR REMOVAL OF OVERHEAD STREET LIGHT POWER IN ADVANCE OF WORK. POLE FOUNDATIONS ON NW, NE, AND SW CORNERS TO BE BROKEN DOWN TO 12" BELOW SIDEWALK GRADE.
2. EXISTING CONDUIT FROM ELECTRIC SERVICE POINT TO BE INTERCEPTED AND EXTENDED ON NE CORNER APPROXIMATELY AS SHOWN ON PLANS.
3. CONTROLLER, CABINET, RRFB, BATTERY BACKUP, POLES, ANCHOR BOLTS, APS PUSH BUTTONS, LED STREET LIGHT HEADS, TRAFFIC SIGN, AND ILSN SIGNS SHALL BE FURNISHED BY CITY AND INSTALLED BY CONTRACTOR. ALL OTHER ITEMS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DETAILS UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

POLE AND HEAD CHART

POLE NUMBER	P-1	P-2	P-3	P-4
POLE TYPE / SIGNAL ARM LEN	SMA 32'	PED 4'H	PED 4'H	PED 12-16'H
FOUNDATION TYPE	30-A	24-A	24-A	24-A
LUMINAIRES	1	-	-	1
ILSN ARMS	1	-	-	-

SIGNAL CONDUIT AND CABLES

RUN NO.	QTY / SIZE	LENGTH (FT)	BORE (B) TRENCH(T) EXISTING	BARE #6 GROUND	XHHW #6 BLACK	XHHW #6 WHITE	2 COND. #14 TWISTED	3 COND. #14	5 COND. #14	20 COND. #14	TRAY CABLE ILLUMINATI	TRAY CABLE ILSN	6 COND. WAVETRONI	CAT 5 ETHERNET
R-1	1-UNK	-	E	EXIST	EXIST	EXIST								
R-2	1-3"	20	T	1	1	1								
R-3	2-3"	10	T	1			3				1			
R-4	1-3"	55	T	1			2							
R-5	1-3"	5	T	1			1							
R-6	1-3"	55	T	1			1							
R-7	1-3"	5	T	1			1							
R-8	1-3"	60	T	1			1				1			
R-9	1-3"	5	T	1			1				1			
CABLE TOTALS (FT)				215	20	20	270	0	0	0	75	0	0	0
CONDUIT TOTALS (FT), 3" TRENCHED				215										

CABLE / WIRE INSIDE POLE

POLE NUMBER	2 COND. #14 TWISTED	3 COND. #14	5 COND. #14	20 COND. #14	TRAY CABLE ILLUMINATI	TRAT CABLE ILSN	6 COND. WAVETRONI	CAT 5 ETHERNET
P-1	10	92	-	-	45	35	-	-
P-2	10	-	-	-	-	-	-	-
P-3	10	-	-	-	-	-	-	-
P-4	10	-	-	-	45	-	-	-
TOTAL	40	92	0	0	90	35	0	0

STATE OF TEXAS
MICHAEL J. PACELLI
108082
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PROFESSIONAL ENGINEER
01/13/2020

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SIGNAL CHARTS LORAINE AND TEXAS

18
18 OF 20

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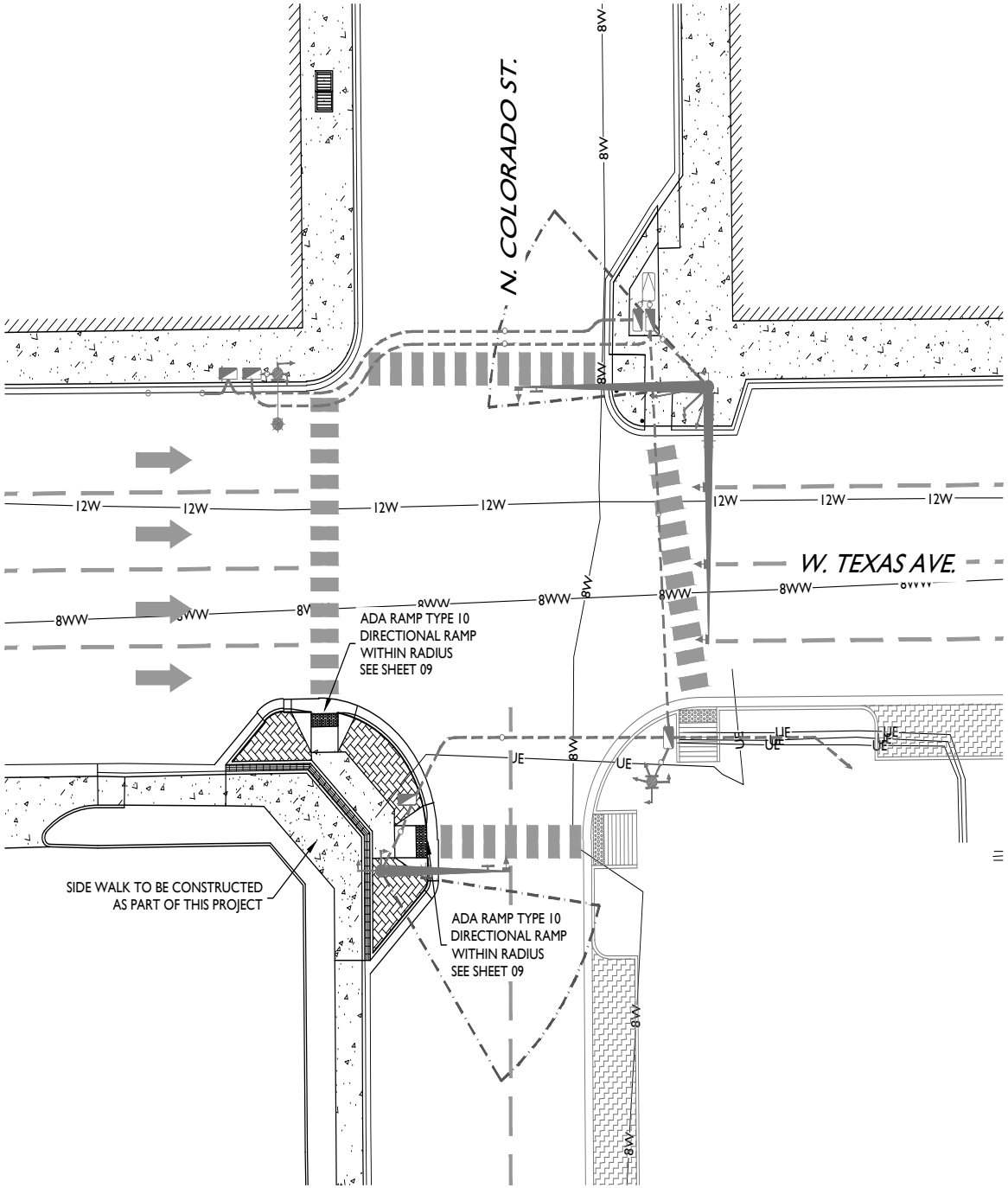

0' 20' 40' 60'

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STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER

01/13/2020

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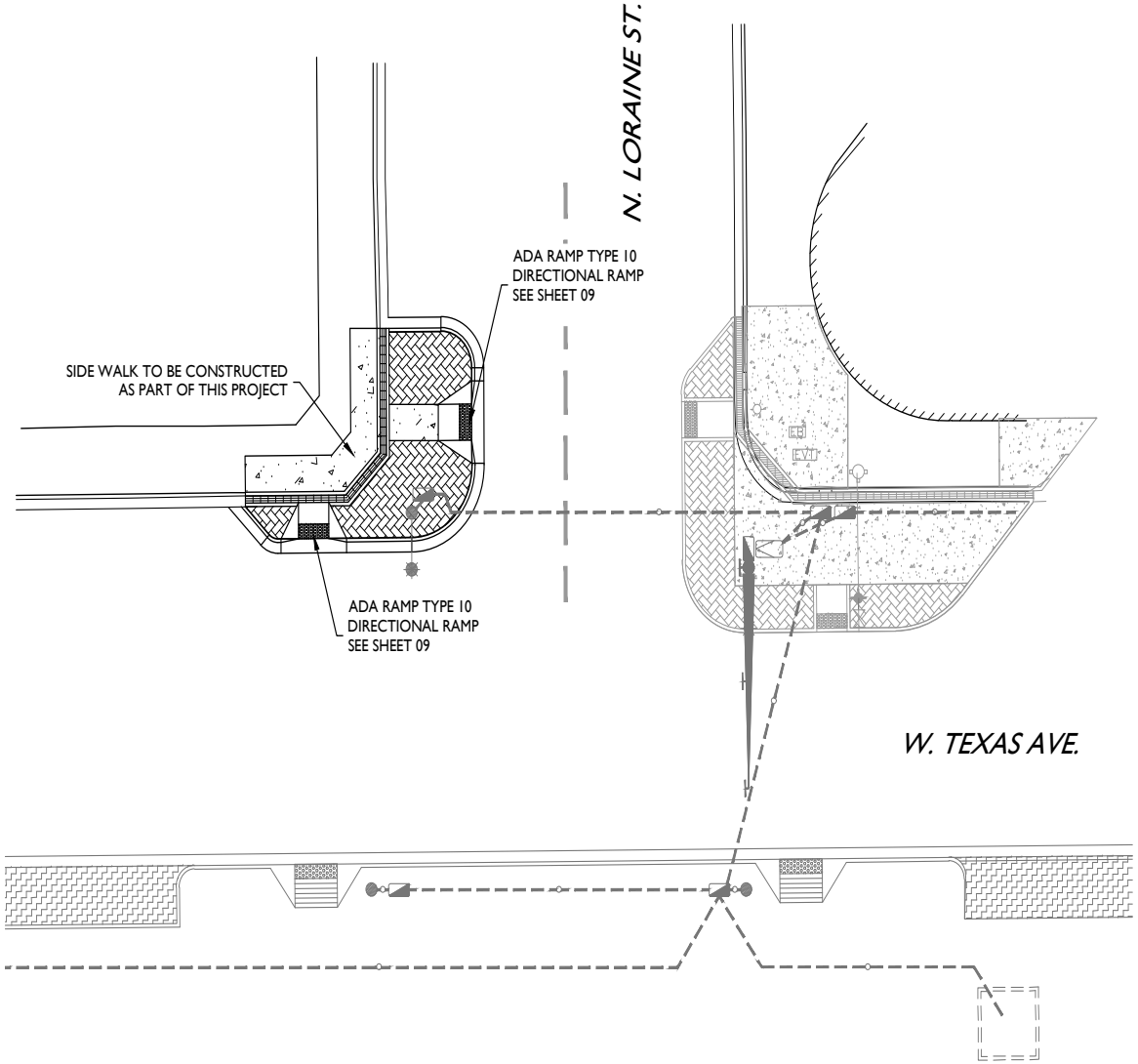
ADA RAMP MODIFICATIONS COLORADO AND TEXAS

19

19 OF 20

7.77



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STATE OF TEXAS
ANDREW L. MELLEN
106572
LICENSED
PROFESSIONAL ENGINEER
01/13/2020

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JOB# 1900896
DATE 01/13/2020

MIDLAND Engineering Services

ADA RAMP MODIFICATIONS LORAINE AND TEXAS

20
20 OF 20

7.78

THE CITY OF MIDLAND, TEXAS

Plans for the Construction of

TRAFFIC SIGNAL IMPROVEMENTS

For

MIDKIFF ROAD INTERSECTION

With

BANKHEAD HIGHWAY & INDUSTRIAL AVENUE

CONTRACTOR _____

DATE CONTRACTOR BEGAN WORK _____

DATE WORK WAS COMPLETED _____

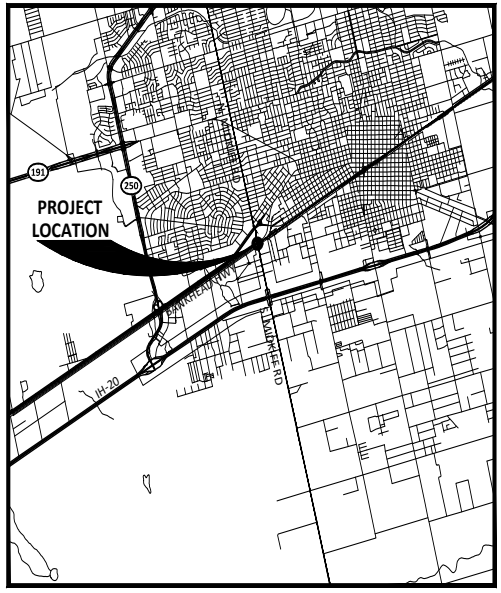
DATE WORK WAS ACCEPTED _____

FINAL CONTRACT COST _____

JERRY MORALES
MAYOR

COURTNEY SHARP
CITY MANAGER

1 - JEFF SPARKS 2 - JOHN B. LOVE, III
3 - SHARLA HOTCHKISS 4 - J.ROSS LACY
AT LARGE - SCOTT DUFFORD
AT LARGE - SPENCER ROBNETT
COUNCIL MEMBERS



VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS	
Sheet Number	Sheet Title
1	COVER SHEET
2	Quantities Summary
3	EXISTING TRAFFIC SIGNAL
4	REMOVAL
5	PROPOSED TRAFFIC SIGNAL
6	SIGNAL CHARTS
7	SIGNAL DETAILS
8	ADA RAMP MODIFICATIONS
9	SIGNING AND PAVEMENT MARKINGS
10–33	TxDOT DETAILS

JOSE E. ORTIZ
DIRECTOR, ENGINEERING SERVICES DEPARTMENT

MICHAEL PACELLI, P.E., PTOE
TRAFFIC ENGINEER

100% SUBMITTAL

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DUNAWAY
4000 N. Big Spring Street • Suite 101 • Midland, Texas 79705
Tel: 432.699.4869 • Fax: 432.682.7722
TBPE F-1174

STATE OF TEXAS
NORMAN L. HOGUE
106059
LICENSED
PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

June 2018

DALP NO. B003436.002

PLANS FOR THE CONSTRUCTION OF TRAFFIC SIGNAL IMPROVEMENTS FOR:
MIDKIFF ROAD AT BANKHEAD HIGHWAY AND INDUSTRIAL AVENUE, MIDLAND, TEXAS

NO.	BIDLIST ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	416 6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	15.00
2	416 6034	DRILL SHAFT (TRF SIG POLE) (48 IN)	LF	40.00
3	502 6025	BARR, SIGNS, TRAFFIC HANDLING	EA	1.00
4	531 6010	CURB RAMPS (TY 7)	EA	10.00
5	531 6034	CURB RAMPS (TY 7)(MOD)	EA	2.00
6	6025 6002	RADAR PRESENCE DETECTOR COMM CABLE	LF	2185.00
7	6054 6003	HELIAX CABLE	LF	230.00
8	618 6023	CONDT (PVC) (SCH 40) (2")	LF	240.00
9	618 6024	CONDT (PVC) (SCH 40) (2") (BORE)	LF	595.00
10	618 6029	CONDT (PVC) (SCH 40) (3")	LF	425.00
11	618 6030	CONDT (PVC) (SCH 40) (3") (BORE)	LF	715.00
12	618 6033	CONDT (PVC) (SCH 40) (4")	LF	10.00
13	618 6070	CONDT (RM) (2")	LF	20.00
14	620 6009	ELEC CONDR (NO.6) BARE	LF	2145.00
15	620 6010	ELEC CONDR (NO.6) INSULATED	LF	45.00
16	624 6009	GROUND BOX TY D (162922)	EA	2.00
17	624 6010	GROUND BOX TY D (162922)W/APRON	EA	7.00
18	636 6001	ALUMINUM SIGNS (TY A)	SF	30.00
19	666 6035	REFL PAV MRK TY I (W)8"(SLD)(090MIL)	LF	70.00
20	666 6047	REFL PAV MRK TY I (W)24"(SLD)(090MIL)	LF	460.00
21	666 6137	REFL PAV MRK TY I (Y)8"(SLD)(090MIL)	LF	350.00
22	677 6001	ELIM EXT PAV MRK & MRKS (4")	LF	62.00
23	677 6003	ELIM EXT PAV MRK & MRKS (8")	LF	17.00

NO.	BIDLIST ITEM NO.	DESCRIPTION	UNIT	QUANTITY
24	677 6007	ELIM EXT PAV MRK & MRKS (24")	LF	75.00
25	680 6002	INSTALL HWY TRF SIG (ISOLATED)	EA	1.00
26	680 6004	REMOVING TRAFFIC SIGNALS	EA	3.00
27	682 6001	VEH SIG SEC (12")LED(GRN)	EA	8.00
28	682 6002	VEH SIG SEC (12")LED(GRN ARW)	EA	4.00
29	682 6003	VEH SIG SEC (12")LED(YEL)	EA	8.00
30	682 6004	VEH SIG SEC (12")LED(YEL ARW)	EA	8.00
31	682 6005	VEH SIG SEC (12")LED(RED)	EA	8.00
32	682 6006	VEH SIG SEC (12")LED(RED ARW)	EA	8.00
33	682 6018	PED SIG SEC (LED)(COUNTDOWN)	EA	12.00
34	682 6035	BACK PLATE (12")(3 SEC)(VENTED)ALUM	EA	8.00
35	682 6037	BACK PLATE (12")(5 SEC)(VENTED)ALUM	EA	4.00
36	684 6030	TRF SIG CBL (TY A)(14 AWG)(4 CONDR)	LF	2225.00
37	684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	LF	1000.00
38	684 6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	LF	2565.00
39	684 6038	TRF SIG CBL (TY A)(14 AWG)(12 CONDR)	LF	670.00
40	684 6042	TRF SIG CBL (TY A)(14 AWG)(16 CONDR)	LF	1895.00
41	686 6045	INST TRF SIG PL AM(S)1 ARM(44')	EA	1.00
42	686 6064	INST TRF SIG PL AM(S)1 ARM(60')LUM&ILSN	EA	1.00
43	686 6068	INST TRF SIG PL AM(S)1 ARM(65')LUM&ILSN	EA	1.00
44	687 6001	PED POLE ASSEMBLY	EA	9.00
45	CITY	Furnish/Install Preemption Cable	LF	435.00
46	CITY	Install Model 722 Preemption Detector	EA	4.00

No new Opticom equipment to be installed with this project.

#	REVISION	BY	DATE
#			#
#			#
#			#
#			#
#			#

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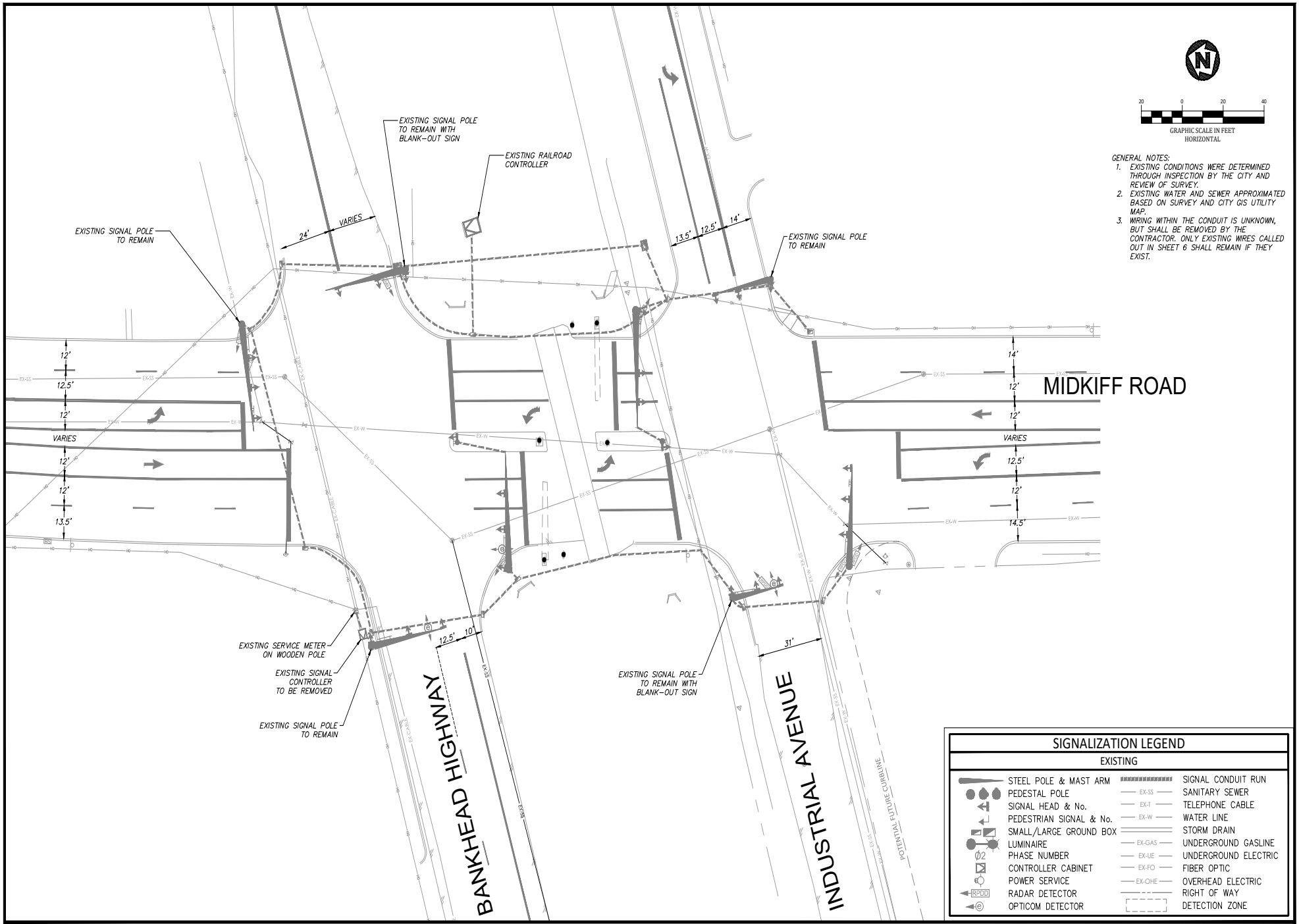
4000 Big Spring Street • Suite 100 • Midland, Texas 79705
Tel: 432.699.4889
[redacted]

STATE OF TEXAS NORMAN L. HOGUE 106059 LICENSED PROFESSIONAL ENGINEER
PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS
MIDKIFF/INDUSTRIAL/BANKHEAD TRAFFIC SIGNAL UPGRADE
QUANTITIES SUMMARY

DA PROJECT 003436.002
SHEET 2

FILENAME: SQM_PL.dwg
PLOTTED: Fri May 25, 2018



GENERAL NOTES:

1. EXISTING CONDITIONS WERE DETERMINED THROUGH INSPECTION BY THE CITY AND REVIEW OF SURVEY.
2. EXISTING WATER AND SEWER APPROXIMATED BASED ON SURVEY AND CITY GIS UTILITY MAP.
3. WIRING WITHIN THE CONDUIT IS UNKNOWN, BUT SHALL BE REMOVED BY THE CONTRACTOR. ONLY EXISTING WIRES CALLED OUT IN SHEET 6 SHALL REMAIN IF THEY EXIST.

SIGNALIZATION LEGEND

EXISTING

	STEEL POLE & MAST ARM		SIGNAL CONDUIT RUN
	PEDESTAL POLE	EX-SS	SANITARY SEWER
	SIGNAL HEAD & No.	EX-T	TELEPHONE CABLE
	PEDESTRIAN SIGNAL & No.	EX-W	WATER LINE
	SMALL/LARGE GROUND BOX		STORM DRAIN
	LUMINAIRE	EX-GAS	UNDERGROUND GASLINE
∅2	PHASE NUMBER	EX-UE	UNDERGROUND ELECTRIC
	CONTROLLER CABINET	EX-FO	FIBER OPTIC
	POWER SERVICE	EX-OHE	OVERHEAD ELECTRIC
RPDD	RADAR DETECTOR		RIGHT OF WAY
	OPTICOM DETECTOR		DETECTION ZONE

#	REVISION	BY	DATE
#			#
#			#
#			#
#			#
#			#

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DJS CHECKED

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Tel: 432.699.4889
TBPE F-11714

STATE OF TEXAS
NORMAN L. HOGUE
106059
LICENSED
PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS

MIDKIFF/INDUSTRIAL/BANKHEAD TRAFFIC SIGNAL UPGRADE

EXISTING TRAFFIC SIGNAL

DA PROJECT 003436.002

SHEET 3

FULL PATH: G:\production\0010\0430\345\002\Civil\Drawings\04 Sheets\SIG04_PL.dwg
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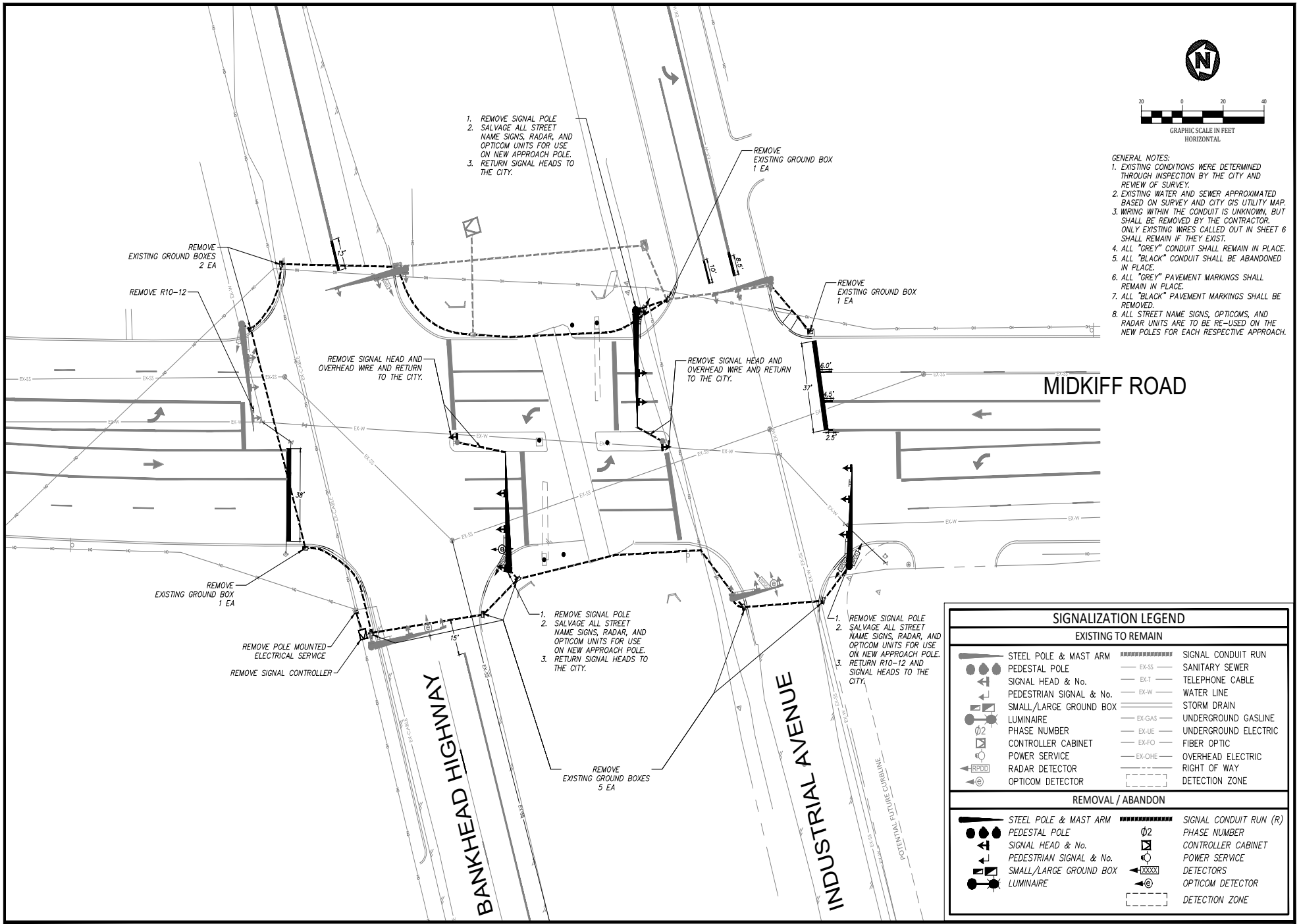
PLOTTED: On: Friday, June 22, 2018



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4. ALL "GREY" CONDUIT SHALL REMAIN IN PLACE.
5. ALL "BLACK" CONDUIT SHALL BE ABANDONED IN PLACE.
6. ALL "GREY" PAVEMENT MARKINGS SHALL REMAIN IN PLACE.
7. ALL "BLACK" PAVEMENT MARKINGS SHALL BE REMOVED.
8. ALL STREET NAME SIGNS, OPTICOMS, AND RADAR UNITS ARE TO BE RE-USED ON THE NEW POLES FOR EACH RESPECTIVE APPROACH.

SIGNALIZATION LEGEND

EXISTING TO REMAIN

STEEL POLE & MAST ARM	SIGNAL CONDUIT RUN
PEDESTAL POLE	EX-SS SANITARY SEWER
SIGNAL HEAD & No.	EX-T TELEPHONE CABLE
PEDESTRIAN SIGNAL & No.	EX-W WATER LINE
SMALL/LARGE GROUND BOX	STORM DRAIN
LUMINAIRE	EX-GAS UNDERGROUND GASLINE
PHASE NUMBER	EX-UE UNDERGROUND ELECTRIC
CONTROLLER CABINET	EX-FO FIBER OPTIC
POWER SERVICE	EX-OHE OVERHEAD ELECTRIC
RADAR DETECTOR	RIGHT OF WAY
OPTICOM DETECTOR	DETECTION ZONE

REMOVAL / ABANDON

STEEL POLE & MAST ARM	*SIGNAL CONDUIT RUN (R)*
PEDESTAL POLE	*PHASE NUMBER*
SIGNAL HEAD & No.	*CONTROLLER CABINET*
PEDESTRIAN SIGNAL & No.	*POWER SERVICE*
SMALL/LARGE GROUND BOX	*DETECTORS*
LUMINAIRE	*OPTICOM DETECTOR*
	DETECTION ZONE

#	REVISION	BY	DATE
#			#
#			#
#			#
#			#
#			#

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Tel: 432.699.4889
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STATE OF TEXAS
NORMAN L. HOGUE
106059
LICENSED
PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS

MIDKIFF/INDUSTRIAL/BANKHEAD
TRAFFIC SIGNAL UPGRADE

REMOVAL

DA PROJECT 003436.002

SHEET 4

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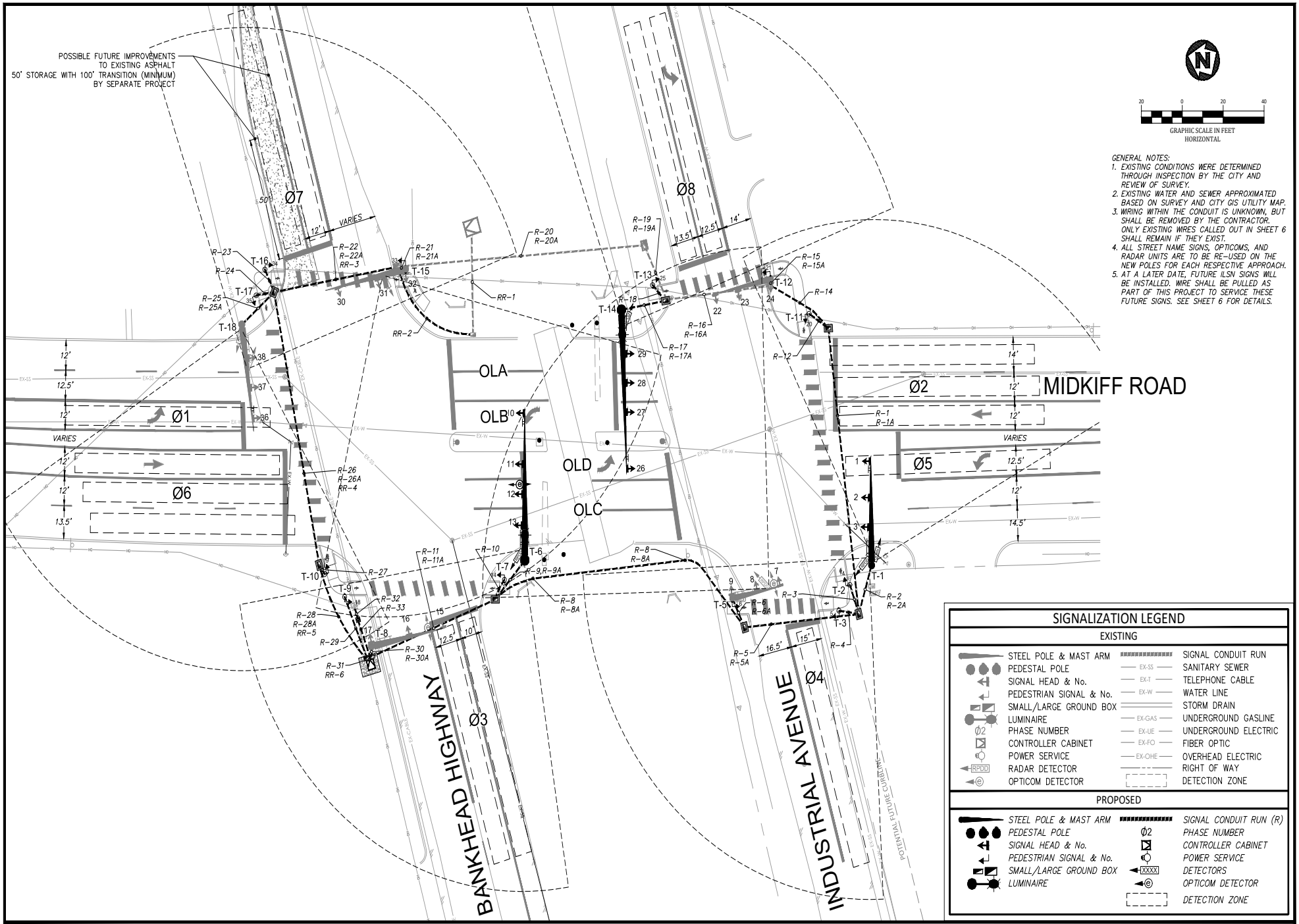
PLOTTED: Fri, May 25, 2018



GENERAL NOTES:

1. EXISTING CONDITIONS WERE DETERMINED THROUGH INSPECTION BY THE CITY AND REVIEW OF SURVEY.
2. EXISTING WATER AND SEWER APPROXIMATED BASED ON SURVEY AND CITY GIS UTILITY MAP.
3. WIRING WITHIN THE CONDUIT IS UNKNOWN, BUT SHALL BE REMOVED BY THE CONTRACTOR. ONLY EXISTING WIRES CALLED OUT IN SHEET 6 SHALL REMAIN IF THEY EXIST.
4. ALL STREET NAME SIGNS, OPTICOMS, AND RADAR UNITS ARE TO BE RE-USED ON THE NEW POLES FOR EACH RESPECTIVE APPROACH.
5. AT A LATER DATE, FUTURE ILSN SIGNS WILL BE INSTALLED. WIRE SHALL BE PULLED AS PART OF THIS PROJECT TO SERVICE THESE FUTURE SIGNS. SEE SHEET 6 FOR DETAILS.

SIGNALIZATION LEGEND

EXISTING

- STEEL POLE & MAST ARM
- PEDESTAL POLE
- SIGNAL HEAD & No.
- PEDESTRIAN SIGNAL & No.
- SMALL/LARGE GROUND BOX
- LUMINAIRE
- Ø2 PHASE NUMBER
- CONTROLLER CABINET
- POWER SERVICE
- RPDD RADAR DETECTOR
- OPTICOM DETECTOR
- SIGNAL CONDUIT RUN
- EX-SS SANITARY SEWER
- EX-T TELEPHONE CABLE
- EX-W WATER LINE
- STORM DRAIN
- EX-GAS UNDERGROUND GASLINE
- EX-UE UNDERGROUND ELECTRIC
- EX-FO FIBER OPTIC
- EX-OHE OVERHEAD ELECTRIC
- RIGHT OF WAY
- DETECTION ZONE

PROPOSED

- *STEEL POLE & MAST ARM*
- *PEDESTAL POLE*
- *SIGNAL HEAD & No.*
- *PEDESTRIAN SIGNAL & No.*
- *SMALL/LARGE GROUND BOX*
- *LUMINAIRE*
- *SIGNAL CONDUIT RUN (R)*
- *Ø2 PHASE NUMBER*
- *CONTROLLER CABINET*
- *POWER SERVICE*
- *XXXX DETECTORS*
- *OPTICOM DETECTOR*
- *DETECTION ZONE*

REVISION	BY	DATE

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STATE OF TEXAS · NORMAN L. HOGUE · 106059 · LICENSED · PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS

MIDKIFF/INDUSTRIAL/BANKHEAD
TRAFFIC SIGNAL UPGRADE

PROPOSED TRAFFIC SIGNAL

DA PROJECT 003436.002

SHEET 5

FILE PATH: G:\production\SIGNS\SIGNS_MIDKIFF\Civil\Drawings\ot Sheets\SIG4_PL.dwg
PLOTTED: Fri, May 25, 2018

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POLE AND HEAD CHART

POLE NUMBER	T-1			T-2	T-3	T-5				T-6				T-7	T-8			T-9	T-10	T-11	T-12				T-13	T-14				T-15				T-16	T-17	T-18		
MAST ARM LENGTH	44'			-	-	44'				60'				-	36'			-	-	-	28'				-	65'				40'				-	-	44'		
POLE / FOUNDATION TYPE	36-A			24-A	24-A	30-A (EXIST)				48-A				24-A	36-A (EXIST)			24-A	24-A	24-A	30-A (EXIST)				24-A	48-A				36-A (EXIST)				24-A	24-A	36-A (EXIST)		
WITH LUMINAIRES	NO			NO	NO	NO				YES				NO	NO			NO	NO	NO	NO				NO	YES				NO				NO	NO	NO		
SIZE OF LENS	12"			12"	12"	12"				12"				12"	12"			12"	12"	12"	12"				12"	12"				12"				12"	12"	12"		
SIGNAL TYPE	H5	H3	H3	P	P	P	H3	H3	V3	H5	H3	H3	V3	P	H3	H3	V3	P	P	P	P	H3	H3	V3	P	H5	H3	H3	H3	H3	H3	V3	P	P	P	H5	H3	H3
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
LED SIGNAL INDICATIONS	<R	R	R	W	W	W	R	R	R	<R	R	R	R	W	R	R	R	W	W	W	W	R	R	R	W	<R	R	R	R	R	R	R	W	W	<R	R	R
	<R	Y	Y	DW	DW	DW	Y	Y	Y	<R	Y	Y	Y	DW	Y	Y	Y	DW	DW	DW	DW	Y	Y	Y	DW	<R	Y	Y	Y	Y	Y	Y	DW	DW	DW	<R	Y	Y
	<SY	G	G				G	G	G	<SY	G	G	G		G	G	G					G	G	G		<SY	G	G	G	G	G	G				<SY	G	G
	<FY									<FY																<FY										<FY		
	<G									<G																<G										<G		
EXISTING							X	X	X						X	X	X					X	X	X						X	X	X					X	X
PROPOSED	X	X	X	X	X	X				X	X	X	X	X				X	X	X	X				X	X	X	X	X				X	X	X	X		
PED HEADS	0			1	1	1				0				1	0			1	1	1	1				1	0				0			1	1	1	0		

CABLE/WIRE INSIDE POLE AND MAST ARM (FEET)

POLE NUMBER	7 COND. #14	5 COND. #14	4 COND. #14 (POLARA APS)	TRAY CABLE ILLUM.	TRAY CABLE ILSN.	2 COND #8 BLANK-OUT SIGNS	RADD CABLE	SSR CABLE (HELIAX)	OPTICOM CABLE
T-1	70	95			35		60		
T-2	10		5						
T-3	10		5						
T-5		115			35	30	45		40
T-6	90	160			35		35		55
T-7			5						
T-8		130			35				
T-9	10		5						
T-10	10		5						
T-11	10		5						
T-12	10	120	5		35				
T-13	10		5						
T-14	90	165		40	35		35		
T-15	10	125	5	40	35	30	40		
T-16	10		5						
T-17	10		5						
T-18	65	90			35		75	35	
TOTAL	415	1000	55	80	280	60	290	35	95

SUMMARY OF SIGNAL CONDUIT AND CABLES

RUN NO.	CONDUIT SIZE EXIST.	CONDUIT SIZE PROP.	CONDUIT LENGTH (FT)	CONDUIT BORE (B) TRENCH (T) EXISITNG (E)	CABLE #6 BARE GROUND	16 COND. #14	7 COND. #14	4 COND. #14 (POLARA APS)	#6 XHHW BLACK	#6 XHHW WHITE	TRAY CABLE ILLUM.	TRAY CABLE ILSN.	12 COND. #14 (RR PREEMP)	2 COND. #8 BLANK-OUT SIGNS	RADD CABLE	SSR CABLE (HELIAX)	OPTICOM CABLE
RR-1	1-3"		45	E	1								(+2)				
RR-2		1 - 3"	50	T	(+1)								(+2)				
RR-3		1 - 3"	65	B	(+1)								(+2)				
RR-4		1 - 3"	115	B	(+1)								(+2)				
RR-5		1 - 3"	50	T	(+1)								(+2)				
RR-6		1 - 3"	10	T	(+1)								(+2)				
R-1		1 - 3"	120	B	(+1)												
R-1A		2 - 3"	120	B	(+1)												
R-2A		1 - 2"	25	T	(+1)							(+1)					
R-2		1 - 3"	25	T	(+1)	(+1)									(+2)		
R-3		1 - 3"	15	T	(+1)		(+1)	(+1)									
R-4		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-5A		1 - 2"	30	B	(+1)							(+1)					
R-5		1 - 3"	30	B	(+1)	(+1)	(+2)	(+2)							(+2)		
R-6A		1 - 2"	20	T	(+1)							(+2)					
R-6		1 - 3"	20	T	(+1)	(+1)		(+1)						(+1)	(+1)		(+1)
R-8A		1 - 2"	140	B	(+1)							(+1)					
R-8		1 - 3"	140	B	(+1)	(+2)	(+3)	(+3)						(+1)	(+3)		(+1)
R-9A		1 - 2"	25	T	(+1)						(+1)	(+2)					
R-9		1 - 3"	25	T	(+1)	(+1)									(+1)		(+1)
R-10		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-11A		1 - 2"	65	B	(+1)						(+1)	(+1)					
R-11		1 - 3"	65	B	(+1)	(+3)	(+4)	(+4)						(+1)	(+4)		(+2)
R-12		1 - 3"	15	T	(+1)		(+1)	(+1)									
R-14		1 - 3"	35	T	(+1)		(+1)	(+1)									
R-15A		1 - 2"	5	T	(+1)							(+1)					
R-15	1-3" *		5	E	1	(+1)											
R-16A		1 - 2"	55	B	(+1)							(+1)					
R-16	1-3" *		55	E	1	(+1)	(+1)	(+1)									
R-17A		1 - 2"	25	T	(+1)						(+1)	(+2)					
R-17		1 - 3"	25	T	(+1)	(+1)									(+1)		
R-18		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-19A		1 - 2"	25	T	(+1)						(+1)	(+1)					
R-19	1-3" *		25	E	1	(+2)	(+2)	(+2)							(+1)		
R-20A		1 - 2"	125	B	(+1)						(+1)	(+1)					
R-20	1-3" *		125	E	1	(+2)	(+2)	(+2)							(+1)		
R-21A		1 - 2"	5	T	(+1)							(+2)					
R-21	1-3" *		5	E	1	(+1)								(+1)	(+1)		
R-22A		1 - 2"	65	B	(+1)						(+1)	(+1)					
R-22		1 - 3"	65	B	(+1)	(+3)	(+2)	(+2)						(+1)	(+2)		
R-23		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-24		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-25A		1 - 2"	25	T	(+1)							(+2)					
R-25		1 - 3"	25	T	(+1)	(+1)									(+2)	(+1)	
R-26A		1 - 2"	115	B	(+1)						(+1)	(+1)					
R-26		1 - 3"	115	B	(+1)	(+4)	(+4)	(+4)						(+1)	(+4)	(+1)	
R-27		1 - 3"	10	T	(+1)		(+1)	(+1)									
R-28A		1 - 2"	50	T	(+1)						(+1)	(+1)					
R-28		1 - 3"	50	T	(+1)	(+4)	(+5)	(+5)						(+1)	(+4)	(+1)	
R-29		1 - 3"	30	T	(+1)		(+1)	(+1)									
R-30A		1 - 2"	10	T	(+1)							(+2)					
R-30		1 - 3"	10	T	(+1)	(+1)											(+1)
R-31		2 - 4"	5	T	(+1)	(+8)	(+12)	(+12)						(+2)	(+8)	(+1)	(+3)
R-32		1-2"	5	T	(+1)				(+1)	(+1)							
R-33		1-2"	20	T	(+1)				(+2)	(+1)	(+2)	(+2)					
NET ADDITIONAL CABLE TOTALS (LF)					215 (+2120)	0 (+1895)	0 (+2150)	0 (+2170)	0 (+45)	0 (+25)	0 (+535)	0 (+960)	(+670)	(+470)	0 (+1895)	0 (+195)	0 (+340)

CONDUIT TOTALS (LF)	
2" TRENCH	(+240)
2" BORE	(+595)
2" RIGID METAL	(+20)
3" TRENCH	(+425)
3" BORE	(+715)
4" TRENCH	(+10)

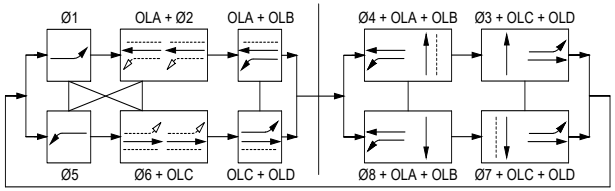
Notes: EXISTING (+PROPOSED)

This chart does not reflect the quantities of cable inside the poles and mast arms, or cable removed from exisitng conduit.

T = Trench, B = Bore, RM = Rigid Metal, OH = Overhead

COMPATIBILITY LINES

NORMAL PHASE SEQUENCE



OLA = Ø2 + Ø4 + Ø8

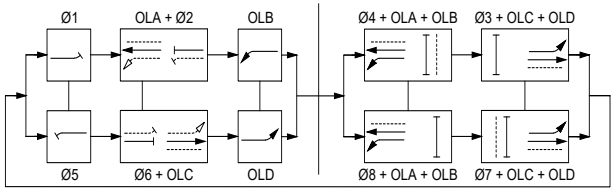
OLB = Ø4 + Ø8

OLC = Ø3 + Ø6 + Ø7

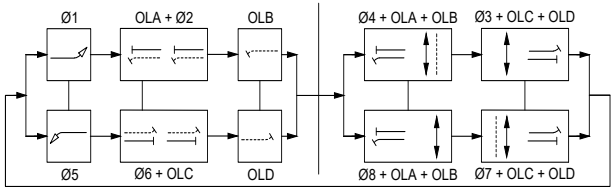
OLD = Ø3 + Ø7

PREEMPTION PLAN 1: ALL RED FLASH (PREEMPTION INTERFACE DEVICE FAILURE DETECTION ACTIVE) [NOT SHOWN]

PREEMPTION PLAN 2: ADVANCE PREEMPTION / TRACK CLEARANCE



PREEMPTION PLAN 3: DWELL OPERATION / LIMITED SERVICE



Elec. Service No.	Sheet No.	Electrical Service Description (see ED (4) - 00)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole/Amps	Branch Circuit Amps	KVA Load
1	3	ELEC SERV TY D(120/240)060(NS)AL(E)PS(U)	1 1/2"	3/#6	N/A	2P/60	N/A	70	A - CONTROLLER	1P/50	40	8.4
									B - ILLUM	2P/20	3	
									C - ILSN	2P/20	12	

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STATE OF TEXAS — NORMAN L. HOGUE — 106059 — LICENSED — PROFESSIONAL ENGINEER

PROJECT ENGINEER 6/22/2018 DATE

CITY OF MIDLAND, TEXAS

MIDKIFF/INDUSTRIAL/BANKHEAD TRAFFIC SIGNAL UPGRADE

SIGNAL CHARTS

DA PROJECT 003436.002

SHEET 6

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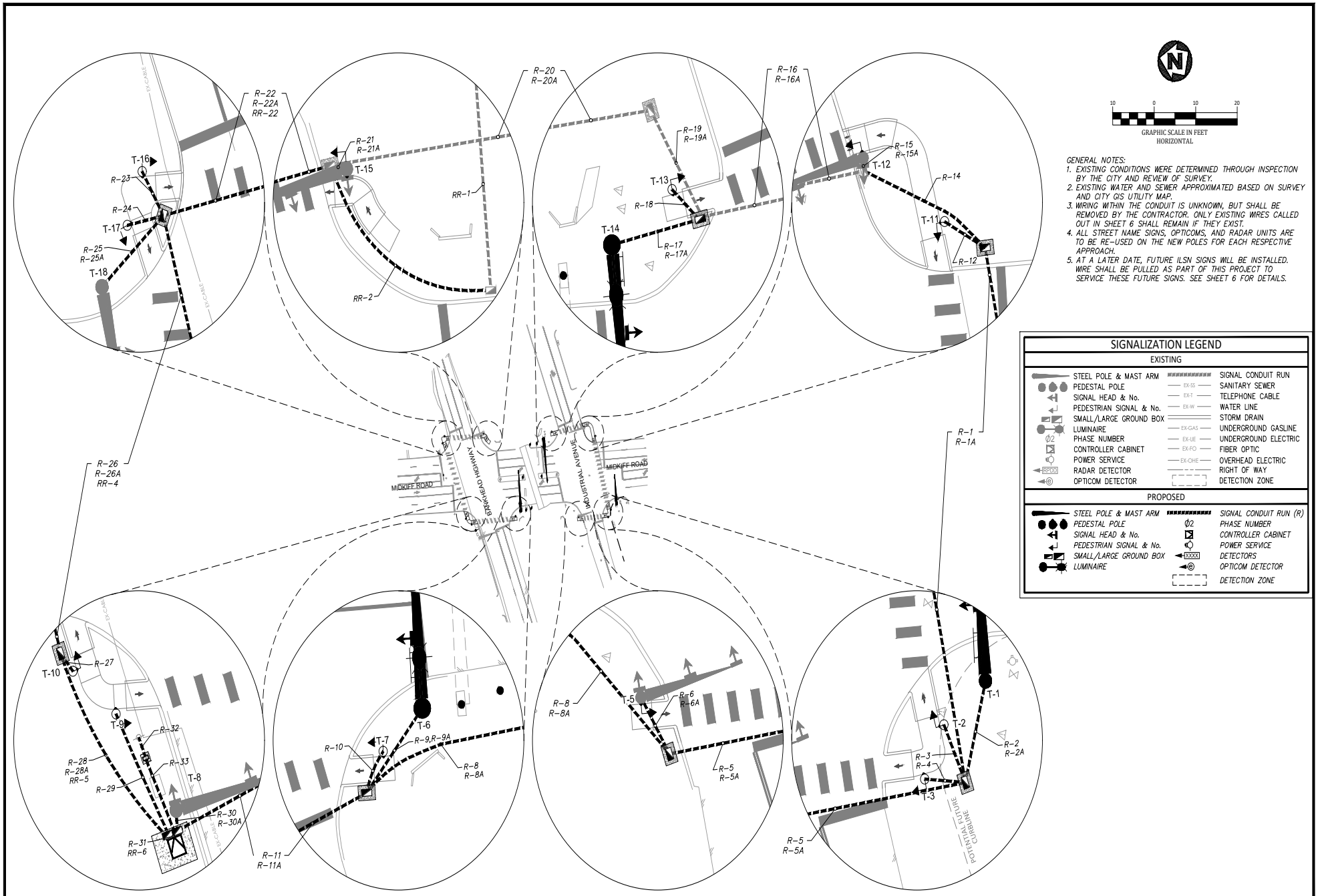

GRAPHIC SCALE IN FEET
HORIZONTAL

GENERAL NOTES:
1. EXISTING CONDITIONS WERE DETERMINED THROUGH INSPECTION BY THE CITY AND REVIEW OF SURVEY.
2. EXISTING WATER AND SEWER APPROXIMATED BASED ON SURVEY AND CITY GIS UTILITY MAP.
3. WIRING WITHIN THE CONDUIT IS UNKNOWN, BUT SHALL BE REMOVED BY THE CONTRACTOR. ONLY EXISTING WIRES CALLED OUT IN SHEET 6 SHALL REMAIN IF THEY EXIST.
4. ALL STREET NAME SIGNS, OPTICOMS, AND RADAR UNITS ARE TO BE RE-USED ON THE NEW POLES FOR EACH RESPECTIVE APPROACH.
5. AT A LATER DATE, FUTURE ILSN SIGNS WILL BE INSTALLED. WIRE SHALL BE PULLED AS PART OF THIS PROJECT TO SERVICE THESE FUTURE SIGNS. SEE SHEET 6 FOR DETAILS.

SIGNALIZATION LEGEND

EXISTING

STEEL POLE & MAST ARM	SIGNAL CONDUIT RUN
PEDESTAL POLE	SANITARY SEWER
SIGNAL HEAD & No.	TELEPHONE CABLE
PEDESTRIAN SIGNAL & No.	WATER LINE
SMALL/LARGE GROUND BOX	STORM DRAIN
LUMINAIRE	UNDERGROUND GASLINE
PHASE NUMBER	UNDERGROUND ELECTRIC
CONTROLLER CABINET	FIBER OPTIC
POWER SERVICE	OVERHEAD ELECTRIC
RADAR DETECTOR	RIGHT OF WAY
OPTICOM DETECTOR	DETECTION ZONE

PROPOSED

STEEL POLE & MAST ARM	*SIGNAL CONDUIT RUN (R)*
PEDESTAL POLE	*PHASE NUMBER*
SIGNAL HEAD & No.	*CONTROLLER CABINET*
PEDESTRIAN SIGNAL & No.	*POWER SERVICE*
SMALL/LARGE GROUND BOX	*DETECTORS*
LUMINAIRE	*OPTICOM DETECTOR*
	DETECTION ZONE

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NORMAN L. HOGUE
106059
LICENSED
PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS
MIDKIFF/INDUSTRIAL/BANKHEAD
TRAFFIC SIGNAL UPGRADE
SIGNAL DETAILS

DA PROJECT 003436.002
SHEET 7

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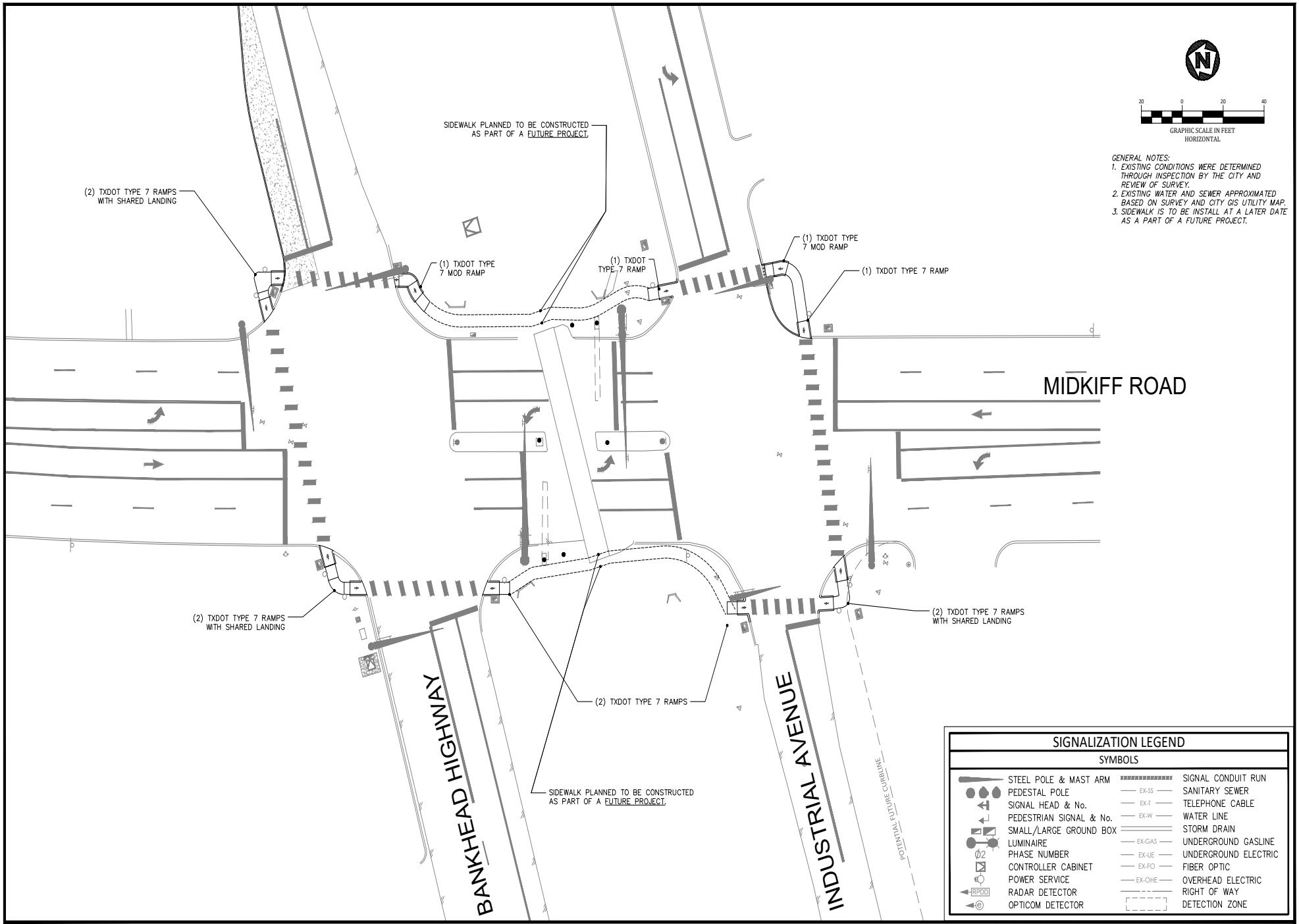
PLOTTED ON: Friday, June 22, 2018



GENERAL NOTES:
1. EXISTING CONDITIONS WERE DETERMINED THROUGH INSPECTION BY THE CITY AND REVIEW OF SURVEY.
2. EXISTING WATER AND SEWER APPROXIMATED BASED ON SURVEY AND CITY GIS UTILITY MAP.
3. SIDEWALK IS TO BE INSTALL AT A LATER DATE AS A PART OF A FUTURE PROJECT.

SIGNALIZATION LEGEND

SYMBOLS

STEEL POLE & MAST ARM	SIGNAL CONDUIT RUN
PEDESTAL POLE	EX-SS SANITARY SEWER
SIGNAL HEAD & No.	EX-T TELEPHONE CABLE
PEDESTRIAN SIGNAL & No.	EX-W WATER LINE
SMALL/LARGE GROUND BOX	STORM DRAIN
LUMINAIRE	EX-GAS UNDERGROUND GASLINE
Ø2 PHASE NUMBER	EX-UE UNDERGROUND ELECTRIC
CONTROLLER CABINET	EX-FO FIBER OPTIC
POWER SERVICE	EX-OHE OVERHEAD ELECTRIC
RPDD RADAR DETECTOR	RIGHT OF WAY
OPTICOM DETECTOR	DETECTION ZONE

REVISION	BY	DATE

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PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS
MIDKIFF/INDUSTRIAL/BANKHEAD TRAFFIC SIGNAL UPGRADE
ADA RAMP MODIFICATIONS

DA PROJECT 003436.002
SHEET 8

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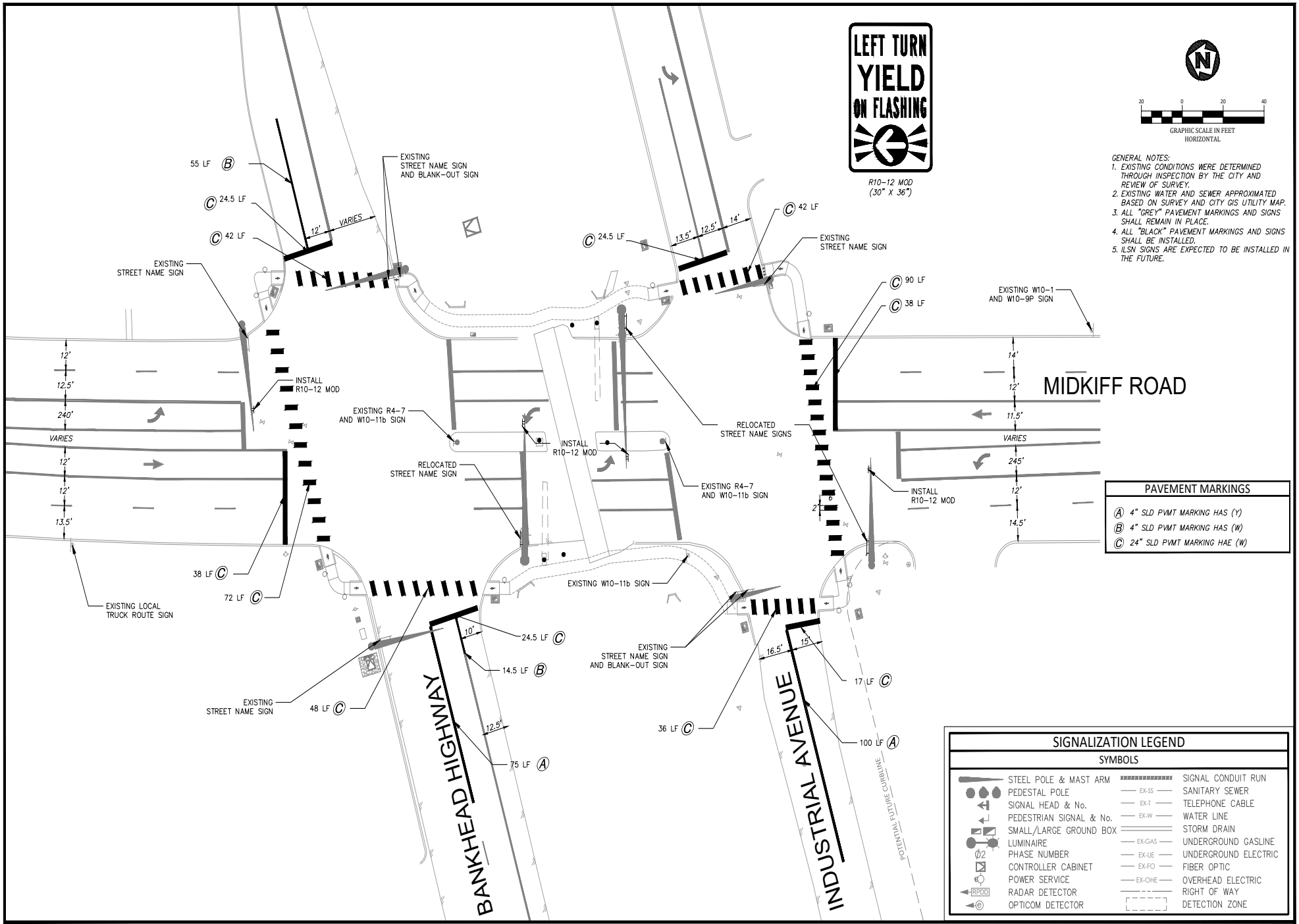

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STATE OF TEXAS NORMAN L. HOGUE 106059 LICENSED PROFESSIONAL ENGINEER
PROJECT ENGINEER
6/22/2018
DATE

CITY OF MIDLAND, TEXAS
MIDKIFF/INDUSTRIAL/BANKHEAD TRAFFIC SIGNAL UPGRADE
SIGNING AND PAVEMENT MARKINGS

DA PROJECT 003436.002
SHEET 9

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PLOTTED BY: Tracy Jones
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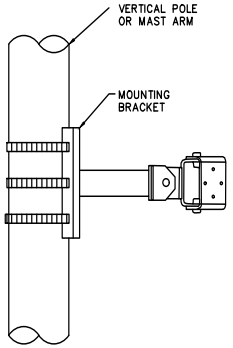


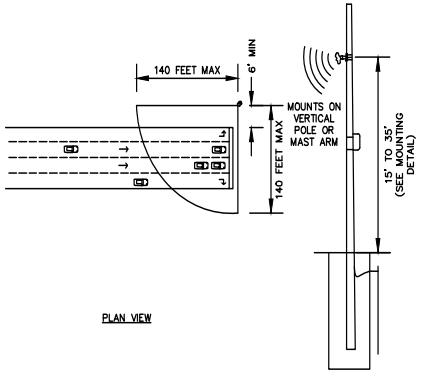
MOUNTING DETAIL

TO ATTACH THE MOUNT BRACKET TO THE POLE:

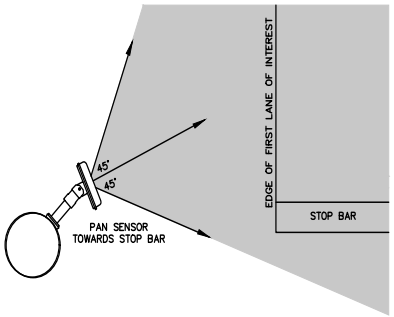
1. INSERT THE STAINLESS STEEL STRAPS THROUGH THE SLOTS IN THE MOUNT BRACKET.
2. POSITION THE MOUNT ON THE POLE SO THE MOUNT HEAD POINTS TOWARD THE LANES OF INTEREST AT A 45° ANGLE.
3. TIGHTEN THE STRAP SCREWS.

TO SECURELY FASTEN THE SENSOR TO THE MOUNT BRACKET:

1. ALIGN THE BOLTS ON THE SENSOR'S BACKPLATE WITH THE HOLES IN THE MOUNT BRACKET. THE EIGHT-PIN CONNECTOR RECEPTACLE ON THE BOTTOM OF THE SENSOR SHOULD BE POINTING TOWARDS THE GROUND.
2. PLACE THE LOCK WASHERS ONTO THE BOLTS AFTER THE BOLTS ARE IN THE MOUNT BRACKET HOLES.
3. THREAD ON THE NUTS AND TIGHTEN.



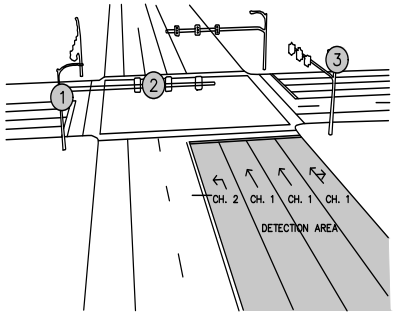
PLAN VIEW



ALIGNING DETAIL

1. ADJUST THE SIDE-TO-SIDE ANGLE SO THE FRONT EDGE OF THE FIELD OF VIEW PROVIDES A VIEW DOWNSTREAM OF THE STOP BAR.
2. TILT THE SENSOR DOWN TO AIM IT AT THE CENTER OF THE LANES OF INTEREST.
3. IF NECESSARY, ROTATE THE SENSOR SO THAT THE BOTTOM EDGE OF THE SENSOR IS PARALLEL WITH THE ROADWAY. THIS IS NECESSARY WHERE THE INTERSECTION APPROACH HAS A SIGNIFICANT GRADE.

NOTES:
1. CONTRACTOR SHALL HAVE PREVIOUSLY COMPLETED INSTALLATION TRAINING PROVIDED BY THE RADAR DETECTION SYSTEM MANUFACTURER OR MAKE ARRANGEMENTS FOR THE MANUFACTURER TO INSTALL AND CALIBRATE THE SYSTEM.
2. A 4 CHANNEL BACK PLATE IS REQUIRED FOR PRESENCE DETECTION. IF ADVANCE DETECTION IS ALSO USED, A 6 CHANNEL BACK PLATE SHALL BE USED.



RADAR DETECTION MOUNTING

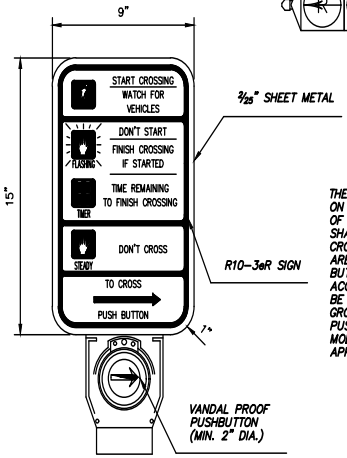
1. THE FAR SIDE APPROACH
2. THE BACKSIDE OF MAST ARM
3. THE NEAR SIDE APPROACH

NOTE:
WHEN MOUNTING TO BACKSIDE OF MAST ARM, A MINIMUM 6' OFFSET IS RECOMMENDED FROM NEAREST LANE OF DETECTION.

RADAR DETECTION – STOP BAR DETECTION DETAILS

NOTES:

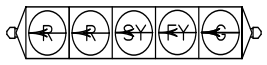
1. PROVIDE ALL SIGNAL HEADS FROM THE SAME MANUFACTURER.
2. PROVIDE ALL LED TRAFFIC SIGNAL LAMP UNITS, AS WELL AS THE VARIOUS COMPONENTS OF THE SIGNAL HEADS TO BE INSTALLED WITHIN THIS PROJECT.
3. TRAFFIC SIGNAL HEADS SHALL BE YELLOW POLYCARBONATE.
4. SIGNAL HEADS MOUNTED ON POLES AND MAST ARMS SHALL BE LEVEL AND PLUMB AND AIMED AS DIRECTED. COVER ALL SIGNAL FACES UNTIL PLACED IN OPERATION.
5. THE SIGNAL HEAD TO MAST ARM CONNECTION MUST ALLOW FOR ADJUSTMENT ABOUT THE HORIZONTAL AND VERTICAL AXIS.



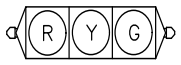
ACCESSIBLE PUSH BUTTON & SIGN

SIGNS F, G, H, I, J, K, L, & M

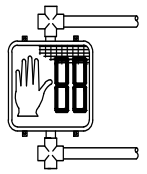
THE SIGN SHOWN SHALL BE USED ON MAST ARM POLES. DIRECTION OF CROSSING ARROW ON SIGNS SHALL CORRESPOND TO THE CROSSING DIRECTION PEDESTRIAN ARE SUPPOSE TO CROSS WHEN BUTTON IS PUSHED. THE ACCESSIBLE PUSH BUTTON SHALL BE INSTALLED 3'-6" ABOVE GROUND LEVEL. THE ACCESSIBLE PUSH BUTTON SHALL BE POLARA MODEL EN2 3 C BO-Y-BD OR APPROVED SUBSTITUTE.



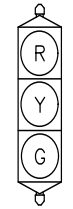
TYPE H5FY



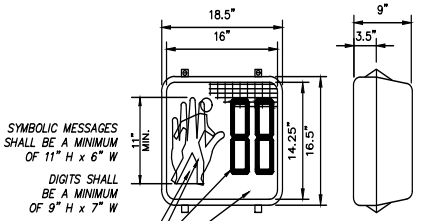
TYPE H3



TYPE P

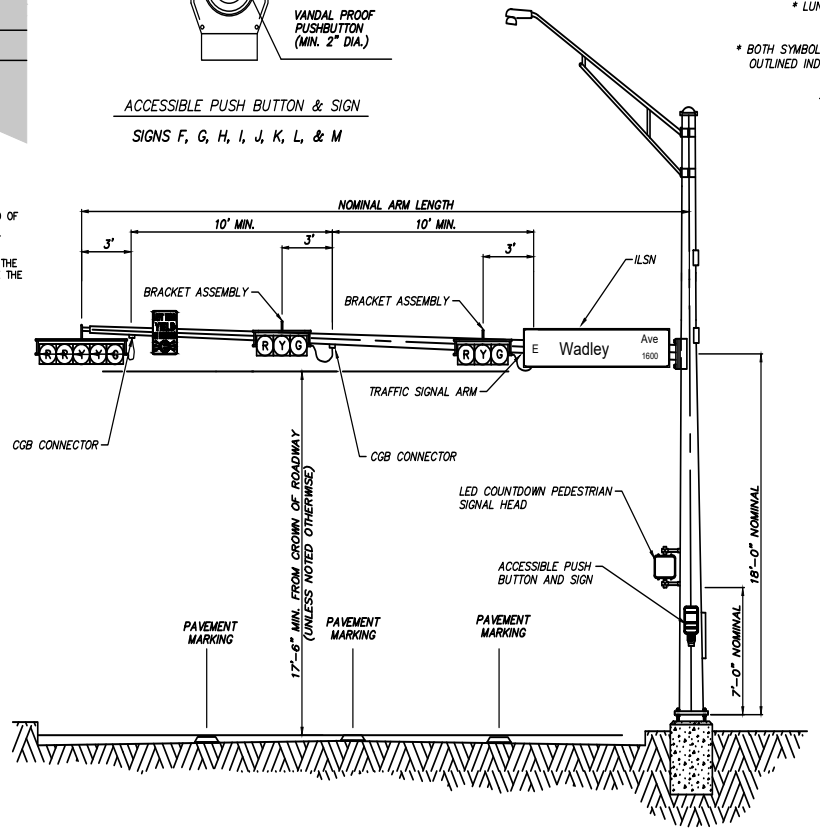


TYPE V3



* BOTH SYMBOLIC INDICATION SHALL BE SOLID. OUTLINED INDICATIONS ARE NOT ACCEPTABLE.

LED COUNTDOWN PEDESTRIAN SIGNAL HEAD



TYPICAL DETAIL OF SIGN MOUNTING AND SIGNAL HEAD MOUNTING LOCATIONS ON MAST ARM

DATE	BY	REV	REVISION

DUNAWAY
TX REGISTERED ENGINEERING FIRM F-1114
4000 Big Spring St
Suite 101
Midland, TX 79705
432-699-4889

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Feel the Energy!

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MIDKIFF/INDUSTRIAL/BANKHEAD
TRAFFIC SIGNAL UPGRADE DETAILS

DESIGN	FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
NLH	6			10
DESIGN CHECK	STATE	STATE DIST.	COUNTY	
DJS	TEXAS	ODA	MIDLAND	
DRAWING	CONT.	SECT.	JOB	HIGHWAY NO.
TNB				B062-40
DRAWING CHECK				
DJS				

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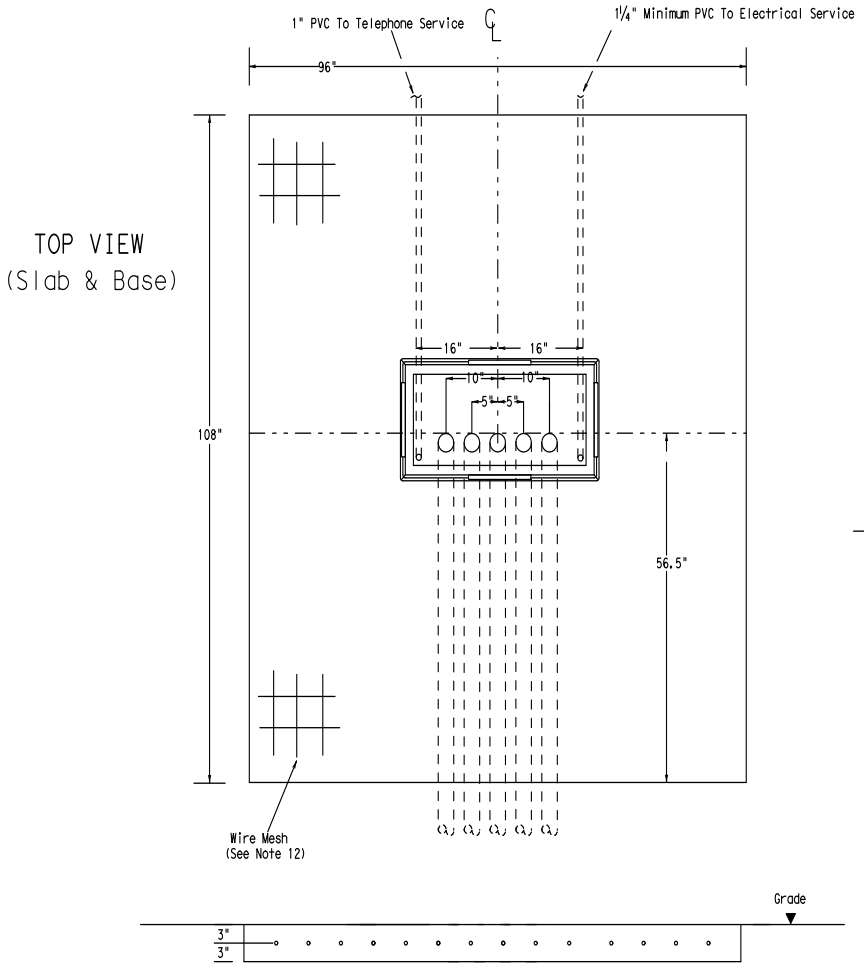
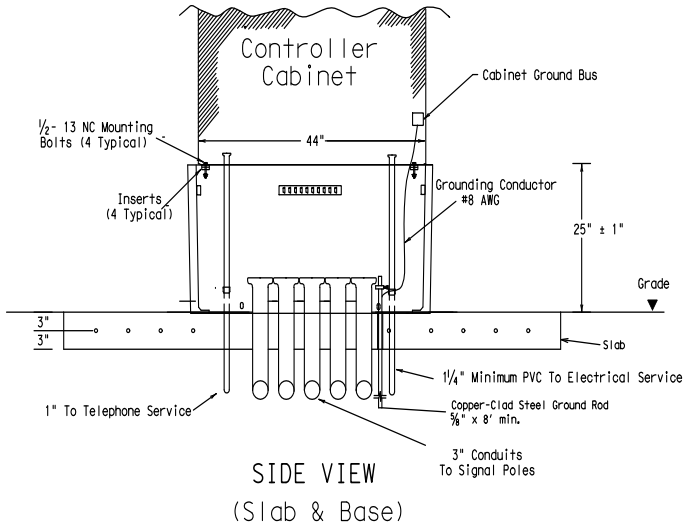
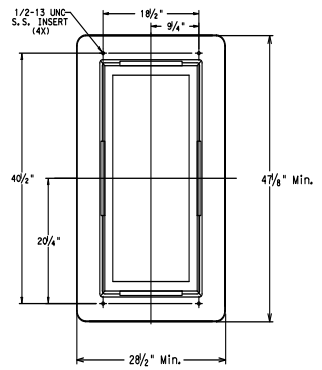
DATE: 7-89
FILE:





SIDE VIEW
(Slab & Base)



CABINET BASE

TRAFFIC SIGNAL CONTROLLER BASE:

1. Provide a traffic signal controller base (cabinet base) manufactured of polymer concrete material consisting of calcareous and siliceous stone; glass fibers and thermoset polyester resin. The polymer concrete cabinet base must be reinforced on the inside of the cabinet base with fiberglass matting. Provide one of the following bases: Armorcast Part # A6001848X24, Quazite Model # PG3048Z709, or other as approved by TxDOT Traffic Operation Division.
2. The polymer concrete material must have a minimum compressive strength of 10,300 pounds per square inch (psi), minimum flexural strength of 3600 psi, and minimum shear strength of 3600 psi.
3. The polymer concrete cabinet base must conform to the dimensions shown and must accommodate a standard TxDOT basemount cabinet.
4. Supply the cabinet base with four ½"-13 UNC stainless steel inserts for attachment of the cabinet to the base. Inserts must withstand a minimum torque of 50 ft-lb and a minimum straight pull out strength of 750 lbs.
5. Provide the cabinet base with 4 cable racks mounted one on each side of the base 2" to 7 " from the top edge of the base. Unless approved otherwise, cable racks must be 1-1/2 x ⅜ x ⅜ inch steel channel with eight T-slots spaced at 1-1/2 inches. The cable racks must easily accommodate the insertion of tie wraps to attach field wiring to the racks to serve as strain relief. Secure cable racks to the base using ½"-13 UNC stainless steel screws and inserts.
6. The cabinet base, when secured to the concrete slab with controller cabinet attached, must withstand a minimum wind load of 125 mph or a 850 lb force applied at 49" above the bottom of the base without causing the base or cabinet to come out of their anchored position or cause any permanent deformation. The manufacturer must supply certification by an independent testing laboratory or sealed by a Texas Licensed Professional Engineer. Provide the cabinet base with hardware for attachment to a concrete slab.
7. The traffic signal base must be permanently marked either by impress or by permanent ink with the manufacturer's model number and name or logo.
8. Seal the base to the concrete with a silicone caulk bead and fastened to the slab per manufacturer's instructions.

CONCRETE SLAB:

9. Traffic signal controller pad must be a portland cement concrete slab poured in place, must conform to the dimensions shown, and must be level.
10. Bond a #8 AWG copper ground wire and an 8 ft ground rod bonded to the reinforcing mesh by a suitable UL Listed clamp and terminated to the cabinet grounding bus for the purpose of providing a local ground for the electrical grounding conductor. The electrical grounding conductor specified in Item 680-3.A.4 is required and must be terminated to the cabinet ground bus.
11. Install a PVC sleeve to prevent the ground rod from direct embedment in the slab.
12. Provide welded wire mesh 6X6-W2.9 X W2.9 for reinforcement. Provide joints and splices in the mesh with a minimum 6-inch overlap. Center the mesh between top and bottom and provide a minimum 3 inch cover on the edges.
13. Provide Class B concrete minimum for the slab in accordance with Item 421. Construct the slab in accordance with Item 531.

CONDUITS:

14. Stub up and run 3-inch conduits through the slab to the various traffic signal poles and ground boxes as shown on the layouts. Install the number of conduits as shown on layouts plus two additional 3 inch conduits for future use. Terminate the conduits with a bushing between 2 and 4-inches above the slab.
15. Extend conduits for future use at least 18-inches from the edge of the slab, terminate underground with a coupling, and cap and seal so that the seal can be removed without damaging the coupling. This must also apply to unused telephone conduit.
16. Stub up two separate conduits through the slab from the electrical and telephone services. Run the conduit for the electrical feed directly to the electrical service enclosure. Run the conduit for the telephone line directly to the telephone service, usually located on the same pole as the electrical service. Telephone must not under any circumstance share a conduit with any other function.
17. Terminate electric and telephone conduits above the slab with a coupling. After the base is installed, extend the conduits above the top of the base and secure to the base using a steel one-hole strap or similar suitable substitute.

CONTROLLER CABINET:

18. Anchor the controller cabinet to the base using four stainless steel 1/2-13 NC bolts.
19. The silicone caulk bead specified in Item 680.3.B must be RTV 133.

PAYMENT:

20. Bid TS-CF as subsidiary to Item 680.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL CONTROLLER CABINET BASE AND PAD

TS-CF-04

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12-04	REVISIONS		CONT	SECT	JOB	HIGHWAY	
			DIST	COUNTY		SHEET NO.	
						10	

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FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft 10	15	40	ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	¾"	36	12 ¾"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 ½"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 ¾"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 ¼"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

NOTES:

① Anchor bolt design develops the foundation capacity given under Foundation Design Loads.

② Foundation Design Loads are the allowable moments and shears at the base of the structure.

③ Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.

④ Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.

⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

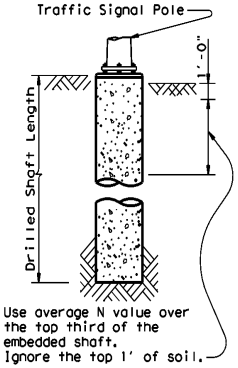
FOUNDATION SUMMARY TABLE ③

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH ⑥ (FEET) 24-A	30-A	36-A	36-B	42-A
T-1	15	36-A	1			12		
T-2	15	24-A	1	5.3				
T-3	15	24-A	1	5.3				
T-7	15	24-A	1	5.3				
T-9	15	24-A	1	5.3				
T-10	15	24-A	1	5.3				
T-11	15	24-A	1	5.3				
T-13	15	24-A	1	5.3				
T-16	15	24-A	1	5.3				
T-17	15	24-A	1	5.3				
TOTAL DRILLED SHAFT LENGTHS				48		12		

FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)

		FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	32'	48'		
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	24' X 24'			
		28' X 28'			
		32' X 28'	32' X 32'		
			36' X 36'		
			40' X 36'		
			44' X 28'	44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS		24' X 24'		
			28' X 28'		
			32' X 24'	32' X 32'	
				36' X 36'	
				40' x24'	40' X 36'
					44' x 36'

EXAMPLE:
1. For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
2. For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.

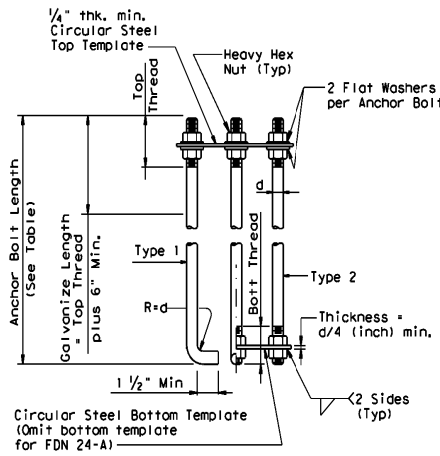


Use average N value over the top third of the embedded shaft. Ignore the top 1' of soil.

ANCHOR BOLT & TEMPLATE SIZES

BOLT DIA IN.	⑦ BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
¾"	1'-6"	3"	—	12 ¾"	7 ⅛"	5 ⅝"
1 ½"	3'-4"	6"	4"	17"	10"	7"
1 ¾"	3'-10"	7"	4 ½"	19"	11 ¼"	7 ¾"
2"	4'-3"	8"	5"	21"	12 ½"	8 ½"
2 ¼"	4'-9"	9"	5 ½"	23"	13 ¾"	9 ¼"

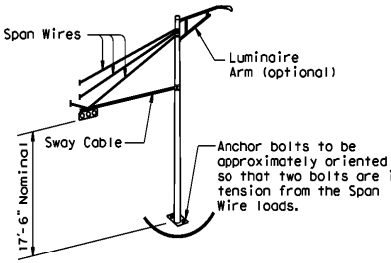
⑦ Min dimensions given, longer bolts are acceptable.



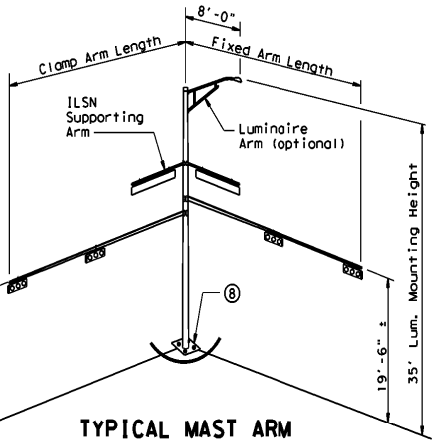
HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2)

ANCHOR BOLT ASSEMBLY

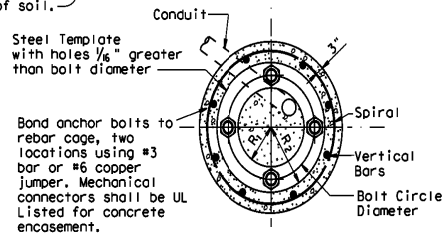
⑧ Orient anchor bolts orthogonal with the fixed arm direction to ensure that two bolts are in tension under dead load.



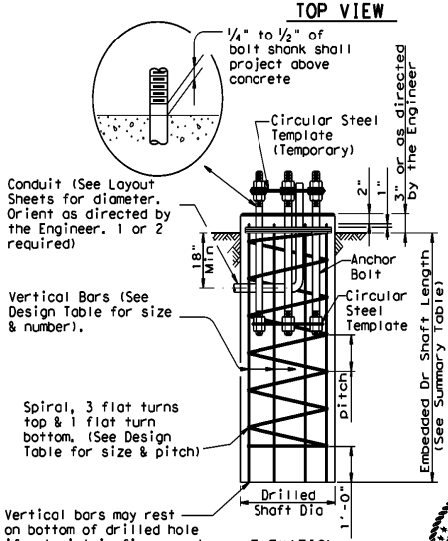
TYPICAL STRAIN POLE ASSEMBLY



TYPICAL MAST ARM ASSEMBLY



TOP VIEW



ELEVATION

FOUNDATION DETAILS

THE ABOVE TABLE WAS COMPLETED UNDER MY RESPONSIBLE SUPERVISION

STATE OF TEXAS — NORMAN L. HOGUE — 106059 — LICENSED PROFESSIONAL ENGINEER

PROJECT ENGINEER

6/22/2018
DATE

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.

Reinforcing steel shall conform to Item 440, "Reinforcing Steel".

Concrete shall be Class "C".

Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".

Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-12

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DN: MS	CK: JSY	DW: MAO/MMF	CK: JSY/TEB
REVISIONS 5-96 11-98 1-12	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY	SHEET NO. 11

DATE: 7-90
FILE:

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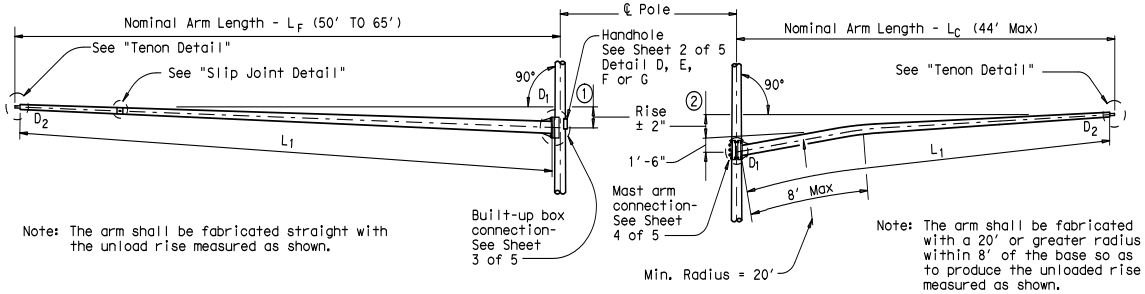
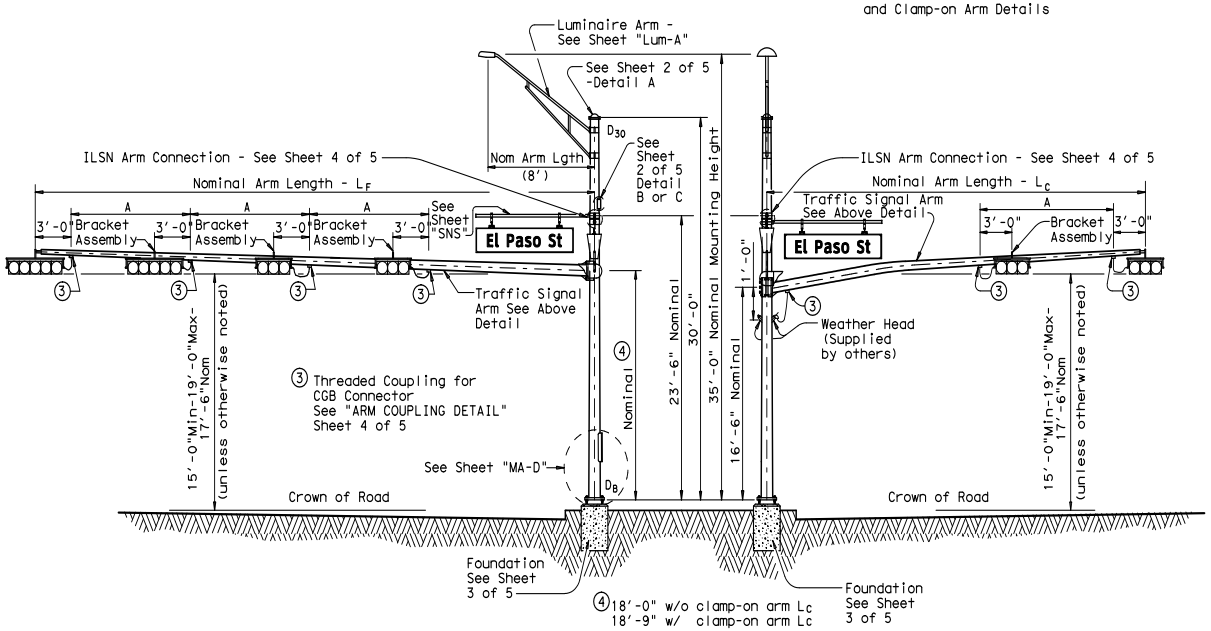


FIXED MOUNT TRAFFIC SIGNAL ARM

(1) See Sheet 3 of 5 for Arm Rise

CLAMP-ON TRAFFIC SIGNAL ARM (IF REQUIRED)

(2) See Sheet 4 of 5 for Arm Rise and Clamp-on Arm Details



ELEVATION

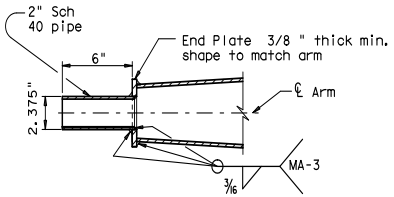
(Showing fixed mount arm)

STRUCTURE ASSEMBLY

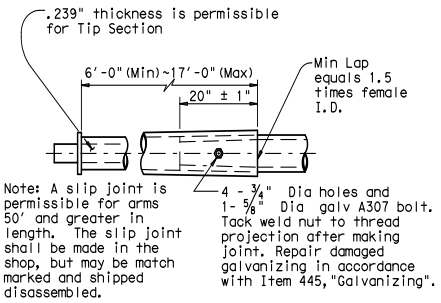
ELEVATION

(Showing clamp-on arm)

TABLE OF DIMENSIONS "A"										
Arm Length	24'	28'	32'	36'	40'	44'	50'	55'	60'	65'
Arm Type II	10'	11'	12'	13'						
Arm Type III			10'	11'	12'	12'				
Arm Type IV							12'	12'	12'	12'



TENON DETAIL



SLIP JOINT DETAIL (FIXED MOUNT ARM)

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Specifications thereto. Design Wind Speed can be either 100 mph or 80 mph plus a 1.3 gust factor. If clamp-on traffic signal is required, designs are based on an arm included angle of 90 degrees or more. Angles of less than approximately 75 degrees will require a special design.

Poles are designed to support one 8'-0" luminaire arm, two 9'-0" internally lighted street name (ILSN) signs and two traffic signal arms with limited length combinations.

Each arm with its related attachment is shown below

Arm	Equivalent DL (5)	WL EPA (5)(6)
8' Luminaire Arm	Luminaire 60 lbs	1.6 sq ft
9' ILSN Arm	Sign 85 lbs	11.5 sq ft
50' to 65' Fixed Mount Arm	Signal Loads 310 lbs	52 sq ft
Up to 44' Clamp-on Arm	Signal Loads 180 lbs	32.4 sq ft

(5) Equivalent dead load plus horizontal wind load applied at the end of arm except ILSN arm, which applied 4.5' from the centerline of the pole.

(6) Effective projected area (actual area times drag coefficient) for the application of horizontal wind load.

Except as noted in Sheet 1 thru 5 of 5, other details not covered shall refer to Standard Sheet "MA-D" for pole details, "LUM-A" for luminaire arm and connection details, "SNS" for internally lighted street name sign details, and "TS-FD" for anchor bolt and foundation details.

Fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. Material, fabrication tolerances, and shipping practices shall also meet the requirements of this sheet and Item 686, "Traffic Signal Pole Assemblies (Steel)".

Unless otherwise noted, all parts shall be galvanized in accordance with Item 445, "Galvanizing" after fabrication.

Deviations from the details and dimensions shown herein require submission of shop drawings in accordance with the Item 441, "Steel Structures". Alternate designs are not acceptable.

Installation of damping plate for the long mast arm is not recommended.

Provision of the bracket assembly used to support the traffic signal heads shall be under the direction of the Engineer for approval.

Design also conforms to NCHRP Report 412 for fatigue resistance except that there are no stiffeners at the base plate. TxDOT is conducting tests to determine if stiffeners at the base plate will or will not result in optimal performance; depending upon the results of the tests, poles may need a retrofit to ensure optimal fatigue performance.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES

LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)

LMA(1)-12

Sheet 1 of 5

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131A

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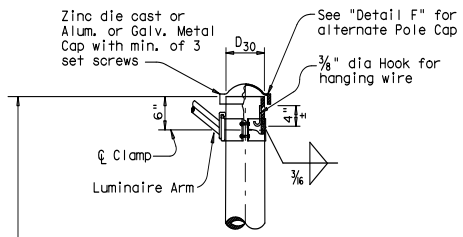
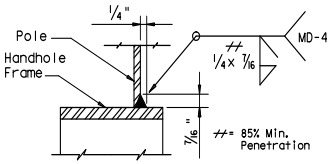
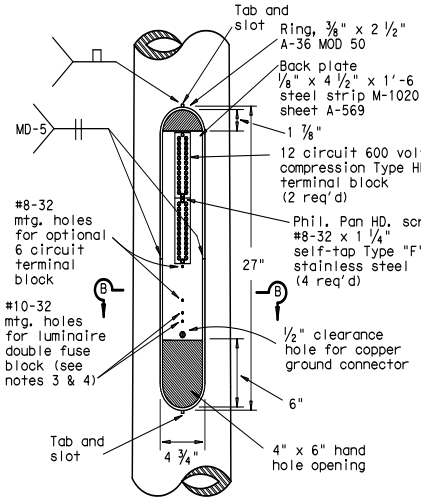


DETAIL A

(for pole with luminaire)



DETAIL H

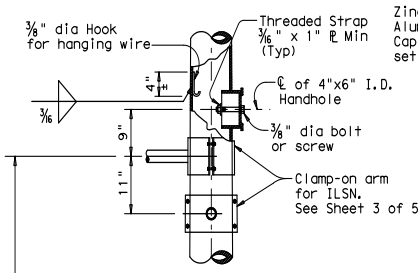


ACCESS COMPARTMENT

MATERIALS	
Round Shafts or Polygonal Shafts (7)	ASTM A595 Gr.A, A588, A1008 HSLAS Gr.50 Class 2, A1011 HSLAS Gr.50 Class 2, A572 Gr.50 or A1011 SS Gr.50 (8)
Plates (7)	ASTM A36, A588, or A572 Gr.50
Connection Bolts	ASTM A325, or A449 except where noted
Pin Bolts	ASTM A325
Pipe (7)	ASTM A53 Gr.B, A501, A1008 HSLAS-F Gr.50, A1011 HSLAS-F Gr.50
Misc. Hardware	Galvanized steel or stainless steel or as noted

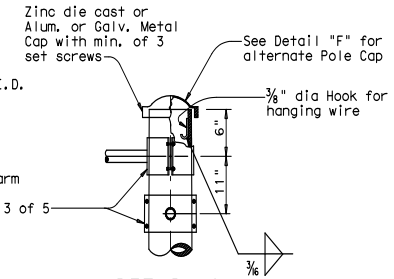
(7) ASTM A572, A1008 HSLAS, A1011 HSLAS, A1008 HSLAS-F, A1011 HSLAS-F, or A1011 SS may have higher yield strengths but shall not have less elongation than the grade indicated.

(8) ASTM A1011 SS Gr.50 shall also have a minimum elongation of 18 percent in 8 inches or 23 percent in 2 inches. Material thickness in excess of those stipulated under A1011 SS will be acceptable providing the material meets all other A1011 SS requirements and the requirements of this item.

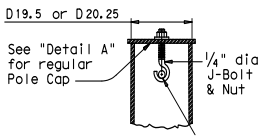


DETAIL B

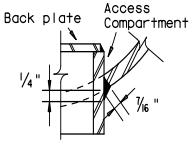
(If ILSN applied)



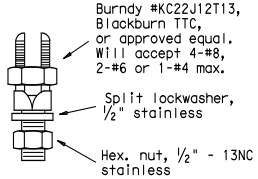
DETAIL C



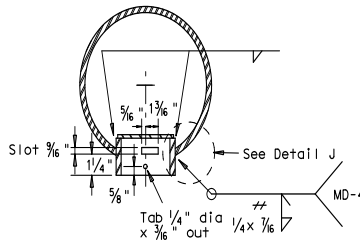
SECTION Y-Y



DETAIL J

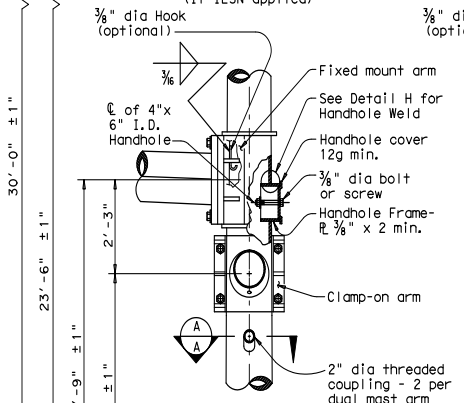


COPPER GROUND CONNECTOR



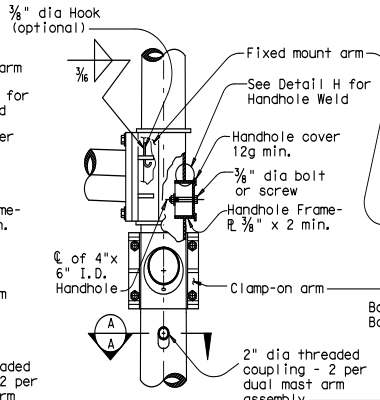
SECTION B-B

Opening for access compartment shall be no more than 1/16 inch wider than the access compartment itself.



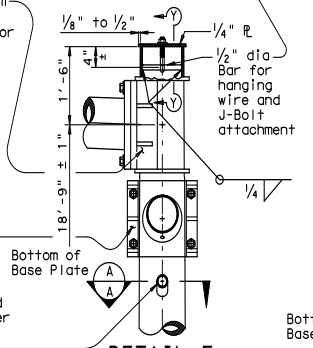
DETAIL D

(for 30' pole with luminaire and ILSN sign)



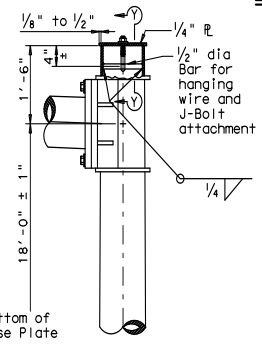
DETAIL E

(for 24' pole with ILSN sign and no luminaire, single or dual mast arm)



DETAIL F

(for 20.25' pole with no ILSN sign and no luminaire, dual mast arm)

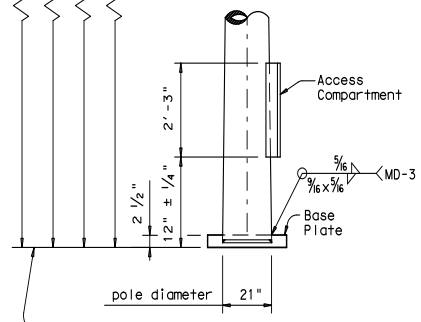


DETAIL G

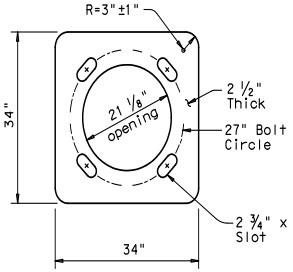
(for 19.5' pole with no ILSN sign and no luminaire, single mast arm)

ACCESS COMPARTMENT NOTES:

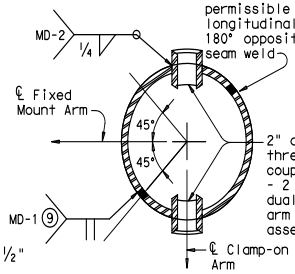
1. The cover shall be one piece formed from ABS plastic, shall be a pearl gray color, and shall be suitable for exposure to harsh sunlight and extreme weather. Cover shall latch with two screw latches and shall fit tightly to the enclosure ring to create a rainproof seal. Latch screws shall be 1/4-20 stainless flat socket head screws with tamper proof feature.
2. The pole manufacturer shall provide with each pole a separate kit consisting of: one cover with two latching assemblies, two terminal strips (Marathon #985GP12CU or approved equal), four #8-32 x 1 1/4" self tapping type "F" stainless steel pan head screws, and one ground connector (Blackburn TTC, Burndy KC22J12T13, or Ilsco SSS-5). The traffic signal contractor shall install the kit items in the field.
3. The screw hole spacing on the enclosure back plate shall be for two Marathon #985GP12 terminal strips, one Marathon #985GP06CU terminal strip, and one Bussmann #BM6032B fuse block.
4. Install one Bussmann #BM6032B, Littelfuse #L60030M-2C, or Ferraz-Shawmut #30352 fuse block for poles where luminaires are to be installed.



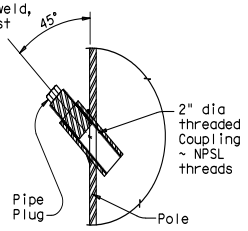
POLE ELEVATION



BASE PLATE



SECTION A-A



POLE COUPLING DETAIL

(9) Longitudinal seam weld must be oriented within 90° (45° rotation each side) along the fixed mount arm. 60% min penetration required, 100% penetration within 6" of circumferential base weld.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES

LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)

Sheet 2 of 5 LMA(2)-12

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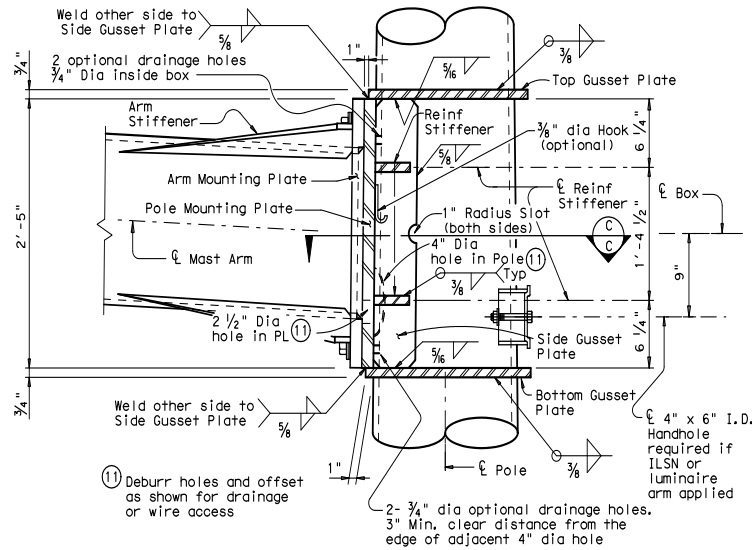
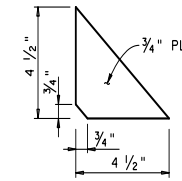
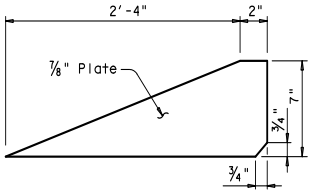


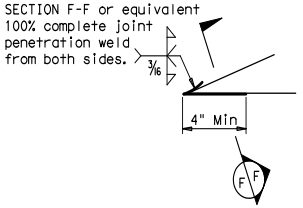
BUILT-UP BOX CONNECTION



REINFORCING STIFFENER

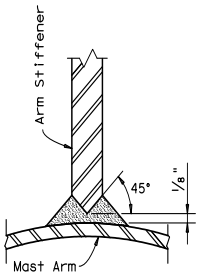


ARM STIFFENER
(Cut to match arm inclination and taper)



Only 4" length at tip of Arm Stiffener requires a complete joint penetration weld. Smooth weld radius to connect Stiffener. Only a fillet weld is required for the remaining weld length.

DETAIL "K"



SECTION F-F

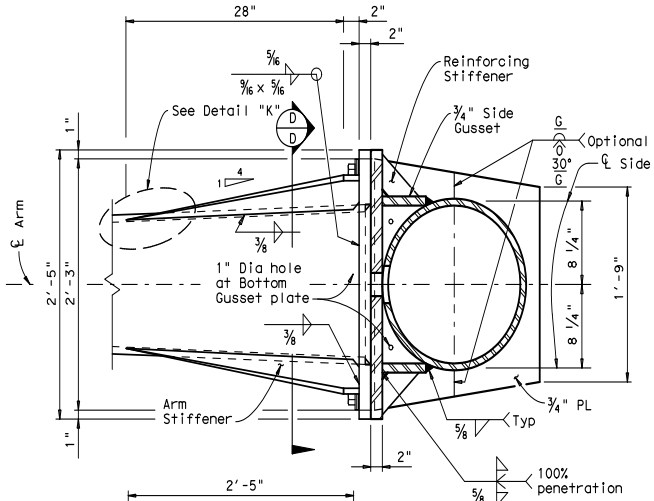
Fixed Mount Arm L_F	ROUND POLES (13)					Foundation Type
	D_B	$D_{19.5}$ or $D_{20.25}$	D_{24}	D_{30}	(12) thk	
ft.	in.	in.	in.	in.	in.	
50', 55' 60', 65'	21.0	18.2	17.6	16.8	.3125	48-A

Fixed Mount Arm L_F	ROUND ARMS (13)				
	L_1	D_1	D_2	(12) thk	Rise
ft.	ft.	in.	in.	in.	
50	49	18.5	11.7	.3125	3'- 3"
55	54	18.5	11.0	.3125	3'- 7"
60	59	18.5	10.3	.3125	3'-11"
65	64	18.5	9.6	.3125	4'- 4"

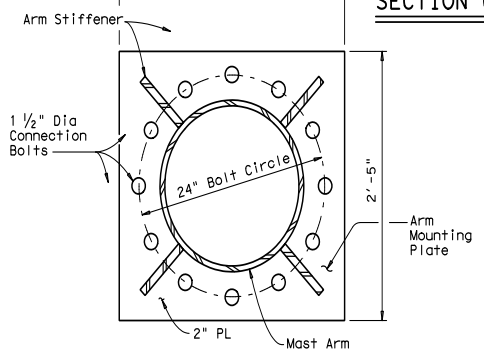
D_B = Pole Base O.D.
$D_{19.5}$ = Pole Top O.D. with no Luminaire and no ILSN (single mast arm)
$D_{20.25}$ = Pole Top O.D. with no Luminaire and no ILSN (dual mast arm)
D_{24} = Pole Top O.D. with ILSN w/out Luminaire
D_{30} = Pole Top O.D. with Luminaire
D_1 = Arm Base O.D.
D_2 = Arm End O.D.
L_1 = Shaft Length
L_F = Fixed Arm Length

(12) Thickness shown is minimum, thicker materials may be used.

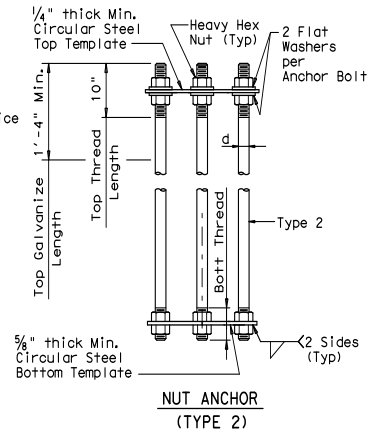
(13) Shaft profile 16-sided or 18-sided is considered to be equivalent to round section.



SECTION C-C

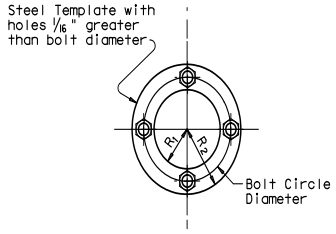


SECTION D-D



NUT ANCHOR
(TYPE 2)

ANCHOR BOLT ASSEMBLY



TEMPLATE DETAIL

GENERAL NOTES:

Built-up Box Connection: For the welded arm-to-pole connection as a build-up box configuration illustrated here is an example only, fabricators are required to submit a shop drawing of box connection for approval. The drawing shall specify the details of each box element, welds of arm-to-pole connection, arm-to-plate socket connection, and arm rise creation. Specify the proper location of drain holes along the pole. 2 1/2" dia hole in the pole mounting plate and 4" dia hole in the pole need to be aligned for wiring access or drainage. Arm stiffeners cut to match arm inclination and taper shall also be included.

The deviation from flat for either arm or pole mounting plate shall not exceed 3/32 in., which is measured along the center of mounting plate to a radial distance of 13.5 in. The deformed-from-flat connection between arm and pole mounting plates shall not be allowed if the center of both mounting plates cannot contact directly.

Fixed mount details are used for single mast arm assemblies and for the first arm on dual mast arm assemblies.

ANCHOR BOLT & TEMPLATE SIZE						
Bolt Dia in.	Length ‡	Top Thread	Bottom Thread	Bolt Circle	R_2	R_1
2 1/2"	5'-2"	10"	6 1/2"	27"	16"	11"

‡ Min dimension given, longer bolts are acceptable.

FOUNDATION DESIGN TABLE												
FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH-ft (16), (17), (18)			ANCHOR BOLT DESIGN (14)				FOUNDATION DESIGN LOAD (15)		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
				10	15	40							
48-A	48"	20 #9	#4 at 6"	21.9	19.5	14.7	2 1/2"	55	27"	2	490	10	50' to 65' Mast arm assembly.

SEE SHEET "TS-FD" FOR ADDITIONAL DETAILS.

(14) Anchor bolt design develops the foundation capacity given under Foundation Design Loods.

(15) Foundation Design Loads are the allowable moments and shears at the base of the structure.

(16) Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.

(17) If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

(18) Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES
LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)

Sheet 3 of 5 LMA(3)-12

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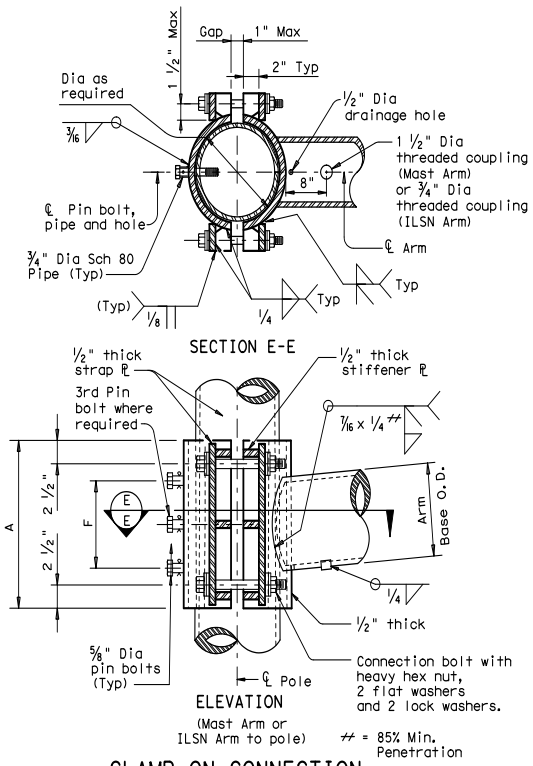


CLAMP-ON CONNECTION

80 MPH WIND

Clamp-on Arm Lc	ROUND ARMS					POLYGONAL ARMS				
	L_1	D_1	D_2	thk (12)	Rise	L_1	D_1	D_2	thk (12)	Rise
ft.	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	6.5	3.8	.179	1'-9"	19.1	7.0	3.5	.179	1'-8"
24	23.1	7.5	4.3	.179	1'-10"	23.1	7.5	3.5	.179	1'-9"
28	27.1	8.0	4.2	.179	1'-11"	27.1	8.0	3.5	.179	1'-10"
32	31.0	9.0	4.7	.179	2'-1"	31.0	9.0	3.5	.179	2'-0"
36	35.0	9.5	4.6	.179	2'-4"	35.0	10.0	3.5	.179	2'-1"
40	39.0	9.5	4.1	.239	2'-8"	39.0	9.5	3.5	.239	2'-3"
44	43.0	10.0	4.1	.239	2'-11"	43.0	10.0	3.5	.239	2'-6"

100 MPH WIND

Clamp-on Arm Lc	ROUND ARMS					POLYGONAL ARMS				
	L_1	D_1	D_2	thk (12)	Rise	L_1	D_1	D_2	thk (12)	Rise
ft.	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	8.0	5.3	.179	1'-8"	19.1	8.0	3.5	.179	1'-7"
24	23.1	9.0	5.8	.179	1'-9"	23.1	9.0	3.5	.179	1'-8"
28	27.1	9.5	5.7	.179	1'-10"	27.1	10.0	3.5	.179	1'-9"
32	31.0	9.5	5.2	.239	1'-11"	31.0	9.5	3.5	.239	1'-10"
36	35.0	10.0	5.1	.239	2'-0"	35.0	10.0	3.5	.239	1'-11"
40	39.0	10.5	5.1	.239	2'-3"	39.0	11.0	3.5	.239	2'-1"
44	43.0	11.0	5.1	.239	2'-8"	43.0	11.5	4.0	.239	2'-3"

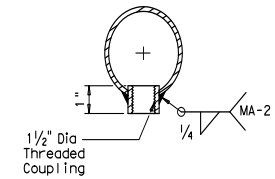
D1 = Arm Base O.D.
D2 = Arm End O.D.
L1 = Shaft Length
Lc = Clamp-on Arm Length

(12) Thickness shown is minimum, thicker materials may be used.

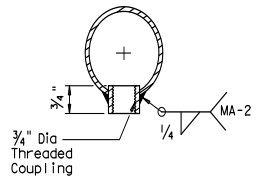
CLAMP-ON ARM CONNECTION

ILSN Arm Size		A	F	4 Conn. Bolts	⅝" Dia. Pin Bolts
Sch 40 pipe Dia	Thick			Dia	No.
in.	in.	in.	in.	in.	ea
3	.216	10	4	¾	2

Mast Arm Size		A	F	4 Conn. Bolts	⅝" Dia. Pin Bolts
Base Dia	Thick			Dia	No.
in.	in.	in.	in.	in.	ea
6.5	.179	12	6	1	2
7.5	.179	14	8	1	2
8.0	.179	14	8	1	2
9.0	.179	16	10	1	2
9.5	.179	18	12	1 ¼	3
9.5	.239	18	12	1 ¼	3
10.0	.239	18	12	1 ¼	3
10.5	.239	18	12	1 ¼	3
11.0	.239	18	12	1 ¼	3
11.5	.239	18	12	1 ¼	3



ARM COUPLING DETAIL



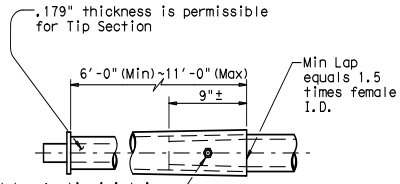
ILSN ARM COUPLING DETAIL

GENERAL NOTES:

Clamp-on details are used for the second arm on dual mast arm assemblies or ILSN arm support. For a clamp-on mast arm, a maximum 1 ½" wide vertical slotted hole may be cut in the front clamp plate to facilitate drainage during galvanizing. The slot shall be centered behind the arm and shall be no longer than the arm diameter minus 1". For an ILSN arm, a 1 ½" diameter hole shall be cut in the front clamp plate for wire access. A matched hole shall be field drilled through the pole to provide wire access after arm is oriented. Deburr both holes.

Where duplicate parts occur on a detail, welds shown for part shall apply to all similar parts on the detail.

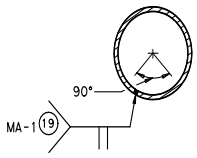
Pin bolts are required to prevent rotation of clamp-on arms under design wind forces. Pin bolts shall be ASTM A325 with threads excluded from the shear plane. Pin bolt and ¾" diameter pipe shall have ⅜" diameter holes for a ⅛" diameter galvanized cotter pin. Back clamp plate shall be furnished with a ¾" diameter hole for each pin bolt. An 11/16" diameter hole for each pin bolt shall be field drilled through the pole after arm orientations have been approved by the Engineer.



SLIP JOINT DETAIL (CLAMP-ON ARM)

Stainless steel bands (or Cables) and cast bracket as in "Astro-Brac", "Sky Bracket" or "Easy Bracket" with 1 ½" Dia Threaded Coupling.

BRACKET ASSEMBLY



ARM WELD DETAIL

(19) Longitudinal Seam Weld must be oriented within the lower 90° of the signal arm.
60% Min penetration
100% penetration within 6" of circumferential base welds.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES
LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)

Sheet 4 of 5 LMA(4)-12

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DN: JK	CK: GRB	DW: FDN	CK: CAL

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4-20-01 1-12				

DIST	COUNTY	SHEET NO.
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Shipping Parts List

Ship each pole with the following attached: enlarged hand hole, pole cap, fixed arm connection bolts and washers, and any additional hardware listed in the table.

Nominal Arm Length	30′ Poles with Luminaire See note above plus: one (or two if ILSN attached) small hand hole, clamp-on simplex		24′ Poles with ILSN See note above plus one small hand hole		19.50′ (Single Mast Arm) 20.25′ (Dual Mast Arm) Poles with no Luminaire and no ILSN See note above	
Single Mast Arm						
Lf ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
50	50L		50S		50	
55	55L		55S		55	
60	60L	1	60S		60	
65	65L	1	65S		65	

Dual Mast Arm

Lf ft.	Lc ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
50	20	5020L		5020S		5020	
	24	5024L		5024S		5024	
	28	5028L		5028S		5028	
	32	5032L		5032S		5032	
	36	5036L		5036S		5036	
	40	5040L		5040S		5040	
	44	5044L		5044S		5044	
55	20	5520L		5520S		5520	
	24	5524L		5524S		5524	
	28	5528L		5528S		5528	
	32	5532L		5532S		5532	
	36	5536L		5536S		5536	
	40	5540L		5540S		5540	
	44	5544L		5544S		5544	
60	20	6020L		6020S		6020	
	24	6024L		6024S		6024	
	28	6028L		6028S		6028	
	32	6032L		6032S		6032	
	36	6036L		6036S		6036	
	40	6040L		6040S		6040	
	44	6044L		6044S		6044	
65	20	6520L		6520S		6520	
	24	6524L		6524S		6524	
	28	6528L		6528S		6528	
	32	6532L		6532S		6532	
	36	6536L		6536S		6536	
	40	6540L		6540S		6540	
	44	6544L		6544S		6544	

Shipping Parts List

Traffic Signal Arms (Fixed Mount) (1 per pole)
Ship each arm with listed equipment attached

Nominal Arm Length	Type IV Arm (4 Signals) 3 Bracket Assembly and 4 CGB Connectors	
ft.	Designation	Quantity
50	50IV	
55	55IV	
60	60IV	1
65	65IV	1

Luminaire Arms (1 per 30′ pole)

Nominal Arm Length	Quantity
8′ Arm	2

ILSN Arm (Max. 2 per pole) Ship with clamps, bolts and washers

Nominal Arm Length	Quantity
7′ Arm	
9′ Arm	2

Traffic Signal Arms (80 MPH Clamp-On Mount) (1 per pole) Ship each arm with listed equipment attached

Nominal Arm Length	Type I Arm (1 Signal) 2 CGB connector and 1 clamp w/bolts and washers		Type II Arm (2 Signals) 1 Bracket Assembly and 3 CGB connectors, and 1 clamp w/bolts and washers		Type III Arm (3 Signals) 2 Bracket Assembly and 4 CGB connectors, and 1 clamp w/bolts and washers	
ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-80					
24	24I-80		24II-80			
28	28I-80		28II-80			
32			32II-80		32III-80	
36			36II-80		36III-80	
40					40III-80	
44					44III-80	

Traffic Signal Arms (100 MPH Clamp-On Mount) (1 per pole) Ship each arm with listed equipment attached

Nominal Arm	Type I Arm (1 Signal) 2 CGB connector and 1 clamp w/bolts and washers		Type II Arm (2 Signals) 1 Bracket Assembly and 3 CGB connectors, and 1 clamp		Type III Arm (3 Signals) 2 Bracket Assembly and 4 CGB connectors, and 1 clamp	
ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-100					
24	24I-100		24II-100			
28	28I-100		28II-100			
32			32II-100		32III-100	
36			36II-100		36III-100	
40					40III-100	
44					44III-100	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
2 1/2 "	5′ - 3"	2

Each anchor bolt assembly consists of the following: Top and bottom templates, 4 anchor bolts, 8 nuts, 8 flat washers and 4 nut anchor devices (type 2) per Standard Drawing "TS-FD".
Templates may be removed for shipment.

Foundation Summary Table **

Location Ident.	Avg. N Blow/ft.	No. Each	Drill Shaft *** Length (feet)
			48-A
T-6	15	1	19.5
T-14	15	1	19.5
Total Drill Shaft Length			39

Notes

** Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.

*** Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

Abbreviations
Lf= Fixed Arm Length
Lc= Clamp-on Arm Length (44′ Max.)

THE ABOVE TABLE WAS COMPLETED UNDER MY RESPONSIBLE SUPERVISION

STATE OF TEXAS
NORMAN L. HOGUE
106059
LICENSED
PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

Texas Department of Transportation
Traffic Operations Division

LONG MAST ARM ASSEMBLY PARTS LIST

LMA(5)-12

Sheet 5 of 5

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DIST	COUNTY	SHEET NO.
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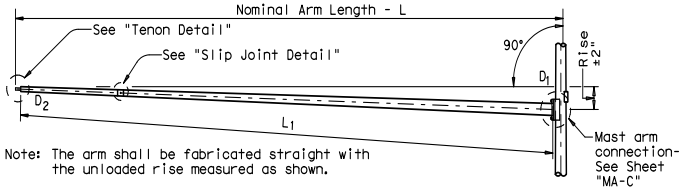
Arm Length	ROUND POLES					POLYGONAL POLES					Foundation Type
	D_B	D_{19}	D_{24}	D_{30}	① thk	D_B	D_{19}	D_{24}	D_{30}	① thk	
ft.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
20	10.5	7.8	7.1	6.3	.179	11.5	8.5	7.7	6.8	.179	30-A
24	11.0	8.3	7.6	6.8	.179	12.0	9.0	8.2	7.3	.179	30-A
28	11.5	8.8	8.1	7.3	.179	12.5	9.5	8.7	7.8	.179	30-A
32	12.5	9.8	9.1	8.3	.179	12.0	9.0	8.2	7.3	.239	30-A
36	12.0	9.3	8.6	7.8	.239	12.5	9.5	8.7	7.8	.239	36-A
40	12.0	9.3	8.6	7.8	.239	13.5	10.5	9.7	8.8	.239	36-A
44	12.5	9.8	9.1	8.3	.239	14.0	11.0	10.2	9.3	.239	36-A
48	13.0	10.3	9.6	8.8	.239	15.0	12.0	11.2	10.3	.239	36-A

Arm Length	ROUND ARMS					POLYGONAL ARMS				
	L_1	D_1	D_2 ① thk		Rise	L_1	D_1	② D_2 ① thk		Rise
ft.	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	6.5	3.8	.179	1'-9"	19.1	7.0	3.5	.179	1'-8"
24	23.1	7.5	4.3	.179	1'-10"	23.1	7.5	3.5	.179	1'-9"
28	27.1	8.0	4.2	.179	1'-11"	27.1	8.0	3.5	.179	1'-10"
32	31.0	9.0	4.7	.179	2'-1"	31.0	9.0	3.5	.179	2'-0"
36	35.0	9.5	4.6	.179	2'-4"	35.0	10.0	3.5	.179	2'-1"
40	39.0	9.5	4.1	.239	2'-8"	39.0	9.5	3.5	.239	2'-3"
44	43.0	10.0	4.1	.239	2'-11"	43.0	10.0	3.5	.239	2'-6"
48	47.0	10.5	4.1	.239	3'-4"	47.0	11.0	3.5	.239	2'-9"

D_B = Pole Base O.D.
D_{19} = Pole Top O.D. with no Luminaire and no ILSN
D_{24} = Pole Top O.D. with ILSN w/out Luminaire
D_{30} = Pole Top O.D. with Luminaire
D_1 = Arm Base O.D.
D_2 = Arm End O.D.
L_1 = Shaft Length
L = Nominal Arm Length

① Thickness shown are minimums, thicker materials may be used.

② D_2 may be increased by up to 1" for polygonal arms.



Note: The arm shall be fabricated straight with the unloaded rise measured as shown.

TRAFFIC SIGNAL ARM

(Fixed Mount)

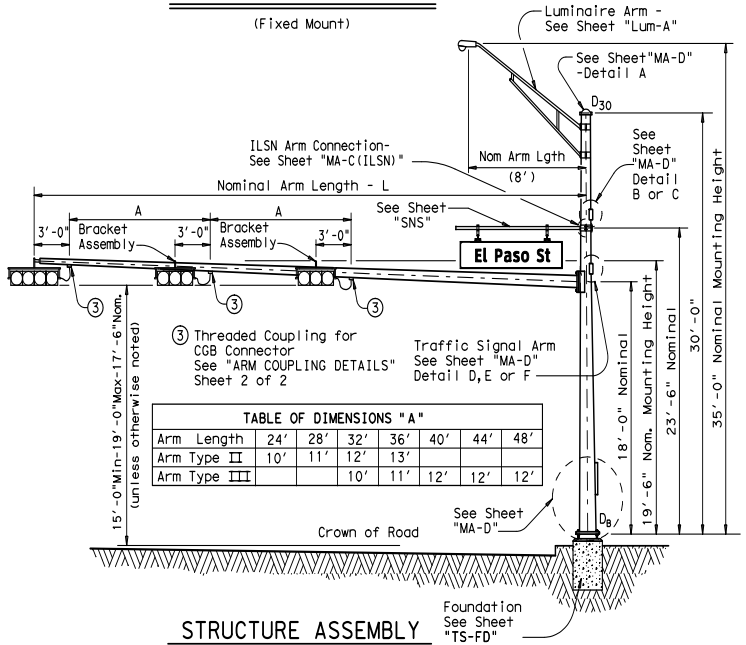


TABLE OF DIMENSIONS "A"							
Arm Length	24'	28'	32'	36'	40'	44'	48'
Arm Type II	10'	11'	12'	13'			
Arm Type III			10'	11'	12'	12'	12'

STRUCTURE ASSEMBLY

SHIPPING PARTS LIST

Ship each pole with the following attached: enlarged hand hole, pole cap, fixed-arm connection bolts and washers and any additional hardware listed in the table.

Nominal Arm Length	30' Poles With Luminaire		24' Poles With ILSN		19' Poles With No Luminaire and No ILSN	
	Above hardware plus: One (or two if ILSN attached) small hand hole, clamp-on simplex		Above hardware plus one small hand hole		See note above	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20L-80		20S-80		20-80	
24	24L-80		24S-80		24-80	
28	28L-80		28S-80		28-80	
32	32L-80		32S-80		32-80	
36	36L-80		36S-80		36-80	
40	40L-80		40S-80		40-80	
44	44L-80		44S-80		44-80	1
48	48L-80		48S-80		48-80	

Traffic Signal Arms (1 per Pole) Ship each arm with the listed equipment attached

Nominal Arm Length	Type I Arm (1 Signal) 1 CGB connector		Type II Arm (2 Signals) 1 Bracket Assembly and 2 CGB Connectors		Type III Arm (3 Signals) 2 Bracket Assemblies and 3 CGB Connectors	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-80					
24	24I-80		24II-80			
28	28I-80		28II-80			
32			32II-80		32III-80	
36			36II-80		36III-80	
40					40III-80	
44					44III-80	1
48					48III-80	

Luminaire Arms (1 per 30' pole)

Nominal Arm Length	Quantity
8' Arm	

ILSN Arm (Max. 2 per pole) Ship with clamps, bolts and washers

Nominal Arm Length	Quantity
7' Arm	
9' Arm	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
1 ½"	3'-4"	1
1 ¾"	3'-10"	
¾"	1'-6"	9 (Ped Poles)

Each anchor bolt assembly consists of the following: Top and Bottom templates, 4 anchor bolts, 8 nuts, 8 flat washers, and 4 nut anchor devices (Type 2) per Standard Drawing "TS-FD".

Templates may be removed for shipment.

THE ABOVE TABLE WAS COMPLETED UNDER MY RESPONSIBLE SUPERVISION

STATE OF TEXAS
NORMAN L. HOGUE
106059
LICENSED PROFESSIONAL ENGINEER

PROJECT ENGINEER
6/22/2018
DATE

SHEET 1 OF 2

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES

SINGLE MAST ARM ASSEMBLY

(80 MPH WIND ZONE)

SMA-80(1)-12

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CONT	SECT	JOB	HIGHWAY

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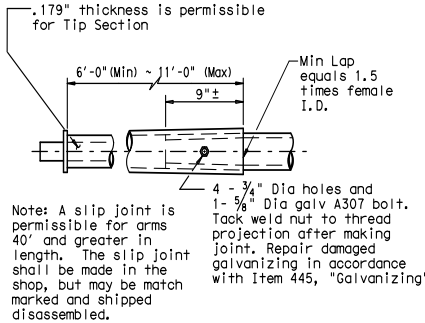
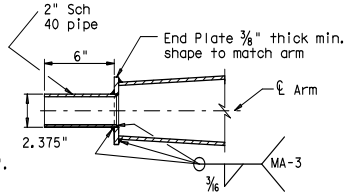


SLIP JOINT DETAIL



TENON DETAIL

VIBRATION WARNING

Mast Arms of SMA and DMA structures and clamp-on Arms of LMA structures of approximately 40 ft or longer are subject to harmonic vertical vibrations in light wind conditions due to the aeroelastic characteristics of a few of the myriads of possible combinations of the following: signal numbers, weights and positions; existence/solidity of backplates; presence of additional attachments to the arm, such as signs and cameras; arm-wind orientation; and arm-pole stiffness.

Such vibrations may cause fatigue damage to the structure and may lead to galloping in moderate wind conditions which may further damage the structure and alarm the public. Tests have indicated that when wind is blowing toward the back side of signal heads having un-vented backplates attached the probability of unacceptable harmonic vibration and/or galloping is rather high.

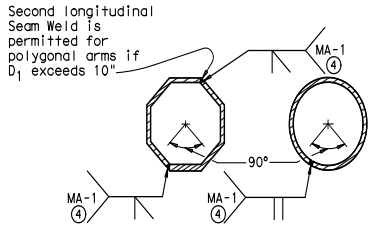
If backplates are not required for improved visibility they should not be applied to the signal heads or, if they must be applied, they should be vented as a first and inexpensive measure to mitigate vibrations.

The traffic signal mast arms shall be visually inspected in 5 to 20 mph wind conditions after installation of signal heads and any attachments, including any required backpates. If vertical movements with a total excursion (maximum upward excursion to maximum downward excursion) of more than approximately 8" are observed at the arm tip, a damping plate shall be fitted to the arm. See "Damping Plate Mounting Details" on standard sheet, MA-DPD-10.

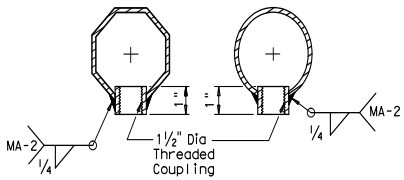
This visual inspection shall be repeated after each modification of the structure that could affect its aeroelastic response. Excessive vibrations shall not be allowed to continue for more than two days.

Stainless steel bands (or Cables) and cast bracket as in "Astro-Brac", "Sky Bracket" or "Easy Bracket" with 1 ½" Dia Threaded Coupling.

BRACKET ASSEMBLY



ARM WELD DETAIL



ARM COUPLING DETAILS

④ 60% Min. penetration 100% pemetration within 6" of circumferential base welds.

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Specifications thereto. Design Wind Speed equals 80 mph plus a 1.3 gust factor.

Poles are designed to support one 8'-0" luminaire arm, one 9'-0" internally lighted street name sign and one traffic signal arm with a length as tabulated. The specified luminaire load applied at the end of the luminaire arm equals 60 lbs vertical dead load plus the horizontal wind load on an effective projected area of 1.6 sq ft. The specified internally lighted street name sign load applied 4.5 ft from the centerline of the pole equals 85 lbs vertical dead load plus horizontal wind load on an effective projected area of 11.5 sq ft. The specified signal load applied at the end of the traffic signal arm equals 180 lbs vertical dead load plus the horizontal wind load on an effective projected area of 32.4 sq ft (actual area times drag coefficient).

See Standard Sheet "MA-D" for pole details, "MA-C" for traffic signal arm connection details, "MA-C (ILSN)" for internally lighted street name sign arm connection details, "LUM-A" for luminaire arm and connection details, "SNS" for internally lighted street name sign details, and "TS-FD" for anchor bolt and foundation details. See "MA-C" for material specifications.

Fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. Materials, fabrication tolerances, and shipping practices shall meet the requirements of this sheet and Item 686, "Traffic Signal Pole Assemblies (Steel)".

Unless otherwise noted, all parts shall be galvanized in accordance with Item 445, "Galvanizing", after fabrication.

Deviation from the details and dimensions shown herein require submission of shop drawings in accordance with Item 441, "Steel Structures". Alternate designs are not acceptable.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES

SINGLE MAST ARM ASSEMBLY

(80 MPH WIND ZONE)

SMA-80(2)-12

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DN: MS	CK: JSY	DW: MMF	CK: JSY

REVISIONS	CONT	SECT	JOB	HIGHWAY
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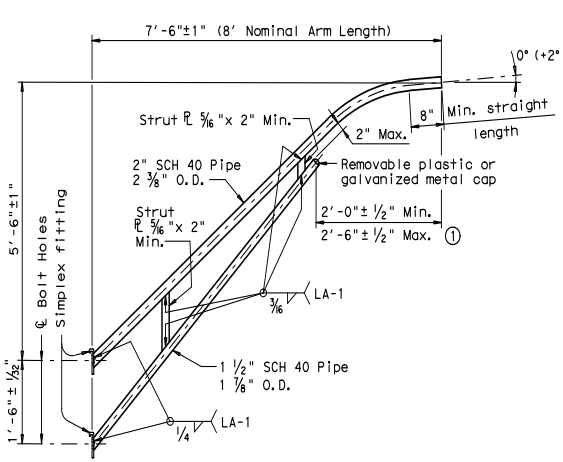
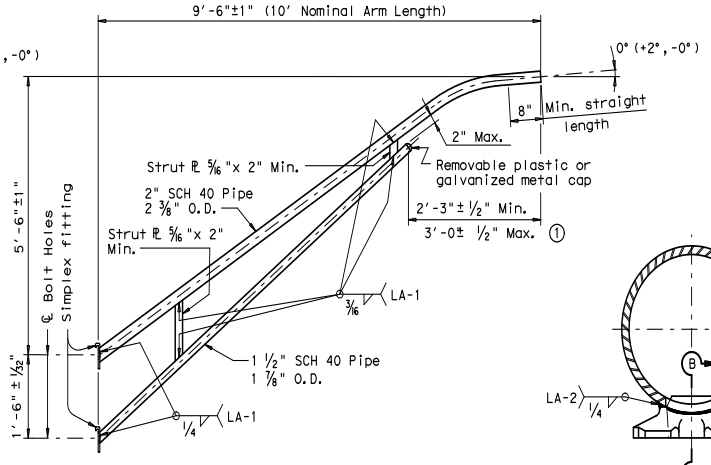
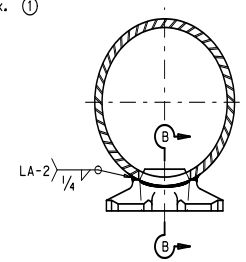
MATERIALS	
Pole or Arm Simplex	ASTM A27 Gr.65-35 or A148 Gr.80-50, A576 Gr.1021 (3), or A36 (Arm only)
Arm Pipes	ASTM A53 Gr.B, A501, A1008 HSLAS-F Gr.50 (4), or A1011 HSLAS-F Gr.50 (4)
Arm Strut Plates (2)	ASTM A36, A572 Gr.50 (4), or A588
Misc.	ASTM designations as noted



8-FOOT LUMINAIRE ARM



10-FOOT LUMINAIRE ARM



DIRECT ATTACHMENT DETAIL

(1) Dimensional limits are given to show acceptable variation in design. All of a Fabricator's production of a particular arm length shall have the same dimensions within specified tolerances.

(2) Any of the materials listed for plates may be used where the drawings do not specify a particular ASTM designation.

(3) A576 must be suitable for forging and also meet minimum tensile strength of 65 ksi, minimum yield of 35 ksi, and elongation in 2 inches of 22 percent.

(4) ASTM A572, A1008 HSLAS-F, and A1011 HSLAS-F may have higher yield strengths but shall not have less elongation than the grade indicated.

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Revisions thereto. Design Wind Speed equals 90 mph plus a 1.3 gust factor. Arms are designed to support a 60 lb. luminaire having an effective projected area (actual area times drag coefficient) of 1.6 sq. ft.

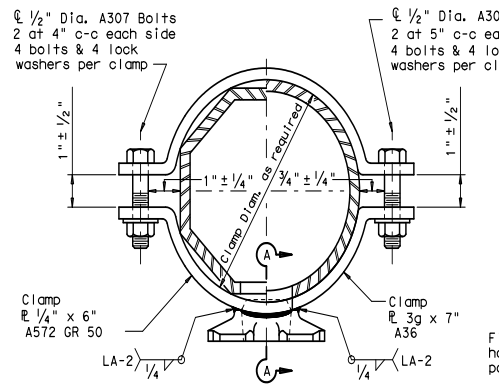
Materials and fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. In the absense of specified Fabricaton tolerances, dimensions shall be within the tolerances generally obtainable in normal fabrication practice.

Unless otherwise noted, all parts shall be galvanized after fabrication in accordance with Item 445, "Galvanizing".

Deviation from the details and dimensions shown herein require submission of shop drawings in accordance with Item 441, "Steel Structures". Alternate designs are not acceptable.

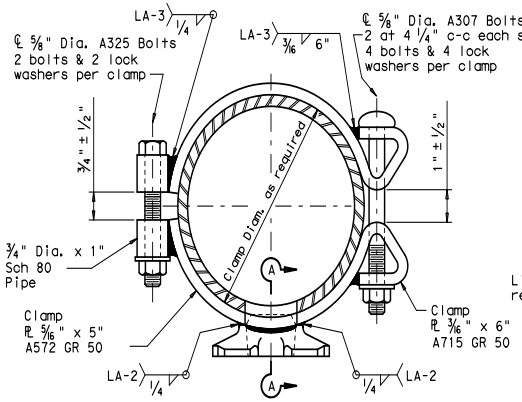
Each pole simplex fitting shall be supplied with 2 ASTM A325 bolts and 2 lock washers of the size specified. The bolts and lock washers shall be secured to the pole with the other hardware items called for in the plans. When clamp attachment is specified, the Fabricator shall ship the clamp assembly securely attached to the pole at the location shown on the plans.

If clamp assemblies are ordered without poles, the Fabricator shall ship one upper and one lower clamp assembly together in a single package, including all nuts and washers required for the clamps and simplex fittings.



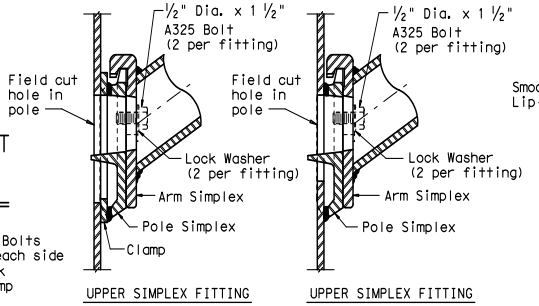
CLAMP ATTACHMENT DETAIL NO.1 (HALF SECTION)

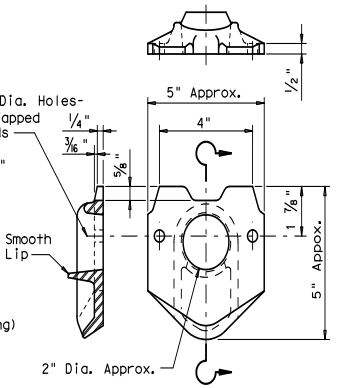
CLAMP ATTACHMENT DETAIL NO.2 (HALF SECTION)



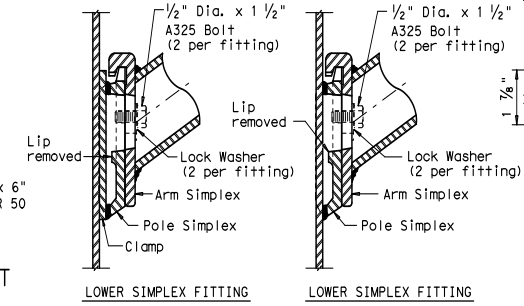
CLAMP ATTACHMENT DETAIL NO.3 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO.4 (HALF SECTION)



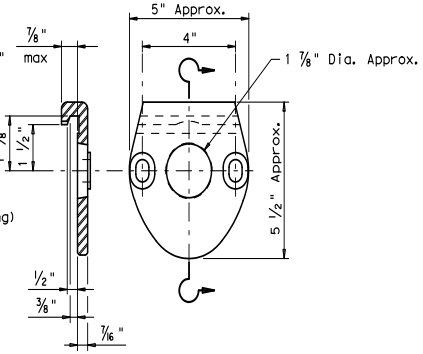


POLE SIMPLEX DETAIL



SECTON A-A

SECTON B-B



ARM SIMPLEX DETAIL

Texas Department of Transportation
Traffic Operations Division

STANDARD ASSEMBLY DRAWINGS FOR LUMINAIRE SUPPORT STRUCTURES

ARM DETAILS

LUM-A-12

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DN: LEH	CK: JSY	DW: LTT	CK: TEB
REVISIONS 5-96 1-99 1-12	CONT	SECT	JOB	HIGHWAY
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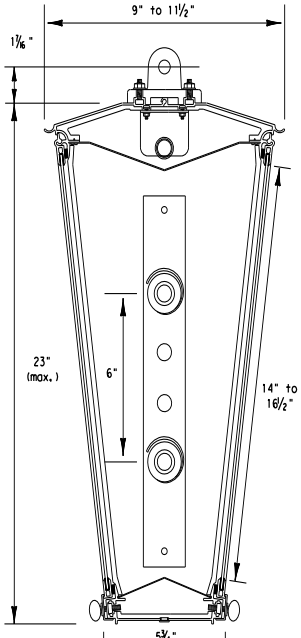
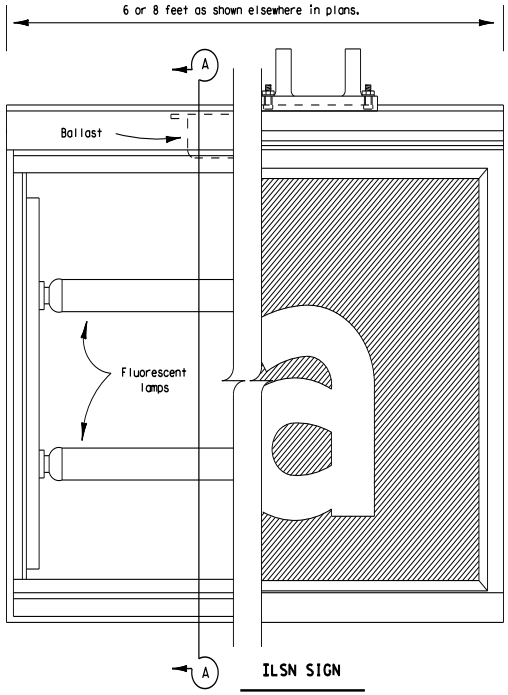
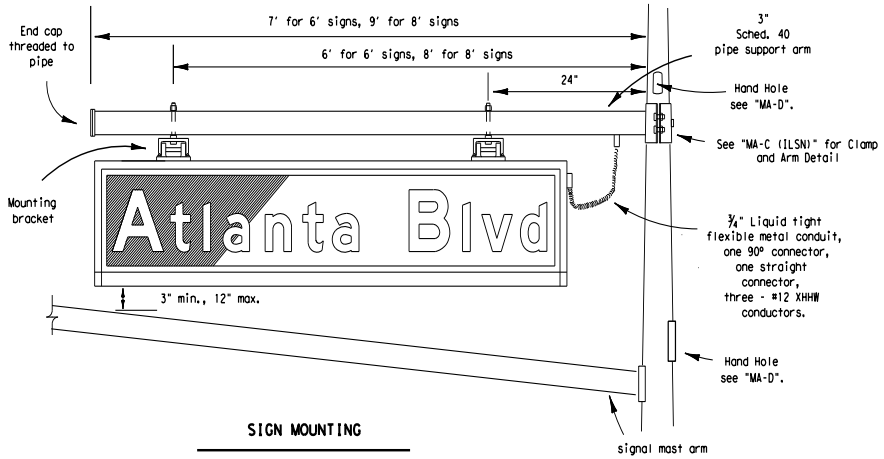
INTERNALLY LIGHTED STREET NAME SIGN DETAILS



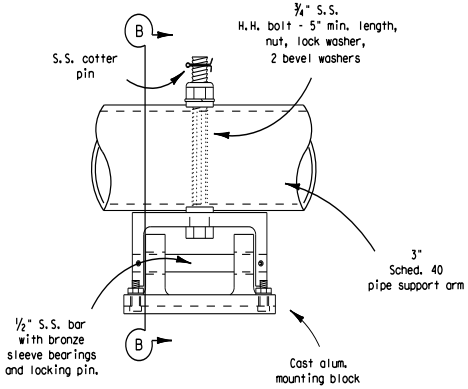
Section A-A



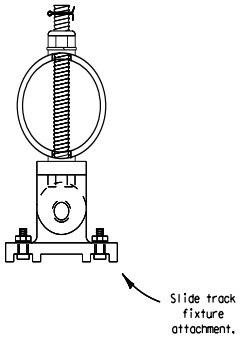
ILSN SIGN



SIGN MOUNTING



MOUNTING BRACKET



Section B-B

ILSN SIGN NOTES:

1. Eight foot ILSN sign shall not exceed 11.5 sq.ft. effective projected area (EPA) and shall not exceed a weight of 85 lbs.
   Six foot ILSN sign shall not exceed 8.7 sq.ft. EPA and shall not exceed a weight of 70 lbs.
2. Sign message shall be as shown elsewhere in the plans.
3. See Special Specification, "Internally Lighted Street Name Signs" for additional details.

EXPLANATION OF DESCRIPTION

ILSN Sign 6 S

- ILSN Sign: Internally lighted street name sign
- 6: Sign length; 6 or 8 ft.
- S: Single or double face

Texas Department of Transportation
Traffic Operations Division

STREET NAME SIGN DETAILS (ILLUMINATED)

SNS-95

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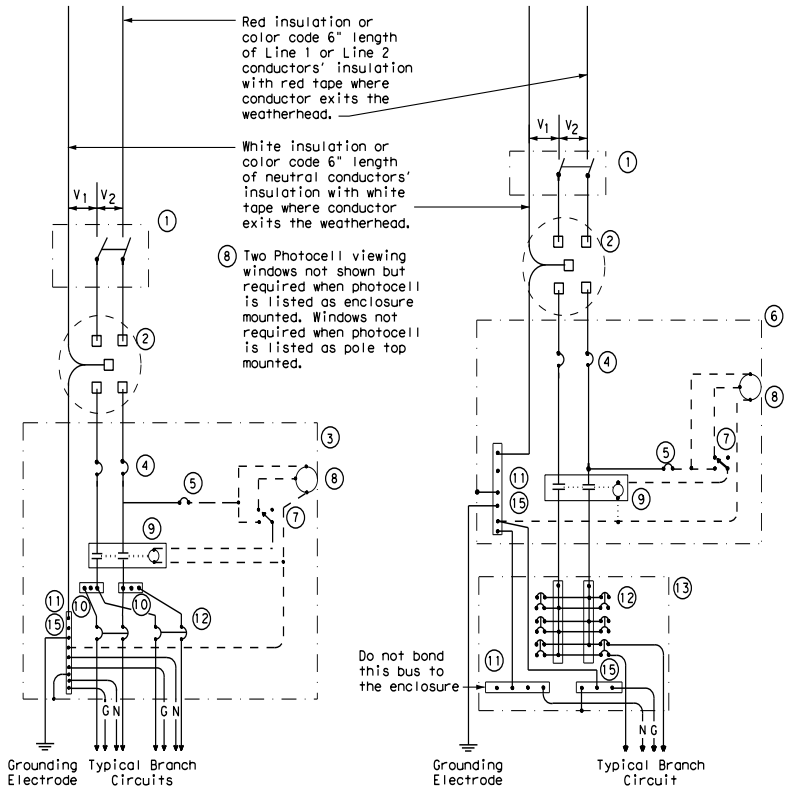
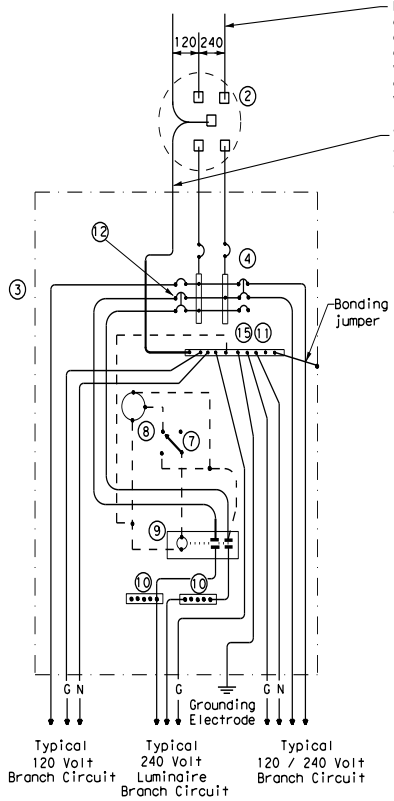
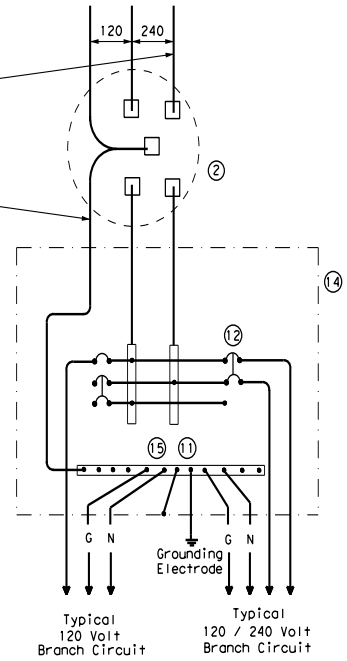


SCHEMATIC TYPE A
THREE WIRE

SCHEMATIC TYPE C
THREE WIRE



SCHEMATIC TYPE D - CUSTOM
120/240 VOLTS - THREE WIRE



SCHEMATIC TYPE T
120/240 VOLTS - THREE WIRE

Galvanized steel-"Buy Off The Shelf" only. When required install photocell top of the pole or on luminaire only, no lighting contractor will be installed.

WIRING LEGEND	
———	Power Wiring
- - - -	Control Wiring
—N—	Neutral Conductor
—G—	Equipment grounding conductor-always required

SCHEMATIC LEGEND	
1	Safety Switch (when required)
2	Meter (when required-verify with electric utility provider)
3	Service Assembly Enclosure
4	Main Disconnect Breaker (See Electrical Service Data)
5	Circuit Breaker, 15 Amp (Control Circuit)
6	Auxiliary Enclosure
7	Control Station ("H-O-A" Switch)
8	Photo Electric Control (enclosure-mounted shown)
9	Lighting Contactor
10	Power Distribution Terminal Blocks
11	Neutral Bus
12	Branch Circuit Breaker (See Electrical Service Data)
13	Separate Circuit Breaker Panelboard
14	Load Center
15	Ground Bus

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS SERVICE ENCLOSURE AND NOTES

ED(6)-14

FILE: ed6-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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PEDESTAL SERVICE NOTES

1. Manufacture pedestal electrical services in accordance with Departmental Material Specifications (DMS)11080 "Electrical Services", 11085 "Electrical Services-Pedestal (PS)" and Item 628 "Electrical Services. "Provide pedestal electrical services as listed on the Material Producers list (MPL) on the Department's web site under "Roadway Illumination and Electrical Supplies," Item 628. Ensure all mounting hardware and installation details of services meet utility company specifications. Contact the local utility company for approval of pedestal details prior to installing the electrical pedestal service. Submit any changes required by the utility company prior to manufacturing the pedestal enclosure.

2. When a meter socket is required, provide a socket with a minimum 100 amp rating that complies with local utility requirements.

3. Provide Class A or C concrete for pedestal service foundations in accordance with Item 420, "Concrete Substructures," except that concrete will not be paid for directly but is considered subsidiary to Item 628.

4. Provide #4 reinforcing steel for foundations in accordance with Item 440, "Reinforcement for Concrete."

5. Install ½ in. X 2 1/16 in. minimum length concrete single expansion type anchors for mounting pedestal enclosure to foundation. Anchor location to match mounting holes in each corner of enclosure. Secure each of the four corners of the pedestal enclosure to the anchors in the foundation with a ½ in. galvanized or stainless steel machine thread bolt, a properly sized locknut and a flat washer.

6. Finish top of concrete foundation in a neat and workmanlike manner. If leveling washers are used, ensure no more than ⅛ in. gap at any corner. Do not exceed a maximum dip or rise in the foundation of ⅛ in. per foot. When properly installed, ensure the top of the service enclosure is level front to back and side to side within ¼ in. Repair rocking or movement of the service enclosure at no additional cost to the department.

7. Do not use liquidtight flexible metal conduit (LFMC) on pedestal type services.

8. Ensure all elbows in the foundation are sized as per utility provider's conduit requirements for underground conduit and feeders. PVC extensions may be installed provided the ends of the rigid metal conduits are more than 2 in. below the top of the concrete foundation. Where extension conduits are metal, grounding bushings must be installed with a bonding jumper properly terminated.

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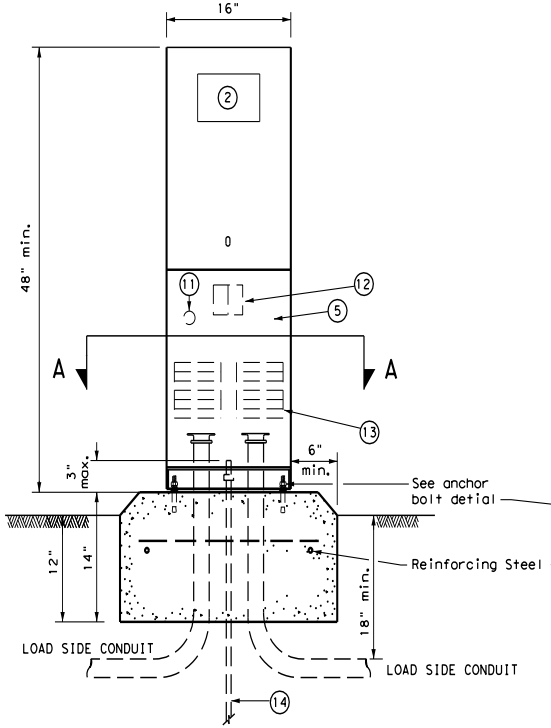
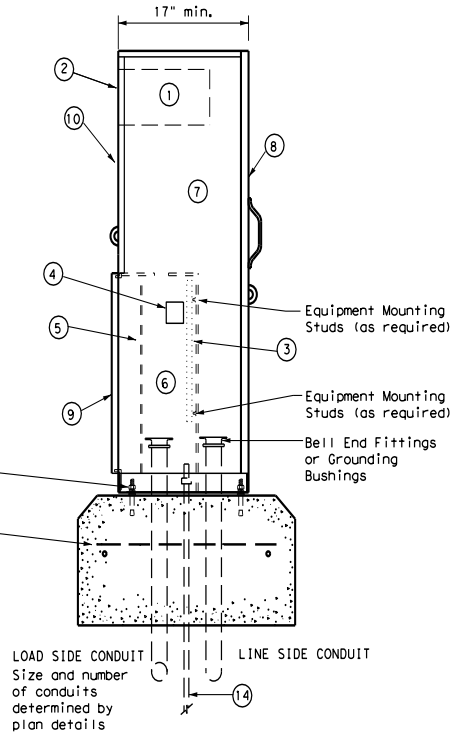
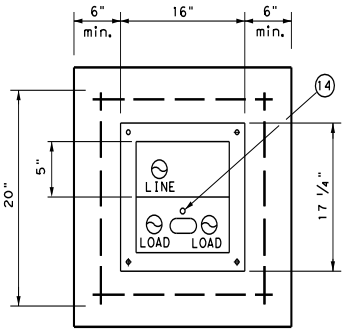


FRONT VIEW

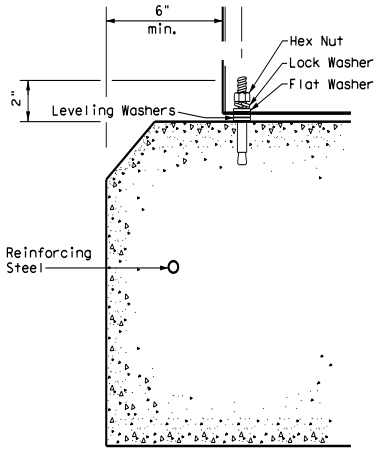


SIDE VIEW

TYPE C shown, TYPE A similar except that TYPE A shall have individual circuit breakers (CB) mounted on an equipment mounting panel. CB Handles shall protrude through hinged deadfront trim.



SECTION A-A



ANCHOR BOLT DETAIL

LEGEND	
1	Meter Socket, (when required)
2	Meter Socket Window, (when required)
3	Equipment Mounting Panel
4	Photo Electric Control Window, (When required)
5	Hinged Deadfront Trim
6	Load Side Conduit Trim
7	Line Side Conduit Area
8	Utility Access Door, with handle
9	Pedestal Door
10	Hinged Meter Access
11	Control Station (H-O-A Switch)
12	Main Disconnect
13	Branch Circuit Breakers
14	Copper Clad Ground Rod - 5/8" X 10'

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
ELECTRICAL SERVICE SUPPORT
PEDESTAL SERVICE TYPE PS

ED(9)-14

FILE: ed9-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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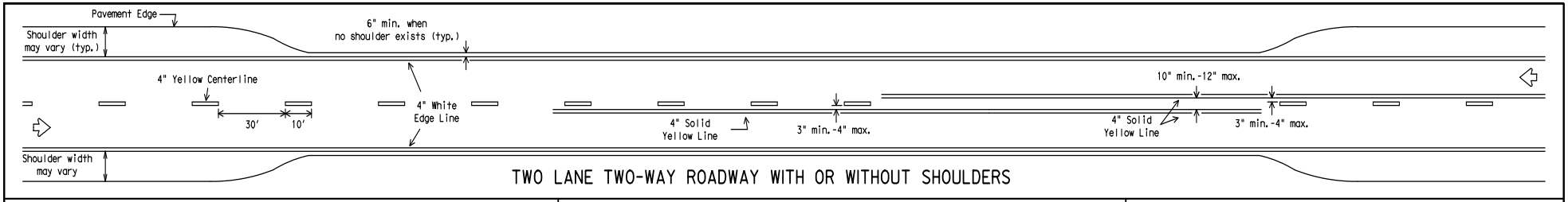
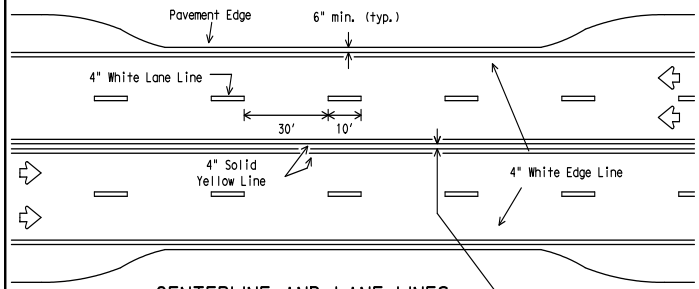
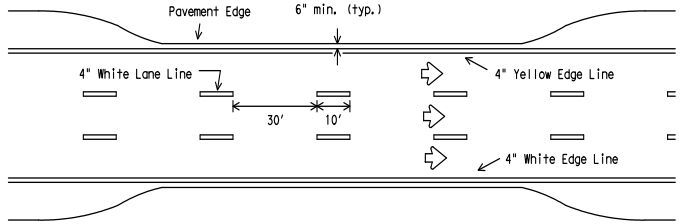


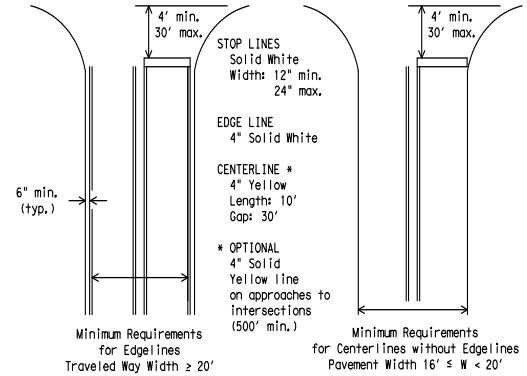
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

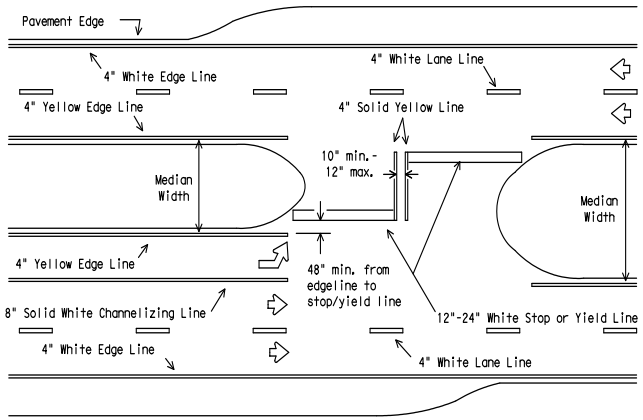


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



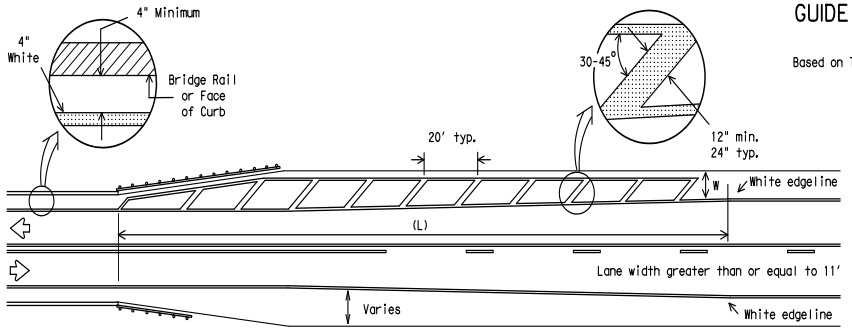
GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways



All medians shall be field measured to determine the location of necessary striping. Stop/Yield bars and centerlines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges and of opposite approaches of the same intersection. The narrow median width will be the controlling width to determine if markings are required.

FOUR LANE DIVIDED ROADWAY INTERSECTIONS



NOTES:

1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.
2. For crosshatching length (L) see Table 1.
3. The width of the offset (W) and the required crosshatching width is the full shoulder width in advance of the bridge.
4. The crosshatching is not required if delineators or barrier reflectors are used along the structure.
5. For guard fence details, refer elsewhere in the plans.

ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT

TABLE 1 - TYPICAL LENGTH (L)

Posted Speed *	Formula
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	L=WS

* 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.

L=Length of Crosshatching (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the cross-hatching should be:

$L = 8 \times 70 = 560$ ft.

A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the cross-hatching should be:

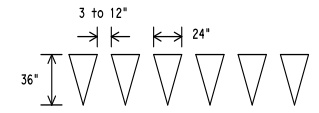
$L = 4(40)^2 / 60 = 106.67$ ft. rounded to 110 ft.

GENERAL NOTES

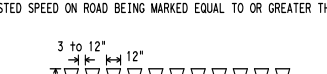
1. Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should typically be placed a minimum of 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel and not the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to inside of edgeline of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR GREATER THAN 45 MPH



FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR LESS THAN 40 MPH

YIELD LINES

Texas Department of Transportation
Traffic Operations Division

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-12

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GENERAL NOTES FOR ALL ELECTRICAL WORK

1. The location of all conduits, junction boxes, ground boxes, and electrical services is diagrammatic and may be shifted to accommodate field conditions.

2. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC), TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA), and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association (CSA), Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Where reference is made to NEMA listed devices, International Electrotechnical Commission (IEC) listed devices will not be considered an acceptable equal to a NEMA listed device. Acceptable devices may have both a NEMA and IEC listing. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection. Replace or reinstall rejected material or equipment at no additional cost to the Department.

3. Miscellaneous nuts, bolts and hardware, except for high strength bolts, may be stainless steel when plans specify galvanized, provided the bolt size is ½ in. or less in diameter.

4. Provide the following test equipment as required by the Engineer to confirm compliance with the contract and the NEC: voltmeter, ammeter, megohm meter (1000 volt DC), ground resistance tester, torque wrenches, and torque screwdrivers. Ensure all equipment has been properly calibrated within the last year. Provide calibration certification to the Engineer upon request. Operate test equipment during inspection as requested by the Engineer.

5. Install grounding as shown on the plans and in accordance with the NEC. Ensure all metallic conduits; metal poles; luminaires; and metal enclosures are bonded to the equipment grounding conductor. Provide stranded bare copper or green insulated grounding conductors. Ground rods, connectors, and bonding jumpers are subsidiary to the various bid items.

6. When required by the Engineer, notify the Department in writing of materials from the Material Producers List (MPL) intended for use on each project. Prequalified materials are listed on the MPL on TxDOT's website under "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials on this list.

CONDUIT

A. MATERIALS

1. Provide conduit, junction boxes, fittings, and hardware as per TxDOT Departmental Material Specification (DMS) 11030 "Conduit" and Item 618 "Conduit" of TxDOT's "Standard Specifications For Construction And Maintenance Of Highways, Streets, And Bridges," latest edition. Provide conduits listed under Item 618 on the MPL under "Roadway Illumination and Electrical Supplies." Provide conduit types according to the descriptive code or as shown on the plans. Do not substitute other types of conduits for those shown. Provide liquidtight flexible metal conduit (LFMC) when flexible conduit is called for on galvanized steel rigid metallic conduit (RMC) systems. Provide liquidtight flexible nonmetallic conduit (LFNC) when flexible conduit is called for on polyvinyl chloride (PVC) systems.

2. Provide galvanized steel RMC for all exposed conduits, unless otherwise shown on the plans. Properly bond all metal conduits.

3. Unless otherwise shown on the plans, provide junction boxes with a minimum size as shown in the following table, which applies to the greatest number of conductors entering the box through one conduit with no more than four conduits per box. When a mixture of conductor sizes is present, count the conductors as if all are of the larger size. For situations not applicable to the table, size junction boxes in accordance with NEC.

AWG	3 CONDUCTORS	5 CONDUCTORS	7 CONDUCTORS
#1	10" x 10" x 4"	12" x 12" x 4"	16" x 16" x 4"
#2	8" x 8" x 4"	10" x 10" x 4"	12" x 12" x 4"
#4	8" x 8" x 4"	10" x 10" x 4"	10" x 10" x 4"
#6	8" x 8" x 4"	8" x 8" x 4"	10" x 10" x 4"
#8	8" x 8" x 4"	8" x 8" x 4"	8" x 8" x 4"

4. Junction boxes with an internal volume of less than 100 cu. in. and supported by entering raceways must have threaded entries or hubs identified for the intended purpose and supported by connection of two or more rigid metal conduits. Secure conduit within 3 ft. of the enclosure or within 18 in. of the enclosure if all conduit entries are on the same side. Mechanically secure all junction boxes with an internal volume greater than 100 cu. inches.

5. Provide hot dipped galvanized cast iron or sand cast aluminum outlet boxes for junction boxes containing only 10 AWG or 12 AWG conductors. Do not use die cast aluminum boxes. Size outlet boxes according to the NEC.

6. Do not use intermediate metal conduit (IMC) or electrical metallic tubing (EMT) unless specifically required by the plan sheets. When EMT is called for, provide junction boxes made from galvanized steel sheeting, listed and approved for outdoor use, unless otherwise noted on the plans. Size all galvanized steel junction boxes in accordance with the NEC. Provide junction boxes for IMC conduit systems that meet the same requirements for junction boxes used with RMC systems.

7. Provide PVC junction boxes intended for outdoor use on PVC conduit systems, unless otherwise noted on the plans.

8. Provide PVC elbows in PVC conduit systems, unless otherwise shown on the plans. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the PVC conduit system. When galvanized steel RMC elbows are specifically called for in the plans and any portion of the RMC elbow is buried less than 18 in., ground the RMC elbow by means of a grounding bushing on a rigid metal extension. Grounding of the rigid metal elbow is not required if the entire RMC elbow is encased in a minimum of 2 in. of concrete. PVC extensions are allowed on these concrete encased rigid metal elbows. RMC or PVC elbows are subsidiary to various bid items.

9. When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal conductors according to Item 622 "Duct Cable." At the Contractor's request and with approval by the Engineer, substitute HDPE conduit with no conductors for bored schedule 40 or schedule 80 PVC conduit bid under Item 618. Ensure bored HDPE substituted for PVC is schedule 40 and of the same size PVC called for in the plans. Ensure the substituted HDPE meets the requirements of Item 622, except that the conduit is supplied without factory-installed conductors. Make the transition of the HDPE conduit to PVC (or RMC elbow when required) at the bore pit. Provide conduit of the size and schedule as shown on the plans. Do not extend substituted conduit into ground boxes or foundations. Provide PVC or galvanized steel RMC elbows as called for at all ground boxes and foundations.

10. Use two-hole straps when supporting 2 in. and larger conduits. On electrical service poles, properly sized stainless steel or hot dipped galvanized one-hole standoff straps are allowed on the service riser conduit.

B. CONSTRUCTION METHODS

1. Provide and install expansion joint conduit fittings on all structure-mounted conduits at the structure's expansion joints to allow for movement of the conduit. In addition, provide and install expansion joint fittings on all continuous runs of galvanized steel RMC conduit externally exposed on structures such as bridges at maximum intervals of 150 ft. When requested by the project Engineer, supply manufacturer's specification sheet for expansion joint conduit fittings. Repair or replace expansion joint fittings that do not allow for movement at no additional cost to the Department. Provide the method of determining the amount of expansion to the Engineer upon request. Do not use LFMC or LFNC as a substitute for the required expansion conduit fittings.

2. Space all conduit supports at maximum intervals of 5 ft. Install conduit spacers when attaching metal conduit to surface of concrete structures. See "Conduit Mounting Options" on ED(2). Install conduit support within 3 ft. of all enclosures and conduit terminations.

3. Do not attach conduit supports directly to pre-stressed concrete beams except as shown specifically in the plans or as approved by the Engineer.

4. Unless otherwise shown on the plans, jack or bore conduit placed beneath existing roadways, driveways, sidewalks, or after the base or surfacing operation has begun. Backfill and compact the bore pits below the conduit per Item 476 "Jacking, Boring, or Tunneling Pipe or Box" prior to installing conduit or duct cable to prevent bending of the connections.

5. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-base of new roadways, backfill all trenches with cement-stabilized base as per requirements of Items 110 "Excavation", 400 "Excavation and Backfill for Structures", 401 "Flowable Backfill", 402 "Trench Excavation Protection", and 403 "Temporary Special Shoring."

6. Provide and place warning tape approximately 10 in. above all trenched conduit as per Item 618.

7. During construction, temporarily cap or plug open ends of all conduit and raceways immediately after installation to prevent entry of dirt, debris and animals. Temporary caps constructed of durable duct tape are allowed. Tightly fix the tape to the conduit opening. Clean out the conduit and prove it clear in accordance with Item 618 prior to installing any conductors.

8. Ensure conduit entry into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.

9. Fit the ends of all PVC conduit terminations with bushings or bell end fittings. Provide and install a grounding type bushing on all metal conduit terminations.

10. Install a bonding jumper from each grounding bushing to the nearest ground rod, grounding lug, or equipment grounding conductor. Ensure all bonding jumpers are the same size as the equipment grounding conductor. Bonding of conduit used as a casing under roadways for duct cable is not required, if the duct extends the full length through the casing.

11. At all electrical services, install a 6 AWG solid copper grounding electrode conductor.

12. Place conduits entering ground boxes so that the conduit openings are between 3 in. and 6 in. from the bottom of the box. See the ground box detail on sheet ED(4).

13. Seal ends of all conduits with duct seal, expandable foam, or by other methods approved by the Engineer. Seal conduit immediately after completion of conductor installation and pull tests. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a conduit sealant.

14. File smooth the cut ends of all mounting strut and conduit. Before installing, paint the field cut ends of all mounting strut and RMC (threaded or non-threaded) with zinc rich paint (94% or more zinc content) to alleviate overspray. Use zinc rich paint to touch up galvanized material as allowed under Item 445 "Galvanizing." Do not paint non-galvanized material with a zinc rich paint as an alternative for materials required to be galvanized.

Texas Department of Transportation | Traffic Operations Division Standard

ELECTRICAL DETAILS CONDUITS & NOTES

ED(1)-14

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ELECTRICAL CONDUCTORS

A. MATERIAL INFORMATION

1. Provide Type XHHW insulated conductors in accordance with Departmental Material Specification (DMS)11040 "Conductors" and Item 620 "Electrical Conductors." Provide conductors as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies" Item 620. Color code insulated conductors in conformance with the NEC. Identify grounded (neutral) conductors with white insulation. Identify grounding conductors (ground wires) with green insulation or bare conductors. Identify ungrounded (hot) conductors with any color insulation except green, white, or gray. Keep color scheme consistent throughout the wiring system. Identify conductors 6 American Wire Gauge (AWG) and smaller by continuous color jacket. Identify electrical conductors 4 AWG and larger by continuous color jacket or by colored tape. When identifying conductors with colored tape, mark at least 6 in. of the conductor's insulation with half laps of tape.
2. Provide a solid copper 6 AWG grounding electrode conductor to bond the electrical service equipment to the concrete encased grounding electrode or the ground rod at the service location. Connect the grounding electrode conductor to the ground rod with a UL listed connector in accordance with DMS 11040. Connect the grounding electrode conductor to the concrete encased grounding electrode as shown in the plans.
3. Where two or more circuits are present in one conduit or enclosure, permanently identify the conductors of each branch circuit by attaching a non-metallic tag around both circuit conductors at each accessible location. Provide tags with two straps, large enough to indicate circuit number, letter, or other identification as shown in the plans. Print circuit identification on the tag with a permanent marker.
4. Use listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors for splicing as specified in DMS 11040. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Provide UL listed gel-filled insulating splice covers. Splicing materials, insulating materials, breakaway disconnects, splice covers, and fuse holders are subsidiary to various bid items.

B. CONSTRUCTION METHODS

1. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the conduit system. After installing conductors in conduit, perform conductor pull test. If a conductor cannot be freely pulled, make any needed alterations or repairs at no additional cost to the department. Perform insulation resistance tests in accordance with Item 620. Coordinate with the Engineer to witness the tests.
2. Leave 2 ft. minimum, 3 ft. maximum length for each conductor up to the splice in ground boxes. Leave 3 ft. minimum, 4 ft. maximum length of conductor in ground boxes when pulled through with no splice. Leave 1 ft. minimum, 1.5 ft. maximum length of conductor at enclosures, weatherheads and pole bases.
3. Make splices only in junction boxes, ground boxes, pole bases, or electrical enclosures and use only listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors. Insulate splices with heavy wall heat shrink tubing or gel-filled insulating splice covers to provide a watertight splice. Overlap conductor insulation with heat shrink tubing a minimum of 2 in. past both sides of the splice. Where heat shrink tubing may not shrink sufficiently to provide a watertight seal around the individual conductors, prior to heating the tubing, increase the diameter of the conductor insulation using hot melt adhesive tape to provide a watertight seal between the individual conductors and the heat shrink tubing. Ensure the tape extends past the heat shrink tubing. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Heat shrink tubing that appears to have been burned, or overheated, is considered defective and must be replaced.
4. Size and install gel-filled insulating splice covers according to manufacturer's specifications when used in place of heat shrink tubing.
5. Wire nuts with factory applied waterproof sealant may be used for 8 AWG or smaller conductors in above ground junction boxes, but not in pole bases or ground boxes. Install wire nuts in an upright position to prevent the accumulation of water.
6. Support conductors in illumination poles with a J-hook at the top of the pole.
7. When terminating conductors, remove the insulation and jacketing material without nicking the individual strands of the conductor. Conductors with nicked individual conductor strands or removed strands will be considered damaged.
8. Replace conductors and cables that are damaged beyond repair or that fail an insulation resistance test at no additional cost to the department.
9. Do not repair damaged conductors with duct tape, electrical tape, or wire nuts. Use only approved splicing methods.
10. Do not terminate more than one conductor under a single connector, unless the connector is rated for multiple conductors. Do not exceed the pressure connector's listing for maximum number and size of conductors allowed.
11. Install breakaway connectors on conductors bid under Item 620 whenever those conductors pass through a breakaway support device. Follow manufacturer's instructions when terminating conductors to breakaway connectors. Properly torque threaded connections. Proper terminations are critical to the safe operation of breakaway devices. Trim waterproofing boots on breakaway connectors to fit snugly around the conductor to ensure waterproof connection. Only one conductor may enter a single opening in a boot. Provide waterproof boots with the correct number of openings. Leave unused openings factory sealed. Use prequalified breakaway connectors as shown on the MPL.
12. Provide and install a separate stranded equipment grounding conductor (EGC) in all conduits that contain circuit wiring of 50 volts or more. Unless shown elsewhere, size the EGC to be the same size as the largest current carrying conductor contained in the conduit. Ensure all EGCs are bonded together at every accessible location. For traffic signal installations, provide a minimum size 8 AWG EGC. The EGC is paid for under Item 620.

C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with the NEC article "Temporary Installations" and Department standard sheets.
2. Provide a ground fault circuit interrupter (GFCI) for power outlets for portable electrical equipment, power tools, ice machines, ice storage bins and refrigerators located outdoors at grade. GFCI may be any one of the following: molded cord and plug set, receptacle, or circuit breaker type.
3. Use listed wire nuts with factory applied sealant for temporary wiring where approved.
4. Enclose conductor splices within a listed enclosure or ground box, or ensure the splices are more than 10 ft. above grade vertically and more than 5 ft. horizontally from any metal structure. Where installing temporary conductors in areas subject to vehicle traffic or mobile construction equipment, ensure the vertical clearance to ground is at least 18 ft. when measured at the lowest point. Ground messenger wires that support power conductors in conformance with the NEC.
5. Protect and when necessary repair any existing electrical conduits uncovered during the construction process in a timely manner and in conformance with the NEC.

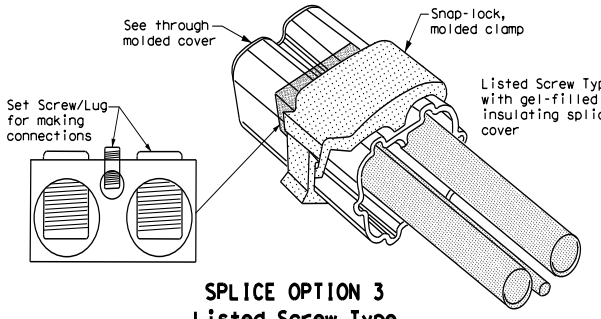
GROUND RODS & GROUNDING ELECTRODES

A. MATERIAL INFORMATION

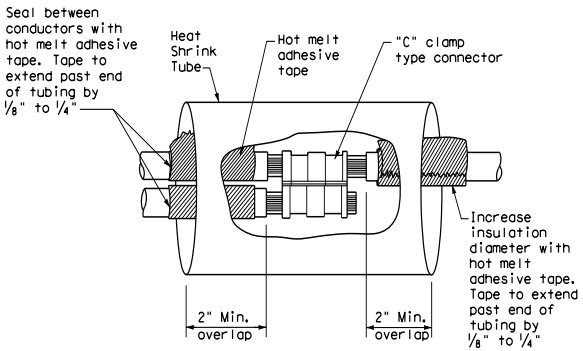
1. Provide and install a grounding electrode at electrical services. Provide ground rods according to DMS 11040 and the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including electrical service, see individual plan sheets.

B. CONSTRUCTION METHODS

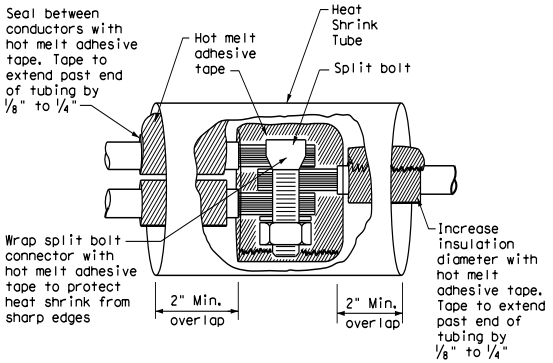
1. Furnish auxiliary ground rods for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, ensure that the upper end is between 2 to 4 in. below finished grade.
2. Do not place ground rods in the same drilled hole as a timber pole.
3. Install ground rods so the imprinted part number is at the upper end of the rod.
4. Remove all non-conductive coatings such as concrete splatter from the rod at the clamp location.
5. Route all conductors as short and straight as possible for connection to lightning protection ground rods. When a bend is required, ensure a minimum radius bend of four inches for these conductors.
6. Unless otherwise called for in the plans, protect grounding electrode conductors with non-metallic conduit. When protecting grounding electrode conductors with metal conduit, provide and install a grounding type bushing and properly sized bonding jumper on each end of the metal conduit.
7. Written authorization is required before installing a ground rod in a horizontal trench for rocky soil or a solid rock bottom.



SPLICE OPTION 3
Listed Screw Type



SPLICE OPTION 1
Compression Type



SPLICE OPTION 2
Split Bolt Type

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS CONDUCTORS

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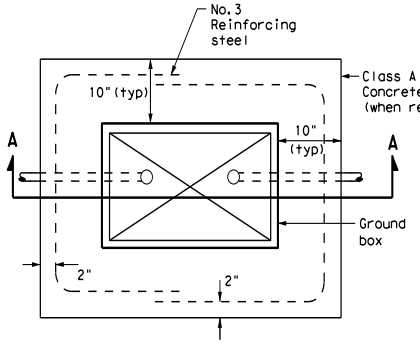
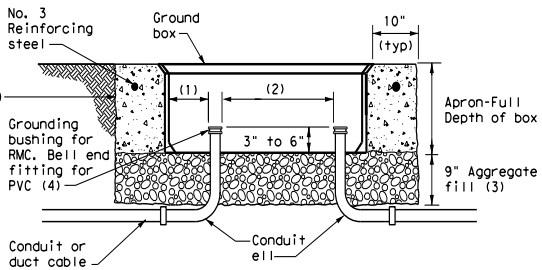


PLAN VIEW



SECTION A - A

APRON FOR GROUND BOX

(1) Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.

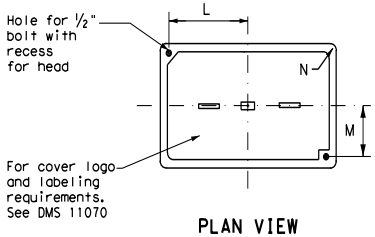
(2) Maintain sufficient space between conduits to allow for proper installation of bushing.

(3) Place aggregate under the box, not in the box. Aggregate should not encroach on the interior volume of the box.

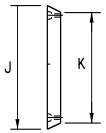
(4) Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.

GROUND BOX DIMENSIONS	
TYPE	OUTSIDE DIMENSIONS (INCHES) (Width x Length X Depth)
A	12 X 23 X 11
B	12 X 23 X 22
C	16 X 29 X 11
D	16 X 29 X 22
E	12 X 23 X 17

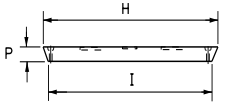
GROUND BOX COVER DIMENSIONS								
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



PLAN VIEW



END



SIDE

GROUND BOX COVER

GROUND BOXES

A. MATERIALS

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxD) or smaller in accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and Item 624 "Ground Boxes."

2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies," Item 624.

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

B. CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Provide Grade 3 or 4 coarse aggregate as shown on Table 2 of Item 302 "Aggregates for Surface Treatments." Ensure aggregate bed is in place and at least 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate.

2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth of concrete for the apron extends from finished grade to the top of the aggregate bed under the box. Ground box aprons, including concrete and reinforcing steel, are subsidiary to ground boxes when called for by descriptive code.

3. Keep bolt holes in the box clear of dirt. Bolt covers down when not working in ground boxes.

4. Install all conduits and ells in a neat and workmanlike manner. Uniformly space conduits so grounding bushings and bell end fittings can easily be installed.

5. Temporarily seal all conduits in the ground box until conductors are installed.

6. Permanently seal conduits immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a sealant.

7. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.

8. When a type B or D ground box is stacked to meet volume requirements, it is allowable to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches below grade.

9. If an existing ground box in the contract has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size as the grounding conductor. The bonding jumper is subsidiary to various bid items. Verify existing ground boxes with metal covers are shown on the plans, with notes fully describing the work required.

10. If other ground boxes with metal covers are within the project limits but are not part of the contract, the Engineer may direct the Contractor to bond the metal covers, identifying the specific boxes in writing. This work will be paid for separately.

11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.

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Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
GROUND BOXES

ED(4)-14

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TRAFFIC SIGNAL NOTES

1. Do not pass luminaire conductors through the signal controller cabinet.
2. Include an equipment grounding conductor in all conduits throughout the electrical system. Bond all exposed metal parts to the grounding conductor.
3. Provide roadway luminaires, when required, in accordance with the material and construction sections of Item 610, "Roadway Illumination Assemblies," except for performance testing of luminaires. Test installed roadway luminaires for proper operation as a part of the associated traffic signal system test.
4. If internally illuminated street name signs are approved for use, ground the fixture to the pole with a 12 AWG green XHHW conductor.
5. Bond anchor bolts to rebar cage in two locations using #3 bars or 6 AWG stranded copper conductors. Use listed mechanical connectors rated for embedment in concrete. See TXDOT standard TS-FD for further details.
6. Drill and tap signal poles for ½ in. X 13 UNC tank ground fitting. Provide and install tank ground fitting 4 in. to 6 in. directly below electrical service enclosure. Provide properly sized hole through the bottom of the enclosure for the service grounding electrode conductor. Connect the electrical service grounding electrode conductor to the tank ground fitting. Ensure electrical service grounding electrode conductor is as short and straight as possible from the enclosure to the tank ground fitting. See Inset A detail for further information. Size service entrance conduit and branch circuit conduit as shown in the plans.
7. Mount electrical service enclosure and meter to signal pole with stainless steel bands. Ensure bands are a minimum width of ¾ in. Secure enclosures to bands using two-bolt brackets. Install brackets near top and bottom of each enclosure. Install properly sized stainless steel washers on each bolt in the enclosure. Band or drill and tap properly sized stand-off straps to signal pole for attaching conduit.
8. Conduct pull tests and insulation resistance tests on all illumination and power conductors as required in Item 620 "Electrical Conductors" and ED(3). To prevent electronics damage, do not conduct insulation resistance tests on traffic signal cables after termination.
9. Lock all enclosures and bolt down all ground box covers before applying power to the signal installation.
10. Terminate conduits entering the top of enclosures with a conduit-sealing hub or threaded boss such as meter hub. Install a grounding bushing on all metal conduits not connected to conduit-sealing hub or threaded boss. Bond the grounding bushing to the ground bus with a bonding jumper. Seal all conduits entering enclosures with duct seal or expanding foam. Do not use silicone to seal conduit ends.
11. For all conduits, ensure the burial depth is a minimum of 18". Ensure the minimum burial depth for conduit placed under a roadway is 24".

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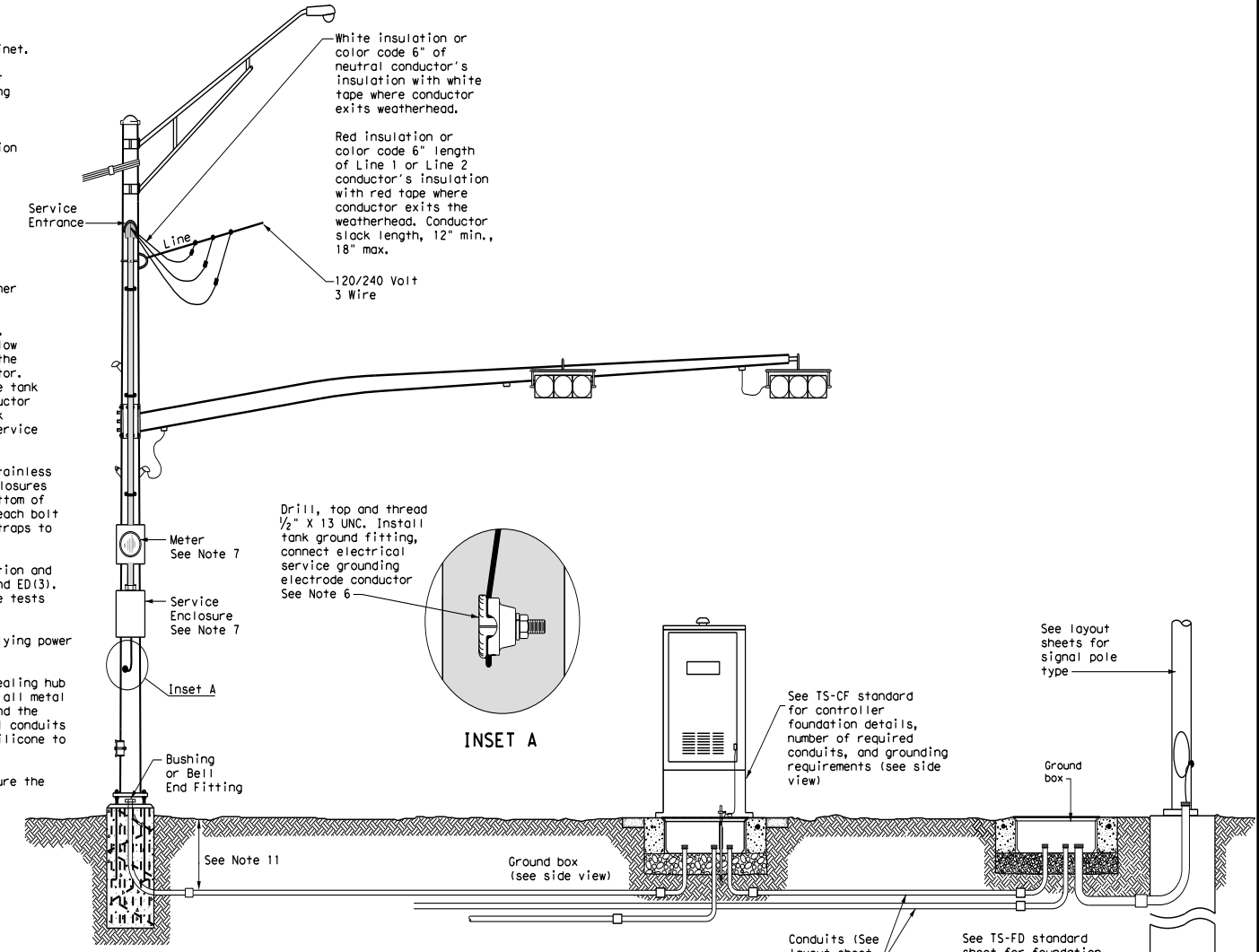


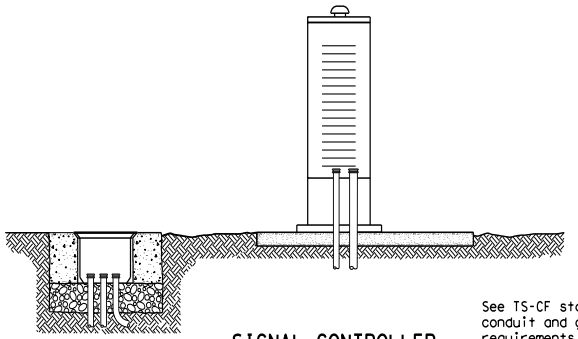
INSET A

SIGNAL POLE WITH SERVICE

Type T electrical service mounted on signal pole shown as an example. See electrical details, layout sheets, and electrical service data chart for additional details.

SIGNAL CONTROLLER FRONT VIEW

SIGNAL POLE



SIGNAL CONTROLLER SIDE VIEW

See TS-CF standard for conduit and grounding requirements. See layout sheets for ground box locations and any additional conduits that are required.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS TYPICAL TRAFFIC SIGNAL SYSTEM DETAILS

ED(8)-14

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ROADWAY ILLUMINATION ASSEMBLY NOTES

1. Details apply to roadway lighting installations bid or referenced under Item 610, "Roadway Illumination Assemblies." Provide, furnish, and install all other materials not shown on the plans which may be necessary for complete and proper construction. Where manufacturers provide warranties or guarantees as a customary trade practice, furnish to the State such warranties or guarantees.

2. The locations of poles and fixtures may be shifted by the Engineer to accommodate local conditions. Install or remove poles and luminaires located near overhead electrical lines using established industry and utility safety practices and in accordance with laws governing such work. Consult with the appropriate utility company prior to beginning such work.

3. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC),TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA),and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association, Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection.

4. Provide Roadway Illumination Light Fixtures as per TxDOT Departmental Material Specification (DMS) 11010, Item 610, and as shown on the Material Producers List (MPL) for Roadway Illumination and Electrical Supplies.

5. Fabricate steel roadway illumination poles in accordance with Roadway Illumination Poles (RIP) standards and Item 610. Poles fabricated according to RIP standards do not require shop drawing submittals.

   a. Alternate designs to RIP standards or the use of aluminum to fabricate poles will require the submission of shop drawings electronically. For instructions on submitting shop drawings electronically see "Guide to Electronic Shop Drawing Submittal" on the TxDOT web site.

   b. Limitations on use of the RIP standard: The RIP standard details were developed for installations in locations where the 3-second gust basic maximum wind speed is 110 mph, and where the elevation of the base of the pole is less than (i.e. not more than) 25′ above the elevation of the surrounding terrain, in accordance with the "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," 4th Edition (2001) (AASHTO Design Specifications). For poles to be installed in regions where the maximum basic wind speed exceeds 110 mph or to be mounted more than 25′ above the surrounding terrain, provide poles meeting the following requirements:

      i. Submittals. Following the electronic shop drawing submittal process (see Guide to Electronic Shop Drawing Submittal on the TxDOT web site), submit to the Engineer for approval fabrication drawings and calculations for the poles, sealed by a Texas licensed professional engineer (P.E.).

      ii. Luminaire Structural Support Requirements. Provide light poles, arms, and anchor bolt assemblies with a 25 year design life to safely resist dead loads, ice loads and the required basic wind speeds at the location of installation in accordance with the 6th edition (2013) of the AASHTO Design Specifications. For transformer base poles, include transformer base and connecting hardware in calculations and shop drawing submittals. Structurally test all transformer bases to resist the theoretical plastic moment capacity of the pole. Submit certification of the plastic moment load test and FHWA breakaway requirement test of the model of base being furnished with the shop drawings. Show breakaway base model number, manufacturer's name, and logo on shop drawings. Include on manufacturer's shop drawings the ASTM designations for all materials to be used.

6. For both transformer and shoe-base type illumination poles, provide and install double-pole breakaway fuse holders as specified by DMS-11040. Breakaway fuse holders are listed on the MPL for Roadway Illumination and Electrical Supplies under Items 610 & 620. Provide 10 amp time delay fuses for breakaway connectors in light poles, or inside the light fixture for underpass luminaires. In each pole, connect luminaires to the breakaway connector with continuous stranded 12 AWG copper conductors as listed on the MPL. Bond all equipment grounding conductors together and to the ground lug in the transformer base or hand hole.

7. Tighten anchor bolts for shoe base, concrete traffic barrier base, and bridge mount roadway illumination poles, in accordance with Item 449.

8. Install T-Base with following procedure:

   a. Anchor Bolt Tightening.

      i. Coat the threads of the anchor bolts with electrically conductive lubricant.

      ii. Place the T-base over the anchor bolts. Foundation must be level and flat. The maximum permissible gap under any one corner of the t-base is 1/8" before nuts are tightened.

      iii. Coat the bearing surfaces of the nuts and washers with electrically conductive lubricant. Install (1) 1/2" hold down washer, (1) lock washer, and (1) nut on each anchor bolt. Turn the nuts onto the bolts so that each is hand-tight against the washer.

      iv. Using a torque wrench, tighten each nut to 150 ft-lb. Uniform contact is required between the foundation and the T-base in the corner regions of the T-base, and all corner gaps must be closed after applying torque. If a gap still exists after torquing to 150 ft-lbs, continue torquing each bolt incrementally until gap is closed or maximum allowable torque of 250 ft. pound is reached, whichever comes first. If 250 ft-lbs is not enough to close the gap the foundation must be leveled. Gaps along the straight sides of the T-bases and the foundation are permissible. Ensure that no high point of contact occurs between the straight sides of the T-base and the foundation.

      v. Check top of T-base for level. If not level then foundation must be leveled.

   b. Top Bolt Procedure

      i. Erect pole over T-base with crane. Coat bolts, nuts, washers, and lock washers with electrically conductive lubricant.

      ii. Install bolts and 1/2" connecting washers from the inside of the T-base, thread up through the pole base. Install flat washers, lock washers and nuts snug tight according to Item 447, "Structural Bolting."

      iii. Tighten each nut to 150 ft-lb. using a torque wrench.

   c. Level and Plumb

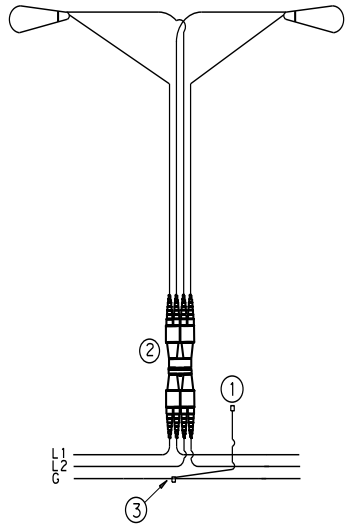
      i. Ensure pole is plumb and mast arm is perpendicular to the roadway according to plans to within 5 degrees.

9. Construct luminaire pole foundations in accordance with Item 416, "Drilled Shaft Foundations," and TxDOT standard sheet RID(2).

10. Provide and install underpass luminaires in accordance with Item 610, DMS-11010, and TxDOT standard sheet RID(3). Typical luminaire size for underpass luminaires is 150W HPS or 150W EQ LED.

11. Mount luminaires on arms level as shown by the luminaire level indicator.

12. Orient luminaires perpendicular to the roadway intended to be lit unless otherwise shown on the plans.



L1,L2 = Hot Conductors
G = Grounding Conductor

TYPICAL WIRING DIAGRAM

LUMINAIRES SERVED AT 480V ON 240/480 VOLT SERVICE OR LUMINAIRES SERVED AT 240V FOR 120/240 VOLT SERVICE.

NOTES:

1. Use 1/2 in.-13 UNC threaded, copper or tin-plated copper, pole bonding connector, sized appropriately for conductors, bonded to T-base, or use ground lug in handhole as available.
2. Use pre-qualified two-pole breakaway connectors for all luminaire pole installations. For luminaires fed by a circuit with a neutral conductor, use double pole breakaway connectors with the neutral side unfused and marked white.
3. Split Bolt or other connector.

Texas Department of Transportation

Traffic Operations Division Standard

ROADWAY ILLUMINATION DETAILS

RID(1)-17

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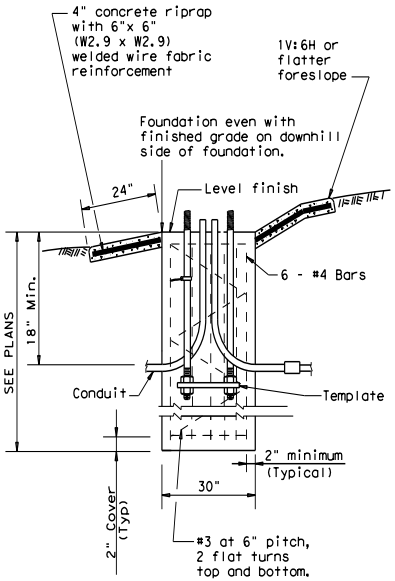
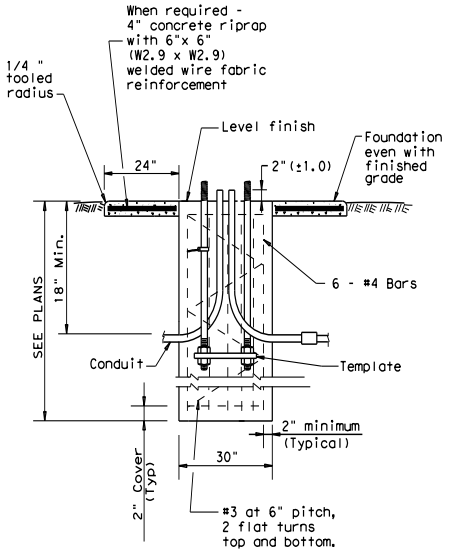


SECTION A-A
SHOWING SLOPED GRADE



SECTION A-A
SHOWING CONSTANT GRADE

TABLE 1

ANCHOR BOLTS

POLE MOUNTING HEIGHT	BOLT CIRCLE		ANCHOR BOLT SIZE
	Shoe Base	T-Base	
<40 ft.	13 in.	14 in.	1in.x 30in.
40-50 ft.	15 in.	17 ¼in.	1 ¼in. x 30in.

TABLE 2

RECOMMENDED FOUNDATION LENGTHS
(See note 1)

MOUNTING HEIGHT	TEXAS CONE PENETROMETER N Blows/ft		
	10	15	40
≤20 ft.	6′	6′	6′
>20 ft. to 30 ft.	8′	6′	6′
>30 ft. to 40 ft.	8′	8′	6′
>40 ft. to 50 ft.	10′	8′	6′

TABLE 3

PAY QUANTITY OF RIPRAP PER FOUNDATION (Install only when shown on the plans)

Foundation Diameter	RIPRAP DIAMETER	RIPRAP (CONC) (CL B)
30 in.	78 in.	0.35 CY

GENERAL NOTES:

1. "Recommended Foundation Lengths" table is for information purposes only. Foundation lengths shall be as shown on the plans, or as directed by the Engineer. Foundations will be paid for under Item 416, "Drilled Shaft Foundations," unless otherwise shown on the plans.
2. Erect roadway illumination assembly poles plumb and true. Form and level the top 6" of the foundation so the pole will be plumb. Use leveling nuts to plumb shoe base poles. Do not use shims or leveling nuts under transformer bases. Do not grout between baseplate and the foundation.
3. Ensure Class 2A and 2B fit for anchor bolts and nuts. Tap and chase nuts after galvanizing. Anchor bolt body with rolled threads need not be full size.
4. Use appropriate class of concrete as specified in Items 416 and 432. Concrete for riprap may be upgraded to Class C at no extra cost to the Department.
5. Place riprap around the foundation when called for elsewhere in the plans. Riprap will be paid for under Item 432.
6. Locate breakaway roadway illumination assemblies as shown in the placement table, unless otherwise dimensioned on the plans. Protect non-breakaway illumination assemblies from vehicular impact (i.e. 2.5 ft. behind guard rail or mounted on traffic barrier), or located outside the clear zone, except that 2.5 ft. from curb face is minimum desired for light poles on city streets, 45 mph or less. See Roadway Design Manual for further information.
7. Use 4 hold down and 4 connecting washers on transformer base poles as recommended by the manufacturer and supplied with base.
8. Install a minimum of 2 conduits in each foundation. See lighting layout sheets for locations of foundations with more than 2 conduits. Cap unused conduits in foundations on both ends.
9. Conduit location in foundations is critical for breakaway devices. Place conduits 2 in. apart on centerline as shown.
10. Bond anchor bolt to rebar cage with #6 bare stranded copper conductor. Use listed mechanical connectors rated for embedment in concrete. The bonded steel in the foundation creates a concrete encased grounding electrode which replaces the ground rod.
11. Use riprap on T-base foundations that are located on sloped grades.

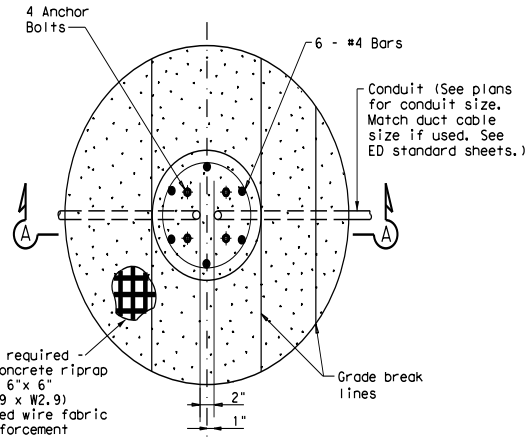
TABLE 4

BREAKAWAY POLE PLACEMENT (See note 6)

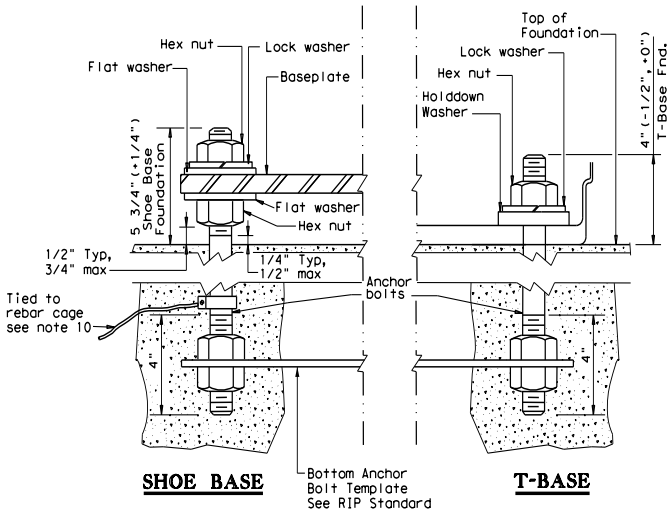
ROADWAY FUNCTIONAL CLASSIFICATION	** POLE OFFSET (DISTANCE TO FACE OF TRANSFORMER BASE)
Freeway Mainlanes (roadway with full control of access)	15 ft. (minimum and typical) from lane edge
All curbed, 45 mph or less design speed	2.5 ft. minimum (15 ft. desirable) from curb face
All others	10 ft. minimum*(15 ft. desirable) from lane edge

* or as close to ROW line as is practical

** provide 2/5 of the luminaire mounting height behind the pole for "falling area" to prevent encroachment on the other travel lanes. See design guidelines.



FOUNDATION DETAIL



SHOE BASE **T-BASE**

ANCHOR BOLT DETAIL

Texas Department of Transportation

Traffic Operations Division Standard

ROADWAY ILLUMINATION DETAILS
(RDWY ILLUM FOUNDATIONS)

RID(2)-17

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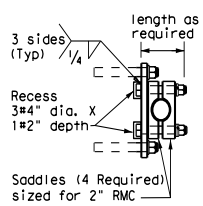
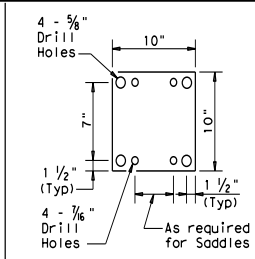
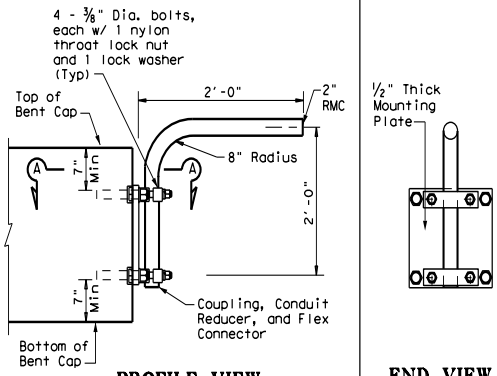


SECTION A-A



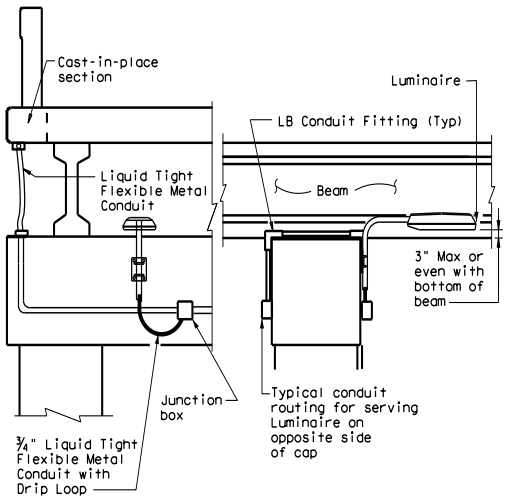
MOUNTING PLATE
(ASTM A-36 or better)



PROFILE VIEW
Or as Required
(See Note A.3)

END VIEW

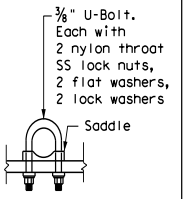
UNDERPASS LIGHTING ARM



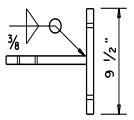
IN RD IL AM (U/P)(TY 1)

If bridge has pre-cast panels under deck, run circuit under deck edge.

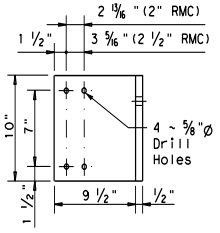
UNDERPASS LIGHTING TYPE 1



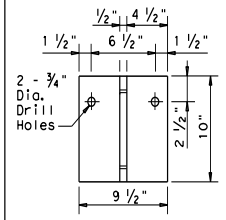
CLAMP DETAIL
(2 Req'd)



PLAN VIEW



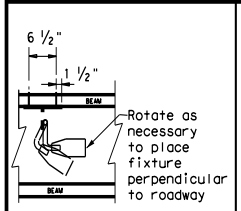
FRONT



SIDE

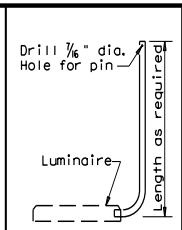
BRACKET DETAIL

Make from 1/2" plate (ASTM A-36 or better)

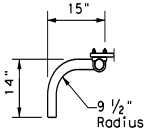


PLAN VIEW

FIXTURE ORIENTATION

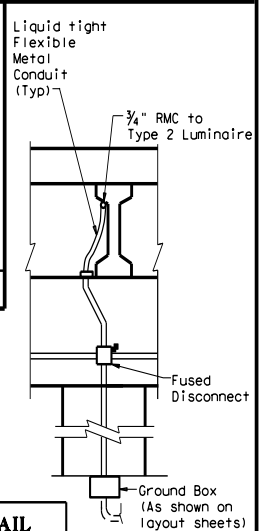


SIDE



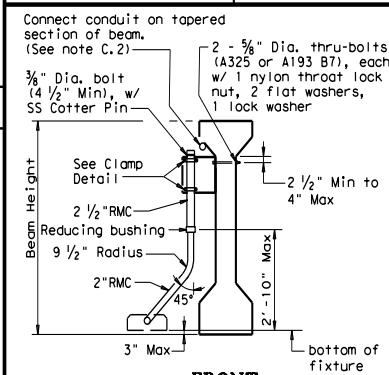
PLAN VIEW

ARM DETAIL

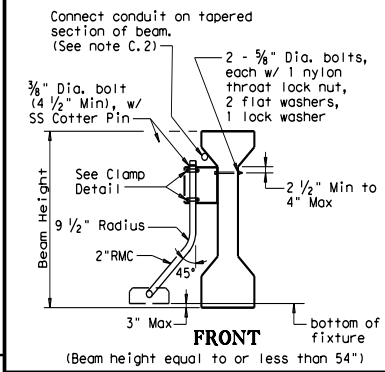


3 - No. 12 XHHW in 3/4" RMC for Branch Circuit runs from fused disconnect to underpass Luminaires

CONDUIT DETAIL



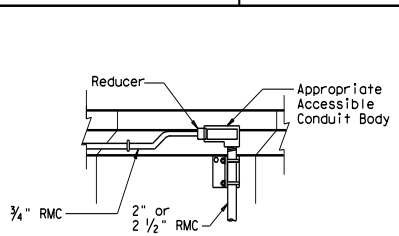
FRONT
(Beam height greater than 54")



FRONT
(Beam height equal to or less than 54")

IN RD IL AM (U/P)(TY 2)

UNDERPASS LIGHTING TYPE 2



CONDUIT CONNECTION PROFILE

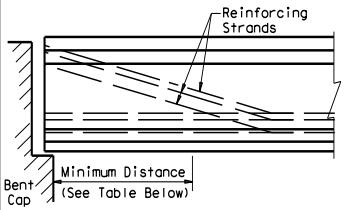


TABLE 5

LOCATION OF UNDERPASS LIGHT MOUNTING BRACKET TABLE

SPAN LENGTH	MINIMUM DISTANCE
≤ 50'	10'-0"
50' - 70'	15'-0"
70' - 90'	20'-0"
> 90'	25'-0"

LOCATION OF UNDERPASS LIGHT MOUNTING BRACKET

GENERAL NOTES:

A. ALL 150 watt HPS and 150 watt equivalent LED Luminaires

1. Luminaire locations, conduit and conductor sizes and routing are typical and diagrammatic only. See project layout sheets for specific details.
2. Conduit will be paid for under Item 618, "Conduit" and conductors will be paid for under Item 620, "Electrical Conductors," unless otherwise shown on the plans.
3. Adjust conduit in saddles to place fixture height and orientation as required. See fixture orientation detail and plans. Where practicable, place luminaires so the bottom of luminaire is above the bottom of the beam, maximum of 3 in. (See detail UNDERPASS LIGHTING ARM TYPE 2)
4. Except as noted, galvanize all structural steel and exposed bolts, nuts, and washers in accordance with Item 445 "Galvanizing".
5. Fabrication of brackets and support arms will not be paid for directly but is subsidiary to Item 610, "Roadway Illumination Assemblies."
6. Install a heavy duty NEMA 3R fused disconnect or breaker enclosure rated at 30 amps and 480 volts to switch underpass luminaires as shown on plans, with at least one per bridge circuit. Install 20 amp time-delay fuses or inverse-time circuit breakers. Mount disconnect or breaker enclosure 10 ft. (min) above grade on columns or bent caps as approved by the Department. Modify disconnect to allow padlocking in the "ON" and "OFF" positions. Padlocks and disconnect switches or circuit breakers for underpass fixtures will not be paid for directly but are subsidiary to the various bid items of the contract.
7. Conduit on columns, caps, and slab is shown surface mounted. For new columns and caps, embed PVC conduit in concrete. Bond and ground metal junction boxes and conduit.

B. TYPE 1

1. Provide 2 in. rigid metal conduit (2.375" O.D., 0.146" wall) for Type 1 arm shaft.
2. Use 3/8 in. stainless steel bolt or stud non-epoxy type expansion anchors for concrete for Type 1 mounting. Except as noted, provide an allowable 2650 lbs minimum pull-out force (after consideration of adjustment factors for edge distance and bolt spacing) for each anchor. Install each anchor to the embedment depth recommended by the manufacturer.
3. Attach conduit to plate with 4 saddles, four - 3/8 in. diameter bolts, nylon throat lock nuts, and lock washers.

C. TYPE 2

1. Provide 2 in. rigid metal conduit (2.375" O.D., 0.146" wall) or provide a combination of 2 1/2 in. (2.875" O.D., 0.193" wall) and 2 in. (2.375" O.D., 0.146" wall) rigid metal conduits with a reducing bushing as beam height stipulated for Type 2 arm shaft. Field cutting and threading will be permitted. Paint cut and threaded areas with zinc rich paint after conduit is connected to adjacent fitting.
2. Connecting conduit may be strapped to tapered section only of precast beams as shown. Anchor as approved by the Engineer. Maximum anchor depth is 1 in.
3. Indiscriminate drilling into precast concrete beams may result in reduced beam strength. Use drilling location and method as directed by the Engineer. See Location of Underpass Lighting Mounting Bracket detail. The locations shown in the table are such that reinforcing strands will not be damaged.

Texas Department of Transportation

Traffic Operations Division Standard

ROADWAY ILLUMINATION DETAILS

(UNDERPASS LIGHT FIXTURES)

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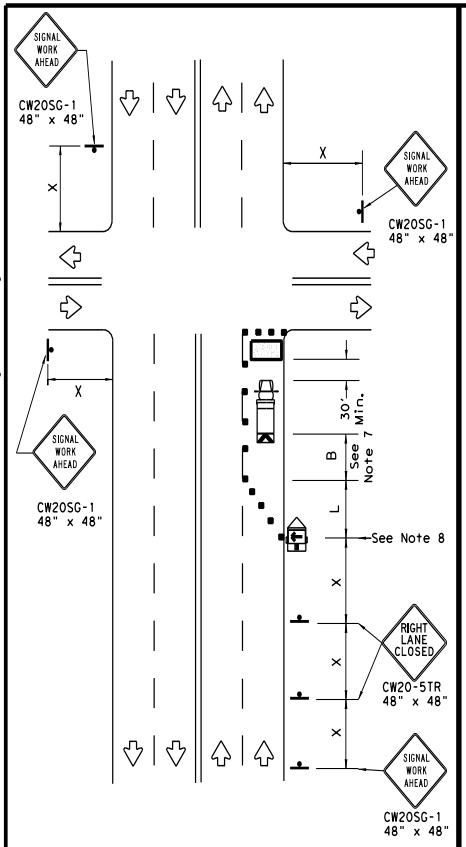
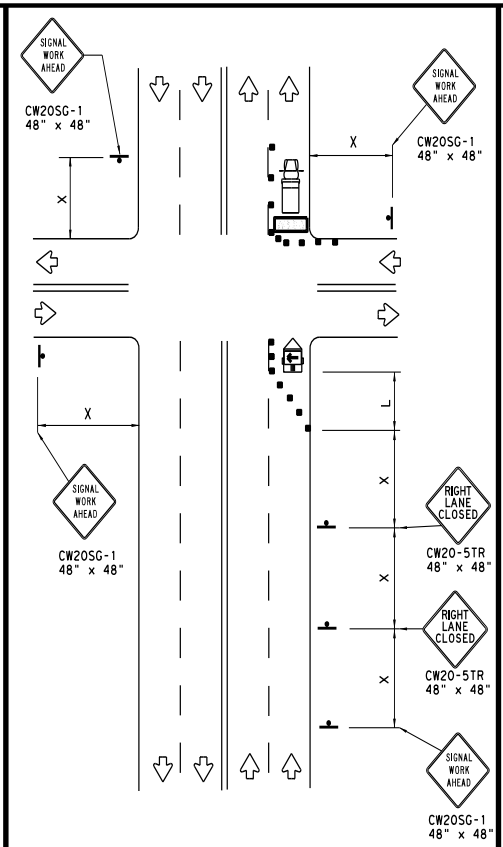


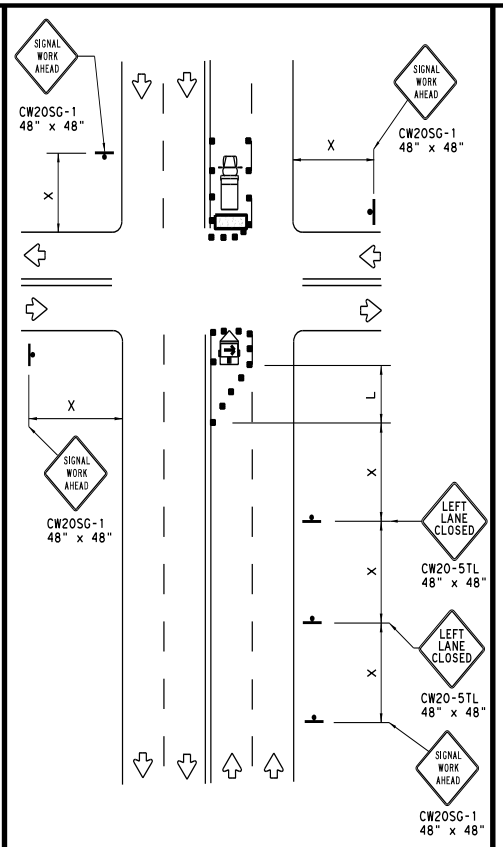
NEAR SIDE LANE CLOSURE

SHORT DURATION OR SHORT TERM STATIONARY



FAR SIDE RIGHT LANE CLOSURE

SHORT DURATION OR SHORT TERM STATIONARY



FAR SIDE LEFT LANE CLOSURE

SHORT DURATION OR SHORT TERM STATIONARY

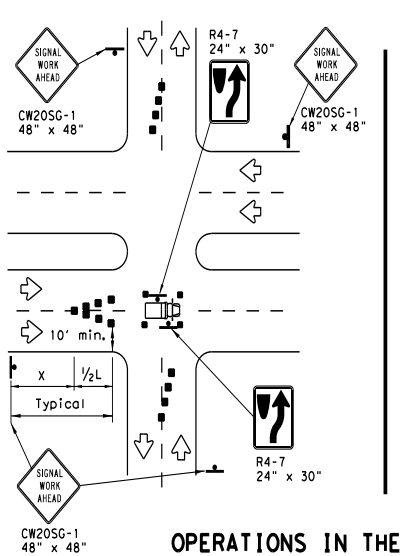
LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

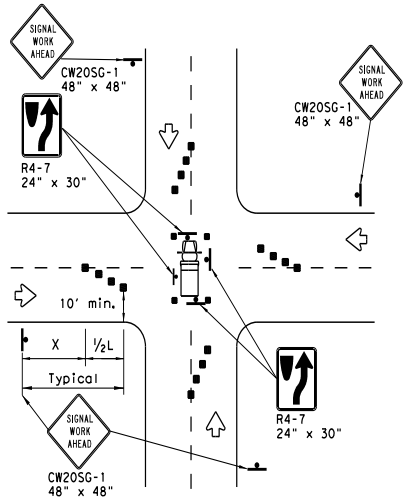
Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

WORKERS IN BUCKET TRUCKS SHALL NOT WORK ABOVE OPEN LANES OF TRAFFIC.





OPERATIONS IN THE INTERSECTION

SHORT DURATION

GENERAL NOTES

1. The minimum size channelizing device is the 28" cone. 42" Two-piece cones, drums, vertical panels or barricades will be required when the device must be left unattended at night.
2. Obstructions or hazards at the work area shall be clearly marked and delineated at all times.
3. Flaggers and Flagger Symbol (CW20-7) signs may be required according to field conditions.
4. Vehicles parked in roadway shall be equipped with at least two high intensity rotating, flashing, oscillating or strobe type lights.
5. High level warning devices (flag trees) may be used at corners of the vehicle.
6. When work operations are performed on existing signals, the signals may be placed in flashing red mode when approved by the engineer. If existing signals do not have power, All-Way Stop (R1-1 and R1-3P) signs may be implemented when approved by the engineer.
7. For Short-Term Stationary work the buffer space "B" from the above table should be used if field conditions permit. For Short Duration (less than 1 hour) any buffer space provided will enhance the safety of the setup.
8. The arrow board at this location may be omitted for Short Duration work if the work vehicle has an arrow board in operation. As an option, the arrow board may be placed at the end of the taper in the closed lane if space is not available at the beginning of the taper.
9. Signs and devices for the NEAR SIDE LANE CLOSURE may be altered for a left lane closure by using a LEFT LANE CLOSED (CW20-5TL) and adding channelizing devices on the centerline to protect the work space from opposing traffic.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC SIGNAL WORK TYPICAL DETAILS

WZ(BTS-1)-13

FILE: wzbts-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2-98 10-99 7-13	DIST	COUNTY		SHEET NO.
4-98 3-03				31

114

DATE:
FILE:

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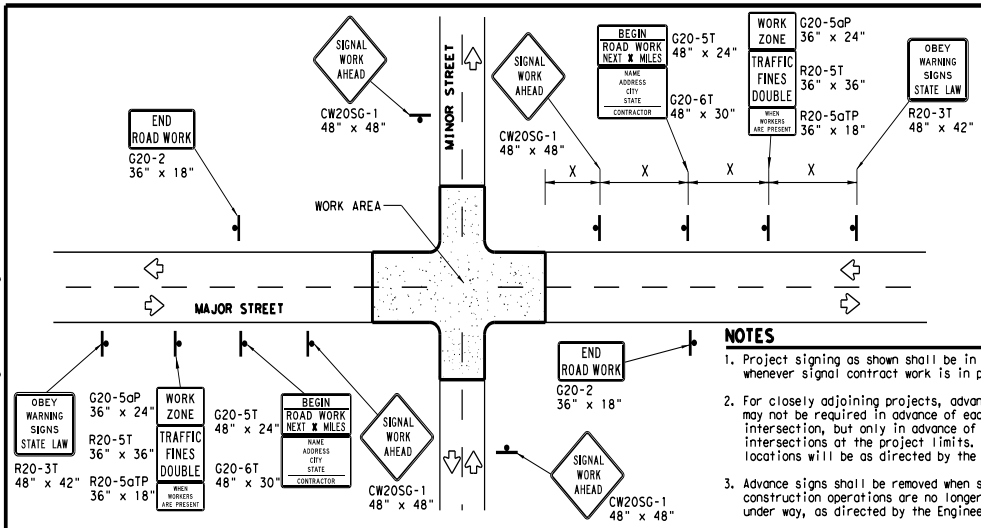


TYPICAL ADVANCE SIGNAL PROJECT SIGNING

FOR LONG TERM and INTERMEDIATE-TERM STATIONARY WORK OPERATIONS

NOTES

1. Project signing as shown shall be in place whenever signal contract work is in progress.
2. For closely adjoining projects, advance signing may not be required in advance of each intersection, but only in advance of the intersections at the project limits. Actual locations will be as directed by the Engineer.
3. Advance signs shall be removed when signal construction operations are no longer under way, as directed by the Engineer.
4. Warning sign spacing shown is typical for both directions.
5. See the Table on sheet 1 of 2 for Typical warning sign spacing.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Signs shall be installed and maintained in a straight and plumb condition.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. All signs shall be installed in accordance with the plans or as directed by the Engineer.
6. The Contractor shall furnish the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD).
7. The Contractor shall furnish sign supports and substrates listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD), installed as per the manufacturer's recommendations.
8. Temporary signs that have damaged or cracked substrates and/or damaged or marred reflective sheeting shall be replaced as directed by the Engineer.
9. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1".
10. Damaged wood posts shall be replaced. Splicing wood posts will not be allowed.

DURATION OF WORK

1. Work zone durations are defined in Part 6, Section 6G.02 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

SIGN MOUNTING HEIGHT

1. Sign height of Long-term/Intermediate-term warning signs shall be as shown on Figure 6F-1 of the TMUTCD.
2. Sign height of Short-term/Short Duration warning signs shall be as shown on Figure 6F-2 of the TMUTCD.
3. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered, unless otherwise approved by the Engineer.
2. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night without damaging the sign sheeting. Burlap, or heavy materials such as plywood or aluminum shall not be used to cover signs.
3. Duct tape or other adhesive material shall NOT be affixed to a sign face.
4. Signs and anchor stubs shall be removed and holes back filled upon completion of the work.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the requirements of the DMS and color usage table shown on this sheet.

SIGN SUPPORT WEIGHTS

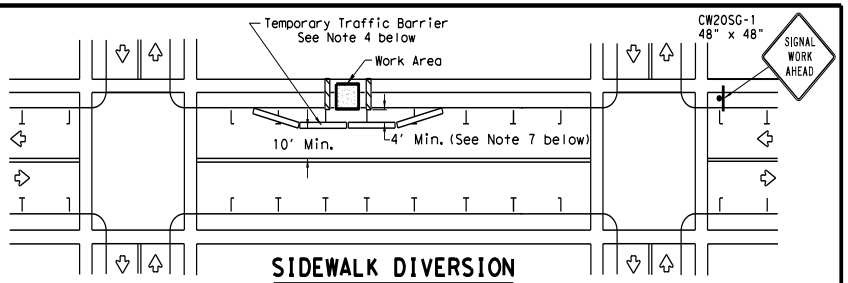
1. Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber, such as tire inner tubes, shall not be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fastners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

LEGEND	
	Sign
	Channelizing Devices
	Type 3 Barricade

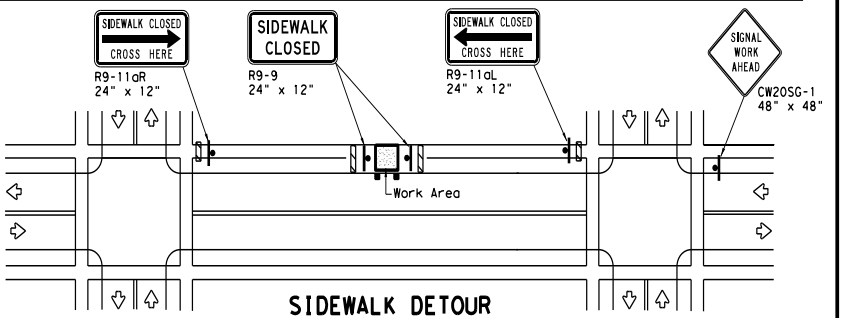
DEPARTMENTAL MATERIAL SPECIFICATIONS	
SIGN FACE MATERIALS	DMS-8300
FLEXIBLE ROLL-UP REFLECTIVE SIGNS	DMS-8310

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL} SHEETING
WHITE	BACKGROUND	TYPE A SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

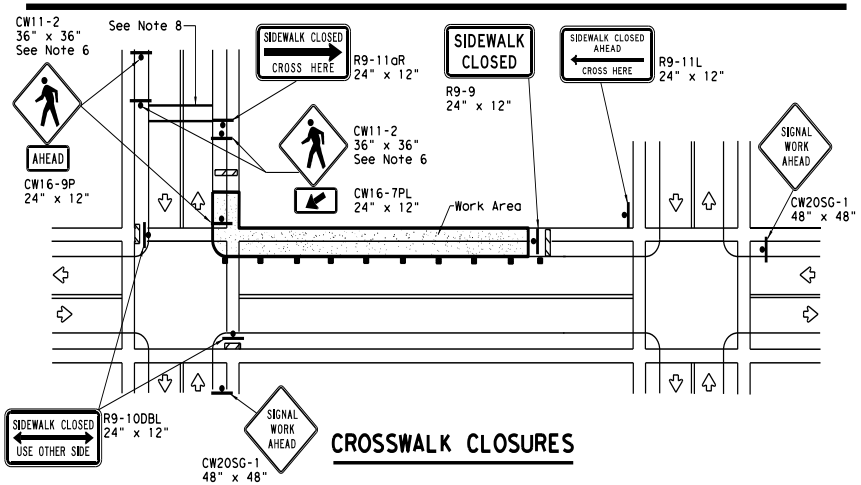
Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found at the following web address:
http://www.txdot.gov/txdot_library/publications/construction.htm



SIDEWALK DIVERSION



SIDEWALK DETOUR



CROSSWALK CLOSURES

PEDESTRIAN CONTROL

1. Holes, trenches or other hazards shall be adequately protected by covering, delineating or surrounding the hazard with orange plastic pedestrian fencing or longitudinal channelizing devices, or as directed by the Engineer.
2. "CROSSWALK CLOSURES" as detailed above will require the Engineer's approval prior to installation.
3. R9 series signs shown may be placed on supports detailed on the BC standards or CWZTCD list, or when fabricated from approved lightweight plastic substrates, they may be mounted on top of a plastic drum at or near the location shown.
4. For speeds less than 45 mph longitudinal channelizing devices may be used instead of traffic barriers when approved by the Engineer. Attenuation of blunt ends and installation of water filled devices shall be as per BC(9) and manufacturer's recommendations.
5. Location of devices are for general guidance. Actual device spacing and location must be field adjusted to meet actual conditions.
6. Where pedestrians with visual disabilities normally use the closed sidewalk Detectable Pedestrian Barricades should be used instead of the Type 3 Barricades shown.
7. The width of existing sidewalk should be maintained if practical.
8. Pavement markings for mid-block crosswalks shall be paid for under the appropriate bid items.
9. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

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DATE:
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SHEET 2 OF 2

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC SIGNAL WORK BARRICADES AND SIGNS

WZ(BTS-2)-13

FILE: wzbts-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2-98 10-99 7-13	DIST	COUNTY		SHEET NO.
4-98 3-03				32

115

Folder No.2947-35

CONTRACTOR'S
RIGHT OF ENTRY AGREEMENT

THIS AGREEMENT is made and entered into as of the _____ day of _____, 20_____, by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation ("Railroad"); and _____, a _____ corporation ("Contractor").

RECITALS:

Contractor has been hired by _____ to perform work relating to _____
_____
(the "work") with all or a portion of such work to be performed on property of Railroad in the vicinity of Railroad's Milepost 555.85 on Railroad's Toyah Sub. at or near DOT No. 796330E located at or near Midland, TX, as such location is in the general location shown on the print marked **Exhibit A**, attached hereto and hereby made a part hereof, which work is the subject of a contract dated _____ between Railroad and _____ June 3, 2019.

Railroad is willing to permit Contractor to perform the work described above at the location described above subject to the terms and conditions contained in this agreement

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between Railroad and Contractor, as follows:

ARTICLE 1 - DEFINITION OF CONTRACTOR.

For purposes of this agreement, all references in this agreement to Contractor shall include Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority. For purposes of clarity, Contractor agrees that any CIC (defined below) hired by Contractor is a subcontractor of Contractor and therefore included in the defined term Contractor pursuant to the foregoing sentence.

ARTICLE 2 - RIGHT GRANTED; PURPOSE.

Railroad hereby grants to Contractor the right, during the term hereinafter stated and upon and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and have ingress to and egress from the property described in the Recitals for the purpose of performing the work described in the Recitals above. The right herein granted to Contractor is limited to those portions of Railroad's property specifically described herein, or as designated by the Railroad Representative named in Article 4.

ARTICLE 3 - TERMS AND CONDITIONS CONTAINED IN EXHIBITS B, C AND D.

The terms and conditions contained in **Exhibit B, Exhibit C** and **Exhibit D**, attached hereto, are hereby made a part of this agreement.

ARTICLE 4 - ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. Contractor shall bear any and all costs and expenses associated with any work performed by Contractor (including without limitation any CIC), or any costs or expenses incurred by Railroad relating to this agreement.

B. Contractor shall coordinate all of its work with the following Railroad representative or his or her duly authorized representative (the "Railroad Representative"):

William C. Cronin
402/591-2519

C. Contractor, at its own expense, shall adequately police and supervise all work to be performed by Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of **Exhibit B**. The responsibility of Contractor for safe conduct and adequate policing and supervision of Contractor's work shall not be lessened or otherwise affected by Railroad's approval of plans and specifications involving the work, or by Railroad's collaboration in performance of any work, or by the presence at the work site of a Railroad Representative, or by compliance by Contractor with any requests or recommendations made by Railroad Representative.

ARTICLE 5 - SCHEDULE OF WORK ON A MONTHLY BASIS.

The Contractor, at its expense, shall provide on a monthly basis a detailed schedule of work to the Railroad Representative named in Article 4B above. The reports shall start at the execution of this agreement and continue until this agreement is terminated as provided in this agreement or until the Contractor has completed all work on Railroad's property.

ARTICLE 6 - TERM; TERMINATION.

A. The grant of right herein made to Contractor shall commence on the date of this agreement, and continue until _____, unless sooner terminated as herein provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad's property.

B. This agreement may be terminated by either party on ten (10) days written notice to the other party.

ARTICLE 7 - CERTIFICATE OF INSURANCE.

A. Before commencing any work, Contractor will provide Railroad with the (i) insurance binders, policies, certificates and endorsements set forth in **Exhibit C** of this agreement, and (ii) the insurance endorsements obtained by each subcontractor as required under Section 12 of **Exhibit B** of this agreement.

B. All insurance correspondence, binders, policies, certificates and endorsements shall be sent to:

Union Pacific Railroad Company
1400 Douglas Street, Stop 1690
Omaha, NE 68179
Folder No. 2947-35

ARTICLE 8 - PRECONSTRUCTION MEETING.

If the work to be performed by the Contractor will involve the Railroad providing any flagging protection (or if a CIC is approved to provide flagging protection pursuant to the terms set forth herein) and/or there is separate work to be performed by the Railroad, the Contractor confirms that no work shall commence until the Railroad and Contractor participate in a preconstruction meeting involving flagging procedures and coordination of work activities of the Contractor and the Railroad (and any CIC, as applicable.)

ARTICLE 9. DISMISSAL OF CONTRACTOR'S EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad's property any employee of Contractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad against any claims arising from the removal of any such employee from Railroad's property.

ARTICLE 10. ADMINISTRATIVE FEE.

Upon the execution and delivery of this agreement, Contractor shall pay to Railroad One Thousand Twenty Five Dollars ($1,025.00) as reimbursement for clerical, administrative and handling expenses in connection with the processing of this agreement.

ARTICLE 11. CROSSINGS; COMPLIANCE WITH MUTCD AND FRA GUIDELINES.

A. No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

B. Any permanent or temporary changes, including temporary traffic control, to crossings must conform to the Manual of Uniform Traffic Control Devices (MUTCD) and any applicable Federal Railroad Administration rules, regulations and guidelines, and must be reviewed by the Railroad prior to any changes being implemented. In the event the Railroad is found to be out of compliance with federal safety regulations due to the Contractor's modifications, negligence, or any other reason arising from the Contractor's presence on the Railroad's property, the Contractor agrees to assume liability for any civil penalties imposed upon the Railroad for such noncompliance.

ARTICLE 12.- EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored or used on Railroad's property without the prior written approval of Railroad.

IN WITNESS WHEREOF, the parties hereto have duly executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

By:_____
Title:_____

_____
(Name of Contractor)

By:_____
Title:_____

EXHIBIT A
TO
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Exhibit A will be a print showing the general location of the work site.

FED.RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	STP 1602(595)FRS3		1
STATE	STATE DIST.	COUNTY	
TEXAS	ODA	MIDLAND	
CONT	SECT	JOB	HIGHWAY NO.
0906	32	056	VARIOUS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXHIBIT A SIGNAL LAYOUT
3	WIRING DIAGRAM
4	*RCSS(1)-09
5	*TSR(4)-13
6	*RCD(1)-16
7	*RCD(2)-16

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

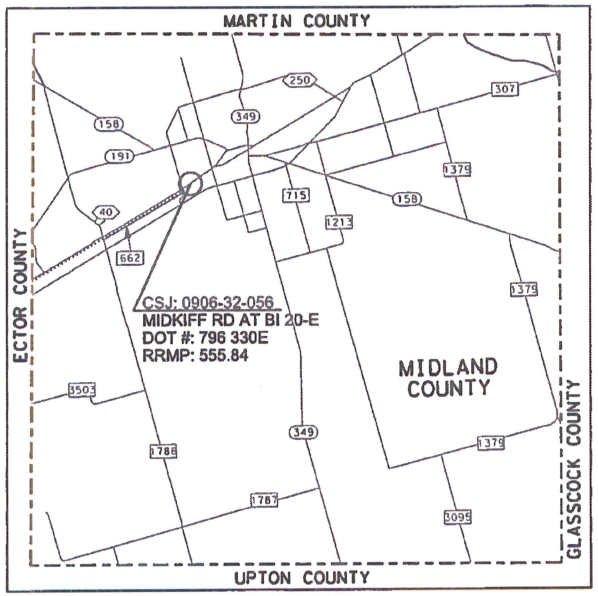
PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT NO.: STP 1602(595)FRS3

MIDLAND COUNTY
AT MIDKIFF RD.

NET LENGTH OF PROJECT: 528 FT = 0.100 MI
LIMITS: RAILROAD CROSSING

FOR THE CONSTRUCTION OF GRADE CROSSING WARNING DEVICES
CONSISTING OF SIGNS, LIGHTS, AND BELLS



EXCEPTIONS: NONE
EQUATIONS: NONE
SCALE: NONE

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE WITH AN (*) HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

_____, PE 7/11/16
DATE

STATE OF TEXAS
KELLI R. WILLIAMS
84793
LICENSED
PROFESSIONAL ENGINEER

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY, 2012).

COUNTY_____ PROJ. NO._____
HWY. NO._____ LETTING DATE_____
DATE ACCEPTED_____

FED08

TEXAS DEPARTMENT OF TRANSPORTATION

CONCURRENCE: June 15, 2016
MAYOR, CITY OF MIDLAND

SUBMITTED FOR LETTING: 7/11/2016
TRAFFIC ENGINEER, P.E.

RECOMMENDED FOR LETTING: 7/11, 2016
DIRECTOR OF OPERATIONS, P.E.

Director of Traffic Operations Div P.E. 7/12/16

APPROVED FOR LETTING: 7-11, 2016
DISTRICT ENGINEER, P.E.

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ver. 2013.04.06

EXHIBIT B
TO
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Section 1. NOTICE OF COMMENCEMENT OF WORK - RAILROAD FLAGGING - PRIVATE FLAGGING.

A. Contractor agrees to notify the Railroad Representative at least ten (10) working days in advance of Contractor commencing its work and at least thirty (30) working days in advance of proposed performance of any work by Contractor in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track.

B. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad approved flagman is provided to watch for trains. Upon receipt of such thirty (30)-day notice, the Railroad Representative will determine and inform Contractor whether a flagman need be present and whether Contractor needs to implement any special protective or safety measures.

C. Contractor shall be permitted to hire a private contractor to perform flagging or other special protective or safety measures (such private contractor being commonly known in the railroad industry as a contractor-in-charge ("CIC")) in lieu of Railroad providing such services or in concert with Railroad providing such services, subject to prior written approval by Railroad, which approval shall be in Railroad's sole and absolute discretion. If Railroad agrees to permit Contractor to utilize a CIC pursuant to the preceding sentence, Contractor shall obtain Railroad's prior approval in writing for each of the following items, as determined in all respects in Railroad's sole and absolute discretion: (i) the identity of the third-party performing the role of CIC; (ii) the scope of the services to be performed for the project by the approved CIC; and (iii) any other terms and conditions governing such services to be provided by the CIC. If flagging or other special protective or safety measures are performed by an approved CIC, Contractor shall be solely responsible for (and shall timely pay such CIC for) its services. Railroad reserves the right to rescind any approval pursuant to this Section 1, Subsection C., in whole or in part, at any time, as determined in Railroad's sole and absolute discretion.

D. If any flagging or other special protective or safety measures are performed by employees of Railroad and/or any contractor of Railroad, Railroad will bill Contractor for such expenses incurred by Railroad, unless Railroad and a federal, state or local governmental entity have agreed that Railroad is to bill such expenses to the federal, state or local governmental entity. If Railroad will be sending the bills to Contractor, Contractor shall pay such bills within thirty (30) days of Contractor's receipt of billing.

E. If any flagging or other special protective or safety measures are performed by Railroad or a CIC, Contractor agrees that Contractor is not relieved of any of its responsibilities or liabilities set forth in this agreement.

F. The provisions set forth in this subsection are only applicable for Flagging Services performed by employees of Railroad: the rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with labor agreements and schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Railroad and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Contractor (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges. If flagging is performed by Railroad, reimbursement to Railroad will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railroad work.

Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Railroad is required to pay the flagman and which could not reasonably be avoided by Railroad by assignment of such flagman to other work, even though Contractor may not be working during such time. When it becomes necessary for Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Contractor must provide Railroad a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Contractor will still be required to pay flagging charges for the five (5) day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional thirty (30) days notice must then be given to Railroad if flagging services are needed again after such five day cessation notice has been given to Railroad.

Section 2. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by Railroad without liability to Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (whether recorded or unrecorded and including those in favor of licensees and lessees of Railroad's property, and others) and the right of Railroad to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 3. NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.

A. Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of Railroad, including without limitation, the operations of Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

B. Operations of Railroad and work performed by Railroad personnel and delays in the work to be performed by Contractor caused by such railroad operations and work are expected by Contractor, and Contractor agrees that Railroad shall have no liability to Contractor, or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of Railroad and third parties so as to avoid interference with railroad operations. The safe operation of Railroad train movements and other activities by Railroad takes precedence over any work to be performed by Contractor.

Section 4. LIENS.

Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of Railroad for any such work performed. Contractor shall indemnify and hold harmless Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If Contractor fails to promptly cause any lien to be released of record, Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.

Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on Railroad's property to be used by Contractor. If it is,

Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. IN ADDITION TO OTHER INDEMNITY PROVISIONS IN THIS AGREEMENT, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD RAILROAD HARMLESS FROM AND AGAINST ALL COSTS, LIABILITY AND EXPENSE WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS AND EXPENSES) ARISING OUT OF ANY ACT OR OMISSION OF CONTRACTOR, ITS AGENTS AND/OR EMPLOYEES, THAT CAUSES OR CONTRIBUTES TO (1) ANY DAMAGE TO OR DESTRUCTION OF ANY TELECOMMUNICATIONS SYSTEM ON RAILROAD'S PROPERTY, AND/OR (2) ANY INJURY TO OR DEATH OF ANY PERSON EMPLOYED BY OR ON BEHALF OF ANY TELECOMMUNICATIONS COMPANY, AND/OR ITS CONTRACTOR, AGENTS AND/OR EMPLOYEES, ON RAILROAD'S PROPERTY. CONTRACTOR SHALL NOT HAVE OR SEEK RECOURSE AGAINST RAILROAD FOR ANY CLAIM OR CAUSE OF ACTION FOR ALLEGED LOSS OF PROFITS OR REVENUE OR LOSS OF SERVICE OR OTHER CONSEQUENTIAL DAMAGE TO A TELECOMMUNICATION COMPANY USING RAILROAD'S PROPERTY OR A CUSTOMER OR USER OF SERVICES OF THE FIBER OPTIC CABLE ON RAILROAD'S PROPERTY.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this agreement, Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Contractor. Contractor shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Contractor shall at a minimum comply with Railroad's safety standards listed in **Exhibit D**, hereto attached, to ensure uniformity with the safety standards followed by Railroad's own forces. As a part of Contractor's safety responsibilities, Contractor shall notify Railroad if Contractor determines that any of Railroad's safety standards are contrary to good safety practices. Contractor shall furnish copies of **Exhibit D** to each of its employees before they enter the job site.

B. Without limitation of the provisions of paragraph A above, Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job.

C. Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Contractor shall promptly notify Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

D. If and when requested by Railroad, Contractor shall deliver to Railroad a copy of Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation, to require Contractor to correct any deficiencies in the Safety Plan. The terms of this agreement shall control if there are any inconsistencies between this agreement and the Safety Plan.

Section 8. INDEMNITY.

A. TO THE EXTENT NOT PROHIBITED BY APPLICABLE STATUTE, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS RAILROAD, ITS AFFILIATES, AND ITS AND THEIR OFFICERS, AGENTS AND EMPLOYEES (INDIVIDUALLY AN "INDEMNIFIED PARTY" OR COLLECTIVELY "INDEMNIFIED PARTIES") FROM AND AGAINST ANY AND ALL LOSS, DAMAGE, INJURY, LIABILITY, CLAIM, DEMAND, COST OR EXPENSE (INCLUDING, WITHOUT LIMITATION, ATTORNEY'S, CONSULTANT'S AND EXPERT'S FEES, AND

COURT COSTS), FINE OR PENALTY (COLLECTIVELY, "LOSS") INCURRED BY ANY PERSON (INCLUDING, WITHOUT LIMITATION, ANY INDEMNIFIED PARTY, CONTRACTOR, OR ANY EMPLOYEE OF CONTRACTOR OR OF ANY INDEMNIFIED PARTY) ARISING OUT OF OR IN ANY MANNER CONNECTED WITH (I) ANY WORK PERFORMED BY CONTRACTOR, OR (II) ANY ACT OR OMISSION OF CONTRACTOR, ITS OFFICERS, AGENTS OR EMPLOYEES, OR (III) ANY BREACH OF THIS AGREEMENT BY CONTRACTOR.

B. THE RIGHT TO INDEMNITY UNDER THIS SECTION 8 SHALL ACCRUE UPON OCCURRENCE OF THE EVENT GIVING RISE TO THE LOSS, AND SHALL APPLY REGARDLESS OF ANY NEGLIGENCE OR STRICT LIABILITY OF ANY INDEMNIFIED PARTY, EXCEPT WHERE THE LOSS IS CAUSED BY THE SOLE ACTIVE NEGLIGENCE OF AN INDEMNIFIED PARTY AS ESTABLISHED BY THE FINAL JUDGMENT OF A COURT OF COMPETENT JURISDICTION. THE SOLE ACTIVE NEGLIGENCE OF ANY INDEMNIFIED PARTY SHALL NOT BAR THE RECOVERY OF ANY OTHER INDEMNIFIED PARTY.

C. CONTRACTOR EXPRESSLY AND SPECIFICALLY ASSUMES POTENTIAL LIABILITY UNDER THIS SECTION 8 FOR CLAIMS OR ACTIONS BROUGHT BY CONTRACTOR'S OWN EMPLOYEES. CONTRACTOR WAIVES ANY IMMUNITY IT MAY HAVE UNDER WORKER'S COMPENSATION OR INDUSTRIAL INSURANCE ACTS TO INDEMNIFY THE INDEMNIFIED PARTIES UNDER THIS SECTION 8. CONTRACTOR ACKNOWLEDGES THAT THIS WAIVER WAS MUTUALLY NEGOTIATED BY THE PARTIES HERETO.

D. NO COURT OR JURY FINDINGS IN ANY EMPLOYEE'S SUIT PURSUANT TO ANY WORKER'S COMPENSATION ACT OR THE FEDERAL EMPLOYERS' LIABILITY ACT AGAINST A PARTY TO THIS AGREEMENT MAY BE RELIED UPON OR USED BY CONTRACTOR IN ANY ATTEMPT TO ASSERT LIABILITY AGAINST ANY INDEMNIFIED PARTY.

E. THE PROVISIONS OF THIS SECTION 8 SHALL SURVIVE THE COMPLETION OF ANY WORK PERFORMED BY CONTRACTOR OR THE TERMINATION OR EXPIRATION OF THIS AGREEMENT. IN NO EVENT SHALL THIS SECTION 8 OR ANY OTHER PROVISION OF THIS AGREEMENT BE DEEMED TO LIMIT ANY LIABILITY CONTRACTOR MAY HAVE TO ANY INDEMNIFIED PARTY BY STATUTE OR UNDER COMMON LAW.

Section 9. RESTORATION OF PROPERTY.

In the event Railroad authorizes Contractor to take down any fence of Railroad or in any manner move or disturb any of the other property of Railroad in connection with the work to be performed by Contractor, then in that event Contractor shall, as soon as possible and at Contractor's sole expense, restore such fence and other property to the same condition as the same were in before such fence was taken down or such other property was moved or disturbed. Contractor shall remove all of Contractor's tools, equipment, rubbish and other materials from Railroad's property promptly upon completion of the work, restoring Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by Railroad of any breach or default of any condition, covenant or agreement herein contained to be kept, observed and performed by Contractor shall in no way impair the right of Railroad to avail itself of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.

No modification of this agreement shall be effective unless made in writing and signed by Contractor and Railroad. This agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between Contractor and Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, with respect to the work to be performed by Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

Contractor shall not assign or subcontract this agreement, or any interest therein, without the written consent of the Railroad. Contractor shall be responsible for the acts and omissions of all subcontractors. Before Contractor

commences any work, the Contractor shall, except to the extent prohibited by law; (1) require each of its subcontractors to include the Contractor as "Additional Insured" on the subcontractor's Commercial General Liability policy and Umbrella or Excess policies (if applicable) with respect to all liabilities arising out of the subcontractor's performance of work on behalf of the Contractor by endorsing these policies with ISO Additional Insured Endorsements CG 20 10, and CG 20 37 (or substitute forms providing equivalent coverage; (2) require each of its subcontractors to endorse their Commercial General Liability Policy with "Contractual Liability Railroads" ISO Form CG 24 17 10 01 (or a substitute form providing equivalent coverage) for the job site; and (3) require each of its subcontractors to endorse their Business Automobile Policy with "Coverage For Certain Operations In Connection With Railroads" ISO Form CA 20 70 10 01 (or a substitute form providing equivalent coverage) for the job site.

EXHIBIT C
TO
CONTRACTOR'S
RIGHT OF ENTRY AGREEMENT

Union Pacific Railroad Company
Insurance Provisions For
Contractor's Right of Entry Agreement

Contractor shall, at its sole cost and expense, procure and maintain during the course of the Project and until all Project work on Railroad's property has been completed and the Contractor has removed all equipment and materials from Railroad's property and has cleaned and restored Railroad's property to Railroad's satisfaction, the following insurance coverage:

A. **Commercial General Liability** insurance. Commercial general liability (CGL) with a limit of not less than $5,000,000 each occurrence and an aggregate limit of not less than $10,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

- Contractual Liability Railroads ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Company Property" as the Designated Job Site.
- Designated Construction Project(s) General Aggregate Limit ISO Form CG 25 03 03 97 (or a substitute form providing equivalent coverage) showing the project on the form schedule.

B. **Business Automobile Coverage** insurance. Business auto coverage written on ISO form CA 00 01 10 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less $5,000,000 for each accident and coverage must include liability arising out of any auto (including owned, hired and non-owned autos).

The policy must contain the following endorsements, which must be stated on the certificate of insurance:

- Coverage For Certain Operations In Connection With Railroads ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Property" as the Designated Job Site.
- Motor Carrier Act Endorsement - Hazardous materials clean up (MCS-90) if required by law.

C. **Workers' Compensation and Employers' Liability** insurance. Coverage must include but not be limited to:

- Contractor's statutory liability under the workers' compensation laws of the state where the work is being performed.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 disease policy limit $500,000 each employee.

If Contractor is self-insured, evidence of state approval and excess workers compensation coverage must be provided. Coverage must include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

D. **Railroad Protective Liability** insurance. Contractor must maintain "Railroad Protective Liability" (RPL) insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than $2,000,000 per occurrence and an aggregate of $6,000,000. The definition of "JOB LOCATION" and "WORK" on the declaration page of the policy shall refer to this agreement and shall describe all WORK or OPERATIONS performed under this agreement. Contractor shall provide this agreement to Contractor's insurance agent(s) and/or broker(s) and Contractor shall instruct such agent(s) and/or broker(s) to procure the insurance coverage required by this agreement. A BINDER STATING THE POLICY IS IN PLACE MUST BE SUBMITTED TO RAILROAD BEFORE THE WORK MAY COMMENCE AND UNTIL THE ORIGINAL POLICY IS FORWARDED TO UNION PACIFIC RAILROAD.

E. **Umbrella or Excess** insurance. If Contractor utilizes umbrella or excess policies, these policies must "follow form" and afford no less coverage than the primary policy.

F. **Pollution Liability** insurance**.** Pollution liability coverage must be included when the scope of the work as defined in the agreement includes installation, temporary storage, or disposal of any "hazardous" material that is injurious in or upon land, the atmosphere, or any watercourses; or may cause bodily injury at any time.

If required, coverage may be provided in separate policy form or by endorsement to Contractors CGL or RPL. Any form coverage must be equivalent to that provided in ISO form CG 24 15 "Limited Pollution Liability Extension Endorsement" or CG 28 31 "Pollution Exclusion Amendment" with limits of at least $5,000,000 per occurrence and an aggregate limit of $10,000,000.

If the scope of work as defined in this agreement includes the disposal of any hazardous or non-hazardous materials from the job site, Contractor must furnish to Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of $1,000,000 per loss, and an annual aggregate of $2,000,000.

Other Requirements

G. All policy(ies) required above (except business automobile, worker's compensation and employers liability) must include Railroad as "Additional Insured" using ISO Additional Insured Endorsements CG 20 10, and CG 20 37 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall not be limited by Contractor's liability under the indemnity provisions of this agreement. BOTH CONTRACTOR AND RAILROAD EXPECT THAT UNION PACIFIC RAILROAD COMPANY WILL BE PROVIDED WITH THE BROADEST POSSIBLE COVERAGE AVAILABLE BY OPERATION OF LAW UNDER ISO ADDITIONAL INSURED FORMS CG 20 10 AND CG 20 37.

H. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless (a) insurance coverage may not lawfully be obtained for any punitive damages that may arise under this agreement, or (b) all punitive damages are prohibited by all states in which this agreement will be performed.

I. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees for damages covered by the workers compensation and employers liability or commercial umbrella or excess liability obtained by Contractor required in this agreement where prohibited by law. This waiver must be stated on the certificate of insurance.

J. Prior to commencing the work, Contractor shall furnish Railroad with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this agreement.

K. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state where the work is being performed.

L. The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

EXHIBIT D
TO
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of Contractor as well as all employees of any subcontractor or agent of Contractor.

I. Clothing

A. All employees of Contractor will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet.

Specifically, Contractor's employees must wear:

(i) Waist-length shirts with sleeves.
(ii) Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
(iii) Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.

B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.

C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

II. Personal Protective Equipment

Contractor shall require its employees to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

(i) Hard hat that meets the American National Standard (ANSI) Z89.1 – latest revision. Hard hats should be affixed with Contractor's company logo or name.
(ii) Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
(iii) Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:

- 100 feet of a locomotive or roadway/work equipment
- 15 feet of power operated tools
- 150 feet of jet blowers or pile drivers
- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection – plugs and muffs)
-

(iv) Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

III. On Track Safety

Contractor is responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations – 49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

(i) Maintain a distance of twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.
(ii) Wear an orange, reflectorized workwear approved by the Railroad Representative.
(iii) Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractor must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. Contractor will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

IV. Equipment

A. It is the responsibility of Contractor to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of Contractor's equipment is unsafe for use, Contractor shall remove such equipment from Railroad's property. In addition, Contractor must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:

- Familiar and comply with Railroad's rules on lockout/tagout of equipment.
- Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
- Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other railbound equipment.

B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.

C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.

D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

V. General Safety Requirements

A. Contractor shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.

B. Contractor shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.

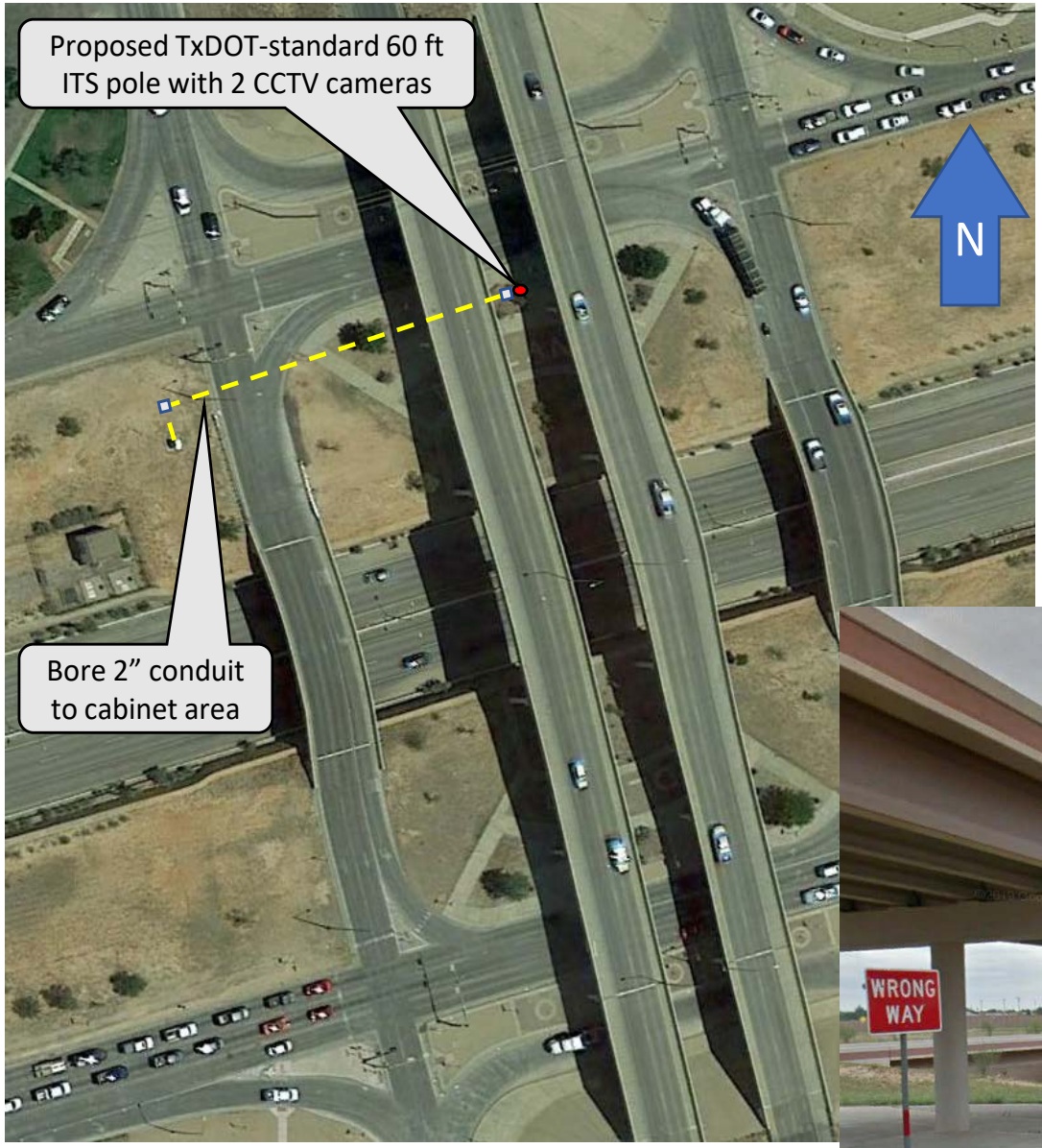
C. All track work performed by Contractor meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.

D. All employees comply with the following safety procedures when working around any railroad track:

(i) Always be on the alert for moving equipment. Employees must always expect movement on any track, at any time, in either direction.
(ii) Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
(iii) In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment of the opening is less than one car length (50 feet).
(iv) Avoid walking or standing on a track unless so authorized by the employee in charge.
(v) Before stepping over or crossing tracks, look in both directions first.
(vi) Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.

E. All employees must comply with all federal and state regulations concerning workplace safety.

LP 250 / SH 191
Proposed City of Midland
Traffic CCTV Location



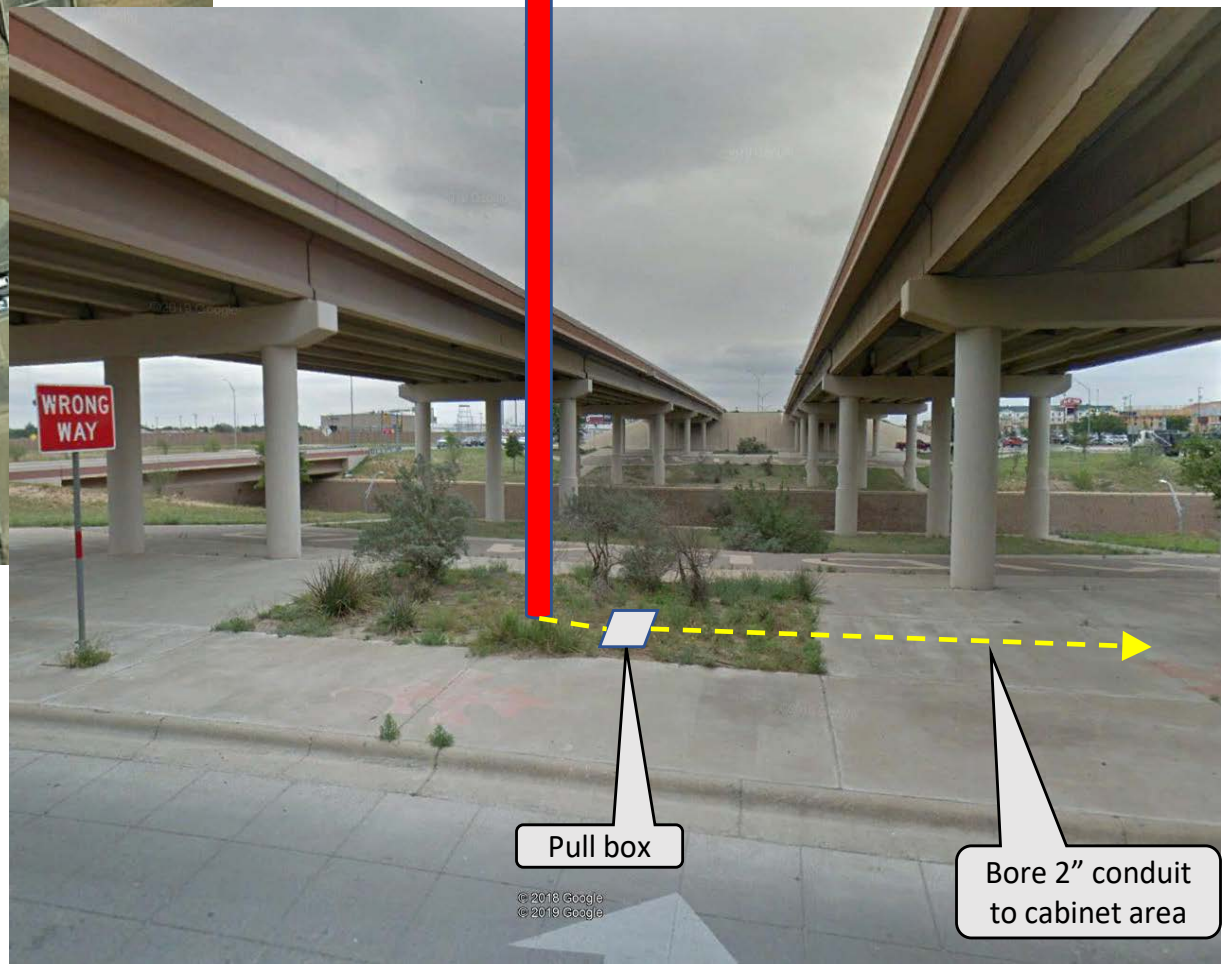


EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, or irrevocable letter of credit issued by a bank satisfactory to the City, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the City, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check or irrevocable letter of credit issued by a bank satisfactory to the City for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

BID BOND

THE STATE OF TEXAS §

SURETY NO. _____

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____

_____

(hereinafter called the Principal), as Principal, and _____

_____

_____

(hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____

_____ DOLLARS

($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written Contract with the obligee to_____

_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damages.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas

IN WITNESS THEREOF, THE SAID PRINCIPAL AND SURETY do sign and seal this instrument, this _____ day of _____, 20____.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PAYMENT BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ of the City of _____ of the County of _____ and State of Texas as Principal, and _____, as Surety, are held and firmly bound unto the City of Midland, Texas, as Obligee, in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20__, for the furnishing of materials, equipment to perform all labor and work necessary for _____, hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of the obligation is that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise, it is to remain in full force and effect.

Surety, for value received, stipulates and agrees that no change, extension of time alteration or addition to the terms of the contract, or to the work performed there under, or the plans, specifications of drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of

time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed there under.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this _____ day of _____ , 20__ .

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____ , 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of _____ , specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PerfB 2

EXHIBIT D – HEAVY AND HIGHWAY – rev 01-05-18

General Decision Number: TX180007 01/05/2018 TX7

Superseded General Decision Number: TX20170007

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.36	
Structures	$ 13.52	
LABORER		
Asphalt Raker	$ 12.28	
Flagger	$ 9.30	
Laborer, Common	$ 10.30	
Laborer, Utility	$ 11.80	

Work Zone Barricade
Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
Asphalt Distributer.....$ 14.87
Asphalt Paving Machine.....$ 13.40
Broom and Sweeper.....$ 11.21
Crane, Lattice Boom 80
Tons or Less.....$ 16.82
Crawler Tractor Operator....$ 13.96
Excavator, 50,000 lbs or
less.....$ 13.46
Front End Loader Operator,
Over 3 CY.....$ 12.77
Front End Loader, 3CY or
less.....$ 12.28
Loader/Backhoe.....$ 14.18
Mechanic.....$ 20.14
Milling Machine.....$ 15.54
Motor Grader, Rough.....$ 16.15
Motor Grader, Fine.....$ 17.49
Pavement Marking Machine....$ 16.42
Reclaimer/Pulverizer.....$ 12.85
Roller, Asphalt.....$ 10.95
Roller, Other.....$ 10.36
Scraper.....$ 10.61
Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
Lowboy-Float.....$ 14.46
Single Axle.....$ 12.74
Single or Tandem Axle Dump..$ 11.33
Tandem Axle Tractor with
Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons

resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

IMPORTANT NOTICE

Conflict Of Interest Reporting Requirements

Compliance with LOCAL GOVERNMENT CODE TITLE 5. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES SUBTITLE C. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES OF MORE THAN ONE TYPE OF LOCAL GOVERNMENT CHAPTER 176. DISCLOSURE OF CERTAIN RELATIONSHIPS WITH LOCAL GOVERNMENT OFFICERS; PROVIDING PUBLIC ACCESS TO CERTAIN INFORMATION.

Form CIQ: This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire shall be filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

Bidders are responsible for filing Conflict of Interest form "CIQ" in accordance with the above referenced statute. Failure to do so is a class C Misdemeanor. Contracts or Purchase Orders awarded to a vendor that has violated this law is subject to termination at such time that the violation is discovered with no recourse to the City of Midland. The bidder will be subsequently removed from the bidders list for a minimum of one year.

When there is no known conflict of interest as defined by the statute, it is not necessary to file/submit the Form CIQ. The form must be submitted if a conflict is subsequently discovered.

By submitting a response to this request, vendor represents that it complies with the requirements of Chapter 176 of the Texas Local Government Code.

For a current list of the local government officers go to: http://www.midlandtexas.gov/

Upon completion of the form, sign and submit with bid or mail to:

City of Midland
Attn: City Secretary
PO Box 1152
Midland, Texas 79702

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

_____ _____

Signature of vendor doing business with the governmental entity Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Consideration of Location of Bidder's Principal Place of Business
For Bids of $50,000 up to $100,000 for Services and $500,000 for Commodities
Affidavit of Eligibility

Pursuant to Texas Local Government Code 271.9051, in purchasing real property, personal property that is not affixed to real property, or services, if the City receives one or more bids from a bidder whose principal place of business is in the City of Midland and whose bid is within five percent (5%) of the lowest bid price received by the City from a bidder who is not a resident of the City of Midland, the City may enter into a contract with:

(1) the lowest bidder; or

(2) the bidder whose principal place of business is in the City of Midland if the City Council determines, in writing, that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City of Midland created by the contract award, including the employment of residents of the City of Midland and increased tax revenues to the City of Midland.

In order to receive consideration, bidders must submit this affidavit to:

Erika Martinez
Purchasing Manager
City of Midland
300 N. Loraine St.,
PO BOX 1152
Midland, TX 79702-1152

Complete all areas below. Incomplete affidavits may be rejected.

Local Business Name: _____

Local Address (must be within the City limits): _____

1. Is the above address the principal place of business for the business named above? ☐ Yes ☐ No
2. How many residents of the City of Midland are employed at the above business location? _____
3. Year your business was established in the City of Midland: _____
4. If you collect sales tax for ANY class of customer, provide the following Reseller information:

   Reseller Permit Number: _____

   Company Name and Address (as it appears on permit):

   _____

   _____

   _____

5. Does your business have more than one office in the State of Texas? ☐ Yes ☐ No
   If Yes, identify the office location considered as the point-of sale for the purpose of sales tax calculation:

   _____

   _____

6. Was the local business required to pay business and/or real property tax for the most recent tax year?

   ☐ Yes ☐ No

   If Yes, did the local business pay any of this tax to the City of Midland? ☐ Yes ☐ No

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct. It is further acknowledged that any person, firm, corporation or entity intentionally submitting false information to the City in an attempt to qualify for eligibility shall be prohibited from bidding on City of Midland products and services for a period of one (1) year.

Authorized Signature: _____ Date: _____

Printed Name and Title: _____

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/COMPANY OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/COMPANY MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.

IF THE SELECTED BIDDER/COMPANY CANNOT MEET THE ABOVE REQUIREMENTS, THEN **THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER**.

IMPORTANT NOTICE – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/COMPANY MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE, WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.

COMPLIANCE: Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended. For further instructions on how to comply with Texas Government Code Section 2252.908 and Texas Local Government Code Section 176.006,

please go to https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm.

ANY VENDOR WHO FAILS TO COMPLY WITH THE TERMS OF THE AWARD **MAY BE DECLARED AN IRRESPONSIBLE VENDOR**. BIDS SUBMITTED BY SAID VENDOR SHALL NOT BE CONSIDERED AGAIN FOR A MINIMUM PERIOD OF SIX MONTHS AS DETERMINED BY THE CITY MANAGER.

IMPORTANT: READ CAREFULLY BEFORE MAKING BID
GENERAL CONDITIONS OF BIDDING

1. All bids are to be submitted as specified in the procurement document(s).

2. Each Bidder is requested to provide: Descriptive literature clearly marked to show each item on this bid. Any catalog or manufacturer's reference in this proposal is descriptive, but not restrictive, and is used only to indicate type and quality. If, however, the bidder proposes similar but not identical terms, he must furnish all particulars. If no mention is made of any exceptions, it is assumed that he is bidding on the article specified and not on an approved equal and he will be required to deliver exact article specified.

3. Prices should be itemized. (Indicate unit price and extend to show total price.) In case of discrepancy between the unit price and the extension, the unit price shall govern.

4. Unit price for each item offered shall include all discounts; e.g., trade, seasonal, etc. with net 30 days payment terms. Discounts shall not be shown as such but shall be incorporated in the base bid price. Any bid showing discounts will be considered an alternate bid. The City of Midland will not be responsible for any goods delivered without a purchase order number.

5. If the Contract is awarded, it will be awarded to either the lowest responsible bidder, or to the bidder who provides goods or services at the best value for the City of Midland. In determining the best value for the City of Midland, the City of Midland may consider the criteria enumerated in Section 252.043 of the Texas Local Government Code. The City of Midland reserves the right to award by item or by total bid, or to reject any or all bids or parts of bids. Further, the City of Midland reserves all rights granted by Section 271.027 of the Texas Local Government Code. The City of Midland reserves the right to award the bid to the lowest responsible bidder.

6. Time of proposed delivery shall be stated in number of calendar days.

7. NOTE: The City of Midland, Texas is exempt from all Federal, State and City tax. Please do not include these taxes in your bid price or invoice. Taxable items must be so designated, and the City will supply vendor with a Tax Exemption Certificate, properly executed.

8. All items are to be delivered, unloaded and stacked at the location indicated on the Bid Request and Purchase Order.

9. All items are to be delivered F.O.B. to the City of Midland, Texas with freight prepaid and included in the bid.

10. Detailed specifications rule over General specifications (headings, etc.)

11. The City of Midland reserves the right to remove a company from the bid list for (1) continued failure to respond to request for bids, (2) failure to deliver merchandise within promised time, or (3) delivery of substandard merchandise.

12. No officer or employee of the City shall have a financial interest, direct or indirect, in any contract with the City, or be financially interested, directly or indirectly, in the sale to the City of any lands, materials, supplies or services except as allowed under chapter 176 of the Local Government Code. Form CIQ shall be submitted and placed on file with the City of Midland.

13. The City shall determine the most advantageous bid for the City and accept the proposal of the responsible party submitting the lowest and/or most advantageous bid or reject any and all bids.

14. The City of Midland, Texas may consider as informal any bid not prepared and submitted in accordance with the provisions hereof, and may waive, in its sole discretion, any informalities.

STANDARD PURCHASE TERMS AND CONDITIONS
PURCHASING DIVISION, CITY OF MIDLAND, TEXAS

"Seller", as used herein, has the same meaning as "Company". "Buyer", as used herein, has the same meaning as "City".

Seller and Buyer agree as follows:

1. SELLER TO PACKAGE GOODS - Seller will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently marked as follows; (a) Seller's name and address, (b) Consignee's name, and address, and purchase order number, (c) Container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing slip. Seller shall bear cost of packaging unless otherwise provided. Goods shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. Buyer's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

2. SHIPMENT UNDER RESERVATION PROHIBITED - Seller is not authorized to ship the goods under reservation and no tender of a bill of lading will serve as a tender of goods.

3. TITLE & RISK OF LOSS - The title and risk of loss of the goods shall not pass to Buyer until Buyer actually receives and takes possession of the goods at the point or points of delivery in Midland, Texas.

4. NO REPLACEMENT OF DEFECTIVE TENDER - Every tender or delivery of goods must fully comply with all provisions of this contract as to time of delivery, quality and the like. If a tender is made which does not fully conform, this shall constitute a breach and Seller shall not have the right to substitute a conforming tender, provided, where the time for performance has yet expired, the Seller may reasonably notify Buyer of his intention to cure and may then make a conforming tender within the contract time but not afterward.

5. PLACE OF DELIVERY - The place of delivery shall be that set forth in the block of the purchase order entitled "deliver to".

6. INVOICES - Seller shall submit separate ORIGINAL invoices, on each purchase order. Invoices shall indicate the purchase order number. All invoices must be mailed to City of Midland, Accounts Payable, P.O. Box 1152, Midland, TX 79702-1152. Payment will be made within 30 days from the date the invoice and properly executed receiving documents are received by City of Midland, Accounts Payable at the above address. Invoices sent to any other address will delay payment.

7. GRATUITIES - The buyer may, by written notice to the seller, cancel this contract without liability to Seller, if it is determined by Buyer that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the seller, or any agent or representative of the Seller, to any officer or employee of the City of Midland with a view toward securing a contract or securing favorable treatment with respect to performing of such a contract. In the event this contract is cancelled by Buyer pursuant to this provision, Buyer shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by Seller in providing such gratuities.

8. WARRANTY - PRICE -

a. The price to be paid by the Buyer shall be that contained in Seller's bid which Seller warrants to be no higher than Seller's current prices on order by others for products of the kind and specifications covered by this agreement for similar quantities under similar or like conditions and methods of purchase. In the event Seller breaches this warranty, the prices of the items shall be reduced to the Seller's current prices on order by others, or in the alternative, Buyer may cancel this contract without liability to Seller for breach or Seller's actual expense.

b. The Seller warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for commission, percentage, brokerage, or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Seller for the purpose of securing business. For breach or violation of this warranty the Buyer shall have the right or rights to cancel this contract without liability and to deduct from the contract price, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.

9. WARRANTY - PRODUCT - Seller shall not limit or exclude any implied warranties and any attempt to do so shall render this contract voidable at the option of the Buyer. Seller warrants that the goods furnished will conform to the specification, drawings, and description listed in the bid invitation, and to the sample(s) furnished by Seller, if any. In the event of a conflict between the specifications, drawings and descriptions, the specifications shall govern.

10. SAFETY WARRANTY - Seller warrants that the product sold to Buyer shall conform to the standards promulgated by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event the product does not conform to OSHA standards, Buyer may return the product for correction or replacement at the Seller's expense. In the event Seller fails to make the appropriate correction within a reasonable time, correction made by buyer will be at Seller's expense.

11. RIGHT OF INSPECTION - Buyer shall have the right to inspect the goods at delivery before accepting them.

12. CANCELLATION - Buyer shall have the right to cancel for default all or any part of the undelivered portion of this order if Seller breached any of the terms hereof including warranties of Seller if the Seller becomes insolvent or commits acts of bankruptcy. Such right of cancellation is in addition to and not in lieu of any other remedies which Buyer may have in law or equity.

13. TERMINATION - The performance of work under this order may be terminated in whole, or in part by the Buyer in accordance with this provision. Termination of work hereunder shall be effected by the delivery to Seller of a "Notice of Termination" specifying the extent to which performance of work under the order is terminated and the date upon which such termination becomes effective. Such right of termination is in addition to and not in lieu of the rights of Buyer set forth in Clause 13, herein.

14. FORCE MAJEURE - Neither party shall be held responsible for losses, resulting if the fulfillment of any terms or provisions of this contract is delayed or prevented by any cause not within the control of the party whose performance is interfered with, and which by the exercise of reasonable diligence said party is unable to prevent.

15. ASSIGNMENT - DELEGATION - No right or interest in this contract shall be assigned or delegation of any obligation made by Seller without the written permission of the Buyer. Any attempted assignment or delegation by the Seller shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

16. MODIFICATIONS - This contract can be modified or rescinded only by a writing signed by both of the parties or their duly authorized agents.

17. INTERPRETATION - PAROL EVIDENCE - This writing, plus any specifications for bids and performance provided by Buyer in its advertisement for bids, is intended by the parties as a final expression of this agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this agreement. Acceptance or acquiescence in a course of performance rendered under this agreement shall not be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the performance and opportunity for objection. Whenever a term defined by the Uniform Commercial Code is used in this agreement, the definition contained in the Code is to control.

18. ADVERTISING - Seller shall not advertise or publish without Buyer's prior consent the fact that Buyer has entered into the contract, except to the extent necessary to comply with proper requests for information from an authorized representative of the federal, state or local government.

19. RIGHT TO ASSURANCE - Whenever one party to the contract in good faith has reason to question the other party's intent to perform he may demand that the other party give written assurance of this intent to perform. In the event that a demand is made and no assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the contract.

20. PROTECTION AGAINST ROYALTIES OR PATENT INFRINGEMENT - The Seller shall pay all royalties and license fees, and shall provide for the use of any design, device, material or process covered by letters patent or copyright by suitable legal agreement with Patentee or Owner thereof. The Seller shall defend all suits or claims for infringement of any patent or copyrights and shall indemnify and save the Buyer harmless from any loss on account thereof, except that Buyer shall defend all such suits and claims and shall be responsible for all such loss when a particular design, device, material or process is allowed to the Seller, the Seller shall indemnify and save Buyer harmless from any loss on account thereof. If the material or process specified or required by Buyer is an infringement, the Seller shall be responsible for such loss unless he promptly gives written notice to the buyer of such infringement.

21. TIME - It is hereby expressly agreed and understood that time is of the essence for the performance of this contract, and any failure by contract to meet the time specifications of this agreement will cause Seller to be in default of this agreement.

22. TAX - The City of Midland is exempt from all Federal, State and City tax. Please do not include these taxes in your bid price or invoice. Taxable items must be so designated, and the City will supply vendor with a Tax Exemption Certificate, properly executed.

23. **INSURANCE –**

The following provisions apply unless the agreement is for the supply of goods only:

Seller shall at all times during the term of this agreement maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit - Personal Injury and Property Damage
Worker's Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project or policy aggregate, including completed operations, and shall be on an occurrence basis.

The Workers' Compensation coverage provided by Seller shall inure to the benefit of employees injured during the course and scope of their employment by Seller pursuant to this agreement.

The Business Automobile Liability insurance provided by Seller shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-owner vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this agreement.

All insurance required pursuant to this agreement, except for Worker's Compensation Insurance, shall name the Buyer as an additional insured on a claims occurred basis. All insurance required pursuant to this agreement, including Worker's Compensation Insurance, shall provide for a waiver of subrogation as to the Buyer.

The parties agree that, prior to the execution of the agreement, Seller shall provide one or more certificates of insurance showing that the requirements of this article have been met, and specifically containing, without limitations, the following endorsement:

"The City of Midland is included as an additional insured, on a claims occurred basis, on all policies except for Worker's Compensation. The Seller and Insurer hereby waive all rights of subrogation with respect to claims against the City of Midland, its agents, employees and officers, on all policies of insurance."

Buyer shall be provided the notice by Seller's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage. Buyer shall not be required to provide any insurance whatsoever pursuant to this agreement.

Seller shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this agreement to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers compensation).

24. ASSIGNMENT - Seller shall not, either directly or indirectly, assign all or any part of this agreement or any interest, right or privilege herein, without the prior written consent of the Buyer. The issue on whether or not to grant consent to an assignment is in the sole discretion of the Buyer.

25. RELEASE - NOTWITHSTANDING ANY OTHER PROVISIONS, SELLER HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES BUYER, BUYER'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH SELLER HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR BUYER'S NEGLIGENCE.

26. GOVERNING LAW AND VENUE - This agreement shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this agreement or the performance of this agreement shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this agreement shall be deemed to have occurred in Midland County, Texas.

27. INDEPENDENT CONTRACTOR - It is expressly understood and agreed that Seller shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Buyer; that Seller shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between Buyer and Seller, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Buyer and Seller. No person performing any of the work and services described hereunder by Seller shall be considered an officer, agent, servant or employee of the Buyer. Further, it is specifically understood and agreed that nothing in this agreement is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Seller shall be an independent contractor under this agreement and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. The Buyer does not have the power to direct the order in which the work is done. The Buyer shall not have the right to control the means, methods or details of the Seller's work. Seller shall assume exclusive responsibility for the work. Seller is entirely free to do the work in its own way.

28. NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES - As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this agreement, Seller or his legal representative, shall give the City Manager, or any other reasonable official of the Buyer, notice in writing (consisting of one original and seven copies of notice attached to a copy of this agreement) of such damages, duly verified, within one-hundred-twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which the Seller will settle, the physical and mailing addresses of Seller at the time and date the claim was presented and the physical and mailing addresses of Seller for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom the Seller relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except the Buyer from any liability whatsoever. The Buyer is under no obligation to provide notice to Seller that Seller's notice is insufficient. Buyer reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Seller's failure to comply with the requirements herein shall perpetually bar Seller's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Buyer has actual or constructive notice or knowledge of said claim or alleged damages. Seller agrees that the requirements of this entire agreement are reasonable.

29. INDEMNITY (NOT APPLICABLE TO PURCHASE AGREEMENTS) - SELLER WILL INDEMNIFY AND HOLD HARMLESS AND DEFEND BUYER AND ALL OF BUYER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING REASONABLE ATTORNEY'S FEES

BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF SELLER, its agents or employees, or any subcontractor, arising out of, or resulting from, Seller's use of, or activities on, the agreement premises, and Seller will be required to pay any judgment with costs which may be obtained against Buyer or any of its officers, agents or employees, including reasonable attorney's fees.

SELLER SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND BUYER AND ALL OF BUYER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, ACCIDENTAL DEATH, PERSONAL INJURIES, PROPERTY DAMAGE, LOSSES, AND EXPENSE OF ANY CHARACTER WHATSOEVER INCLUDING REASONABLE ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF BUYER, BUYER'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH SELLER OR SELLER'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS AGREEMENT AND SELLER WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST BUYER OR ANY OF BUYER'S OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

30. SOVEREIGN IMMUNITY - By executing this agreement the Buyer is not waiving its right of sovereign immunity. The Buyer is retaining its immunity from suit. The Buyer is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF SOVEREIGN IMMUNITY**.

31. THIRD PARTY BENEFICIARY - The Buyer's approval of this agreement does not create a third party beneficiary. There is no third party beneficiary to this agreement. No person or entity who is not a party to this agreement shall have any third party beneficiary or other rights hereunder.

32. <u>ATTORNEY FEES</u> - BY EXECUTING THIS AGREEMENT, SELLER AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE BUYER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE AGREEMENT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE AGREEMENT. THE SELLER SPECIFICALLY AGREES THAT IF THE SELLER BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS AGREEMENT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE SELLER AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH SELLER MIGHT OTHERWISE BE ENTITLED.

SELLER AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. SELLER ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE AGREEMENT. THE SELLER FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE BUYER AND THE SELLER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE SELLER AND BUYER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS AGREEMENT WITH LEGAL COUNSEL PRIOR TO ITS EXECUTION.

33. CONSIDERATION - The terms of this agreement are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

34. CERTIFICATION - In accordance with the Texas Local Government Code, the City of Midland Department of Facilities and Fleet Management does hereby certify that the City of Midland is in compliance with Sections 252, 271 and all applicable sections of the Texas Local Government Code and other state law as it applies to procurement and contracting issues.

35. FEDERAL WAGE REQUIREMENTS - If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this agreement, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this agreement, to which the parties to this agreement have agreed to be bound.

36. COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS - Seller shall at all times during the term of this agreement comply with applicable federal, state, and local laws regarding Seller's activities pursuant to this agreement, including but not limited to all applicable sections of the Municipal Code of Midland, Texas, as may be amended, said sections being hereby incorporated by reference and made a part of this agreement for all legal purposes. Failure to abide by any such law mentioned herein constitutes grounds for the immediate termination of this agreement.

No-Bid
Response
For
Request #: 20001930

If your firm has made a decision not to bid on this request, please complete this form and return to:

Office of the Purchasing Agent
City of Midland
P.O. BOX 1152
Midland, TX 79702-1152

or

Fax to: (432) 685-0523

Email: purchasing@midlandtexas.gov

Please Check all reasons below that apply:

☐ Cannot provide items requested.

☐ Cannot be competitive.

☐ Cannot meet the specifications in the request.

☐ Cannot provide the liability insurance required by the City of Midland.

☐ Cannot provide the Worker's Compensation Insurance required by the City of Midland.

☐ Cannot provide the required bonding.

☐ Cannot comply with the indemnification requirements.

☐ Job too large.

☐ Job too small.

☐ Do not wish to do business with the City of Midland.

☐ Other. Please explain below:

_____

_____

Company Name: _____

Authorized Officer or Agent Signature: _____

Telephone Number: _____ Fax: _____

Email Address: _____

PLEASE NOTE: THIS COMPLETED FORM MAY BE FAXED TO 432-685-0523. IT IS NOT NECESSARY TO RETURN ANY OTHER DOCUMENTS.

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Justine Ruff, Director of Airports

SUBJECT: Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate North, Terminal and South Apron Concrete Pavement Project.

Purpose:

Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate North, Terminal and South Apron Concrete Pavement Project.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

To be Determined

Discussion:

In Amendment #9 to the Professional Service Agreement with Parkhill, Smith & Cooper, the Rehabilitate North, Terminal and South Apron Concrete Pavement (Design Phase) was added to the Agreement. This project includes replacing all the existing joint sealant and backer-rod from the entirety of the existing concrete pavement located on the North, Terminal and South aprons. Panels that are not functioning correctly for transferring load from the aircraft as it moves across the panels will be replaced and new pavement markings will also be applied.

This project was included in FAA Grant #58, and the Grant covered 90% of the expenses through the bidding phase of the project. The construction process of this project is covered by FAA Grant #60, which with the Government's new COVID-19 Assistance Package, should cover 100% of the construction expenses and is scheduled to be funded in the Summer of 2020. The project is being advertised for bid at this time as the FAA has requested that we have "bids in hand" when the Grant is funded.

Project Manual

Midland International
Air & Space Port

Concrete Apron Rehabilitation

Midland, Texas

FAA Project No. 3-48-0150-060-2020

April 2020
PSC Project #01976918

PSC PARKHILLSMITH&COOPER

Project Manual

Midland International
Air & Space Port

Concrete Apron Rehabilitation

Midland, Texas

FAA Project No. 3-48-0150-060-2020

This document is released on April 1, 2020 for the purpose of interim review under the authority of Michael Krusing, P.E., Texas license # 111822. It is not to be used for regulatory approval, construction, bidding or permit purposes.

Parkhill, Smith & Cooper Inc.

F-560

April 2020
PSC Project #01976918

PSC PARKHILLSMITH&COOPER

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ADVERTISEMENT FOR BIDS
NOTICE TO BIDDERS

Sealed proposals addressed to the Honorable Mayor and City Council of Midland, Texas, will be received at the office of the City Secretary, City Hall, Midland, Texas until **2pm, Thursday, May 21, 2020**, for furnishing all necessary materials, machinery, equipment, superintendence, and labor for constructing certain improvements at Midland International Air & Space Port, Midland, Texas. These improvements are contained in plans and Specifications entitled, "Midland International Air & Space Port, Concrete Apron Rehabilitation, dated April 2020.

Immediately following the closing time for receipt of Bids/Proposals will be publicly opened and read aloud. Any Bid received after closing time will be returned unopened.

Principal items of Work are set forth in specific detail in the Proposal Section of these Specifications; however, Work items may be generally described as *rehabilitate concrete joint sealant and repair concrete edge spalls.*

Work will also include other miscellaneous materials, equipment, machinery, superintendence, and labor for constructing these improvements for the Midland International Air & Space Port, Midland, Texas.

A Bid Proposal guaranty is to accompany the Bid, thereby guaranteeing the good faith of the Bidder and that Bidder will enter into the written contract. The guaranty is to amount to 5 percent of the total bid and must be in the form of cash or certified check, issued by a bank satisfactory to the City of Midland, or a bid bond.

Bidders are expected to inspect site of work and inform themselves regarding all local conditions.

In all areas of employment, women will be afforded equal opportunity for employment. Employment of women shall not diminish the standards or requirements for employment of minorities.

This project is subject to Minority Business Enterprise Contract Provisions, Foreign Trade Restrictions, Federal Debarment and Suspension, Drug-free Workplace, and other requirements stated in the Instructions to Bidders and other sections of project specifications and contract documents.

Policy. It is the policy of the Department of Transportation (DOT) that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have maximum opportunity to participate in performance of contracts financed in whole or in part with Federal funds.

Buy American Provision. Proposed contract is subject to the Buy American Provision under Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990. Details of such requirement are contained in Specifications.

MAF treats Bidder/Offers' compliance with good faith efforts' requirements as a matter of responsiveness.

Requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of MAF to practice nondiscrimination based on race, color, sex, or national origin in award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit Bids/Proposals. Award of this contract will be conditioned upon satisfying requirements of this bid specification. These requirements apply to all Bidders/Offerors, including those who qualify as a DBE. DBE contract goal of 9.82 percent has been established for this contract. Bidder/Offeror shall make good

faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet contract goal for DBE participation in performance of this contract.

Successful Bidder/Offeror will be required to submit the following information: (1) names and addresses of DBE firms that will participate in contract; (2) description of work each DBE firm will perform; (3) dollar amount of participation of each DBE firm participating; (4) written documentation of bidder/offeror's commitment to use a DBE subcontractor whose participation submits to meet contract goal; (5) written confirmation from the DBE of participation in contract as provided in commitment made under (4); and (6) if contract goal is not met, evidence of good faith efforts. Successful Bidder or Offeror must provide written confirmation of participation from each DBE firm the Bidder or Offeror lists in their commitment. This Bidder/Offeror must submit DBE written confirmation of participation within five days of receiving Owner notice to successful Bidder.

Information for Bidders, Proposal forms, Specifications, and plans are on file in the office of the Director of Airports, Midland International Air & Space Port, Midland, Texas, at the office of Parkhill, Smith & Cooper, Inc., (PSC), 1700 West Wall Street, Suite 100, Midland, Texas 79701, 432.697.1447.

Paper copies of plans and Specifications may be secured at the PSC, 1700 West Wall Street, Suite 100, Midland, Texas 79701, 432.697.1447, at a cost of $150.00 for a set of specifications and full size plans. Cost for plans and Specifications is refundable. Download documents (PDF file extension format) can be obtained from the PSC Info Exchange web site after registering as a plan holder with the office issuing paper copies. No cost or deposit required for this option.

CITY OF MIDLAND, TEXAS
Amy M. Turner
City Secretary

INSTRUCTIONS TO BIDDERS

IB-1. BID FORMS

Bid shall be submitted on Proposal form in the bound Specifications.

In addition to the completed Proposals, bid forms shall include Bid Security, Financial Statement, and other specified documents. Failure to submit a complete Bid as specified will be considered as sufficient cause for rejection of the Bid.

IB-2. PREPARATION OF PROPOSALS

All blanks in the forms shall be filled in or marked "N/A" (Not Applicable) and all required information shall be included with Proposals. Bid prices shall be written in ink. Receipt of all addenda issued shall be acknowledged in the space provided on the addendum. Each addendum received and the Bid Security shall be enclosed with Proposal. Proposal and accompanying documents shall be enclosed in a sealed envelope, addressed to the Honorable Mayor and City Council, City of Midland, Texas marked "Concrete Apron Rehabilitation" with name and address of Bidder also shown thereon.

IB-3. EXPERIENCE RECORD AND FINANCIAL STATEMENT

Experience Record included herein, shall be filled in, showing completed jobs, of a similar nature to the one covered by Proposal, and work in progress with contract and bond amounts and percent complete.

A sworn statement of the current financial condition of Bidder shall also be enclosed with Proposal, in order to provide Owner with information relative to the responsibility of bidders and their ability to finance and construct the work. This statement shall be enclosed with Proposal in a separate envelope and will be returned to Bidder upon return of his bid security.

TxDOT prequalification can be submitted in lieu of a financial statement with bids; however, financial information may be required of the apparent low Bidder.

IB-4. BID SECURITY

Each proposal must be accompanied by a Bid Bond, Certified Check, or cash in the amount of not less than 5 percent of the maximum bid submitted, payable without recourse to the City of Midland, Texas. If a Bid Bond is submitted as bid security, it shall be executed by an approved surety company authorized to do business in the State of Texas, and accepted according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States of America. Such bid security shall be so conditioned if Bidder is awarded Contract and unable or fails to furnish performance and payment bonds and execute Contract within 10 days after date of award, security shall revert to Owner as compensation for damages which Owner suffers because of such failure by Bidder.

IB-5. PERFORMANCE AND PAYMENT BONDS

With execution and delivery of the contract documents, Contractor shall furnish, on the forms provided herein, bonds, as required by the General Conditions, of 100 percent of the total contract price, executed by an approved surety company authorized to do business in the State of Texas, and accepted according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States of America. Performance and Payment Bonds submitted shall be in compliance with Chapter 2253 of the Texas Government Code.

IB-6. INTERPRETATION OF BIDS

No bid will be considered which fails to supply all information indicated, or which has any limitation or provisions placed upon it by Bidder. In case of a difference between the written words and the figures in Proposal, amount stated in written words will be considered as bid price, without recourse on the

part of Contractor. In case of ambiguity or lack of clearness in Proposal, Owner will adopt the most advantageous construction thereof or reject the bid. Owner reserves the right to accept or reject any or all bids, if it is deemed to be in the best interest of the public. Further, Owner reserves the right to reject any bids because of irregularity or to waive such irregularity if such action is in the public interest.

IB-7. DISPOSITION OF BIDS

Owner expects to make award of the contracts as soon as possible after the opening of bids, but specifically reserves the right to hold all Proposals for a period not to exceed 90 days, before making an award. No Proposal, having been opened, may be withdrawn prior to expiration of this 90-day period. Bid security of all but the successful Bidder will be returned upon making an award.

Contract will be awarded to the responsible bidder submitting the lowest bid complying with the conditions of the Advertisement for Bidders and the Instructions to Bidders.

IB-8. EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

Prior to submission of a Proposal, each Bidder shall have made a thorough examination of the site of work and of the plans and specifications, and shall become informed as to the location and nature of the proposed construction, labor conditions and all other matters that may affect the cost and time of completion of the work upon which he bids. Bidders shall make such investigations of the nature of the project as they deem necessary and shall assume all responsibility for fully informing themselves of the character of materials which will be encountered. Submission of a Proposal shall be prima facie evidence that Bidder has made such an examination. Contact Justine Ruff, Director of Airports (432.560.2200), to schedule a site examination visit.

IB-9. PREBID CONFERENCE

A prebid conference will be held at **1:30pm, Wednesday, April 29, 2020** in the Conference Room at Midland International Air & Space Port. At this time, all interested bidders will be requested to appear and present any questions they may have pertaining to this project. All bidders are urged to attend prebid conference because they will be charged with notice of the matters discussed therein. Attendance to the prebid conference is not mandatory.

IB-10. INTERPRETATION OF SPECIFICATIONS PRIOR TO BIDDING

Any questions arising during the advertising period as to the meaning or intent of the specifications will be answered by an addendum which will be sent to all who have placed a deposit and/or furnished plans and Contract documents issued by Parkhill, Smith & Cooper Inc. Architect/Engineer shall receive requests for clarifications to specifications and plans at least three days prior to the date for receipt of bids.

Receipt of each addendum shall be acknowledged by Bidder in the space provided and each addendum shall be enclosed with Proposal when it is submitted. All addenda shall become a part of these contract documents.

IB-11. AVAILABILITY OF PLANS

A. For Bidders

All parties with an interest in the type of work included in the project covered by these documents, shall be given a reasonable opportunity to examine the documents and prepare a bid or sub-bid. Documents may be examined without charge as noted in the Notice to Bidders.

1. Complete sets of documents may be obtained from Architect/Engineer upon request, accompanied by a refundable deposit of $150.00 for a set of specifications and plans.
2. Downloadable documents (PDF file extension format) can be obtained from the PSC Info Exchange web site after registering as a plan holder with issuing PSC office. No cost or deposit required for this option.

3. Unlimited number of digital copies (PDF file extension format) upon a non-refundable cost of $20.00 per each CD ($18.48 plus applicable sales tax).

B. For Contractor

Contractor will be furnished five sets of specifications and plans for his use during construction. This shall include all plans and specifications furnished to material suppliers and subcontractors but does not include the executed contract copies. Plans and specifications for use during construction will be furnished directly only to Contractor. Contractor shall then distribute copies of plans and specifications to suppliers, subcontractors, or others, as required for proper execution of the work.

Should additional sets of documents be desired, they may be purchased, by Contractor only, at the following prices, exclusive of postage or freight charges:

Plans and Specifications $150.00 per set.

IB-12. SPECIAL PROVISIONS

Attention of Bidders is directed to SPECIAL PROVISIONS included in these documents for requirements concerning scope of work, labor, insurance, and similar subjects.

IB-13. PLANT LOCATION AND STORAGE AREA

Contractors bidding on the work included in this contract who desire to locate a material storage area or other similar facility on the airport property may secure such site, buildings or areas by direct negotiation with the Director of Airports, Midland International Air & Space Port, Midland, Texas. An area located adjacent to the project area will be identified as available for use by Contractor for staging and material storage.

IB-14. WITHDRAWAL OF PROPOSALS

Any Bidder, upon his or his authorized representative's written request, will be given permission to withdraw his Proposal not later than the time set for opening thereof. At the time of opening of Proposals, when such Proposal is reached, it will be returned to him unread.

IB-15. DISQUALIFICATION OF BIDDERS

Any one or more of the following causes may be considered as sufficient for the disqualification of bidder and the rejection of his bid or bids:

More than one Proposal for the same work from an individual firm, partnership, or corporation under the same or different name.

Evidence of collusion among bidders. Participants in such collusion may not receive recognition as Bidders for any future work.

Unbalanced Proposals in which the prices for some items are out of proportion to the prices for other items.

Failure to submit a unit price for each item of work for which a bid price is required by Proposal.

Lack of competency as revealed by the financial statement submitted.

Lack of responsibility as shown by past work judged from the standpoint of workmanship and progress.

Uncompleted work which, in the judgment of Owner, might hinder or prevent the prompt completion of additional work if awarded.

For being in arrears on existing contracts, in litigation with Owner, or having defaulted on a previous contract.

IB-16. MATERIAL GUARANTY

Before any contract is awarded, Bidder may be required to furnish a complete statement of origin, composition, or manufacture of any or all materials proposed to be used in the construction of the work, together with samples, which may be subjected to the tests provided for in these specifications to determine their quality and fitness for the work.

IB-17. DISADVANTAGED BUSINESS ENTERPRISE CONTRACT PROVISIONS

It is the policy of the Department of Transportation (DOT) that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, Bidder will be required to conform to the DBE requirements of 49 CFR Part 26.

IB-18. WAIVER

BY SUBMITTING A BID, EACH BIDDER AGREES TO AND DOES HEREBY WAIVE ANY CLAIM BIDDER HAS OR MAY HAVE AGAINST THE CITY OF MIDLAND, TEXAS, AND THE CITY'S EMPLOYEES, AGENTS, AND OFFICERS ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FOLLOWING:

1. ADMINISTRATION, EVALUATION, OR RECOMMENDATION OF ANY BID;
2. WAIVER OR DELETION OF ANY REQUIREMENT UNDER BID DOCUMENTS OR CONTRACT DOCUMENTS;
3. ACCEPTANCE OR REJECTION OF ANY BIDS; AND
4. AWARD OF CONTRACT

BY SUBMITTING A BID, BIDDER ACKNOWLEDGES THAT BIDDER UNDERSTANDS ALL TERMS OF BIDDING DOCUMENTS AND CONSENTS TO BIDDING PROCESS AND THE POSSIBILITY OF A NEGATIVE ASSESSMENT. BY SUBMITTING A BID, BIDDER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN BIDDER AND THE CITY OF MIDLAND, TEXAS.

BIDDER AGREES THIS IS THE INTENTIONAL RELINQUISHMENT OF THE LISTED PRESENTLY EXISTING KNOWN RIGHTS.

IB-19. WAIVER OF ATTORNEY FEES

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. CONTRACTOR SPECIFICALLY AGREES THAT IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN OWNER AND CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

BID BOND

THE STATE OF TEXAS)

SURETY'S NO._____

COUNTY OF MIDLAND)

KNOWN ALL MEN BY THESE PRESENTS, THAT_____

_____(hereinafter called the Principal), as Principal, and_____

_____ (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, a home rule municipal corporation of Midland County (hereinafter called the Obligee), in the amount of_____

_____DOLLARS ($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written contract with the Obligee to perform all work associated with the Concrete Apron Rehabilitation.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully, enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection of such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either of such events, shall be entitled and is hereby given the right to collect this Bid Bond as liquidated damages.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas.

IN WITNESS WHEREOF, the said Principal and Surety do sign and seal this instrument, this__day of_____, 20___.

_____	_____
Surety	
By_____	By_____
Address_____	Address_____
_____	_____

APPROVED AS TO FORM:

_____
City Attorney

NOTE: Attach Power of Attorney

PROPOSAL

_____, 2020

TO: The Mayor and City Council
City of Midland
Midland, Texas

Gentlemen:

Pursuant to foregoing Notice to Bidders, undersigned Bidder hereby proposes to do all work and furnish all necessary superintendence, labor, machinery, equipment, tools, and materials, and anything necessary to complete all work bid, as provided by attached specifications and shown on plans, and binds himself on acceptance of this Proposal to execute Contract and Bonds per accompanying forms, performing and completing work within time stated, and furnishing all required guarantees, for the following prices to-wit:

CONCRETE APRON REHABILITATION

Item	Quantity & Unit	Description of Item and Unit Prices	Total Amount
1	1 LS	Item C-105, Mobilization, complete, per lump sum: _____Dollars and _____Cents ($_____)	$_____
2	241,300 LF	P-101, Remove existing joint sealant, complete, per linear foot: _____Dollars and _____Cents ($_____)	$_____
3	241,300 LF	P-101, Preparation of joints in rigid pavement, complete, per linear foot: _____Dollars and _____Cents ($_____)	$_____
4	2,225 SF	P-501, Concrete spall repair, complete, per square foot: _____Dollars and _____Cents ($_____)	$_____
5	241,300 LF	P-605, Joint sealant filler, complete, per linear foot: _____Dollars and _____Cents ($_____)	$_____

Item	Quantity & Unit	Description of Item and Unit Prices	Total Amount
6	241,300 LF	P-620, Taxiway markings, complete, per square foot: _____Dollars and _____Cents ($_____)	$_____

TOTAL BID	

The Bidder is required to separate the cost of materials to be incorporated into this Project. Such material costs are separated from the other costs so that the Bidder is a seller of such materials to the City. The Bidder shall be required to issue a resale certificate on such materials in lieu of paying the sales tax on such materials at the time of purchase. The City will provide the successful Bidder with a sales tax exemption certificate for such materials. The labor and materials charge shall be separated as follows:

BID

MATERIALS $_____

LABOR $_____

TOTAL BID **$_____**

The undersigned Bidder hereby declares that he has visited the Site of the Work and has carefully examined the Plans, Specifications and Contract Documents pertaining to the Work covered by the above Bid, and that the prices bid herein are based on the minimum wage rates included in the Specifications.

The Bidder certifies, by submission of this Proposal or acceptance of this Contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded from participation in this transaction by any Federal department or agency. It further agrees that by submitting this Proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the Bidder or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this proposal.

Contractor or subcontractor, by submission of offer/execution of a contract, certifies it:

a. is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
b. has not knowingly entered into any contract or subcontract for this project with a contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list.
c. has not procured any product nor subcontracted for the supply of any product for use on the Project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to Contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product

to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.

Further, Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. Contractor may rely upon the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

Contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the contractor, if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

Bidder hereby agrees to commence work under this contract within 111 days of a date to be specified in written "Notice to Proceed" and to complete the work within the consecutive calendar day framework noted in the Contract. Bidder further agrees to pay as liquidated damages the sum of $ 1,000 for each consecutive calendar day beyond each phase, or subphase, of the days allowed; as hereinafter provided in Paragraph 32 of the General Conditions.

Bidder acknowledges receipt of the following addendum: _____

Enclosed with this Proposal is a Cashier's or Certified Check for _____ Dollars ($_____) or, a Proposal Bond in the sum of 5 percent of Greatest Amount Bid Dollars ($ 5 percent of Greatest Bid), which it is agreed shall be collected and retained by the Owner as liquidated damages in the event the Proposal is accepted by the Owner within 90 days after the date advertised for the reception of bids and the undersigned fails to execute the contract or required bonds with the Owner, under the conditions hereof, within 10 days after the date said proposal is accepted; otherwise, said check or bond shall be returned to the undersigned upon demand.

_____
Contractor

(Seal if Bidder is a Corporation)

By _____

_____
Address

NOTE: Fill in all blank spaces in this and accompanying forms and include proper bid security.

CONTRACT

STATE OF TEXAS

COUNTY OF MIDLAND

THIS CONTRACT, made and entered into this __ day of _____, 2020, by and between the **CITY OF MIDLAND, TEXAS**, a home rule municipal corporation ("***Owner***"), and _____, ("***Contractor***").

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by Owner, and under the conditions expressed in the bond bearing even date herewith, Contractor hereby agrees to commence and complete the construction of items of work included in this project, which are described as rehabilitation of the concrete apron.

Work will also include other miscellaneous materials, equipment, machinery, superintendence and labor for constructing these improvements for the Midland International Air & Space Port.

These improvements are shown on the plans and Specifications entitled "Concrete Apron Rehabilitation" dated April 2020. The plans and specifications are hereby incorporated herein by reference for all legal purposes and shall apply to this Contract as if fully set forth herein.

This Contract shall include all extra work in connection therewith. All work performed hereunder shall be in accordance with those certain General Conditions and Special Provisions, which are attached hereto and hereby incorporated herein by referenced for all legal purposes and shall apply to this Contract as if fully set forth herein. Contractor shall, at Contractor's own proper cost and expense, furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete said construction, in accordance with conditions and prices stated in Proposal attached hereto, and in accordance with all General Conditions and Special Provisions, and in accordance with plans, which includes all maps, plats, blueprints, and other drawings and printed or written explanatory matter thereof, and Specifications therefor, as prepared by Parkhill, Smith & Cooper, Inc., (***Engineer***), each of which has been identified by endorsement of Contractor and Engineer thereon, together with Contractor's written Proposal, and General Conditions and Special Provisions, and Performance Bond and Payment Bond hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire agreement between the parties hereof.

Contractor hereby agrees to commence work under this Contract within 10 days of a date to be specified in written "Notice to Proceed" and to complete work under Base Bid identified on plans within 111 consecutive calendar days from Notice to Proceed.

Contractor further agrees to pay as liquidated damages the sum of four-thousand dollars ($4,000) for each consecutive calendar day beyond days allowed as hereinafter provided in Article 32 of the General Conditions.

Owner agrees to pay Contractor from current funds for performance of this Contract in accordance with Proposal submitted therefor, subject to additions and deductions, as provided in specifications, and to make payments on account thereof as provided therein.

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY WAIVE ANY CLAIM CONTRACTOR HAS OR MAY HAVE AGAINST THE CITY OF MIDLAND, TEXAS, AND PARKHILL, SMITH & COOPER, INC., REGARDING AWARD OF ATTORNEY FEES, WHICH ARE IN ANY WAY RELATED TO CONTRACT, OR CONSTRUCTION, INTERPRETATION OR BREACH OF CONTRACT. CONTRACTOR SPECIFICALLY AGREES IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, CONSTRUCTION, INTERPRETATION, VALIDITY, OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, *ET SEQ*., AS AMENDED), CONTRACTOR AGREES TO WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO RECOVERY OF ATTORNEY FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THIS IS INTENTIONAL RELINQUISHMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT CONTRACTOR UNDERSTANDS ALL TERMS AND CONDITIONS OF THIS CONTRACT.

By execution of this Contract, Contractor hereby represents and warrants to the City of Midland, Texas, that Contractor has read and understood the Contract.

This Contract shall be governed by laws of the State of Texas. Venue of any suit, right or cause of action arising under or in connection with this contract shall lie exclusively in Midland County, Texas. All payments and performance under or connected to this contract shall be deemed to have occurred exclusively in Midland County, Texas.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

OWNER:

CITY OF MIDLAND, TEXAS

By_____
Patrick Payton, Mayor

ATTEST:

By_____
Amy M. Turner, City Secretary

CONTRACTOR:

ATTEST:

By_____ By_____

Complete Address:

_____

_____

_____

PERFORMANCE BOND
SUBMITTED IN COMPLIANCE WITH CHAPTER 2253 OF THE TEXAS GOVERNMENT CODE

STATE OF TEXAS §

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS: That we, _____

of the City of _____, County of _____ and State of _____, as principal,

and _____hereinafter called the Surety, are held

and firmly bound unto the City of Midland, Texas, a home rule municipal corporation of Midland County,

Texas, (hereinafter called the City-Obligee), in the penal sum of _____

_____ DOLLARS, ($_____) lawful money of the United States, well

and truly to be paid to the City of Midland, Texas, for the payment whereof the said Principal and Surety

bind themselves and their heirs, administrators, executors, successors, and assigns, jointly and severally,

firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner-Obligee, dated

the ____ day of _____ 20__, to the Concrete Apron Rehabilitation for the Midland International Air & Space Port, Midland, Texas

specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidders, general and special conditions and other contract documents, including any addendums thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

PROVIDED further that this Performance Bond is submitted in compliance with Chapter 2253 of the Texas Government Code.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in any way affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to

the work to be performed thereunder.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this __day of _____, 20___.

Contractor	Surety
By_____	By_____
	(Title)

NOTE: If signed by an officer of the Surety Company, there must be on file a certified extract from the by-laws showing that this person has authority to sign such obligation. If signed by an Attorney in Fact, the Owner must be furnished with a copy of Power of Attorney for their files.

PAYMENT BOND
SUBMITTED IN COMPLIANCE WITH CHAPTER 2253 OF THE TEXAS GOVERNMENT CODE

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS: That we, _____ of the City of _____, County of and State of _____, as principal, and hereinafter called the Surety, are held and firmly bound unto the City of Midland, Texas, a home rule municipal corporation of Midland County, Texas, (hereinafter called the City-Obligee), in the penal sum of _____ DOLLARS, ($_____) lawful money of the United States, well and truly to be paid to the City of Midland, for the payment whereof the said Principal and Surety bind themselves and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner-Obligee, dated the _____ day of _____ 20__, to the Concrete Apron Rehabilitation for the Midland International Air & Space Port, Midland, Texas

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of this obligation is that if said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

PROVIDE further that this Payment Bond is submitted in compliance with Chapter 2253 of the Texas Government Code.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of this contract, or to the Work performed thereunder, or the plans, Specifications or Drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to Bidders, shall in any way affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed thereunder.

WITNESS our hands this the _____ day of _____, 20____.

_____	_____
Contractor	Surety
By_____	By_____
	(Title)

NOTE: If signed by an officer of the Surety Company, there must be on file a certified extract from the by-laws showing that this person has authority to sign such obligation. If signed by an Attorney in Fact, Owner must be furnished with a copy of Power of Attorney for their files.

CERTIFICATE OF INSURANCE

TO: CITY OF MIDLAND
MIDLAND INTERNATIONAL AIR & SPACE PORT
MIDLAND, TEXAS

Date_____

Type of Project: Concrete Apron Rehabilitation

THIS IS TO CERTIFY THAT _____
(Name of Insured)

is, at the date of this certificate, insured by this Company with respect to the business operations hereinafter described, for the types of Insurance and in accordance with the provisions of the standard policies used by this Company, and further hereinafter described. Exceptions to standard policy noted on reverse side hereof.

TYPE OF INSURANCE	Policy No.	Effective	Expires	Limits of Liability
Workmen's Compensation				
				Public Liability
1 person $_____				Liability
1 accident $_____				Contingent
1 person $_____				Liability
1 accident $_____				
Property Damage				
Builder's Risk				
Automobile				
Other				

The foregoing Policies (do) (do not) cover all sub-contractors.

Locations Covered:_____

Description of Operations Covered:_____

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or cancelled by the insurer in less than the legal time required after the insured has received written notice of such change or cancellation, or, in case there is no legal requirement, in less than five days after the insured has received such written notice.

EIGHT COPIES OF THIS
CERTIFICATE MUST BE
SENT TO THE OWNER

_____
(Name of Insurer)

By _____
Title _____
Phone _____

NOTE: THE CITY OF MIDLAND AND PARKHILL, SMITH & COOPER, INC. SHALL BE NAMED AS ADDITIONAL INSUREDS ON REQUIRED INSURANCE POLICIES.

SAMPLE ONLY
SUCCESSFUL
CONTRACTOR
SHALL PROVIDE
CERTIFICATE
INSURANCE FROM
HIS CARRIER

EXPERIENCE RECORD

List of Projects, similar to that covered by Proposal, which Bidder has successfully completed:

Amount of Contract Award	Time of Work	Date Completed	Name and Address of Owner

List of Projects Bidder is now engaged in completing:

Amount of Contract Award	Type of Work	Percent Completed	Name and Address of Owner

List of Surety Bonds in force on the above uncompleted work:

Amount of Contract Award	Amount of Bond	Name of Surety Company

_____
Bidder

By_____

_____
Business Address

EQUIPMENT SCHEDULE

Bidder should list the major equipment available and serviceable for use on this work.

Portion of work bidder proposes to sublet, if any:

Dated this _____ day of _____, 20____.

By_____

Title_____

FAA
Airports

Required Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION to ENSURE EQUAL EMPLOYMENT OPPORTUNITY

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables

Goals for minority participation for each trade: 19.1%

Goals for female participation in each trade: 6.9%

These goals are applicable to all of the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is **Midland, Texas, Midland County.**

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the *Contractor* or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide *Contracto*r written notice that describes the nature of the breach and corrective actions the *Contractor* must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the *Contractor* must correct the breach. Owner may proceed with termination of the contract if the *Contractor* fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

BUY AMERICAN PREFERENCE

The Contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must complete and submit the Buy America certification included herein with their bid or offer. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

Certificate of Buy American Compliance for Manufactured Products

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing U.S. domestic product.
3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.

4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

GENERAL CIVIL RIGHTS PROVISIONS

The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

Title VI Solicitation Notice:

The City of Midland, Texas, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS:

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or

    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

COPELAND "ANTI-KICKBACK" ACT

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 USC 874 and 40 USC 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

DAVIS-BACON REQUIREMENTS

1. Minimum Wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days

of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program: *Provided* that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or

costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and that show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.* the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at *www.dol.gov/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) The payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) Each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) Each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different

practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC 1001.

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov.
2. Collecting a certification statement similar to the Certification of Offerer /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) –

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Department of Transportation-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

1) Withholding monthly progress payments;
2) Assessing sanctions;
3) Liquidated damages; and/or
4) Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from City of Midland. The prime contractor agrees further to return retainage payments to each subcontractor within [30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Midland. This clause applies to both DBE and non-DBE subcontractors.

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 that involve driving a motor vehicle in performance of work activities associated with the project.

ENERGY CONSERVATION REQUIREMENTS

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC 6201*et seq*).

EQUAL OPPORTUNITY CLAUSE

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identify, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff, or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance*: Provided, however*, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

d. "Minority" includes:

(1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);

(3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR part 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply

the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and

trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions, including specific review of these items, with onsite supervisory personnel such superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally), the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR part 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

FEDERAL FAIR LABOR STANDARDS ACT

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The [*Contractor* |] has full responsibility to monitor compliance to the referenced statute or regulation. The [*Contractor* |] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

CERTIFICATION REGARDING LOBBYING

The Bidder or Offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

PROHIBITION OF SEGREGATED FACILITIES

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Employment Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this contract.

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

1) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
2) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b) Fails to meet reasonable contract performance requirements; or
c) Is only available at an unreasonable price.

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2) The applicant represents that it is ( ) is not ( ) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

2) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

3) reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

4) reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

TERMINATION FOR DEFAULT (CONSTRUCTION)

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes conditions, rights, and remedies associated with Owner termination of this contract due to default of the Contractor.

SECTION 80-09 FROM AC 150/5370-10

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Architect/Engineer consider the Contractor in default of the contract for any reason above, the Architect/Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Architect/Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Architect/Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or
2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

"General Decision Number: TX20200002 01/03/2020

Superseded General Decision Number: TX20190002

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	

FORM BUILDER/FORM SETTER
     Paving & Curb.....$ 12.36
     Structures.....$ 13.52

LABORER
     Asphalt Raker.....$ 12.28
     Flagger.....$ 9.30
     Laborer, Common.....$ 10.30
     Laborer, Utility.....$ 11.80
     Work Zone Barricade
     Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
     Asphalt Distributer.....$ 14.87
     Asphalt Paving Machine.....$ 13.40
     Broom and Sweeper.....$ 11.21
     Crane, Lattice Boom 80
     Tons or Less.....$ 16.82
     Crawler Tractor Operator....$ 13.96
     Excavator, 50,000 lbs or
     less.....$ 13.46
     Front End Loader Operator,
     Over 3 CY.....$ 12.77
     Front End Loader, 3CY or
     less.....$ 12.28
     Loader/Backhoe.....$ 14.18
     Mechanic.....$ 20.14
     Milling Machine.....$ 15.54
     Motor Grader, Rough.....$ 16.15
     Motor Grader, Fine.....$ 17.49
     Pavement Marking Machine....$ 16.42
     Reclaimer/Pulverizer.....$ 12.85
     Roller, Asphalt.....$ 10.95
     Roller, Other.....$ 10.36
     Scraper.....$ 10.61
     Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
     Lowboy-Float.....$ 14.46
     Single Axle.....$ 12.74
     Single or Tandem Axle Dump..$ 11.33
     Tandem Axle Tractor with
     Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that

classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION
"

CONTRACT ASSURANCE

Contractor will ensure that the following clause is placed in every DOT-assisted contract and subcontract:

Contractor or subcontractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the recipient deems appropriate. This may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and or
4. Disqualifying the contractor from future bidding as non-responsible.

PROMPT PAYMENT

Prime Contractor agrees to pay each Subcontractor under this Prime Contract for satisfactory performance of its contract no later than 30 working days from the receipt of each payment the prime contractor receives from the City of Midland. Prime contractor agrees further to return retainage payments to each subcontractor within 30 working days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Midland. The clause applies to both DBE and non-DBE subcontractors.

For purposes of this section, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the City of Midland. When the City of Midland has made an incremental acceptance of a portion of a prime contract, the work of a Subcontractor covered by that acceptance is deemed to be satisfactorily completed.

Contractor will not be reimbursed for work performed by Subcontractors unless and until the contractor ensures that the subcontractors are promptly paid for the work they have performed.

Contractor failure to comply with the requirements of the DBE Plan shall constitute a material breach of this contract. In such a case, the City of Midland reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due Contractor, not as a penalty but as liquidated damages to the City of Midland or such other remedy or remedies as the City of Midland deems appropriate.

CITY OF MIDLAND DEPARTMENT OF AIRPORTS - DBE POLICY STATEMENT

Section 26.1, 26.23 Objectives/Policy Statement

The City of Midland, owner and operator of Midland International Air & Space Port, herein referred to as MAF, has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. MAF has received Federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, MAF has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of MAF to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also our policy:

1. To ensure nondiscrimination in the award and administration of DOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. To help remove barriers to the participation of DBEs in DOT-assisted contracts; and
6. To assist the development of firms that can compete successfully in the market place outside the DBE program.

An MAF staff person has been delegated as the DBE Liaison Officer. In that capacity, the appointed staff is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by MAF in its financial assistance agreements with the Department of Transportation.

MAF has disseminated this policy statement to the City Council of the City of Midland, Texas and all the components of our organization. We have distributed this statement to DBE and non-DBE business communities that perform work for us on DOT-assisted contracts. This is accomplished via inclusion in all our Bid Documents.

Justine Ruff
Director of Airports

Information to be submitted (26.53(b))

MAF treats bidder/offers' compliance with good faith efforts' requirements as a matter of responsiveness.

Requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of MAF to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. Award of this contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders/offerors, including those who qualify as a DBE. A DBE contract goal of 9.82 percent has been established for this contract. Bidder/offeror shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet the contract goal for DBE participation in the performance of this contract.

TO BE INCLUDED WITH PROPOSAL
Bidder/Offeror shall include with their proposal, a completed Bidder Information Sheet, Form 1: Disadvantaged Business Enterprise (DBE) Utilization, (signed by bidder/offeror) and Form 2: Letter of Intent (for each DBE firm). Form 2: Letter of Intent does not require a signature by DBE firm(s) at the time of the proposal submission.

UPON AWARD OF CONTRACT
Successful bidder/offeror will be required to submit the following information: (1) names and addresses of DBE firms that will participate in the contract; (2) description of the work that each DBE firm will perform; (3) dollar amount of the participation of each DBE firm participating; (4) written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal; (5) written confirmation from the DBE that it is participating in the contract as provided in the commitment made under (4); and (6) if the contract goal is not met, evidence of good faith efforts. The successful Bidder or Offeror must submit DBE written confirmation of participation within five days after Bid Opening.

Midland International Air & Space Port

To all Bidders for AIP funded projects for Midland International Air & Space Port:

Any company desiring to submit a bid on an AIP grant project for the Midland International Air & Space Port, must complete a Bidder Information Sheet that includes:

- Name of Firm
- Address of Firm
- Age of Firm
- Whether firm is a certified disadvantaged business enterprise
- Amount of annual gross receipts

Before contract is awarded, companies must also submit Demonstration of Good Faith Efforts Form 1: DBE Utilization, and Form 2: Letter of Intent for each DBE subcontractor. If DBE goal percentage is met, complete one Form 1 and a separate Form 2 for each DBE subcontractor. If not met, complete Form 1, and submit documentation of Good Faith Efforts (see 49 CFR Part 26, Appendix A) to support percentage accomplished.

Upon Airport acceptance of bid, the following information must be submitted to Midland International Air & Space Port's Disadvantage Business Enterprises Liaison Officer (DBELO) before project is started:

- Commitments made to all subcontractors (DBE and non-DBE): MAF Form 2: Letter of Intent or TxDOT Form 4901
- Proof of DBE certification of all DBE subcontractors.

Once project starts, a Monthly Progress Report (MAF Form or TxDOT Form 4903 or 4904) of the actual dollar amount paid to DBE subcontractors should be submitted monthly to the DBELO.

For questions, please call 432.560.2200. Thank you for your time and consideration regarding this matter.

Sincerely,

MAF, Liaison Officer
Disadvantage Business Enterprise

Encl

ATTACHMENT 5 - FORMS 1 AND 2 FOR DEMONSTRATION OF GOOD FAITH EFFORTS

FORM 1: DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The undersigned bidder/offeror has satisfied the requirements of the bid/proposal specification in the following manner (please check the appropriate space):

_____ The bidder/offeror is committed to a minimum of _____% DBE utilization on this contract.

_____ The bidder/offeror (if unable to meet the DBE goal of _____%) is committed to a minimum of ____%DBE utilization on this contract and submits documentation demonstrating good faith efforts.

Name of bidder/offeror's firm: _____

State Registration No. _____

By _____
(Signature) Title

FORM 2: LETTER OF INTENT

Name of bidder/offeror's firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE firm:

_____

_____

_____

_____

_____

_____

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $_____

Affirmation

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____
(Signature)(Title)

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

(Submit this page for each DBE subcontractor.)

Midland International Air & Space Port
Department of Airports

Bidder Information Sheet

Firm Name: _____

_____

Address: _____

_____

_____

Age of Firm: _____

Is your firm a Certified Disadvantaged Business Enterprise (DBE)? **YES** ☐
NO ☐

Mark the category of your firm's Annual Gross Receipts.

- ☐ **Less than $1 million.**
- ☐ **More than $1 million, less than $5 million.**
- ☐ **More than $5 million, less than $10 million.**
- ☐ **More than $10 million, less than $15 million.**
- ☐ **More than $15 million.**

DBE/Non DBE Monthly Progress Report for MAF

Project: _____ AIP Grant No.: _____

Contractor: _____ Contract Amount: _____

DBE Goal: _____ DBE Goal Dollars: _____

Contractor DBE Status: (DBE or Non DBE)_____ Reporting Month: (Mo/Y.): _____

Vendor Number	Name of Prime/Subcontractor DBE or Non-DBE	* D or N	**Dis-advantaged Group	Type of Work	***Total $ Amt Paid for Work Performed (Prime & Sub; DBE & Non-DBE)	**** $ Amt Paid to Non-DBE Firm this Pay Period	***** $ Amt Paid to DBE Firm this Pay Period

* All payments to DBE and Non-DBE firms are required to be reported. (D=DBE; N=Non DBE)

** If the firm is a DBE, report the Disadvantaged Group the DBE firm falls under. (BA=Black American; HA=Hispanic American; NA=Native American; SAA=Subcont. Asian American; APA=Asian Pacific American; NMW=Non-Minority Women; O=Other)

*** Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE/second-tier subcontractors and haulers from this column.

**** Report amount paid to Non-DBE firm or sub.

***** Report amount paid to DBE firm or sub.

If using a non-DBE hauling firm that leases from DBE truck owner-operators, payments made to each owner-operator must be reported separately. Report amount of payment DBE subcontractors paid to non-DBE subcontractors/haulers.

Submission of this report for periods of negative DBE activity is required. This report is required monthly until entirety of project specified is completed.

I hereby certify that the above is a true and correct statement of the amounts paid to the DBE or Non-DBE firms listed above.

Signature: _____ Date: _____

Company Official

🛠This report must be submitted with monthly request for payment.

SPECIAL PROVISIONS

SP-1 SCOPE OF WORK

Work to be accomplished under these specifications, including the plans, shall consist of:

Principal items of work are set forth in specific detail in the proposal section of these specifications; however, work items may be generally described as rehabilitation of the main concrete apron including replacement of concrete joint sealant and spall repair.

Work will also include other miscellaneous materials, equipment, machinery, superintendence, and labor for constructing these improvements for the Midland International Air & Space Port, Midland, Texas.

Contractor shall furnish all labor, materials, and equipment necessary to complete work called for in these specifications and shown on the plans.

Payment for various items of work will be made as specified under various payment Articles of technical sections.

SP-2 CONTRACT DOCUMENTS

All work covered by this contract shall be done in accordance with Contract Documents described in the General Conditions. Drawings included in documents consist of the plans entitled "Concrete Apron Rehabilitation," dated April 2020.

All bidders shall be thoroughly familiar with all Drawings and specifications. Contractor shall be responsible for the satisfactory completion of all work shown on Drawings or specified.

Intent of plans and specifications is to prescribe a complete work or improvement which Contractor undertakes to do in full compliance with the plans, the specifications, the special provisions, proposal, and contract. Contractor shall do all work including such additional, extra, and incidental work as may be considered necessary to complete the project in a satisfactory and acceptable manner, as provided in the plans, proposal, and contract. He shall furnish, unless otherwise provided in the specifications, special provisions, or contract, all materials, equipment, tools, labor and incidentals necessary to prosecute the completion of work.

Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of Contract Documents, priority of interpretation shall be in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Proposal, Special Provisions, Notice to Bidders, Instructions to Bidders, Technical Specifications, Plans and General Conditions of Contract.

SP-3 TIME AND ORDER OF COMPLETION

Contractor is permitted to prosecute certain portions of work in the order and manner of his own choosing to the best interest of the project. However, work shall be conducted in such manner and with such materials, equipment and labor as may be required to ensure completion in accordance with the plans and specifications within the time stated in the Proposal and in Contract. Contractor shall furnish Engineer with his proposed progress schedule and this schedule shall be approved by Engineer before work is commenced on the project.

Contractor is reminded approved material submittals are required prior to the incorporation of the materials into this project. To avoid any delays in progress of work, it is imperative that complete information be provided to Engineer as early as possible for review and approval.

Contractor will be required to execute various portions of the project in phases to maintain usage of airport facilities as well as safety during the entire project. Contractor will be allowed to develop his own phasing plan which will meet the intent of the phasing shown on the Plans. Contractor's phasing plan will be subject to Engineer's approval.

Other contractors may be performing work for Owner in the same general area as that covered under this contract. Contractor shall be expected to coordinate his work with work of other contractors as may be required to insure that all work can be carried out with the least possible interference with the operation of other contractors or Owner. Contractor's coordination with other contractors shall require the approval of Engineer. Owner reserves the right to control and direct the sequence of operations in the areas where others will be working. Provision shall be made for other contractors to have suitable space to work and for storage of materials, as well as access to these areas.

Contractor shall schedule his work well in advance of actual operations and shall keep Engineer advised of this schedule so that close coordination can be maintained with the Director of Airports and with other contractors. Portions of taxiways and runways will be closed as required for proper execution of work, but at least three days' notice will be required before closing any portion of a taxiway or runway. Notice to Airmen (NOTAM's) required for various construction operations, will be filed by the Director of Airports.

When closing of portions of the airfield for construction is required, the time closed shall be kept to a minimum time. Contractor shall be required to provide, install and maintain approved closed runway and/or taxiway markings in accordance with FAA Advisory Circular 150/5370-2G, and other applicable FAA regulations. No separate measurement or payment shall be made for closed runway or taxiway marking. All operations shall be coordinated through Engineer and the Director of Airports.

SP-4 LIMITATION OF OPERATION

Each item of work shall be completed without delay and in no instance shall Contractor be permitted to transfer his forces from uncompleted work to new work without the permission of Engineer. Contractor shall be required to submit a schedule of operations to Engineer for approval. Contractor shall not commence new work to the prejudice of work already started.

Contractor shall take all precautions necessary to ensure the safety of operating aircraft and their passengers as well as that of his own equipment and personnel. Special considerations shall be given to flight schedules and routes to be taken by equipment traveling within the airport area. Contractor shall provide all such equipment with a flag on a staff so attached to the equipment that the flag will be readily visible. The flag shall be not less than three feet square consisting of a checkered pattern of international orange and white squares of not less than one foot on each side. Contractor shall make his own estimate of all difficulties to be encountered. Equipment not actually in operation shall be kept clear of landing areas; personnel shall not enter areas of the airport where aircraft are operating without specific permission.

Nighttime construction activities will not be permitted without the prior approval of Engineer and the Director of Airports. If required and permitted, nighttime construction activities shall be as noted on the plans and coordinated, through Engineer, with the Director of Airports. During nighttime construction, Contractor shall provide all equipment traveling within the airport area with a flashing light, which shall remain visible and operational at all times.

All operations shall be coordinated, through Engineer, with the Director of Airports, to the end that no interference with aircraft traffic on active runways, taxiways or aprons will result from the operations of

Contractor. Construction activities will not be allowed within the safety areas of any active runway or taxiway unless approved by Engineer and Director of Airports. Taxiway safety area is defined as the area within 90 feet of the centerline of any taxiway or taxilane. Runway safety area is defined as the area within 250 feet of the centerline of any runway when aircraft are operating under Visual Flight Rule (VFR, clear weather) conditions, or within 570 feet of the centerline of any runway when aircraft are operating under Instrument Flight Rule (IFR, inclement weather) conditions.

Contractor shall maintain flagmen, as may be required, to direct his construction traffic if it becomes necessary for such traffic to cross or travel along any active taxiway, apron or runway. Traffic shall be directed away from these facilities whenever possible and no traffic shall ever cross an active runway, taxiway or apron without having proper clearance.

Contractor shall schedule his work well in advance of actual operations and shall keep Engineer advised of this schedule so that close coordination can be maintained with the Director of Airports. Aprons, runways and taxiways will be closed as required for proper execution of work as provided in above Articles.

Contractor shall exert every effort to maintain the safety of aircraft traffic and shall acquaint himself with the rules and regulations concerning aircraft traffic safety. The requirements of FAA Advisory Circular 150/5370-2G, "Operational Safety on Airports during Construction," will be maintained. Violations of the safety rules by Contractor's workmen shall result in the discharge of such men in accordance with the General Conditions. Continued violations of safety rules and regulations by Contractor, after having been notified of such violations by Engineer, shall constitute grounds for suspending Contractor's operations until steps are taken that will insure a safe operation.

Contractor's field office and material storage area may be located south of Taxiway A but outside the safety area of Taxiway A near areas of construction. Contractor shall provide an area for parking all equipment not being used for construction purposes, and for parking of employee vehicles. This area shall be located away from the operational area of the airport in an area approved by Engineer and the Director of Airports. No employee or other unauthorized vehicles will be allowed within the operational area of the airport. If Contractor needs his field office to be outside of the service area, Contractor can install temporary security fencing around the office site. The security fence will be required to be approved by the airport.

Contractor shall utilize existing vehicle gates for his employees and subcontractors. Contractor shall be responsible for allowing only authorized personnel to enter the operational area of the airport through this gate. Entrance through the gate shall be controlled by Contractor at all times that Contractor’s employees or sub-contractors are entering/exiting the gate.

Hauling routes shall not be along or across any paved airport street, road, apron, taxiway or runway without specific written authorization from Engineer and the Director of Airports. Any damage incurred by Contractor's equipment shall be repaired by and at the expense of Contractor, and as required by Engineer and the Director of Airports.

Contractor shall maintain pavement surfaces of runways, taxiways, and aprons, allowed to be used as hauling routes, in a clean condition, suitable for use by aircraft, as determined by the Director of Airports.

Successful Bidder is subject to a pre-award review by the Office of Compliance and Security, Equal Opportunity Division, Federal Aviation Administration, to determine Contractor’s previous compliance status.

Contractor subject to a preconstruction conference to discuss phasing and project safety control after award of contract.

SP-5 CONSTRUCTION ACTIVITY

When construction activity is performed on or adjacent to the aircraft operating areas (AOA), the following Rules and Regulations will apply unless otherwise authorized by Airport Operations. **Contractor required to have all picture-badged supervisors fingerprinted. Fingerprinting cost is $50.00 per person, paid by Contractor**.

5-1 AOA Badge: At least one supervisor with an AOA picture badge must be present at all times with any group of unbadged personnel.

5-2 Escorts: All escorts performed by Contractor within the AOA must be accomplished by picture-badged personnel operating a vehicle marked by a 3- x 3-foot orange and white checkered flag. Traffic must adhere to haul routes at all times (see subarticle 5-3). Only authorized airport personnel are to perform escorts off of established haul routes.

5-3 Haul Routes: Establishment of AOA haul routes must be authorized through Airport Operations. Contractor shall furnish, erect, maintain, and remove flags for delineation of haul routes. Criteria of establishing perimeter of a haul route and restricted areas will be as follows:

A. Green flags will prominently mark either side of haul route at intervals which easily define route.
B. Yellow flags will prominently mark a boundary 500 feet adjacent to a runway centerline to delineate restricted areas during poor visibility as determined by Airport Operations.
C. Red flags will prominently mark a boundary 250 feet adjacent to a runway centerline to indicate entry is prohibited unless specifically authorized by Airport Operations.
D. Haul Routes that cross or come within 153 feet of a taxiway must have a flagman present to control vehicular traffic.
E. No haul route may come within 1,000 feet from end of a runway unless specifically authorized by Airport Operations.

5-4 Cranes: Any construction activity utilizing a crane or any other hoisting device shall have the prior written approval of the Federal Aviation Administration. Contractor shall be responsible for filing the prescribed forms for airspace clearance in accordance with Part 77 of the Federal Aviation Regulations. Applications for airspace clearance must be submitted at least 30 days prior to the beginning of construction activities. To avoid construction delays, Contractor is urged to file the prescribed forms in a timely manner. Airspace clearance from the FAA must be approved prior to the erection of the crane or other hoisting device. The following information is required:

A. Location of equipment
B. Maximum extendable height.
C. Duration of use.
D. Daily hours of operation.

Top of crane must be marked by a 3- x 3-foot orange and white checkered flag and lowered at night and during periods of poor visibility as directed by Airport Operations. Cranes which exceed a height of 149 feet must be approved in writing by the FAA (FAA Form 7460-1). Contractor shall notify Engineer at least 48 hours prior to actually erecting the crane.

5-5 Restricted Areas: Construction in these areas is prohibited unless authorized by Airport Operations:

A. Within 90 feet of a taxiway or apron taxiway centerline.
*B. Within 250 feet parallel to a runway centerline.
C. Within 1,000 feet of the end of the runway.
D. Within certain areas about the runway to cause interference with navigational equipment.

(* 500 feet during poor visibility as determined by Airport Operations.)

5-6 Trenches and Excavations: No trenches or excavations allowed within these areas:

A. Within 250’ parallel to runway centerline.
B. Within 90’ parallel to a taxiway or apron taxiway centerline.
C. Within 1,000’ of the end of a runway.

EXCEPTION: Authorization will be considered on a case by case basis by Airport Operations.

5-7 Stockpiles of Material: No stockpiled material allowed within these areas:

A. Within 500’ parallel to runway centerline.
B. Within 90’ parallel to a taxiway or apron taxiway centerline.
C. Within 1,000’ of the end of a runway.

EXCEPTION: Authorization will be considered on a case by case basis by Airport Operations.

5-8 Escorts, Badges and Permits: When AOA construction activity is performed on or adjacent to the aircraft operating area and access onto apron required, the following rules will apply unless otherwise authorized by Airport Operations:

A. Escorts: Contractor vehicles and equipment must be escorted by Airport Operations and observe the Rules and Regulations.

EXCEPTION: Vehicles displaying a Permanent AOA Access decal do not require an escort while operating on ramps.

B. AOA Badges: Contractor personnel will display an AOA Identification Badge.
C. AOA Access Permit: Contractor vehicles will display an AOA Access Permit or Temporary AOA Access Permit.

EXCEPTION: Construction equipment such as tractors, dump trucks, and cranes not required to display an AOA Access Permit.

5-9 Protection of Airfield Areas: These procedures will be utilized to prevent inadvertent entry by aircraft or vehicles into closed sections of taxiways, runways or aprons. Contractor shall provide all materials and labor to furnish, erect, maintain, and remove these items as subsidiary to other items in project.

A. When any taxiway or other AOA is closed, area will be protected by cones and flashing lights set up at the entrances to the closed areas.
B. Appropriate NOTAM's will be issued on the closure and its associated maintenance or construction activity.
C. Centerline and edge lights will be turned off, removed, obliterated, or disconnected as dictated by the circumstances requiring the closure.
D. All excavations in existing pavement areas (e.g. mudjacking repairs) must have hole protected by cones and flashing lights. This will be in addition to cones and lights marking the closed area.
E. Major excavations (such as construction of new taxiways, ramps or other construction activity) or the major repairs of an existing taxiway or runway will be protected by 10-inch-wide by 8-foot-long plastic FAA approved barricades (striped orange and white), with at least two red-flashing lights on top of each barricade.
F. In some cases, taxiway centerline striping will be obliterated and a temporary displaced centerline provided.
G. All activities on the airfield must be continually coordinated through the Airport Operations Supervisor.

SP-6 AFFIDAVIT OF BILLS PAID

Prior to final acceptance of this project by Owner, Contractor shall execute an affidavit that all bills for labor, materials and incidentals incurred in the construction of these improvements, have been paid in full, including any retainage, and that there are no claims pending, of which he has been notified.

SP-7 CALENDAR DAY

Time for completion of the project and for liquidated damages shall be in accordance with the provisions of the General Conditions, 80-08, Failure to Complete on Time. A calendar day is defined as every day shown on the calendar.

SP-8 PROTECTION OF PROPERTY

Contractor shall exercise care to prevent damage to all structures, either above or below ground, including buildings, fences, pipelines, utilities, roads, etc., whether publicly or privately owned and including work performed by others. Contractor shall be responsible for locating all underground facilities damaged by proposed construction.

Contractor shall be responsible for all damage done to either public or private property during the course of construction except as specifically provided otherwise in these specifications.

Known existing underground utilities and structures are shown on the plans. Locations are believed reasonably accurate but not guaranteed.

Contractor shall take all steps necessary to protect these existing facilities during construction to assure continuous operation of lights for runways and taxiways which will be open for night operations.

SP-9 ELECTRIC POWER AND NATURAL GAS

Contractor shall make his own provisions for his electrical, natural gas and other fuel requirements and shall pay for electricity, gas or fuel consumed during the construction of the project. Contractor shall construct his own service lines and such construction shall be in strict accordance with all applicable codes and laws.

SP-10 LINES AND GRADES

Engineer will provide Contractor with horizontal control points and a benchmark for vertical control. All construction staking shall be done by Contractor. References to lines and grades as established by Engineer shall be in reference to these control points.

Engineer will provide Contractor with all necessary information relating to control points set by Engineer. Contractor will be responsible for laying out work. Engineer will check grade control and major layouts at his discretion, but this check will not relieve Contractor of his responsibility of correctly locating line and grade in accordance with the plans and specifications.

Engineer will take all measurements necessary for the determination of the amount of work performed under the various items for which payment is provided. Whenever necessary, work will be suspended to permit this work, but such suspension will be as brief as practicable, and Contractor shall be allowed no extra compensation therefor.

Contractor shall satisfy himself as to the accuracy of all measurements before constructing any permanent structure and shall not take advantage of any errors which may have been made in laying out work. Such stakes and markings as Engineer may set for either his own or Contractor's guidance shall be scrupulously preserved by Contractor. In case of negligence on the part of Contractor or his employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing same may be deducted from subsequent estimates due Contractor, at the discretion of Engineer.

SP-11 WATER FOR CONSTRUCTION

Contractor shall make his own provisions for his water requirements and shall pay for all water consumed during the construction of the project. Contractor shall make his own arrangements for connections to existing water mains and fire hydrants and piping or hauling the water to the point where the water is required, all at his own expense.

SP-12 MATERIAL TESTS

Various tests on materials of construction are required in the specifications. In general, Contractor shall bear the cost of all material tests required before approval of a material, source or mix design. City will bear the cost of all passing commercial laboratory tests required for acceptance during construction of the improvements and Contractor shall bear the cost of all failing construction tests.

Where only small amounts of any material are used or where compliance with specifications determined by visual inspection, no tests are required. Certificates of compliance required on all materials not tested.

All materials proposed used, may be tested at any time during their preparation and use. If, after trial, sources of supply approved do not furnish a product of uniform quality or if product from any source proves unacceptable at any time, Contractor shall furnish approved material from another source.

SP-13 BARRICADES, SIGNS, AND HAZARD MARKINGS

Contractor shall provide, erect, and maintain all necessary barricades, signs, danger signals, and lights for the protection of work and the safety of the public for both passengers and aircraft. Before closing existing apron, runways or taxiways, warning signs for air traffic shall be placed at such locations and shall be visible day and night. Any movement of Contractor's vehicles or equipment on or across aprons or taxiways shall carry FAA standard markings or flags. Movement of other vehicles responsible to Contractor shall be under escort, as specified in Article SP-5-2.

Barricades for runways, taxiways, and aprons closed to traffic, shall consist of 10-inch-wide by 8-foot-long plastic FAA approved barricades. Each barricade shall have reflective striping and a red flashing light on each end. Barricades shall be spaced with no more than 10-foot clearance between the ends. Obstructions shall be illuminated at night. Proper illumination of obstructions is critical to the safe operation of aircraft on the Airport. All warning lights shall be equipped with photocell controls to automatically turn on the lights at night and turn them off at daytime. Contractor shall check lights daily to assure batteries or power cells are working. In addition, Contractor shall check lights at night on a daily basis. Any lights found out-of-order, flashing weakly, or in otherwise less than acceptable operating condition, shall be immediately replaced or repaired. Engineer may suspend work on project if Contractor's warning lights are not maintained in an acceptable manner. A $25.00 charge will be assessed Contractor for each light, per day, found inoperative by Owner's personnel or representatives.

SP-14 PREVENTION OF AIR AND WATER POLLUTION

Contractor shall use suitable precaution to minimize air and water pollution during the progress of work. Contractor shall meet all requirements of the EPA concerning air and water pollution. Contractor shall implement a Stormwater Pollution Prevention Plan (SWPPP) as required by the plans and specifications.

SP-15 PUBLIC CONVENIENCE AND SAFETY

Materials stored on the airport shall be so placed and work shall, at all times, be so conducted as to cause no greater obstruction to the air and ground traffic than is considered necessary by Engineer. In

protecting operational areas, the minimum clearances maintained for runways shall be in agreement with Part 77 of the Federal Aviation Regulations. During construction of the project, Contractor shall also maintain operational safety on the Airport in accordance with FAA's Advisory Circular 150/5370-2G, "Operational Safety on Airports during Construction" and SW5200.5B, "Airport Safety during FAA-funded Airport Construction and FAA Facilities Maintenance." No runway, taxiway, apron, or roadway shall be closed or opened except by express permission from Engineer and the Director of Airports.

Contractor shall be responsible for maintaining the pavement free of all rocks, gravel, dirt and other debris in areas where hauling is permitted on or across any active roadway, apron, runway or taxiway, or in areas temporarily closed which are subject to opening on short notice. All rocks, gravel, dirt or other debris shall be removed immediately by Contractor.

SP-16 FINAL CLEANING UP

As each intermediate phase of work is completed and prior to opening any portion of any airfield apron, roadway, runway or taxiway, Contractor shall be responsible for cleaning the construction site and adjacent pavement as specified.

Upon completion of work and before acceptance and final payment will be made, Contractor shall remove from the site all machinery, equipment, surplus, and discarded materials, rubbish and temporary structures. Material cleared from the site and deposited on property adjacent, will not be considered as being disposed of satisfactorily. The cost of the "Cleanup" shall be included as a part of the cost of the various items of work involved, and no direct compensation will be made for this work.

SP-17 INSURANCE

Contractor shall not begin work under this contract until he has obtained all insurance as required in the General Conditions of Contract, has furnished proof of same to Owner, and Owner has approved the same. All insurance required for this project shall name the City of Midland and Parkhill, Smith & Cooper Inc. (PSC) as additional insureds.

Contractor shall also obtain an Owner's Protective or Contingent Public Liability Insurance Policy naming the City of Midland, Texas and Engineer as additional insureds and the amount of the policy shall be as follows: $1,000,000 for injuries, including accidental death, to one or more persons and subject to the above limit for each person, a total limit of $1,000,000 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, a limit of not less than $1,000,000 for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit of $2,000,000 for all damages arising out of injury to or destruction of property during the policy period. A copy of this policy shall be delivered to Owner.

Before work on any contract or subcontract is started, Contractor(s) and subcontractor(s) shall submit seven certificates to Owner for approval covering each insurance policy carried and offered as evidence of compliance with the above requirements, signed by an authorized representative of the insurance company, setting forth:

1. Name and address of the insured.
2. Location of operations to which the insurance applied.
3. Number of policy and type(s) of insurance in force thereunder on the date borne by such certificate.
4. Policy expiration date and limit(s) of liability thereunder on date borne by such certificate.
5. Statement the insurance of type afforded by policy applied to all operations of whatever character, undertaken by insured during performance of this contract, provided such operations are required in performance of Contract.

6. Provision the policy may be canceled only by mailing written notice to named insured at address shown in this policy stating when, not less than 10 days thereafter, and cancellation of such policy shall be effective, with copy to Owner of letter of intent.

These certificates will become a part of Contract Documents and must be included with Contract Documents before execution by the City of Midland, Texas. Coverages specified herein apply to all operations of Contractor in connection with this work, including automobile and other vehicles.

Contractor's insurance shall cover himself and all subcontractors and sub-subcontractors. All other sublevels of contractors shall provide copies of proof of insurance if not covered by the general contractor.

Contractor shall provide a Waiver of Subrogation in favor of the City of Midland and Parkhill, Smith & Cooper, Inc. on worker's Compensation and Employee Liability Insurance, Contractor's Public Liability and Property Damage Liability Insurance, and Automobile Insurance.

SP-18 REMOVAL AND DISPOSAL OF STRUCTURES, UTILITIES AND OBSTRUCTIONS

All materials and debris specified to be disposed of by Contractor shall become the property of Contractor and shall be properly disposed of off the airport property by Contractor.

SP-19 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

Finished surfaces shall conform to the lines, grades, cross sections and dimensions. Any deviation from the plans which may be required by the exigencies of construction shall be determined by Engineer and authorized by him in writing.

SP-20 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

All work rejected or condemned shall be repaired or, if it cannot be satisfactorily repaired, removed and replaced at Contractor's expense. Materials not conforming to the requirements of the specifications shall be removed immediately from the site of work and replaced with satisfactory material by Contractor at his expense.

Work done beyond shown on the plans, or as given, except as herein provided, work done without proper inspection, or any extra or unclassified work done without written authority and prior agreement in writing as to prices, will be done at Contractor risk and considered unauthorized and, at the option of Engineer, may not be measured and paid for and may be ordered removed and replaced at Contractor's expense.

Upon Contractor failure to repair satisfactorily or remove and replace, if so directed, rejected, unauthorized, or condemned work or materials immediately after receiving formal notice from Engineer, Owner may recover for such defective work or materials on Contractor bond, or by action in court having proper jurisdiction over such matters, or may employ labor, equipment, and satisfactorily repair or remove and replace such work and charge cost of same to Contractor, which cost will be deducted from any money due him.

SP-21 DISPUTED CLAIMS FOR EXTRA WORK

In case Contractor deems extra compensation is due him for work on materials not clearly covered in Contract, or not ordered by Engineer as an extra, Contractor shall notify Engineer in writing of his intention to make claim for such extra compensation before he begins work on which he bases the claim and shall afford Engineer every facility for keeping actual cost of work. Failure on the part of Contractor to give such notification or to afford Engineer proper facilities for keeping strict account of actual costs shall constitute a

waiver of the claim for such extra compensation. The filing of such notice by Contractor and the keeping of costs by Engineer shall not in any way be construed to prove validity of the claim. When work has been completed, Contractor shall within 10 days file his claim for extra compensation with Engineer, who will present it to Owner for consideration.

SP-22 FEDERAL PARTICIPATION

Contractor attention of is invited to the fact that pursuant to the provisions of the Act of Congress known as the Airport Improvement Program of 1982 as amended, the United States Government may pay a portion of the cost of these improvements. Act of Congress provides that the construction work and labor in each state shall be done in accordance with the laws of that state subject to the inspection and approval of the FAA and in accordance with the rules and regulations made pursuant to said Act. Construction work, therefore, will be subject to such inspection by the Administrator of the Federal Aviation Administration or his agents as may be deemed necessary to meet with the above requirements when Federal funds are used, but such inspection will in no sense make the Federal Government a party to this contract and will in no way interfere with the rights of either party to Contract.

SP-23 INDEMNIFICATION

CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND OWNER, ENGINEER, AND ALL OF OFFICERS, AGENTS, AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE, AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING REASONABLE ATTORNEY FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CONTRACTOR, AGENTS, EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR REQUIRED TO PAY ANY JUDGMENT WITH COSTS OBTAINED AGAINST OWNER, ENGINEER, OR ANY OF OFFICERS, AGENTS, OR EMPLOYEES, INCLUDING REASONABLE ATTORNEY FEES.

CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND OWNER AND ALL OF OWNER'S OFFICERS, AGENTS, AND EMPLOYEES AND PSC AND OFFICERS, AGENTS, AND EMPLOYEES OF PSC FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF OWNER, OWNER'S OFFICERS, AGENTS AND EMPLOYEES, OR ON ACCOUNT OF ANY NEGLIGENT ACT OF PSC, OR OFFICERS, AGENTS, AND EMPLOYEES OF PSC WHETHER SUCH NEGLIGENT ACTS WERE THE SOLE PROXIMATE CAUSE OF INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH CONTRACTOR OR CONTRACTOR'S EMPLOYEES, AGENTS, OR SUBCONTRACTORS NEGLIGENCE, IN EXECUTION, SUPERVISION, AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST OWNER OR ANY OFFICERS, AGENTS, OR EMPLOYEES, INCLUDING REASONABLE ATTORNEY FEES.

CONTRACTOR AGREES HE WILL INDEMNIFY AND SAVE OWNER AND PSC HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS, ALL

SUPPLIES, INCLUDING COMMISSARY INCURRED IN FURTHERING PERFORMANCE OF THIS CONTRACT. WHEN OWNER SO DESIRES, CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE ALL OBLIGATIONS OF NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED, OR WAIVED.

CONTRACTOR HEREBY WAIVES ALL RIGHTS TO ANY ATTORNEY FEES AWARDED AS RESULT OF ANY ACTION BROUGHT UNDER THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT RELATING TO THIS CONTRACT.

SP-24 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until acceptance by Engineer of any part or all of the construction, as provided for in these specifications, it shall be under the charge and care of Contractor, and he shall take every necessary precaution against injury or damage to any part of work by the action of the elements or from any other cause whatsoever, whether arising from the execution or from the non-execution of work. Contractor shall rebuild, repair, restore, and make good, at his own expense, all injuries or damage to any portion of work occasioned by any of the above causes before its completion and acceptance.

SP-25 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

Making final payment by Owner to Contractor, shall not relieve Contractor of responsibility for faulty materials or workmanship. Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of work.

Performance Bond shall remain in effect until one year after the date of the written acceptance of work to insure compliance by Contractor with the requirements of this Article.

SP-26 TEXAS STATE SALES TAX

Work under this contract is for an entity which qualifies for exemption pursuant to the provisions of Article 151.309 of the Texas Tax Code.

Contractor performing this contract may purchase, rent or lease all materials, supplies and equipment incorporated into the project by issuing to his supplier an exemption certificate in lieu of the tax, said exemption certificate complying with State Comptroller's rulings. However, equipment and parts for equipment purchased to be used on the project but not incorporated into the project do not qualify for said tax exemption.

Contractor shall issue a resale certificate in lieu of paying such sales tax for all materials incorporated into this project. Further, Contractor shall separate the charges for materials incorporated into the project from the charges for labor. Any such exemption certificate issued by Contractor in lieu of the tax shall be subject to the provisions of the State Comptroller's rulings.

SP-27 SEPARATE CONTRACTS

Owner reserves the right to let other contracts about or near project. Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall coordinate his work and theirs. Contractor's coordination with other contractors shall require the approval of Engineer. See Article SP-3 for additional requirements concerning separate contracts.

SP-28 TRENCH SAFETY

Contractor shall strictly comply with all requirements of the Occupational Safety and Health Administration (OSHA) Manual, Chapter XVII, Subpart P - Excavation, Trenching and Shoring, for all trenching and excavation operations.

If depths of trenches are encountered over 5 feet, Contractor shall cut trench walls to angle of repose of the soils encountered or shall submit alternate shoring details to Engineer for approval.

SP-29 LOAD RESTRICTIONS

Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of work. A special permit will not relieve Contractor of liability for damage which may result from the moving of material or equipment.

Equipment operations of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling materials over base course not permitted. Hauling materials over base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. Contractor shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

SP-30 NOTICE TO PROCEED

Notice to proceed shall state the date on which it is expected Contractor will begin the construction and from which date contract time will be charged. Contractor shall begin work to be performed under Contract within 10 days of the date set by Engineer in the written Notice to Proceed, but in any event, Contractor shall notify Engineer at least 24 hours in advance of the time actual construction operations will begin.

SP-31 PAYMENT FOR MATERIALS ON HAND

Partial payments may be made to extent of delivered cost of materials to incorporate in work, provided such materials meet the requirements of Contract, plans and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. Material is stored or stockpiled in a manner acceptable to Engineer at or on an approved site.
b. Contractor furnished Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
c. Contractor furnished Engineer with satisfactory evidence that the material and transportation costs have been paid.
d. Contractor furnished Owner legal title (free of liens or encumbrances of any kind) to material so stored or stockpiled.
e. Contractor furnished Owner evidence that material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in work.

It is understood and agreed the transfer of title and Owner's payment for such stored or stockpiled materials shall in no way relieve Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of Contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed Contract price for such materials or Contract price for Contract item in which the material is intended to be used.

No partial payment made for stored or stockpiled living or perishable plant materials.

Contractor bears all costs associated with partial payment of stored or stockpiled materials in accordance with provisions of this subsection. Partial payments are per GC-46, "Partial Payments."

SP-32 WEIGHING AND MEASURING EQUIPMENT

Except as modified herein, all scales and scale installations shall meet requirements of the National Institute of Standards and Technology Handbooks 44 and 112 (published by the U.S. Department of Commerce and available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.D. 20402-9325), except required accuracy shall be 0.4 percent of the load being weighed or one graduation on the dial of the scale. Contractor shall provide personnel, facilities and equipment for checking the scales to the satisfaction of Engineer.

All scales shall be checked prior to beginning of operations, after each move, at such other times when, in Engineer opinion, there is a question as to accuracy/adequacy, and at least once each six months. Contractor shall furnish a report of calibration from a scale mechanic licensed by the Texas Department of Agriculture using certified weights and approved by Engineer, certifying scales meet requirements of this item. Plant operations shall cease during the checking operation. When inaccuracy or inadequacy is discovered, scale use not resumed until corrective measures are complete and/or scales calibrated. Whenever equipment is adjusted, adjustments shall be so made to bring performance errors as close as practicable to zero value.

SP-33 PROGRESS SCHEDULE

Within 15 working days after award of Contract (or at the Pre-Construction Meeting), Contractor shall submit a progress schedule for the project. Progress schedule shall be prepared in a form suitable to Engineer and shall show the proposed starting and completion dates for each phase of construction and each item of work within each phase. Progress schedule shall include a "Percent Complete Curve," with monthly amount, cumulative amount, and cumulative percent. Progress schedule, when submitted in suitable form and provided schedule indicates certain completion of the project within the time specified, will be approved in writing by Engineer. Revision or changes in the approved progress schedule may be made only with approval of Engineer.

SP-34 AVERAGE CLIMATIC RANGE

Time allowed for completion of the entire project shall include the number of calendar days for anticipated delays due to normal weather conditions. No time extension for delays due to weather will be allowed until and unless such delays exceed the claims for extension of time because of abnormal inclement weather, such extension of time shall be granted only because such abnormal inclement weather prevented the execution of major items of work on normal working days. Weather conditions on a particular day may affect work on days following the normal weather day. This subsequent delay shall not be considered abnormal and no extension of time will be considered.

The following weather table reflects meteorological data from Midland-Odessa area and will be used to determine contract time extensions due to abnormally inclement weather. For purposes of this Contract, "abnormally inclement weather" is interpreted as number of days more than normal number of days on which rainfall exceeds 0.01 inch, or snow/ice pellets exceed 1.0 inch. Extensions of time to complete work will be based on calendar days and will be granted by monthly account. No "rain days" unused for previous months may be carried over or accountable for future periods of time.

WEATHER TABLE		
MONTH	**MEAN NO. OF RAIN DAYS (1)**	**MEAN NO. OF SNOW/ICE PELLETS DAYS (2)**
January	2.8	1
February	3.3	1
March	3.6	0
April	1.9	0
May	4.5	0
June	4.2	0
July	4.9	0
August	5.0	0
September	5.6	0
October	2.9	0
November	1.4	0
December	3.4	1
TOTAL	**43.5**	**3**
(1): Mean number of days' rainfall, 0.01 inch or more. (2): Mean number of days' 1.0 inch or more. (*): Less than 0.5 inch.		

Table based on information reported from Midland International Air & Space Port, Midland, Texas. Latitude 31 degrees, 56 minutes N Longitude, 102 degrees 12 minutes W, elevation (ground) 2,863 feet.

Means are based on records covering 10 years from 2005-2014.

SP-35 SUBSTANTIALLY COMPLETE

In various areas of specifications "Substantially Complete" is used. Definition shall be:

> "Substantially complete shall occur at time work to be completed is complete as specified and Owner accepts/occupies facility or improvement. All equipment shall have been completely installed, tested, ready for Owner acceptance and use, and accepted by Owner before work defined as substantially complete."

SP-36 SUBMITTALS

Transmit each submittal with Contractor-standard transmittal letter including Contractor name, address, and phone number. Identify Project, Contractor, subcontractor, or supplier pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate. Apply Contractor stamp, signed or initialed certifying review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with requirements of work and Contract Documents. Schedule submittals to expedite Project and deliver to Engineer via Info Exchange website (with exception of product samples mailed to Engineer's physical address). Coordinate submission of related items. Identify variations from Contract Documents and Product or system limitations detrimental to successful performance of completed work. Distribution of copies of reviewed submittals to concerned parties shall be conducted by Engineer's Project Administrative Assistant (PASS) via Info Exchange website instructing parties to promptly report any inability to comply with provisions.

Format

- Submit all submittals digitally using PDF file extension. Each submittal shall be a single PDF file including transmittal letter. Multiple files for the same submittal will not be accepted.
- Submittals in any other format, including ZIP files, will be rejected.
- Hard copies will not be accepted.

- To ensure each page is legible, PDF pages of drawings shall be same size/scale as a hard copy. Where applicable, scale symbols should be provided to indicate scale. Illegible submittals will be rejected.
- Submittals will be uploaded to Engineer's Info Exchange website.

Submittal procedures described in this Article applies to the Construction Progress Schedule, Products List, Shop Drawings, Product Data, Samples (actual samples to submit, not digital files), Design Data, Test Reports, Certificates, Manufacturer's Instructions and Field Reports, and any other type of submittal submitted to Engineer.

Submittals necessary shall include, but are not necessarily limited to:

- Preliminary CPM Contractor's construction schedule.
- Detailed lighting plan for night work (if applicable).
- Contractor's emergency names and phone number list.
- Video and/or written report of the conditions of existing facilities, documenting the results of inspection performed prior to start of work.
- List of subcontractors and material suppliers with an experience statement.
- Certified payroll reports and statement of compliance, from Contractor and all subcontractors (submitted directly to the Airport Accountant).
- Disadvantaged Business Enterprise (DBE) utilization reports (submitted with monthly pay applications
- Three-week look ahead project schedule at weekly construction meetings.
- Contractor's quality Control Plan, to be submitted by preconstruction meeting.
- Other submittals noted in Appendix C of the Construction Management Plan (CMP).
- Original affidavit acknowledging all subcontractor, material suppliers, payrolls, bill for materials and equipment, and other indebtedness connected with Contract have been paid or otherwise satisfied (closeout req.).
- Original with notary signature, full and final release and waiver on liens from Contractor, and each subcontractor and material suppler that documents that they have been paid in full (closeout req).
- Warranty (due at Final Completion).
- Maintenance and operating instructions of new equipment.

SP-37 GEOTECHNICAL INFORMATION

No geotechnical reports for this project are available.

SP-38 SOVEREIGN IMMUNITY

By executing this contract, Owner is not waiving its right to sovereign immunity. Owner is retaining immunity from suit. Owner is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

SP-39 GOVERNING LAW AND VENUE

This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. Obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. Laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and all contractual claims or disputes, arising from or relating in any way that would direct application of the laws of another jurisdiction.

SP-40 THIRD-PARTY BENEFICIARY

This Contract does not create a third-party beneficiary. There is no third-party beneficiary to this Contract. No person or entity who is not a party to this Contract shall have any third-party beneficiary or other rights hereunder.

SP-41 RELEASES

NOTWITHSTANDING ANY OTHER PROVISIONS, Contractor hereby releases, acquits, RELINQUISHES, and forever discharges Owner, OWNER'S employees and officers, and PSC, AND its employees and officers, from any and all demands, claims, DAMAGES, or causes of action of any kind whatsoever which Contractor has/might have, including but not limited to BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR OWNER'S NEGLIGENCE.

SP-42 INDEPENDENT CONTRACTOR

It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of Owner; that Contractor shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondent superior shall not apply as between owner and Contractor, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of Owner. Further, it is specifically understood and agreed that nothing in this contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Contractor shall be an independent contractor under this contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor. Owner does not have the power to direct the order in which work is done. Owner shall not have the right to control the means, methods or details of Contractor's work. Contractor shall assume exclusive responsibility for work. Contractor is entirely free to do work in its own way.

SP-43 NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES

As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Contractor or his legal representative, shall give City Manager, or any other reasonable official of Owner, notice in writing (consisting of one original and seven copies of notice attached to a copy of this contract) of such damages, duly verified, within 150 days after the same has been sustained. Discovery rule does not apply to the giving of this notice. Notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Contractor relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except Owner from any liability whatsoever. Owner is under no obligation to provide notice to Contractor that Contractor's notice is insufficient. Owner reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within 30 days after receipt of notice.

Statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Contractor failure to comply with requirements herein, shall perpetually bar Contractor's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Owner has actual or constructive notice or knowledge of said claim or alleged damages. Contractor agrees that the requirements of this entire contract are reasonable.

SP-44 ASSIGNMENT

Contractor shall not, either directly or indirectly, assign all or any part of this contract or any interest, right or privilege herein, without prior written consent of Owner. The issue on whether to grant consent to an assignment is in sole discretion of Owner.

SP-45 WAIVER OF ATTORNEY'S FEES

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF CONTRACT. CONTRACTOR SPECIFICALLY AGREES THAT IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THIS IS VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF CONTRACT. CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN OWNER AND CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

SP-46 PROMPT PAY ACT

Owner and Contractor agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

SP-47 PAYMENT

After all work is completed by Contractor, including all Change Orders altering the original scope and amount of said contract are completed, and Owner has inspected and approved that work is completed and in compliance with Contract and all subsequent Change Orders, Owner may thereafter issue payment to Contractor in the amount of Contract and all Change Orders. Owner shall be the final judge of when work is

completed by Contractor. Owner, in its sole discretion, shall determine if work under Contract and under any Change Orders has been done to Owner's requirements. Owner may make periodic payments to Contractor however such periodic payments may only be made pursuant to this Article, and only after all work and all Change Orders are completed by Contractor and approved by Owner.

SP-48 PROJECT CLOSEOUT

Approval of final payment to Contractor is contingent upon completion and submittal of the items listed below. Final payment not approved until Engineer approves Contractor's final submittal. Contractor shall:

a. Provide two copies of all manufacturer warranties specified for materials, equipment, and installations.
b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.
c. Complete final cleanup. Upon completion of work and before acceptance and final payment will be made, Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless Contractor has obtained the written permission of such property Owner.
d. Complete all punch list items identified during the Final Inspection.
e. Provide complete release of all claims for labor and material arising out of Contract.
f. Provide a certified statement signed by subcontractors, indicating actual amounts paid to Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with project.
g. When applicable per state requirements, return copies of sales tax completion forms.
h. Manufacturer's certifications for all items incorporated in work.
i. All required record drawings, as-built drawings or as-constructed drawings.
j. Project Operation and Maintenance (O&M) Manual.
k. Security for Construction Warranty.
l. Equipment commissioning documentation submitted, if required.

SP-49 DISCLOSURE OF INTERESTED PARTIES

Successful proposer will be required to complete the Texas Ethics Commission Form 1295 – Certificate of Interested Parties and submit completed form with executed Contracts for project. Form 1295 is completed online at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm, the Texas Ethics web site.

PSC will email links to Contractor with an explanation once contract has been awarded. Contractor is responsible for going online to fill out form, printing, and submitting along with all other needed contract documents.

GENERAL CONDITIONS OF CONTRACT

GC-01. OWNER

Whenever "Owner," or expression Party of the First Part, or First Party, is used in Contract documents, it shall be understood as referring to Owner as described in Contract.

GC-02. CONTRACTOR

Whenever "Contractor," or expression Party of the Second Part, or Second Party, is used, it shall be understood to mean person(s), co-partnership, or corporation so defined in Contract and who has agreed to perform Work embraced in this contract, or to his or their legal representatives.

GC-03. ENGINEER

Whenever "Engineer" is used in this contract, it shall be understood as referring to Parkhill, Smith & Cooper, Inc., (PSC), Consulting Engineers, in Abilene, Amarillo, Arlington, Austin, El Paso, Frisco, Lubbock, and Midland, Texas, as well as Albuquerque and Las Cruces, New Mexico, Engineer of Owner, or such other Engineer, supervisor, or inspector as authorized by said Owner to act in any particular.

GC-04. CONTRACT DOCUMENTS

Contract Documents shall consist of Notice to Bidders (Advertisement), Instructions to Bidders, Proposal, signed Contract, Performance Bond, Payment Bond, General Conditions of the Contract, Special Provisions, Technical Specifications, Plans, and all modifications thereof incorporated in any documents before execution of contract.

Contract Documents are complementary, and called for by any one shall be as binding as if called for by all. In case of conflict between any of Contract Documents, priority of Interpretation shall be in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Proposal, Special Provisions, Notice to Bidders, Instructions to Bidders, Technical Specifications, Plans and General Conditions of the Contract.

GC-05. SUBCONTRACTOR

"Subcontractor," as employed herein, includes only those having a direct contract with Contractor, and includes one who furnished material worked to a special design according to plans or specifications of this work, but does not include one who merely furnished material not so worked.

GC-06. WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to individual, member of firm, or officer of corporation for whom it is intended, or if delivered or sent by registered mail to last business address know to him who gives notice.

GC-07. WORK

Unless otherwise stipulated, Contractor shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation, and other facilities necessary for execution and completion of Work covered by Contract documents. Unless otherwise specified, all materials shall be new and both workmanship and materials of good quality. Contractor shall, if required, furnish satisfactory evidence as to kind and quality of materials. Materials or work described in words applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

GC-08. DELETED

GC-09. DELETED

GC-10. LAYOUT OF WORK

Except as specifically provided herein, Contractor shall be responsible for laying out all work and accomplish this work in a manner acceptable to Engineer. Engineer will check Contractor's layout of all major structures and any other layout work done by Contractor at Contractors request, but this check does not relieve Contractor of responsibility of correctly locating all work in accordance with plans and specifications.

GC-11. ENGINEER'S AUTHORITY AND DUTY

Unless otherwise specified, it is mutually agreed between parties to this Contract that Engineer will observe quality and progress of Work at various times. To prevent delays and disputes and discourage litigation, it is further agreed Engineer shall, in all cases, determine amounts and quantities of several kinds of work to be paid for under this contract. He shall determine all questions in relation to said work and construction thereof, and in all cases, decide every question which may arise relative to execution of this contract on part of said Contractor. Engineer's estimates and findings shall be conditions precedent to right of parties hereto to any action of contract, and to any rights of Contractor to receive any money under this contract; provided, however, should Engineer render any decision or give any direction, which in the opinion of either party hereto, is not in accordance with meaning and intent of this contract, either party may file with said Engineer within 30 days, his written objection to decision or direction so rendered. It is the intent of this contract there be no delay in execution of Work; therefore, written decision or directions of Engineer as rendered, shall be promptly carried out, and any claim arising therefrom shall be thereafter adjusted as hereinafter provided.

Engineer shall, within a reasonable time, render and deliver to both Owner and Contractor, a written decision on all claims of parties hereto and all questions which may arise relative to execution of Work or interpretation of contract, specifications, and plans. Should Engineer fail to make such decision within a reasonable time, an appeal may be taken as if his decision had been rendered against the party appealing.

Whenever "directed," "required," "permitted," "designated," "considered necessary," "prescribed," or words of like import are used, it shall be understood the direction, requirement, permission, order, designation, or prescription, of Engineer is intended. Similarly, "approval," "acceptable," "satisfactory," or words of like import shall mean approved by or acceptable or satisfactory to Engineer.

Whenever in specifications or drawings accompanying this contract, terms of description of various qualities relative to finish, workmanship, or other qualities of similar kind which cannot, from their nature, be specifically and clearly described and specified, but necessarily described in general terms, fulfillment of which must depend on individual judgment, in all such cases, any question of fulfillment of said specifications shall be decided by Engineer, and said work shall be done in accordance with his interpretations of meaning of words, terms, or clauses defining character of Work.

GC-12. SUPERINTENDENCE AND PROJECT REPRESENTATION

It is agreed by Contractor Engineer shall be and is hereby authorized to appoint from time-to-time such subordinate engineers, supervisors, or project representatives as said Engineer may deem proper to inspect material furnished and Work done under this contract, and to see said material is furnished, and said work is done in accordance with specifications therefor. Contractor shall furnish all reasonable aid and assistance required by subordinate engineers, supervisors, or project representatives for the proper inspection and examination of Work. Contractor shall regard and obey the directions and instructions of any subordinate engineers, supervisors or project representatives so appointed, when such directions and instructions are consistent with obligations of this Contract and accompanying plans and specifications, provided; however, should Contractor object to any orders by any subordinate engineer, supervisor, or project representative, Contractor may, within six days, make written appeal to Engineer for his decision.

GC-13. CONTRACTOR'S DUTY AND SUPERINTENDENCE

Contractor shall give personal attention to faithful prosecution and completion of this contract and keep on Work, during progress, competent superintendent and any necessary assistants all satisfactory to Engineer. Superintendent shall represent Contractor in his absence and all directions given him shall be as binding as if given to Contractor. Adequate supervision by competent and responsible representatives of Contractor is essential to proper performance of Work and lack of such supervision shall be grounds for suspending operations of Contractor. Important directions shall be confirmed in writing to Contractor. Other directions shall be so confirmed on written request in each case.

GC-14. CONTRACTOR'S UNDERSTANDING

It is understood and agreed that Contractor has, by careful examination, satisfied himself as to nature and location of Work, confirmation of ground, character, quality, and quantity of materials to be encountered, character of equipment and facilities needed preliminary to and during prosecution of Work, general and local conditions, and all other matters which can in any way affect Work under this contract. No verbal agreement or conversation with any officer, agent, or employee of Owner, either before or after execution of this contract shall affect or modify any terms or obligations herein contained.

GC-15. CHARACTER OF WORKERS

Contractor agrees to employ only orderly and competent employees, skillful in performance of type of work required under this contract, to do Work; and agrees whenever Engineer inform him in writing any employee(s) on Work are, in his opinion, incompetent, unfaithful, or disorderly, such employee or employees shall be discharged from Work and not again be employed on Work without Engineer's written consent.

GC-16. CONTRACTOR'S BUILDINGS

Building structures for housing employees, or erecting tents or other forms of protection, will be permitted only at such places as Engineer shall direct, and sanitary conditions of grounds in or about such structures shall at all times be maintained in a manner satisfactory to Engineer.

GC-17. SANITATION

Necessary sanitary conveniences for use of laborers on work, properly secluded from public observation, shall be constructed and maintained by Contractor to be approved by Engineer, and their use shall be strictly enforced.

GC-18. SHOP DRAWINGS

Contractor shall submit to Engineer with such promptness as to cause no delay in his own work or that of any other Contractor, shop and/or setting drawings and schedules required for Work of various trades, and Engineer shall pass upon them with reasonable promptness, making required corrections. Engineer's approval of such drawings or schedules, shall not relieve Contractor from responsibility for deviations from drawings or specifications, unless he has, in writing, called Engineer's attention to such deviations at time of submission nor relieve him from responsibility for errors of any sort in shop drawings or schedules.

GC-19. PRELIMINARY APPROVAL

Engineer shall not have power to waive obligations of this contract for furnishing by Contractor of good material, and performing good work as herein described, and full accordance with plans and specifications. No failure or omission of Engineer to condemn any defective work or material shall relieve Contractor from obligations to tear out, remove, and properly replace same at any time prior to final acceptance upon discovery of said defective work or material; provided, however, Engineer shall upon request of Contractor, inspect, accept, and/or reject any material furnished, and in event material has been once accepted by Engineer, such acceptance shall be binding on Owner, unless clearly shown such material furnished does not meet specifications for this work. Any questioned work may be ordered taken up or

removed for re-examination, by Engineer, prior to final acceptance, and, if found not in accordance with specifications for said work, all expense of removing, re-examination, and replacement shall be borne by Contractor, otherwise expense thus incurred shall be allowed as Extra Work and paid for by Owner, provided that, where inspection or approval is specifically required by specifications prior to performance of certain work, should Contractor proceed with such work without requesting prior inspection or approval, he shall bear all expense of taking up, removing, and replacing his work if so directed by Engineer.

GC-20. DEFECTS AND THEIR REMEDIES

It is further agreed if Work or any part thereof, or any material brought on site of Work for use in Work or selected for same, shall be deemed by Engineer as unsuitable or not in conformity with specifications, Contractor shall, after receipt of written notice thereof from Engineer, forthwith remove such material and rebuild or otherwise remedy such work so it shall be in full accordance with this contract.

GC-21. CHANGES AND ALTERATIONS

Contractor further agrees Owner may make such changes and alterations as Owner may see fit, in line, grade, form, dimensions, plans, or materials for Work herein contemplated, or any part thereof, before or after beginning construction without affecting validity of this contract and accompanying performance bond.

If such changes or alterations diminish quantity of Work to do, they shall not constitute basis for a claim for damages, or anticipated profits on Work that may be dispensed with, except as provided for unit price items under "Estimated Quantities." If amount of work is either increased or decreased, and Work can fairly be classified under specifications, price adjustment for such increase or decrease shall be made according to quantity actually done and at unit price, if any, established for such work under this contract, except as provided for unit price items under "Estimated Quantities;" otherwise, price adjustment for such changed work shall be made as provided under Extra Work. In case Owner shall make such changes or alterations as useless any material already done or material already furnished or used, Owner shall recompense Contractor for any material or labor so used, and any actual loss occasioned by such change, due to actual expense incurred in preparation as originally planned.

GC-22. RIGHT OF ENGINEER TO MODIFY METHODS AND EQUIPMENT

If at any time, methods or equipment used by Contractor are found inadequate to secure quality of work or rate of progress required under this contract, Engineer may order Contractor in writing to increase safety or improve character and efficiency, and Contractor shall comply with such order.

If at any time, Working force of Contractor is inadequate for securing progress herein specified, Contractor shall, if so ordered in writing, increase his force or equipment, or both, to such an extent as to give reasonable assurance of compliance with schedule of progress.

GC-23. KEEPING OF PLANS AND SPECIFICATIONS ACCESSIBLE

Engineer shall furnish Contractor with an adequate and reasonable number of copies of all specifications without expense to him, and Contractor shall keep one copy of same constantly accessible on Work, with latest revisions noted thereon.

GC-24. OWNERSHIP OF DRAWINGS

All drawings, specifications, and copies thereof furnished by Engineer shall not be reused on other work, and with exception of signed contract sets, are returned to him on request, at completion of Work. All models are property of Owner.

GC-25. ADEQUACY OF DESIGN

It is understood Owner believes he employed competent engineers and designers. It is, therefore, agreed Owner shall be responsible for adequacy of design, sufficiency of Contract Documents,

safety of structure, and practicability of operations of completed project; provided Contractor complied with requirements of said Contract Documents, all approved modifications thereof, additions, and alterations thereto approved in writing by Owner. Burden of proof of such compliance shall be upon Contractor to show he complied with said requirements of Contract Documents, approved modifications thereof, and all approved additions and alterations thereto.

GC-26. RIGHT OF ENTRY

Owner reserves the right to enter property or location on which Works herein contracted for are to be constructed or installed, by such agent or agents as he may elect, to supervise and inspect Work, or construct or install such collateral work as said Owner may desire.

GC-27. COLLATERAL CONTRACTS

Owner agrees to provide by separate contract or otherwise, all labor and material essential to completion of Work specifically excluded from this contract, not delaying progress of Work, or damage said Contractor, except where such delays are specifically mentioned elsewhere in Contract Documents.

GC-28. DISCREPANCIES AND OMISSIONS

It is further agreed it is the intent of this contract all work must be done and material furnished in accordance with generally accepted practice, and in the event of any discrepancies between separate contract documents, priority of interpretation defined under "Contract Documents" shall govern. In the event there is still any doubt as to meaning and intent of any portion of contract, specifications, or drawings, Engineer shall define which is intended to apply to Work.

GC-29. DELETED

GC-30. PROTECTION AGAINST ACCIDENT TO EMPLOYEES AND THE PUBLIC

Contractor shall take out and procure a policy or policies of workmen's compensation insurance with an insurance company licensed to transact business in the State of Texas, which policy shall comply with Workman's Compensation Law of the State of Texas. Contractor shall at all times exercise reasonable precautions for the safety of employees and others on or near Work and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building and construction codes. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America except where incompatible with Federal, State or Municipal laws or regulations. Contractor, sureties, and insurance carriers shall defend, indemnify, and save harmless Owner and all officers, agents, and employees and Engineer and agents and employees from all suits, actions, or claims of any character, name, and description brought for or on account of any injuries or damages received or sustained by any persons or property, on account of any negligent act or fault of Contractor or any subcontractor, agents, or employees, in execution and supervision of said contract and project which is the subject matter of this contract or on account of Contractor or any subcontractor failure to provide necessary barricades, warning lights, or signs, and will be required to pay any judgment with costs obtained against Owner or any officers, agents, or employees, and/or Engineer, his agents and employees.

Safety precautions taken shall be sole responsibility of Contractor, in his sole discretion as an independent contractor; inclusion of this paragraph in the contract, as well as any notice given by Owner, Engineer, or representatives concerning omissions under this paragraph as Work progresses, are intended only as reminders to Contractor of his duty and not construed as any assumption of duty to supervise safety precautions by either Owner or Engineer.

GC-31. CONTRACTOR'S INSURANCE

Contractor shall procure and carry, at his sole cost and expense, throughout life of contract, insurance protection as hereinafter specified. All Insurance shall name Owner and Engineer as additional

insureds except Worker's Compensation and Employer Liability Insurance. Such insurance shall be carried with an insurance company licensed to transact business in the State of Texas and cover all operations in connection with this contract. Contractor's insurance shall cover himself and as a minimum all subcontractors and sub-subcontractors. All other sublevels of contractors shall provide copies of proof of insurance if not covered by general contractor.

Contractor shall provide a Waiver of Subrogation in favor of the City of Midland and Parkhill, Smith & Cooper, Inc. on Worker's Compensation, and Employer Liability Insurance, Contractor's Public Liability and Property Damage Liability Insurance and Automobile Insurance.

a. Worker's Compensation and Employer Liability Insurance: As required by statute, covering all employees employed on Work whether employed by Contractor or subcontractor.

b. Contractor's Public Liability and Property Damage Liability Insurance: Providing for a limit of not less than $1,000,000.00 for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of $1,000,000.00 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, and regular Contractor's Property Damage Liability Insurance providing for a limit of not less than $1,000,000.00 for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit of $2,000,000.00 for all damages arising out of injury to or destruction of property during policy period.

c. Automobile Insurance: Providing a limit of not less than $1,000,000.00 for injuries, including accidental death, to any one person and, subject to same limit for each person a total limit of $2,000,000.00 on account of one accident, and automobile property damage insurance in an amount not less than $500,000.00.

d. Proof of Carriage of Insurance: Before work on any contract or subcontract starts, each Contractor and subcontractor shall submit to Owner for approval six certificates covering each insurance policy carried and offered as evidence of compliance with requirements, signed by an authorized representative of the insurance company, setting forth:
   1. Name and address of the insured.
   2. Location of operations to which the insurance applied.
   3. Number of policy and the type or types of insurance in force thereunder on date borne by such certificate.
   4. Expiration date of policy and limit(s) of liability thereunder on date borne by such certificate.
   5. Statement that insurance of type afforded by policy, applied to all operations of whatever character, undertaken by insured during performance of this contract, provided such operations are required in performance of contract.
   6. Provision that policy may be cancelled only by mailing written notice to named insured at address shown in this policy stating when, not less than 10 days thereafter, cancellation of such policy shall be effective, with copy to Owner of letter of intent.

GC-32. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

It is hereby understood and mutually agreed, by and between Contractor and Owner, that date of beginning and time for completion as specified in Contract of Work to be done hereunder, are ESSENTIAL CONDITIONS of this contract; and further mutually understood and agreed that Work embraced in this contract shall be commenced on a date to be specified in "Notice to Proceed."

Contractor agrees said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between Contractor and Owner, that time for completion of Work described

herein is a reasonable time for completion of same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If said Contractor shall neglect, fail, or refuse to complete Work within time herein specified, or any proper extension thereof granted by Owner, Contractor does hereby agree, as a part consideration for awarding this contract, to pay to Owner amount specified in contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each calendar day Contractor shall be in default after time stipulated in Contract for completing Work.

Said amount is fixed and agreed upon by and between Contractor and Owner because of impracticability and extreme difficulty of fixing and ascertaining actual damages Owner would in such event sustain, and said amount is agreed to be amount of damages Owner would sustain and said amount shall be retained from time-to-time by Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and specifications wherein a definite and certain length of time is fixed for performance of any act whatsoever; and where under Contract an additional time is allowed for completion of any work, new time limit fixed by such extension shall be of the essence of this contract. Provided, Contractor shall not be charged with liquidated damages or any excess cost when Owner determines Contractor is without fault and Contractor's reasons for time extension are acceptable to Owner; Provided, further, Contractor shall not be charged with liquidated damages of any excess cost when delay in completion of Work is due:

a. To any preference, priority, or allocation order duly issued by the Government;
b. To unforeseeable cause beyond the control and without fault or negligence of Contractor, including, but not restricted to, acts of God or of public enemy, acts of Owner, acts of another Contractor in performance of contract with Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
c. To any delays of subcontractors or suppliers occasioned by any cause specified in subsection (a) and (b) of this article:

Provided, further, Contractor shall, within 10 days from beginning of such delay, unless Owner shall grant a further period of time prior to date of final settlement of contract, notify Owner, in writing, of causes of delay, who shall ascertain facts and extent of delay and notify Contractor within a reasonable time of decision in the matter.

GC-33. PRICE FOR WORK

In consideration of furnishing all necessary labor, equipment, and material and completion of all work by Contractor, and on delivery of all material embraced in this contract in full conformity with specifications and stipulations herein contained, Owner agrees to pay Contractor prices set forth in Proposal hereto attached, made a part of this contract, and Contractor hereby agrees to receive such prices in full for furnishing all material and all labor required for aforesaid work, also for all expenses incurred by him, and for well and truly performing same and whole thereof in the manner and according to this Contract, specifications, drawings, and requirements of Engineer.

GC-34. BONDS

It is further agreed by the parties to this contract that Contractor will execute bonds in sum of 100 percent of total contract price, for satisfactory performance of Work and payment of all labor, materials, and equipment in accordance with this contract on forms provided for this purpose, executed by an approved surety company authorized to do business in the State of Texas, and agreed this contract shall not be in effect until such bonds are furnished and approved by Owner. Performance and Payment Bonds shall be in compliance with Chapter 2253 of the Texas Government Code.

GC-35. LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to Contractor arising out of the nature of Work to be done, or from action of elements, or from any unforeseen circumstances in prosecution of same, or from unusual obstructions or difficulties encountered in the prosecution of Work, shall be sustained and borne by Contractor at his own expense.

GC-36. PROTECTION OF ADJOINING PROPERTY

Said Contractor shall take proper means to protect adjacent or adjoining property or properties, in any way encountered, which might be injured or seriously affected by any process of construction undertaken under this Contract, from any damage or injury by reason of said process of construction; and shall be liable for any and all claims for such damage on account of failure to fully protect all adjoining property. Contractor agrees to indemnify, save, and hold harmless Owner against any claim or claims for damages due to any injury to any adjacent or adjoining property, arising or growing out of performance of contract, but any such indemnity shall not apply to any claim of any kind arising out of existence or character of Work.

GC-37. PROTECTION AGAINST CLAIMS OF SUBCONTRACTORS, LABORERS, MATERIALMEN AND FURNISHERS OF MACHINERY, EQUIPMENT, AND SUPPLIES

Contractor agrees he will indemnify and save Owner harmless from all claims growing out of lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in furthering the performance of this contract. When so desired by Owner, Contractor shall furnish satisfactory evidence that all obligations of nature hereinabove designated, have been paid, discharged, or waived. If Contractor fails so to do, Owner may, at option of Contractor, pay directly any unpaid bills, of which Owner has written notice, or withhold from Contractor's unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payments to Contractor shall be resumed in full, in accordance with terms of this contract, but in no event shall provisions of this paragraph be construed to impose any obligations upon Owner by either Contractor or his surety.

GC-38. PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION

Contractor shall pay all royalties and license fees, and provide use of any design, device, material, or process covered by letters patent or copyright by suitable legal contract with patentee or owner. Contractor shall defend all suits or claims for infringement of any patent or copyrights and shall indemnify and save Owner harmless from any loss on account thereof, except Owner shall defend all such suits and claims and be responsible for all such loss when a particular design, device, material, or process or product of a particular manufacturer is specified or required by Owner; provided, however, if choice of alternate design, device, material, or process is allowed to Contractor, he shall indemnify and save Owner harmless from any loss on account of thereof. If material or process specified or required by Owner is an infringement, Contractor shall be responsible for such loss unless he promptly gives such information to Owner.

GC-39. LAWS AND ORDINANCES

Contractor shall, at all times, observe and comply with all Federal, State, and local laws, ordinances, and regulations, which affect Contractor Work, and indemnify and save harmless Owner against any claims arising from violation of any such laws, ordinances, and regulations by Contractor or his employees, except where such violations are called for by provisions of Contract Documents. If Contractor observes that plans and specifications are at variance therewith, he shall promptly notify Engineer in writing, and any necessary changes shall be adjusted as provided in Contract for changes in Work. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and

regulations, and without such notice to Engineer, he shall bear all costs arising therefrom. In case Owner is a body politic and corporate law where he derives powers, insofar as same regulates objects for which, or in manner in which, or conditions under which Owner may enter into contract, shall be controlling, and considered as part of this contract, to same effect as though embodied herein.

GC-40. ASSIGNMENT AND SUBLETTING

Contractor further agrees he will retain personal control and give his personal attention to fulfillment of contract and not assign by Power of Attorney, or otherwise, or sublet said contract without written consent of Owner, and no part or feature of Work will be sublet to anyone objectionable to Engineer or Owner. Contractor further agrees the subletting of any portion or feature of Work, or materials required in performance of this contract, shall not relieve Contractor from full obligations to Owner, as provided by this Contract.

GC-41. TIME AND ORDER OF COMPLETION

It is the meaning and intent of this contract, unless otherwise herein specifically provided, Contractor be allowed to prosecute his work at such times and sessions, in such order of precedence, and in such manner most conducive to economy of construction; provided, however, order and time of prosecution shall be such that Work shall be substantially completed as a whole or in part, in accordance with this contract, plans, and specifications, and within time of completion designated in proposal; provided, also, when Owner is having other work done, by contract or his own force, Engineer may direct time and manner of constructing Work done under this contract so conflict will be avoided and construction of various works done for Owner shall be harmonized.

Contractor shall submit, at such times reasonably requested by Engineer, schedules to show the order in which Contractor proposes to carry on Work, with dates at which Contractor will start several parts of Work, and estimated dates of completion of several parts.

GC-42. EXTENSION OF TIME

Should Contractor be delayed in completion of Work by any act or neglect of Owner, Engineer, any employee of either, other contractors employed by Owner, changes ordered in Work, strikes, lockouts, fires, and unusual delays by common carriers, unavoidable cause(s) beyond Contractor's control, or any cause which Engineer decides justifies delay, an extension of time shall be allowed for completing Work, sufficient to compensate for delay, amount of extension determined by Engineer, provided, however, Contractor shall give Engineer prompt notice in writing of cause of such delay.

GC-43. HINDRANCES AND DELAYS

No claims shall be made by Contractor for damages resulting from hindrances or delays from any cause (except where Work is stopped by order of Owner for his own convenience) during progress of any portion of Work embraced in this contract. In case said work shall be stopped by act of Owner, such expense as in judgment of Engineer is caused by such stoppage of said work shall be paid by Owner to Contractor.

GC-44. QUANTITIES AND MEASUREMENTS

No extra or customary measurements of any kind allowed, but actual measured and/or computed length, area, solid contents, number, and weight only shall be considered, unless otherwise specifically provided.

GC-45. ESTIMATED QUANTITIES

This Contract, including specifications, plans, and estimate, is intended to show clearly all work to be done and material furnished hereunder. Where estimated quantities are shown for various classes of work to be done and material furnished under this contract, they are approximate, used only as a basis for estimating probable cost of Work, and comparing proposals offered for Work. It is understood and

agreed the actual amount of work to be done and material furnished under this contract may differ somewhat from these estimates, and where basis for payment under this contract is unit price method, payment shall be for actual amount of such work done and material furnished.

Where payment is based on unit price method, Contractor agrees he will make no claim for damages, anticipated profits, or otherwise on account of any differences found between quantities of work actually done, material actually furnished under this contract, and estimated quantities contemplated and contained in proposal; provided, however, where actual quantity of any major item in this contract is an estimated quantity and actual quantity of such "major item" varies more than 25 percent above or below estimated quantity stated in this contract, an equitable adjustment in Contract price shall be made upon demand of either party. Equitable adjustment shall be based upon any increase or decrease in costs due solely to variation above 125 percent or below 75 percent of estimated quantity.

"Major Item" shall be any individual bid item included in proposal that has a total cost equal to or greater than 10 percent of total contract cost, computed on basis of original bid proposal, quantities, and Contract unit prices.

Any revised consideration is to be determined by agreement between parties, otherwise by terms of this Contract, as provided under "Extra Work."

GC-46. PARTIAL PAYMENTS

On or before the last day of each month, Contractor shall prepare for review by Engineer a statement showing as completely as practicable total value of Work done by Contractor for prior month/period. Statement shall also include value of all sound materials delivered on site of Work to be fabricated into Work. Engineer, after approval, shall submit Contractor's partial pay application to Owner.

Owner shall then pay Contractor within three working days after receipt of partial payment from applicable governmental authority, total amount of Engineer's statement, less 5 percent of amount thereof, which 5 percent shall be retained until final payment, and further less all previous payments and all further sums may be retained by Owner under terms of this Contract. It is understood, however, that in case whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on part of Contractor, Owner may, -upon written recommendation of Engineer, pay a reasonable and equitable portion of retained percentage to Contractor; or Contractor at Owner's option, may be relieved of obligation to fully complete Work, and thereupon, Contractor shall receive payment of balance due him under Contract subject only to conditions stated under "Final Payment."

GC-47. USE OF COMPLETED PORTIONS

Owner shall have the right to take possession of and use any completed or partially completed portions of Work, notwithstanding time for completing entire work or such portions may not have expired but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with Contract Documents. If such prior use increases cost of or delays Work, Contractor shall be entitled to such extra compensation, or extension of time, or both, as Engineer may determine.

GC-48. FINAL COMPLETION AND ACCEPTANCE

Within 20 days after Contractor has given Engineer written notice that Work has been completed, Engineer and Owner shall inspect Work and within said time, if Work is completed in accordance with Contract Documents, Engineer shall issue to Owner and Contractor his Certificate of Completion, and thereupon it shall be duty of Owner, within 10 days, to issue a Certificate of Acceptance of Work to Contractor.

GC-49. FINAL PAYMENT

Upon issuance of Certificate of Completion, Engineer shall proceed to make final measurements and prepare final statement of value of all work performed and materials furnished under terms of Contract and certify same to Owner, who shall pay to Contractor on or before the 20th day after date of the Certificate of Completion, or if governmental financial assistance is involved, within 30 working days of receipt of final payment from applicable governmental authority, balance due Contractor under terms of this Contract, provided he fully performed his contractual obligations under terms of this contract; and said payment shall become due in any event upon said performance by Contractor. Neither Certificate of Acceptance, final payment, nor any provision in Contract Documents, shall relieve Contractor of obligation for fulfillment of any warranty required in Special Provisions of Specifications.

GC-50. PAYMENT WITHHELD

Owner may, on account of subsequently discovered evidence, withhold or nullify whole or part of any certificate to such extent as necessary to protect himself from loss on account of:

a. Defective work not remedied.
b. Claims filed or reasonable evidence indicating possible filing of claims.
c. Failure of Contractor to make payments properly to subcontractors or for material or labor.
d. Damage to another contractor.

When grounds are removed, or Contractor provides a Surety Bond satisfactory to Owner, to protect Owner in amount withheld, payment shall be made for amounts withheld because of them.

GC-51. DELAYED PAYMENTS

Should Owner fail to make payment to Contractor of sum named in any partial or final statement, when payment is due, or should Engineer fail to issue any statement on or before date provided, Owner shall pay Contractor, in addition to sum shown as due by such statement, interest thereon at the rate of 6 percent per annum, unless otherwise specified, from date due as provided under "Partial Payments" and "Final Payments," until fully paid, fully liquidating any injury to Contractor growing out of such delay in payment, but right is expressly reserved to Contractor in the event payments be not promptly made as provided under "Partial Payments," to at any time thereafter treat Contract as abandoned by Owner and recover compensation, as provided under "Abandonment of Contract," unless such payments are withheld in accordance with the provisions of "Payments Withheld."

GC-52. EXTRA WORK

"Extra Work," as used in this contract, shall mean and include all work required by Engineer or Owner done by Contractor to accomplish any change, alteration, or addition to Work shown upon plans, or reasonably implied by specifications, and not covered by Contractor's Proposal, except as provided under "Changes and Alterations" herein.

It is agreed Contractor shall perform all Extra Work under direction of Engineer when presented with a written Extra Work Order signed by Engineer, subject, however, to right of Contractor to require a written confirmation of such Extra Work Order by Owner. It is also agreed compensation to be paid Contractor for performing said Extra Work shall be determined by one or more of the following methods:

Method A - By agreed unit prices; or
Method B - By agreed lump sum; or
Method C - If neither Method A nor Method B be agreed upon before Extra Work is commenced, Contractor shall be paid "actual field cost" of Work, plus 15 percent.

In the event said Extra Work be performed and paid for under Method C, provisions of this paragraph shall apply and "actual field cost" defined to include cost of all workmen such as foremen, timekeepers, mechanics, and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used on such Extra Work, plus actual transportation charges necessarily incurred, together with all expenses incurred directly on account of such Extra Work, including Social Security, Old Age Benefits, Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as required by any law or ordinance, or directed by Engineer or Owner, or by them agreed to. Engineer may direct form in which accounts of "actual field cost" shall be kept and records of these accounts made available to Engineer. Engineer may also specify in writing, before Work commences, method of doing Work and type and kind of machinery and equipment to be used; otherwise these matters determined by Contractor. Unless otherwise agreed upon, prices for use of machinery and equipment, shall be determined by using 100 percent, unless otherwise specified, of the latest schedule of Equipment Ownership Expense adopted by the Associated General Contractors of America. Where practicable, terms and prices for use of machinery and equipment shall be incorporated in Written Extra Work Order. The 15 percent of "actual field cost" paid Contractor, shall cover and compensate him for his profit, overhead, general superintendence and field office expense, and all other elements of cost and expense not embraced within "actual field cost" as herein defined, save that where Contractor's Camp or Field Office must be maintained primarily on account of such Extra Work, then cost to maintain and operate same shall be included in "actual field cost."

No claim for Extra Work of any kind allowed unless ordered in writing by Engineer. In case any orders or instructions, either oral or written, appear to Contractor to involve Extra Work for which he should receive compensation or an adjustment in construction time, he shall make written request to Engineer for written order authorizing such Extra Work. Should a difference of opinion arise as to what does or does not constitute Extra Work, or as to payment therefor, and Engineer insists upon performance, Contractor shall proceed with Work after making written request for written order and keep an accurate account of "actual field cost" thereof, as provided under Method C. Contractor will thereby preserve right to submit matter of payment by filing a claim as herein provided.

GC-53. TIME OF FILING CLAIMS

It is further agreed by both parties hereto, all questions of dispute or adjustment presented by Contractor shall be in writing and filed with Engineer within 15 days after Engineer has given any directions, order, or instruction to which Contractor desires to take exception. Engineer shall reply to such written exceptions by Contractor and render his final decision in writing. In case Contractor should appeal from Engineer's decision, appeal shall be filed with Engineer and Owner in writing within 10 days after date of delivery to Contractor of Engineer's final decision. It is further agreed final acceptance of Work by Owner and acceptance by Contractor of final payment, shall be a bar to any claim by either party, except where noted otherwise in Contract Documents.

GC-54. DELETED

GC-55. ABANDONMENT BY CONTRACTOR

In case Contractor should abandon and fail or refuse to resume work within 10 days after written notification from Owner, or Engineer, or Contractor fails to comply with orders of Engineer, when such orders are consistent with Contract Documents, then, and in that case, where a performance bond exists, Surety on bond shall be notified in writing and directed to complete Work, and a copy of said notice shall be delivered to Contractor.

After receiving said notice of abandonment, Contractor shall not remove from Work any machinery, equipment, tools, materials, or supplies on the job, but same, together with any materials and equipment under contract for Work, may be held for use on Work by Owner or the Surety on construction bond, or another contractor in completion of Work; and Contractor shall not receive any rental or credit

therefor (except when used in connection with Extra Work, where credit allowed as provided for under "Extra Work"), it understood use of such equipment and materials will ultimately reduce cost to complete Work and reflected in final settlement.

Where there is no performance bond provided or in case Surety should fail to commence compliance with notice for completion hereinbefore provided for, within 10 days after service of such notice, Owner may provide for completion of Work in either of the following elective manners:

a. Owner may thereupon employ such force of men and use such machinery, equipment, tools, materials, and supplies as said Owner may deem necessary to complete Work and charge expense of such labor, machinery, equipment, tools, materials, and supplies to said Contractor, and expense charged shall be deducted and paid by Owner out of such moneys as due, or may thereafter at any time become due to Contractor under and by virtue of this Contract. In case such expense is less than sum payable under this contract, if same had been completed by Contractor, then Contractor shall receive the difference. In case such expense is greater than sum payable under this contract, if same completed by said Contractor, then Contractor and/or Surety shall pay amount of such excess to Owner; or

b. Owner under sealed bids, after five days' notice, published one or more times in a newspaper having general circulation in county of location of Work, may let Contract for completion of Work under substantially same terms and conditions provided in this contract. In case of any increase in cost to Owner under new contract as compared to what would have been cost under this contract, such increase shall be charged to Contractor and Surety shall be and remain bound therefor. However, should cost to complete any such new contract prove less than cost to complete under this contract, Contractor and/or Surety shall be credited therewith.

When Work shall have been substantially completed, Contractor and Surety shall be so notified and Certificates of Completion and Acceptance, as provided herein, shall be issued. Complete itemized statement of Contract accounts, certified to by Engineer as correct, shall then be prepared and delivered to Contractor and Surety, whereupon Contractor and/or Surety, or Owner as case may be, shall pay balance due as reflected by said statement, within 15 days after date of such Certificate of Completion.

In the event statement of accounts shows cost to complete Work is less cost to Owner, had Work been completed by Contractor under terms of this contract; or when Contractor and/or Surety shall pay balance shown due by them to Owner, then all machinery, equipment, tools, materials, or supplies left on site of Work shall be turned over to Contractor and/or Surety. Should cost to complete Work exceed Contract price, and Contractor and/or his Surety fail to pay amount due Owner within time designated herein, and there remains any machinery, equipment, tools, materials, or supplies on site of Work, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to Contractor and Surety at respective addresses designated in this contract provided; however, actual written notice given in any manner will satisfy this condition. After mailing, or other giving of such notice, such property shall be held at risk of Contractor and Surety subject only to duty of Owner to exercise ordinary care to protect such property. After 15 days from date of said notice, Owner may sell such machinery, equipment, tools, materials, or supplies and apply net sum derived from such sale to credit of Contractor and Surety. Such sale may be made at public or private sale, with or without notice, as Owner elects. Owner shall release any machinery, equipment, tools, materials, or supplies, which remain on Work, and belong to persons other than Contractor or Surety, to proper owners. Books on all operations provided herein shall be open to Contractor and Surety.

GC-56. ABANDONMENT BY OWNER

In case Owner shall fail to comply with terms of this contract, and should fail or refuse to comply with said terms within 10 days after written notification by Contractor, Contractor may suspend or wholly abandon Work, and remove therefrom all machinery, tools, and equipment, and all materials on site of work not included in payments to Contractor and have not been wrought into Work. And thereupon Engineer shall make an estimate of total amount earned by Contractor, which estimate shall include value of all work actually completed by said Contractor (at prices stated in attached proposal where unit prices are used), value of all partially completed work at a fair and equitable price, and amount of all Extra Work performed at prices agreed upon, or provided for by terms of this contract, and a reasonable sum to cover cost of any provisions made by Contractor to carry whole work to completion and which cannot be utilized. Engineer shall then make a final statement of balance due Contractor by deducting from estimates, all previous payments by Owner and all other sums retained by Owner under terms of this Contract and certify same to Owner who shall pay to Contractor on or before 30 days after date of notification by Contractor, balance shown by said final statement as due Contractor, under terms of this Agreement.

Part 1 – General Contract Provisions

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

Paragraph Number	Term	Definition
10-01	**AASHTO**	The American Association of State Highway and Transportation Officials.
10-02	**Access Road**	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	**Advertisement**	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	**Airport**	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
10-05	**Airport Improvement Program (AIP)**	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	**Air Operations Area (AOA)**	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
10-07	**Apron**	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	**ASTM International (ASTM)**	Formerly known as the American Society for Testing and Materials (ASTM).
10-09	**Award**	The Owner’s notice to the successful bidder of the acceptance of the submitted bid.
10-10	**Bidder**	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

Paragraph Number	Term	Definition
10-11	**Building Area**	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
10-12	**Calendar Day**	Every day shown on the calendar.
10-13	**Certificate of Analysis (COA)**	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	**Certificate of Compliance (COC)**	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
10-15	**Change Order**	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
10-16	**Contract**	A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment. The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.
10-17	**Contract Item (Pay Item)**	A specific unit of work for which a price is provided in the contract.
10-18	**Contract Time**	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	**Contractor**	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
10-20	**Contractors Quality Control (QC) Facilities**	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	**Contractor Quality Control Program (CQCP)**	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the

Paragraph Number	Term	Definition
		contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
10-22	**Control Strip**	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	**Construction Safety and Phasing Plan (CSPP)**	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
10-24	**Drainage System**	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	**Engineer**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
10-26	**Equipment**	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
10-27	**Extra Work**	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	**FAA**	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	**Federal Specifications**	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	**Force Account**	**a.** Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis. **b.** Owner Force Account - Work performed for the project by the Owner's employees.
10-31	**Intention of Terms**	Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident

Paragraph Number	Term	Definition
		Project Representative (RPR) is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner. Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.
10-32	**Lighting**	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	**Major and Minor Contract Items**	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.
10-34	**Materials**	Any substance specified for use in the construction of the contract work.
10-35	**Modification of Standards (MOS)**	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	**Notice to Proceed (NTP)**	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
10-37	**Owner**	The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is **Midland International Air & Space Port**.
10-38	Passenger Facility Charge (PFC)	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
10-39	**Pavement Structure**	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	**Payment bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

Paragraph Number	Term	Definition
10-41	**Performance bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
10-42	**Plans**	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
10-43	**Project**	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	**Proposal**	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	**Proposal guaranty**	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
10-46	**Quality Assurance (QA)**	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	**Quality Control (QC)**	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	**Quality Assurance (QA) Inspector**	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
10-49	**Quality Assurance (QA) Laboratory**	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
10-50	**Resident Project Representative (RPR)**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
10-51	**Runway**	The area on the airport prepared for the landing and takeoff of aircraft.

Paragraph Number	Term	Definition
10-52	**Runway Safety Area (RSA)**	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
10-53	**Safety Plan Compliance Document (SPCD)**	Details how the Contractor will comply with the CSPP.
10-54	**Specifications**	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	**Sponsor**	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
10-56	**Structures**	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
10-57	**Subgrade**	The soil that forms the pavement foundation.
10-58	**Superintendent**	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.
10-59	**Supplemental Agreement**	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%: (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
10-60	**Surety**	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
10-61	**Taxilane**	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	**Taxiway**	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of

Paragraph Number	Term	Definition
		aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
10-63	**Taxiway/Taxilane Safety Area (TSA)**	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	**Work**	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
10-65	**Working day**	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.
10-66	**Owner Defined terms**	**See City of Midland Contract Documents**

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). Project Advertisement and Instruction to Bidders may be found in Sections A-1 and IB-1, respectively, of the front end portion of the Project Manual.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference is required on this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. **See Section IB-9 for Prebid Conference information.**

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms,* of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than **three** days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

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Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within **90** calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals.* Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds.*

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds*, of this section, within **10** calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract*, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

END OF SECTION 30

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Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work

covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or

grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the RPR; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If

any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions.

SP-1 Scope of Work
SP-2 Contract Documents
SP-3 Time and Order of Completion
SP-4 Limitation of Operation
SP-5 Construction Activity
SP-6 Affidavit of Bills Paid
SP-7 Calendar Day
SP-8 Protection of Property
SP-9 Electric Power and Natural Gas
SP-10 Lines and Grades
SP-11 Water for Construction
SP-12 Material Tests
SP-13 Barricades, Signs, and Hazard Markings
SP-14 Prevention of Air and Water Pollution
SP-15 Public Convenience and Safety
SP-16 Final Cleaning Up
SP-17 Insurance
SP-18 Removal and Disposal of Structures, Utilities and Obstructions
SP-19 Conformity with Plans and Allowable Deviations
SP-20 Removal of Defective and Unauthorized Work
SP-21 Disputed Claims for Extra Work
SP-22 Federal Participation
SP-23 Indemnification
SP-24 Contractor's Responsibility for Work
SP-25 Correction of Faulty Work after Final Payment
SP-26 Texas State Sales Tax
SP-27 Separate Contracts
SP-28 Trench Safety
SP-29 Load Restrictions
SP-30 Notice to Proceed
SP-31 Payment for Materials on Hand
SP-32 Weighing and Measuring Equipment
SP-33 Progress Schedule
SP-34 Average Climatic Range
SP-35 Substantially Complete
SP-36 Submittals
SP-37 Geotechnical Information
SP-38 Sovereign Immunity
SP-39 Governing Law and Venue

SP-40 Third-Party Beneficiary
SP-41 Releases
SP-42 Independent Contractor
SP-43 Notice of Alleged Breach; Statutory Prerequisites
SP-44 Assignment
SP-45 Waiver of Attorney's Fees
SP-46 Prompt Pay Act
SP-47 Payment
SP-48 Project Closeout
SP-49 Disclosure of Interested Parties

50-05 Cooperation of Contractor. The Contractor shall be supplied with an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be

provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): **DWG and PDF**.

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done

without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the

work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum,* that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans and is indicated as follows: **None**.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is in Appendix A.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities

during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not

preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work,* and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements. See Special Provisions SP-17.

END OF SECTION 70

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Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **25** percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR fourteen (14) days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within **10** days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least **ten (10) days** prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice-monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows: None.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for

normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1

Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Phase 1	$4,000	21
Phase 2	$4,000	17
Phase 3	$4,000	33
Phase 4	$4,000	40

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard may be weighed, and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles

Term	Description
	shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60°F or will be corrected to the volume at 60°F using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton or hundredweight.
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than 1 pound. The use of spring balances will not be permitted. In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%. In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.

Term	Description
	Scale installations shall have available ten standard 50-pound weights for testing the weighing equipment or suitable weights and devices for other approved equipment. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.
Rental Equipment	Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 *Payment for Extra Work*.
Pay Quantities	When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities,* will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items,* the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's

order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

Option 3: The Owner may hold retainage from prime Contractors and provide for prompt and regular incremental acceptances of portions of the prime contract, pay retainage to prime Contractors based on these acceptances, and require a contract clause obligating the prime Contractor to pay all retainage owed to the subcontractor for satisfactory completion of the accepted work within 30 days after the Owner's payment to the prime Contractor. If Option 3 is selected, the percent withheld may range from 0% to 10% but in no case may it exceed 10%. When establishing a suitable retainage value that protects the Owner's interests, give consideration that the performance and payment bonds also provide similar protection of Owner interests. Owner may elect to incrementally release retainage if owner is satisfied its interest with completion of the project are protected in an adequate manner. If Option 3 is selected, insert the following clause and specify a suitable value where indicated:

a. From the total of the amount determined to be payable on a partial payment, 5% percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-03. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.

b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within **seven (7)** days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within **fourteen (14)** days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) obtain all warranties that would be given in normal commercial practice; (2) require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

TECHNICAL SPECIFICATIONS

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by Owner.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 25 percent.

b. When 25 percent or more of the original contract is earned, an additional 25 percent.

c. When 50 percent or more of the original contract is earned, an additional 40 percent.

d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10 percent.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 Mobilization

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of **1.5 inch**. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed, broken to a maximum size of **3/4** inch.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch. If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by RPR. Fill all cracks greater than 1/4 inch wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with

the crack sealant, underfill the crack sealant a minimum of 1/8 inch, not to exceed 1/4 inch. Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4	100
No. 8	90-100
No. 16	65-90
No. 30	40-60
No. 50	25-42
No. 100	15-30
No. 200	10-20

Up to 3-percent cement can be added to accelerate the set time. The mixture shall not contain more than 20-percent natural sand without approval in writing from RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inch of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/contaminates prior to remarking. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by RPR in the field during construction.

High-pressure water and sandblasting are the only approved methods for removing old joint sealant or cleaning joint. High-pressure water is approved in all cases and sandblasting shall be allowed in instances approved by the Engineer. If chemicals are used, they shall comply with the state’s environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch deep. If it is deemed by RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, Contractor shall repair the damaged area without compensation and as directed by RPR.

Removal of foreign substances shall not proceed until approved by RPR. Water used for high-pressure water equipment shall be provided by Contractor at Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. Contractor shall repair all spalled concrete as shown on the plans or as directed by RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches outside the affected area and 2 inches deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. Contractor shall repair all spalled concrete as shown on the plans or as directed by RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property. If Contractor mills or grinds deeper or wider than the plans specify, Contractor shall replace the material removed with new material at Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. RPR shall layout the area to be milled with a straightedge in increments of 1-foot widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by Contractor at Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet and equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 and -1/4 inch of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove millings or cuttings from the pavement and load into a truck. All millings shall be removed and disposed off the airport.

c. Clean-up. Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property .

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. Contractor shall demonstrate, in the presence of RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. Contractor shall demonstrate, in the presence of RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router or random crack saw by removing a minimum of 1/16 inch from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by routing or random crack saw. Following routing or sawing**,** any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Not used.

b. Removal of Inlets/Manholes. Not used.

METHOD OF MEASUREMENT

101-4.1 Removal of Existing Joint Sealant. The unit of measurement for removal of existing joint sealant shall be the linear foot of joint.

101-4.2 Preparation of Joints in Rigid Pavement Prior to Sealing. The unit of measurement for preparation of joints in rigid pavement prior to resealing shall be linear foot of joint.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling,

and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Removal of Existing Joint Sealant, per linear foot;
Item P 101-5.2	Preparation of Joints in Rigid Pavement, per linear foot.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

Item 247
Flexible Base

1. DESCRIPTION

Construct a foundation course composed of flexible base.

2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications. Notify the Engineer of the proposed material sources and of changes to material sources. The Engineer may sample and test project materials at any time before compaction throughout the duration of the project to assure specification compliance. Use Tex-100-E material definitions.

2.1. **Aggregate**. Furnish aggregate of the type and grade shown on the plans and meeting the requirements of Table 1. Each source must meet Table 1 requirements for liquid limit, plasticity index, and wet ball mill for the grade specified. Do not use additives, such as but not limited to lime, cement, or fly ash to modify aggregates to meet the requirements of Table 1 unless shown on the plans.

Table 1
Material Requirements

Property	Test Method	Grade 1–2			
Sampling	Tex-400-A				
Master gradation sieve size (cumulative % retained)	Tex-110-E				
2-1/2"		0			
1-3/4"		0–10			
7/8"		10–35			
3/8"		30–65			
#4		45–75			
#40		65–90			
Liquid Limit, % Max	Tex-104-E	40			
Plasticity Index, Max[1]	Tex-106-E	10			
Plasticity index, Min[1]		As shown on the plans			
Wet ball mill, % Max	Tex-116-E	40			
Wet ball mill, % Max increase passing the #40 sieve		20			
Min compressive strength, psi	Tex-117-E				
lateral pressure 0 psi		35			
lateral pressure 3 psi		–			
lateral pressure 15 psi		175			

1. Determine plastic index in accordance with Tex-107-E (linear shrinkage) when liquid limit is unattainable as defined in Tex-104-E.

Quality Control. The following list will be a guideline for the number of tests required for a sequence of construction. Engineer shall direct required tests and reserves the right to adjust, modify, or waive required test.

Base Material. Retest gradation, liquid limits, and plasticity index, for each 10,000 square yards of base material laid.

2.1.1. **Material Tolerances**. The Engineer may accept material if no more than 1 of the 5 most recent gradation tests has an individual sieve outside the specified limits of the gradation.

When target grading is required by the plans, no single failing test may exceed the master grading by more than 5 percentage points on sieves No. 4 and larger or 3 percentage points on sieves smaller than No. 4.

The Engineer may accept material if no more than 1 of the 5 most recent plasticity index tests is outside the specified limit. No single failing test may exceed the allowable limit by more than 2 points.

2.1.2. **Material Types**. Do not use fillers or binders unless approved. Furnish the type specified on the plans in accordance with the following:

2.1.2.1. **Type A**. Crushed stone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources.

2.1.2.2. **Type B**. Crushed or uncrushed gravel. Blending of 2 or more sources is allowed.

2.1.2.3. **Type C**. Crushed gravel with a minimum of 60% of the particles retained on a No. 4 sieve with 2 or more crushed faces as determined by Tex-460-A, Part I. Blending of 2 or more sources is allowed.

2.1.2.4. **Type D**. Type A material or crushed concrete. Crushed concrete containing gravel will be considered Type D material. Crushed concrete must meet the requirements in Section 247.2.1.3.2., "Recycled Material (Including Crushed Concrete) Requirements," and be managed in a way to provide for uniform quality. The Engineer may require separate dedicated stockpiles in order to verify compliance.

2.1.2.5. **Type E**. Caliche, iron ore or as otherwise shown on the plans.

2.1.3. **Recycled Material**. Reclaimed asphalt pavement (RAP) and other recycled materials may be used when shown on the plans. Request approval to blend 2 or more sources of recycled materials.

2.1.3.1. **Limits on Percentage**. Do not exceed 20% RAP by weight, when RAP is allowed, unless otherwise shown on the plans. The percentage limitations for other recycled materials will be as shown on the plans.

2.1.3.2. **Recycled Material (Including Crushed Concrete) Requirements**.

2.1.3.2.1. **Contractor-Furnished Recycled Materials**. Provide recycled materials, other than RAP, that have a maximum sulfate content of 3,000 ppm when tested in accordance with Tex-145-E. When the Contractor furnishes the recycled materials, including crushed concrete, the final product will be subject to the requirements of Table 1 for the grade specified. Certify compliance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines," for Contractor furnished recycled materials. In addition, recycled materials must be free from reinforcing steel and other objectionable material and have at most 1.5% deleterious material when tested in accordance with Tex-413-A. For RAP, do not exceed a maximum percent loss from decantation of 5.0% when tested in accordance with Tex-406-A. Test RAP without removing the asphalt.

2.1.3.2.2. **Owner-Furnished Required Recycled Materials**. When the Owner furnishes and requires the use of recycled materials, unless otherwise shown on the plans:

- Owner-required recycled material will not be subject to the requirements in Table 1,
- Contractor-furnished materials are subject to the requirements in Table 1 and this Item,
- the final product, blended, will be subject to the requirements in Table 1, and
- for final product, unblended (100% Owner-furnished required recycled material), the liquid limit, plasticity index, wet ball mill, and compressive strength is waived.

Crush Owner-furnished RAP so that 100% passes the 2 in. sieve. The Contractor is responsible for uniformly blending to meet the percentage required.

2.1.3.2.3. **Owner-Furnished and Allowed Recycled Materials**. When the Owner furnishes and allows the use of recycled materials or allows the Contractor to furnish recycled materials, the final blended product is subject to the requirements of Table 1 and the plans.

2.1.3.3. **Recycled Material Sources**. Owner recycled material is available to the Contractor only when shown on the plans. Return unused Owner recycled materials to the Owner stockpile location designated by the Engineer unless otherwise shown on the plans.

The use of Contractor-owned recycled materials is allowed when shown on the plans. Contractor-owned surplus recycled materials remain the property of the Contractor. Remove Contractor-owned recycled materials from the project and dispose of them in accordance with federal, state, and local regulations before project acceptance. Do not intermingle Contractor-owned recycled material with Owner-owned recycled material unless approved.

2.2. **Water**. Furnish water free of industrial wastes and other objectionable matter.

2.3. **Material Sources**. Expose the vertical faces of all strata of material proposed for use when non-commercial sources are used. Secure and process the material by successive vertical cuts extending through all exposed strata, when directed.

3. EQUIPMENT

Provide machinery, tools, and equipment necessary for proper execution of the work.

3.1. Provide rollers in accordance with Item 210, "Rolling." Provide proof rollers in accordance with Item 216, "Proof Rolling," when required.

3.2. When ride quality measurement is required, provide a high speed or lightweight inertial profiler certified at the Texas A&M Transportation Institute. Provide equipment certification documentation. Display a current decal on the equipment indicating the certification expiration date.

4. CONSTRUCTION

Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the plans or as directed.

Stockpile base material temporarily at an approved location before delivery to the roadway. Build stockpiles in layers no greater than 2 ft. thick. Stockpiles must have a total height between 10 and 16 ft. unless otherwise approved. After construction and acceptance of the stockpile, loading from the stockpile for delivery is allowed. Load by making successive vertical cuts through the entire depth of the stockpile.

Do not add or remove material from temporary stockpiles that require sampling and testing before delivery unless otherwise approved. Charges for additional sampling and testing required as a result of adding or removing material will be deducted from the Contractor's estimates.

Haul approved flexible base in clean trucks. Deliver the required quantity to each 100-ft. station or designated stockpile site as shown on the plans. Prepare stockpile sites as directed. When delivery is to the 100-ft. station, manipulate in accordance with the applicable Items.

4.1. **Preparation of Subgrade or Existing Base**. Remove or scarify existing asphalt concrete pavement in accordance with Item P-101 "Surface Preparation" when shown on the plans or as directed. Shape the subgrade or existing base to conform to the typical sections shown on the plans or as directed.

When new base is required to be mixed with existing base, deliver, place, and spread the new flexible base in the required amount per station. Manipulate and thoroughly mix the new base with existing material to provide a uniform mixture to the specified depth before shaping.

Proof roll the roadbed in accordance with Item 216, "Proof Rolling," before pulverizing or scarifying when shown on the plans or directed. Correct soft spots as directed.

4.2. **Placing**. Spread and shape flexible base into a uniform layer with an approved spreader the same day as delivered unless otherwise approved. Construct layers to the thickness shown on the plans. Maintain the shape of the course. Control dust by sprinkling, as directed. Correct or replace segregated areas as directed, at no additional expense to the Owner.

Place successive base courses and finish courses using the same construction methods required for the first course.

Upon completion, the finished base shall conform with the typical section shown on plans and established lines and grades. Contractor should avoid overworking base course and working excess fines to the top of finished surface. If this occurs, Contractor will be required to remove excess fines by power brooming or other mechanical means before placing prime coat.

4.3. **Compaction**. Compact using density control unless otherwise shown on the plans. Multiple lifts are permitted when shown on the plans or approved. Bring each layer to the moisture content directed. When necessary, sprinkle the material in accordance with Item 204, "Sprinkling."

Begin rolling longitudinally at the sides and proceed towards the center, overlapping on successive trips by at least 1/2 the width of the roller unit. Begin rolling at the low side and progress toward the high side on superelevated curves. Offset alternate trips of the roller. Operate rollers at a speed between 2 and 6 mph as directed.

Rework, recompact, and refinish material that fails to meet or that loses required moisture, density, stability, or finish requirements before the next course is placed or the project is accepted. Continue work until specification requirements are met. Perform the work at no additional expense to the Owner.

Before final acceptance, the Engineer will select the locations of tests and measure the flexible base depth in accordance with Tex-140-E. Correct areas deficient by more than 1/2 in. in thickness by scarifying, adding material as required, reshaping, recompacting, and refinishing at the Contractor's expense.

4.3.1. **Ordinary Compaction**. Ordinary compaction is not intended for this project. If needed, roll with approved compaction equipment as directed. Correct irregularities, depressions, and weak spots immediately by scarifying the areas affected, adding or removing approved material as required, reshaping, and recompacting.

4.3.2. **Density Control**. Compact to at least 100% of the maximum dry density determined by Tex-113-E, unless otherwise shown on the plans. Maintain moisture during compaction within ±2 percentage points of the optimum moisture content as determined by Tex-113-E. Measure the moisture content of the material in accordance with Tex-115-E or Tex-103-E during compaction daily and report the results the same day to the Engineer, unless otherwise shown on the plans or directed. Do not achieve density by drying the material after compaction.

The Engineer will determine roadway density and moisture content of completed sections in accordance with Tex-115-E. The Engineer may accept the section if no more than 1 of the 5 most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

Density tests will be taken at one test per installation area in the patch areas and one test per 200 square yards.

4.4. **Finishing**. After completing compaction, clip, skin, or tight-blade the surface with a maintainer or subgrade trimmer to a depth of approximately 1/4 in. Remove loosened material and dispose of it at an approved location. Seal the clipped surface immediately by rolling with a pneumatic tire roller until a smooth surface is attained.

Add small increments of water as needed during rolling. Shape and maintain the course and surface in conformity with the typical sections, lines, and grades as shown on the plans or as directed.

Correct grade deviations greater than 1/4 in. in 16 feet measured longitudinally or greater than 1/4 in. over the entire width of the cross-section in areas where surfacing is to be placed. Correct by loosening and adding, or removing material. Reshape and re-compact in accordance with Section 247.4.3., "Compaction."

4.5. **Curing**. Cure the finished section until the moisture content is at least 2 percentage points below optimum or as directed before applying the next successive course or prime coat.

4.6. **Ride Quality**. This section applies to the final travel lanes that receive a 1 or 2 course surface treatment for the final surface, unless otherwise shown on the plans. Measure ride quality of the base course after placement of the prime coat and before placement of the surface treatment, unless otherwise approved. Use a certified profiler operator from the Owner's MPL. When requested, furnish the Engineer documentation for the person certified to operate the profiler.

Provide all profile measurements to the Engineer in electronic data files within 3 days after placement of the prime coat using the format specified in Tex-1001-S. The Engineer will use Owner software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi.sections having an average international roughness index (IRI) value greater than 100.0 in. per mile to an IRI value of 100.0 in. per mile or less for each wheel path, unless otherwise shown on the plans.

Re-profile and correct sections that fail to maintain ride quality until placement of the next course, as directed. Correct re-profiled sections until specification requirements are met, as approved. Perform this work at no additional expense to the Owner.

5. MEASUREMENT

Flexible base will be measured as follows:

Item 247-6.1 Flexible Base, Grade 1-2, type A, B, C, D or E, 6-inch thickness, (Complete In Place). per square yard

Measurement is further defined for payment as follows.

5.1. **Square Yard**. By the square yard of surface area in the completed and accepted final position. The surface area of the base course is based on the width of flexible base as shown on the plans. No measurement consideration given to multiple lift installations.

5.2. **Ton**. By the ton of dry weight in vehicles as delivered. The dry weight is determined by deducting the weight of the moisture in the material at the time of weighing from the gross weight of the material. The Engineer will determine the moisture content in the material in accordance with Tex-103-E from samples taken at the time of weighing.

When material is measured in trucks, the weight of the material will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at a location approved by the Engineer. Scales must conform to the requirements of Item 520, "Weighing and Measuring Equipment."

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the types of work shown below. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans for cubic yard in the final position or square yard measurement.

Sprinkling and rolling, except proof rolling, will not be paid for directly but will be subsidiary to this Item unless otherwise shown on the plans.

Where subgrade is constructed under this Contract, correction of soft spots in the subgrade will be at the Contractor's expense. Where subgrade is not constructed under this Contract, correction of soft spots in the subgrade will be paid in accordance with pertinent Items or Article 4.4., "Changes in the Work."

6.1. **Flexible Base (Grade 1-2, Type A, B, C, D or E).** Payment shall be made at the Contract unit price per square yard for 6-inch flexible base constructed in one 6-inch lift. Price shall be full compensation for securing and furnishing all materials, including royalty and freight involved; furnishing scales and labor involved in weighing material when required; loading all materials; all hauling, delivering, and manipulations; sprinkling; rolling; sprinkling for dust control; shaping and fine grading; spreading, mining, blading, compacting, shaping, finishing, and curing base material; labor, tools and incidentals necessary to complete Work.

Payment will be made under:

TxDOT Item 247-6.1, Flexible Base, Grade 1-2, Type A, B, C, D or E, installed in one 6-inch lift, furnished and installed, complete, per square yard.

Item P-501 Cement Concrete Pavement

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete with reinforcement constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10 percent at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10 percent at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10 percent at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30 percent ±0.5 percent weight lithium nitrate in water. If the expansion does not exceed 0.10 percent at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10 percent at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10 percent at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	45 minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1 inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29
D-cracking (Freeze-Thaw)[3]	Durability factor ≥95	ASTM C666

[1] A flat particle is one having a ratio of width to thickness greater than 5; an elongated particle is one having a ratio of length to width greater than 5.

[2] Only required if slag is specified.

[3] Coarse aggregate may only be accepted from sources that have a 20-year service history for the same gradation to be supplied with no history of D-Cracking. Aggregates that do not have a 20-year record of service free from major repairs (less than 5% of slabs replaced) in similar conditions without D-cracking shall not be used unless the material currently being produced has a durability factor greater than or equal to 95 per ASTM C666. Contractor shall submit a current certification and test results to verify the aggregate acceptability. Test results will only be accepted from a State Department of Transportation (DOT) materials laboratory or an accredited laboratory. Certification and test results which are not dated or which are over one year old or which are for different gradations will not be accepted.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with density of Sp. Gr. of 2.40)	1.0[3]
Total of all deleterious Material		3.0[1]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5 percent for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5 percent with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis. The total of all deleterious materials increases up to 3.5 percent.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be limited to 0.1 percent by mass in areas subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. sieve)(100) / (cumulative percent retained on the No. 8 sieve)

(3) The WF is defined as the percent passing the No. 8 sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds of cementitious material per cubic meter yard greater than 564 pounds per cubic yard.

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch	*
1-1/2 inch	*
1 inch	*
3/4 inch	*
1/2 inch	*
3/8 inch	*
No. 4	*
No. 8	*
No. 16	*
No. 30	*
No. 50	*
No. 100	*

501-2.2 Cement. Cement shall conform to the requirements of ASTM **C150** Type **I/II**.

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6 percent. Fly ash shall have a Calcium Oxide (CaO) content of less than 15 percent and a total alkali content less than 3 percent per ASTM C311. Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grades 100 or 120. Slag cement shall be used only at a 25- to 55- percent rate between of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6 percent. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3 percent.

d. Ultrafine fly ash and ultrafine pozzolan. UltraFine Fly Ash (UFFA) and UltraFine Pozzolan (UFP) shall conform to ASTM C618, Class F or N, and the following additional requirements:

(1) The strength activity index at 28 days of age shall be at least 95 percent of the control specimens.

(2) The average particle size shall not exceed 6 microns.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of Item P-605 and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by RPR.

When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Deformed and Plain Carbon-Steel Bars** conforming to the requirements of ASTM **A615**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A or B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. Air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet requirements of ASTM C494, Types A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Types A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30 percent aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Not required.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to RPR for review and RPR has taken appropriate action. RPR's review shall not relieve Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day flexural strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a flexural strength of **650** psi per ASTM C78.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches. For hand placement, the slump shall not exceed 4 inches.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to RPR for approval.

RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to RPR at least 30 days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30 percent by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10 percent by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55 percent of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30 percent by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10 percent by weight of total cementitious material.

d. Ultrafine fly ash (UFFA) and ultrafine pozzolan (UFP). UFFA and UFP may be used in the concrete mix with RPR's approval. When UFFA and UFP is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 7 and 16 percent by weight of the total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **4.5**. Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). Contractor shall demonstrate, in the presence of RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by RPR, Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by RPR. The acceptable control strip shall be paid for in accordance with paragraph 501-6.6.

501-4.2 Equipment. Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation

of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch or more. Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by RPR. The top face of the form shall not vary from a true plane more than 1/8 inch in 10 feet, and the upstanding leg shall not vary more than 1/4 inch. The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed 30 minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F. Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F.

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F. The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F, the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F. The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, Contractor shall provide RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet. The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches a flexural strength of 550 psi, based on the average of four field cured specimens per 2,000 cubic yards of concrete placed. Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

Contractor shall have available materials for the protection of the concrete during cold, hot and/or inclement weather in accordance with paragraph 501-4.7.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to

longitudinal unit shall not exceed 9 inches for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches).

"Internal vibration" means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot. The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15 percent of the total free edge of each 500-foot segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch, and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch. (The total free edge of 500 feet of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet of paving lane originally constructed as a separate lane will have 1,000 feet of free edge, 500 feet of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of Contractor as directed by RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars/dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth consolidation but not closer to the underlying material than 2 inches. Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by RPR.

If a lack of consolidation of the hardened concrete is suspected by RPR, referee testing may be required. Referee testing of hardened concrete will be performed by RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards of pavement, or fraction. Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97 percent of the original concrete mix density, with no cores having a density of less than 96 percent of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch from their designated position and shall be true to line with not more than 1/4-inch variation in 10 feet. The surface across the

joints shall be tested with a 12-foot straightedge as the joints are finished and any irregularities in excess of 1/4 inch shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch. The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch. The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet, except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum flexural strength of 450 psi before drilling begins. Holes 1/8 inch greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied

finishing aids specified to prevent plastic shrinkage cracking, approved by RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7,500 pounds and shall have a transversely operating carriage containing a knock-down auger and a minimum of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade; and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard, will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately 1 foot from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. [Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a seven-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind Contractor may elect to use, or lack of water to adequately take care of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of 1 gallon to not more than 150 square feet. The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven days. When the forms are stripped, the

vertical walls shall also be kept moist. It shall be the responsibility of Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F for a period of 72 hours after placing and at a temperature above freezing for the remainder of the seven-day curing period. Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch, shall be repaired with an approved grout, as directed by RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item P-605.

501-4.17 Protection of pavement. Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by Contractor's employees and agents until accepted by RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven days old, or for a longer period if directed by RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven days, the joints are protected, the concrete has attained a minimum field cured flexural strength of 450 psi, and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have attained a flexural strength of 450 pounds per square inch when tested in accordance with ASTM C78. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign

materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by RPR, at Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 to 4 inches, shall be drilled by Contractor and shall be filled by Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches, ±1/16 inch, and to a width of 5/8 inch, ±1/8 inch. The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by RPR at Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than half the slab depth, and less than 25 percent of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch outside the spalled area and to a depth of at least 2 inches. Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar meeting or exceeding the requirements of ASTM C928 R3 material or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than half the slab depth or spalls longer than 25 percent of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet wide. The saw blades shall be 1/8-inch wide with sufficient number of flush cut blades that create grooves 0.090-0.130 inch wide; and peaks and ridges approximately 1/32 inch higher than the bottom of the grinding cut. Contractor shall determine the number and type of blades based on the hardness of the aggregate. Contractor shall demonstrate to RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.3 Contractor QC testing. Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification**.**

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30 days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness

criteria is not met, appropriate changes and corrections to the construction process shall be made by Contractor before construction continues

Contractor may use a 12-foot straightedge or a rolling inclinometer meeting the requirements of ASTM E2133. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet or more often as determined by RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet; and at the third points of paving lanes when widths of paving lanes are 20 feet or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically and 0.1 feet (laterally. The documentation will be provided by Contractor to RPR by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at Contractors expense.

501-5.4 Control charts. Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number,

each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and Contractor's test results. Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If Contractor's projected data during production indicates a potential problem and Contractor is not taking satisfactory corrective action, RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by Contractor per ASTM C136. Contractor shall take at least two samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	Suspension Limit
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch	+1 to -1.5 inch
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by Contractor.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by RPR. Contractor shall provide adequate facilities for the initial curing of beams. Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F, and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required

for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards**]**. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24-48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with ASTM C78. The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5 percent. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by Contractor for each sublot in the presence of RPR. Sampling locations will be determined by RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch in diameter neatly cut with a core drill. Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by Contractor with a non-shrink grout approved by RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness Not used.

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

Production quality must achieve 90 PWL or higher to receive full payment.

Strength and thickness will be evaluated for acceptance on a lot basis using the method of estimating PWL. Production quality must achieve 90 PWL or higher to receive full pavement. The PWL will be determined in accordance with procedures specified in Item C-110.

The lower specification tolerance limit (L) for strength and thickness will be:

Lower Specification Tolerance Limit (L)

Strength	0.93 × strength specified in paragraph 501-3.3
Thickness	Lot Plan Thickness in inches, - 0.50 in

b. Acceptance criteria.

(1) Strength. If the PWL of the lot equals or exceeds 90 percent, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.

(**2) Thickness.** If the PWL of the lot equals or exceeds 90 percent, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall reduced by 5 percent and not be more than 95 percent.

(4) Adjustments for repair. Sublots with spall repairs, crack repairs, or partial panel replacement, will be limited to no more than 95-percent payment.

(5) Adjustment for grinding. For sublots with grinding over 25 percent of a sublot, payment will be reduced 5 percent.

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of reinforced pavement as specified in-place, completed and accepted.

501-7.2 Concrete spall repair shall be measured by the number of square feel as specified in plans, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work (See Note 1 under the Price Adjustment Schedule table).

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

a. Basis of adjusted payment. The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100 percent or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100 percent or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100 percent.

Price Adjustment Schedule[1]

Percentage of Materials Within Specification Limits (PWL)	Lot Pay Factor (Percent of Contract Unit Price)
96 – 100	106
90 – 95	PWL + 10
75 – 90	0.5 PWL + 55
55 – 74	1.4 PWL – 12
Below 55	Reject[2]

[1] Although it is theoretically possible to achieve a pay factor of 106 percent for each lot, actual payment in excess of 100 percent shall be subject to the total project payment limitation specified in paragraph 501-8.1.

[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, Owner and Contractor agree in writing that the lot will remain; the lot paid at 50 percent of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100 percent for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100 percent; except for rejected lots which remain in place and/or sublots with adjustments for repairs.

b. Adjusted payment for repairs. The PWL lot pay factor shall be reduced by 5 percent and no higher than 95 percent for sublots which contain repairs per paragraph 501-4.19 on more than 20 percent of slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.

c. Adjusted payment for grinding. PWL lot pay factor shall be reduced by 5 percent and no higher than 95 percent for sublots with grinding over 25 percent of a sublot.

Not used.

e. Payment. Payment shall be made under:

Item P-501-8.1 Concrete Spall Repair, per square foot.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete

ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete

ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

Item P-605 Joint Sealants for Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of **ASTM D6690**.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25percent ± 5percent larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **seven** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

c. Waterblasting equipment. Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. Contractor shall demonstrate, in the presence of RPR, that the method cleans the joint and does not damage the joint.

d. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

e. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. Contractor shall demonstrate, in the presence of RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw, or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 ±1/16 inch below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by RPR. When a primer is

recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the linear foot of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1	Joint Sealing Filler, per linear foot.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. Contractor shall furnish manufacturer's certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer's surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. Contractor shall notify RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by RPR. **The airport will supply all material for the pavement markings.**

620-2.2 Marking materials.

Table 1. Marking Materials

Paint[1]				Glass Beads[2]	
Type	**Color**	**Fed Std. 595 Number**	**Application Rate Maximum**	**Type**	**Application Rate Minimum**
II	White	37925	115 ft^2/gal (2.8 m^2/l)	I	7 lb/gal (0.85 kg/l)
II	Yellow	33538 or 33655	115 ft^2/gal (2.8 m^2/l)	I	17 lb/gal (0.85 kg/l)
II	Black	37038	115 ft^2/gal (2.8 m^2/l)	-	-
II	Red	31136	115 ft^2/gal (2.8 m^2/l)	I	7 lb/gal (0.85 kg/l)

[1] See paragraph 620-2.2a
[2] See paragraph 620-2.2b

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595. **Paint will be furnished and applied by airport personnel.**

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100 percent acrylic polymer as determined by infrared spectral analysis.

b. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type I, Gradation A.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

Glass beads will be furnished and applied by airport personnel.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process. **No direct payment will be made for cleaning the pavement surface or removing the cure compound.**

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the

pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to RPR prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans. **No direct payment will be made for layout of the pavement markings.**

620-3.5 Application. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet, and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch or less	±1/2 inch
greater than 36 inch to 6 feet	±1 inch
greater than 6 feet to 60 feet	±2 inch
greater than 60 feet	±3 inch

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 Application--preformed thermoplastic airport pavement markings. Not Used

620-3.7 Control strip. Prior to the full application of airfield markings, Contractor shall prepare a control strip in the presence of RPR. Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6-square-foot area with three readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30 percent of each other.

Minimum Retro-Reflectance Values

Material	Retro-reflectance mcd/m^2/lux		
	White	Yellow	Red
Initial Type I	300	175	35
Initial Type III	600	300	35
Initial Thermoplastic	225	100	35
All materials, remark when less than[1]	100	75	10

[1] 'Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of RPR. Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 No separate measurement will be made for cleaning the pavement surface or removing the cure compound of the taxiway and vehicle service road markings or work performed in accordance with the specifications and accepted by.

BASIS OF PAYMENT

620-5.1 NO DIRECT PAYMENT WILL BE MADE FOR LAYOUT OF MARKINGS OR FOR CLEANING THE PAVEMENT SURFACE OR REMOVING THE CURE COMPOUND.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester

ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
FED SPEC TT-P-1952F	Paint, Traffic and Airfield Marking, Waterborne
FED STD 595	Colors used in Government Procurement

Commercial Item Description

A-A-2886B	Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1	Standards for Airport Markings
AC 150/5320-12	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

APPENDIX A

Construction Safety and Phasing Plan

CSPP

Midland, Texas

Midland International Air & Space Port

Concrete Apron Rehabilitation

Construction Safety and Phasing Plan

April 2020

PSC Project #01976918

PARKHILLSMITH&COOPER

Midland, Texas

Midland International Air & Space Port

Concrete Apron Rehabilitation

Construction Safety and Phasing Plan

April 2020

PSC Project #01976918

PARKHILLSMITH&COOPER

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Project Name: Midland International Air and Space Port
MAF Concrete Apron Rehabilitation
Midland County, Texas

Sponsor's Agent:

Ms. Justin Ruff, Director of Airports
City of Midland, Texas
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Midland Texas 79711
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Grant/Project Numbers: FAA AIP No.: 3-48-0150-060-2020

Engineer's Project No.: 01.9769.18

1. COORDINATION

A. MEETINGS TO OCCUR DURING THE PROJECT:

Predesign Conference. A Predesign Conference was held between Midland International Air & Space Port (MAF) staff and PSC personnel. Items were discussed included Project scope, phasing, design, schedule, survey, unique project elements/areas of potential concern, and utilities.

Prebid Conference. A Prebid Conference, in accordance with FAA AC 150/5300-9B will be held for Consulting Engineer, MAF, and FAA to go over Project details and for Contractors to ask Project specific questions. Prebid Conference will be led by MAF with assistance from PSC.

Preconstruction Meeting. A Preconstruction Meeting, in accordance with FAA AC 150/5370-12B, will be held before issuance of Notice to Proceed. At minimum, required attendees will be MAF, Consulting Engineer, Resident Project Representative (RPR), Prime Contractor, and all subcontractors.

Construction Progress Meetings. Construction progress meetings will be held throughout Project duration, typically monthly. At minimum, required attendees will be Airport administrative staff, Consulting Engineer, RPR, Prime Contractor, and all subcontractors performing work during the current period. Construction phasing and safety will be a standing item at all construction progress meetings. Other ongoing agenda items will include:

- Project Schedule
- Safety/Security
- Project Coordination
- Construction Issues
- Review of Submittals
- Review of Request for Information (RFI)
- Review of Change Orders
- Environmental Issues
- Quality Assurance (Test Reports)
- Record Drawings
- Review of Pay Application
- General Discussion

Consulting Engineer is responsible for preparing and distributing meeting minutes for all meetings.

B. SCOPE

1. Rehabilitation of concrete apron to include joint spall repair and joint sealant removal and replacement.

Any changes in Project Scope will require a revision to this CSPP, which must be approved by MAF and FAA.

C. FAA AIR TRAFFIC CONTROL TOWER (ATCT) COORDINATION

MAF Airport Operations shall coordinate communication with MAF Air Traffic Control Tower (ATCT). FAA ATCT personnel will be invited to preconstruction and construction progress meetings to discuss construction schedule and Project phasing. Before any Project construction phase beginning or ending, a meeting to discuss

pavement closure or ending shall be attended by MAF Operation staff, Consulting Engineer, FAA Regional ADO representative, FAA ATCT personnel, Contractor, etc.

2. PHASING

Refer to Phasing Plans included in Appendix A for limits of each phase.

A. BID PACKAGE 111 CALENDAR DAYS TOTAL)

1. Phase 1 (21 Calendar Days):
   Phase 1A – 8 Calendar Days
   Phase 1B – 4 Calendar Days
   Phase 1C – 9 Calendar Days

2. Phase 2 (17 Calendar Days):
   Phase 2A – 7 Calendar Days
   Phase 2B – 5 Calendar Days
   Phase 2C – 5 Calendar Days

3. Phase 3 (33 Calendar Days):
   Phase 3A – 5 Calendar Days
   Phase 3B – 6 Calendar Days
   Phase 3C – 7 Calendar Days
   Phase 3D – 10 Calendar Days
   Phase 3E – 5 Calendar Days

4. Phase 4 (40 Calendar Days):
   Phase 4A – 5 Calendar Days
   Phase 4B – 6 Calendar Days
   Phase 4C – 6 Calendar Days
   Phase 4D – 7 Calendar Days
   Phase 4E – 6 Calendar Days
   Phase 4F – 10 Calendar Days

Calendar Days per phase considers placement and removal of phasing barricades, plus time for coordination of closing/opening of each subphase.

B. PROJECT SCHEDULE

Contractor will be required to submit an overall project schedule and phasing plan at the Preconstruction Meeting. Any changes made to Project Schedule or Phasing will require a revision to the CSPP, which must be approved by MAF and FAA.

3. AREAS/OPERATIONS AFFECTED BY CONSTRUCTION

No protected surfaces will be affected by Project construction.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

A. LIST OF NAVAIDS IN CLOSE PROXIMITY TO WORK AREA:

There will not be any NAVAIDs affected by construction of this Project.

5. CONTRACTOR ACCESS

A. GENERAL

Airport security is a vital part of Contractor responsibility during the project. Contractor and his employees, subcontractors, suppliers, and representatives shall follow security guidelines, rules, and regulations of MAF and the Transportation Security Administration at all times during execution of this project. Contractor is directly responsible for all fines or penalties levied against MAF as a result of any breach of security or safety caused by Contractor or his employees, subcontractors, suppliers, or representatives.

B. AIRPORT OPERATIONS AREA

Airport Operations Area (AOA) is defined as any portion of the airport property normally secured against unauthorized entry. AOA includes all areas specifically reserved for aircraft operations, support equipment, and personnel. Generally, AOA boundaries are the airport's outer security fencing and any building that forms part of the secured perimeter. When necessary to cross pavement surface on the airfield, Contractor shall daily inspect all paved surfaces for Foreign Object Debris (FOD) and before reopening pavement surface to air traffic. Final inspection shall be by MAF Operations. Contractor shall not leave opening in secure fence at any time.

C. MAF SECURITY BADGES

1. Contractor is responsible for obtaining a photo-identification security badge issued by MAF Operations for each supervisor or foreman of every work crew working within the AOA. Contractor shall obtain MAF Operations security badges for at least one member of each work crew working in separate areas of the AOA. The intent is that all individuals responsible to the Contractor, including his employees,

subcontractors, suppliers, or representatives, obtain and display a MAF Operations security badge, or are directly escorted/supervised by an individual displaying a current MAF Operations security badge.

2. Contractor may obtain MAF security badges from the MAF Operations Department. MAF Operations reserves the right to limit the number of security badges issued to Contractor. MAF Operations will charge Contractor for each security badge issued. Fingerprint verification will be an additional cost. Total cost is covered by Contractor and not refundable. An additional fee will be charged for lost or destroyed badges.
3. MAF Operations security badges shall be worn and easily visible at all times while working within the AOA. The badge holder shall be familiar with and obey all regulations, security, and safety rules. MAF Operations security badge may be confiscated and all security rights revoked by MAF Operations upon the breach of any security or safety regulations at Operation's discretion. The MAF Operations badge holder shall surrender the badge at completion of project, upon transfer or termination of employment, or any time at MAF Operations request.
4. MAF shall conduct a background check of each applicant for an MAF Operations security badge. Contractor is responsible for completing required forms and submitting to MAF Operations for review as early in the project as possible to avoid construction delays. Forms for completing the required background checks are available through MAF Operations after award of the project. MAF Operations shall be responsible for reviewing background checks. Only persons whose application is approved by MAF Operations, are issued security badges. MAF Operations reserves the right to bar anyone from the AOA found by the background check to be, in the opinion of MAF Operations, a risk to AOA security or safety.
5. At completion of project, Contractor shall return all MAF Operations issued security badges to MAF Operations. MAF Operations will charge an additional fee for each lost or destroyed MAF Operations-issued security badge. All MAF Operations-issued security badges must be accounted for and surrendered at completion of project. Failure to account for and surrender all MAF Operations-issued security badges will constitute grounds for withholding retainage from the final pay estimate amount.

D. CONTRACTOR'S ENTRANCE GATE

1. Adjacent to Contractor entrance gate, outside the AOA, Contractor shall provide a parking area for his employee's personal automobiles. Engineer directs limits of this parking/storage area. At project completion, any damage done by Contractor to this area shall be repaired to Engineer satisfaction at no additional cost to Owner. Repairs shall include, but not limited to, regrading, reseeding, and/or repaving any damaged areas.

2. Contractor is responsible for and shall control all movement through Contractor entrance gate. Only authorized personnel and vehicles are allowed to enter AOA through this gate. Pedestrian walkthroughs are not allowed through vehicular gate. When not in immediate use, Contractor shall securely lock gate to prevent entrance by unauthorized persons or vehicles. Upon request, Contractor shall provide Director of Aviation and MAF Operations with duplicate keys (for key locks) or combinations (for combination locks) to lock(s) used to secure Contractor entrance gate to AOA.
3. If construction activities, such as hauling materials, require the Contractor entrance gate to the AOA remain open for long periods of time, Contractor may, upon approval from MAF Operations, leave gate open and provide a full-time watchguard at the gate. The watchguard shall be approved for and possess an MAF Operations issued security badge. If this security arrangement is desired and approved, the gate shall be manned by a watchguard as long as gate remains open. Watchguard shall be a Contractor representative and responsible for all movement through the gate. Again, only authorized persons and vehicles are allowed by the Contractor's watchguard to enter AOA.

E. CONTRACTOR'S PLANT SITE, STORAGE, AND OFFICE AREA

1. Contractor is held completely responsible for any damage or deterioration in areas allowed for Contractor use. Contractor is also responsible for maintenance and dust control for project duration.
2. Direct negotiation may be conducted with the Director of Aviation for any areas desired. Areas used by the Contractor may be subject to rental rates and fees as Director of Aviation identifies.
3. Contractor shall completely restore, at his expense, areas he and his forces occupy including but not limited to regrading disturbed areas, complete removal of debris or any other material Contractor brings onto site, as well as complete replacement of topsoil, turf, asphalt pavement, concrete slabs or drives, etc. that were worn, deteriorated, or damaged while Contractor and his forces occupied the area. All restoration shall be to the Director of Aviation's satisfaction.
4. Prior to moving into an unpaved area, Contractor shall clear and grub as well as remove and stockpile a minimum 6 inches of existing topsoil. After project completion and clearing site of materials, equipment, and debris, Contractor shall replace, spread, and grade the salvaged topsoil, followed by seeding and fertilizing.
5. All restoration activities shall be accomplished in accordance with applicable technical specifications.
6. No direct payment will be made to the Contractor for preparing or restoring plant site haul routes, storage, or office areas.
7. For all projects with an onsite concrete or hot-mix asphalt batch plant, and for projects involving pug-mill produced material, a concrete or asphalt paved material stockpile area is required. Stockpile all materials to incorporate into concrete, hot

mix, cement-treated base (CTB), or other similar material on a specially-prepared concrete or asphalt pad so stockpile contamination does not occur. Stockpile area shall be restored to pre project conditions.

F. VEHICLE ESCORT

1. All vehicles responsible to Contractor entering the AOA, such as supplier vehicles, shall be escorted by an approved Contractor escort vehicle from point of AOA entry to construction site. The escort vehicle shall be clearly identified with standard FAA specified markings and/or flags. In addition, escort vehicle shall be marked with Contractor name.
2. Escort vehicle is responsible for leading supply, delivery, or other vehicles across active airfield. To facilitate safe movement of escort vehicle and escorted vehicles, driver of escort vehicle shall be approved for, issued, and display an MAF Operations security badge. Further, escort vehicle driver shall be familiar with MAF security and safety procedures.

G. CHALLENGING UNAUTHORIZED PERSONNEL OR VEHICLES:

1. Contractor and employees, subcontractors, suppliers, and representatives who have been issued an MAF Operations security badge, are responsible for challenging any person/vehicle found on AOA or other non public area who does not display or cannot produce a valid MAF Operations security badge, or is not under escort or direct supervision of a person possessing a valid MAF Operations security badge. The challenge shall consist of advising the person that he is within a restricted area, and informing of an appropriate exit route. Should the unauthorized person refuse to exit restricted area, MAF Operations shall be immediately notified for further action, and unauthorized person kept under surveillance until MAF Operations arrives.
2. Any expired or altered badge or badge bearing a photograph not matching the bearer, shall be brought to the attention of MAF Operations and immediately confiscated by MAF Operations or Airport Police.

H. CONTRACTOR SAFETY PLAN (CSP)

Contractor is required to submit a Construction Safety Plan as part of the submittal process before starting construction. The Construction Safety Plan shall be adhered to at all times. MAF reserves the right to have Contractor amend the Construction Safety Plan at any time if concerns arise.

Escort vehicle will be responsible for leading supply, delivery, or other vehicles across active airfield. To facilitate safe movement of escort and escorted vehicles, the driver of escort vehicle shall be approved for, issued, and display an MAF security badge. Further, escort vehicle driver shall be familiar with airport security and safety procedures. Escort vehicle shall be equipped with an FAA radio, as specified in Article 5.F - Two-Way Radio Communications, and driver of escort vehicle shall be familiar with FAA radio, operation, and shall obey all instructions from Air Traffic Control Tower.

I. TWO-WAY RADIO COMMUNICATIONS

Contractor shall be required to equip vehicles, used by his project superintendent and foremen, with radio receiver/transmitters for maintaining direct communication with Airport personnel. Contractor will provide minimum two radios, as specified, consisting of: Two Icom America, Model IC-A5 (or latest equivalent model), with AC charger, DC charger, carrying case, flexible antenna, headset adapter cable, headset desk charger, multi-charger, and two 760 mAH heavy rechargeable battery packs.

Communication will be required at a frequency of 122.950 MHz for Midland ground control. Radio contact shall be required when construction operations are in the vicinity of, or when crossing any active runway, taxiway, or apron, or as directed by MAF. Contractor shall be required to provide sufficient number of radios to maintain communication in all areas of work.

6. WILDLIFE MANAGEMENT

A. TRASH

Contractor will be required to dispose all trash in a covered trash can or other method, not allowing trash to become a hazard or animal attractant.

B. STANDING WATER

Contractor will be required to minimize standing water.

C. TALL GRASS AND SEEDS

Contractor will be required to maintain grass in construction area to MAF-required height.

D. POORLY MAINTAINED FENCING AND GATES

Any fencing or gates used by Contractor, shall be maintained in good condition and proper working order. Also, the gap under the fence or gate shall not exceed 3 inches.

E. DISRUPTION OF EXISTING WILDLIFE HABITAT

In the event of wildlife habitat, Contractor will notify MAF and Engineer immediately.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Contractor will be required to train and emphasize to construction site employees the need for continuous Foreign Object Debris (FOD) checks on or near active airfield pavement.

Contractor will be required, at minimum, to conduct FOD checks before and after each construction shift, and monitor nearby active pavements throughout the construction shift.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

Hazardous materials will be handled and stored per the latest revision to FAA Advisory Circular 150/5370-2 - Operational Safety on Airports during Construction. Contractor must be prepared to immediately contain and clean spills resulting from fuel, oil, petroleum products, or hydraulic fluid leaks. Transporting and handling other hazardous materials on Airport property requires additional special procedures as addressed in latest revisions to FAA Advisory Circular 150/5320-15 - Management of Airport Industrial Waste. All spills must be immediately reported to MAF Operations.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

A. RESPONSIBLE REPRESENTATIVES / POINTS OF CONTACT

Midland International Air and Space Port

Name	**Position**	**Phone Number**
Aaron Easton	Deputy Director of Airports	432.560.2200 x3020
Nick Krakovec	Airport Operations Supervisor	432.560.2200 x3006

Parkhill, Smith & Cooper, Inc., Engineer/Consultant

Name	**Position**	**Phone Number**
Danny Winchester, P.E.	Project Manager	432.697.1447
Michael Krusing, P.E.	Project Engineer	806.473.2200

_____TBD_____, Resident Engineer

Name	**Position**	**Phone Number**

_____TBD_____, Quality Assurance Testing

Name	**Position**	**Phone Number**

***** Insert Contractor and Sub-Contractor Personnel Information when Project awarded.**

_____, Contractor

Name	**Position/Trade**	**Phone Number**

_____, Subcontractor

Name	**Position/Trade**	**Phone Number**

_____, Subcontractor

Name	**Position/Trade**	**Phone Number**

B. NOTICES TO AIRMEN (NOTAM)

MAF will be responsible for issuing any Notice to Airmen (NOTAM) required before the Project begins and as Project progresses, and will cancel NOTAMs at completion of intermediate construction phases of Project, as required. Contractor required to closely coordinate anticipated and required NOTAMs with MAF, and give MAF at least 72 hours' notice of necessary NOTAMs.

C. EMERGENCY NOTIFICATION PROCEDURES

In the event of an emergency, Contractor shall immediately call 911 first, then MAF Operations, then Engineer.

D. AIRCRAFT RESCUE AND FIREFIGHTING (ARFF) NOTIFICATIONS

1. During airport emergencies, all ARFF vehicles have the immediate right of-way at all times and may traverse any and all known roadways throughout airfield. Contractor, subcontractors, and suppliers shall immediately yield right-of-way to all Airport ARFF personnel and equipment.
2. Owner and Engineer shall be notified in writing at least 72 hours in advance if water lines or fire hydrants are out of service. 72-hour advance notification shall also be provided prior to performing any work that may close or affect an emergency rescue and firefighting route.

3. MAF Administration and/or Operations will communicate with MAF ARFF as needed to ensure MAF ARFF remain aware of construction activities

E. NOTIFICATION TO THE FAA

Contractor will notify Consulting Engineer and MAF 72 hours in advance of any work around NAVAIDs or shutdowns affecting NAVAIDs owned by the FAA. NAVAIDs owned by a separate party shall be notified by Contractor 72 hours in advance of any work around or shutdowns of NAVAIDs.

10. INSPECTION REQUIREMENTS

A. DAILY INSPECTIONS

Contractor will be required to perform daily safety, security, and phasing inspections to ensure compliance with CSPP. Inspections shall be documented in Contractor's Daily/Quality Control Logs.

Contractor will be required to submit a Quality Control Plan for Owner or designated representative review before any construction begins. The Quality Control Plan will address specific requirements for inspection of individual specification/pay items including test method, sampling point, testing frequency for each item and a proposed remediation action for each item if it does not meet specification requirements. This Plan will also provide direction on developing inspection reports and what shall be included. The Quality Control Plan will likely be developed in whole or in conjunction with the selected Quality Control firm. The Quality Control Plan shall include and address requirements of the Construction Management Plan.

B. FINAL INSPECTIONS

MAF will perform the final safety inspection before any airfield pavement opening to aircraft.

11. UNDERGROUND UTILITIES

A. UTILITIES

Contractor is responsible for locating, marking, and protecting all utilities and infrastructure during construction. Location of utilities shall include notification of Texas' One Call system, as well as coordination with MAF.

12. PENALTIES

If Contractor is, at Engineer and MAF discretion, continuously negligent towards construction site safety, or refuses to comply with safety requirements, Contractor access to airfield may be suspended until Contractor complies. No reimbursement for delay will be granted under this circumstance. This would include negligence towards FOD control.

13. SPECIAL CONDITIONS

A. FAA FORM 7460-1

1. Consulting Engineer will prepare and submit FAA Form 7460-1 for Project scope and for proposed Construction Safety and Phasing Plan.

2. Contractor shall submit Form 7460 on all equipment over 20 feet high.

3. Included in Appendix B is a blank Federal Aviation Administration (FAA) Form 7460-1 - Notice of Proposed Construction or Alteration. Contractor shall submit supplemental FAA Form 7460-1 to FAA at least 45 days before equipment utilization in excess of 20 feet in height.

B. ONSITE BURNING AND BLASTING

Onsite burning and blasting are prohibited.

C. GUN PROHIBITION ON AIRPORT PROPERTY

No firearms or guns are allowed on MAF property.

14. RUNWAY AND TAXIWAY VISUAL AIDS

A. GENERAL

Airport marking, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials to minimize damage to an aircraft in the event of inadvertent contact.

Lighting, signs, and NAVAIDs located within object free area must be frangible.

15. MARKING AND SIGNS

A. ACCESS ROUTE

Contractor required to mark access/haul routes with lathes and flag tape.

B. APPROVED WORK AREAS

Contractor will be required to mark approved work areas with lathes and flag tape to ensure construction personnel and equipment remain in approved areas.

16. HAZARD MARKING AND LIGHTING

A. EQUIPMENT

1. Contractor vehicles shall be clearly identified with Contractor name, standard FAA marking, lighting, and/or flags. Rotating amber beacons required for all nighttime work.

2. Contractor shall submit 7460s on all equipment over 20 feet in height.

3. Any request to use nighttime lighting will be provided in writing two weeks prior to the requested start time, from Contractor to Engineer and MAF for approval.

B. WORK AREAS

1. Temporary low profile barricades will be provided by Contractor to delineate safe operating areas for aircrafts.

2. Barricades shall have flashing red lights.

3. Contractor required to inspect lights each evening and immediately replace any lights not operating correctly.

4. Contractor will be fined for non-working lights as indicated in Project Specifications.

5. Line the perimeter construction area with low-profile aviation barricades spaced at 5 feet.

17. WORK ZONE LIGHTING FOR NIGHT CONSTRUCTION

If work is to be accomplished at night, Contractor-provided lighting equipment must adequately illuminate work area. Present a Lighting Plan to MAF, Engineer, and FAA at least 28 days before commencing nighttime construction activities. Requirement for Lighting Plan are stated in Section 3.22 of AC 150/5370-2G.

18. PROTECTION

A. RUNWAY SAFETY AREA (RSA)

No construction or material stockpile shall occur within an active RSA. Contractor will be required to mark out the RSA before construction. RSA is 500 feet wide and extends 1,000 feet beyond the runway end for all runways

B. RUNWAY OBJECT FREE AREA (ROFA)

No material stockpile will occur within an active ROFA. ROFA is 800 feet wide and 1,000 feet beyond runway end for all runways.

C. TAXIWAY SAFETY AREA (TSA)

No construction or material stockpile shall occur within an active TSA. TSA is 171 feet wide.

D. TAXIWAY OBJECT FREE AREA (TOFA)

No material stockpile shall occur within an active TOFA. TOFA is 259 feet wide.

E. OBSTACLE FREE ZONE (OFZ)

No construction activity or material stockpile will penetrate the OFZ.

F. RUNWAY APPROACH/DEPARTURE SURFACES

No construction activities will penetrate approach/departure surfaces.

G. OPEN TRENCHES

Open trenches will not be permitted within the RSA of an open runway or TSA of an open taxiway. Contractor shall prominently mark any open trench or excavation at construction site with lighted barricades.

H. SAFETY INFORMATION

Refer to Appendix D - Safety Details, for safety information.

I. JET BLAST

Contractor shall take precautions to minimize effects of jet blast, particularly in areas within close proximity to runway threshold.

J. ELECTRICAL LOCKOUT/TAG-OUT REQUIREMENTS

Contractor to prepare lockout/tag-out plan and communicate procedures to all staff.

K. UNUSED RUNWAY

Where shown on the Construction/Safety Plan, Contractor shall denote unusable runway pavement using low profile aviation barricades. Refer to Plans for details.

19. OTHER LIMITATIONS ON CONSTRUCTION

A. PROHIBITIONS

1. No use of tall equipment over 20 feet unless a 7460-1 determination letter is issued for such equipment.

2. No use of open-flame welding or torches.

3. No use of electrical blasting caps.

4. No use of flare pots.

B. RESTRICTIONS

1. Any construction suspension required during specific airport operations will be coordinated by Engineer, Owner, and Contractor during construction.

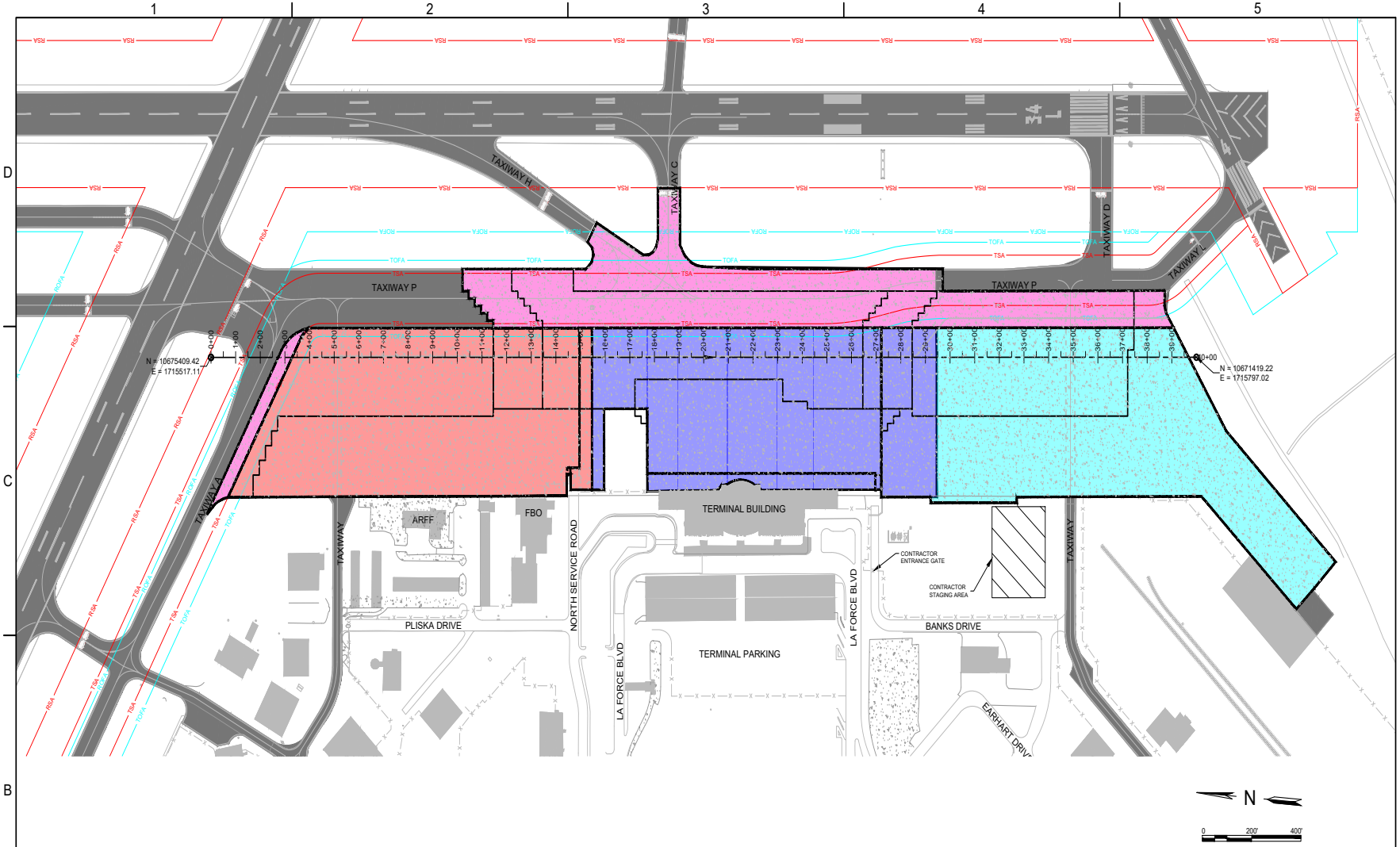
2. Areas not worked on simultaneously, will be coordinated by Engineer, Owner, and Contractor during construction.

3. Refer to Article 16 – Hazard Marking and Lighting, for night construction requirements.

4. Seasonal construction restrictions will be coordinated by Engineer, Owner, and Contractor during construction.

APPENDIX A

CONSTRUCTION SAFETY AND PHASING PLAN



GENERAL NOTES

1. INSTALL AVIATION BARRICADES AROUND ENTIRE CONSTRUCTION AREA. GAP AT 5 FT EXCEPT WHERE VEHICULAR ACCESS IS NECESSARY.
2. THE CONTRACTOR SHALL MAINTAIN ALL ACTIVE PAVEMENT FREE OF CONSTRUCTION DEBRIS. IF EQUIPMENT IS ROUTED ACROSS A TAXIWAY OR APRON, SWEEP THE TAXIWAY OR APRON A MINIMUM OF ONCE PER DAY AND FOLLOWING A CROSSING.
3. ALL OBJECTS INCLUDING EQUIPMENT AND MATERIAL STOCKPILES MUST BE BELOW THE 34:1 THRESHOLD SITING SURFACE (TSS). THE TSS STARTS 200' FROM THE THRESHOLD AT THE ELEVATION OF THE RELOCATED THRESHOLD. AT 1000' BEYOND THE THRESHOLD THE TSS IS 23.5' ABOVE THE RUNWAY THRESHOLD ELEVATION.
4. CONTRACTOR SHALL NOT USE SHOULDERS FOR PARKING OR FOR HAUL ROUTES. ANY SHOULDER DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO OWNER.
5. MARK AND LIGHT CONSTRUCTION AREAS AND VEHICLES AS REQUIRED IN LATEST EDITION OF AC 150/5370-2.
6. CONTRACTOR SHALL MAINTAIN A 10FT CLEAR AREA ADJACENT TO SECURITY FENCE. AREA SHALL BE CLEAR OF STOCK PILES AND EQUIPMENT.
7. AT ALL TIMES, CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT LIGHTING, SIGNAGE, FAA NAVIGATIONAL AIDS, AND ANY OTHER STRUCTURE WITHIN THE APPROVED WORK AREA OR ELSEWHERE. ANY DAMAGE CAUSED BY THE CONTRACTORS OPERATIONS SHALL BE REPAIRED, TO THE SATISFACTION OF THE OWNER, AT THE CONTRACTORS SOLE COST.
8. THE INTENT OF THE PHASING PLANS IS TO MINIMIZE INTERFERENCE TO AIRCRAFT MOVEMENTS, THE AMOUNT IF TIME EACH WORK AREA IS CLOSED, AND DISRUPTIONS TO AIRPORT OPERATIONS. WORK IN A MANNER TO HELP MEET THESE INTENDED GOALS, INCLUDING EXTENDED PRODUCTION HOURS WHEN POSSIBLE / PRACTICAL. AIRCRAFT HAS RIGHT OF WAY AT ALL TIMES. CONTRACTOR TO YIELD TO AIRCRAFT AT ALL TIMES.
9. COORDINATE WORK EFFORTS WITH THE ENGINEER (OR THE ENGINEER'S REPRESENTATIVE) AND OWNER. IF PROBLEMS OR CHANGES ARISE DURING CONSTRUCTION SEQUENCING, IMMEDIATELY NOTIFY THE ENGINEER REQUESTING ACTIONS TO RESOLVE SAID PROBLEMS PRIOR TO CONTINUING THE WORK.
10. COORDINATE AIRCRAFT OPERATIONS SCHEDULES WITH THE OWNER. FACILITATE AIRCRAFT OPERATIONS TO THE MAXIMUM EXTENT POSSIBLE BY REMOVING CONTRACTOR PERSONNEL AND EQUIPMENT FOR THE SAFE PASSAGE OF AIRCRAFT. THE CONTRACTOR IS HEREBY MADE AWARE THAT THE AIRCRAFT OPERATIONS ADJACENT TO WORK AREAS MAY CAUSE JET BLAST THROUGH THE WORK AREAS. MOVE CONTRACTOR PERSONNEL AND EQUIPMENT AS NECESSARY IN ORDER TO PROTECT PERSONNEL, EQUIPMENT, AND MATERIALS FROM THE EFFECTS OF JET BLAST.
11. SPECIFIC CONSTRUCTION TASKS IDENTIFIED WITHIN THE INDIVIDUAL PHASE PLAN SHEETS ARE NOT MEANT TO INCLUDE EVERY EXACT OR PRECISE DETAIL OF ALL WORK THAT MUST BE COMPLETED, BUT ARE RATHER INTENDED TO PROVIDE A GENERAL OVERVIEW OF THE APPROXIMATE SEQUENCING OF THE PHASE. MANY OF THE ITEMS LISTED WILL REQUIRE PRECEDING AND SUBSEQUENT OPERATION TO VARIOUS OTHER ITEMS LISTED.
12. THE COMPLETION OF ANY PHASE OF WORK AND SUBSEQUENT USAGE BY THE OWNER DOES NOT DEFINE FINAL ACCEPTANCE OF THE WORK IN THAT PHASE. THE ENTIRE PROJECT WILL BE ACCEPTED ONCE ALL PHASES ARE COMPLETE. A FINAL INSPECTION OF THE ENTIRE PROJECT HAS OCCURRED, AND ALL ASSOCIATED PUNCH LIST ITEMS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PROJECT PLANS AND PROJECT MANUAL TO THE SATISFACTION OF THE OWNER.
13. PRIOR TO THE START OF EACH PHASE, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, OWNER AND AIRLINES TO ENSURE THAT OPERATIONAL REQUIREMENTS ARE MET AND THAT REQUIRED WING TIP CLEARANCE IS MET. FURTHERMORE, DETAILS RELATED TO AIRCRAFT PULL-IN AND PUSH-BACK OPERATIONS WILL NEED TO BE DISCUSSED.
14. SUPPLEMENTAL LOW-PROFILE BARRICADES SHALL BE INSTALLED AS NECESSARY TO PROTECT OPEN-TRENCH CONDITIONS.
15. AIRCRAFT HAVE RIGHT OF WAY AT ALL TIMES.
16. CONTRACTOR TO COORDINATE WORK BOUNDARY WITH AIRPORT OPERATIONS IN ACCORDANCE WITH AIRLINES NEEDS.
17. PRIOR TO THE START OF EACH PHASE, THE CONTRACTOR SHALL COORDINATE WITH AIRPORT OPERATIONS TO DETERMINE APPROVED ACCESS FROM STAGING AREA, ENTRANCE GATE TO WORK AREA.

GENERAL SAFETY NOTES

1. INSPECT MARKINGS AND BARRICADES DAILY AND MAKE REPAIRS AND ADJUSTMENTS IN A TIMELY MANNER. PROVIDE INSPECTION LOGS TO ENGINEER.
2. CONTRACTOR PARKING SHALL BE WITHIN THE STAGING AREA SHOWN ON THE AIRPORT LAYOUT PLAN. ONLY AUTHORIZED VEHICLES SHALL BE PERMITTED INSIDE THE AIRCRAFT OPERATION AREA (AOA) SECURITY FENCE
3. ALL CONTRACTOR'S VEHICLES SHALL BE CLEARLY MARKED WITH THE COMPANY'S NAME AND FLASHING AMBER LIGHT
4. CONSTRUCTION EQUIPMENT SHALL HAVE AN ORANGE AND WHITE FLAG.
5. THE CONTRACTOR SHALL SUBMIT A SECURITY PLAN AT THE PRE-CONSTRUCTION CONFERENCE OUTLINING PROCEDURES FOR MAINTAINING A SECURE AOA INCLUDING COMMUNICATIONS WITH THE ATCT.
6. EQUIPMENT AND MATERIAL SHALL NOT PENETRATE THE THRESHOLD SITING SURFACE OR THE PRECISION OBSTACLE CLEARANCE AREAS. MATERIAL STOCKPILES SHALL NOT PENETRATE THE PRIMARY, APPROACH OR TRANSITIONAL SURFACES. ALL EQUIPMENT OR OTHER OBJECTS THAT PENETRATE ANY OF THE IMAGINARY SURFACES MUST BE COORDINATED WITH THE ENGINEER IN ADVANCE. OBSTRUCTIONS TO THE IMAGINARY SURFACES MUST BE MARKED AND/OR LIGHTED IN ACCORDANCE WITH FAA GUIDELINES
7. THE CONTRACTOR SHALL PREPARE AND SUBMIT A DETAILED SAFETY PLAN AT THE PRE-CONSTRUCTION CONFERENCE. THE PLAN SHALL DETAIL PLACEMENT OF SAFETY DEVICES, MARKING, LIGHTING, ETC, DURING EACH PHASE OF THE PROJECT AS REQUIRED IN LATEST EDITION OF AC150/5370-2 INCLUDED IN THE SPECIFICATIONS.
8. THE CONTRACTOR SHALL PROVIDE A 24-HOUR POINT OF CONTACT WHO WILL BE RESPONSIBLE FOR CORRECTION OF SAFETY CONCERNS. THE POINT OF CONTACT SHALL BE ONSITE WITHIN 30 MINUTES OF NOTIFICATION.
9. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS OF LATEST EDITION OF AC-150/5370-2 "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
10. CONTINUALLY CLEAR TAXIWAY, AND APRON OF FOREIGN OBJECT DEBRIS RESULTING FROM CONSTRUCTION ACTIVITY. REMAIN OFF ACTIVE RUNWAY AND TAXIWAY SURFACES. CONTRACTOR SHALL HAVE VACUUM TRUCK ONSITE AT ALL TIMES.
11. THE CONTRACTOR SHALL PROVIDE A SAFETY OFFICER/ CONSTRUCTION INSPECTOR FAMILIAR WITH AIRPORT SAFETY TO MONITOR CONSTRUCTION ACTIVITIES. THIS INDIVIDUAL SHALL NOT BE THE PROJECT SUPERINTENDENT OR PROJECT MANGER. MARK ALL CRITICAL SURFACES BY BARRICADES, FLAGGING OR OTHER APPROVED MEANS.
12. RESTRICT MOVEMENT OF CONSTRUCTION VEHICLES TO CONSTRUCTION AREAS BY BARRICADING, AND PROVIDING ESCORTS AS APPROPRIATE
13. NO CONSTRUCTION SHALL OCCUR WITHIN 750-FT OF RUNWAY 16R-34L AND 10-28 CENTERLINE, 107 FEET OF ANY ACTIVE TAXIWAY, AND 300 FEET TO CENTERLINE OF RUNWAY 4-22.
14. PERSONNEL, MATERIAL AND OR EQUIPMENT MUST NOT PENETRATE THE OFZ OR INNER APPROACH OFZ AS DEFINED IN LATEST EDITION OF AC 150/5300-13 (PARAGRAPH 308)
15. MARK OPEN TRENCHES WITH RED OR ORANGE FLAGS AND LIGHT WITH RED LIGHTS.
16. CONTRACTOR SHALL MONITOR THE AIR CONTROL TOWER AT ALL TIMES.
17. DURING NIGHT TIME WORK, CONTRACTOR SHALL ORIENT CONSTRUCTION LIGHTS SO THEY DO NOT IMPACT APPROACHING AIRCRAFT OR THE AIRCRAFT CONTROL TOWER.
18. EACH CREW WILL BE REQUIRED TO HAVE A MAF OPERATIONS-BADGED SUPERVISOR WITH THE CREW AT ALL TIMES.
19. DO NOT STORE MATERIAL OR STAGE EQUIPMENT WITHIN 10 FT OF PERIMETER SECURITY FENCE.
20. CONTRACTOR TO COORDINATE ELECTRICAL VAULT WORK NECESSARY FOR APRON LIGHT MODIFICATIONS. PROPER LOCK-OUT/ TAG-OUT PROCEDURES MUST BE USED.
21. PRIOR TO START OF CONSTRUCTION, CONTRACTOR TO COORDINATE PERSONNEL RADIO TRAINING WITH MAF OPERATIONS. CONTRACTOR TO DESIGNATE RESPONSIBLE PARTY FOR PERFORMING "LISTENING WATCH" ROLE WITH MAF GROUND.

CONTRACT TIME (111 CALENDAR DAYS)

PHASE 1 (21 CALENDAR DAYS)
PHASE 2 (17 CALENDAR DAYS)
PHASE 3 (33 CALENDAR DAYS)
PHASE 4 (40 CALENDAR DAYS)

LEGEND

- CONTRACTOR STAGING AREA
- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- ACTIVE RUNWAY
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT

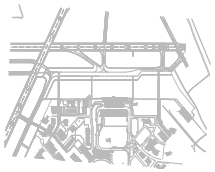
PSC PARKHILL SMITH & COOPER

THIS DOCUMENT IS RELEASED ON APRIL 1, 2020 FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF MICHAEL KRUSING, P.E., TEXAS LICENSE #111822 IT IS NOT TO BE USED FOR REGULATORY APPROVAL, CONSTRUCTION, BIDDING OR PERMIT PURPOSES. PARKHILL SMITH & COOPER, INC. F-560

Midland International Air & Space Port

CONCRETE APRON REHABILITATION PROEJCT

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

OVERALL PHASING AND SAFETY PLAN

G-004

8.232

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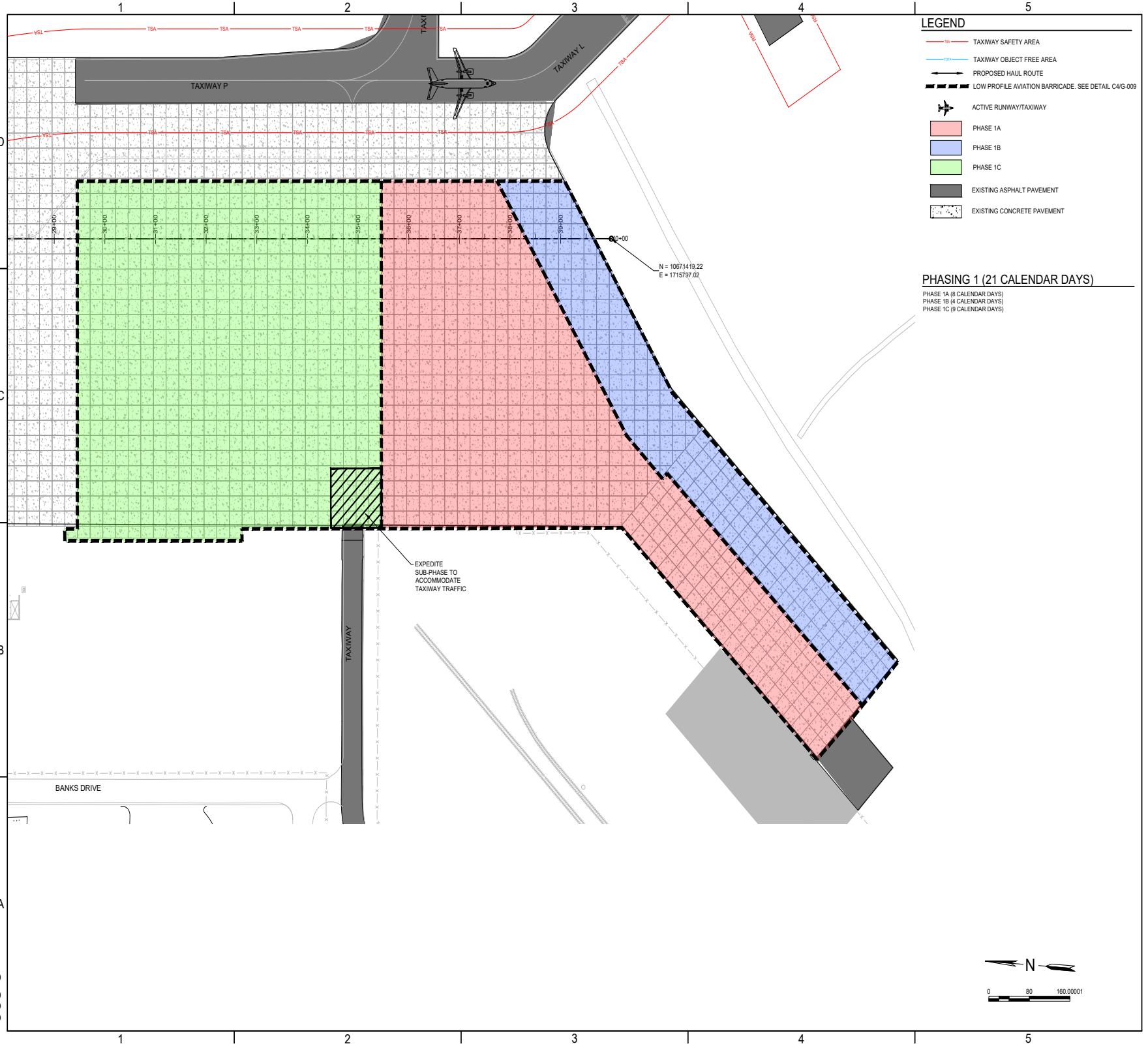

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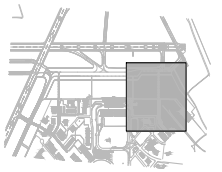
Midland International Air & Space Port

CONCRETE APRON REHABILITATION PROEJCT

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

PHASE 1 PHASING AND SAFETY PLAN

G-005

8.233

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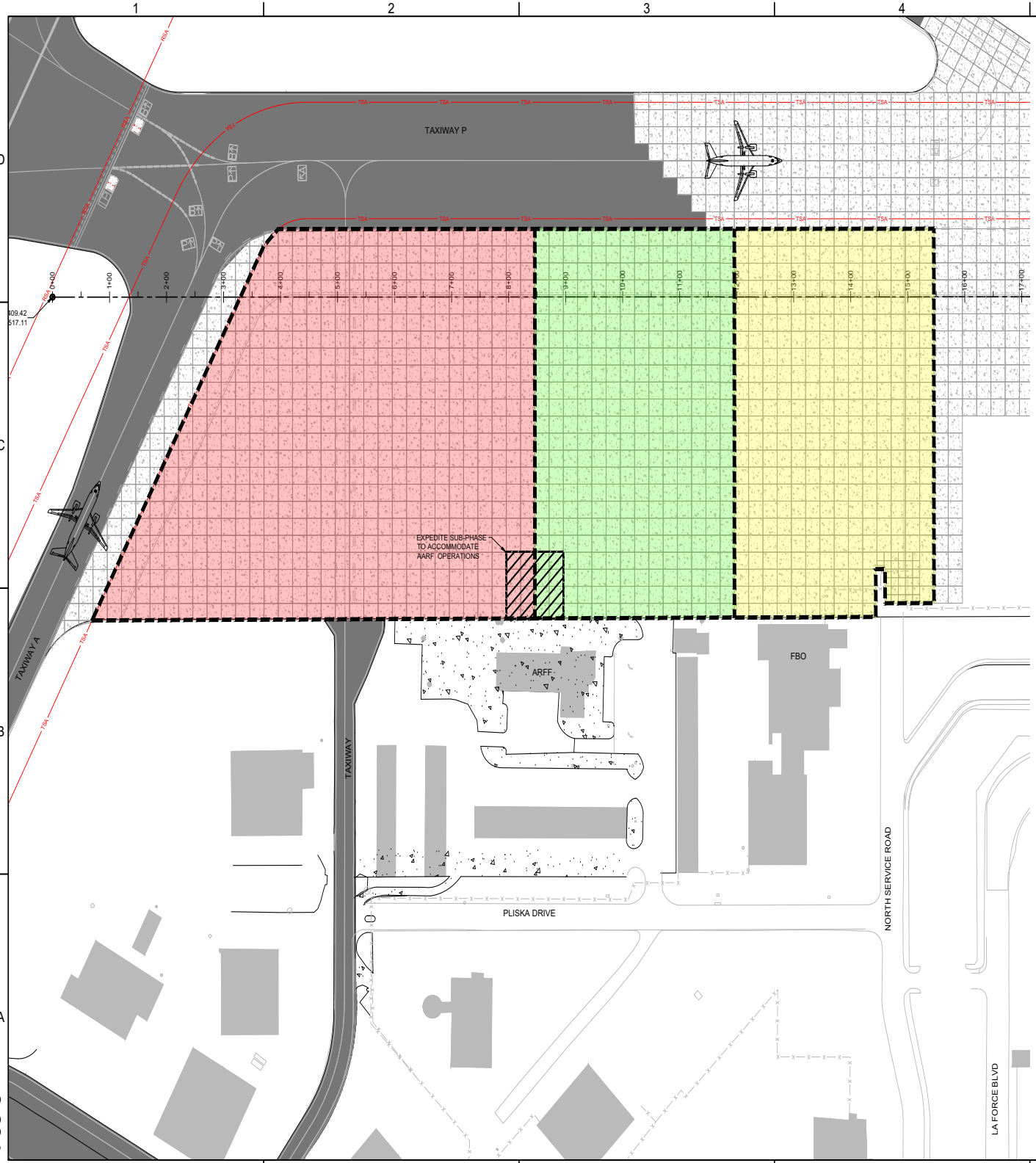

LEGEND

- TAXIWAY SAFETY AREA
- TAXIWAY OBJECT FREE AREA
- PROPOSED HAUL ROUTE
- LOW PROFILE AVIATION BARRICADE. SEE DETAIL C4/G-009
- ACTIVE RUNWAY/TAXIWAY
- PHASE 2A
- PHASE 2B
- PHASE 2C
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT

PHASE 2 (17 CALENDAR DAYS)

PHASE 2A (7 CALENDAR DAYS)
PHASE 2B (5 CALENDAR DAYS)
PHASE 2C (5 CALENDAR DAYS)

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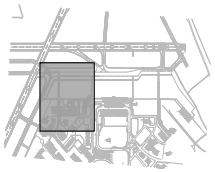
KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

PHASE 2 PHASING AND SAFETY PLAN

G-006

8.234

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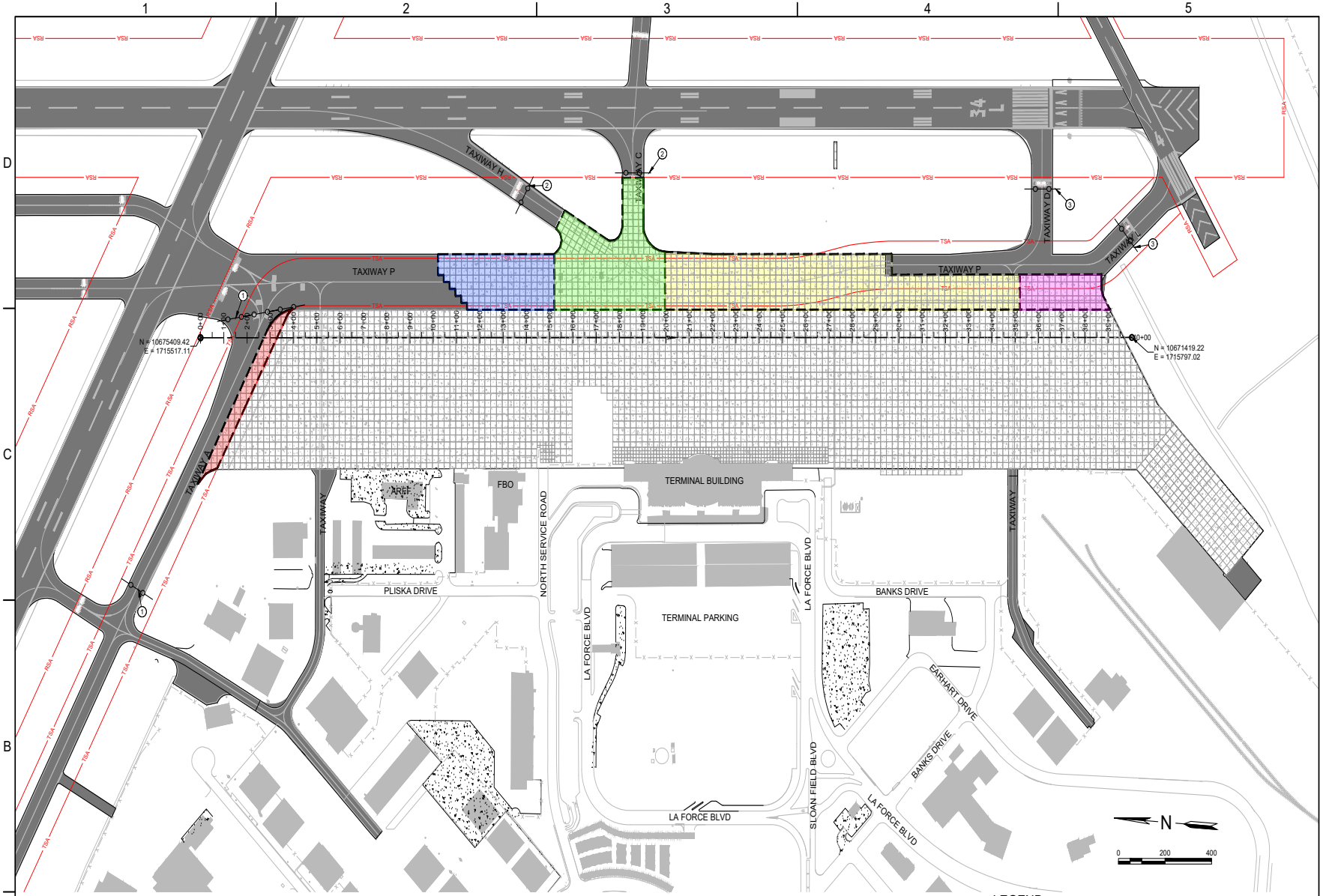

PHASE 3 (33 CALENDAR DAYS)

PHASE 3A (5) CALENDAR DAYS
PHASE 3B (6) CALENDAR DAYS
PHASE 3C (7) CALENDAR DAYS
PHASE 3D (10) CALENDAR DAYS
PHASE 3E (5) CALENDAR DAYS

PHASE 3 KEYED NOTES

AS INDICATED BY: (N)

1. ADDITIONAL BARRICADES USED FOR PHASE 3A
2. ADDITIONAL BARRICADES USED FOR PHASE 3C
3. ADDITIONAL BARRICADES USED FOR PHASE 3C AND 3D

LEGEND

- TAXIWAY SAFETY AREA
- TAXIWAY OBJECT FREE AREA
- PROPOSED HAUL ROUTE
- LOW PROFILE AVIATION BARRICADE. SEE DETAIL C4/G-009
- LOW PROFILE AVIATION BARRICADE. SEE DETAIL C4/G-009
- ACTIVE RUNWAY/TAXIWAY
- PHASE 3A
- PHASE 3B
- PHASE 3C
- PHASE 3D
- PHASE 3E
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT

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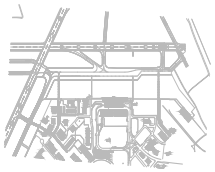
Midland International Air & Space Port

CONCRETE APRON REHABILITATION PROEJCT

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

PHASE 3 PHASING AND SAFETY PLAN

G-007

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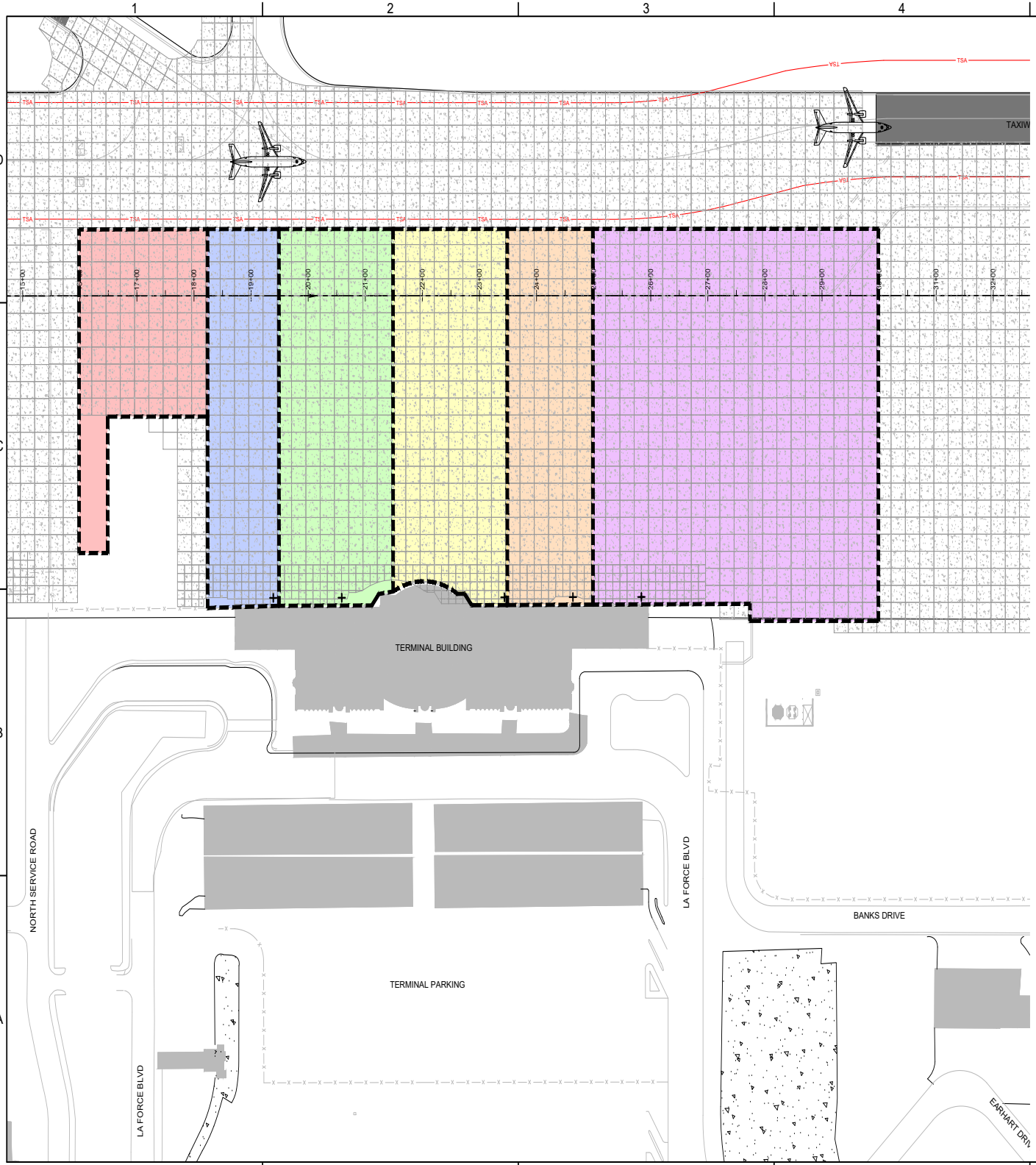

LEGEND

- TAXIWAY SAFETY AREA
- TAXIWAY OBJECT FREE AREA
- PROPOSED HAUL ROUTE
- LOW PROFILE AVIATION BARRICADE. SEE DETAIL C4/G-009
- ACTIVE RUNWAY/TAXIWAY
- PHASE 4A
- PHASE 4B
- PHASE 4C
- PHASE 4D
- PHASE 4E
- PHASE 4F
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT

PHASE 4 (40 CALENDAR DAYS)

PHASE 4A (5 CALENDAR DAYS)
PHASE 4B (6 CALENDAR DAYS)
PHASE 4C (6 CALENDAR DAYS)
PHASE 4D (7 CALENDAR DAYS)
PHASE 4E (6 CALENDAR DAYS)
PHASE 4F (10 CALENDAR DAYS)

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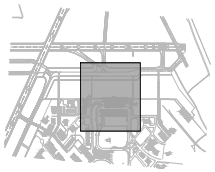
Midland International Air & Space Port

CONCRETE APRON REHABILITATION PROEJCT

KEY PLAN



NO DATE DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

PHASE 4 PHASING AND SAFETY PLAN

G-008

8.236

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APPENDIX B

FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION (BLANK)

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

§ 77.7 Form and time of notice.

(a) If you are required to file notice under §77.9, you must submit to the FAA a completed FAA Form 7460–1, Notice of Proposed Construction or Alteration. FAA Form 7460–1 is available at FAA regional offices and on the Internet.

(b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.

(c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.

(d) If you propose construction or alteration to an existing structure that exceeds 2,000 ft. in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.

(e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460–1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

§ 77.9 Construction or alteration requiring notice.

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

(a) Any construction or alteration that is more than 200 ft. AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76193
Fax: (817) 321-7765
Phone: (817) 321-7750

Website: https://oeaaa.faa.gov

INSTRUCTIONS FOR COMPLETING FAA FORM 7460-1

PLEASE TYPE or PRINT

ITEM #1. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #2. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #3. New Construction would be a structure that has not yet been built.

Alteration is a change to an existing structure such as the addition of a side mounted antenna, a change to the marking and lighting, a change to power and/or frequency, or a change to the height. The nature of the alteration shall be included in ITEM #21 "Complete Description of Proposal".

Existing would be a correction to the latitude and/or longitude, a correction to the height, or if filing on an existing structure which has never been studied by the FAA. The reason for the notice shall be included in ITEM #21 "Complete Description of Proposal".

ITEM #4. If Permanent, so indicate. If Temporary, such as a crane or drilling derrick, enters the estimated length of time the temporary structure will be up.

ITEM #5. Enter the date that construction is expected to start and the date that construction should be completed.

ITEM #6. Please indicate the type of structure. DO NOT LEAVE BLANK.

ITEM #7. In the event that obstruction marking and lighting is required, please indicate type desired. If no preference, check "other" and indicate "no preference" DO NOT LEAVE BLANK. NOTE: High Intensity lighting shall be used only for structures over 500' AGL. In the absence of high intensity lighting for structures over 500' AGL, marking is also required.

ITEM #8. If this is an existing tower that has been registered with the FCC, enter the FCC Antenna Structure Registration number here.

ITEM #9 and #10. Latitude and longitude must be geographic coordinates, accurate to within the nearest second or to the nearest hundredth of a second if known. Latitude and longitude derived solely from a hand-held G P S instrument is NOT acceptable. A hand-held GPS is only accurate to within 100 meters (328 feet) 95 percent of the time. This data, when plotted, should match the site depiction submitted under ITEM #20.

ITEM #11. NAD 83 is preferred; however, latitude and longitude may be submitted in NAD 27. Also, in some geographic areas where NAD 27 and NAD 83 are not available other datum may be used. It is important to know which datum is used. DO NOT LEAVE BLANK.

ITEM #12. Enter the name of the nearest city and state to the site. If the structure is or will be in a city, enter the name of that city and state.

ITEM #13. Enter the full name of the nearest public-use (not private-use) airport or heliport or military airport or heliport to the site.

ITEM #14. Enter the distance from the airport or heliport listed in #13 to the structure.

ITEM #15. Enter the direction from the airport or heliport listed in #13 to the structure.

ITEM #16. Enter the site elevation above mean sea level and expressed in whole feet rounded to the nearest foot (e.g. 17'3" rounds to 17', 17'6" rounds to 18'). This data should match the ground contour elevations for site depiction submitted under ITEM #20.

ITEM #17. Enter the total structure height above ground level in whole feet rounded to the next highest foot (e.g. 17'3" rounds to 18'). The total structure height shall include anything mounted on top of the structure, such as antennas, obstruction lights, lightning rods, etc.

ITEM #18. Enter the overall height above mean sea level and expressed in whole feet. This will be the total of ITEM #16 + ITEM #17.

ITEM #19. If an FAA aeronautical study was previously conducted, enter the previous study number.

ITEM #20. Enter the relationship of the structure to roads, airports, prominent terrain, existing structures, etc. Attach an 8-1/2" x 11" non-reduced copy of the appropriate 7.5 minute U.S. Geological Survey (USGS) Quadrangle Map MARKED WITH A PRECISE INDICATION OF THE SITE LOCATION. To obtain maps, contact USGS at 1-888-275-8747 or via internet at "http://store.usgs.gov". If available, attach a copy of a documented site survey with the surveyor's certification stating the amount of vertical and horizontal accuracy in feet.

ITEM #21.

- For transmitting stations, include maximum effective radiated power (ERP) and all frequencies.
- For antennas, include the type of antenna and center of radiation (Attach the antenna pattern, if available).
- For microwave, include azimuth relative to true north.
- For overhead wires or transmission lines, include size and configuration of wires and their supporting structures (Attach depiction).
- For each pole/support, include coordinates, site elevation, and structure height above ground level or water.
- For buildings, include site orientation, coordinates of each corner, dimensions, and construction materials.
- For alterations, explain the alteration thoroughly.
- For existing structures, thoroughly explain the reason for notifying the FAA (e.g. corrections, no record or previous study, etc.).

Filing this information with the FAA does not relieve the sponsor of this construction or alteration from complying with any other federal, state or local rules or regulations. If you are not sure what other rules or regulations apply to your proposal, contact local/state aviation's and zoning authorities.

Paperwork Reduction Work Act Statement: This information is collected to evaluate the effect of proposed construction or alteration on air navigation and is not confidential. Providing this information is mandatory or anyone proposing construction or alteration that meets or exceeds the criteria contained in 14 CFR, part 77. We estimate that the burden of this collection is an average 19 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB control number associated with this collection is 2120-0001. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Please Type or Print on This Form

Form Approved OMB No.2120-0001
Expiration Date: 8/31/2014

U.S. Department of Transportation
Federal Aviation Administration

Failure To Provide All Requested Information May Delay Processing of Your Notice

Notice of Proposed Construction or Alteration

FOR FAA USE ONLY

Aeronautical Study Number

1. Sponsor *(person, company, etc. proposing this action):*

Attn. of:

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

2. Sponsor's Representative *(if other than #1):*

Attn. of:

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

3. Notice of: ☐ New Construction ☐ Alteration ☐ Existing

4. Duration: ☐ Permanent ☐ Temporary (___ months, ____days)

5. Work Schedule: Beginning _____ End _____

6. Type: ☐ Antenna Tower ☐ Crane ☐ Building ☐ Power Line
☐ Landfill ☐ Water Tank ☐ Other _____

7. Marking/Painting and/or Lighting Preferred:

☐ Red Lights and Paint
☐ White-Medium Intensity
☐ White -High Intensity
☐ Dual - Red and Medium Intensity
☐ Dual - Red and high Intensity
☐ Other

8. FCC Antenna Structure Registration Number *(if applicable)*:

_____

9. Latitude: _____ 0 _____ , _____ , _____ "

10. Longitude: _____ 0 _____ , _____ , _____

11. Datum: ☐ NAD 83 ☐ NAD 27 ☐ Other

12. Nearest: City: _____ State _____

13. Nearest *Public-use* *(not private-use)* or Military Airport or Heliport:

_____

14. Distance from #13. to Structure: _____

15. Direction from #13. to Structure: _____

16. Site Elevation ***(AMSL)***: _____ ft.

17. Total Structure Height ***(AGL)***: _____ ft.

18. Overall Height (#16 + #17) ***(AMSL)***: _____ ft.

19. Previous FAA Aeronautical Study Number *(if applicable)*:

_____-OE

20. Description of Location: *(Attach a USGS 7.5 minute Quadrangle Map with the precise site marked and any certified survey)*

21. Complete Description of Proposal:

Frequency/Power (kW)	

Notice is required by 14 Code of Federal Regulations, part 77 pursuant to 49 U.S.C., Section 44718. Persons who knowingly and willingly violate the notice requirements of part 77 are subject to a civil penalty of $1,000 per day until the notice is received, pursuant to 49 U.S.C., Section 46301(a)

I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking & lighting standards as necessary.

Date	Typed or Printed Name and Title of Person Filing Notice	Signature

APPENDIX C

ADVISORY CIRCULAR 150/5370-2G, OPERATING SAFETY ON AIRPORTS DURING CONSTRUCTION

U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 12/13/2017 **Initiated By:** AAS-100	**AC No:** 150/5370-2G **Change:**

1 **Purpose.**

This AC sets forth guidelines for operational safety on airports during construction.

2 **Cancellation.**

This AC cancels AC 150/5370-2F, *Operational Safety on Airports during Construction*, dated September 29, 2011.

3 **Application.**

This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*. For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP). See Grant Assurance No. 34, *Policies, Standards, and Specifications*. While we do not require non-certificated airports without grant agreements or airports using Passenger Facility Charge (PFC) Program funds for construction projects to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

4 **Related Documents.**

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version. Appendix A contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.

5 **Principal Changes.**

The AC incorporates the following principal changes:

1. Notification about impacts to both airport owned and FAA-owned NAVAIDs was added. See paragraph 2.13.5.3, NAVAIDs.

2. Guidance for the use of orange construction signs was added. See paragraph 2.18.4.2, Temporary Signs.
3. Open trenches or excavations may be permitted in the taxiway safety area while the taxiway is open to aircraft operations, subject to restrictions. See paragraph 2.22.3.4, Excavations.
4. Guidance for temporary shortened runways and displaced thresholds has been enhanced. See Figure 2-1 and Figure 2-2.
5. Figures have been improved and a new Appendix F on the placement of orange construction signs has been added.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the "ALT" and " ←" keys simultaneously.

Figures in this document are schematic representations and are not to scale.

6 **Use of Metrics.**

Throughout this AC, U.S. customary units are used followed with "soft" (rounded) conversion to metric units. The U.S. customary units govern.

7 **Where to Find this AC.**

You can view a list of all ACs at http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

8 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.

John R. Dermody
Director of Airport Safety and Standards

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CHAPTER 1. PLANNING AN AIRFIELD CONSTRUCTION PROJECT

1.1 Overview.

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

1.2 Plan for Safety.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified and their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

1.2.1 Identify Affected Areas.

The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

1.2.2 Describe Current Operations.

Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Approach Category (AAC) and Airplane Design Group (ADG) of the airplanes that operate on each runway; the ADG and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums;

[1] Find Taxiway Design Group information in AC 150/5300-13, *Airport Design.*

available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System (SMGCS) plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

1.2.3 Allow for Temporary Changes to Operations.

To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways, and other changes. An example of a table showing temporary operations versus current operations is shown in Appendix E.

1.2.4 Take Required Measures to Revise Operations.

Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary widely among airports, this AC presents general guidance on those subjects.

1.2.5 Manage Safety Risk.

The FAA is committed to incorporating proactive safety risk management (SRM) tools into its decision-making processes. FAA Order 5200.11, *FAA Airports (ARP) Safety Management System (SMS)*, requires the FAA to conduct a Safety Assessment for certain triggering actions. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA determine whether a Safety Assessment is required prior to FAA approval of the CSPP. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for a Safety Risk Assessment. If the FAA requires an assessment, the airport operator must at a minimum:

1. Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.
2. Provide documents identified by the FAA as necessary to conduct SRM.
3. Participate in the SRM process for airport projects.
4. Provide a representative to participate on the SRM panel.

5. Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

1.3 **Develop a Construction Safety and Phasing Plan (CSPP).**

Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix A for a list of related reading material.

1.3.1 List Requirements.

A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or located on an airport certificated under Part 139. For on-airfield construction projects at Part 139 airports funded without AIP funds, the preparation of a CSPP represents an acceptable method the certificate holder may use to meet Part 139 requirements during airfield construction activity. As per FAA Order 5200.11, projects that require Safety Assessments do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 1.2.5).

1.3.2 Prepare a Safety Plan Compliance Document (SPCD).

The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

1.3.3 Assume Responsibility for the CSPP.

The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

1.4 **Who Is Responsible for Safety During Construction?**

1.4.1 Establish a Safety Culture.

Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others, such as military personnel at any airport supporting military operations (e.g. national guard or a joint use facility). Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

1.4.2 Assess Airport Operator's Responsibilities.

An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

1.4.2.1 Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

1.4.2.2 Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

1.4.2.3 Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

1.4.2.4 Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

1.4.2.5 Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

1.4.2.6 Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

1.4.2.7 Ensure construction personnel know applicable airport procedures and changes to those procedures that may affect their work.

1.4.2.8 Ensure that all temporary construction signs are located per the scheduled list for each phase of the project.

1.4.2.9 Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

1.4.2.10 Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

1.4.2.11 At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

1.4.2.12 Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.2.13 Take immediate action to resolve safety deficiencies.

1.4.2.14 At airports subject to 49 CFR Part 1542, *Airport Security*, ensure construction access complies with the security requirements of that regulation.

1.4.2.15 Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

1.4.2.16 Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

1.4.2.17 Ensure prompt transmission of the Airport Sponsor Strategic Event Submission, FAA Form 6000-26, located at https://oeaaa.faa.gov/oeaaa/external/content/AIRPORT_SPONSOR_STRATEGIC_EVENT_SUBMISSION_FORM.pdf, to assure proper coordination for NAS Strategic Interruption per Service Level Agreement with ATO.

1.4.2.18 Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. The FAA Airports Regional or District office will determine if further coordination within the FAA is needed. Coordinate with appropriate local and other federal government agencies, such as Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Transportation Security Administration (TSA), and the state environmental agency.

1.4.3 Define Construction Contractor's Responsibilities.

The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

1.4.3.1 Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

1.4.3.2 Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

1.4.3.3 Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

1.4.3.4 Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.

1.4.3.5 Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.3.6 Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

1.4.3.7 Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

1.4.3.8 Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

1.4.3.9 Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.

1.4.3.10 Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

1.4.4 Define Tenant's Responsibilities.

If planning construction activities on leased property, Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction are strongly encouraged to:

1. Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator. The airport operator may forgo a complete CSPP submittal and instead incorporate appropriate operational safety principles and measures addressed in the advisory circular within their tenant lease agreements.
2. In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval issued prior to issuance of a Notice to Proceed.
3. Ensure that construction personnel are familiar with safety procedures and regulations on the airport during all phases of the construction.
4. Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.
5. Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
6. Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.
7. Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, as specified in the CSPP and SPCD.
8. Ensure prompt submittal through the airport operator of Form 7460-1 for conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.
9. Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

CHAPTER 2. CONSTRUCTION SAFETY AND PHASING PLANS

2.1 Overview.

Aviation safety is the primary consideration at airports, especially during construction. The airport operator's CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

2.2 Assume Responsibility.

Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

2.3 Submit the CSPP.

Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 × 11 inch or 11 × 17 inch format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

2.3.1 Submit an Outline/Draft.

By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

2.3.2 Submit a CSPP.

The CSPP should be formally submitted for FAA approval when the project design is 80 percent to 90 percent complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

2.3.3 Submit an SPCD.

The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

2.3.4 Submit CSPP Revisions.

All revisions to a previously approved CSPP must be re-submitted to the FAA for review and approval/disapproval action.

2.4 Meet CSPP Requirements.

2.4.1 To the extent possible, the CSPP should address the following as outlined in Chapter 3, Guidelines for Writing a CSPP. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
    a. Contractor progress meetings.
    b. Scope or schedule changes.
    c. FAA ATO coordination.
2. Phasing.
    a. Phase elements.
    b. Construction safety drawings.
3. Areas and operations affected by the construction activity.
    a. Identification of affected areas.
    b. Mitigation of effects.
4. Protection of navigation aids (NAVAIDs).
5. Contractor access.
    a. Location of stockpiled construction materials.
    b. Vehicle and pedestrian operations.
6. Wildlife management.
    a. Trash.
    b. Standing water.
    c. Tall grass and seeds.
    d. Poorly maintained fencing and gates.
    e. Disruption of existing wildlife habitat.
7. Foreign Object Debris (FOD) management.
8. Hazardous materials (HAZMAT) management.
9. Notification of construction activities.

a. Maintenance of a list of responsible representatives/ points of contact.

b. NOTAM.

c. Emergency notification procedures.

d. Coordination with ARFF Personnel.

e. Notification to the FAA.

10. Inspection requirements.

a. Daily (or more frequent) inspections.

b. Final inspections.

11. Underground utilities.

12. Penalties.

13. Special conditions.

14. Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.

a. General.

b. Markings.

c. Lighting and visual NAVAIDs.

d. Signs, temporary, including orange construction signs, and permanent signs.

15. Marking and signs for access routes.

16. Hazard marking and lighting.

a. Purpose.

b. Equipment.

17. Work zone lighting for nighttime construction (if applicable).

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.

a. Runway Safety Area (RSA).

b. Runway Object Free Area (ROFA).

c. Taxiway Safety Area (TSA). Provide details for any adjustments to Taxiway Safety Area width to allow continued operation of smaller aircraft. See paragraph 2.22.3.

d. Taxiway Object Free Area (TOFA). Provide details for any continued aircraft operations while construction occurs within the TOFA. See paragraph 2.22.4.

e. Obstacle Free Zone (OFZ).

f. Runway approach/departure surfaces.

19. Other limitations on construction.

a. Prohibitions.

b. Restrictions.

2.4.2 The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

1. Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
2. Phasing. Discuss proposed construction schedule elements, including:
   a. Duration of each phase.
   b. Daily start and finish of construction, including "night only" construction.
   c. Duration of construction activities during:
      i. Normal runway operations.
      ii. Closed runway operations.
      iii. Modified runway "Aircraft Reference Code" usage.
3. Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
4. Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.
5. Contractor access. Provide the following:
   a. Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   b. Listing of individuals requiring driver training (for certificated airports and as requested).
   c. Radio communications.
      i. Types of radios and backup capabilities.
      ii. Who will be monitoring radios.
      iii. Who to contact if the ATCT cannot reach the contractor's designated person by radio.

d. Details on how the contractor will escort material delivery vehicles.

6. Wildlife management. Discuss the following:
   a. Methods and procedures to prevent wildlife attraction.
   b. Wildlife reporting procedures.
7. Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.
8. Hazardous Materials (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.
9. Notification of construction activities. Provide the following:
   a. Contractor points of contact.
   b. Contractor emergency contact.
   c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   d. Batch plant details, including 7460-1 submittal.
10. Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.
11. Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.
12. Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.
13. Special conditions. Discuss proposed actions for each special condition identified in the CSPP.
14. Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
   a. Equipment and methods for covering signage and airfield lights.
   b. Equipment and methods for temporary closure markings (paint, fabric, other).
   c. Temporary orange construction signs.
   d. Types of temporary Visual Guidance Slope Indicators (VGSI).
15. Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.
16. Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.
17. Work zone lighting for nighttime construction (if applicable). Discuss proposed equipment, locations, aiming, and shielding to prevent interference with air traffic control and aircraft operations.

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
    a. Equipment and methods for maintaining Taxiway Safety Area standards.
    b. Equipment and methods to ensure the safe passage of aircraft where Taxiway Safety Area or Taxiway Object Free Area standards cannot be maintained.
    c. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
19. Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

2.5 **Coordination.**

Airport operators, or tenants responsible for design, bidding and conducting construction on their leased properties, should ensure at all project developmental stages, such as predesign, prebid, and preconstruction conferences, they capture the subject of airport operational safety during construction (see AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects*). In addition, the following should be coordinated as required:

2.5.1 Progress Meetings.

Operational safety should be a standing agenda item for discussion during progress meetings throughout the project developmental stages.

2.5.2 Scope or Schedule Changes.

Changes in the scope or duration at any of the project stages may require revisions to the CSPP and review and approval by the airport operator and the FAA (see paragraph 1.4.2.17).

2.5.3 FAA ATO Coordination.

Early coordination with FAA ATO is highly recommended during the design phase and is required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. Formal agreements between the airport operator and appropriate FAA offices are recommended. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See paragraph 2.13.5.3.2 for required FAA notification regarding FAA-owned NAVAIDs.)

2.6 **Phasing.**

Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In this case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

2.6.1 Phase Elements.

For each phase the CSPP should detail:

- Areas closed to aircraft operations.
- Duration of closures.
- Taxi routes and/or areas of reduced TSA and TOFA to reflect reduced ADG use.
- ARFF access routes.
- Construction staging, disposal, and cleanout areas.
- Construction access and haul routes.
- Impacts to NAVAIDs.
- Lighting, marking, and signing changes.
- Available runway length and/or reduced RSA and ROFA to reflect reduced ADG use.
- Declared distances (if applicable).
- Required hazard marking, lighting, and signing.
- Work zone lighting for nighttime construction (if applicable).
- Lead times for required notifications.

2.6.2 Construction Safety Drawings.

Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should also be included in the contract drawing package.

2.7 **Areas and Operations Affected by Construction Activity.**

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA ATO will support operational simulations. See Appendix E for an example of a table showing temporary operations versus current operations. The tables in Appendix E can be useful for coordination among all interested parties, including FAA Lines of Business.

2.7.1 Identification of Affected Areas.

Identifying areas and operations affected by the construction helps to determine possible safety problems. The affected areas should be identified in the construction safety drawings for each construction phase. (See paragraph 2.6.2.) Of particular concern are:

2.7.1.1 **Closing, or Partial Closing, of Runways, Taxiways and Aprons, and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or takeoff in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is normally available for take-off in the direction of the displacement and for landing and takeoff in the opposite direction. Misunderstanding this difference, may result in issuance of an inaccurate NOTAM, and can lead to a hazardous condition.

2.7.1.1.1 Partially Closed Runways.

The temporarily closed portion of a partially closed runway will generally extend from the threshold to a taxiway that may be used for entering and exiting the runway. If the closed portion extends to a point between taxiways, pilots will have to back-taxi on the runway, which is an undesirable operation. See Figure 2-1 for a desirable configuration.

2.7.1.1.2 Displaced Thresholds.

Since the portion of the runway pavement between the permanent threshold and a standard displaced threshold is available for takeoff and for landing in the opposite direction, the temporary displaced threshold need not be located at an entrance/exit taxiway. See Figure 2-2.

2.7.1.2 Closing of aircraft rescue and fire fighting access routes.

2.7.1.3 Closing of access routes used by airport and airline support vehicles.

2.7.1.4 Interruption of utilities, including water supplies for fire fighting.

2.7.1.5 Approach/departure surfaces affected by heights of objects.

2.7.1.6 Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

Figure 2-1. Temporary Partially Closed Runway

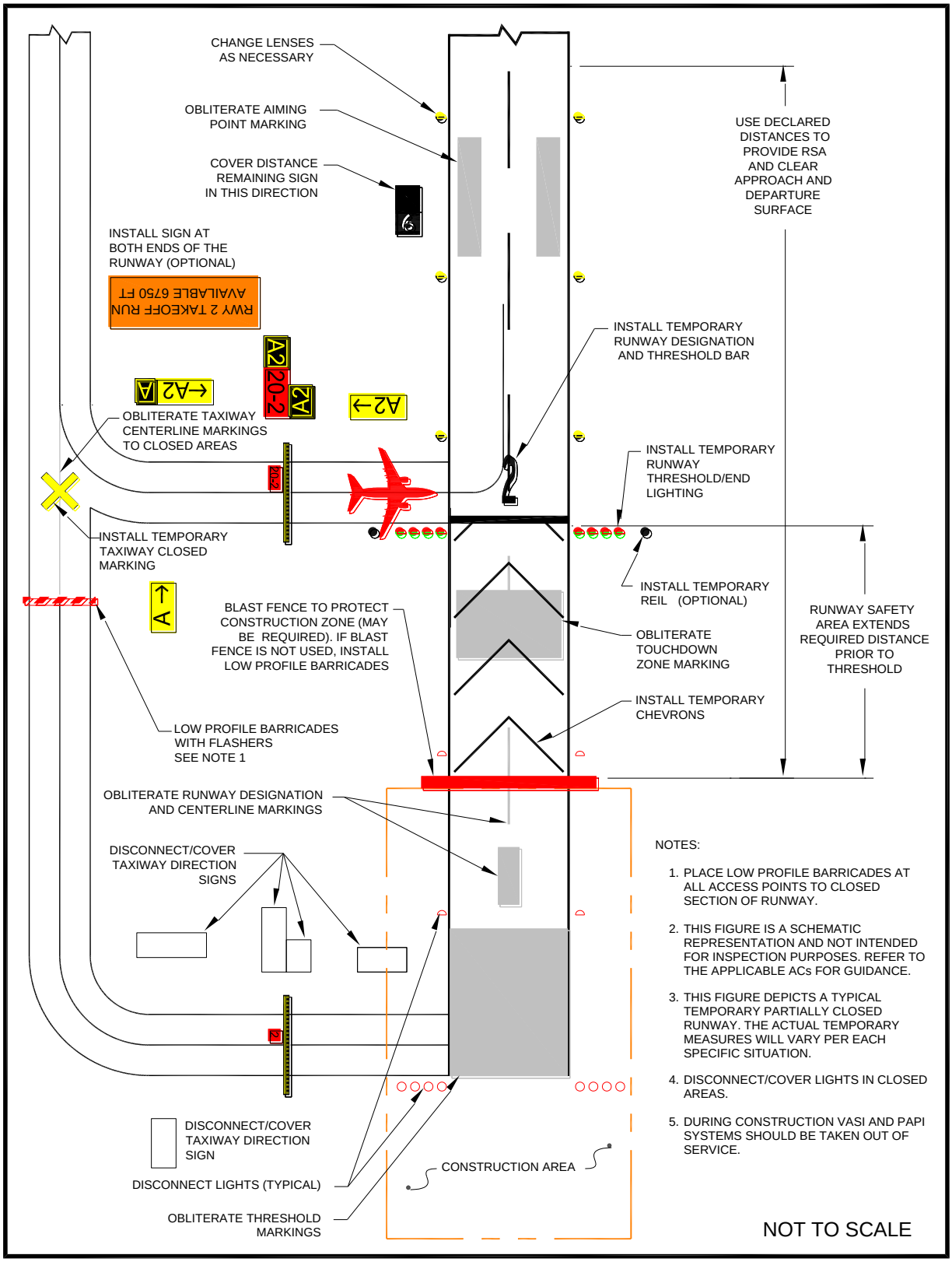
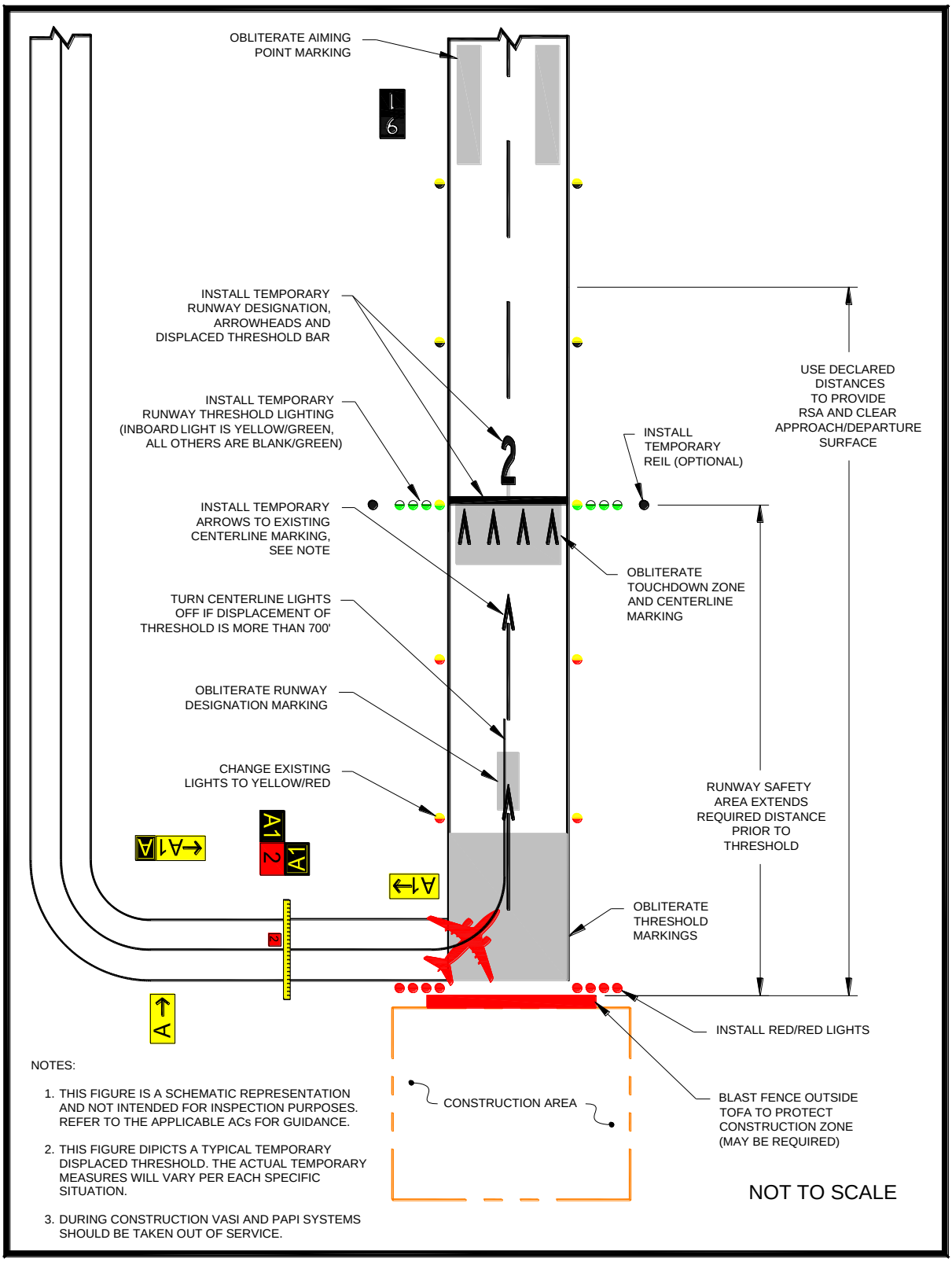


Figure 2-2. Temporary Displaced Threshold



Note: See paragraph 2.18.2.5.

2.7.2 Mitigation of Effects.

Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

2.7.2.1 Temporary changes to runway and/or taxi operations.

2.7.2.2 Detours for ARFF and other airport vehicles.

2.7.2.3 Maintenance of essential utilities.

2.7.2.4 Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

2.8 Navigation Aid (NAVAID) Protection.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 2.13.5.3.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 2.13.2). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 2.13.5.3.)

2.9 Contractor Access.

The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

2.9.1 Location of Stockpiled Construction Materials.

Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 2.18.2.) This includes determining and

verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage from blowing or tracked material. See paragraphs 2.10 and 2.11.

2.9.2 Vehicle and Pedestrian Operations.

The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, with associated training requirements:

2.9.2.1 **Construction Site Parking.**

Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

2.9.2.2 **Construction Equipment Parking.**

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 2.13.1 for further information.

2.9.2.3 **Access and Haul Roads.**

Determine the construction contractor’s access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul

roads does not interfere with NAVAIDs or approach surfaces of operational runways. Address whether access gates will be blocked or inoperative or if a rally point will be blocked or inaccessible.

2.9.2.4 Marking and lighting of vehicles in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport.*

2.9.2.5 Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

2.9.2.6 Required escorts.

2.9.2.7 **Training Requirements for Vehicle Drivers to Ensure Compliance with the Airport Operator's Vehicle Rules and Regulations.**

Specific training should be provided to vehicle operators, including those providing escorts. See AC 150/5210-20, *Ground Vehicle Operations on Airports*, for information on training and records maintenance requirements.

2.9.2.8 **Situational Awareness.**

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

2.9.2.9 **Two-Way Radio Communication Procedures.**

2.9.2.9.1 General.

The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

1. Airport operations
2. ATCT

3. Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
4. Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

2.9.2.9.2 Areas Requiring Two-Way Radio Communication with the ATCT.

Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

2.9.2.9.3 Frequencies to be Used.

The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

2.9.2.9.4 Proper radio usage, including read back requirements.

2.9.2.9.5 Proper phraseology, including the International Phonetic Alphabet.

2.9.2.9.6 Light Gun Signals.

Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (see "Signs & Markings Vehicle Dashboard Sticker") or obtained from the FAA Airports Regional Office.

2.9.2.10 **Maintenance of the secured area of the airport, including:**

2.9.2.10.1 Fencing and Gates.

Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-

00/52, *Recommended Security Guidelines for Airport Planning and Construction*, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

2.9.2.10.2 Badging Requirements.

Airports subject to 49 CFR Part 1542, *Airport Security*, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

2.10 Wildlife Management.

The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports,* and CertAlert 98-05, *Grasses Attractive to Hazardous Wildlife.* Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

2.10.1 Trash.

Food scraps must be collected from construction personnel activity.

2.10.2 Standing Water.

2.10.3 Tall Grass and Seeds.

Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, *Standards for Specifying Construction of Airports,* Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

2.10.4 Poorly Maintained Fencing and Gates.

See paragraph 2.9.2.10.1.

2.10.5 Disruption of Existing Wildlife Habitat.

While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

2.11 **Foreign Object Debris (FOD) Management.**

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, *Foreign Object Debris (FOD) Management.*

2.12 **Hazardous Materials (HAZMAT) Management.**

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, *Management of Airport Industrial Waste.*

2.13 **Notification of Construction Activities.**

The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

2.13.1 List of Responsible Representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours.

2.13.2 NOTAMs.

Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must either enter the NOTAM into NOTAM Manager, or provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators,* for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 2.7.1.1 about issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

2.13.3 Emergency notification procedures for medical, fire fighting, and police response.

2.13.4 Coordination with ARFF.

The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

1. The deactivation and subsequent reactivation of water lines or fire hydrants, or
2. The rerouting, blocking and restoration of emergency access routes, or
3. The use of hazardous materials on the airfield.

2.13.5 Notification to the FAA.

2.13.5.1 **Part 77.**

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e., cranes, graders, other equipment) on airports. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix A to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

2.13.5.2 **Part 157.**

With some exceptions, Title 14 CFR Part 157, *Notice of Construction, Alteration, Activation, and Deactivation of Airports*, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, *Notice of Landing Area Proposal*, to the nearest FAA Airports Regional or District Office. See Appendix A to download the form.

2.13.5.3 **NAVAIDs.**

For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

2.13.5.3.1 Airport Owned/FAA Maintained.

If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

2.13.5.3.2 FAA Owned.

1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.
2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

2.14 **Inspection Requirements.**

2.14.1 Daily Inspections.

Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix D, Construction Project Daily Safety Inspection Checklist. See also AC 150/5200-18, *Airport Safety Self-Inspection.* Airport operators holding a Part 139 certificate are required to conduct self-inspections during unusual conditions, such as construction activities, that may affect safe air carrier operations.

2.14.2 Interim Inspections.

Inspections should be conducted of all areas to be (re)opened to aircraft traffic to ensure the proper operation of lights and signs, for correct markings, and absence of FOD. The contractor should conduct an inspection of the work area with airport operations personnel. The contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the air traffic control tower be notified to open the area to aircraft operations. The contractor should be required to retain a suitable workforce and the necessary equipment at the work area for any last minute cleanup that may be requested by the airport operator prior to opening the area.

2.14.3 Final Inspections.

New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

2.15 **Underground Utilities.**

The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that "One Call" or "Miss Utility" services do not include FAA ATO/Technical Operations.

2.16 **Penalties.**

The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

2.17 **Special Conditions.**

The CSPP must detail any special conditions that affect the operation of the airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

2.18 **Runway and Taxiway Visual Aids.**

This includes marking, lighting, signs, and visual NAVAIDs. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs that are to continue to perform their functions during construction remain in place and operational. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary. The CSPP must address the following, as appropriate:

2.18.1 General.

Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents and constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact. Items used to secure such markings must be of a color similar to the marking.

2.18.2 Markings.

During the course of construction projects, temporary pavement markings are often required to allow for aircraft operations during or between work periods. During the design phase of the project, the designer should coordinate with the project manager,

airport operations, airport users, the FAA Airports project manager, and Airport Certification Safety Inspector for Part 139 airports to determine minimum temporary markings. The FAA Airports project manager will, wherever a runway is closed, coordinate with the appropriate FAA Flight Standards Office and disseminate findings to all parties. Where possible, the temporary markings on finish grade pavements should be placed to mirror the dimensions of the final markings. Markings must be in compliance with the standards of AC 150/5340-1, *Standards for Airport Markings*, except as noted herein. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 2.18.2.1.2.)

2.18.2.1 **Closed Runways and Taxiways.**

2.18.2.1.1 Permanently Closed Runways.

For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place an X at each end and at 1,000-foot (300 m) intervals. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X.

2.18.2.1.2 Temporarily Closed Runways.

For runways that have been temporarily closed, place an X at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X. See Figure 2-3. See also paragraph 2.18.3.3.

2.18.2.1.3 Partially Closed Runways and Displaced Thresholds.

When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 2.7.1.1 for the difference between partially closed runways and runways with displaced thresholds. Because of the temporary nature of threshold displacement due to construction, it is not necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach. Some of the requirements below may be waived in the cases of low-activity airports and/or short duration changes that are measured in days rather than weeks. Consider whether the presence of an airport traffic

control tower allows for the development of special procedures. Contact the appropriate FAA Airports Regional or District Office for assistance.

Figure 2-3. Markings for a Temporarily Closed Runway

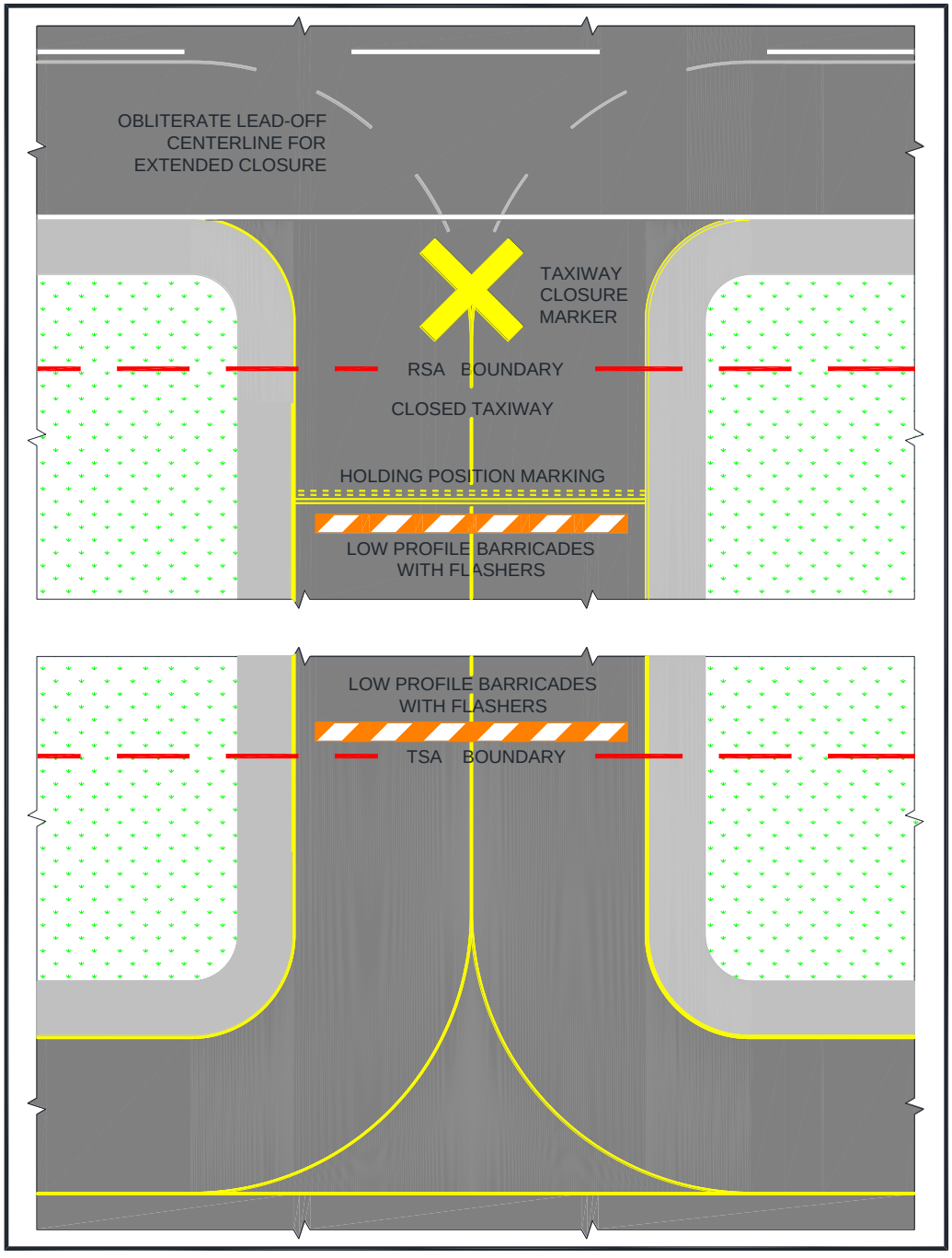
1. **Partially Closed Runways.** Pavement markings for temporary closed portions of the runway consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1). Obliterate or cover markings prior to the moved threshold. Existing touchdown zone markings beyond the moved threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-4.

2. **Displaced Thresholds.** Pavement markings for a displaced threshold consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1. Obliterate markings prior to the displaced threshold. Existing touchdown zone markings beyond the displaced threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-2.

2.18.2.1.4 Taxiways.

1. **Permanently Closed Taxiways.** AC 150/5300-13 *Airport Design*, notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. See Figure 2-4.

Figure 2-4. Temporary Taxiway Closure



2. **Temporarily Closed Taxiways.** Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section. Always obliterate runway lead-off lines for high speed exits, regardless of the duration of the closure. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed. See Figure 2-4.

2.18.2.1.5 Temporarily Closed Airport.

When the airport is closed temporarily, mark all the runways as closed.

2.18.2.2 If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents. Items used to secure such markings must be of a color similar to the marking.

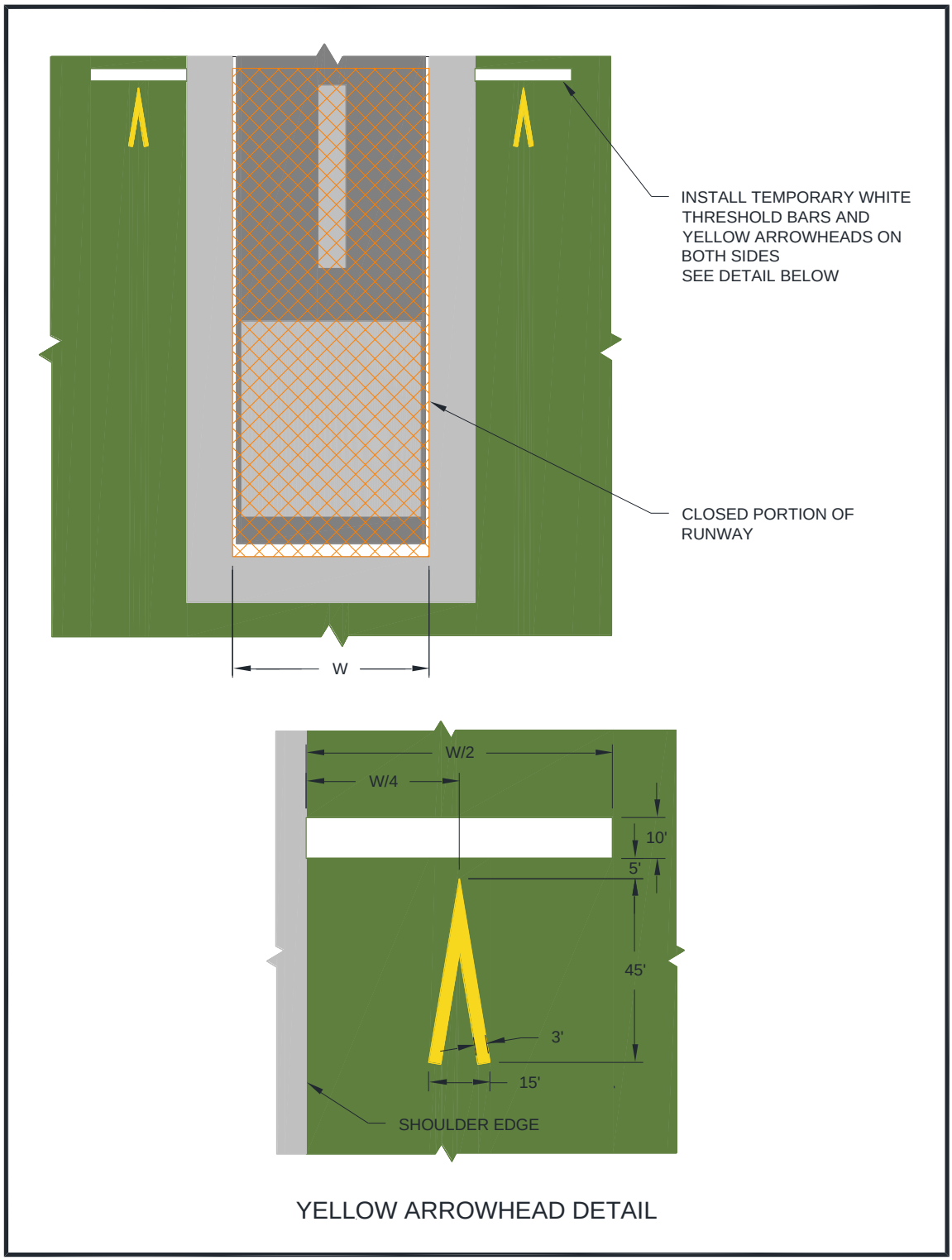
2.18.2.3 It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

2.18.2.4 If it is not possible to install threshold bars, chevrons, and arrows on the pavement, "temporary outboard white threshold bars and yellow arrowheads", see Figure 2-5, may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimensions must be as shown in Figure 2-5. If the markings are not discernible on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

2.18.2.5 The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, "Runway and Taxiway Painting," in AC 150/5370-10), but the dimensions must meet the existing standards. When applying temporary markings at night, it is recommended that the fast curing, Type II paint be used to help offset the higher humidity and cooler temperatures often experienced at night. Diluting the paint will substantially increase cure time and is not recommended. Glass beads are not recommended for temporary markings. Striated markings may also be used for certain temporary markings. AC

150/5340-1, *Standards for Airport Markings*, has additional guidance on temporary markings.

Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads



2.18.3 Lighting and Visual NAVAIDs.

This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting installation must be in conformance with AC 150/5340-30, *Design and Installation Details for Airport Visual Aids,* and fixture design in conformance with AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights.* When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. See AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*, for disconnect procedures and safety precautions. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Maintain mandatory hold signs to operate normally in any situation where pilots or vehicle drivers could mistakenly be in that location. At towered airports certificated under Part 139, holding position signs are required to be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, install a jumper to the taxiway circuit to provide power to the holding position sign for nighttime operations. Where it is not possible to maintain power to signs that would normally be operational, install barricades to exclude aircraft. Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4 illustrate temporary changes to lighting and visual NAVAIDs.

2.18.3.1 **Permanently Closed Runways and Taxiways.**

For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

2.18.3.2 **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.**

If available, use a lighted X, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note that the lighted X must be illuminated at all times that it is on a runway.) The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, *Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure.* For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-6 shows a lighted X by day. Figure 2-7 shows a lighted X at night.

Figure 2-6. Lighted X in Daytime

Figure 2-7. Lighted X at Night

2.18.3.3 **Partially Closed Runways and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially

closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.

2.18.3.3.1 Partially Closed Runways.

Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixtures in such a way as to prevent light leakage. See Figure 2-1.

2.18.3.3.2 Temporary Displaced Thresholds.

Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, blank out centerline lights in the direction of approach or place the centerline lights out of service. If the displacement is over 700 feet, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds. See Figure 2-2.

2.18.3.3.3 Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

2.18.3.3.4 A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 2.18.2.1.3. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, *Specification for L-853, Runway and Taxiway Retroreflective Markers.*

2.18.3.3.5 Temporary threshold lights and runway end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

2.18.3.3.6 Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may

be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

2.18.3.3.7 When runway thresholds are temporarily displaced, reconfigure yellow lenses (caution zone), as necessary, and place the centerline lights out of service.

2.18.3.3.8 Relocate the Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense. See FAA JO 6850.2, *Visual Guidance Lighting Systems,* for installation criteria for FAA owned and operated NAVAIDs.

2.18.3.3.9 Issue a NOTAM to inform pilots of temporary lighting conditions.

2.18.3.4 **Temporarily Closed Taxiways.**

If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), cover the light fixture in a way as to prevent light leakage.

2.18.4 Signs.

To the extent possible, signs must be in conformance with AC 150/5345-44, *Specification for Runway and Taxiway Signs*, and AC 150/5340-18, *Standard for Airport Sign Systems.*

2.18.4.1 **Existing Signs.**

Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

2.18.4.2 **Temporary Signs.**

Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot "information overload," the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, *Guidance for the Assembly and Installation of Temporary Orange Construction Signs.* Many criteria in AC 150/5345-44, *Specification for Runway and Taxiway Signs,* are referenced in the Engineering Brief. Permissible sign legends are:

1. CONSTRUCTION AHEAD,
2. CONSTRUCTION ON RAMP, and
3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

2.18.4.2.1 Takeoff Run Available (TORA) signs.

Recommended: Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position. See EB 93 for sign size and location.

2.18.4.2.2 Sign legends are shown in Figure F-1.

Note: See Figure E-1, Figure E-2, Figure E-3, Figure F-2, and Figure F-3 for examples of orange construction sign locations.

2.19 **Marking and Signs for Access Routes.**

The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, *Frangible Connections,* which may require modification to size and height guidance in the MUTCD.

2.20 **Hazard Marking, Lighting and Signing.**

2.20.1 Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

2.20.2 Equipment.

2.20.2.1 **Barricades.**

Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude aircraft, gaps between barricades must be smaller than the wingspan of the smallest aircraft to be excluded; if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

2.20.2.2 **Lights.**

Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

2.20.2.3 **Supplement Barricades with Signs (for example) As Necessary.**

Examples are “No Entry” and “No Vehicles.” Be aware of the increased effects of wind and jet blast on barricades with attached signs.

2.20.2.4 **Air Operations Area – General.**

Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground. Figure 2-8 and Figure 2-9 show sample barricades with proper coloring and flags.

Figure 2-8. Interlocking Barricades

Figure 2-9. Low Profile Barricades

2.20.2.5 **Air Operations Area – Runway/Taxiway Intersections.**

Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

2.20.2.6 **Air Operations Area – Other.**

Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

2.20.2.7 **Maintenance.**

The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

2.21 **Work Zone Lighting for Nighttime Construction.**

Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Refer to AC 150/5370-10 for minimum illumination levels for nighttime paving projects. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely

illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways.

2.22 **Protection of Runway and Taxiway Safety Areas.**

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (see paragraph 2.13.5) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

2.22.1 Runway Safety Area (RSA).

A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

2.22.1.1 No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. (See AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published, and appropriate NOTAMs issued. See AC 150/5300-13 for guidance on the use of declared distances.

2.22.1.2 The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

2.22.1.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

2.22.1.4 **Excavations.**

2.22.1.4.1 Open trenches or excavations are not permitted within the RSA while the runway is open. Backfill trenches before the runway is opened. If backfilling excavations before the runway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

2.22.1.4.2 Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.1.5 **Erosion Control.**

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.2 Runway Object Free Area (ROFA).

Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

2.22.3 Taxiway Safety Area (TSA).

2.22.3.1 A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Since the width of the TSA is equal to the wingspan of the design aircraft, no construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. Give special consideration to TSA dimensions at taxiway turns and intersections. (see AC 150/5300-13).

2.22.3.2 The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

2.22.3.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

2.22.3.4 **Excavations.**

1. Curves. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.
2. Straight Sections. Open trenches or excavations are not permitted within the TSA while the taxiway is open for unrestricted aircraft operations. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations to allow the safe passage of ARFF equipment and of the heaviest aircraft operating on the taxiway across the trench without causing damage to the equipment or aircraft. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the following restrictions:
   a. Taxiing speed is limited to 10 mph.
   b. Appropriate NOTAMs are issued.
   c. Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.
   d. Low mass, low-profile lighted barricades are installed.
   e. Appropriate temporary orange construction signs are installed.
3. Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.3.5 **Erosion control.**

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.4 Taxiway Object Free Area (TOFA).

Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus, the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

2.22.4.1 The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available. Give special consideration to TOFA dimensions at taxiway turns and intersections.

2.22.4.2 Offset taxiway centerline and edge pavement markings (do not use glass beads) may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting, centerline reflectors, or taxiway edge reflectors are required. Existing lighting that does not coincide with the temporary markings must be taken out of service.

2.22.4.3 Construction activity, including open excavations, may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

2.22.4.3.1 Taxiing speed is limited to 10 mph.

2.22.4.3.2 NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.

2.22.4.3.3 Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.

2.22.4.3.4 If desired, appropriate orange construction signs are installed. See paragraph 2.18.4.2 and Appendix F.

2.22.4.3.5 Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

2.22.4.3.6 Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Due to liability issues, the airport operator should require airlines to provide flaggers for directing taxiing aircraft.

2.22.5 Obstacle Free Zone (OFZ).

In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6 Runway Approach/Departure Areas and Clearways.

All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6.1 Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

2.22.6.2 **Caution About Partial Runway Closures.**

When filing a NOTAM for a partial runway closure, clearly state that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

2.22.6.3 **Caution About Displaced Thresholds.**

Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, or other work within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

2.23 **Other Limitations on Construction.**

The CSPP must specify any other limitations on construction, including but not limited to:

2.23.1 Prohibitions.

2.23.1.1 No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2.23.1.2 No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

2.23.1.3 No use of electrical blasting caps on or within 1,000 feet (300 meters) of the airport property. See AC 150/5370-10.

2.23.2 Restrictions.

2.23.2.1 Construction suspension required during specific airport operations.

2.23.2.2 Areas that cannot be worked on simultaneously.

2.23.2.3 Day or night construction restrictions.

2.23.2.4 Seasonal construction restrictions.

2.23.2.5 Temporary signs not approved by the airport operator.

2.23.2.6 Grades changes that could result in unplanned effects on NAVAIDs.

CHAPTER 3. GUIDELINES FOR WRITING A CSPP

3.1 General Requirements.

The CSPP is a standalone document written to correspond with the subjects outlined in paragraph 2.4. The CSPP is organized by numbered sections corresponding to each subject listed in paragraph 2.4, and described in detail in paragraphs 2.5 - 2.23. Each section number and title in the CSPP matches the corresponding subject outlined in paragraph 2.4 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

3.2 Applicability of Subjects.

Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA ILS cables during trenching operations could be considered FAA ATO coordination (Coordination, paragraph 2.5.3), an area and operation affected by the construction activity (Areas and Operations Affected by the Construction Activity, paragraph 2.7.1.4), a protection of a NAVAID (Protection of Navigational Aids (NAVAIDs), paragraph 2.8), or a notification to the FAA of construction activities (Notification of Construction Activities, paragraph 2.13.5.3.2). However, it is more specifically an underground utility requirement (Underground Utilities, paragraph 2.15). The procedure for protecting underground ILS cables during trenching operations should therefore be described in 2.4.2.11: "The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings." All other applicable sections should include a reference to 2.4.2.11: "ILS cables shall be identified and protected as described in 2.4.2.11" or "See 2.4.2.11 for ILS cable identification and protection requirements." Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

3.3 Graphical Representations.

Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

3.4 **Reference Documents.**

The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor. Where this AC recommends references (e.g. as in paragraph 3.9) the intent is to include a reference to the corresponding section in the CSPP, not to this Advisory Circular.

3.5 **Restrictions.**

The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

3.6 **Coordination.**

Include in this section a detailed description of conferences and meetings to be held both before and during the project. Include appropriate information from AC 150/5370-12. Discuss coordination procedures and schedules for each required FAA ATO Technical Operations shutdown and restart and all required flight inspections.

3.7 **Phasing.**

Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 3.8, as appropriate.

3.8 **Areas and Operations Affected by Construction.**

Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. See Appendix F for sample operational effects tables and figures.

3.9 **NAVAID Protection.**

List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 3.6 for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 3.14 for the

issuance of NOTAMs as required. Include a reference to paragraph 3.16 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 3.19. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

3.10 **Contractor Access.**

This will necessarily be the most extensive section of the CSPP. Provide sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

3.10.1 Location of Stockpiled Construction Materials.

Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 3.11 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 3.12 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

3.10.2 Vehicle and Pedestrian Operations.

While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying HAZMAT vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

3.10.3 Two-Way Radio Communications.

Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor CTAF at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light

signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

3.10.4 Airport Security.

Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

3.11 **Wildlife Management.**

Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 3.10 for security (wildlife) fence integrity maintenance as required.

3.12 **FOD Management.**

In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 3.15 for inspection requirements as required.

3.13 **HAZMAT Management.**

Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Safety Data Sheet (SDS), Material Safety Data Sheet (MSDS) or Product Safety Data Sheet (PSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be identified. Include a reference to paragraph 3.10 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

3.14 **Notification of Construction Activities.**

List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to

Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. Identify the E911 address of the airport and the emergency access route via haul roads to the construction site. Require the contractor to have this information available to all workers. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 3.10. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

3.15 **Inspection Requirements.**

Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) or other airport operator's representative and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

3.16 **Underground Utilities.**

Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 3.14 for notification of utility owners of accidental utility disruption as required.

3.17 **Penalties.**

Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, VPD, and others.

3.18 **Special Conditions.**

Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 3.10 for compliance with airport safety and security measures and for radio communications as required. Include

a reference to paragraph 3.14 for emergency notification of all involved parties, including police/security, ARFF, and medical services.

3.19 **Runway and Taxiway Visual Aids.**

Include marking, lighting, signs, and visual NAVAIDS. Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, *Standards for Airport Markings;* AC 150/5340-18, *Standards for Airport Sign Systems;* and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

3.20 **Marking and Signs for Access Routes.**

Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration MUTCD and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

3.21 **Hazard Marking and Lighting.**

Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 3.14. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

3.22 **Work Zone Lighting for Nighttime Construction.**

If work is to be conducted at night, specify all lighting equipment, including when and where each type of device is to be used. Indicate the direction lights are to be aimed and any directions that aiming of lights is prohibited. Specify any shielding necessary in instances where aiming is not sufficient to prevent interference with air traffic control and aircraft operations. Attach drawings to graphically indicate the placement and aiming of lighting equipment. Where the plan only indicates directions that aiming of lights is prohibited, the placement and positioning of portable lights must be proposed by the Contractor and approved by the airport operator’s representative each time lights are relocated or repositioned.

3.23 **Protection of Runway and Taxiway Safety Areas.**

This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13, as required. Include a reference to paragraph 3.10 for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 3.10 for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide the required Runway Safety Area, include a reference to paragraphs 3.14 and 3.19. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13, as required. Include a reference to paragraph 3.24 for height (i.e., crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional "box" within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

3.24 **Other Limitations on Construction.**

This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e., crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 3.7 for project phasing requirements based on construction limitations as required.

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APPENDIX A. RELATED READING MATERIAL

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

Table A-1. FAA Publications

Number	Title and Description
AC 150/5200-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5210-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program

Number	Title and Description
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	*Specification for L-853, Runway and Taxiway Retroreflective Markers*
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*

Number	Title and Description
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS) Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://www.ecfr.gov/.

Table A-2. Code of Federal Regulation

Number	Title
Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

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APPENDIX B. TERMS AND ACRONYMS

Table B-1. Terms and Acronyms

Term	Definition
Form 7460-1	Notice of Proposed Construction or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. (See guidance available on the FAA web site at https://oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000-26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
AT	Air Traffic
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under

Term	Definition
	the authority of 14 CFR Part 139, *Certification of Airports*.
CFR	Code of Federal Regulations
Construction	The presence of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety and Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris/Damage
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
HMA	Hot Mix Asphalt
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.

Term	Definition
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13 for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicator
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area
SMS	Safety Management System

Term	Definition
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area, or Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicator
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicator (PAPI), visual approach slope indicator (VASI), and pulse light approach slope indicator (PLASI).
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5				
Operational safety is a standing agenda item for construction progress meetings.	2.5				
Scheduling of the construction phases is properly addressed.	2.6				
Any formal agreements are established.	2.5.3				
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1				
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1				
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2				
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3				
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5				
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1				
Temporary changes to taxi operations are addressed.	2.7.2.1				
Detours for ARFF and other airport vehicles are identified.	2.7.2.2				
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3				
Temporary changes to air traffic control procedures are addressed.	2.7.2.4				
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8				
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8				
Protection of NAVAID facilities is addressed.	2.8				
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8				
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1				
Contractor Access					
The CSPP addresses areas to which contractor will have access and how	2.9				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
the areas will be accessed.					
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9				
The location of stockpiled construction materials is depicted on drawings.	2.9.1				
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1				
Requirements for proper stockpiling of materials are included.	2.9.1				
Construction site parking is addressed.	2.9.2.1				
Construction equipment parking is addressed.	2.9.2.2				
Access and haul roads are addressed.	2.9.2.3				
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport,* is included.	2.9.2.4				
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6				
Training requirements for vehicle drivers are addressed.	2.9.2.7				
Two-way radio communications procedures are described.	2.9.2.9				
Maintenance of the secured area of the airport is addressed.	2.9.2.10				
Wildlife Management					
The airport operator’s wildlife management procedures are addressed.	2.10				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11				
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12				
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13				
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1				
A list of local ATO/Technical Operations personnel is included.	2.13.1				
A list of ATCT managers on duty is included.	2.13.1				
A list of authorized representatives to the OCC is included.	2.13.2				
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9				
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2				
Emergency notification procedures for medical, fire fighting, and police	2.13.3				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
response are addressed.					
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4				
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5				
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2				
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2				
Final inspections at certificated airports are specified when required.	2.14.3				
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15				
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16				
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17				
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1				
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2				
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2				
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids;* AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3				
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2				
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs;* AC 50/5340-18, *Standards for Airport Sign Systems;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4				
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2				
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1				
The CSPP considers less obvious construction-related hazards.	2.20.1				
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1				
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1				
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2				
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3				
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3				
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5				
Markings for temporary closures are specified.	2.20.2.5				
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21				
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1				
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2				
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3				
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4				
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4				
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4				
Grading and soil erosion control to maintain RSA/TSA standards are	2.22.3.5				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
addressed.					
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2				
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3				
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4				
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6				
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6				
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2				
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3				

APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

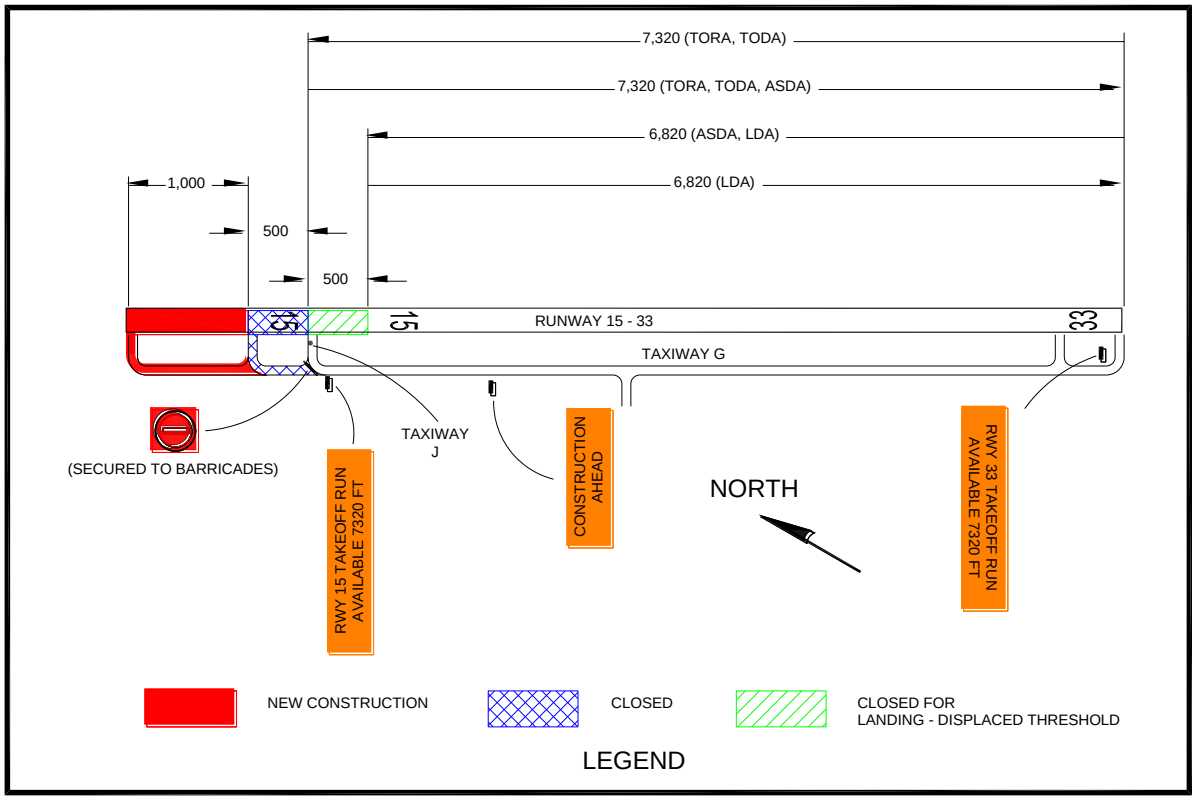
APPENDIX E. SAMPLE OPERATIONAL EFFECTS TABLE

E.1 **Project Description.**

Runway 15-33 is currently 7820 feet long, with a 500 foot stopway on the north end. This project will remove the stopway and extend the runway 1000 feet to the north and 500 feet to the south. Finally, the existing portion of the runway will be repaved. The runway 33 glide slope will be relocated. The new runway 33 localizer has already been installed by FAA Technical Operations and only needs to be switched on. Runway 15 is currently served only by a localizer, which will remain in operation as it will be beyond the future RSA. Appropriate NOTAMS will be issued throughout the project.

E.1.1 During Phase I, the runway 15 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 15 takeoff and the departure end of runway 33 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 33 will be adjusted to provide the required RSA and applicable departure surface. Excavation near Taxiway G will require its ADG to be reduced from IV to III. See Figure E-1.

Figure E-1. Phase I Example

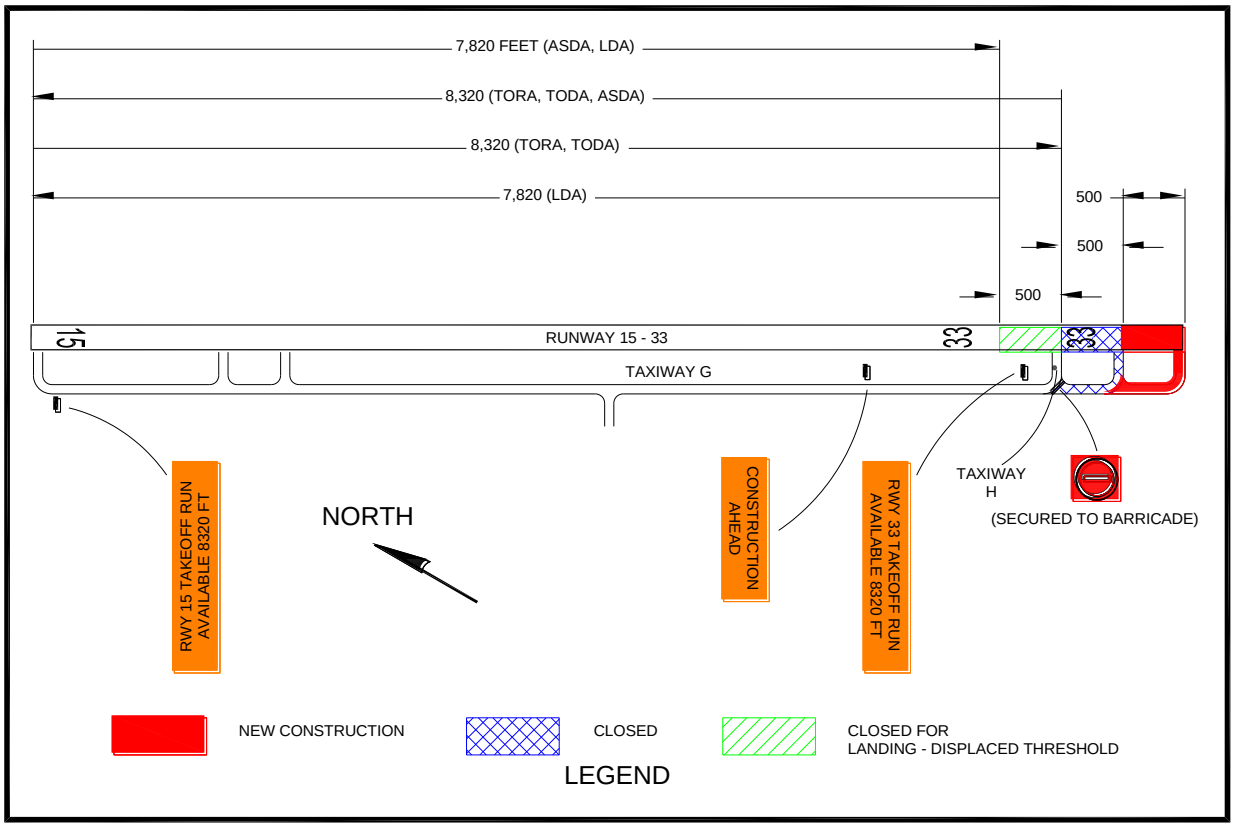


Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 33 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.2 During Phase II, the runway 33 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 33 takeoff and the departure end of runway 15 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 15 will be adjusted to provide the required RSA and applicable departure surface. See Figure E-2.

Figure E-2. Phase II Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 15 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.3 During Phase III, the existing portion of the runway will be repaved with Hot Mix Asphalt (HMA) and the runway 33 glide slope will be relocated. Construction will be accomplished between the hours of 8:00 pm and 5:00 am, during which the runway will be closed to operations.

Figure E-3. Phase III Example

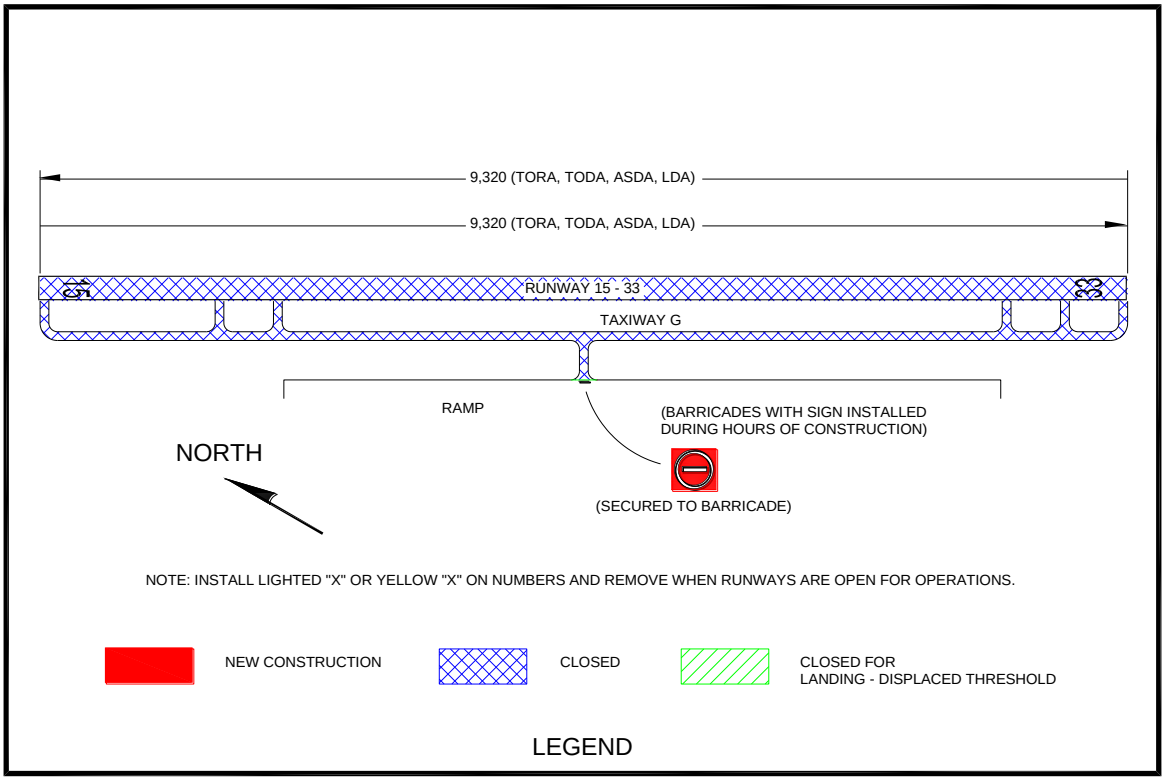


Table E-1. Operational Effects Table

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Scope of Work	N/A	Extend Runway 15-33 1,000 ft on north end with Hot Mix Asphaltic Concrete (HMA).	Extend Runway 15-33 500 ft on south end with Hot Mix Asphaltic Concrete (HMA).	Repave existing runway with HMA Relocate Runway 33 Glide Slope
Effects of Construction Operations	N/A	Existing North 500 ft closed	Existing South 500 ft closed	Runway closed between 8:00 pm and 5:00 am Edge lighting out of service
Construction Phase	N/A	Phase I (Anticipated)	Phase II (Anticipated)	Phase III (Anticipated)
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 40 /day GA: 26 /day Military: 0 /day	Carrier: 45 /day GA: 26 /day Military: 5 /day	Carrier: 45 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 30 /day GA: 18 /day Military: 0 /day	Carrier: 25 /day GA: 18 /day Military: 5 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 Aircraft Category	C-IV	C-IV	C-IV	C-IV
Runway 15 Approach Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	¾ mile	¾ mile	1 mile

Note: Proper coordination with Flight Procedures group is necessary to maintain instrument approach procedures during construction.

Project		Runway 15-33 Extension and Repaving			
Phase		**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Runway 15 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	7,820	7,320	7,820	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 33 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	8,320	6,820	8,320	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 15 Approach Procedures		LOC only	LOC only	LOC only	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 33 Approach Procedures		ILS	ILS	ILS	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 15 NAVAIDs		LOC	LOC	LOC	LOC
Runway 33 NAVAIDs		ILS, MALSR	ILS, MALSR	ILS, MALSR	LOC, MALSR
Taxiway G ADG		IV	III	IV	IV
Taxiway G TDG		4	4	4	4
ATCT (hours open)		24 hours	24 hours	24 hours	0500 - 2000
ARFF Index		D	D	D	D

Project	Runway 15-33 Extension and Repaving			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Special Conditions	Air National Guard (ANG) military operations	All military aircraft relocated to alternate ANG Base	Some large military aircraft relocated to alternate ANG Base	All military aircraft relocated to alternate ANG Base
Information for NOTAMs		Refer above for applicable declared distances. Taxiway G limited to 118 ft wingspan	Refer above for applicable declared distances.	Refer above for applicable declared distances. Airport closed 2000 – 0500. Runway 15 glide slope OTS.

Note: This table is one example. It may be advantageous to develop a separate table for each project phase and/or to address the operational status of the associated NAVAIDs per construction phase.

Complete the following chart for each phase to determine the area that must be protected along the runway and taxiway edges:

Table E-2. Runway and Taxiway Edge Protection

Runway/Taxiway	Aircraft Approach Category* A, B, C, or D	Airplane Design Group* I, II, III, or IV	Safety Area Width in Feet Divided by 2*

*See AC 150/5300-13 to complete the chart for a specific runway/taxiway.

Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Table E-3. Protection Prior to Runway Threshold

Runway End Number	Airplane Design Group* I, II, III, or IV	Aircraft Approach Category* A, B, C, or D	Minimum Safety Area Prior to the Threshold*	Minimum Distance to Threshold Based on Required Approach Slope*	
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1

*See AC 150/5300-13 to complete the chart for a specific runway.

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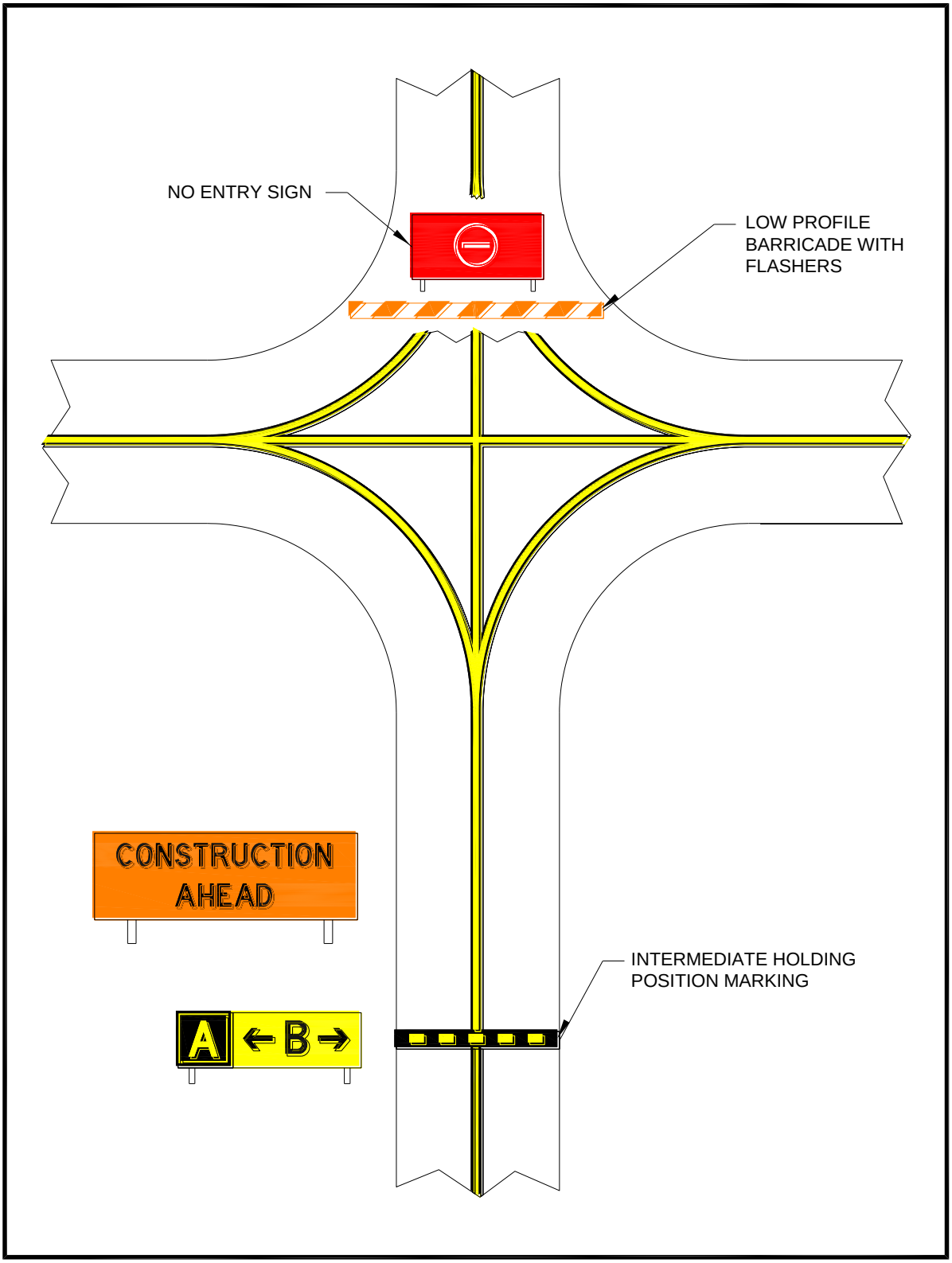
APPENDIX F. ORANGE CONSTRUCTION SIGNS

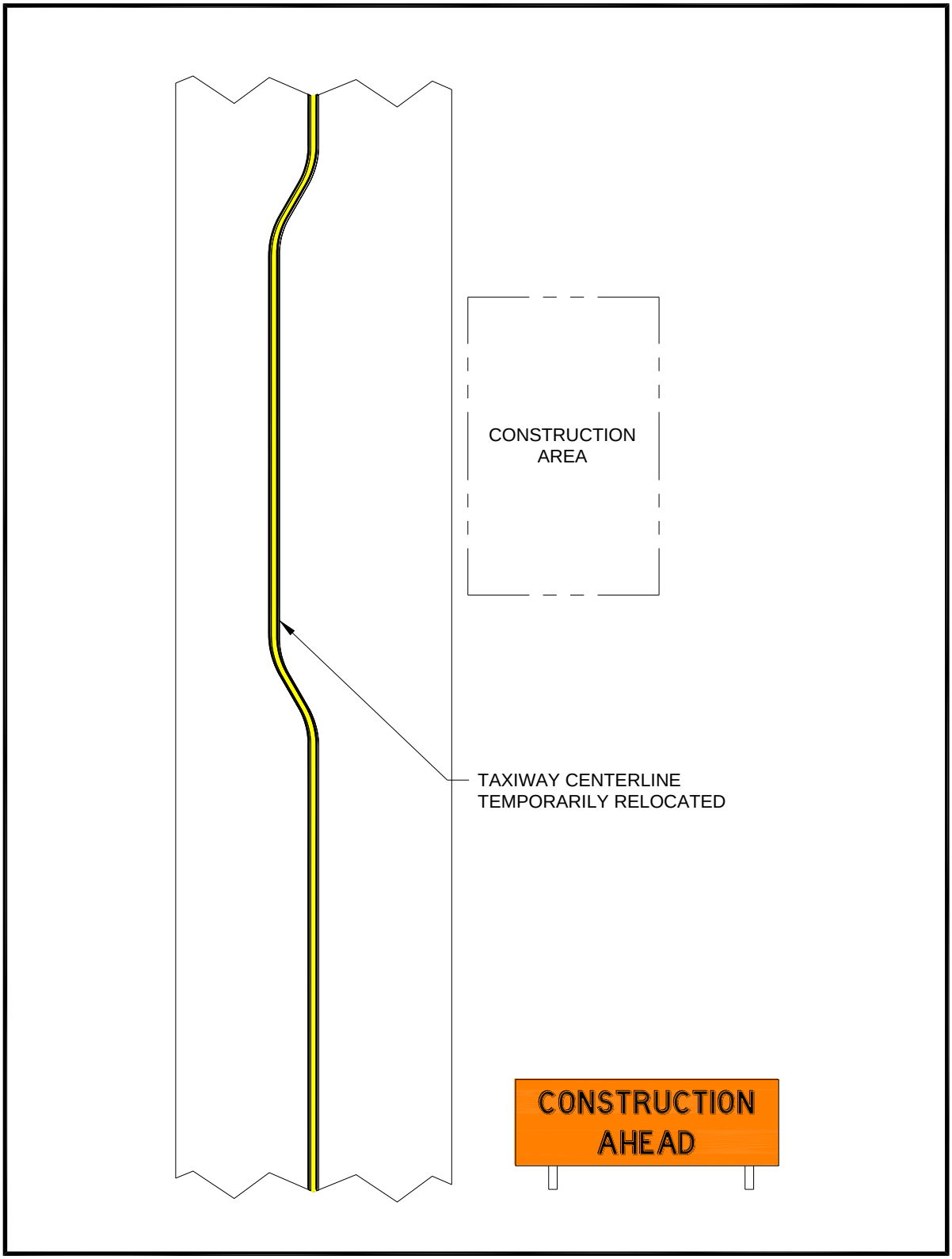
Figure F-1. Approved Sign Legends

Figure F-2. Orange Construction Sign Example 1



Note: For proper placement of signs, refer to EB 93.

Figure F-3. Orange Construction Sign Example 2



Note: For proper placement of signs, refer to EB 93.

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Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5370-2G Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____

Submitted by: _____ Date: _____

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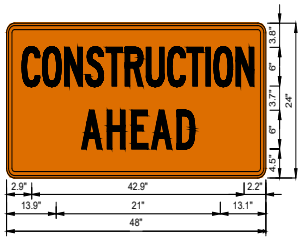
APPENDIX D

SAFETY DETAILS

NOTES:
1. CONTRACTOR TO PLACE ON LEFT SIDE OF TAXIWAY FOR PILOTS ENTERING RAMP. THE SIGN SHALL BE LOCATED OUTSIDE OF TOFA AND AS SPECIFIED IN THE LATEST VERSION OF AC150/5370-2.
2. SIGN DIMENSIONS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF MUTCD, AC150/5370-2, AND AC150/5340-18.
3. SIGN MOUNTED ON A FRANGIBLE BASE AT A MINIMUM HEIGHT OF 7 FT.

IDENTIFIER: TEMPORARY TAXILANE;
1.5" RADIUS, 0.6" BORDER, 0.4" INDENT, BLACK ON ORANGE;
"TEMPORARY" C 50% TAXILANE;
98% SPACING;

D2 "TEMPORARY TAXILANE" SIGN
NO SCALE



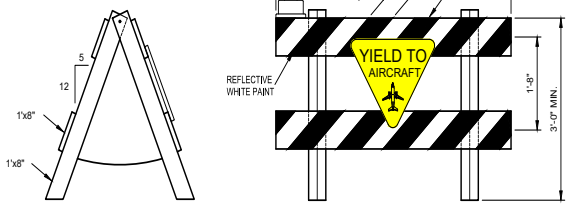
NOTES:
1. CONTRACTOR TO PLACE ON LEFT SIDE OF TAXIWAY FOR PILOTS ENTERING RAMP. THE SIGN SHALL BE LOCATED OUTSIDE OF TOFA AND AS SPECIFIED IN THE LATEST VERSION OF AC150/5370-2.
2. SIGN DIMENSIONS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF MUTCD, AC150/5370-2, AND AC150/5340-18.
3. SIGN MOUNTED ON A FRANGIBLE BASE AT A MINIMUM HEIGHT OF 7 FT.

IDENTIFIER: CONSTRUCTION AHEAD;
1.5" RADIUS, 0.6" BORDER, 0.4" INDENT, BLACK ON ORANGE;
"CONSTRUCTION" C 50% SPACING;
"AHEAD" C 98% SPACING;

C1 "CONSTRUCTION AHEAD" SIGN
NO SCALE

GENERAL NOTES

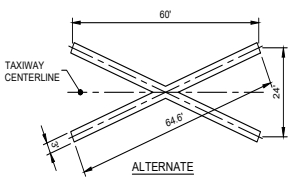
1. BARRICADE TO SHOW SIGN FACING VEHICLE TRAFFIC.
2. IT SHALL BE PLACED ON BOTH SIDES OF HAUL ROUTES OUTSIDE OF AIRCRAFT MOVEMENT AREAS.

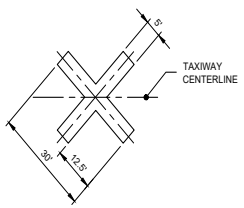


A-FRAME BARRICADE
NO SCALE

C3 YIELD TO AIRCRAFT DETAIL
NO SCALE

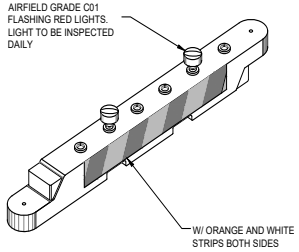
NOTES:
1. TEMPORARY CROSSES SHALL BE PLACED ON ALL TAXIWAYS TO BE TEMPORARILY CLOSED.
2. CROSSES SHALL BE CONSTRUCTED OF FABRIC, PLYWOOD OR SIMILAR MATERIAL.
3. CROSSES SHALL BE AVIATION YELLOW COLOR.MARKING SHALL BE PLACED AT EACH ENTRANCE OF THE CLOSED TAXIWAY.
4. MARKING OF HAZARDOUS AREAS DUE TO CONSTRUCTION, WHICH NO PART OF THE AIRCRAFT MAY ENTER, ARE MARKED IN ACCORDANCE WITH AC 150/5370-2.
5. LIGHTED BARRICADES, PER DETAILC4, ON THIS SHEET, SHALL BE PLACED ON EACH END OF TEMPORARILY CLOSED TAXIWAYS & RUNWAYS AS DIRECTED BY THE ENGINEER.





A1 CLOSED TAXIWAY CROSSES
NO SCALE

BARRICADE NOTES
1. BARRICADES ARE TO BE PLACED AROUND ALL AREA CLOSED TO AIRCRAFT TRAFFIC. BARRICADES SHALL BE SPACED NO MORE THAN 8'-10' BETWEEN BARRICADES. THE AIRPORT RESERVES THE RIGHT TO MODIFY THE NUMBER AND PLACEMENT OF BARRICADES AS THEY SEE FIT.
2. BARRICADES SHALL BE CHECKED DAILY FOR PROPER PLACEMENT AND OPERATION.
3. BARRICADES SHALL BE COLLAPSIBLE AND IN FULL COMPLIANCE WITH AC 15/5370-2F, OR LATEST ISSUANCE. BARRICADES SHALL HAVE A MINIMUM CAPACITY OF 25 GALLONS. BARRICADES SHALL BE FILLED TO CAPACITY TO PREVENT MOVEMENT IN HIGH WIND.
4. BARRICADES SHALL INCLUDE TWO (2) FLASHING RED LIGHTS.



C4 AIRFIELD CONSTRUCTION BARRICADE
NO SCALE

PSC PARKHILL SMITH & COOPER

THIS DOCUMENT IS RELEASED ON APRIL 1, 2020 FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF MICHAEL KRUSING, P.E., TEXAS LICENSE #111822 IT IS NOT TO BE USED FOR REGULATORY APPROVAL, CONSTRUCTION, BIDDING OR PERMIT PURPOSES.
PARKHILL SMITH & COOPER, INC. F-560

Midland International Air & Space Port

CONCRETE APRON REHABILITATION PROEJCT

KEY PLAN

NO	DATE	DESCRIPTION

ISSUING OFFICE: LUBBOCK, TX PROJECT NO: 9769.18

SAFETY DETAILS

G-009

J:\projects\2016\9769.18\03_DSGN\01_DWG\010_GEN\G-009-6769.dwg LAYOUT NAME: G-009 PRINTED: Tuesday, March 31, 2020 - 3:19pm USER: MKrusing

APPENDIX B

Construction Management Plan

Construction Management Plan

Midland, Texas

Midland International Air & Space Port

Concrete Apron Rehabilitation

April 2020

PSC Project #010976918

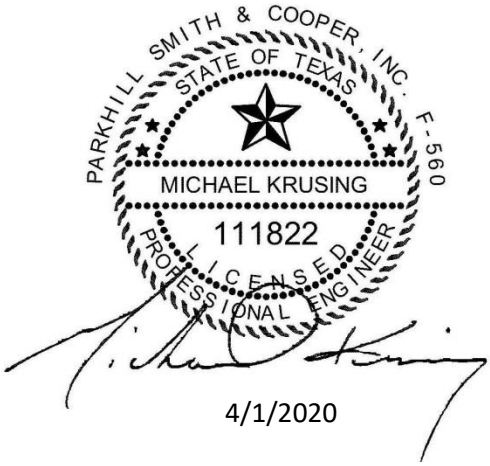
PARKHILLSMITH&COOPER

Construction Management Plan

Midland, Texas

Midland International Air & Space Port

Concrete Apron Rehabilitation



April 2020

PSC Project #010976918

PARKHILLSMITH&COOPER

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APPENDICES

APPENDIX A CONSULTING ENGINEERING STAFF RESUMES
APPENDIX B LABORATORY CERTIFICATION
APPENDIX C SUBMITTAL PROCESS SUMMARY
APPENDIX D QUALITY CONTROL TESTING (BY CONTRACTOR)
APPENDIX E ACCEPTANCE TESTING/QUALITY ASSURANCE (BY ENGINEER)

A. INTRODUCTION

Project accomplished under this program includes rehabilitation of the Midland International Air & Space Port main concrete apron and portions of Taxiways A, C, H, and P. Rehabilitation is to consists of removal and replacement of concrete joint sealant, and the repair of concrete joint spalls.

B. PERSONNEL AND RESPONSIBILITIES

1. Sponsor:

   Ms. Justine Ruff, Director of Airports
   City of Midland, Texas
   PO Box 60305
   Midland Texas 79711
   432.560.2200 x3010

   Mr. Aaron Easton, Deputy Director of Airports
   City of Midland, Texas
   PO Box 60305
   Midland Texas 79711
   432.560.2200 x3010

2. Federal Aviation Administration:

   Marcelino Sanchez
   Federal Aviation Administration, Southwest Region
   Texas Airports Development Office ASW-650
   10101 Hillwood Parkway
   Fort Worth Texas 76177
   817.222.5652
   marcelino.sanchez@faa.gov

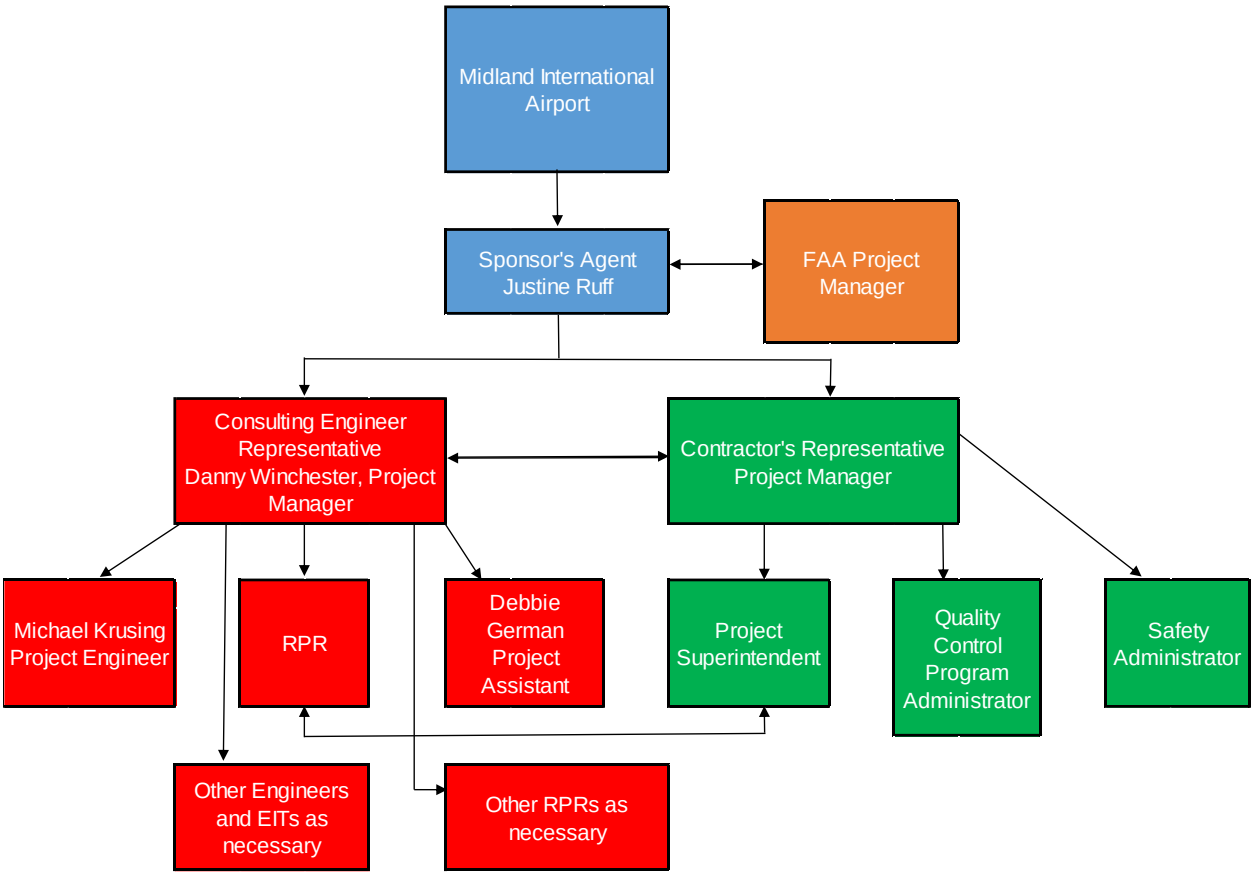
3. Consulting Engineer and Staff:

   Danny Winchester, P.E.
   Project Manager
   Parkhill, Smith & Cooper Inc.
   1700 West Wall Street Suite 100
   Midland Texas 79701
   432.697.1447

   Michael Krusing, P.E.
   Project Engineer
   Parkhill, Smith & Cooper Inc.
   4222 85th Street
   Lubbock Texas 79423
   806.473.2200

   Debbie German, Project Assistant
   Parkhill, Smith & Cooper Inc.
   4222 85th Street
   Lubbock Texas 79423
   806.473.2200

4. Project Manager/Engineer will oversee construction period services. PSC will also provide one, full-time Resident Project Representative (RPR) during Project construction. A second RPR will be provided if needed. RPR duties, responsibilities, and limitations of authority are described in the Professional Engineering Services Agreement. RPR will report directly to PSC Project Manager. PSC will compile a copy of all test reports to be delivered to FAA. Key personnel and chain of communication is described here:



5. Contractor:

   [Updated upon award.]

6. Testing Lab(s):

   - Sponsor's Quality Assurance Testing Lab (TBD)
     [Testing Lab]
     [Project Manager]
     [Address]
     [City, State, Zip]
     [Phone Number]
   - Contractor's Quality Control Testing Lab (TBD)
     [Testing Lab]
     [Project Manager]
     [Address]
     [City, State, Zip]
     [Phone Number]

   As required, the Sponsor's Quality Assurance (QA) testing laboratory and Contractor's Quality Control (QC) testing laboratory must be certified according to ASTM D3666 and C1077.

Laboratory certificates may be found in Appendix B. Sponsor's QA laboratory is responsible for reporting all construction period and material compliant test results to Contractor, Sponsor, Sponsor's Agent/FAA, and Engineer. Contractor's QC laboratory is responsible for testing and reporting quality control test reports and periodic inspections to ensure the quality of material required by Project Technical Specifications.

C. INSPECTION PROCEDURES AND FREQUENCIES

1. For Surveying and Grade Control.

    a. Because of the scope of this project, the Contractor will not be required to employ a licensed RPLS.

2. By Contractor.

    a. Contractor is required to execute daily inspections on work performed and to be performed. All inspection notes shall be captured in Contractor's daily log, submitted as required. Contractor also required to perform certain QC testing, where applicable. Testing shall be performed by Contractor's lab and all test reports made available to Engineer daily. Frequencies are defined in Project specifications and Item E. Contractor will detail QC testing further in their QC Program required by Section C-100 of Technical Specifications.

3. By Consulting Engineer.

    a. Observation Procedures: Engineer's RPR will be onsite full-time daily throughout Project duration. As per Agreement for Professional Services, RPR will check for "general conformance to plans and specifications." RPR will not "inspect" every detail of Contractor's Project nor direct Contractor operations. RPR will observe, document findings, and bring concerns to the attention of the PSC project manager. RPR will also coordinate Owner's QA testing laboratory. Tests will be performed as required by Technical Specifications and as stated in Item F. RPR will also monitor daily activity to confirm Contractor performs required QC testing. Observation notes will be captured in the PSC Procore system.
    b. Daily Reporting/Diary: RPR will maintain daily logs in Procore for activity, progress, concerns, communication, testing, and other activity related to construction. Submit logs to Sponsor and FAA as part of Project Final Report, if applicable. RPR will also collect photos for reference where appropriate. Include all photos in Procore and transmitted as part of the Project Final Report.
    c. Weekly Reporting: As required by FAA, PSC will prepare and submit weekly Construction Progress Reports by email and upload to the FAA Project Manager with electronic copies to the Sponsor.

D. SUBMITTAL PROCESS

1. Contractor required to prepare and submit a complete submittal list at preconstruction meeting that will be populated into Procore and maintained throughout Project. Engineer will also maintain a record of submittal status in Procore. All submittals shall address "Buy American" and FAA-approved source requirements by having Contractor submit a written certification statement indicating requirements are met.

2. A preliminary list of submittals may be found in Appendix C. This list was prepared to assist Contractor and does not permit Contractor to omit a submittal if not included on list.

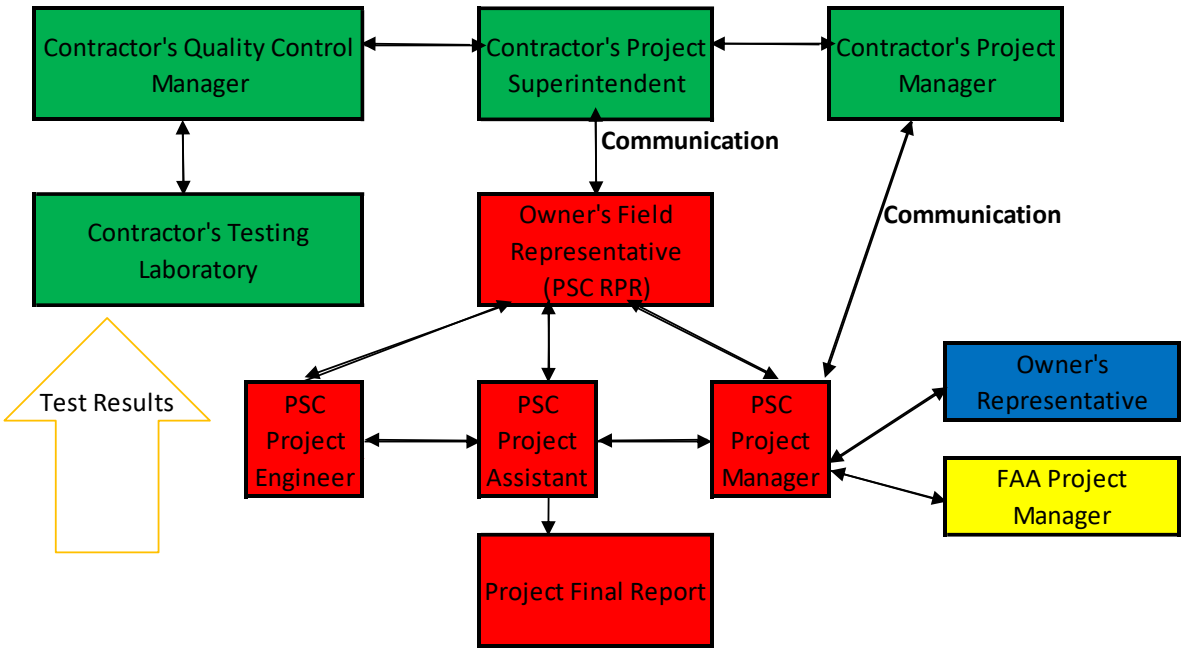
3. All submittals will be routed through the PSC Procore system for review and approval.

E. QUALITY CONTROL TESTING (BY CONTRACTOR)

1. Contractor must visually inspect all items used upon arrival and maintain control charts for applicable material production. Contractor shall perform and document all daily inspections and tests as determined in Section C-100 of specifications. Contractor shall make QC reports, test results, and inspection reports available to Engineer. Provide test results before start of the following day. Provide inspection reports on work day after day of record. All items of material and equipment subject to Engineer surveillance. If Contractor determines to be noncompliant regarding any requirements of QC Program, Engineer has the option to expect Contractor to:
   a. replace ineffective or unqualified quality control personnel or subcontractors; or
   b. stop operations until appropriate corrective action is taken.

2. For a list of anticipated QC Tests, see Appendix D, Table 2 - Quality Control Testing (By Contractor). Test values are included in Project specifications.

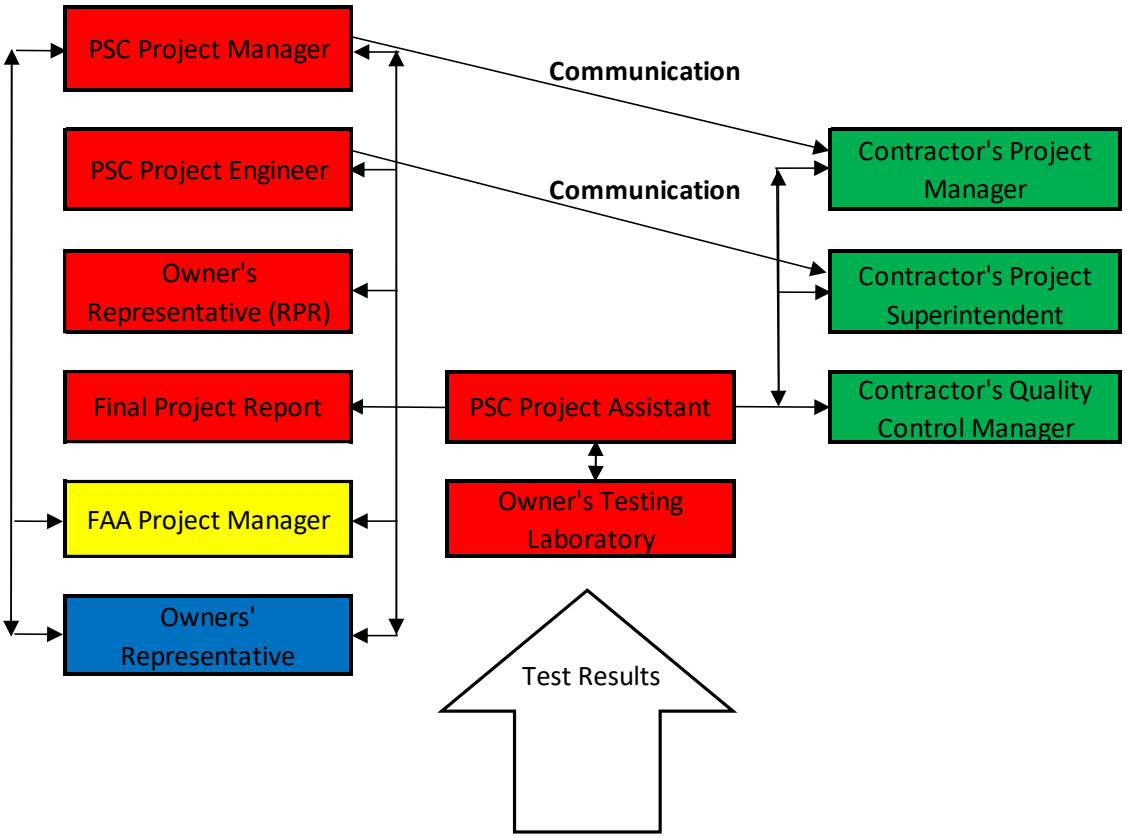
3. Quality Control Testing Responsibility



4. Summary of Action: If/when deficiencies arise during construction, immediate communication will occur as indicated. Action includes but not limited to:
   a. Discussion of test results and potential implications.
   b. Retest by Contractor to verify results.
   c. If retest confirms deficiency, Contractor shall rework deficiency or potentially replace material depending on deficiency.
   d. Reworked area or replaced material tested by Contractor's laboratory.
   e. Contractor shall develop a plan for avoiding same deficiency on future segments of work.
   f. Other specific courses of action defined in Contractor's QC Plan.

F. ACCEPTANCE TESTING (BY OWNER'S REPRESENTATIVE)

1. For Testing Methods, see Appendix E, Table 3 - Quality Assurance (by Engineer).
2. Quality Assurance Testing Responsibility:



G. PAY FACTORS

1. There are no Pay Factors for this Project.

H. TEST RESULTS

1. Documentation

    a. Quality Control Tests (Daily): Contractor required to document all QC Tests results performed on Project. Submit test results to RPR for review the day after testing is performed. If results are deficient, RPR will initiate dialogue with Contractor's Superintendent. If results are favorable, RPR will forward results to PSC Project Assistant to be compiled for Project Final Report.
    b. Quality Acceptance Tests (Daily): RPR will coordinate testing with Owner's Laboratory. RPR will also document all test results at point of testing, using this data to reconcile test reports received from Owner's Testing Laboratory. RPR will also note tests performed [in Procore]. Deficient test results will be communicated to Contractor's Project Superintendent immediately.
    c. Failing Tests:
        1) Quality Control Testing: Whether passing or failing, RPR will obtain a copy of all QC Test results performed by Contractor. Deficient results will result in immediate communication between Contractor and Engineer and subsequent action determined. Corresponding retests will be taken and documented.
        2) Quality Assurance Testing: RPR will document all test results at point test is performed by Owner's Testing Laboratory. Deficient results will result in immediate communication between Contractor and Engineer and an action plan for remediation developed. Retest results will be documented and all charges for failing tests invoiced to Contractor.

I. FINAL TEST AND QUALITY CONTROL REPORT

As part of the Project Final Report, Engineer, Contractor, and Owner's Testing Laboratory will coordinate preparation of a Final Test and Quality Control Report. Report will summarize number of tests performed versus number of tests required for each specification item. Failed tests and subsequent retests will be included. Where necessary, document acceptance of specification deficiencies.

APPENDIX A

CONSULTING ENGINEER STAFF RESUMES

Danny Winchester, PE
Principal / Civil Engineer

Bachelor of Science, Civil Engineering, Texas Tech University, 1984

Licensed Professional Engineer, TX, 65060

Years of experience 35

Danny Winchester, PE, is a Principal and a Team Leader for PSC's Aviation Sector. His 30 years at PSC have been spent in aviation design and project management. Danny's aviation design has been mostly with FAA Certificated Airports (Part 139). He has been involved in aviation projects at Midland International Airport since he came to work for PSC. He has developed a strong expertise in FAA funding processes for Airport Improvement Project funding and Passenger Facility Charge funding. This expertise has allowed Danny to assist the City of Midland in acquiring over $150 million of funding from FAA for Capital Improvement Projects at the Midland International Airport over the past 30 years. Danny assisted Midland International Airport in becoming the first Commercial Service Airport (Part 139) to receive an FAA Certified Space Launch Site Operator License. Danny has also served the engineering profession by serving in many roles at the local and state levels of the Texas Society of Professional Engineers. He has been recognized by the Texas Society of Professional Engineers as both the Young Engineer of the Year and Engineer of the Year for the Permian Basin Chapter. He also received the Distinguished Engineer Award from the Texas Engineering Foundation - 2004

Relevant Project Experience

- MAF Air Carrier Runways and Taxiways Rehabilitation
- MAF Aircraft Ramp Lighting System Improvements
- MAF ARFF Vehicles Replacement
- MAF Construct Taxiway and Apron at CAF
- MAF Lavatory Disposal Station Modifications
- MAF PFC Application and Amendments
- MAF Rehab Entrance Road Pavement and Guidance Signage
- MAF RIM (Runway 10 End)
- MAF Security Checkpoint Expansion
- MAF Terminal Vehicle Parking Rehabilitation and Parking Equipment Replacement
- Midland International Airport Access Control System and Cable Upgrade
- Midland International Airport Airfield Lighting Cabling Replacement and Airfield Signage
- Midland International Airport Emergency Roadway and Gates Rehabilitation
- Midland International Airport Executive Apron Reconstruction
- Midland International Airport Northwest Taxilane Extension - Phase 2
- Midland International Airport NW Roads and Parking - Phase 2
- Midland International Airport Runway 16L-34R Preliminary Engineering Report Phase
- Midland International Airport Spaceport Launch Site License Application
- Midland International Airport Taxiway P Aircraft Run-up
- Midland International Airport Terminal Vehicle Parking Expansion
- Runway 16L-34R Environmental Assessment and AGIS Aeronautical Obstruction Survey
- Spaceport Business Park Environmental and Asbestos Survey

Michael Krusing, PE
Associate/Civil Engineer

Bachelor of Science, Civil Engineering, Texas Tech University, 2007

Licensed Professional Engineer, TX, 111822
Licensed Professional Engineer, NM, 20863

Years of experience 12

Michael Krusing, PE, is an Associate and Team Leader for PSC's Aviation Sector. After joining PSC in 2007, Michael worked with the infrastructure team in Amarillo, until 2010, when he joined PSC's Aviation team. In November 2014, Michael transferred from PSC's Amarillo office to the Lubbock office to better serve PSC's clients. Michael has gained experience by designing multiple projects for TxDOT Aviation and New Mexico Department of Transportation. He has also worked on projects benefiting Lubbock Preston Smith International Airport, Midland International Airport, and El Paso International Airport. Michael played a vital role in the designs of two projects that won Most Improved Airport in 2015 (Hemphill County) and 2017 (Hale County).

Relevant Project Experience

- Artesia Municipal Airport Runway 12-30 Phase II Reconstruction
- Artesia Municipal Airport Runway 12-30 Reconstruction
- Artesia Municipal Airport Runway 3-21 Rehabilitation
- Artesia Municipal Airport Taxiway A1 Construction
- Borger Northwest Wellfield
- CAF Museum Buildings Demolition
- El Paso International Airport FBO Ramp Addition and Taxiway U & V Realignment
- El Paso International Airport Taxiway A Realignment and Taxiways D & F Reconstruction
- Hemphill County Lake Marvin Maintenance Project
- Lubbock Runway 17R-35L Construction
- MAF NW Basin Wildlife Improvements
- MAF Rehabilitate Concrete Apron
- MAF Terminal Vehicle Parking Rehabilitation and Parking Equipment Replacement
- Midland International Airport Emergency Roadway and Gates Rehabilitation
- Panhandle 2009 CDBG Distribution Improvements
- Roger Mills Memorial Hospital Renovation & Addition
- TxDOT-Floydada Municipal Airport
- TxDOT Aviation Graham Municipal Airport
- TxDOT Dimmitt Municipal Airport 2011
- TxDOT Hale County Airport 2013 CSJ No 1305PLNVW
- TxDOT Hemphill County Airport 2013
- TxDOT Hereford Airport 2014
- Xcel Energy, Yoakum Substation, SWP3, Contract #289515, Release 37
- Xcel Tolk Station Well #73

Debbie German

I. Project Responsibilities

- Project Assistant (PASS)
- Project Manual Compilation
- Construction Document Control Specialist
- Coordination of Submittals
- Preparation and Distribution Meeting Agenda and Minutes
- Preparation of Application for Payment
- Review of Certified Payroll Reports
- Review of Progress towards DBE goal

II. Qualifications

a. Background instilled importance of documentation, organization, and multitasking.
b. Strong work ethic, effectively collaborates with a wide range of personalities, and sticks to a task until complete.
c. Assists in organizing, planning, and facilitating meetings.
d. Prepares, records, and maintains data from all incoming construction correspondences.
e. Education: Bachelor of Science in Human Services, University of Phoenix, 2012
f. Years of experience: 5

III. Experience

- El Paso FBO Ramp Addition and Taxiway U & V Realignment
- Floydada Municipal Airport Hangar Access Taxiway Reconstruction
- Lubbock Preston Smith International Airport Airfield-Wide Joint Seal
- Lubbock Preston Smith International Airport Runway 17R-35L
- Lubbock Preston Smith International Airport Terminal Apron Rehabilitation
- Midland International Air & Space Port Aircraft Ramp Lighting System
- Midland International Air & Space Port New Terminal Vehicle Parking Lots
- Midland International Air & Space Port Northwest Basin Wildlife Improvements
- Midland International Air & Space Port Rehabilitate Concrete Apron
- Midland International Air & Space Port Security Checkpoint Expansion
- Midland International Air & Space Port Terminal Vehicle Parking Rehabilitation
- TxDOT Cameron AP Pavement Rehabilitation
- TxDOT Lampasas Municipal Airport Airfield Pavement Rehabilitation, Marking, MIRL and Signage Replacement, and PAPI Installation
- TxDOT Littlefield Taylor Brown Municipal Airport Improvements
- TxDOT Odessa/Ector County Airport, Schlemeyer Field, Apron Expansion and Runway 11-29 MALS Installation
- TxDOT Pecos Municipal Airport (PEQ) Taxiway and Apron Pavement Rehabilitation
- TxDOT Post-Garza County Municipal Airport Electrical Improvements and Pavement Repair
- TxDOT Seymour Municipal Airport Runway 17-35 Improvements
- TxDOT Winkler County AP Pavement Improvement
- Winkler County Airport Hangar Improvements

APPENDIX B

LABORATORY CERTIFICATION

APPENDIX C

SUBMITTAL PROCESS SUMMARY

Table 1: SUMMARY OF SUBMITTALS

Specification	Spec Section	Submitted By	Material	Test Standard	Test Required	Sampling Locations	Minimum Test Frequency	Requirements	Notes
C-105 Mobilization		C		None	None				
P-101 Surface Preparation	101-2	C	List of Equipment					To be approved by RPR	
	101-3.2	C	Crack Sealant	ASTM D6690				See P-605	>1/4" wide; <1-1/2" wide; >1-1/2" wide indicates that pavement/pavement base should be repaired or replaced
	101-3.2	C	Emusified asphalt and Aggregate for wide cracks		Gradation	Source	1 / Project	Gradation table	<3% Cement; <20% natural sand
	101-3.4	C	Spall Repair; asphalt filler mixture						
	101-3.8.3	C	Joint Sealant	ASTM D6690				See P-605	
P-501 Cement Concrete Pavement	501-4.19.e	C	Spall Repair					spalls >1" & less than 1/2 slab depth; vertical cut >1" outside spalled area and depth of >2"	epoxy-resin type III, grade I.
P-605 Joint Sealants for Concrete Pavements	605-2.1	C	Joint Sealant	ASTM D6690					
	605-2.2	C	Backer Rod	ASTM D5249				25% +/- 5% larger in diameter than the nominal width of the joint	
	605-2.3	C	Bond Breaking Tapes	ASTM D789				Melting point >5 degrees F greater than pouring temp of sealant being used when tested	Approximately 1/8" wider than nominal width of joint
	605-3.2	C	List of machines, equipment, and tools					X days prior to use on the project	
P-620 Runway And Taxiway Marking	620-2.1	C	manufacturer's certified test reports for materials shipped to project				Prior to initial application of markings	To be submitted and approved by RPR	
	620-2.2	C	Paint			Source	Project	Paint Type, Paint Color, Glass Beads to be Used	
	620-2.2.a	C	Waterborne Paint	FED SPEC TT-P-1952F	Paint Spec.			Paint Type	The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer
	620-2.2.a	C	Epoxy Paint		Paint Spec.				

Table 1: SUMMARY OF SUBMITTALS									
Specification	**Spec Section**	**Submitted By**	**Material**	**Test Standard**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
	620-2.2.a	C	Methacrylate Paint		Paint Spec.				
	620-2.2.a	C	Solvent-Based Paint	Commercial Item Description A-A-2886B				Paint Type	
	620-2.2.a	C	Preformed Thermoplastic Airport Pavement Markings		Paint Spec.				
	620-2.2.b	C	Reflective Media	FED SPEC TT-B-1325D	Reflective Media	Source	1 / Project	Media Type	Conform to test method.
Other Submittals			Low profile barricades, other traffic control devices.					Meets AC 150/5370-2.	

APPENDIX D

QUALITY CONTROL TESTING (BY CONTRACTOR)

Table 2: QUALITY CONTROL (by Contractor)									
Specification	**Spec Section**	**Test By**	**Material**	**Test Procedure**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
C-105 Mobilization		C	Posted Notices				Prior to commencement of construction activities		EEO Poster, Davis Bacon Wage Poster, Applicable Davis-Bacon Wage Rate Determination
P-101 Surface Preparation		C		None	None				
P-501 Cement Concrete Pavement		C		None	None				
P-605 Joint Sealants for Concrete Pavements		C		None	None				
P-620 Runway And Taxiway Marking	620-3.3	C	Written certification that surface is dry and free from dirt, grease, oil, laitancee, or other foreign material that would prevent paint bonding				Prior to initial application of markings.	Submit to RPR.	
	620-3.8	C	Retro-reflectance	ASTM E1710	Portable Retro-Reflectometer		6 readings over a 6 sf area with 3 readings taken in each direction	Average shall be equal to or above minimum levels of all readings, which are within 30% of each other	See table "Minimum Retro-Reflectance Values" in spec.
	620-3.9	C	Protection of Pavement					All markings shall be protected from damage until dry; all surfaces are to be protected from excess moisture/rain.	

APPENDIX E

ACCEPTANCE TESTING/QUALITY ASSURANCE (BY ENGINEER)

Table 3: QUALITY ASSURANCE (by Engineer)									
Specification	**Spec Section**	**Test By**	**Material**	**Test Procedure**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
C-105 Mobilization		E		None	None				
P-101 Surface Preparation		E		None	None				
P-501 Cement Concrete Pavement	501-4.19.e	C	Spall Repair Material	ASTM C928	7-Day Compression Test	Site	1 / Day	5,000 psi	Contractor to submit data to engineer within 48 hours.
P-605 Joint Sealants for Concrete Pavements		E		None	None				
P-620 Runway And Taxiway Marking		E		None	None				

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Justine Ruff, Director of Airports

SUBJECT: Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate Northwest Taxilane and Executive Apron Project.

Purpose:

Consider a motion authorizing the Director of Airports to advertise a request for bids for the MAF Rehabilitate Northwest Taxilane and Executive Apron Project.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

To be Determined – Most likely 100% FAA

Discussion:

In Amendment #9 to the Professional Service Agreement with Parkhill, Smith & Cooper, the Rehabilitate Northwest Taxilane and Executive Apron Project (Design Phase) was added to the Agreement. This project includes preparing a rehabilitation plan to include sealing the cracks and surface course and application of an FAA-Emulsified Asphalt Surface Seal to the bituminous surface course pavement on the Northwest Taxilane extension and the Executive Apron to reduce the rate of pavement oxidation. This project was included in FAA Grant #58, and the Grant covered 90% of the expenses through the bidding phase of the project. The construction process of this project is covered by FAA Grant #60, which with the Government's new COVID-19 Assistance Package, should cover 100% of the construction expenses and is scheduled to be funded in the Summer of 2020. The project is being advertised for bid at this time as the FAA has requested that we have "bids in hand" when the Grant is funded.

Project Manual

Midland International Air & Space Port

Northwest Taxilane and Executive Apron Rehabilitation

Midland, Texas

FAA AIP Project No. 3-48-0150-060-2020

April 2020

PSC Project # 01977018

PARKHILLSMITH&COOPER

Project Manual

Midland International
Air & Space Port

Northwest Taxilane and Executive Apron Rehabilitation

Midland, Texas

FAA AIP Project No. 3-48-0150-060-2020

This document is released on April 1, 2020 for the purpose of interim review under the authority of Lawrence J. Valdez, P.E., Texas license # 65358. It is not to be used for regulatory approval, construction, bidding or permit purposes.

Parkhill, Smith & Cooper Inc.

F-560

April 2020

PSC Project # 01977018

PARKHILLSMITH&COOPER

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ADVERTISEMENT FOR BIDS
NOTICE TO BIDDERS

Sealed proposals addressed to the Honorable Mayor and City Council of Midland, Texas, will be received at the office of the City Secretary, City Hall, Midland, Texas until 2:30pm, Thursday May 21, 2020 for furnishing all necessary materials, machinery, equipment, superintendence, and labor for constructing certain improvements at Midland International Air & Space Port, Midland, Texas. These improvements are contained in plans and Specifications entitled, "Midland International Air & Space Port, Northwest Taxilane and Executive Apron Rehabilitation," dated April 2020.

Immediately following the closing time for receipt of Bids/Proposals will be publicly opened and read aloud. Any Bid received after closing time will be returned unopened.

Principal items of Work are set forth in specific detail in the Proposal Section of these Specifications; however, Work items may be generally described as *Northwest Taxilane and Executive Apron Rehabilitation.*

Work will also include other miscellaneous materials, equipment, machinery, superintendence, and labor for constructing these improvements for the Midland International Air & Space Port, Midland, Texas.

A Bid Proposal guaranty is to accompany the Bid, thereby guaranteeing the good faith of the Bidder and that Bidder will enter into the written contract. The guaranty is to amount to 5 percent of the total bid and must be in the form of cash or certified check, issued by a bank satisfactory to the City of Midland, or a bid bond.

Bidders are expected to inspect site of work and inform themselves regarding all local conditions.

In all areas of employment, women will be afforded equal opportunity for employment. Employment of women shall not diminish the standards or requirements for employment of minorities.

This project is subject to Minority Business Enterprise Contract Provisions, Foreign Trade Restrictions, Federal Debarment and Suspension, Drug-free Workplace, and other requirements stated in the Instructions to Bidders and other sections of project specifications and contract documents.

Policy. It is the policy of the Department of Transportation (DOT) that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have maximum opportunity to participate in performance of contracts financed in whole or in part with Federal funds.

Buy American Provision. Proposed contract is subject to the Buy American Provision under Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990. Details of such requirement are contained in Specifications.

MAF treats Bidder/Offer compliance with good faith effort requirements as a matter of responsiveness.

Requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of MAF to practice nondiscrimination based on race, color, sex, or national origin in award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit Bids/Proposals. Award of this contract will be conditioned upon satisfying requirements of this bid specification. These requirements apply to all Bidders/Offerors, including those who qualify as a DBE. DBE contract goal of 9.82 percent, has been established for this contract. Bidder/Offeror shall make good

faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet contract goal for DBE participation in performance of this contract.

Successful Bidder/Offeror will be required to submit the following information: (1) names and addresses of DBE firms that will participate in contract; (2) description of work each DBE firm will perform; (3) dollar amount of participation of each DBE firm participating; (4) written documentation of bidder/offeror's commitment to use a DBE subcontractor whose participation submits to meet contract goal; (5) written confirmation from the DBE of participation in contract as provided in commitment made under (4); and (6) if contract goal is not met, evidence of good faith efforts. Successful Bidder or Offeror must provide written confirmation of participation from each DBE firm the Bidder or Offeror lists in their commitment. This Bidder/Offeror must submit DBE written confirmation of participation within five days of receiving Owner notice to successful Bidder.

Information for Bidders, Proposal forms, Specifications, and plans are on file in the office of the Director of Airports, Midland International Air & Space Port, Midland, Texas, at the office of Parkhill, Smith & Cooper, Inc., (PSC), 1700 West Wall Street, Suite 100, Midland, Texas 79701, 432.697.1447.

Paper copies of plans and Specifications may be secured at the PSC, 1700 West Wall Street, Suite 100, Midland, Texas 79701, 432.697.1447, at a cost of $150.00 for a set of specifications and full-size plans. Cost for plans and Specifications is refundable. Download documents (PDF file extension format) can be obtained from the PSC Info Exchange web site after registering as a plan holder with the office issuing paper copies. No cost or deposit required for this option.

CITY OF MIDLAND, TEXAS
Amy M. Turner
City Secretary

INSTRUCTIONS TO BIDDERS

IB-1. BID FORMS

Bid shall be submitted on Proposal form in the bound Specifications.

In addition to the completed Proposals, bid forms shall include Bid Security, Financial Statement, and other specified documents. Failure to submit a complete Bid as specified will be considered as sufficient cause for rejection of the Bid.

IB-2. PREPARATION OF PROPOSALS

All blanks in the forms shall be filled in or marked "N.A." (Not Applicable) and all required information shall be included with Proposals. Bid prices shall be written in ink. Receipt of all addenda issued shall be acknowledged in the space provided on the addendum. Each addendum received and the Bid Security shall be enclosed with Proposal. Proposal and accompanying documents shall be enclosed in a sealed envelope, addressed to the Honorable Mayor and City Council, City of Midland, Texas marked "Northwest Taxilane and Executive Apron Rehabilitation" with name and address of Bidder also shown thereon.

IB-3. EXPERIENCE RECORD AND FINANCIAL STATEMENT

Experience Record included herein, shall be filled in, showing completed jobs, of a similar nature to the one covered by Proposal, and work in progress with contract and bond amounts and percent complete.

A sworn statement of the current financial condition of Bidder shall also be enclosed with Proposal, in order to provide Owner with information relative to the responsibility of bidders and their ability to finance and construct the work. This statement shall be enclosed with Proposal in a separate envelope and will be returned to Bidder upon return of his bid security.

TxDOT prequalification can be submitted in lieu of a financial statement with bids; however, financial information may be required of the apparent low Bidder.

IB-4. BID SECURITY

Each proposal must be accompanied by a Bid Bond, Certified Check, or cash in the amount of not less than 5 percent of the maximum bid submitted, payable without recourse to the City of Midland, Texas. If a Bid Bond is submitted as bid security, it shall be executed by an approved surety company authorized to do business in the State of Texas, and accepted according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States of America. Such bid security shall be so conditioned if Bidder is awarded Contract and unable or fails to furnish performance and payment bonds and execute Contract within 10 days after date of award, security shall revert to Owner as compensation for damages which Owner suffers because of such failure by Bidder.

IB-5. PERFORMANCE AND PAYMENT BONDS

With execution and delivery of the contract documents, Contractor shall furnish, on the forms provided herein, bonds, as required by the General Conditions, of 100 percent of the total contract price, executed by an approved surety company authorized to do business in the State of Texas, and accepted according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States of America. Performance and Payment Bonds submitted shall be in compliance with Chapter 2253 of the Texas Government Code.

IB-6. INTERPRETATION OF BIDS

No bid will be considered which fails to supply all information indicated, or which has any limitation or provisions placed upon it by Bidder. In case of a difference between the written words and the figures in Proposal, amount stated in written words will be considered as bid price, without recourse on the

part of Contractor. In case of ambiguity or lack of clearness in Proposal, Owner will adopt the most advantageous construction thereof or reject the bid. Owner reserves the right to accept or reject any or all bids, if it is deemed to be in the best interest of the public. Further, Owner reserves the right to reject any bids because of irregularity or to waive such irregularity if such action is in the public interest.

IB-7. DISPOSITION OF BIDS

Owner expects to make award of the contracts as soon as possible after the opening of bids, but specifically reserves the right to hold all Proposals for a period not to exceed 90 days, before making an award. No Proposal, having been opened, may be withdrawn prior to expiration of this 90-day period. Bid security of all but the successful Bidder will be returned upon making an award.

Contract will be awarded to the responsible bidder submitting the lowest bid complying with the conditions of the Advertisement for Bidders and the Instructions to Bidders.

IB-8. EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

Prior to submission of a Proposal, each Bidder shall have made a thorough examination of the site of work and of the plans and specifications, and shall become informed as to the location and nature of the proposed construction, labor conditions and all other matters that may affect the cost and time of completion of the work upon which he bids. Bidders shall make such investigations of the nature of the project as they deem necessary and shall assume all responsibility for fully informing themselves of the character of materials which will be encountered. Submission of a Proposal shall be prima facie evidence that Bidder has made such an examination. Contact Justine Ruff, Director of Airports (432.560.2200), to schedule a site examination visit.

IB-9. PREBID CONFERENCE

A prebid conference will be held at 10:30am, Wednesday, April 29, 2020 in the Conference Room at Midland International Air & Space Port. At this time, all interested bidders will be requested to appear and present any questions they may have pertaining to this project. All bidders are urged to attend prebid conference because they will be charged with notice of the matters discussed therein. Attendance to the prebid conference is not mandatory.

IB-10. INTERPRETATION OF SPECIFICATIONS PRIOR TO BIDDING

Any questions arising during the advertising period as to the meaning or intent of the specifications will be answered by an addendum which will be sent to all who have placed a deposit and/or furnished plans and Contract documents issued by Parkhill, Smith & Cooper Inc. Engineer shall receive requests for clarifications to specifications and plans at least three days prior to the date for receipt of bids.

Receipt of each addendum shall be acknowledged by Bidder in the space provided and each addendum shall be enclosed with Proposal when it is submitted. All addenda shall become a part of these contract documents.

IB-11. AVAILABILITY OF PLANS

A. For Bidders

All parties with an interest in the type of work included in the project covered by these documents, shall be given a reasonable opportunity to examine the documents and prepare a bid or sub-bid. Documents may be examined without charge as noted in the Notice to Bidders.

1. Complete sets of documents may be obtained from Engineer upon request, accompanied by a refundable deposit of $150.00 for a set of specifications and plans.
2. Downloadable documents (PDF file extension format) can be obtained from the PSC Info Exchange web site after registering as a plan holder with issuing PSC office. No cost or deposit required for this option.

3. Unlimited number of digital copies (PDF file extension format) upon a non-refundable cost of $20.00 per each CD ($18.48 plus applicable sales tax).

B. For Contractor

Contractor will be furnished five sets of specifications and plans for his use during construction. This shall include all plans and specifications furnished to material suppliers and subcontractors but does not include the executed contract copies. Plans and specifications for use during construction will be furnished directly only to Contractor. Contractor shall then distribute copies of plans and specifications to suppliers, subcontractors, or others, as required for proper execution of the work.

Should additional sets of documents be desired, they may be purchased, by Contractor only, at the following prices, exclusive of postage or freight charges:

Plans and Specifications $150.00 per set.

IB-12. SPECIAL PROVISIONS

Attention of Bidders is directed to SPECIAL PROVISIONS included in these documents for requirements concerning scope of work, labor, insurance, and similar subjects.

IB-13. PLANT LOCATION AND STORAGE AREA

Contractors bidding on the work included in this contract who desire to locate a material storage area or other similar facility on the airport property may secure such site, buildings or areas by direct negotiation with the Director of Airports, Midland International Air & Space Port, Midland, Texas. An area located adjacent to the project area will be identified as available for use by Contractor for staging and material storage.

IB-14. WITHDRAWAL OF PROPOSALS

Any Bidder, upon his or his authorized representative's written request, will be given permission to withdraw his Proposal not later than the time set for opening thereof. At the time of opening of Proposals, when such Proposal is reached, it will be returned to him unread.

IB-15. DISQUALIFICATION OF BIDDERS

Any one or more of the following causes may be considered as sufficient for the disqualification of bidder and the rejection of his bid or bids:

More than one Proposal for the same work from an individual firm, partnership, or corporation under the same or different name.

Evidence of collusion among bidders. Participants in such collusion may not receive recognition as Bidders for any future work.

Unbalanced Proposals in which the prices for some items are out of proportion to the prices for other items.

Failure to submit a unit price for each item of work for which a bid price is required by Proposal.

Lack of competency as revealed by the financial statement submitted.

Lack of responsibility as shown by past work judged from the standpoint of workmanship and progress.

Uncompleted work which, in the judgment of Owner, might hinder or prevent the prompt completion of additional work if awarded.

For being in arrears on existing contracts, in litigation with Owner, or having defaulted on a previous contract.

IB-16. MATERIAL GUARANTY

Before any contract is awarded, Bidder may be required to furnish a complete statement of origin, composition, or manufacture of any or all materials proposed to be used in the construction of the work, together with samples, which may be subjected to the tests provided for in these specifications to determine their quality and fitness for the work.

IB-17. DISADVANTAGED BUSINESS ENTERPRISE CONTRACT PROVISIONS

It is the policy of the Department of Transportation (DOT) that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, Bidder will be required to conform to the DBE requirements of 49 CFR Part 26.

IB-18. WAIVER

BY SUBMITTING A BID, EACH BIDDER AGREES TO AND DOES HEREBY WAIVE ANY CLAIM BIDDER HAS OR MAY HAVE AGAINST THE CITY OF MIDLAND, TEXAS, AND THE CITY'S EMPLOYEES, AGENTS, AND OFFICERS ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FOLLOWING:

1. ADMINISTRATION, EVALUATION, OR RECOMMENDATION OF ANY BID;
2. WAIVER OR DELETION OF ANY REQUIREMENT UNDER BID DOCUMENTS OR CONTRACT DOCUMENTS;
3. ACCEPTANCE OR REJECTION OF ANY BIDS; AND
4. AWARD OF CONTRACT

BY SUBMITTING A BID, BIDDER ACKNOWLEDGES THAT BIDDER UNDERSTANDS ALL TERMS OF BIDDING DOCUMENTS AND CONSENTS TO BIDDING PROCESS AND THE POSSIBILITY OF A NEGATIVE ASSESSMENT. BY SUBMITTING A BID, BIDDER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN BIDDER AND THE CITY OF MIDLAND, TEXAS.

BIDDER AGREES THIS IS THE INTENTIONAL RELINQUISHMENT OF THE LISTED PRESENTLY EXISTING KNOWN RIGHTS.

IB-19. WAIVER OF ATTORNEY FEES

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. CONTRACTOR SPECIFICALLY AGREES THAT IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN OWNER AND CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

BID BOND

THE STATE OF TEXAS)

SURETY'S NO._____

COUNTY OF MIDLAND)

KNOWN ALL MEN BY THESE PRESENTS, THAT_____

_____(hereinafter called the Principal), as Principal, and_____

_____ (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, a home rule municipal corporation of Midland County (hereinafter called the Obligee), in the amount of_____

_____DOLLARS ($____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written contract with the Obligee to perform all work associated with the Northwest Taxilane and Executive Apron Rehabilitation.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully, enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection of such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either of such events, shall be entitled and is hereby given the right to collect this Bid Bond as liquidated damages.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas.

IN WITNESS WHEREOF, the said Principal and Surety do sign and seal this instrument, this day of _____, 20___.

_____ _____

Surety

By _____ By _____

Address _____ Address _____

_____ _____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

PROPOSAL

_____, 2020

TO: The Mayor and City Council
City of Midland
Midland, Texas

Gentlemen:

Pursuant to foregoing Notice to Bidders, undersigned Bidder hereby proposes to do all work and furnish all necessary superintendence, labor, machinery, equipment, tools, and materials, and anything necessary to complete all work bid, as provided by attached specifications and shown on plans, and binds himself on acceptance of this Proposal to execute Contract and Bonds per accompanying forms, performing and completing work within time stated, and furnishing all required guarantees, for the following prices to-wit:

NORTHWEST TAXILANE AND EXECUTIVE APRON REHABILITATION

Item	Quantity & Unit	Description of Item and Unit Prices	Total Amount
1	1 LS	Item P-140, Contractor Mobilization, complete, per lump sum: _____Dollars and _____Cents ($_____)	$_____
2	25,000 LF	Item P-101, Asphalt Joint and Crack Repair, 1/4 to 1-1/2 inch width (excluding sealant material), complete, per linear foot: _____Dollars and _____Cents ($_____)	$_____
3	2,500 GAL	Item P-605, Joint Sealing Filler, complete, per gallon: _____Dollars and _____Cents ($_____)	$_____
4	84,000 SY	Item P-608R, Rapid Cure Seal Coat Surface Treatment, complete, per square yard: _____Dollars and _____Cents ($_____)	$_____
5	6,500 SF	Item P-620, Runway and Taxiway Marking, includes Prime Coat, complete, per square foot: _____Dollars and _____Cents ($_____)	$_____
6	6,500 SF	Item P-620, Runway and Taxiway Marking Removal, complete, per square foot: _____Dollars and _____Cents ($_____)	$
		TOTAL BID	

The Bidder is required to separate the cost of materials to be incorporated into this Project. Such material costs are separated from the other costs so that the Bidder is a seller of such materials to the City. The Bidder shall be required to issue a resale certificate on such materials in lieu of paying the sales tax on such materials at the time of purchase. The City will provide the successful Bidder with a sales tax exemption certificate for such materials. The labor and materials charge shall be separated as follows:

BID

MATERIALS	$_____
LABOR	$_____
TOTAL BID	**$**_____

The undersigned Bidder hereby declares that he has visited the Site of the Work and has carefully examined the Plans, Specifications and Contract Documents pertaining to the Work covered by the above Bid, and that the prices bid herein are based on the minimum wage rates included in the Specifications.

The Bidder certifies, by submission of this Proposal or acceptance of this Contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded from participation in this transaction by any Federal department or agency. It further agrees that by submitting this Proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the Bidder or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this proposal.

Contractor or subcontractor, by submission of offer/execution of a contract, certifies it:

a. is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
b. has not knowingly entered into any contract or subcontract for this project with a contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list.
c. has not procured any product nor subcontracted for the supply of any product for use on the Project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to Contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.

Further, Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. Contractor may rely upon the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

Contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the contractor, if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

Bidder hereby agrees to commence work under this contract within 75 days of a date to be specified in written "Notice to Proceed" and to complete the work within the consecutive calendar day framework noted in the Contract. Bidder further agrees to pay as liquidated damages the sum of $ 1,000.00 for each consecutive calendar day beyond each phase of the days allowed; as hereinafter provided in Paragraph 32 of the General Conditions.

Bidder acknowledges receipt of the following addendum:_____

Enclosed with this Proposal is a Cashier's or Certified Check for_____ Dollars ($_____) or, a Proposal Bond in the sum of 5 percent of Greatest Amount Bid Dollars ($ 5 percent of Greatest Bid), which it is agreed shall be collected and retained by the Owner as liquidated damages in the event the Proposal is accepted by the Owner within 90 days after the date advertised for the reception of bids and the undersigned fails to execute the contract or required bonds with the Owner, under the conditions hereof, within 10 days after the date said proposal is accepted; otherwise, said check or bond shall be returned to the undersigned upon demand.

_____
Contractor

(Seal if Bidder is a Corporation)

By_____

_____
Address

NOTE: Fill in all blank spaces in this and accompanying forms and include proper bid security.

CONTRACT

STATE OF TEXAS

COUNTY OF MIDLAND

THIS CONTRACT, made and entered into this __ day of _____, 2019, by and between the **CITY OF MIDLAND, TEXAS**, a home rule municipal corporation ("***Owner***"), and _____, ("***Contractor***").

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by Owner, and under the conditions expressed in the bond bearing even date herewith, Contractor hereby agrees to commence and complete the construction of items of work included in this project, which are described as rehabilitation of the Northwest Taxilane And Executive Apron.

Work will also include other miscellaneous materials, equipment, machinery, superintendence and labor for constructing these improvements for the Midland International Air & Space Port.

These improvements are shown on the plans and Specifications entitled "Northwest Taxilane and Executive Apron Rehabilitation" dated April 2020. The plans and specifications are hereby incorporated herein by reference for all legal purposes and shall apply to this Contract as if fully set forth herein.

This Contract shall include all extra work in connection therewith. All work performed hereunder shall be in accordance with those certain General Conditions and Special Provisions, which are attached hereto and hereby incorporated herein by referenced for all legal purposes and shall apply to this Contract as if fully set forth herein. Contractor shall, at Contractor's own proper cost and expense, furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete said construction, in accordance with conditions and prices stated in Proposal attached hereto, and in accordance with all General Conditions and Special Provisions, and in accordance with plans, which includes all maps, plats, blueprints, and other drawings and printed or written explanatory matter thereof, and Specifications therefor, as prepared by Parkhill, Smith & Cooper, Inc., ("***Engineer***"), each of which has been identified by endorsement of Contractor and Engineer thereon, together with Contractor's written Proposal, and General Conditions and Special Provisions, and Performance Bond and Payment Bond hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire agreement between the parties hereof.

Contractor hereby agrees to commence work under this Contract within 10 days of a date to be specified in written "Notice to Proceed" and to complete work under Base Bid identified on plans within 75 consecutive calendar days from Notice to Proceed.

Contractor further agrees to pay as liquidated damages the sum of 1,0000 Dollars ($1,000) for each consecutive calendar day beyond days allowed as hereinafter provided in Article 32 of the General Conditions.

Owner agrees to pay Contractor from current funds for performance of this Contract in accordance with Proposal submitted therefor, subject to additions and deductions, as provided in specifications, and to make payments on account thereof as provided therein.

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY WAIVE ANY CLAIM CONTRACTOR HAS OR MAY HAVE AGAINST THE CITY OF MIDLAND, TEXAS, AND PARKHILL, SMITH & COOPER, INC., REGARDING AWARD OF ATTORNEY FEES, WHICH ARE IN ANY WAY RELATED TO CONTRACT, OR CONSTRUCTION, INTERPRETATION OR BREACH OF CONTRACT. CONTRACTOR SPECIFICALLY AGREES IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, CONSTRUCTION, INTERPRETATION, VALIDITY, OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, *ET SEQ.*, AS AMENDED), CONTRACTOR AGREES TO WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO RECOVERY OF ATTORNEY FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THIS IS INTENTIONAL RELINQUISHMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT CONTRACTOR UNDERSTANDS ALL TERMS AND CONDITIONS OF THIS CONTRACT.

By execution of this Contract, Contractor hereby represents and warrants to the City of Midland, Texas, that Contractor has read and understood the Contract.

This Contract shall be governed by laws of the State of Texas. Venue of any suit, right or cause of action arising under or in connection with this contract shall lie exclusively in Midland County, Texas. All payments and performance under or connected to this contract shall be deemed to have occurred exclusively in Midland County, Texas.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

OWNER:

CITY OF MIDLAND, TEXAS

By_____
Patrick Payton, Mayor

ATTEST:

By_____
Amy M. Turner, City Secretary

CONTRACTOR:

ATTEST:

By_____ By_____

Complete Address:

_____

_____

_____

PERFORMANCE BOND

SUBMITTED IN COMPLIANCE WITH CHAPTER 2253 OF THE TEXAS GOVERNMENT CODE

STATE OF TEXAS §

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS: That we, _____ of the City of _____, County of _____ and State of _____, as principal, and _____ _____ hereinafter called the Surety, are held and firmly bound unto the City of Midland, Texas, a home rule municipal corporation of Midland County, Texas, (hereinafter called the City-Obligee), in the penal sum of _____ _____ DOLLARS, ($_____) lawful money of the United States, well and truly to be paid to the City of Midland, Texas, for the payment whereof the said Principal and Surety bind themselves and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner-Obligee, dated the ____ day of _____ 20__, to the Northwest Taxilane and Executive Apron Rehabilitation for the Midland International Air & Space Port, Midland, Texas

specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidders, general and special conditions and other contract documents, including any addendums thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

PROVIDED further that this Performance Bond is submitted in compliance with Chapter 2253 of the Texas Government Code.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in any way affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to

the work to be performed thereunder.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this __day of _____, 20___.

Contractor	Surety
By_____	By_____
	(Title)

NOTE: If signed by an officer of the Surety Company, there must be on file a certified extract from the by-laws showing that this person has authority to sign such obligation. If signed by an Attorney in Fact, the Owner must be furnished with a copy of Power of Attorney for their files.

PAYMENT BOND

SUBMITTED IN COMPLIANCE WITH CHAPTER 2253 OF THE TEXAS GOVERNMENT CODE

STATE OF TEXAS §

COUNTY OF MIDLAND §

KNOW ALL MEN BY THESE PRESENTS: That we, _____ of the City of _____, County of _____ and State of _____, as principal, and hereinafter called the Surety, are held and firmly bound unto the City of Midland, Texas, a home rule municipal corporation of Midland County, Texas, (hereinafter called the City-Obligee), in the penal sum of _____ DOLLARS, ($_____) lawful money of the United States, well and truly to be paid to the City of Midland, for the payment whereof the said Principal and Surety bind themselves and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner-Obligee, dated the _____ day of _____ 20__, to the Northwest Taxilane and Executive Apron Rehabilitation for the Midland International Air & Space Port, Midland, Texas which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of this obligation is that if said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

PROVIDE further that this Payment Bond is submitted in compliance with Chapter 2253 of the Texas Government Code.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of this contract, or to the Work performed thereunder, or the plans, Specifications or Drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to Bidders, shall in any way affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed thereunder.

WITNESS our hands this the _____ day of _____, 20____.

_____	_____
Contractor	Surety
By_____	By_____
	(Title)

NOTE: If signed by an officer of the Surety Company, there must be on file a certified extract from the by-laws showing that this person has authority to sign such obligation. If signed by an Attorney in Fact, Owner must be furnished with a copy of Power of Attorney for their files.

CERTIFICATE OF INSURANCE

TO: CITY OF MIDLAND
MIDLAND INTERNATIONAL AIR & SPACE PORT
MIDLAND, TEXAS

Date_____

Type of Project: Northwest Taxilane and Executive Apron Rehabilitation

THIS IS TO CERTIFY THAT _____
(Name of Insured)

is, at the date of this certificate, insured by this Company with respect to the business operations hereinafter described, for the types of Insurance and in accordance with the provisions of the standard policies used by this Company, and further hereinafter described. Exceptions to standard policy noted on reverse side hereof.

SAMPLE ONLY
SUCCESSFUL
CONTRACTOR
SHALL PROVIDE
CERTIFICATE FROM
INSURANCE
HIS CARRIER

TYPE OF INSURANCE	Policy No.	Effective	Expires	Limits of Liability
Workmen's Compensation				Public
1 person $_____				Liability
1 accident $_____				Contingent
1 person $_____				Liability
1 accident $_____				
Property Damage				
Builder's Risk				
Automobile				
Other				

The foregoing Policies (do) (do not) cover all sub-contractors.

Locations Covered:_____

Description of Operations Covered:_____

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or cancelled by the insurer in less than the legal time required after the insured has received written notice of such change or cancellation, or, in case there is no legal requirement, in less than five days after the insured has received such written notice.

EIGHT COPIES OF THIS
CERTIFICATE MUST BE
SENT TO THE OWNER

_____
(Name of Insurer)

By _____
Title _____
Phone _____

NOTE: THE CITY OF MIDLAND AND PARKHILL, SMITH & COOPER, INC. SHALL BE NAMED AS ADDITIONAL INSUREDS ON REQUIRED INSURANCE POLICIES.

EXPERIENCE RECORD

List of Projects, similar to that covered by Proposal, which Bidder has successfully completed:

Amount of Contract Award	Time of Work	Date Completed	Name and Address of Owner

List of Projects Bidder is now engaged in completing:

Amount of Contract Award	Type of Work	Percent Completed	Name and Address of Owner

List of Surety Bonds in force on the above uncompleted work:

Amount of Contract Award	Amount of Bond	Name of Surety Company

_____
Bidder

By _____

_____
Business Address

EQUIPMENT SCHEDULE

Bidder should list the major equipment available and serviceable for use on this Work.

Portion of Work Bidder proposes to sublet, if any:

Dated this _____ day of _____, 20____.

By_____

Title_____

FAA
Airports

Required Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION to ENSURE EQUAL EMPLOYMENT OPPORTUNITY

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables

Goals for minority participation for each trade: 19.1%

Goals for female participation in each trade: 6.9%

These goals are applicable to all of the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is **Midland, Texas, Midland County.**

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the Contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

BUY AMERICAN PREFERENCE

The Contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must complete and submit the Buy America certification included herein with their bid or offer. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

Certificate of Buy American Compliance for Manufactured Products

As a matter of bid responsiveness, the Bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The Bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing U.S. domestic product.
3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

GENERAL CIVIL RIGHTS PROVISIONS

The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

Title VI Solicitation Notice:

The City of Midland, Texas, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS:

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or

    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

COPELAND "ANTI-KICKBACK" ACT

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 USC 874 and 40 USC 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

DAVIS-BACON REQUIREMENTS

1. Minimum Wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program: *Provided* that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages

of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and that show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.* the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at *www.dol.gov/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) The payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) Each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) Each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC 1001.

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov.
2. Collecting a certification statement similar to the Certification of Offerer /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) –

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Department of Transportation-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

1) Withholding monthly progress payments;
2) Assessing sanctions;
3) Liquidated damages; and/or
4) Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from City of Midland. The prime contractor agrees further to return retainage payments to each subcontractor within [30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Midland. This clause applies to both DBE and non-DBE subcontractors.

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 that involve driving a motor vehicle in performance of work activities associated with the project.

ENERGY CONSERVATION REQUIREMENTS

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC 6201*et seq*).

EQUAL OPPORTUNITY CLAUSE

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identify, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff, or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance*: Provided, however,* that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

d. "Minority" includes:

(1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);

(3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR part 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply

the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded

or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions, including specific review of these items, with onsite supervisory personnel such superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally), the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR part 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee

identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

FEDERAL FAIR LABOR STANDARDS ACT

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The [*Contractor* |] has full responsibility to monitor compliance to the referenced statute or regulation. The [*Contractor* |] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

CERTIFICATION REGARDING LOBBYING

The Bidder or Offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

PROHIBITION OF SEGREGATED FACILITIES

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Employment Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this contract.

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

1) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
2) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b) Fails to meet reasonable contract performance requirements; or
c) Is only available at an unreasonable price.

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2) The applicant represents that it is ( ) is not ( ) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twentyfour (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

2) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

3) reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

4) reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

TERMINATION FOR DEFAULT (CONSTRUCTION)

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes conditions, rights, and remedies associated with Owner termination of this contract due to default of the Contractor.

SECTION 80-09 FROM AC 150/5370-10

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Architect/Engineer consider the Contractor in default of the contract for any reason above, the Architect/Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Architect/Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Architect/Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or
2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

"General Decision Number: TX20200002 01/03/2020

Superseded General Decision Number: TX20190002

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	

FORM BUILDER/FORM SETTER
     Paving & Curb.....$ 12.36
     Structures.....$ 13.52

LABORER
     Asphalt Raker.....$ 12.28
     Flagger.....$ 9.30
     Laborer, Common.....$ 10.30
     Laborer, Utility.....$ 11.80
     Work Zone Barricade
     Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
     Asphalt Distributer.....$ 14.87
     Asphalt Paving Machine.....$ 13.40
     Broom and Sweeper.....$ 11.21
     Crane, Lattice Boom 80
     Tons or Less.....$ 16.82
     Crawler Tractor Operator....$ 13.96
     Excavator, 50,000 lbs or
     less.....$ 13.46
     Front End Loader Operator,
     Over 3 CY.....$ 12.77
     Front End Loader, 3CY or
     less.....$ 12.28
     Loader/Backhoe.....$ 14.18
     Mechanic.....$ 20.14
     Milling Machine.....$ 15.54
     Motor Grader, Rough.....$ 16.15
     Motor Grader, Fine.....$ 17.49
     Pavement Marking Machine....$ 16.42
     Reclaimer/Pulverizer.....$ 12.85
     Roller, Asphalt.....$ 10.95
     Roller, Other.....$ 10.36
     Scraper.....$ 10.61
     Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
     Lowboy-Float.....$ 14.46
     Single Axle.....$ 12.74
     Single or Tandem Axle Dump..$ 11.33
     Tandem Axle Tractor with
     Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that

classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION
"

CONTRACT ASSURANCE

Contractor will ensure that the following clause is placed in every DOT-assisted contract and subcontract:

Contractor or subcontractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the recipient deems appropriate. This may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and or
4. Disqualifying the contractor from future bidding as non-responsible.

PROMPT PAYMENT

Prime Contractor agrees to pay each Subcontractor under this Prime Contract for satisfactory performance of its contract no later than 30 working days from the receipt of each payment the prime contractor receives from the City of Midland. Prime contractor agrees further to return retainage payments to each subcontractor within 30 working days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Midland. The clause applies to both DBE and non-DBE subcontractors.

For purposes of this section, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the City of Midland. When the City of Midland has made an incremental acceptance of a portion of a prime contract, the work of a Subcontractor covered by that acceptance is deemed to be satisfactorily completed.

Contractor will not be reimbursed for work performed by Subcontractors unless and until the contractor ensures that the subcontractors are promptly paid for the work they have performed.

Contractor failure to comply with the requirements of the DBE Plan shall constitute a material breach of this contract. In such a case, the City of Midland reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due Contractor, not as a penalty but as liquidated damages to the City of Midland or such other remedy or remedies as the City of Midland deems appropriate.

CITY OF MIDLAND DEPARTMENT OF AIRPORTS - DBE POLICY STATEMENT

Section 26.1, 26.23 Objectives/Policy Statement

The City of Midland, owner and operator of Midland International Air & Space Port, herein referred to as MAF, has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. MAF has received Federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, MAF has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of MAF to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also our policy:

1. To ensure nondiscrimination in the award and administration of DOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. To help remove barriers to the participation of DBEs in DOT-assisted contracts; and
6. To assist the development of firms that can compete successfully in the market place outside the DBE program.

An MAF staff person has been delegated as the DBE Liaison Officer. In that capacity, the appointed staff is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by MAF in its financial assistance agreements with the Department of Transportation.

MAF has disseminated this policy statement to the City Council of the City of Midland, Texas and all the components of our organization. We have distributed this statement to DBE and non-DBE business communities that perform work for us on DOT-assisted contracts. This is accomplished via inclusion in all our Bid Documents.

Justine Ruff
Director of Airports

Information to be submitted (26.53(b))

MAF treats bidder/offers' compliance with good faith efforts' requirements as a matter of responsiveness.

Requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of MAF to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. Award of this contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders/offerors, including those who qualify as a DBE. A DBE contract goal of 9.82 percent has been established for this contract. Bidder/offeror shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet the contract goal for DBE participation in the performance of this contract.

TO BE INCLUDED WITH PROPOSAL

Bidder/Offeror shall include with their proposal, a completed Bidder Information Sheet, Form 1: Disadvantaged Business Enterprise (DBE) Utilization, (signed by bidder/offeror) and Form 2: Letter of Intent (for each DBE firm). Form 2: Letter of Intent does not require a signature by DBE firm(s) at the time of the proposal submission.

UPON AWARD OF CONTRACT

Successful bidder/offeror will be required to submit the following information: (1) names and addresses of DBE firms that will participate in the contract; (2) description of the work that each DBE firm will perform; (3) dollar amount of the participation of each DBE firm participating; (4) written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal; (5) written confirmation from the DBE that it is participating in the contract as provided in the commitment made under (4); and (6) if the contract goal is not met, evidence of good faith efforts. The successful Bidder or Offeror must submit DBE written confirmation of participation within five days after Bid Opening.

Midland International Air & Space Port

To all Bidders for AIP funded projects for Midland International Air & Space Port:

Any company desiring to submit a bid on an AIP grant project for the Midland International Air & Space Port, must complete a Bidder Information Sheet that includes:

- Name of Firm
- Address of Firm
- Age of Firm
- Whether firm is a certified disadvantaged business enterprise
- Amount of annual gross receipts

Before contract is awarded, companies must also submit Demonstration of Good Faith Efforts Form 1: DBE Utilization, and Form 2: Letter of Intent for each DBE subcontractor. If DBE goal percentage is met, complete one Form 1 and a separate Form 2 for each DBE subcontractor. If not met, complete Form 1, and submit documentation of Good Faith Efforts (see 49 CFR Part 26, Appendix A) to support percentage accomplished.

Upon Airport acceptance of bid, the following information must be submitted to Midland International Air & Space Port's Disadvantage Business Enterprises Liaison Officer (DBELO) before project is started:

- Commitments made to all subcontractors (DBE and non-DBE): MAF Form 2: Letter of Intent or TxDOT Form 4901
- Proof of DBE certification of all DBE subcontractors.

Once project starts, a Monthly Progress Report (MAF Form or TxDOT Form 4903 or 4904) of the actual dollar amount paid to DBE subcontractors should be submitted monthly to the DBELO.

For questions, please call 432.560.2200. Thank you for your time and consideration regarding this matter.

Sincerely,

MAF, Liaison Officer
Disadvantage Business Enterprise

Encl

ATTACHMENT 5 - FORMS 1 AND 2 FOR DEMONSTRATION OF GOOD FAITH EFFORTS

FORM 1: DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The undersigned bidder/offeror has satisfied the requirements of the bid/proposal specification in the following manner (please check the appropriate space):

_____ The bidder/offeror is committed to a minimum of 9.82% DBE utilization on this contract.

_____ The bidder/offeror (if unable to meet the DBE goal of 9.82%) is committed to a minimum of _____% DBE utilization on this contract and submits documentation demonstrating good faith efforts.

Name of bidder/offeror's firm: _____

State Registration No. _____

By _____
(Signature) Title

FORM 2: LETTER OF INTENT

Name of bidder/offeror's firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE firm:

_____

_____

_____

_____

_____

_____

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $_____

Affirmation

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____
(Signature)(Title)

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

(Submit this page for each DBE subcontractor.)

Midland International Air & Space Port
Department of Airports

Bidder Information Sheet

Firm Name: _____

_____

Address: _____

_____

_____

Age of Firm: _____

Is your firm a Certified Disadvantaged Business Enterprise (DBE)? **YES** ☐
NO ☐

Mark the category of your firm's Annual Gross Receipts.

- ☐ **Less than $1 million.**
- ☐ **More than $1 million, less than $5 million.**
- ☐ **More than $5 million, less than $10 million.**
- ☐ **More than $10 million, less than $15 million.**
- ☐ **More than $15 million.**

DBE/Non DBE Monthly Progress Report for MAF

Project: _____ AIP Grant No.: _____

Contractor: _____ Contract Amount: _____

DBE Goal: _____ DBE Goal Dollars: _____

Contractor DBE Status: (DBE or Non DBE)_____ Reporting Month: (Mo/Y.): _____

Vendor Number	Name of Prime/Subcontractor DBE or Non-DBE	* D or N	**Dis-advantaged Group	Type of Work	***Total $ Amt Paid for Work Performed (Prime & Sub; DBE & Non-DBE)	**** $ Amt Paid to Non-DBE Firm this Pay Period	***** $ Amt Paid to DBE Firm this Pay Period

* All payments to DBE and Non-DBE firms are required to be reported. (D=DBE; N=Non DBE)

** If the firm is a DBE, report the Disadvantaged Group the DBE firm falls under. (BA=Black American; HA=Hispanic American; NA=Native American; SAA=Subcont. Asian American; APA=Asian Pacific American; NMW=Non-Minority Women; O=Other)

*** Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE/second-tier subcontractors and haulers from this column.

**** Report amount paid to Non-DBE firm or sub.

***** Report amount paid to DBE firm or sub.

If using a non-DBE hauling firm that leases from DBE truck owner-operators, payments made to each owner-operator must be reported separately. Report amount of payment DBE subcontractors paid to non-DBE subcontractors/haulers.

Submission of this report for periods of negative DBE activity is required. This report is required monthly until entirety of project specified is completed.

I hereby certify that the above is a true and correct statement of the amounts paid to the DBE or Non-DBE firms listed above.

Signature: _____ Date: _____

Company Official

🛠**This report must be submitted with monthly request for payment.**

SPECIAL PROVISIONS

SP-1 SCOPE OF WORK

Work to be accomplished under these Specifications, including the plans, shall consist of:

Principal items of work are set forth in specific detail in the proposal Section of these Specifications; however, Work may be generally described as rehabilitation of asphalt pavements including preparing and sealing cracks, applying a sealant surface treatment, and applying new markings.

Work will also include other miscellaneous materials, equipment, machinery, superintendence, and labor for constructing these improvements for the Midland International Air & Space Port, Midland, Texas.

Contractor shall furnish all labor, materials, and equipment necessary to complete work called for in these specifications and shown on the plans.

Payment for various items of work will be made as specified under various payment Articles of technical sections.

SP-2 CONTRACT DOCUMENTS

All work covered by this contract shall be done in accordance with Contract Documents described in the General Conditions. Drawings included in documents consist of the plans entitled "Northwest Taxilane and Executive Apron Rehabilitation," dated April 2020.

All bidders shall be thoroughly familiar with all Drawings and Specifications. Contractor shall be responsible for the satisfactory completion of all Work shown on Drawings or specified.

Intent of plans and Specifications is to prescribe a complete Work or improvement which Contractor undertakes to do in full compliance with the plans, the specifications, the special provisions, proposal, and contract. Contractor shall do all Work including such additional, extra, and incidental work as may be considered necessary to complete the project in a satisfactory and acceptable manner, as provided in the plans, proposal, and contract. He shall furnish, unless otherwise provided in the specifications, special provisions, or contract, all materials, equipment, tools, labor and incidentals necessary to prosecute the completion of work.

Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of Contract Documents, priority of interpretation shall be in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Proposal, Special Provisions, Notice to Bidders, Instructions to Bidders, Technical Specifications, Plans and General Conditions of Contract.

SP-3 TIME AND ORDER OF COMPLETION

Contractor is permitted to prosecute certain portions of Work in the order and manner of his own choosing to the best interest of the Project. However, Work shall be conducted in such manner and with such materials, equipment and labor as may be required to ensure completion in accordance with the plans and Specifications within the time stated in the Proposal and in Contract. Contractor shall furnish Engineer with his proposed progress schedule and this schedule shall be approved by Engineer before Work is commenced on the Project.

Contractor is reminded approved material submittals are required prior to the incorporation of the materials into this project. To avoid any delays in progress of work, it is imperative that complete information be provided to Engineer as early as possible for review and approval.

Contractor will be required to execute various portions of the project in phases to maintain usage of airport facilities as well as safety during the entire project. Contractor will be allowed to develop his own phasing plan which will meet the intent of the phasing shown on the Plans. Contractor's phasing plan will be subject to Engineer's approval.

Other contractors may be performing work for Owner in the same general area as that covered under this contract. Contractor shall be expected to coordinate his work with work of other contractors as may be required to ensure that all work can be carried out with the least possible interference with the operation of other contractors or Owner. Contractor's coordination with other contractors shall require the approval of Engineer. Owner reserves the right to control and direct the sequence of operations in the areas where others will be working. Provision shall be made for other contractors to have suitable space to work and for storage of materials, as well as access to these areas.

Contractor shall schedule his work well in advance of actual operations and shall keep Engineer advised of this schedule so that close coordination can be maintained with the Director of Airports and with other contractors. Portions of taxiways and runways will be closed as required for proper execution of work, but at least three days' notice will be required before closing any portion of a taxiway or runway. Notice to Airmen (NOTAM's) required for various construction operations, will be filed by the Director of Airports.

When closing of portions of the airfield for construction is required, the time closed shall be kept to a minimum time. Contractor shall be required to provide, install and maintain approved closed runway and/or taxiway markings in accordance with FAA Advisory Circular 150/5370-2G, and other applicable FAA regulations. No separate measurement or payment shall be made for closed runway or taxiway marking. All operations shall be coordinated through Engineer and the Director of Airports.

SP-4 LIMITATION OF OPERATION

Each item of work shall be completed without delay and in no instance shall Contractor be permitted to transfer his forces from uncompleted work to new work without the permission of Engineer. Contractor shall be required to submit a schedule of operations to Engineer for approval. Contractor shall not commence new work to the prejudice of work already started.

Contractor shall take all precautions necessary to ensure the safety of operating aircraft and their passengers as well as that of his own equipment and personnel. Special considerations shall be given to flight schedules and routes to be taken by equipment traveling within the airport area. Contractor shall provide all such equipment with a flag on a staff so attached to the equipment that the flag will be readily visible. The flag shall be not less than three feet square consisting of a checkered pattern of international orange and white squares of not less than one foot on each side. Contractor shall make his own estimate of all difficulties to be encountered. Equipment not actually in operation shall be kept clear of landing areas; personnel shall not enter areas of the airport where aircraft are operating without specific permission.

Nighttime construction activities will not be permitted without the prior approval of Engineer and the Director of Airports. If required and permitted, nighttime construction activities shall be as noted on the plans and coordinated, through Engineer, with the Director of Airports. During nighttime construction, Contractor shall provide all equipment traveling within the airport area with a flashing light, which shall remain visible and operational at all times.

All operations shall be coordinated, through Engineer, with the Director of Airports, to the end that no interference with aircraft traffic on active runways, taxiways or aprons will result from the operations of Contractor. Construction activities will not be allowed within the safety areas of any active runway or taxiway unless approved by Engineer and Director of Airports. Taxiway safety area is defined as the area within 90 feet of the centerline of any taxiway or taxilane. Runway safety area is defined as the area within 250 feet of the centerline of any runway when aircraft are operating under Visual Flight Rule (VFR, clear weather) conditions, or within 570 feet of the centerline of any runway when aircraft are operating under Instrument Flight Rule (IFR, inclement weather) conditions.

Contractor shall maintain flagmen, as may be required, to direct his construction traffic if it becomes necessary for such traffic to cross or travel along any active taxiway, apron or runway. Traffic shall be directed away from these facilities whenever possible and no traffic shall ever cross an active runway, taxiway or apron without having proper clearance.

Contractor shall schedule his work well in advance of actual operations and shall keep Engineer advised of this schedule so that close coordination can be maintained with the Director of Airports. Aprons, runways and taxiways will be closed as required for proper execution of work as provided in above Articles.

Contractor shall exert every effort to maintain the safety of aircraft traffic and shall acquaint himself with the rules and regulations concerning aircraft traffic safety. The requirements of FAA Advisory Circular 150/5370-2G, "Operational Safety on Airports during Construction," will be maintained. Violations of the safety rules by Contractor's workmen shall result in the discharge of such men in accordance with the General Conditions. Continued violations of safety rules and regulations by Contractor, after having been notified of such violations by Engineer, shall constitute grounds for suspending Contractor's operations until steps are taken that will insure a safe operation.

Contractor's field office and material storage area may be located south of Taxiway A but outside the safety area of Taxiway A near areas of construction. Contractor shall provide an area for parking all equipment not being used for construction purposes, and for parking of employee vehicles. This area shall be located away from the operational area of the airport in an area approved by Engineer and the Director of Airports. No employee or other unauthorized vehicles will be allowed within the operational area of the airport. If Contractor needs his field office to be outside of the service area, Contractor can install temporary security fencing around the office site. The security fence will be required to be approved by the airport.

Contractor shall utilize existing vehicle gates for his employees and subcontractors. Contractor shall be responsible for allowing only authorized personnel to enter the operational area of the airport through this gate. Entrance through the gate shall be controlled by Contractor at all times that Contractor’s employees or sub-contractors are entering/exiting the gate.

Hauling routes shall not be along or across any paved airport street, road, apron, taxiway or runway without specific written authorization from Engineer and the Director of Airports. Any damage incurred by Contractor's equipment shall be repaired by and at the expense of Contractor, and as required by Engineer and the Director of Airports.

Contractor shall maintain pavement surfaces of runways, taxiways, and aprons, allowed to be used as hauling routes, in a clean condition, suitable for use by aircraft, as determined by the Director of Airports.

Successful Bidder is subject to a pre-award review by the Office of Compliance and Security, Equal Opportunity Division, Federal Aviation Administration, to determine Contractor’s previous compliance status.

Contractor subject to a preconstruction conference to discuss phasing and project safety control after award of contract.

SP-5 CONSTRUCTION ACTIVITY

When construction activity is performed on or adjacent to the aircraft operating areas (AOA), the following Rules and Regulations will apply unless otherwise authorized by Airport Operations. **Contractor required to have all picture-badged supervisors fingerprinted. Fingerprinting cost is $50.00 per person, paid by Contractor**.

5-1 AOA Badge: At least one supervisor with an AOA picture badge must be present at all times with any group of unbadged personnel.

5-2 Escorts: All escorts performed by Contractor within the AOA must be accomplished by picture-badged personnel operating a vehicle marked by a 3- x 3-foot orange and white checkered flag. Traffic must adhere to haul routes at all times (see subarticle 5-3). Only authorized airport personnel are to perform escorts off of established haul routes.

5-3 Haul Routes: Establishment of AOA haul routes must be authorized through Airport Operations. Contractor shall furnish, erect, maintain, and remove flags for delineation of haul routes. Criteria of establishing perimeter of a haul route and restricted areas will be as follows:

A. Green flags will prominently mark either side of haul route at intervals which easily define route.
B. Yellow flags will prominently mark a boundary 500 feet adjacent to a runway centerline to delineate restricted areas during poor visibility as determined by Airport Operations.
C. Red flags will prominently mark a boundary 250 feet adjacent to a runway centerline to indicate entry is prohibited unless specifically authorized by Airport Operations.
D. Haul Routes that cross or come within 153 feet of a taxiway must have a flagman present to control vehicular traffic.
E. No haul route may come within 1,000 feet from end of a runway unless specifically authorized by Airport Operations.

5-4 Cranes: Any construction activity utilizing a crane or any other hoisting device shall have the prior written approval of the Federal Aviation Administration. Contractor shall be responsible for filing the prescribed forms for airspace clearance in accordance with Part 77 of the Federal Aviation Regulations. Applications for airspace clearance must be submitted at least 30 days prior to the beginning of construction activities. To avoid construction delays, Contractor is urged to file the prescribed forms in a timely manner. Airspace clearance from the FAA must be approved prior to the erection of the crane or other hoisting device. The following information is required:

A. Location of equipment
B. Maximum extendable height.
C. Duration of use.
D. Daily hours of operation.

Top of crane must be marked by a 3- x 3-foot orange and white checkered flag and lowered at night and during periods of poor visibility as directed by Airport Operations. Cranes which exceed a height of 149 feet must be approved in writing by the FAA (FAA Form 7460-1). Contractor shall notify Engineer at least 48 hours prior to actually erecting the crane.

5-5 Restricted Areas: Construction in these areas is prohibited unless authorized by Airport Operations:

A. Within 90 feet of a taxiway or apron taxiway centerline.
*B. Within 250 feet parallel to a runway centerline.
C. Within 1,000 feet of the end of the runway.
D. Within certain areas about the runway to cause interference with navigational equipment.

(* 500 feet during poor visibility as determined by Airport Operations.)

5-6 Trenches and Excavations: No trenches or excavations allowed within these areas:

A. Within 250' parallel to runway centerline.
B. Within 90' parallel to a taxiway or apron taxiway centerline.
C. Within 1,000' of the end of a runway.

EXCEPTION: Authorization will be considered on a case by case basis by Airport Operations.

5-7 Stockpiles of Material: No stockpiled material allowed within these areas:

A. Within 500' parallel to runway centerline.
B. Within 90' parallel to a taxiway or apron taxiway centerline.
C. Within 1,000' of the end of a runway.

EXCEPTION: Authorization will be considered on a case by case basis by Airport Operations.

5-8 Escorts, Badges and Permits: When AOA construction activity is performed on or adjacent to the aircraft operating area and access onto apron required, the following rules will apply unless otherwise authorized by Airport Operations:

A. Escorts: Contractor vehicles and equipment must be escorted by Airport Operations and observe the Rules and Regulations.

EXCEPTION: Vehicles displaying a Permanent AOA Access decal do not require an escort while operating on ramps.

B. AOA Badges: Contractor personnel will display an AOA Identification Badge.
C. AOA Access Permit: Contractor vehicles will display an AOA Access Permit or Temporary AOA Access Permit.

EXCEPTION: Construction equipment such as tractors, dump trucks, and cranes not required to display an AOA Access Permit.

5-9 Protection of Airfield Areas: These procedures will be utilized to prevent inadvertent entry by aircraft or vehicles into closed sections of taxiways, runways or aprons. Contractor shall provide all materials and labor to furnish, erect, maintain, and remove these items as subsidiary to other items in project.

A. When any taxiway or other AOA is closed, area will be protected by cones and flashing lights set up at the entrances to the closed areas.
B. Appropriate NOTAM's will be issued on the closure and its associated maintenance or construction activity.
C. Centerline and edge lights will be turned off, removed, obliterated, or disconnected as dictated by the circumstances requiring the closure.
D. All excavations in existing pavement areas (e.g. mudjacking repairs) must have hole protected by cones and flashing lights. This will be in addition to cones and lights marking the closed area.
E. Major excavations (such as construction of new taxiways, ramps or other construction activity) or the major repairs of an existing taxiway or runway will be protected by 10-inch-wide by 8-foot-long plastic FAA approved barricades (striped orange and white), with at least two red-flashing lights on top of each barricade.
F. In some cases, taxiway centerline striping will be obliterated and a temporary displaced centerline provided.
G. All activities on the airfield must be continually coordinated through the Airport Operations Supervisor.

SP-6 AFFIDAVIT OF BILLS PAID

Prior to final acceptance of this project by Owner, Contractor shall execute an affidavit that all bills for labor, materials and incidentals incurred in the construction of these improvements, have been paid in full, including any retainage, and that there are no claims pending, of which he has been notified.

SP-7 CALENDAR DAY

Time for completion of the project and for liquidated damages shall be in accordance with the provisions of the General Conditions, Paragraph GC-32 - Time for Completion and Liquidated Damages. A calendar day is defined as every day shown on the calendar.

SP-8 PROTECTION OF PROPERTY

Contractor shall exercise care to prevent damage to all structures, either above or below ground, including buildings, fences, pipelines, utilities, roads, etc., whether publicly or privately owned and including work performed by others. Contractor shall be responsible for locating all underground facilities damaged by proposed construction.

Contractor shall be responsible for all damage done to either public or private property during the course of construction except as specifically provided otherwise in these specifications.

Known existing underground utilities and structures are shown on the plans. Locations are believed reasonably accurate but not guaranteed.

Contractor shall take all steps necessary to protect these existing facilities during construction to assure continuous operation of lights for runways and taxiways which will be open for night operations.

SP-9 ELECTRIC POWER AND NATURAL GAS

Contractor shall make his own provisions for his electrical, natural gas and other fuel requirements and shall pay for electricity, gas or fuel consumed during the construction of the project. Contractor shall construct his own service lines and such construction shall be in strict accordance with all applicable codes and laws.

SP-10 LINES AND GRADES

Engineer will provide Contractor with horizontal control points and a benchmark for vertical control. All construction staking shall be done by Contractor. References to lines and grades as established by Engineer shall be in reference to these control points.

Engineer will provide Contractor with all necessary information relating to control points set by Engineer. Contractor will be responsible for laying out work. Engineer will check grade control and major layouts at his discretion, but this check will not relieve Contractor of his responsibility of correctly locating line and grade in accordance with the plans and specifications.

Engineer will take all measurements necessary for the determination of the amount of work performed under the various items for which payment is provided. Whenever necessary, work will be suspended to permit this work, but such suspension will be as brief as practicable and Contractor shall be allowed no extra compensation therefor.

Contractor shall satisfy himself as to the accuracy of all measurements before constructing any permanent structure and shall not take advantage of any errors which may have been made in laying out work. Such stakes and markings as Engineer may set for either his own or Contractor's guidance shall be scrupulously preserved by Contractor. In case of negligence on the part of Contractor or his employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing same may be deducted from subsequent estimates due Contractor, at the discretion of Engineer.

SP-11 WATER FOR CONSTRUCTION

Contractor shall make his own provisions for his water requirements and shall pay for all water consumed during the construction of the project. Contractor shall make his own arrangements for connections to existing water mains and fire hydrants and piping or hauling the water to the point where the water is required, all at his own expense.

SP-12 MATERIAL TESTS

Various tests on materials of construction are required in the specifications. In general, Contractor shall bear the cost of all material tests required before approval of a material, source or mix design. City will bear the cost of all passing commercial laboratory tests required for acceptance during construction of the improvements and Contractor shall bear the cost of all failing construction tests.

Where only small amounts of any material are used or where compliance with specifications determined by visual inspection, no tests are required. Certificates of compliance required on all materials not tested.

All materials proposed used, may be tested at any time during their preparation and use. If, after trial, sources of supply approved do not furnish a product of uniform quality or if product from any source proves unacceptable at any time, Contractor shall furnish approved material from another source.

SP-13 BARRICADES, SIGNS, AND HAZARD MARKINGS

Contractor shall provide, erect, and maintain all necessary barricades, signs, danger signals, and lights for the protection of work and the safety of the public for both passengers and aircraft. Before closing existing apron, runways or taxiways, warning signs for air traffic shall be placed at such locations and shall be visible day and night. Any movement of Contractor's vehicles or equipment on or across aprons or taxiways shall carry FAA standard markings or flags. Movement of other vehicles responsible to Contractor shall be under escort, as specified in Article SP-5-2.

Barricades for runways, taxiways, and aprons closed to traffic, shall consist of 10-inch-wide by 8-foot-long plastic FAA approved barricades. Each barricade shall have reflective striping and a red flashing light on each end. Barricades shall be spaced with no more than 10-foot clearance between the ends. Obstructions shall be illuminated at night. Proper illumination of obstructions is critical to the safe operation of aircraft on the Airport. All warning lights shall be equipped with photocell controls to automatically turn on the lights at night and turn them off at daytime. Contractor shall check lights daily to assure batteries or power cells are working. In addition, Contractor shall check lights at night on a daily basis. Any lights found out-of-order, flashing weakly, or in otherwise less than acceptable operating condition, shall be immediately replaced or repaired. Engineer may suspend work on project if Contractor's warning lights are not maintained in an acceptable manner. A $25.00 charge will be assessed Contractor for each light, per day, found inoperative by Owner's personnel or representatives.

SP-14 PREVENTION OF AIR AND WATER POLLUTION

Contractor shall use suitable precaution to minimize air and water pollution during the progress of work. Contractor shall meet all requirements of the EPA concerning air and water pollution. Contractor shall implement a Stormwater Pollution Prevention Plan (SWPPP) as required by the plans and specifications.

SP-15 PUBLIC CONVENIENCE AND SAFETY

Materials stored on the airport shall be so placed and work shall, at all times, be so conducted as to cause no greater obstruction to the air and ground traffic than is considered necessary by Engineer. In protecting operational areas, the minimum clearances maintained for runways shall be in agreement with Part 77 of the Federal Aviation Regulations. During construction of the project, Contractor shall also maintain operational safety on the Airport in accordance with FAA's Advisory Circular 150/5370-2G, "Operational Safety on Airports during Construction" and SW5200.5B, "Airport Safety during FAA-funded Airport Construction and FAA Facilities Maintenance." No runway, taxiway, apron, or roadway shall be closed or opened except by express permission from Engineer and the Director of Airports.

Contractor shall be responsible for maintaining the pavement free of all rocks, gravel, dirt and other debris in areas where hauling is permitted on or across any active roadway, apron, runway or taxiway, or in areas temporarily closed which are subject to opening on short notice. All rocks, gravel, dirt or other debris shall be removed immediately by Contractor.

SP-16 FINAL CLEANING UP

As each intermediate phase of work is completed and prior to opening any portion of any airfield apron, roadway, runway or taxiway, Contractor shall be responsible for cleaning the construction site and adjacent pavement as specified.

Upon completion of work and before acceptance and final payment will be made, Contractor shall remove from the site all machinery, equipment, surplus, and discarded materials, rubbish and temporary structures. Material cleared from the site and deposited on property adjacent, will not be considered as being disposed of satisfactorily. The cost of the "Cleanup" shall be included as a part of the cost of the various items of work involved, and no direct compensation will be made for this work.

SP-17 INSURANCE

Contractor shall not begin work under this contract until he has obtained all insurance as required in the General Conditions of Contract, has furnished proof of same to Owner, and Owner has approved the same. All insurance required for this project shall name the City of Midland and Parkhill, Smith & Cooper Inc. (PSC) as additional insureds.

Contractor shall also obtain an Owner's Protective or Contingent Public Liability Insurance Policy naming the City of Midland, Texas and Engineer as additional insureds and the amount of the policy shall be as follows: $1,000,000 for injuries, including accidental death, to one or more persons and subject to the above limit for each person, a total limit of $1,000,000 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, a limit of not less than $1,000,000 for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit of $2,000,000 for all damages arising out of injury to or destruction of property during the policy period. A copy of this policy shall be delivered to Owner.

Before work on any contract or subcontract is started, Contractor(s) and subcontractor(s) shall submit seven certificates to Owner for approval covering each insurance policy carried and offered as evidence of compliance with the above requirements, signed by an authorized representative of the insurance company, setting forth:

1. Name and address of the insured.
2. Location of operations to which the insurance applied.
3. Number of policy and type(s) of insurance in force thereunder on the date borne by such certificate.
4. Policy expiration date and limit(s) of liability thereunder on date borne by such certificate.

5. Statement the insurance of type afforded by policy applied to all operations of whatever character, undertaken by insured during performance of this contract, provided such operations are required in performance of Contract.
6. Provision the policy may be canceled only by mailing written notice to named insured at address shown in this policy stating when, not less than 10 days thereafter, and cancellation of such policy shall be effective, with copy to Owner of letter of intent.

These certificates will become a part of Contract Documents and must be included with Contract Documents before execution by the City of Midland, Texas. Coverages specified herein apply to all operations of Contractor in connection with this work, including automobile and other vehicles.

Contractor's insurance shall cover himself and all subcontractors and sub-subcontractors. All other sublevels of contractors shall provide copies of proof of insurance if not covered by the general contractor.

Contractor shall provide a Waiver of Subrogation in favor of the City of Midland and Parkhill, Smith & Cooper, Inc. on worker's Compensation and Employee Liability Insurance, Contractor's Public Liability and Property Damage Liability Insurance, and Automobile Insurance.

SP-18 REMOVAL AND DISPOSAL OF STRUCTURES, UTILITIES AND OBSTRUCTIONS

All materials and debris specified to be disposed of by Contractor shall become the property of Contractor and shall be properly disposed of off the airport property by Contractor.

SP-19 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

Finished surfaces shall conform to the lines, grades, cross sections and dimensions. Any deviation from the plans which may be required by the exigencies of construction shall be determined by Engineer and authorized by him in writing.

SP-20 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

All work rejected or condemned shall be repaired or, if it cannot be satisfactorily repaired, removed and replaced at Contractor's expense. Materials not conforming to the requirements of the specifications shall be removed immediately from the site of work and replaced with satisfactory material by Contractor at his expense.

Work done beyond shown on the plans, or as given, except as herein provided, work done without proper inspection, or any extra or unclassified work done without written authority and prior agreement in writing as to prices, will be done at Contractor risk and considered unauthorized and, at the option of Engineer, may not be measured and paid for and may be ordered removed and replaced at Contractor's expense.

Upon Contractor failure to repair satisfactorily or remove and replace, if so directed, rejected, unauthorized, or condemned work or materials immediately after receiving formal notice from Engineer, Owner may recover for such defective work or materials on Contractor bond, or by action in court having proper jurisdiction over such matters, or may employ labor, equipment, and satisfactorily repair or remove and replace such work and charge cost of same to Contractor, which cost will be deducted from any money due him.

SP-21 DISPUTED CLAIMS FOR EXTRA WORK

In case Contractor deems extra compensation is due him for work on materials not clearly covered in Contract, or not ordered by Engineer as an extra, Contractor shall notify Engineer in writing of his

intention to make claim for such extra compensation before he begins work on which he bases the claim and shall afford Engineer every facility for keeping actual cost of work. Failure on the part of Contractor to give such notification or to afford Engineer proper facilities for keeping strict account of actual costs shall constitute a waiver of the claim for such extra compensation. The filing of such notice by Contractor and the keeping of costs by Engineer shall not in any way be construed to prove validity of the claim. When work has been completed, Contractor shall within 10 days file his claim for extra compensation with Engineer, who will present it to Owner for consideration.

SP-22 FEDERAL PARTICIPATION

Contractor attention of is invited to the fact that pursuant to the provisions of the Act of Congress known as the Airport Improvement Program of 1982 as amended, the United States Government may pay a portion of the cost of these improvements. Act of Congress provides that the construction work and labor in each state shall be done in accordance with the laws of that state subject to the inspection and approval of the FAA and in accordance with the rules and regulations made pursuant to said Act. Construction work, therefore, will be subject to such inspection by the Administrator of the Federal Aviation Administration or his agents as may be deemed necessary to meet with the above requirements when Federal funds are used, but such inspection will in no sense make the Federal Government a party to this contract and will in no way interfere with the rights of either party to Contract.

SP-23 INDEMNIFICATION

CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND OWNER, ENGINEER, AND ALL OF OFFICERS, AGENTS, AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE, AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING REASONABLE ATTORNEY FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CONTRACTOR, AGENTS, EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR REQUIRED TO PAY ANY JUDGMENT WITH COSTS OBTAINED AGAINST OWNER, ENGINEER, OR ANY OF OFFICERS, AGENTS, OR EMPLOYEES, INCLUDING REASONABLE ATTORNEY FEES.

CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND OWNER AND ALL OF OWNER'S OFFICERS, AGENTS, AND EMPLOYEES AND PSC AND OFFICERS, AGENTS, AND EMPLOYEES OF PSC FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF OWNER, OWNER'S OFFICERS, AGENTS AND EMPLOYEES, OR ON ACCOUNT OF ANY NEGLIGENT ACT OF PSC, OR OFFICERS, AGENTS, AND EMPLOYEES OF PSC WHETHER SUCH NEGLIGENT ACTS WERE THE SOLE PROXIMATE CAUSE OF INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH CONTRACTOR OR CONTRACTOR'S EMPLOYEES, AGENTS, OR SUBCONTRACTORS NEGLIGENCE, IN EXECUTION, SUPERVISION, AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST OWNER OR ANY OFFICERS, AGENTS, OR EMPLOYEES, INCLUDING REASONABLE ATTORNEY FEES.

CONTRACTOR AGREES HE WILL INDEMNIFY AND SAVE OWNER AND PSC HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS, ALL SUPPLIES, INCLUDING COMMISSARY INCURRED IN FURTHERING PERFORMANCE OF THIS CONTRACT. WHEN OWNER SO DESIRES, CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE ALL OBLIGATIONS OF NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED, OR WAIVED.

CONTRACTOR HEREBY WAIVES ALL RIGHTS TO ANY ATTORNEY FEES AWARDED AS RESULT OF ANY ACTION BROUGHT UNDER THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT RELATING TO THIS CONTRACT.

SP-24 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until acceptance by Engineer of any part or all of the construction, as provided for in these specifications, it shall be under the charge and care of Contractor, and he shall take every necessary precaution against injury or damage to any part of work by the action of the elements or from any other cause whatsoever, whether arising from the execution or from the non-execution of work. Contractor shall rebuild, repair, restore, and make good, at his own expense, all injuries or damage to any portion of work occasioned by any of the above causes before its completion and acceptance.

SP-25 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

Making final payment by Owner to Contractor, shall not relieve Contractor of responsibility for faulty materials or workmanship. Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of work.

Performance Bond shall remain in effect until one year after the date of the written acceptance of work to insure compliance by Contractor with the requirements of this Article.

SP-26 TEXAS STATE SALES TAX

Work under this contract is for an entity which qualifies for exemption pursuant to the provisions of Article 151.309 of the Texas Tax Code.

Contractor performing this contract may purchase, rent or lease all materials, supplies and equipment incorporated into the project by issuing to his supplier an exemption certificate in lieu of the tax, said exemption certificate complying with State Comptroller's rulings. However, equipment and parts for equipment purchased to be used on the project but not incorporated into the project do not qualify for said tax exemption.

Contractor shall issue a resale certificate in lieu of paying such sales tax for all materials incorporated into this project. Further, Contractor shall separate the charges for materials incorporated into the project from the charges for labor. Any such exemption certificate issued by Contractor in lieu of the tax shall be subject to the provisions of the State Comptroller's rulings.

SP-27 SEPARATE CONTRACTS

Owner reserves the right to let other contracts about or near project. Contractor shall afford other contractors' reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall coordinate his work and theirs. Contractor's coordination with other

contractors shall require the approval of Engineer. See Article SP-3 for additional requirements concerning separate contracts.

SP-28 TRENCH SAFETY

Contractor shall strictly comply with all requirements of the Occupational Safety and Health Administration (OSHA) Manual, Chapter XVII, Subpart P - Excavation, Trenching and Shoring, for all trenching and excavation operations.

If depths of trenches are encountered over 5 feet, Contractor shall cut trench walls to angle of repose of the soils encountered or shall submit alternate shoring details to Engineer for approval.

SP-29 LOAD RESTRICTIONS

Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of work. A special permit will not relieve Contractor of liability for damage which may result from the moving of material or equipment.

Equipment operations of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling materials over base course not permitted. Hauling materials over base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. Contractor shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

SP-30 NOTICE TO PROCEED

Notice to proceed shall state the date on which it is expected Contractor will begin the construction and from which date contract time will be charged. Contractor shall begin work to be performed under Contract within 10 days of the date set by Engineer in the written Notice to Proceed, but in any event, Contractor shall notify Engineer at least 24 hours in advance of the time actual construction operations will begin.

SP-31 PAYMENT FOR MATERIALS ON HAND

Partial payments may be made to extent of delivered cost of materials to incorporate in work, provided such materials meet the requirements of Contract, plans and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. Material is stored or stockpiled in a manner acceptable to Engineer at or on an approved site.
b. Contractor furnished Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
c. Contractor furnished Engineer with satisfactory evidence that the material and transportation costs have been paid.
d. Contractor furnished Owner legal title (free of liens or encumbrances of any kind) to material so stored or stockpiled.
e. Contractor furnished Owner evidence that material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in work.

It is understood and agreed the transfer of title and Owner's payment for such stored or stockpiled materials shall in no way relieve Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of Contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed Contract price for such materials or Contract price for Contract item in which the material is intended to be used.

No partial payment made for stored or stockpiled living or perishable plant materials.

Contractor bears all costs associated with partial payment of stored or stockpiled materials in accordance with provisions of this subsection. Partial payments are per GC-46, "Partial Payments."

SP-32 WEIGHING AND MEASURING EQUIPMENT

Except as modified herein, all scales and scale installations shall meet requirements of the National Institute of Standards and Technology Handbooks 44 and 112 (published by the U.S. Department of Commerce and available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.D. 20402-9325), except required accuracy shall be 0.4 percent of the load being weighed or one graduation on the dial of the scale. Contractor shall provide personnel, facilities and equipment for checking the scales to the satisfaction of Engineer.

All scales shall be checked prior to beginning of operations, after each move, at such other times when, in Engineer opinion, there is a question as to accuracy/adequacy, and at least once each six months. Contractor shall furnish a report of calibration from a scale mechanic licensed by the Texas Department of Agriculture using certified weights and approved by Engineer, certifying scales meet requirements of this item. Plant operations shall cease during the checking operation. When inaccuracy or inadequacy is discovered, scale use not resumed until corrective measures are complete and/or scales calibrated. Whenever equipment is adjusted, adjustments shall be so made to bring performance errors as close as practicable to zero value.

SP-33 PROGRESS SCHEDULE

Within 15 working days after award of Contract (or at the Pre-Construction Meeting), Contractor shall submit a progress schedule for the project. Progress schedule shall be prepared in a form suitable to Engineer and shall show the proposed starting and completion dates for each phase of construction and each item of work within each phase. Progress schedule shall include a "Percent Complete Curve," with monthly amount, cumulative amount, and cumulative percent. Progress schedule, when submitted in suitable form and provided schedule indicates certain completion of the project within the time specified, will be approved in writing by Engineer. Revision or changes in the approved progress schedule may be made only with approval of Engineer.

SP-34 AVERAGE CLIMATIC RANGE

Time allowed for completion of the entire project shall include the number of calendar days for anticipated delays due to normal weather conditions. No time extension for delays due to weather will be allowed until and unless such delays exceed the claims for extension of time because of abnormal inclement weather, such extension of time shall be granted only because such abnormal inclement weather prevented the execution of major items of work on normal working days. Weather conditions on a particular day may affect work on days following the normal weather day. This subsequent delay shall not be considered abnormal and no extension of time will be considered.

The following weather table reflects meteorological data from Midland-Odessa area and will be used to determine contract time extensions due to abnormally inclement weather. For purposes of this Contract, "abnormally inclement weather" is interpreted as number of days more than normal number of days on which rainfall exceeds 0.01 inch, or snow/ice pellets exceed 1.0 inch. Extensions of time to complete work will be based on calendar days, and will be granted by monthly account. No "rain days" unused for previous months may be carried over or accountable for future periods of time.

WEATHER TABLE		
MONTH	**MEAN NO. OF RAIN DAYS (1)**	**MEAN NO. OF SNOW/ICE PELLETS DAYS (2)**
January	2.8	1
February	3.3	1
March	3.6	0
April	1.9	0
May	4.5	0
June	4.2	0
July	4.9	0
August	5.0	0
September	5.6	0
October	2.9	0
November	1.4	0
December	3.4	1
TOTAL	**43.5**	**3**
(1): Mean number of days' rainfall, 0.01 inch or more. (2): Mean number of days' 1.0 inch or more. (*): Less than 0.5 inch.		

Table based on information reported from Midland International Air & Space Port, Midland, Texas. Latitude 31 degrees, 56 minutes N Longitude, 102 degrees 12 minutes W, elevation (ground) 2,863 feet.

Means are based on records covering 10 years from 2005-2014.

SP-35 SUBSTANTIALLY COMPLETE

In various areas of specifications "Substantially Complete" is used. Definition shall be:

> "Substantially complete shall occur at time work to be completed is complete as specified and Owner accepts/occupies facility or improvement. All equipment shall have been completely installed, tested, ready for Owner acceptance and use, and accepted by Owner before work defined as substantially complete."

SP-36 SUBMITTALS

Transmit each submittal with Contractor-standard transmittal letter including Contractor name, address, and phone number. Identify Project, Contractor, subcontractor, or supplier pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate. Apply Contractor stamp, signed or initialed certifying review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with requirements of work and Contract Documents. Schedule submittals to expedite Project, and deliver to Engineer via Info Exchange website (with exception of product samples mailed to Engineer's physical address). Coordinate submission of related items. Identify variations from Contract Documents and Product or system limitations detrimental to successful performance of completed work. Distribution of copies of reviewed submittals to concerned parties shall be conducted by Engineer's Project Administrative Assistant (PASS) via Info Exchange website instructing parties to promptly report any inability to comply with provisions.

Format

- Submit all submittals digitally using PDF file extension. Each submittal shall be a single PDF file including transmittal letter. Multiple files for the same submittal will not be accepted.
- Submittals in any other format, including ZIP files, will be rejected.
- Hard copies will not be accepted.

- To ensure each page is legible, PDF pages of Drawings shall be same size/scale as a hard copy. Where applicable, scale symbols should be provided to indicate scale. Illegible submittals will be rejected.
- Submittals will be uploaded to Engineer's Info Exchange website.

Submittal procedures described in this Article applies to the Construction Progress Schedule, Products List, Shop Drawings, Product Data, Samples (actual samples to submit, not digital files), Design Data, Test Reports, Certificates, Manufacturer's Instructions and Field Reports, and any other type of submittal submitted to Engineer.

Submittals necessary shall include, but are not necessarily limited to:

- Preliminary CPM Contractor's construction schedule.
- Detailed lighting plan for night work (if applicable).
- Contractor's emergency names and phone number list.
- Video and/or written report of the conditions of existing facilities, documenting the results of inspection performed prior to start of work.
- List of subcontractors and material suppliers with an experience statement.
- Certified payroll reports and statement of compliance, from Contractor and all subcontractors (submitted directly to the Airport Accountant).
- Disadvantaged Business Enterprise (DBE) utilization reports (submitted with monthly pay applications
- Three-week look ahead project schedule at weekly construction meetings.
- Contractor's quality Control Plan, to be submitted by preconstruction meeting.
- Other submittals noted in Appendix C of the Construction Management Plan (CMP).
- Contractor's affidavit regarding settlement of claims (Closeout req.).
- Original affidavit acknowledging all subcontractor, material suppliers, payrolls, bill for materials and equipment, and other indebtedness connected with Contract have been paid or otherwise satisfied (closeout req.).
- Original with notary signature, full and final release and waiver on liens from Contractor, and each subcontractor and material suppler that documents that they have been paid in full (closeout req).
- Warranty (due at Final Completion).
- Maintenance and operating instructions of new equipment.

SP-37 GEOTECHNICAL INFORMATION

No geotechnical reports for this project are available.

SP-38 SOVEREIGN IMMUNITY

By executing this contract, Owner is not waiving its right to sovereign immunity. Owner is retaining immunity from suit. Owner is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

SP-39 GOVERNING LAW AND VENUE

This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. Obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. Laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited

to tort claims and all contractual claims or disputes, arising from or relating in any way that would direct application of the laws of another jurisdiction.

SP-40 THIRD-PARTY BENEFICIARY

This Contract does not create a third-party beneficiary. There is no third-party beneficiary to this Contract. No person or entity who is not a party to this Contract shall have any third-party beneficiary or other rights hereunder.

SP-41 RELEASES

NOTWITHSTANDING ANY OTHER PROVISIONS, Contractor hereby releases, acquits, RELINQUISHES, and forever discharges Owner, OWNER'S employees and officers, and PSC, AND its employees and officers, from any and all demands, claims, DAMAGES, or causes of action of any kind whatsoever which Contractor has/might have, including but not limited to BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR OWNER'S NEGLIGENCE.

SP-42 INDEPENDENT CONTRACTOR

It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of Owner; that Contractor shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondent superior shall not apply as between owner and Contractor, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of Owner. Further, it is specifically understood and agreed that nothing in this contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Contractor shall be an independent contractor under this contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor. Owner does not have the power to direct the order in which work is done. Owner shall not have the right to control the means, methods or details of Contractor's work. Contractor shall assume exclusive responsibility for work. Contractor is entirely free to do work in its own way.

SP-43 NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES

As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Contractor or his legal representative, shall give City Manager, or any other reasonable official of Owner, notice in writing (consisting of one original and seven copies of notice attached to a copy of this contract) of such damages, duly verified, within 150 days after the same has been sustained. Discovery rule does not apply to the giving of this notice. Notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Contractor relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except Owner from any liability whatsoever. Owner is under no obligation to provide notice to Contractor that Contractor's notice is insufficient. Owner

reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within 30 days after receipt of notice.

Statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Contractor failure to comply with requirements herein, shall perpetually bar Contractor's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Owner has actual or constructive notice or knowledge of said claim or alleged damages. Contractor agrees that the requirements of this entire contract are reasonable.

SP-44 ASSIGNMENT

Contractor shall not, either directly or indirectly, assign all or any part of this contract or any interest, right or privilege herein, without prior written consent of Owner. The issue on whether to grant consent to an assignment is in sole discretion of Owner.

SP-45 WAIVER OF ATTORNEY'S FEES

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF CONTRACT. CONTRACTOR SPECIFICALLY AGREES THAT IF CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THIS IS VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF CONTRACT. CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN OWNER AND CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

SP-46 PROMPT PAY ACT

Owner and Contractor agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

SP-47 PAYMENT

After all Work is completed by Contractor, including all Change Orders altering the original scope and amount of said contract are completed, and Owner has inspected and approved that work is completed and in compliance with Contract and all subsequent Change Orders, Owner may thereafter issue payment to Contractor in the amount of Contract and all Change Orders. Owner shall be the final judge of when work is completed by Contractor. Owner, in its sole discretion, shall determine if work under Contract and under any Change Orders has been done to Owner's requirements. Owner may make periodic payments to Contractor, however such periodic payments may only be made pursuant to this Article, and only after all work and all Change Orders are completed by Contractor and approved by Owner.

SP-48 PROJECT CLOSEOUT

Approval of final payment to Contractor is contingent upon completion and submittal of the items listed below. Final payment not approved until Engineer approves Contractor's final submittal. Contractor shall:

a. Provide two copies of all manufacturers' warranties specified for materials, equipment, and installations.
b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.
c. Complete final cleanup. Upon completion of work and before acceptance and final payment will be made, Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless Contractor has obtained the written permission of such property Owner.
d. Complete all punch list items identified during the Final Inspection.
e. Provide complete release of all claims for labor and material arising out of Contract.
f. Provide a certified statement signed by subcontractors, indicating actual amounts paid to Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with project.
g. When applicable per state requirements, return copies of sales tax completion forms.
h. Manufacturer's certifications for all items incorporated in work.
i. All required record drawings, as-built drawings or as-constructed drawings.
j. Project Operation and Maintenance (O&M) Manual.
k. Security for Construction Warranty.
l. Equipment commissioning documentation submitted, if required.

SP-49 DISCLOSURE OF INTERESTED PARTIES

Successful proposer will be required to complete the Texas Ethics Commission Form 1295 – Certificate of Interested Parties and submit completed form with executed Contracts for project. Form 1295 is completed online at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm, the Texas Ethics web site.

PSC will email links to Contractor with an explanation once contract has been awarded. Contractor is responsible for going online to fill out form, printing, and submitting along with all other needed contract documents.

END OF DOCUMENT

GENERAL CONDITIONS OF CONTRACT

GC-01. OWNER

Whenever "Owner," or expression Party of the First Part, or First Party, is used in Contract documents, it shall be understood as referring to Owner as described in Contract.

GC-02. CONTRACTOR

Whenever "Contractor," or expression Party of the Second Part, or Second Party, is used, it shall be understood to mean person(s), co-partnership, or corporation so defined in Contract and who has agreed to perform Work embraced in this contract, or to his or their legal representatives.

GC-03. ARCHITECT/ENGINEER

Whenever "Architect/Engineer" is used in this contract, it shall be understood as referring to Parkhill, Smith & Cooper, Inc., (PSC), Consulting Engineers, in Abilene, Amarillo, Arlington, Austin, El Paso, Frisco, Lubbock, and Midland, Texas, as well as Albuquerque and Las Cruces, New Mexico, Architect/Engineer of Owner, or such other Architect/Engineer, supervisor, or inspector as authorized by said Owner to act in any particular.

GC-04. CONTRACT DOCUMENTS

Contract Documents shall consist of Notice to Bidders (Advertisement), Instructions to Bidders, Proposal, signed Contract, Performance Bond, Payment Bond, General Conditions of the Contract, Special Provisions, Technical Specifications, Plans, and all modifications thereof incorporated in any documents before execution of contract.

Contract Documents are complementary, and called for by any one shall be as binding as if called for by all. In case of conflict between any of Contract Documents, priority of Interpretation shall be in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Proposal, Special Provisions, Notice to Bidders, Instructions to Bidders, Technical Specifications, Plans and General Conditions of the Contract.

GC-05. SUBCONTRACTOR

"Subcontractor," as employed herein, includes only those having a direct contract with Contractor, and includes one who furnished material worked to a special design according to plans or specifications of this work, but does not include one who merely furnished material not so worked.

GC-06. WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to individual, member of firm, or officer of corporation for whom it is intended, or if delivered or sent by registered mail to last business address know to him who gives notice.

GC-07. WORK

Unless otherwise stipulated, Contractor shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation, and other facilities necessary for execution and completion of Work covered by Contract documents. Unless otherwise specified, all materials shall be new and both workmanship and materials of good quality. Contractor shall, if required, furnish satisfactory evidence as to kind and quality of materials. Materials or work described in words applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

GC-08. DELETED

GC-09. DELETED

GC-10. LAYOUT OF WORK

Except as specifically provided herein, Contractor shall be responsible for laying out all work and accomplish this work in a manner acceptable to Architect/Engineer. Architect/Engineer will check Contractor's layout of all major structures and any other layout work done by Contractor at Contractors request, but this check does not relieve Contractor of responsibility of correctly locating all work in accordance with plans and specifications.

GC-11. ARCHITECT/ENGINEER'S AUTHORITY AND DUTY

Unless otherwise specified, it is mutually agreed between parties to this Contract that Architect/Engineer will observe quality and progress of Work at various times. To prevent delays and disputes and discourage litigation, it is further agreed Architect/Engineer shall, in all cases, determine amounts and quantities of several kinds of work to be paid for under this contract. He shall determine all questions in relation to said work and construction thereof, and in all cases, decide every question which may arise relative to execution of this contract on part of said Contractor. Architect/Engineer's estimates and findings shall be conditions precedent to right of parties hereto to any action of contract, and to any rights of Contractor to receive any money under this contract; provided, however, should Architect/Engineer render any decision or give any direction, which in the opinion of either party hereto, is not in accordance with meaning and intent of this contract, either party may file with said Architect/Engineer within 30 days, his written objection to decision or direction so rendered. It is the intent of this contract there be no delay in execution of Work; therefore, written decision or directions of Architect/Engineer as rendered, shall be promptly carried out, and any claim arising therefrom shall be thereafter adjusted as hereinafter provided.

Architect/Engineer shall, within a reasonable time, render and deliver to both Owner and Contractor, a written decision on all claims of parties hereto and all questions which may arise relative to execution of Work or interpretation of contract, specifications, and plans. Should Architect/Engineer fail to make such decision within a reasonable time, an appeal may be taken as if his decision had been rendered against the party appealing.

Whenever "directed," "required," "permitted," "designated," "considered necessary," "prescribed," or words of like import are used, it shall be understood the direction, requirement, permission, order, designation, or prescription, of Architect/Engineer is intended. Similarly, "approval," "acceptable," "satisfactory," or words of like import shall mean approved by or acceptable or satisfactory to Architect/Engineer.

Whenever in specifications or drawings accompanying this contract, terms of description of various qualities relative to finish, workmanship, or other qualities of similar kind which cannot, from their nature, be specifically and clearly described and specified, but necessarily described in general terms, fulfillment of which must depend on individual judgment, in all such cases, any question of fulfillment of said specifications shall be decided by Architect/Engineer, and said work shall be done in accordance with his interpretations of meaning of words, terms, or clauses defining character of Work.

GC-12. SUPERINTENDENCE AND PROJECT REPRESENTATION

It is agreed by Contractor Architect/Engineer shall be and is hereby authorized to appoint from time-to-time such subordinate engineers, supervisors, or project representatives as said Architect/Engineer may deem proper to inspect material furnished and Work done under this contract, and to see said material is furnished, and said work is done in accordance with specifications therefor. Contractor shall furnish all reasonable aid and assistance required by subordinate engineers, supervisors, or project representatives for the proper inspection and examination of Work. Contractor shall regard and obey the directions and instructions of any subordinate engineers, supervisors or project representatives so appointed, when such directions and instructions are consistent with obligations of this Contract and

accompanying plans and specifications, provided; however, should Contractor object to any orders by any subordinate engineer, supervisor, or project representative, Contractor may, within six days, make written appeal to Architect/Engineer for his decision.

GC-13. CONTRACTOR'S DUTY AND SUPERINTENDENCE

Contractor shall give personal attention to faithful prosecution and completion of this contract and keep on Work, during progress, competent superintendent and any necessary assistants all satisfactory to Architect/Engineer. Superintendent shall represent Contractor in his absence and all directions given him shall be as binding as if given to Contractor. Adequate supervision by competent and responsible representatives of Contractor is essential to proper performance of Work and lack of such supervision shall be grounds for suspending operations of Contractor. Important directions shall be confirmed in writing to Contractor. Other directions shall be so confirmed on written request in each case.

GC-14. CONTRACTOR'S UNDERSTANDING

It is understood and agreed that Contractor has, by careful examination, satisfied himself as to nature and location of Work, confirmation of ground, character, quality, and quantity of materials to be encountered, character of equipment and facilities needed preliminary to and during prosecution of Work, general and local conditions, and all other matters which can in any way affect Work under this contract. No verbal agreement or conversation with any officer, agent, or employee of Owner, either before or after execution of this contract shall affect or modify any terms or obligations herein contained.

GC-15. CHARACTER OF WORKERS

Contractor agrees to employ only orderly and competent employees, skillful in performance of type of work required under this contract, to do Work; and agrees whenever Architect/Engineer inform him in writing any employee(s) on Work are, in his opinion, incompetent, unfaithful, or disorderly, such employee or employees shall be discharged from Work and not again be employed on Work without Architect/Engineer's written consent.

GC-16. CONTRACTOR'S BUILDINGS

Building structures for housing employees, or erecting tents or other forms of protection, will be permitted only at such places as Architect/Engineer shall direct, and sanitary conditions of grounds in or about such structures shall at all times be maintained in a manner satisfactory to Architect/Engineer.

GC-17. SANITATION

Necessary sanitary conveniences for use of laborers on work, properly secluded from public observation, shall be constructed and maintained by Contractor to be approved by Architect/Engineer, and their use shall be strictly enforced.

GC-18. SHOP DRAWINGS

Contractor shall submit to Architect/Engineer with such promptness as to cause no delay in his own work or that of any other Contractor, shop and/or setting drawings and schedules required for Work of various trades, and Architect/Engineer shall pass upon them with reasonable promptness, making required corrections. Architect/Engineer's approval of such drawings or schedules, shall not relieve Contractor from responsibility for deviations from drawings or specifications, unless he has, in writing, called Architect/Engineer's attention to such deviations at time of submission nor relieve him from responsibility for errors of any sort in shop drawings or schedules.

GC-19. PRELIMINARY APPROVAL

Architect/Engineer shall not have power to waive obligations of this contract for furnishing by Contractor of good material, and performing good work as herein described, and full accordance with plans and specifications. No failure or omission of Architect/Engineer to condemn any defective work or material shall relieve Contractor from obligations to tear out, remove, and properly replace same at any

time prior to final acceptance upon discovery of said defective work or material; provided, however, Architect/Engineer shall upon request of Contractor, inspect, accept, and/or reject any material furnished, and in event material has been once accepted by Architect/Engineer, such acceptance shall be binding on Owner, unless clearly shown such material furnished does not meet specifications for this work. Any questioned work may be ordered taken up or removed for re-examination, by Architect/Engineer, prior to final acceptance, and, if found not in accordance with specifications for said work, all expense of removing, re-examination, and replacement shall be borne by Contractor, otherwise expense thus incurred shall be allowed as Extra Work and paid for by Owner, provided that, where inspection or approval is specifically required by specifications prior to performance of certain work, should Contractor proceed with such work without requesting prior inspection or approval, he shall bear all expense of taking up, removing, and replacing his work if so directed by Architect/Engineer.

GC-20. DEFECTS AND THEIR REMEDIES

It is further agreed if Work or any part thereof, or any material brought on site of Work for use in Work or selected for same, shall be deemed by Architect/Engineer as unsuitable or not in conformity with specifications, Contractor shall, after receipt of written notice thereof from Architect/Engineer, forthwith remove such material and rebuild or otherwise remedy such work so it shall be in full accordance with this contract.

GC-21. CHANGES AND ALTERATIONS

Contractor further agrees Owner may make such changes and alterations as Owner may see fit, in line, grade, form, dimensions, plans, or materials for Work herein contemplated, or any part thereof, before or after beginning construction without affecting validity of this contract and accompanying performance bond.

If such changes or alterations diminish quantity of Work to do, they shall not constitute basis for a claim for damages, or anticipated profits on Work that may be dispensed with, except as provided for unit price items under "Estimated Quantities." If amount of work is either increased or decreased, and Work can fairly be classified under specifications, price adjustment for such increase or decrease shall be made according to quantity actually done and at unit price, if any, established for such work under this contract, except as provided for unit price items under "Estimated Quantities;" otherwise, price adjustment for such changed work shall be made as provided under Extra Work. In case Owner shall make such changes or alterations as useless any material already done or material already furnished or used, Owner shall recompense Contractor for any material or labor so used, and any actual loss occasioned by such change, due to actual expense incurred in preparation as originally planned.

GC-22. RIGHT OF ARCHITECT/ENGINEER TO MODIFY METHODS AND EQUIPMENT

If at any time, methods or equipment used by Contractor are found inadequate to secure quality of work or rate of progress required under this contract, Architect/Engineer may order Contractor in writing to increase safety or improve character and efficiency, and Contractor shall comply with such order.

If at any time, Working force of Contractor is inadequate for securing progress herein specified, Contractor shall, if so ordered in writing, increase his force or equipment, or both, to such an extent as to give reasonable assurance of compliance with schedule of progress.

GC-23. KEEPING OF PLANS AND SPECIFICATIONS ACCESSIBLE

Architect/Engineer shall furnish Contractor with an adequate and reasonable number of copies of all specifications without expense to him, and Contractor shall keep one copy of same constantly accessible on Work, with latest revisions noted thereon.

GC-24. OWNERSHIP OF DRAWINGS

All drawings, specifications, and copies thereof furnished by Architect/Engineer shall not be reused on other work, and with exception of signed contract sets, are returned to him on request, at completion of Work. All models are property of Owner.

GC-25. ADEQUACY OF DESIGN

It is understood Owner believes he employed competent engineers and designers. It is, therefore, agreed Owner shall be responsible for adequacy of design, sufficiency of Contract Documents, safety of structure, and practicability of operations of completed project; provided Contractor complied with requirements of said Contract Documents, all approved modifications thereof, additions, and alterations thereto approved in writing by Owner. Burden of proof of such compliance shall be upon Contractor to show he complied with said requirements of Contract Documents, approved modifications thereof, and all approved additions and alterations thereto.

GC-26. RIGHT OF ENTRY

Owner reserves the right to enter property or location on which Works herein contracted for are to be constructed or installed, by such agent or agents as he may elect, to supervise and inspect Work, or construct or install such collateral work as said Owner may desire.

GC-27. COLLATERAL CONTRACTS

Owner agrees to provide by separate contract or otherwise, all labor and material essential to completion of Work specifically excluded from this contract, not delaying progress of Work, or damage said Contractor, except where such delays are specifically mentioned elsewhere in Contract Documents.

GC-28. DISCREPANCIES AND OMISSIONS

It is further agreed it is the intent of this contract all work must be done and material furnished in accordance with generally accepted practice, and in the event of any discrepancies between separate contract documents, priority of interpretation defined under "Contract Documents" shall govern. In the event there is still any doubt as to meaning and intent of any portion of contract, specifications, or drawings, Architect/Engineer shall define which is intended to apply to Work.

GC-29. DELETED

GC-30. PROTECTION AGAINST ACCIDENT TO EMPLOYEES AND THE PUBLIC

Contractor shall take out and procure a policy or policies of workmen's compensation insurance with an insurance company licensed to transact business in the State of Texas, which policy shall comply with Workman's Compensation Law of the State of Texas. Contractor shall at all times exercise reasonable precautions for the safety of employees and others on or near Work and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building and construction codes. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America except where incompatible with Federal, State or Municipal laws or regulations. Contractor, sureties, and insurance carriers shall defend, indemnify, and save harmless Owner and all officers, agents, and employees and Architect/Engineer and agents and employees from all suits, actions, or claims of any character, name, and description brought for or on account of any injuries or damages received or sustained by any persons or property, on account of any negligent act or fault of Contractor or any subcontractor, agents, or employees, in execution and supervision of said contract and project which is the subject matter of this contract or on account of Contractor or any subcontractor failure to provide necessary barricades, warning lights, or signs, and will be required to pay any judgment with costs obtained against Owner or any officers, agents, or employees, and/or Architect/Engineer, his agents and employees.

Safety precautions taken shall be sole responsibility of Contractor, in his sole discretion as an independent contractor; inclusion of this paragraph in the contract, as well as any notice given by Owner, Architect/Engineer, or representatives concerning omissions under this paragraph as Work progresses, are intended only as reminders to Contractor of his duty and not construed as any assumption of duty to supervise safety precautions by either Owner or Architect/Engineer.

GC-31. CONTRACTOR'S INSURANCE

Contractor shall procure and carry, at his sole cost and expense, throughout life of contract, insurance protection as hereinafter specified. All Insurance shall name Owner and Architect/Engineer as additional insureds except Worker's Compensation and Employer Liability Insurance. Such insurance shall be carried with an insurance company licensed to transact business in the State of Texas and cover all operations in connection with this contract. Contractor's insurance shall cover himself and as a minimum all subcontractors and sub-subcontractors. All other sublevels of contractors shall provide copies of proof of insurance if not covered by general contractor.

Contractor shall provide a Waiver of Subrogation in favor of the City of Midland and Parkhill, Smith & Cooper, Inc. on Worker's Compensation, and Employer Liability Insurance, Contractor's Public Liability and Property Damage Liability Insurance and Automobile Insurance.

a. Worker's Compensation and Employer Liability Insurance: As required by statute, covering all employees employed on Work whether employed by Contractor or subcontractor.

b. Contractor's Public Liability and Property Damage Liability Insurance: Providing for a limit of not less than $1,000,000.00 for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of $1,000,000.00 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, and regular Contractor's Property Damage Liability Insurance providing for a limit of not less than $1,000,000.00 for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit of $2,000,000.00 for all damages arising out of injury to or destruction of property during policy period.

c. Automobile Insurance: Providing a limit of not less than $1,000,000.00 for injuries, including accidental death, to any one person and, subject to same limit for each person a total limit of $2,000,000.00 on account of one accident, and automobile property damage insurance in an amount not less than $500,000.00.

d. Proof of Carriage of Insurance: Before work on any contract or subcontract starts, each Contractor and subcontractor shall submit to Owner for approval six certificates covering each insurance policy carried and offered as evidence of compliance with requirements, signed by an authorized representative of the insurance company, setting forth:
    1. Name and address of the insured.
    2. Location of operations to which the insurance applied.
    3. Number of policy and the type or types of insurance in force thereunder on date borne by such certificate.
    4. Expiration date of policy and limit(s) of liability thereunder on date borne by such certificate.
    5. Statement that insurance of type afforded by policy, applied to all operations of whatever character, undertaken by insured during performance of this contract, provided such operations are required in performance of contract.
    6. Provision that policy may be cancelled only by mailing written notice to named insured at address shown in this policy stating when, not less than 10 days thereafter, cancellation of such policy shall be effective, with copy to Owner of letter of intent.

GC-32. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

It is hereby understood and mutually agreed, by and between Contractor and Owner, that date of beginning and time for completion as specified in Contract of Work to be done hereunder, are ESSENTIAL CONDITIONS of this contract; and further mutually understood and agreed that Work embraced in this contract shall be commenced on a date to be specified in "Notice to Proceed."

Contractor agrees said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between Contractor and Owner, that time for completion of Work described herein is a reasonable time for completion of same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If said Contractor shall neglect, fail, or refuse to complete Work within time herein specified, or any proper extension thereof granted by Owner, Contractor does hereby agree, as a part consideration for awarding this contract, to pay to Owner amount specified in contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each calendar day Contractor shall be in default after time stipulated in Contract for completing Work.

Said amount is fixed and agreed upon by and between Contractor and Owner because of impracticability and extreme difficulty of fixing and ascertaining actual damages Owner would in such event sustain, and said amount is agreed to be amount of damages Owner would sustain and said amount shall be retained from time-to-time by Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and specifications wherein a definite and certain length of time is fixed for performance of any act whatsoever; and where under Contract an additional time is allowed for completion of any work, new time limit fixed by such extension shall be of the essence of this contract. Provided, Contractor shall not be charged with liquidated damages or any excess cost when Owner determines Contractor is without fault and Contractor's reasons for time extension are acceptable to Owner; Provided, further, Contractor shall not be charged with liquidated damages of any excess cost when delay in completion of Work is due:

a. To any preference, priority, or allocation order duly issued by the Government;
b. To unforeseeable cause beyond the control and without fault or negligence of Contractor, including, but not restricted to, acts of God or of public enemy, acts of Owner, acts of another Contractor in performance of contract with Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
c. To any delays of subcontractors or suppliers occasioned by any cause specified in subsection (a) and (b) of this article:

Provided, further, Contractor shall, within 10 days from beginning of such delay, unless Owner shall grant a further period of time prior to date of final settlement of contract, notify Owner, in writing, of causes of delay, who shall ascertain facts and extent of delay and notify Contractor within a reasonable time of decision in the matter.

GC-33. PRICE FOR WORK

In consideration of furnishing all necessary labor, equipment, and material and completion of all work by Contractor, and on delivery of all material embraced in this contract in full conformity with specifications and stipulations herein contained, Owner agrees to pay Contractor prices set forth in Proposal hereto attached, made a part of this contract, and Contractor hereby agrees to receive such prices in full for furnishing all material and all labor required for aforesaid work, also for all expenses incurred by him, and

for well and truly performing same and whole thereof in the manner and according to this Contract, specifications, drawings, and requirements of Architect/Engineer.

GC-34. BONDS

It is further agreed by the parties to this contract that Contractor will execute bonds in sum of 100 percent of total contract price, for satisfactory performance of Work and payment of all labor, materials, and equipment in accordance with this contract on forms provided for this purpose, executed by an approved surety company authorized to do business in the State of Texas, and agreed this contract shall not be in effect until such bonds are furnished and approved by Owner. Performance and Payment Bonds shall be in compliance with Chapter 2253 of the Texas Government Code.

GC-35. LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to Contractor arising out of the nature of Work to be done, or from action of elements, or from any unforeseen circumstances in prosecution of same, or from unusual obstructions or difficulties encountered in the prosecution of Work, shall be sustained and borne by Contractor at his own expense.

GC-36. PROTECTION OF ADJOINING PROPERTY

Said Contractor shall take proper means to protect adjacent or adjoining property or properties, in any way encountered, which might be injured or seriously affected by any process of construction undertaken under this Contract, from any damage or injury by reason of said process of construction; and shall be liable for any and all claims for such damage on account of failure to fully protect all adjoining property. Contractor agrees to indemnify, save, and hold harmless Owner against any claim or claims for damages due to any injury to any adjacent or adjoining property, arising or growing out of performance of contract, but any such indemnity shall not apply to any claim of any kind arising out of existence or character of Work.

GC-37. PROTECTION AGAINST CLAIMS OF SUBCONTRACTORS, LABORERS, MATERIALMEN AND FURNISHERS OF MACHINERY, EQUIPMENT, AND SUPPLIES

Contractor agrees he will indemnify and save Owner harmless from all claims growing out of lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in furthering the performance of this contract. When so desired by Owner, Contractor shall furnish satisfactory evidence that all obligations of nature hereinabove designated, have been paid, discharged, or waived. If Contractor fails so to do, Owner may, at option of Contractor, pay directly any unpaid bills, of which Owner has written notice, or withhold from Contractor's unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payments to Contractor shall be resumed in full, in accordance with terms of this contract, but in no event shall provisions of this paragraph be construed to impose any obligations upon Owner by either Contractor or his surety.

GC-38. PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION

Contractor shall pay all royalties and license fees, and provide use of any design, device, material, or process covered by letters patent or copyright by suitable legal contract with patentee or owner. Contractor shall defend all suits or claims for infringement of any patent or copyrights and shall indemnify and save Owner harmless from any loss on account thereof, except Owner shall defend all such suits and claims and be responsible for all such loss when a particular design, device, material, or process or product of a particular manufacturer is specified or required by Owner; provided, however, if choice of alternate design, device, material, or process is allowed to Contractor, he shall indemnify and save Owner harmless from any loss on account of thereof. If material or process specified or required by Owner is an

infringement, Contractor shall be responsible for such loss unless he promptly gives such information to Owner.

GC-39. LAWS AND ORDINANCES

Contractor shall, at all times, observe and comply with all Federal, State, and local laws, ordinances, and regulations, which affect Contractor Work, and indemnify and save harmless Owner against any claims arising from violation of any such laws, ordinances, and regulations by Contractor or his employees, except where such violations are called for by provisions of Contract Documents. If Contractor observes that plans and specifications are at variance therewith, he shall promptly notify Architect/Engineer in writing, and any necessary changes shall be adjusted as provided in Contract for changes in Work. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Architect/Engineer, he shall bear all costs arising therefrom. In case Owner is a body politic and corporate law where he derives powers, insofar as same regulates objects for which, or in manner in which, or conditions under which Owner may enter into contract, shall be controlling, and considered as part of this contract, to same effect as though embodied herein.

GC-40. ASSIGNMENT AND SUBLETTING

Contractor further agrees he will retain personal control and give his personal attention to fulfillment of contract and not assign by Power of Attorney, or otherwise, or sublet said contract without written consent of Owner, and no part or feature of Work will be sublet to anyone objectionable to Architect/Engineer or Owner. Contractor further agrees the subletting of any portion or feature of Work, or materials required in performance of this contract, shall not relieve Contractor from full obligations to Owner, as provided by this Contract.

GC-41. TIME AND ORDER OF COMPLETION

It is the meaning and intent of this contract, unless otherwise herein specifically provided, Contractor be allowed to prosecute his work at such times and sessions, in such order of precedence, and in such manner most conducive to economy of construction; provided, however, order and time of prosecution shall be such that Work shall be substantially completed as a whole or in part, in accordance with this contract, plans, and specifications, and within time of completion designated in proposal; provided, also, when Owner is having other work done, by contract or his own force, Architect/Engineer may direct time and manner of constructing Work done under this contract so conflict will be avoided and construction of various works done for Owner shall be harmonized.

Contractor shall submit, at such times reasonably requested by Architect/Engineer, schedules to show the order in which Contractor proposes to carry on Work, with dates at which Contractor will start several parts of Work, and estimated dates of completion of several parts.

GC-42. EXTENSION OF TIME

Should Contractor be delayed in completion of Work by any act or neglect of Owner, Architect/Engineer, any employee of either, other contractors employed by Owner, changes ordered in Work, strikes, lockouts, fires, and unusual delays by common carriers, unavoidable cause(s) beyond Contractor's control, or any cause which Architect/Engineer decides justifies delay, an extension of time shall be allowed for completing Work, sufficient to compensate for delay, amount of extension determined by Architect/Engineer, provided, however, Contractor shall give Architect/Engineer prompt notice in writing of cause of such delay.

GC-43. HINDRANCES AND DELAYS

No claims shall be made by Contractor for damages resulting from hindrances or delays from any cause (except where Work is stopped by order of Owner for his own convenience) during progress of any portion of Work embraced in this contract. In case said work shall be stopped by act of Owner, such

expense as in judgment of Architect/Engineer is caused by such stoppage of said work shall be paid by Owner to Contractor.

GC-44. QUANTITIES AND MEASUREMENTS

No extra or customary measurements of any kind allowed, but actual measured and/or computed length, area, solid contents, number, and weight only shall be considered, unless otherwise specifically provided.

GC-45. ESTIMATED QUANTITIES

This Contract, including specifications, plans, and estimate, is intended to show clearly all work to be done and material furnished hereunder. Where estimated quantities are shown for various classes of work to be done and material furnished under this contract, they are approximate, used only as a basis for estimating probable cost of Work, and comparing proposals offered for Work. It is understood and agreed the actual amount of work to be done and material furnished under this contract may differ somewhat from these estimates, and where basis for payment under this contract is unit price method, payment shall be for actual amount of such work done and material furnished.

Where payment is based on unit price method, Contractor agrees he will make no claim for damages, anticipated profits, or otherwise on account of any differences found between quantities of work actually done, material actually furnished under this contract, and estimated quantities contemplated and contained in proposal; provided, however, where actual quantity of any major item in this contract is an estimated quantity and actual quantity of such "major item" varies more than 25 percent above or below estimated quantity stated in this contract, an equitable adjustment in Contract price shall be made upon demand of either party. Equitable adjustment shall be based upon any increase or decrease in costs due solely to variation above 125 percent or below 75 percent of estimated quantity.

"Major Item" shall be any individual bid item included in proposal that has a total cost equal to or greater than 10 percent of total contract cost, computed on basis of original bid proposal, quantities, and Contract unit prices.

Any revised consideration is to be determined by agreement between parties, otherwise by terms of this Contract, as provided under "Extra Work."

GC-46. PARTIAL PAYMENTS

On or before the last day of each month, Contractor shall prepare for review by Architect/Engineer a statement showing as completely as practicable total value of Work done by Contractor for prior month/period. Statement shall also include value of all sound materials delivered on site of Work to be fabricated into Work. Architect/Engineer, after approval, shall submit Contractor's partial pay application to Owner.

Owner shall then pay Contractor within three working days after receipt of partial payment from applicable governmental authority, total amount of Architect/Engineer's statement, less 5 percent of amount thereof, which 5 percent shall be retained until final payment, and further less all previous payments and all further sums may be retained by Owner under terms of this Contract. It is understood, however, that in case whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on part of Contractor, Owner may, -upon written recommendation of Architect/Engineer, pay a reasonable and equitable portion of retained percentage to Contractor; or Contractor at Owner's option, may be relieved of obligation to fully complete Work, and thereupon, Contractor shall receive payment of balance due him under Contract subject only to conditions stated under "Final Payment."

GC-47. USE OF COMPLETED PORTIONS

Owner shall have the right to take possession of and use any completed or partially completed portions of Work, notwithstanding time for completing entire work or such portions may not have expired but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with Contract Documents. If such prior use increases cost of or delays Work, Contractor shall be entitled to such extra compensation, or extension of time, or both, as Architect/Engineer may determine.

GC-48. FINAL COMPLETION AND ACCEPTANCE

Within 20 days after Contractor has given Architect/Engineer written notice that Work has been completed, Architect/Engineer and Owner shall inspect Work and within said time, if Work is completed in accordance with Contract Documents, Architect/Engineer shall issue to Owner and Contractor his Certificate of Completion, and thereupon it shall be duty of Owner, within 10 days, to issue a Certificate of Acceptance of Work to Contractor.

GC-49. FINAL PAYMENT

Upon issuance of Certificate of Completion, Architect/Engineer shall proceed to make final measurements and prepare final statement of value of all work performed and materials furnished under terms of Contract and certify same to Owner, who shall pay to Contractor on or before the 20th day after date of the Certificate of Completion, or if governmental financial assistance is involved, within 30 working days of receipt of final payment from applicable governmental authority, balance due Contractor under terms of this Contract, provided he fully performed his contractual obligations under terms of this contract; and said payment shall become due in any event upon said performance by Contractor. Neither Certificate of Acceptance, final payment, nor any provision in Contract Documents, shall relieve Contractor of obligation for fulfillment of any warranty required in Special Provisions of Specifications.

GC-50. PAYMENT WITHHELD

Owner may, on account of subsequently discovered evidence, withhold or nullify whole or part of any certificate to such extent as necessary to protect himself from loss on account of:

a. Defective work not remedied.
b. Claims filed or reasonable evidence indicating possible filing of claims.
c. Failure of Contractor to make payments properly to subcontractors or for material or labor.
d. Damage to another contractor.

When grounds are removed, or Contractor provides a Surety Bond satisfactory to Owner, to protect Owner in amount withheld, payment shall be made for amounts withheld because of them.

GC-51. DELAYED PAYMENTS

Should Owner fail to make payment to Contractor of sum named in any partial or final statement, when payment is due, or should Architect/Engineer fail to issue any statement on or before date provided, Owner shall pay Contractor, in addition to sum shown as due by such statement, interest thereon at the rate of 6 percent per annum, unless otherwise specified, from date due as provided under "Partial Payments" and "Final Payments," until fully paid, fully liquidating any injury to Contractor growing out of such delay in payment, but right is expressly reserved to Contractor in the event payments be not promptly made as provided under "Partial Payments," to at any time thereafter treat Contract as abandoned by Owner and recover compensation, as provided under "Abandonment of Contract," unless such payments are withheld in accordance with the provisions of "Payments Withheld."

GC-52. EXTRA WORK

"Extra Work," as used in this contract, shall mean and include all work required by Architect/Engineer or Owner done by Contractor to accomplish any change, alteration, or addition to Work shown upon plans, or reasonably implied by specifications, and not covered by Contractor's Proposal, except as provided under "Changes and Alterations" herein.

It is agreed Contractor shall perform all Extra Work under direction of Architect/Engineer when presented with a written Extra Work Order signed by Architect/Engineer, subject, however, to right of Contractor to require a written confirmation of such Extra Work Order by Owner. It is also agreed compensation to be paid Contractor for performing said Extra Work shall be determined by one or more of the following methods:

Method A - By agreed unit prices; or
Method B - By agreed lump sum; or
Method C - If neither Method A nor Method B be agreed upon before Extra Work is commenced, Contractor shall be paid "actual field cost" of Work, plus 15 percent.

In the event said Extra Work be performed and paid for under Method C, provisions of this paragraph shall apply and "actual field cost" defined to include cost of all workmen such as foremen, timekeepers, mechanics, and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used on such Extra Work, plus actual transportation charges necessarily incurred, together with all expenses incurred directly on account of such Extra Work, including Social Security, Old Age Benefits, Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as required by any law or ordinance, or directed by Architect/Engineer or Owner, or by them agreed to. Architect/Engineer may direct form in which accounts of "actual field cost" shall be kept and records of these accounts made available to Architect/Engineer. Architect/Engineer may also specify in writing, before Work commences, method of doing Work and type and kind of machinery and equipment to be used; otherwise these matters determined by Contractor. Unless otherwise agreed upon, prices for use of machinery and equipment, shall be determined by using 100 percent, unless otherwise specified, of the latest schedule of Equipment Ownership Expense adopted by the Associated General Contractors of America. Where practicable, terms and prices for use of machinery and equipment shall be incorporated in Written Extra Work Order. The 15 percent of "actual field cost" paid Contractor, shall cover and compensate him for his profit, overhead, general superintendence and field office expense, and all other elements of cost and expense not embraced within "actual field cost" as herein defined, save that where Contractor's Camp or Field Office must be maintained primarily on account of such Extra Work, then cost to maintain and operate same shall be included in "actual field cost."

No claim for Extra Work of any kind allowed unless ordered in writing by Architect/Engineer. In case any orders or instructions, either oral or written, appear to Contractor to involve Extra Work for which he should receive compensation or an adjustment in construction time, he shall make written request to Architect/Engineer for written order authorizing such Extra Work. Should a difference of opinion arise as to what does or does not constitute Extra Work, or as to payment therefor, and Architect/Engineer insists upon performance, Contractor shall proceed with Work after making written request for written order and keep an accurate account of "actual field cost" thereof, as provided under Method C. Contractor will thereby preserve right to submit matter of payment by filing a claim as herein provided.

GC-53. TIME OF FILING CLAIMS

It is further agreed by both parties hereto, all questions of dispute or adjustment presented by Contractor shall be in writing and filed with Architect/Engineer within 15 days after Architect/Engineer has given any directions, order, or instruction to which Contractor desires to take exception.

Architect/Engineer shall reply to such written exceptions by Contractor and render his final decision in writing. In case Contractor should appeal from Architect/Engineer's decision, appeal shall be filed with Architect/Engineer and Owner in writing within 10 days after date of delivery to Contractor of Architect/Engineer's final decision. It is further agreed final acceptance of Work by Owner and acceptance by Contractor of final payment, shall be a bar to any claim by either party, except where noted otherwise in Contract Documents.

GC-54. DELETED

GC-55. ABANDONMENT BY CONTRACTOR

In case Contractor should abandon and fail or refuse to resume work within 10 days after written notification from Owner, or Architect/Engineer, or Contractor fails to comply with orders of Architect/Engineer, when such orders are consistent with Contract Documents, then, and in that case, where a performance bond exists, Surety on bond shall be notified in writing and directed to complete Work, and a copy of said notice shall be delivered to Contractor.

After receiving said notice of abandonment, Contractor shall not remove from Work any machinery, equipment, tools, materials, or supplies on the job, but same, together with any materials and equipment under contract for Work, may be held for use on Work by Owner or the Surety on construction bond, or another contractor in completion of Work; and Contractor shall not receive any rental or credit therefor (except when used in connection with Extra Work, where credit allowed as provided for under "Extra Work"), it understood use of such equipment and materials will ultimately reduce cost to complete Work and reflected in final settlement.

Where there is no performance bond provided or in case Surety should fail to commence compliance with notice for completion hereinbefore provided for, within 10 days after service of such notice, Owner may provide for completion of Work in either of the following elective manners:

a. Owner may thereupon employ such force of men and use such machinery, equipment, tools, materials, and supplies as said Owner may deem necessary to complete Work and charge expense of such labor, machinery, equipment, tools, materials, and supplies to said Contractor, and expense charged shall be deducted and paid by Owner out of such moneys as due, or may thereafter at any time become due to Contractor under and by virtue of this Contract. In case such expense is less than sum payable under this contract, if same had been completed by Contractor, then Contractor shall receive the difference. In case such expense is greater than sum payable under this contract, if same completed by said Contractor, then Contractor and/or Surety shall pay amount of such excess to Owner; or

b. Owner under sealed bids, after five days' notice, published one or more times in a newspaper having general circulation in county of location of Work, may let Contract for completion of Work under substantially same terms and conditions provided in this contract. In case of any increase in cost to Owner under new contract as compared to what would have been cost under this contract, such increase shall be charged to Contractor and Surety shall be and remain bound therefor. However, should cost to complete any such new contract prove less than cost to complete under this contract, Contractor and/or Surety shall be credited therewith.

When Work shall have been substantially completed, Contractor and Surety shall be so notified and Certificates of Completion and Acceptance, as provided herein, shall be issued. Complete itemized statement of Contract accounts, certified to by Architect/Engineer as correct, shall then be

prepared and delivered to Contractor and Surety, whereupon Contractor and/or Surety, or Owner as case may be, shall pay balance due as reflected by said statement, within 15 days after date of such Certificate of Completion.

In the event statement of accounts shows cost to complete Work is less cost to Owner, had Work been completed by Contractor under terms of this contract; or when Contractor and/or Surety shall pay balance shown due by them to Owner, then all machinery, equipment, tools, materials, or supplies left on site of Work shall be turned over to Contractor and/or Surety. Should cost to complete Work exceed Contract price, and Contractor and/or his Surety fail to pay amount due Owner within time designated herein, and there remains any machinery, equipment, tools, materials, or supplies on site of Work, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to Contractor and Surety at respective addresses designated in this contract provided; however, actual written notice given in any manner will satisfy this condition. After mailing, or other giving of such notice, such property shall be held at risk of Contractor and Surety subject only to duty of Owner to exercise ordinary care to protect such property. After 15 days from date of said notice, Owner may sell such machinery, equipment, tools, materials, or supplies and apply net sum derived from such sale to credit of Contractor and Surety. Such sale may be made at public or private sale, with or without notice, as Owner elects. Owner shall release any machinery, equipment, tools, materials, or supplies, which remain on Work, and belong to persons other than Contractor or Surety, to proper owners. Books on all operations provided herein shall be open to Contractor and Surety.

GC-56. ABANDONMENT BY OWNER

In case Owner shall fail to comply with terms of this contract, and should fail or refuse to comply with said terms within 10 days after written notification by Contractor, Contractor may suspend or wholly abandon Work, and remove therefrom all machinery, tools, and equipment, and all materials on site of work not included in payments to Contractor and have not been wrought into Work. And thereupon Architect/Engineer shall make an estimate of total amount earned by Contractor, which estimate shall include value of all work actually completed by said Contractor (at prices stated in attached proposal where unit prices are used), value of all partially completed work at a fair and equitable price, and amount of all Extra Work performed at prices agreed upon, or provided for by terms of this contract, and a reasonable sum to cover cost of any provisions made by Contractor to carry whole work to completion and which cannot be utilized. Architect/Engineer shall then make a final statement of balance due Contractor by deducting from estimates, all previous payments by Owner and all other sums retained by Owner under terms of this Contract and certify same to Owner who shall pay to Contractor on or before 30 days after date of notification by Contractor, balance shown by said final statement as due Contractor, under terms of this Agreement.

TECHNICAL SPECIFICATIONS

Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for crack sealing, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Engineer. The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Preparation/Removal of existing pavement. Contractor preparation/removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch. Treat the specific area with a concentrated solution of a water-based herbicide approved by ENGINEER. Fill all cracks greater than 1/4 inch wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch, not to exceed 1/4 inch. Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to applying surface treatment. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by ENGINEER in the field during construction.

Rotary grinding or sandblasting may be used. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch deep. If it is deemed by ENGINEER that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by ENGINEER.

Removal of foreign substances shall not proceed until approved by ENGINEER. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

Removal of existing marking shall be as specified under Item P-620, Runway and Taxiway Markings, of these Specifications.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property or in designated area allowed by the airport.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the ENGINEER. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the ENGINEER, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with random crack saw by removing a minimum of 1/16 inch from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by random crack saw. Following sawing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

METHOD OF MEASUREMENT

101-4.1 Joint and crack repair. The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made for crack preparation at contract unit price for the unit of measurement as specified above. This price shall be full compensation for Furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Asphalt, Joint, and Crack Repair, 1/4 to 1 1/2-inch width (excluding sealant material)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

Item P-605 Joint Sealants for Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D6990.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. No backer rod.

605-2.3 Bond breaking tapes. No bond breaking tape.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Sandblasting equipment. [Sandblasting is not allowed. **] [** The Contractor must demonstrate sandblasting equipment including the air compressor, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the Resident Project Representative (RPR), that the method cleans the joint and does not damage the joint.

c. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

d. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

e. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the ENGINEER, that the method cleans the joint and does not damage the joint.

a. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by hand, sandblasting, or tractor-mounted routing equipment as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the ENGINEER before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch ±1/16 inch below the top of pavement surface. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the ENGINEER. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the gallon of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per gallon. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1	Joint Sealing Filler, per gallon

REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

Item P-608-R Rapid Cure Seal Coat

DESCRIPTION

608-R-1.1 This item shall consist of the application of an asphalt surface treatment composed of natural and refined asphalt materials, additives, and light oils, for taxiways and runways with the application of a suitable aggregate to maintain adequate surface friction; and airfield secondary and tertiary pavements including aprons, shoulders, overruns, roads, parking areas, and other general applications with aggregate.

The terms seal coat, asphalt sealer, and asphalt material are interchangeable throughout this Specification. The term asphalt means natural and refined asphalt materials in this Specification.

MATERIALS

608-R-2.1 Aggregate. The fine-aggregate material shall be a dry, clean, sound, durable, angular shaped, with highly textured surfaces, manufactured specialty abrasive aggregate. It shall have 100% fractured faces, SiO2 content of 55% minimum, CaO of 3% max, with a sand equivalent greater than 85 and a Mohs hardness of 7 or greater. Additional characteristics as outlined in the following table(s). The Contractor shall submit specialty aggregate manufacturer's technical data and the specialty aggregate manufacturer's certification indicating that the specialty aggregate meets the requirements of the specification to the RPR prior to start of construction. The aggregate must be approved for use by the RPR and shall meet the following gradation limits when tested in accordance with ASTM C136:

Aggregate Material Gradation Requirements

Sieve Designation	Percentage by Weight Passing Sieves
No. 8	100
No. 14	98-100
No. 16	85-100
No. 30	15-45
No. 50	0-8
No. 70	0-2

Aggregate Characteristics

Test	Standard	Range
Micro-Deval	ASTM D7428	15% max
Magnesium Sulfate Soundness	ASTM C88	2% max
Aggregate Angularity	ASTM C1252 – Test Method A	45% min
Moisture Content (%)	ASTM C566	2% max
Bulk Dry Specific Gravity	ASTM C128	2.6 – 3.0
Absorption (%)	ASTM D2216	3% max
Mohs Hardness	Mohs Scale	7 min

The Contractor shall provide a certification of analysis (COA) showing analysis and properties of the material delivered for use on the project. The Contractor's certification may be subject to verification by testing the material delivered for use on the project.

608-R-2.2 Asphalt material. The asphalt material base residue shall contain not less than 40% gilsonite, or uintaite, and shall not contain any tall oil pitch or coal tar material. The material shall be compatible with asphalt pavement, and have a 5-year minimum proven aviation performance record at airports with similar climatic conditions. The solvent-based rapid cure material shall meet the following properties:

Properties for Asphalt Sealing Material

Properties	Specification	Limits
Kinematic Viscosity at 140°F (60°C)	ASTM D4402	10-30 cSt
Percent Residue by Distillation	ASTM D402	30-45%

Tests on Residue from Distillation

Properties	Specification	Limits
Penetration at 77°F (25°C)	ASTM D5	2-12 dmm
Softening Point	ASTM D36	180-200
Solubility in 1,1,1 Trichloroethylene	ASTM D2042	99% min.
HCI Precipitation Value		18-25

The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt sealer delivered to the project. If the asphalt sealer is diluted at other than the manufacturer's facility, the Contractor shall provide a supplemental COA from an independent laboratory verifying the asphalt sealer properties. The COA shall be provided to and approved by the RPR before the asphalt material is applied. The furnishing of the vendor's certified test report for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

The asphalt sealing material must be applied in an undiluted form. The material may be stored at ambient temperature for long periods of time if necessary. Storage will follow industry standard recommendations due to the flammability of the material; avoid sparks and open flames to come into contact with the material or any gasses that might be escaping the storage vessel.

Contractor shall provide a list of airport pavement projects, exposed to similar climate conditions, where this product has been successfully applied within at least 5 years of the project.

608-R-2.3 Seal Coat with Aggregate. The Contractor shall submit friction test data from at least 2 airport projects identified under 608-R-2.2. The test data must be from the same project and include technical details on application rates, aggregate rates, and point of contact at the airport to confirm use and success of sealer with aggregate.

Friction test data in accordance with AC 150/5320-12, at 40 or 60 mph wet, must include as a minimum; the friction value prior to sealant application; two values, between 24 and 96 hours after application, with a minimum of 24 hours between tests; and one value between 180 days and 360 days after the application. The results of the tests between 24 and 96 hours shall indicate friction is increasing at a rate to obtain similar friction value of the pavement surface prior to application, and the long-term test shall indicate no apparent adverse effect with time relative to friction values and existing pavement surface.

Seal coat material submittal without required friction performance will not be approved. Friction tests performed on this project cannot be used as a substitute of this requirement.

COMPOSITION AND APPLICATION RATE

608-R-3.1 Application Rate. The approximate amounts of materials per square yard (square meter) for the asphalt surface treatment shall be as provided in the table for the treatment area(s) at the specified rate(s) as noted on the plans. The actual application rates will vary within the range specified to suit field conditions and will be recommended by the manufacturer's representative for control strip evaluations, and approved by the RPR from the test area/sections evaluation.

Application Rate

Dilution Rate	Quantity of Sealer gal/yd^2 (l/m^2)	Quantity of Aggregate lb/yd^2 (kg/m^2)
N/A	0.08-0.15 (0.36-0.68)	0.40-0.50 (0.11-0.22)

608-R-3.2 Control areas and control strips. A qualified manufacturer's representative shall be present in the field to assist the Contractor in applying control areas and/or control strips to determine the appropriate application rate of both sealer and aggregate to be evaluated and approved by the RPR.

A test area and/or section shall be applied for each differing asphalt pavement surface identified in the project. The control area(s) and/or control strip(s) shall be used to determine the material application rate(s) of both sealer and aggregate prior to full production. The same equipment and method of operation shall be utilized on the control area(s) and/or control strip(s) as will be utilized on the remainder of the work.

a. For taxiway, taxilane and apron surfaces. Prior to full application, the Contractor shall place test areas at varying application rates as recommended by the Contractor's manufacturer's representative to determine appropriate application rate(s). The test areas will be located on representative section(s) of the pavement to receive the asphalt surface treatment designated by the RPR.

b. For runway and high-speed exit taxiway surfaces. Prior to full application, the Contractor shall place a series of control strips a minimum of 300 feet long by 12 feet wide, or width of anticipated application, whichever is greater, at varying application rates as recommended by the manufacturer's

representative and acceptable to the RPR to determine appropriate application rate(s). The control strips should be separated by a minimum of 200 feet between control strips. The area to be tested will be located on a representative section of the pavement to receive the asphalt surface treatment designated by the RPR. The control strips should be placed under similar field conditions as anticipated for the actual application. Before beginning the control strip(s), the skid resistance of the existing pavement shall be determined for each control strip with a continuous friction measuring equipment (CFME). The skid resistance of existing pavement can be immediately adjacent to the control strip or at the same location as the control strip if testing prior to application.

The Contractor may begin testing the skid resistance of runway and high-speed exit taxiway control strips after application of the asphalt surface treatment has fully cured, generally 2 to 4 hours after application of the control strips depending on site conditions. Aircraft shall not be permitted on the runway or high-speed exit taxiway control strips until such time as the Contractor validates that its surface friction meets the maintenance planning friction levels in AC 150/5320-12, Table 3-2 when tested at speeds of 40 and 60 mph (65 and 95 km/h) wet with approved CFME.

c. Control strip. If the control strip should prove to be unsatisfactory, necessary adjustments to the application rate, placement operations, and equipment shall be made. Additional control strips shall be placed and additional skid resistance tests performed and evaluated. Full production shall not begin without the RPR's approval of an appropriate application rate(s). Acceptable control strips shall be paid for in accordance with paragraph 608-R-8.1.

CONSTRUCTION METHODS

608-R-4.1 Worker safety. The Contractor shall obtain a Safety Data Sheet (SDS) for both the asphalt sealer product and aggregate and require workmen to follow the manufacturer's recommended safety precautions. All additional industry standard safety precautions regarding the storage and applications of solvent based asphalts should be understood and followed by the Contractor.

608-R-4.2 Weather limitations. The asphalt sealer shall be applied only when the existing pavement surface is dry and when the weather is not foggy, rainy, or when the wind velocity will prevent the uniform application of the material. No material shall be applied when dust or aggregate is blowing or when rain is anticipated within four (4) hours of application completion. The atmospheric temperature and the pavement surface temperature shall both be at, or above 55°F (14°C) and rising. The sealer will shall not be applied when pavement temperatures are expected to exceed 160F within the subsequent 72 hours if traffic will be opened on pavement within those 72 hours. During application, account for wind drift. Cover existing buildings, structures, runway edge lights, taxiway edge lights, informational signs, retro-reflective marking and in-pavement duct markers as necessary to protect against overspray before applying the sealer. Should sealer get on any light or marker fixture, promptly clean the fixture. If cleaning is not satisfactory to the RPR, the Contractor shall replace any light, sign or marker with equivalent equipment at no cost to the Owner.

608-R-4.3 Equipment and tools. The Contractor shall furnish all equipment, tools, and machinery necessary for the performance of the work.

a. Pressure distributor. The sealer shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the sealer. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute). The Contractor will provide verification of truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application per nozzle manufacturer, spray-bar height and pressure and pump speed appropriate for the

viscosity and temperature of sealer material, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use. The distributor truck shall be equipped with a 12-foot (3.7-m), minimum, spray bar with individual nozzle control. The distributor truck shall be capable of specific application rates in the range of 0.05 to 0.25 gallons per square yard (0.15 to 0.80 liters per square meter). These rates shall be computer-controlled rather than mechanical. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the sealer, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy.

The distributor truck shall effectively mix the material prior to application.

The distributor shall be equipped with a hand sprayer to spray the sealer in areas not accessible to the distributor truck.

b. Aggregate spreader. The asphalt distributor truck will be equipped with an aggregate spreader mounted to the distributor truck that can apply aggregate to the sealer in a single pass operation without driving through wet sealer. The aggregate spreader shall be equipped with a variable control system capable of uniformly distributing the aggregate at the specified rate at varying application widths and speeds. The aggregate spreader must be adjusted to produce an even and accurate application of specified aggregate. Prior to any seal coat application, the aggregate spreader will be calibrated onsite to ensure acceptable uniformity of spread. The RPR will observe the calibration and verify the results. The aggregate spreader will be re-calibrated each time the aggregate rate is changed either during the application of test strips or production. The Contractor may consult the seal coat manufacturer representative for procedure and guidance. The aggregate spreader shall have a minimum hopper capacity of 3,000 pounds (1361 kg) of aggregate. Push-type hand spreaders will be allowed for use around lights, signs and other obstructions, if necessary.

c. Power broom/blower. A power broom and/or blower shall be provided for removing loose material from the surface to be treated.

d. Equipment calibration. Asphalt distributors must be calibrated within the same construction season in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

608-R-4.4 Preparation of asphalt pavement surfaces. Clean pavement surface immediately prior to placing the seal coat so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film. Remove oil or grease from the asphalt pavement by scrubbing with a detergent, washing thoroughly with clean water, and treating these areas with the oil spot primer. Any additional surface preparation, such as crack repair, shall be in accordance with Item P-101, paragraph 101-3.6.

[a. New asphalt pavement surfaces. Allow new asphalt pavement surfaces to cure so that there is no concentration of oils on the surface. A period of at least 30 days at 70°F (21°C) daytime temperatures should elapse between the placement of a hot mixed asphalt concrete surface course and the application of the surface treatment.

Perform a water-break-free test to confirm that the surface oils have degraded and dissipated. (Cast approximately one gallon (4 liters) of clean water out over the surface. The water should sheet out and wet the surface uniformly without crawling or showing oil rings.) If signs of crawling or oil rings are apparent on the pavement surface, additional time must be allowed for additional curing and retesting of the pavement surface prior to treatment.

608-R-4.5 Application of asphalt sealer. The asphalt sealer shall be applied using a pressure distributor upon the properly prepared, clean and dry surface at the application rate recommended by the manufacturer's representative and approved by the RPR from the test area/sections evaluation for each designated treatment area. Recommended material temperature for application is 70°F to 90°F, but

depending on the application equipment used, good material dispersion and pavement coverage may be achieved at lower material temperatures. The material should not be heated above 100°F.

Pavement surfaces which have excessive runoff of seal coat due to excessive amount of material being applied or excessive surface grade shall be treated in two or more applications, if feasible, to the specified application rate at no additional cost to the Owner. Each additional application shall be performed after the prior application of material has penetrated into the pavement.

If low spots and depressions greater than 1/2 inch (12 mm) in depth in the pavement surface cause ponding or puddling of the applied materials, the pavement surface shall be lightly broomed with a broom or brush type squeegee. Brooming shall continue until the pavement surface is free of any pools of excess material. Ponding and/or puddling shall not cause excessive pavement tackiness and/or additional distress.

During all applications, the surfaces of adjacent structures shall be protected to prevent their being spattered or marred. Asphalt materials shall not be discharged into borrow pits or gutters or on the airport area.

Caution. *Heating asphalt binders of any kind always constitutes some degree of hazard. The most hazardous of these are cutback asphalts because of the highly volatile solvents used. Care must be taken not to allow any spark or open flame to come in contact with the cutback asphalt or the gases from cutback asphalt due to the low flash point. It is the Contractor's responsibility to understand and adhere to these standards in regards to staying within the recommended application temperatures of this material and at all times during production.*

608-R-4.6 Application of aggregate material. Immediately following the application of the asphalt sealer, aggregate at the rate recommended by the manufacturer's representative and approved by the RPR from the test area/sections evaluation for each designated application area, shall be spread uniformly over the asphalt sealer in a single-pass operation simultaneous with the sealer application. The sealer material and aggregate shall be applied simultaneously in a single pass operation, so as to not drive through the applied fresh sealer. The aggregate shall be spread to the same width of application as the asphalt material and shall not be applied in such thickness as to cause blanketing.

Sprinkling of additional aggregate material, and spraying additional asphalt material over areas that show up having insufficient cover or bitumen, shall be done by hand whenever necessary. In areas where hand work is necessitated, the aggregate shall be applied before the sealant begins to break.

Minimize aggregate from being broadcast and accumulating on the untreated pavement adjacent to an application pass. Prior to the next application pass, the Contractor shall clean areas of excess or loose aggregate and remove from project site.

QUALITY CONTROL (QC)

608-R-5.1 Manufacturer's representation. The manufacturer's representative knowledgeable of the material, procedures, and equipment described in the specification is responsible to assist the Contractor and RPR in determining the appropriate application rates of the emulsion and aggregate, as well as recommendations for proper preparation and start-up of seal coat application. Documentation of the manufacturer representative's experience and knowledge for applying the seal coat product shall be furnished to the RPR a minimum of 10 work days prior to placement of the control strips. The cost of the manufacturer's representative shall be included in the Contractor's bid price.

608-R-5.2 Contractor qualifications. The Contractor shall provide the RPR with the seal coat Contractor's qualifications for applicators, personnel and equipment. The Contractor shall also provide documentation that the seal coat Contractor is qualified to apply the seal coat and has made at least three (3) applications similar to this project in the past two (2) years.

MATERIAL ACCEPTANCE

608-R-6.1 Application rate. The rate of application of the asphalt emulsion shall be verified at least twice per day.

608-R-6.2 Friction tests. Friction tests in accordance with AC 150/5320-12, Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces, shall be accomplished on all runway and high-speed taxiways that have received a seal coat. Each test includes performing friction tests at 40 mph and 60 mph (65 or 95 km/h) both wet, 15 feet (4.5 m) to each side of runway centerline. The Contractor shall coordinate testing with the RPR.and provide the RPR a written report of friction test results. The RPR shall be present for testing.

METHOD OF MEASUREMENT

608-R-7.1 Asphalt surface treatment. The quantity of asphalt surface treatment shall be measured by the square yards of material applied in accordance with the plans and specifications and accepted by the RPR.

The Contractor must furnish the RPR with the certified weigh bills when materials are received for the asphalt material used under this contract. The Contractor must not remove material from the tank car or storage tank until initial amounts and temperature measurements have been verified.

BASIS OF PAYMENT

608-R-8.1 Payment shall be made at the contract unit price per square yard for the asphalt surface treatment applied and accepted by the RPR, and the contract unit price per lump sum for runway friction testing. This price shall be full compensation for all surface preparation, furnishing all materials, delivery and application of these materials, for all labor, equipment, tools, and incidentals necessary to complete the item, and any costs associated with furnishing a qualified manufacturer's representative to assist with control strips.

Payment will be made under:

Item P-608-R-8.1	Rapid Cure Seal Coat Surface Treatment – per square yard

REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C128	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying

ASTM C1252	Standard Test Methods for Uncompacted Void Content of Fine Aggregate
ASTM D5	Standard Test Method for Penetration of Asphalt Materials
ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
ASTM D402	Standard Test Method for Distillation of Cutback Asphalt
ASTM D2042	Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D2995	Standard Practice for Estimating Application Rate of Bituminous Distributors
ASTM D4402	Standard Test Method for Viscosity Determination of Asphalt at Elevated Temperatures Using a Rotational Viscometer
ASTM D5340	Standard Test Method for Airport Pavement Condition Index Surveys
ASTM D6433	Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys
ASTM D6997	Standard Test Method for Distillation of Emulsified Asphalt
ASTM D7428	Standard Test Method for Resistance of Fine Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus

Advisory Circulars (AC)

AC 150/5320-12	Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces
AC 150/5320-17	Airfield Pavement Surface Evaluation and Rating (PASER) Manuals
AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements
AC 150/5380-7	Airport Pavement Management Program (PMP)

END OF ITEM P-608-R

Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by ENGINEER. The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this Specification. This item shall also consist of the removal of existing runway and taxiway markings in preparation for the surface treatment application.

MATERIALS

620-2.1 Materials acceptance. Contractor shall furnish manufacturer's certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer's surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by ENGINEER prior to the initial application of markings. The reports can be used for material acceptance or ENGINEER may perform verification testing. The reports shall not be interpreted as a basis for payment. Contractor shall notify RPR and ENGINEER upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by ENGINEER.

620-2.2 Marking materials.

Table 1. Marking Materials

Paint[1]				Glass Beads[2]	
Type	**Color**	**Fed Std. 595 Number**	**Application Rate Maximum**	**Type**	**Application Rate Minimum**
*	White	*	115 ft2/gal	*	Waterborne Types I or II
*	Yellow	*	115 ft2/gal	*	

[1] See paragraph 620-2.2a
[2] See paragraph 620-2.2b

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Paint Color	Fed Std. No 595 Color Number
White	37925
Yellow	33538 or 33655
Black	37038

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type I. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type I, Gradation A .

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by ENGINEER. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by ENGINEER to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing loose and dried marking should be removed manually by hand before pavement remarking. To eliminate shadow marking appearing under new surface treatment, existing markings shall be removed by rotary grinding, water or shot blasting, or other methods approved by RPR to minimize damage to pavement surface.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by ENGINEER. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to RPR and ENGINEER prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of **30** days, or a period recommended by paint manufacturer, shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied in two opposite directions at the rate of 50/100 at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by ENGINEER. Contractor shall wait a period of 24 hours to allow the paint to cure, after the first placement of markings, before application of second and final placement in opposite direction at 100 percent application rate.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet, and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inches or less	±1/2 inch
greater than 36 inches to 6 feet	±1 inch
greater than 6 feet to 60 feet	±2 inch
greater than 60 feet	±3 inch

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after the second and final application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 Application--preformed thermoplastic airport pavement markings.

Preformed thermoplastic pavement markings not used.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of ENGINEER. Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30 percent of each other.

Minimum Retro-Reflectance Values

Material	Retro-reflectance mcd/m^2/lux		
	White	Yellow	Red
Initial Type I	300	175	35
Initial Type III	600	300	35
Initial Thermoplastic	225	100	35
All materials, remark when less than[1]	100	75	10

[1] 'Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of ENGINEER. Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of markings to be paid for shall be measured by the number of square feet of painting**.** Quantity of existing marking removal to be paid for shall be measured by the number of square feet of paint removal approved.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by ENGINEER in accordance with these specifications.

620-5.2 Payment for markings shall be made at the contract price for the number of square feet of painting including reflective media (beads). Payment for marking removal shall be made at Contract unity price for number of square feet of markings removed.

REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer

ASTM G154 Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24 Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings

29 CFR Part 1910.1200 Hazard Communication

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D Beads (Glass Spheres) Retro-Reflective

FED SPEC TT-P-1952F Paint, Traffic and Airfield Marking, Waterborne

FED STD 595 Colors used in Government Procurement

Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

APPENDIX A

Construction Safety and Phasing Plan

Midland International Air & Space Port

Midland, Texas

Midland International Air & Space Port Northwest Taxilane & Executive Apron Rehabilitation

Construction Safety and Phasing Plan (CSPP)

FAA AIP Project No. 3-48-0150-058-2018

September 2019

PSC Project # 01.9770.18

PARKHILLSMITH&COOPER

Midland International Air & Space Port

Midland, Texas

Midland International Air & Space Port

Northwest Taxilane & Executive Apron Rehabilitation

Construction Safety and Phasing Plan (CSPP)

FAA AIP Project No. 3-48-0150-058-2018

09/20/19

September 2019

PSC Project # 01.9770.18

PSC PARKHILLSMITH&COOPER

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APPENDICES

APPENDIX A Construction Safety and Phasing Plan
APPENDIX B FAA Form 7460-1, Notice of Proposed Construction or Alteration (blank)
APPENDIX C Advisory Circular 150/5370-2F, Operating Safety on Airports During Construction
APPENDIX D Safety Details

Project Name: Airfield Pavement Improvements

Sponsor: Justine Ruff
PO BOX 60305
MIDLAND, TX 79711
432-560-2200

Sponsor' Agent:

Consultant/Engineer: Danny Winchester, P
Parkhill, Smith & Cooper, Inc. (PSC)
1700 W Wall St, Suite 100
Midland, TX 79701
432- 697-1447

Larry Valdez, P.E.
Parkhill, Smith & Cooper, Inc. (PSC)
422 85th Street
Lubbock, Texas 79423
806-473-2200

Rodrigo Vela, E.I.T.
Parkhill, Smith & Cooper, Inc. (PSC)
12301-B riata Trace Parkway Ste.100
Austin, Texas 78727
512-676-2100

Grant/Project Numbers: FAA AIP Project No. 3-48-0150-058-2018

Engineer's Project No.: 01.9770.18

1. COORDINATION

A. MEETINGS TO OCCUR DURING THE PROJECT:

Predesign Conference

Prebid Conference

A prebid conference in accordance with FAA AC 150/5300-9B will be held for the Consulting Engineer, FAA & MAF to go over project details and for Contractors to ask project specific questions. The pre-bid conference will be led by MAF with assistance from PSC.

Preconstruction Meeting

A preconstruction meeting in accordance with FAA AC 150/5300-9B will be held prior to the issuance of the Notice to Proceed. At a minimum, required attendees will be MAF Airport Manager, Consulting Engineer, Resident Project Representative (RPR), Prime Contractor and all subcontractors.

Construction Progress Meetings

Construction progress meetings will be held throughout the duration of the project, typically at monthly intervals or as needed. At a minimum, required attendees will be Airport administrative staff, County, Consulting Engineer, RPR, Prime Contractor and all subcontractors performing work during the current period. Construction phasing and safety will be a standing item at all construction progress meetings. Other ongoing agenda items will include:

- Project Schedule
- Safety/Security
- Project Coordination
- Construction Issues
- Review of Submittals
- Review of Request for Information (RFI)
- Review of Change Orders
- Environmental Issues
- Quality Assurance (Test Reports)
- Record Drawings
- Review of Pay Application
- General Discussion

The Consulting Engineer will be responsible for preparing and distributing meeting minutes for all meetings.

B. SCOPE

1. Rehabilitate and Mark Northwest Taxilane

2. Rehabilitate and Mark Executive Apron

C. FAA AIR TRAFFIC CONTROL TOWER (ATCT) COORDINATION

1. Contractor shall coordinate all project-related correspondence through the Consulting Engineer and Owner. Owner will coordinate runway and taxiway shut downs with the FAA ATCT.

2. Runway closure schedules shall be coordinated in advance with Engineer. Engineer will coordinate the runway closure with the airport to make sure a NOTAM is in place..

2. PHASING

Refer to Phasing Plans included in Appendix A for limits of each phase.

A. BID PACKAGE (75 CALENDAR DAYS TOTAL)

1. Phase 1 (30) Calendar Days Northwest Taxilane

2. Phase 2 (45) Calendar Days: Executive Apron

B. PROJECT SCHEDULE

Contractor will be required to submit an overall project schedule and phasing plan at the preconstruction meeting.

C. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

Pavement Area	Phase 1
Runway 16L-34R	Open
Taxiway Z	Open
Runway 10-28	Open
Taxiway C	Open
Runway 4-22	Open
Taxiway L	Open
Runway 16R-34L	Open
Taxiway D	Open
Taxiway H	Open
Taxiway P	Open
Taxiway B	Open

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

A. LIST OF NAVAIDS IN CLOSE PROXIMITY TO WORK AREA:

MAF does not have any active NAVAIDs in close proximity to the project areas.

5. CONTRACTOR ACCESS

A. GENERAL

MAF to provide airport's visitor/contractor access procedures.

B. AIRPORT OPERATIONS AREA

Airport Operations Area (AOA) is defined as any portion of the Airport property normally secured against unauthorized entry. AOA includes all areas specifically reserved for the operations of aircraft and aircraft support equipment and personnel. Generally, the AOA is defined by the Airport's outer security fencing and any building that forms part of the secured perimeter. When necessary to cross pavement surface on the airfield, the Contractor shall inspect all paved surfaces for Foreign Object Debris (FOD) daily and prior to reopening pavement surface to air traffic. Final inspection shall be by MAF. Contractor shall not leave opening in secure fence at any time.

C. CONTRACTOR'S ENTRANCE GATE

Adjacent to the Contractor's entrance gate, outside the AOA, the Contractor shall provide a parking area for Contractor employees' personal automobiles. The limits of this parking/storage area shall be as directed by the Engineer. At the completion of this project, any damage done by the Contractor to this area shall be repaired to the satisfaction of the Engineer at no additional cost to the Owner. Repairs shall include, but not be limited to, regrading, reseeding, or repaving any damaged areas.

D. CONTRACTOR'S PLANT SITE, STORAGE, AND OFFICE AREA

The Contractor will be held completely responsible for any damage or deterioration in areas allowed for Contractor use. The Contractor will also be responsible for maintenance of areas and dust control for the duration of the project.

Direct negotiation may be conducted with the Director of Airports for any areas desired. Areas used by the Contractor may be subject to rental rates and fees as identified by the Director of Airports.

Any areas occupied by the Contractor and his forces will be required to be completely restored by the Contractor, at his expense, including but not limited to: regrading disturbed areas, complete removal of debris or any other material brought onto the site by the Contractor, and complete replacement of topsoil, turf, asphalt pavement, concrete slabs, or drives, etc. that is worn, deteriorated, or damaged while the Contractor and his forces occupy the area. All restoration shall be to the satisfaction of the Director of Airports.

Prior to moving into an unpaved area, the Contractor shall clear and grub the area, then remove and stockpile a minimum 6 inches of existing topsoil. After completion of the project and clearing the site of materials, equipment, and debris, the Contractor shall replace, spread, and grade the salvaged topsoil. Follow by seeding and fertilizing.

All restoration activities shall be accomplished in accordance with applicable technical specifications.

No direct payment will be made to the Contractor for preparing or restoring plant site haul routes, storage, or office areas.

For all projects with onsite concrete or hot mix asphalt batch plant, and for projects involving pug-mill produced material, a concrete or asphalt-paved material stockpile area is required. All materials to be incorporated into concrete, hot mix, CTB, or other similar material, must be stockpiled on a specially prepared concrete or asphalt pad so stockpile contamination does not occur. The stockpile area shall be restored to pre-project conditions.

E. VEHICLE ESCORT

All vehicles (such as supplier vehicles), responsible to the Contractor, entering the AOA, shall be escorted by an approved Contractor escort vehicle from the point of AOA entry to the construction site. The escort vehicle shall be clearly identified with standard FAA markings and/or FAA flags. In addition, the escort vehicle shall be marked with the Contractor's name.

The escort vehicle will be responsible for leading supply, delivery, or other vehicles across the active airfield. To facilitate safe movement of the escort vehicle and the escorted vehicles, the driver of the escort vehicle shall be approved for, issued, and display a/an MAF security badge. Further, the escort vehicle driver shall be familiar with

airport security and safety procedures. If the contractor needs to enter/cross an active taxiway or runway, they will be required to be escorted by MAF, who will be responsible for radio communications with the ATC.

F. TWO-WAY RADIO COMMUNICATIONS

G. CONTRACTOR'S SAFETY PLAN (CSP)

Contractor will be required to submit a Contractor's Safety Plan (CSP) as part of the submittal process before starting construction. The CSP shall always be adhered to. MAF will reserve the right to have the Contractor amend the CSP at any time if concerns arise.

6. WILDLIFE MANAGEMENT

A. TRASH

Contractor will be required to dispose of all trash in a covered trash can or other method, so as not to allow the trash to become a hazard or animal attractant.

B. STANDING WATER

Contractor will be required to minimize standing water.

C. TALL GRASS AND SEEDS

Contractor will be required to maintain grass in the construction area to the height required by MAF.

D. POORLY MAINTAINED FENCING AND GATES

Any fencing or gates used by the Contractor, shall be maintained in good condition and proper working order. Also, the gap under the fence or gate shall not exceed 3 inches.

E. DISRUPTION OF EXISTING WILDLIFE HABITAT

In the event of wildlife habitat, Contractor will notify MAF and Engineer immediately.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Contractor will be required to train and emphasize to construction site employees the need for continuous Foreign Object Debris (FOD) checks on or near active airfield pavement.

Contractor will be required, at a minimum, to conduct FOD checks before and after each construction shift and monitor nearby active pavements throughout the construction shift.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

Hazardous materials will be handled and stored per the latest revision to FAA Advisory Circular 150/5370-2F - Operational Safety on Airports during Construction. Contractor must be prepared to immediately contain and clean up spills resulting from fuel, oil, petroleum products, or hydraulic fluid leaks. The transportation and handling of other hazardous materials on the Airport requires additional special procedures as addressed in the latest revisions to FAA Advisory Circular 150/5320-15 - Management of Airport Industrial Waste. All spills must be immediately reported to MAF Airport Manager Justine Ruffat 432-294-4247.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

A. RESPONSIBLE REPRESENTATIVES / POINTS OF CONTACT

Midland International Air & Space Port

Name	Position	Phone Number
Justine Ruff	Director of Airports	432-560-2200

Parkhill, Smith & Cooper, Inc., Engineer/Consultant

Name	Position	Phone Number
Danny Winchester, P.E.	Project Manager	432-681-6114
Larry Valdez, P.E.	Project Engineer	806-473-3528
Rodrigo Vela, E.I.T	Engineer in Training	512-676-2111

_____TBD_____, Resident Project Engineer (RPR)

Name	Position	Phone Number

_____TBD_____, Quality Assurance Testing

Name Position Phone Number

***** Insert Contractor and Sub-Contractor Personnel Information when Project awarded.**

_____TBD _____, Contractor

Name Position/Trade Phone Number

_____TBD _____, Subcontractor

Name Position/Trade Phone Number

_____TBD _____, Subcontractor

Name Position/Trade Phone Number

B. NOTICES TO AIRMEN (NOTAM)

MAF will be responsible for issuing any Notice to Airmen (NOTAM) required before the project begins and as the project progresses and will update or cancel NOTAMs at the completion of intermediate construction phases of the project, as required. Contractor required to closely coordinate anticipated and required NOTAMs with MAF and give MAF at least 72 hours' notice of necessary NOTAMs.

C. EMERGENCY NOTIFICATION PROCEDURES

In the event of an emergency, Contractor shall immediately call 911 first and then MAF at Director of Airports Justine Ruff (432-560-2200).

D. NOTIFICATION TO THE FAA

Contractor will notify Consulting Engineer and MAF 72 hours in advance of any work around NAVAIDs or shutdowns affecting NAVAIDs owned by the FAA. NAVAIDs owned by a separate party shall be notified by Contractor 72 hours in advance of any work around or shutdowns of NAVAIDs.

10. INSPECTION REQUIREMENTS

A. DAILY INSPECTIONS

The Contractor will be required to perform daily safety, security, and phasing inspections to ensure compliance with CSPP. Inspections shall be documented in contractors Daily Logs/ Quality Control Logs.

Contractor will be required to submit a Quality Control Plan for the Owner or designated representative review before any construction begins. The Quality Control Plan will address specific requirements for inspection of individual specification/pay items including test method, sampling point, testing frequency for each item and a proposed remediation action for each item if it does not meet specification requirements. The Plan will also provide direction on developing inspection reports and what shall be included in them. The Quality Control Plan will likely be developed in whole or in conjunction with the selected Quality Control firm. The Quality Control Plan shall include and address requirements of the Construction Management Plan.

B. FINAL INSPECTIONS

MAF will perform the final safety inspection prior to any airfield pavement opening to aircraft.

11. UNDERGROUND UTILITIES

A. UTILITIES

The Contractor is responsible for locating, marking, and protecting all utilities and infrastructure during construction. Location of utilities shall include notification of Texas One Call system, as well as coordination with MAF.

12. PENALTIES

Contractor pays all penalty fines associated with any safety violation.

13. SPECIAL CONDITIONS

A. FAA FORM 7460-1

1. Consulting Engineer will prepare and submit FAA Form 7460-1 for project scope and for proposed Construction Safety and Phasing Plan.

2. The Contractor shall submit Form 7460 on all equipment over 20 feet high.

3. A blank Federal Aviation Administration (FAA) Form 7460-1 - Notice of Proposed Construction or Alteration, is included in Appendix B. Contractor shall submit supplemental FAA Form 7460-1 to FAA at least 45 days prior to utilization of equipment in excess of 20 feet in height.

B. ONSITE BURNING AND BLASTING

Onsite burning and blasting are prohibited.

C. GUN PROHIBITION ON AIRPORT PROPERTY

No firearms or guns are allowed on MAF property.

14. RUNWAY AND TAXIWAY VISUAL AIDS

A. GENERAL

Airport marking, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials to minimize damage to an aircraft in the event of inadvertent contact.

Lighting, signs, and NAVAIDs located within object free area must be frangible.

15. MARKING AND SIGNS

A. ACCESS ROUTE

Contractor required to mark access routes and haul routes with lathes and flag tape.

B. APPROVED WORK AREAS

Contractor will be required to mark approved work areas with lathes and flag tape to ensure construction personnel and equipment remain in approved areas.

16. HAZARD MARKING AND LIGHTING

A. EQUIPMENT

1. Contractor vehicles shall be clearly identified with lighting, and/or flags. Rotating amber beacons required for all nighttime work.

2. The Contractor shall submit 7460s on all equipment over 20 feet in height.

3. Any request to use nighttime lighting will be provided in writing two weeks prior to the requested start time, from the Contractor to the Engineer and MAF for approval.

B. WORK AREAS

1. Temporary low-profile barricades will be provided by the Contractor to delineate safe operating areas for aircrafts.

2. Barricades shall have flashing red lights.

3. Contractor will be required to inspect lights each evening and immediately replace any lights not operating correctly.

4. The Contractor will be fined for non-working lights as indicated in the project specifications.

5. The perimeter construction area shall be lined with low profile aviation barricades spaced at 5 feet.

17. PROTECTION

A. RUNWAY SAFETY AREA (RSA)

No construction or material stockpile shall occur within an active RSA. Contractor will be required to mark out the RSA prior to construction. The RSA for Runway 10-28 (closest runway to project area) is 500 feet wide centered on runway centerline and extends 1,000' feet beyond the runway end.

B. RUNWAY OBJECT FREE AREA (ROFA)

No material stockpile will occur within an active ROFA. The ROFA 800 feet wide centered on runway centerline and 1,000 feet beyond runway end for both Runway 10-28.

C. TAXIWAY SAFETY AREA (TSA)

No construction or material stockpile shall occur within an active TSA. The TSA for Taxiway A is 171 feet wide centered on taxiway centerline.

D. TAXIWAY OBJECT FREE AREA (TOFA)

No material stockpile shall occur within an active TOFA. The TOFA for Taxiway A is 259 feet wide centered on taxiway centerline.

E. OBSTACLE FREE ZONE (OFZ)

No construction activity or material stockpile will penetrate the OFZ. Airfield runways & taxiways will be closed during construction per phasing plans as shown on the project plans.

F. RUNWAY APPROACH/DEPARTURE SURFACES

No construction activities will penetrate the approach/departure surfaces. Airfield runways & taxiways will be closed during construction per phasing plans as shown on the project plans.

G. OPEN TRENCHES

Open trenches will not be permitted within the RSA of an open runway or the TSA of an open taxiway. Contractor shall prominently mark any open trench or excavation at the construction site with lighted barricades.

H. SAFETY INFORMATION

Refer to Appendix D - Safety Details, for safety information.

I. JET BLAST

Contractor shall take precautions to minimize the effects of jet blast, particularly in areas within close proximity to the runway threshold.

18. OTHER LIMITATIONS ON CONSTRUCTION

A. PROHIBITIONS

1. No use of tall equipment over 20 feet unless a 7460-1 determination letter is issued for such equipment.

2. No use of open flame welding or torches.

3. No use of electrical blasting caps.

4. No use of flare pots.

B. RESTRICTIONS

1. Any construction suspension required during specific airport operations will be coordinated by Engineer, Owner, and Contractor during construction.

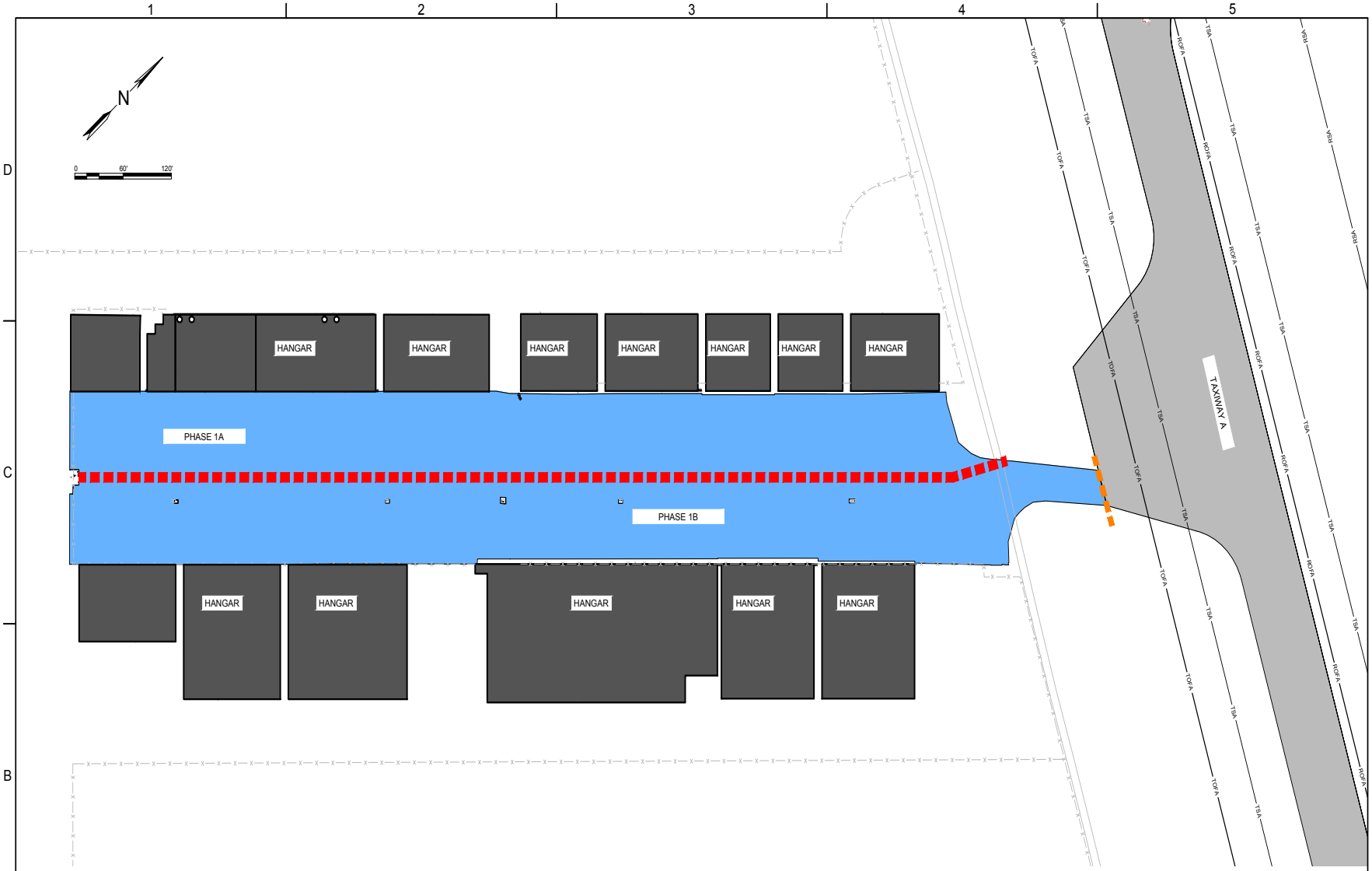
2. Areas that cannot be worked on simultaneously, will be coordinated by Engineer, Owner, and Contractor during construction.

3. Refer to Article 16 – Hazard Marking and Lighting, for night construction requirements.

4. Seasonal construction restrictions will be coordinated by Engineer, Owner, and Contractor during construction.

APPENDIX A

CONSTRUCTION SAFETY AND PHASING PLAN



LEGEND

- CHAIN-LINK FENCING
- PROPERTY LINE
- EXISTING CONCRETE PAVEMENT
- ASPHALT PAVEMENT REHABILITATION LIMITS
- EXISTING AIRFIELD ASPHALT PAVEMENT
- BARRICADES
- CONSTRUCTION PHASING LIMITS

GENERAL PHASING NOTES

A. CONTRACT TIME TO COMPLETE ALL PHASES IS 60 CALENDAR DAYS. PHASE 1 SHALL BE 30 DAYS. PHASE 2 SHALL BE 45 DAYS.

GENERAL CONSTRUCTION SAFETY AND INFORMATION

1. THE CONTRACTOR SHALL MAKE HIS OWN PROVISIONS FOR WATER, ELECTRICAL, NATURAL GAS AND OTHER REQUIREMENTS AND SHALL PAY FOR WATER, ELECTRICITY, GAS OR FUEL CONSUMED DURING THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL CONSTRUCT HIS OWN SERVICE LINES AND SUCH CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND LAW
2. HAUL ROUTES SHALL NOT BE ALONG OR ACROSS ANY PAVED AIRPORT STREET, ROAD, APRON, TAXIWAY OR RUNWAY WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM THE ENGINEER AND THE DIRECTOR OF AIRPORTS. ANY DAMAGE INCURRED BY THE CONTRACTOR'S IMPROPER EQUIPMENT USE SHALL BE REPAIRED BY AND AT THE EXPENSE OF THE CONTRACTOR AND AS REQUIRED BY THE ENGINEER AND THE DIRECTOR OF AIRPORTS. THE CONTRACTOR SHALL MAINTAIN THE PAVED SURFACES, RUNWAYS, TAXIWAYS, APRONS AND ROADWAYS WHICH ARE ALLOWED TO BE USED AS HAULING ROUTES OR ACCESS ROUTES TO THE SITE, IN A CLEAN CONDITION, SUITABLE FOR USE AS DETERMINED BY THE ENGINEER AND THE AIRPORT.
3. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, DANGER SIGNALS AND LIGHTS FOR THE PROTECTION OF THE WORK AND THE SAFETY OF THE PUBLIC FOR BOTH LAND AND AIR TRAFFIC. SUITABLE WARNING SIGNS AND BARRICADES SHALL BE ILLUMINATED AT NIGHT BY ACCEPTABLE LIGHT UNITS.
4. THE CONTRACTOR SHALL SCHEDULE HIS WORK WELL IN ADVANCE OF ACTUAL OPERATIONS AND SHALL KEEP THE ENGINEER ADVISED OF THE SCHEDULE SO THAT CLOSE COORDINATION CAN BE MAINTAINED WITH THE AIRPORT AND WITH OTHER CONTRACTORS. AT LEAST (3) THREE DAYS NOTICE WILL BE REQUIRED BEFORE CLOSING ANY PORTION OF A TAXIWAY, APRON OR RUNWAY. NOTICE TO AIRMEN (NOTAMS) REQUIRED FOR VARIOUS CONSTRUCTION OPERATIONS WILL BE FILED BY THE AIRPORT.
5. THE CONTRACTOR SHALL EXERT EVERY EFFORT TO MAINTAIN THE SAFETY OF AIRCRAFT TRAFFIC AND THE GENERAL PUBLIC AND SHALL ACQUAINT HIMSELF WITH THE RULES AND REGULATIONS CONCERNING AIRCRAFT TRAFFIC SAFETY. THE REQUIREMENTS OF FAA ADVISORY CIRCULAR 150/5370-2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, AND FAA FACILITIES MAINTENANCE WILL BE MAINTAINED. VIOLATIONS OF THE SAFETY RULES BY THE CONTRACTOR'S WORKERS SHALL RESULT IN THE DISCHARGE OF SUCH WORKERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTINUED VIOLATION OF THE SAFETY RULES AND REGULATIONS BY THE CONTRACTOR, AFTER HAVING BEEN NOTIFIED OF SUCH VIOLATIONS BY THE ENGINEER, SHALL CONSTITUTE GROUNDS FOR SUSPENDING THE CONTRACTOR'S OPERATIONS UNTIL STEPS ARE TAKEN THAT WILL INSURE A SAFE OPERATION.
6. CONSTRUCTION ACTIVITIES WITHIN TAXIWAY OR APRON SAFETY AREAS WHEN THE TAXIWAY OR APRON IS OPEN TO AIRCRAFT TRAFFIC SHALL BEGIN ONLY AFTER APPROVAL OF THE ENGINEER AND THE DIRECTOR OF AIRPORTS. ADEQUATE WINGTIP/EMPENNAGE CLEARANCE BETWEEN THE AIRCRAFT AND EQUIPMENT AND MATERIAL SHALL BE MAINTAINED. EXCAVATIONS, DITCHES OR TRENCHES OR OTHER CONDITIONS SHALL BE CONSPICUOUSLY MARKED AND LIGHTED AS SPECIFIED.
7. THE CONTRACTOR SHALL MINIMIZE AS MUCH AS POSSIBLE DAMAGE TO THE CONTRACTOR'S ACCESS ROUTE. ANY DAMAGE TO THE ACCESS ROUTE WILL BE REPAIRED AT THE CONTRACTOR'S COST. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL IDENTIFY ANY PRE-EXISTING CONDITIONS WITH THE ENGINEER.
8. HAUL ROUTES ARE TO BE MARKED WITH FLAGS AS SPECIFIED IN THE SPECIAL PROVISIONS, PARAGRAPH SP-5, CONSTRUCTION ACTIVITY.

BARRICADE NOTES

1. BARRICADES ARE TO BE PLACED AROUND ALL AREA CLOSED TO AIRCRAFT TRAFFIC. BARRICADES SHALL BE SPACED NO MORE THAN 8'-10' BETWEEN BARRICADES. THE AIRPORT RESERVES THE RIGHT TO MODIFY THE NUMBER AND PLACEMENT OF BARRICADES AS THEY SEE FIT.
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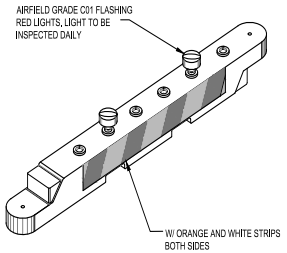
4. BARRICADES SHALL INCLUDE TWO (2) FLASHING RED LIGHTS.



A4 AIRFIELD CONSTRUCTION BARRICADE
NO SCALE

PSC
PARKHILL SMITH & COOPER

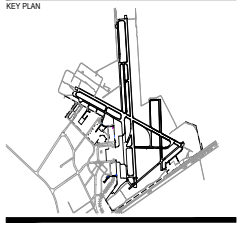
PARKHILL SMITH & COOPER INC. TEXAS REGISTERED ENGINEERING FIRM F-560
LAWRENCE J. VALDEZ
65358
LICENSED PROFESSIONAL ENGINEER
09/20/2019

MIDLAND INTERNATIONAL AIR & SPACE PORT

REHABILITATE NORTHWEST TAXILANE AND EXECUTIVE APRON

MIDLAND, TEXAS

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: MIDLAND PROJECT NO: 9770.18

NORTHWEST TAXILANE PHASING PLAN 1A & 1B

G-004

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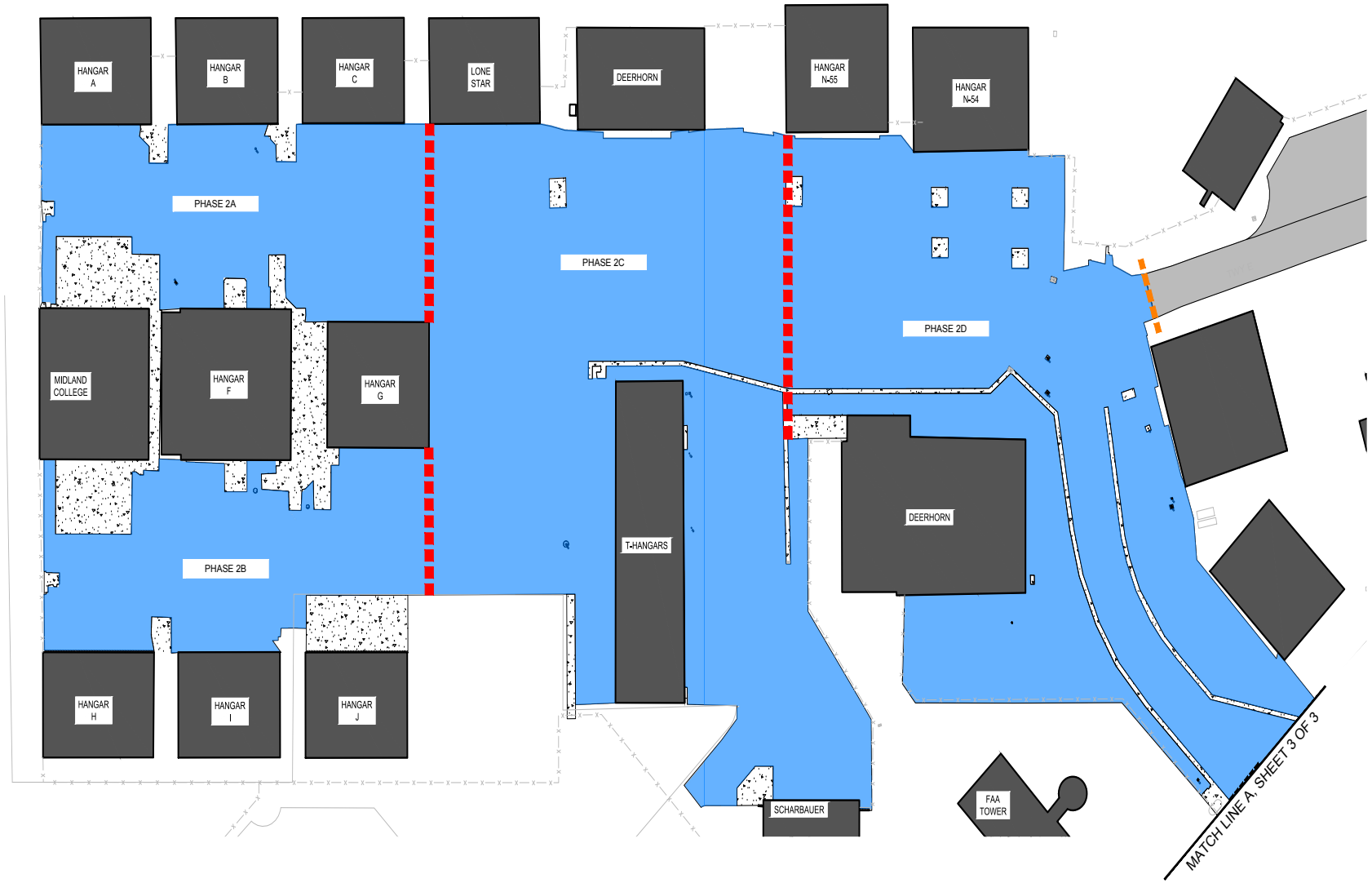

LEGEND

- CHAIN-LINK FENCING
- PROPERTY LINE
- EXISTING CONCRETE PAVEMENT
- ASPHALT PAVEMENT REHABILITATION LIMITS
- EXISTING AIRFIELD ASPHALT PAVEMENT
- BARRICADES
- CONSTRUCTION PHASING LIMITS

GENERAL PHASING NOTES

A. CONTRACT TIME TO COMPLETE ALL PHASES IS 60 CALENDAR DAYS. PHASE 1 SHALL BE 30 DAYS. PHASE 2 SHALL BE 45 DAYS.

GENERAL CONSTRUCTION SAFETY AND INFORMATION

SEE SHEET G-004 FOR GENERAL CONSTRUCTION SAFETY AND INFORMATION NOTES.

N

0 60' 120'

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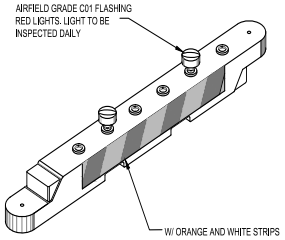


A4 AIRFIELD CONSTRUCTION BARRICADE
NO SCALE

PSC
PARKHILL SMITH & COOPER

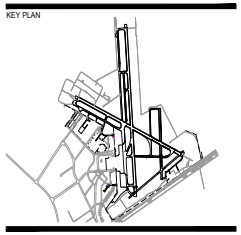
LAWRENCE J. VALDEZ
65358
LICENSED PROFESSIONAL ENGINEER
09/20/2019

MIDLAND INTERNATIONAL AIR & SPACE PORT

REHABILITATE NORTHWEST TAXILANE AND EXECUTIVE APRON

MIDLAND, TEXAS

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: MIDLAND PROJECT NO: 9770.18

EXECUTIVE APRON PHASING PLAN

G-005

9.154

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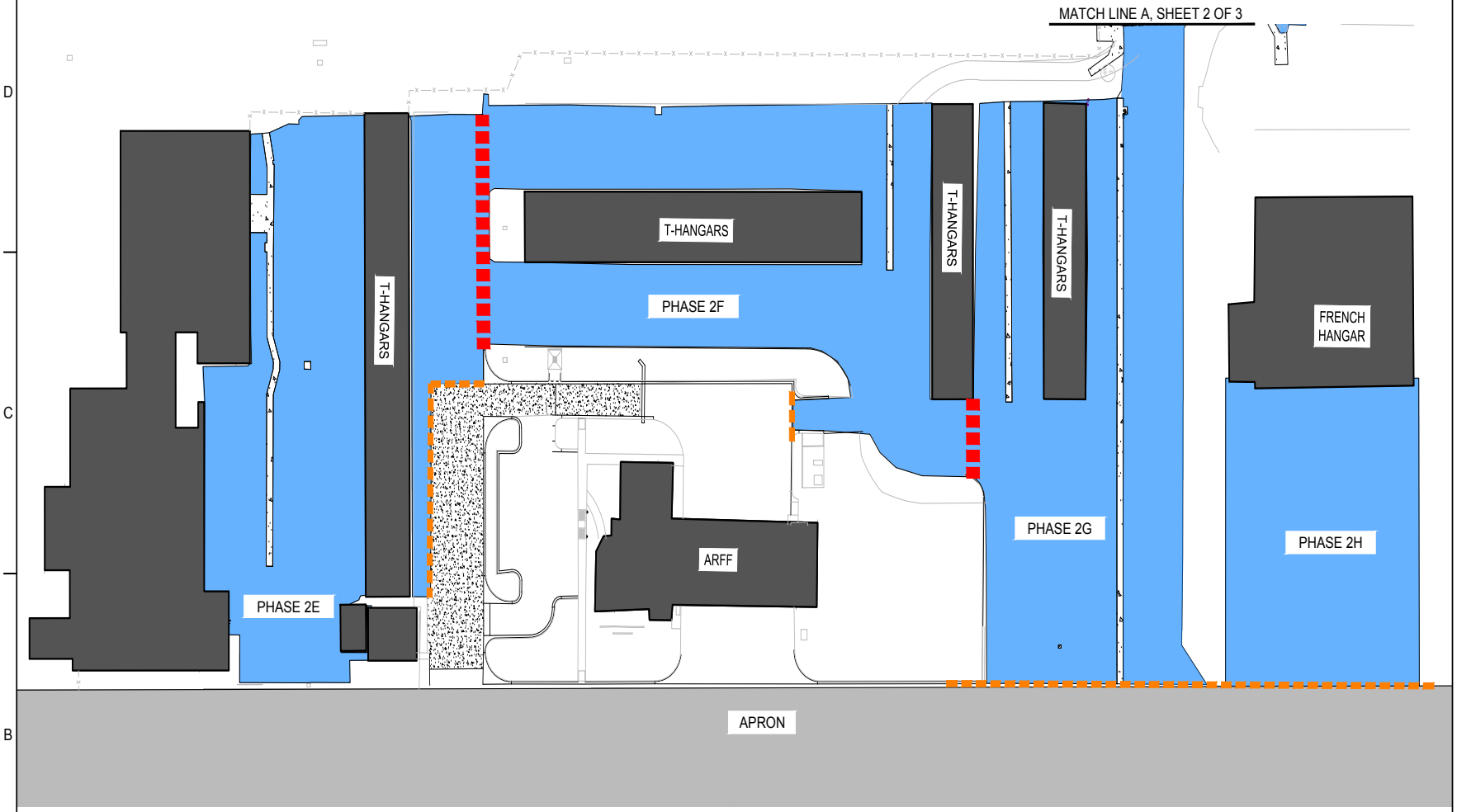

LEGEND

- CHAIN-LINK FENCING
- PROPERTY LINE
- EXISTING CONCRETE PAVEMENT
- ASPHALT PAVEMENT REHABILITATION LIMITS
- EXISTING AIRFIELD ASPHALT PAVEMENT
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- CONSTRUCTION PHASING LIMITS

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GENERAL CONSTRUCTION SAFETY AND INFORMATION

SEE SHEET G-004 FOR GENERAL CONSTRUCTION SAFETY AND INFORMATION NOTES.

N

0 60' 120'

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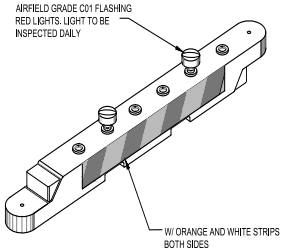


A4 AIRFIELD CONSTRUCTION BARRICADE
NO SCALE

PARKHILL SMITH & COOPER

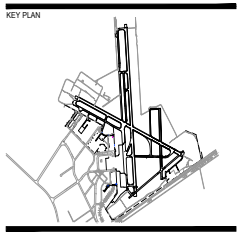
LAWRENCE J. VALDEZ
65358
LICENSED PROFESSIONAL ENGINEER
09/20/2019

MIDLAND INTERNATIONAL AIR & SPACE PORT

REHABILITATE NORTHWEST TAXILANE AND EXECUTIVE APRON

MIDLAND, TEXAS

KEY PLAN



NO	DATE	DESCRIPTION

ISSUING OFFICE: MIDLAND PROJECT NO: 9770.18

EXECUTIVE APRON PHASING PLAN

G-006

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APPENDIX B

FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION (BLANK)

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

§ 77.7 Form and time of notice.

(a) If you are required to file notice under §77.9, you must submit to the FAA a completed FAA Form 7460–1, Notice of Proposed Construction or Alteration. FAA Form 7460–1 is available at FAA regional offices and on the Internet.

(b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.

(c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.

(d) If you propose construction or alteration to an existing structure that exceeds 2,000 ft. in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.

(e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460–1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

§ 77.9 Construction or alteration requiring notice.

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

(a) Any construction or alteration that is more than 200 ft. AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177
Fax: (817) 222-5920

Website: https://oeaaa.faa.gov

INSTRUCTIONS FOR COMPLETING FAA FORM 7460-1

PLEASE TYPE or PRINT

ITEM #1. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #2. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #3. New Construction would be a structure that has not yet been built.

Alteration is a change to an existing structure such as the addition of a side mounted antenna, a change to the marking and lighting, a change to power and/or frequency, or a change to the height. The nature of the alteration shall be included in ITEM #21 "Complete Description of Proposal".

Existing would be a correction to the latitude and/or longitude, a correction to the height, or if filing on an existing structure which has never been studied by the FAA. The reason for the notice shall be included in ITEM #21 "Complete Description of Proposal".

ITEM #4. If Permanent, so indicate. If Temporary, such as a crane or drilling derrick, enters the estimated length of time the temporary structure will be up.

ITEM #5. Enter the date that construction is expected to start and the date that construction should be completed.

ITEM #6. Please indicate the type of structure. DO NOT LEAVE BLANK.

ITEM #7. In the event that obstruction marking and lighting is required, please indicate type desired. If no preference, check "other" and indicate "no preference" DO NOT LEAVE BLANK. NOTE: High Intensity lighting shall be used only for structures over 500' AGL. In the absence of high intensity lighting for structures over 500' AGL, marking is also required.

ITEM #8. If this is an existing tower that has been registered with the FCC, enter the FCC Antenna Structure Registration number here.

ITEM #9 and #10. Latitude and longitude must be geographic coordinates, accurate to within the nearest second or to the nearest hundredth of a second if known. Latitude and longitude derived solely from a hand-held G P S instrument is NOT acceptable. A hand-held GPS is only accurate to within 100 meters (328 feet) 95 percent of the time. This data, when plotted, should match the site depiction submitted under ITEM #20.

ITEM #11. NAD 83 is preferred; however, latitude and longitude may be submitted in NAD 27. Also, in some geographic areas where NAD 27 and NAD 83 are not available other datum may be used. It is important to know which datum is used. DO NOT LEAVE BLANK.
ITEM #12. Enter the name of the nearest city and state to the site. If the structure is or will be in a city, enter the name of that city and state.

ITEM #13. Enter the full name of the nearest public-use (not private-use) airport or heliport or military airport or heliport to the site.

ITEM #14. Enter the distance from the airport or heliport listed in #13 to the structure.

ITEM #15. Enter the direction from the airport or heliport listed in #13 to the structure.

ITEM #16. Enter the site elevation above mean sea level and expressed in whole feet rounded to the nearest foot (e.g. 17'3" rounds to 17', 17'6" rounds to 18'). This data should match the ground contour elevations for site depiction submitted under ITEM #20.
ITEM #17. Enter the total structure height above ground level in whole feet rounded to the next highest foot (e.g. 17'3" rounds to 18'). The total structure height shall include anything mounted on top of the structure, such as antennas, obstruction lights, lightning rods, etc.

ITEM #18. Enter the overall height above mean sea level and expressed in whole feet. This will be the total of ITEM #16 + ITEM #17.

ITEM #19. If an FAA aeronautical study was previously conducted, enter the previous study number.

ITEM #20. Enter the relationship of the structure to roads, airports, prominent terrain, existing structures, etc. Attach an 8-1/2" x 11" non-reduced copy of the appropriate 7.5 minute U.S. Geological Survey (USGS) Quadrangle Map MARKED WITH A PRECISE INDICATION OF THE SITE LOCATION. To obtain maps, contact USGS at 1-888-275-8747 or via internet at "http://store.usgs.gov". If available, attach a copy of a documented site survey with the surveyor's certification stating the amount of vertical and horizontal accuracy in feet.

ITEM #21.
- For transmitting stations, include maximum effective radiated power (ERP) and all frequencies.
- For antennas, include the type of antenna and center of radiation (Attach the antenna pattern, if available).
- For microwave, include azimuth relative to true north.
- For overhead wires or transmission lines, include size and configuration of wires and their supporting structures (Attach depiction).
- For each pole/support, include coordinates, site elevation, and structure height above ground level or water.
- For buildings, include site orientation, coordinates of each corner, dimensions, and construction materials.
- For alterations, explain the alteration thoroughly.
- For existing structures, thoroughly explain the reason for notifying the FAA (e.g. corrections, no record or previous study, etc.).

Filing this information with the FAA does not relieve the sponsor of this construction or alteration from complying with any other federal, state or local rules or regulations. If you are not sure what other rules or regulations apply to your proposal, contact local/state aviation's and zoning authorities.

Paperwork Reduction Work Act Statement: This information is collected to evaluate the effect of proposed construction or alteration on air navigation and is not confidential. Providing this information is mandatory or anyone proposing construction or alteration that meets or exceeds the criteria contained in 14 CFR, part 77. We estimate that the burden of this collection is an average 19 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB control number associated with this collection is 2120-0001. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, ASP-110.

Please Type or Print on This Form

Form Approved OMB No.2120-0001
Expiration Date: 10/31/2017

U.S. Department of Transportation
Federal Aviation Administration

Failure To Provide All Requested Information May Delay Processing of Your Notice

Notice of Proposed Construction or Alteration

FOR FAA USE ONLY

Aeronautical Study Number

1. Sponsor *(person, company, etc. proposing this action):*

Attn. of:

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

2. Sponsor's Representative *(if other than #1):*

Attn. of:

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

3. Notice of: ☐ New Construction ☐ Alteration ☐ Existing

4. Duration: ☐ Permanent ☐ Temporary (___ months, ____days)

5. Work Schedule: Beginning _____ End _____

6. Type: ☐ Antenna Tower ☐ Crane ☐ Building ☐ Power Line
☐ Landfill ☐ Water Tank ☐ Other _____

7. Marking/Painting and/or Lighting Preferred:

☐ Red Lights and Paint
☐ White-Medium Intensity
☐ White -High Intensity
☐ Dual - Red and Medium Intensity
☐ Dual - Red and high Intensity
☐ Other

8. FCC Antenna Structure Registration Number *(if applicable)*:

_____

9. Latitude: _____ 0 _____ , _____ , _____ "

10. Longitude: _____ 0 _____ , _____ , _____

11. Datum: ☐ NAD 83 ☐ NAD 27 ☐ Other

12. Nearest: City: _____ State _____

13. Nearest *Public-use* *(not private-use)* or Military Airport or Heliport:

_____

14. Distance from #13. to Structure: _____

15. Direction from #13. to Structure: _____

16. Site Elevation *(AMSL)*: _____ ft.

17. Total Structure Height *(AGL)*: _____ ft.

18. Overall Height (#16 + #17) *(AMSL)*: _____ ft.

19. Previous FAA Aeronautical Study Number *(if applicable)*:

_____-OE

20. Description of Location: *(Attach a USGS 7.5 minute Quadrangle Map with the precise site marked and any certified survey)*

21. Complete Description of Proposal:

Frequency/Power (kW)	

Notice is required by 14 Code of Federal Regulations, part 77 pursuant to 49 U.S.C., Section 44718. Persons who knowingly and willingly violate the notice requirements of part 77 are subject to a civil penalty of $1,000 per day until the notice is received, pursuant to 49 U.S.C., Section 46301(a)

I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking & lighting standards as necessary.

Date	Typed or Printed Name and Title of Person Filing Notice	Signature

APPENDIX C

ADVISORY CIRCULAR 150/5370-2G, OPERATING SAFETY ON AIRPORTS DURING CONSTRUCTION

U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 12/13/2017 **Initiated By:** AAS-100	**AC No:** 150/5370-2G **Change:**

1 **Purpose.**

This AC sets forth guidelines for operational safety on airports during construction.

2 **Cancellation.**

This AC cancels AC 150/5370-2F, *Operational Safety on Airports during Construction*, dated September 29, 2011.

3 **Application.**

This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*. For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP). See Grant Assurance No. 34, *Policies, Standards, and Specifications*. While we do not require non-certificated airports without grant agreements or airports using Passenger Facility Charge (PFC) Program funds for construction projects to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

4 **Related Documents.**

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version. Appendix A contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.

5 **Principal Changes.**

The AC incorporates the following principal changes:

1. Notification about impacts to both airport owned and FAA-owned NAVAIDs was added. See paragraph 2.13.5.3, NAVAIDs.

2. Guidance for the use of orange construction signs was added. See paragraph 2.18.4.2, Temporary Signs.
3. Open trenches or excavations may be permitted in the taxiway safety area while the taxiway is open to aircraft operations, subject to restrictions. See paragraph 2.22.3.4, Excavations.
4. Guidance for temporary shortened runways and displaced thresholds has been enhanced. See Figure 2-1 and Figure 2-2.
5. Figures have been improved and a new Appendix F on the placement of orange construction signs has been added.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the "ALT" and " ←" keys simultaneously.

Figures in this document are schematic representations and are not to scale.

6 **Use of Metrics.**

Throughout this AC, U.S. customary units are used followed with "soft" (rounded) conversion to metric units. The U.S. customary units govern.

7 **Where to Find this AC.**

You can view a list of all ACs at http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

8 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.

John R. Dermody
Director of Airport Safety and Standards

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CHAPTER 1. PLANNING AN AIRFIELD CONSTRUCTION PROJECT

1.1 Overview.

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

1.2 Plan for Safety.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified and their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

1.2.1 Identify Affected Areas.

The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

1.2.2 Describe Current Operations.

Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Approach Category (AAC) and Airplane Design Group (ADG) of the airplanes that operate on each runway; the ADG and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums;

[1] Find Taxiway Design Group information in AC 150/5300-13, *Airport Design.*

available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System (SMGCS) plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

1.2.3 Allow for Temporary Changes to Operations.

To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways, and other changes. An example of a table showing temporary operations versus current operations is shown in Appendix E.

1.2.4 Take Required Measures to Revise Operations.

Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary widely among airports, this AC presents general guidance on those subjects.

1.2.5 Manage Safety Risk.

The FAA is committed to incorporating proactive safety risk management (SRM) tools into its decision-making processes. FAA Order 5200.11, *FAA Airports (ARP) Safety Management System (SMS)*, requires the FAA to conduct a Safety Assessment for certain triggering actions. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA determine whether a Safety Assessment is required prior to FAA approval of the CSPP. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for a Safety Risk Assessment. If the FAA requires an assessment, the airport operator must at a minimum:

1. Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.
2. Provide documents identified by the FAA as necessary to conduct SRM.
3. Participate in the SRM process for airport projects.
4. Provide a representative to participate on the SRM panel.

5. Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

1.3 **Develop a Construction Safety and Phasing Plan (CSPP).**

Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix A for a list of related reading material.

1.3.1 List Requirements.

A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or located on an airport certificated under Part 139. For on-airfield construction projects at Part 139 airports funded without AIP funds, the preparation of a CSPP represents an acceptable method the certificate holder may use to meet Part 139 requirements during airfield construction activity. As per FAA Order 5200.11, projects that require Safety Assessments do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 1.2.5).

1.3.2 Prepare a Safety Plan Compliance Document (SPCD).

The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

1.3.3 Assume Responsibility for the CSPP.

The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

1.4 Who Is Responsible for Safety During Construction?

1.4.1 Establish a Safety Culture.

Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others, such as military personnel at any airport supporting military operations (e.g. national guard or a joint use facility). Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

1.4.2 Assess Airport Operator's Responsibilities.

An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

1.4.2.1 Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

1.4.2.2 Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

1.4.2.3 Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

1.4.2.4 Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

1.4.2.5 Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

1.4.2.6 Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

1.4.2.7 Ensure construction personnel know applicable airport procedures and changes to those procedures that may affect their work.

1.4.2.8 Ensure that all temporary construction signs are located per the scheduled list for each phase of the project.

1.4.2.9 Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

1.4.2.10 Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

1.4.2.11 At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

1.4.2.12 Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.2.13 Take immediate action to resolve safety deficiencies.

1.4.2.14 At airports subject to 49 CFR Part 1542, *Airport Security*, ensure construction access complies with the security requirements of that regulation.

1.4.2.15 Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

1.4.2.16 Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

1.4.2.17 Ensure prompt transmission of the Airport Sponsor Strategic Event Submission, FAA Form 6000-26, located at https://oeaaa.faa.gov/oeaaa/external/content/AIRPORT_SPONSOR_STRATEGIC_EVENT_SUBMISSION_FORM.pdf, to assure proper coordination for NAS Strategic Interruption per Service Level Agreement with ATO.

1.4.2.18 Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. The FAA Airports Regional or District office will determine if further coordination within the FAA is needed. Coordinate with appropriate local and other federal government agencies, such as Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Transportation Security Administration (TSA), and the state environmental agency.

1.4.3 Define Construction Contractor's Responsibilities.

The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

1.4.3.1 Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

1.4.3.2 Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

1.4.3.3 Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

1.4.3.4 Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.

1.4.3.5 Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.3.6 Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

1.4.3.7 Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

1.4.3.8 Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

1.4.3.9 Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.

1.4.3.10 Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

1.4.4 Define Tenant's Responsibilities.

If planning construction activities on leased property, Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction are strongly encouraged to:

1. Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator. The airport operator may forgo a complete CSPP submittal and instead incorporate appropriate operational safety principles and measures addressed in the advisory circular within their tenant lease agreements.
2. In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval issued prior to issuance of a Notice to Proceed.
3. Ensure that construction personnel are familiar with safety procedures and regulations on the airport during all phases of the construction.
4. Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.
5. Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
6. Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.
7. Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, as specified in the CSPP and SPCD.
8. Ensure prompt submittal through the airport operator of Form 7460-1 for conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.
9. Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

CHAPTER 2. CONSTRUCTION SAFETY AND PHASING PLANS

2.1 Overview.

Aviation safety is the primary consideration at airports, especially during construction. The airport operator's CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

2.2 Assume Responsibility.

Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

2.3 Submit the CSPP.

Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 × 11 inch or 11 × 17 inch format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

2.3.1 Submit an Outline/Draft.

By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

2.3.2 Submit a CSPP.

The CSPP should be formally submitted for FAA approval when the project design is 80 percent to 90 percent complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

2.3.3 Submit an SPCD.

The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

2.3.4 Submit CSPP Revisions.

All revisions to a previously approved CSPP must be re-submitted to the FAA for review and approval/disapproval action.

2.4 Meet CSPP Requirements.

2.4.1 To the extent possible, the CSPP should address the following as outlined in Chapter 3, Guidelines for Writing a CSPP. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
    a. Contractor progress meetings.
    b. Scope or schedule changes.
    c. FAA ATO coordination.
2. Phasing.
    a. Phase elements.
    b. Construction safety drawings.
3. Areas and operations affected by the construction activity.
    a. Identification of affected areas.
    b. Mitigation of effects.
4. Protection of navigation aids (NAVAIDs).
5. Contractor access.
    a. Location of stockpiled construction materials.
    b. Vehicle and pedestrian operations.
6. Wildlife management.
    a. Trash.
    b. Standing water.
    c. Tall grass and seeds.
    d. Poorly maintained fencing and gates.
    e. Disruption of existing wildlife habitat.
7. Foreign Object Debris (FOD) management.
8. Hazardous materials (HAZMAT) management.
9. Notification of construction activities.

a. Maintenance of a list of responsible representatives/ points of contact.

b. NOTAM.

c. Emergency notification procedures.

d. Coordination with ARFF Personnel.

e. Notification to the FAA.

10. Inspection requirements.

a. Daily (or more frequent) inspections.

b. Final inspections.

11. Underground utilities.

12. Penalties.

13. Special conditions.

14. Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.

a. General.

b. Markings.

c. Lighting and visual NAVAIDs.

d. Signs, temporary, including orange construction signs, and permanent signs.

15. Marking and signs for access routes.

16. Hazard marking and lighting.

a. Purpose.

b. Equipment.

17. Work zone lighting for nighttime construction (if applicable).

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.

a. Runway Safety Area (RSA).

b. Runway Object Free Area (ROFA).

c. Taxiway Safety Area (TSA). Provide details for any adjustments to Taxiway Safety Area width to allow continued operation of smaller aircraft. See paragraph 2.22.3.

d. Taxiway Object Free Area (TOFA). Provide details for any continued aircraft operations while construction occurs within the TOFA. See paragraph 2.22.4.

e. Obstacle Free Zone (OFZ).

f. Runway approach/departure surfaces.

19. Other limitations on construction.

a. Prohibitions.

b. Restrictions.

2.4.2 The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

1. Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
2. Phasing. Discuss proposed construction schedule elements, including:
   a. Duration of each phase.
   b. Daily start and finish of construction, including "night only" construction.
   c. Duration of construction activities during:
      i. Normal runway operations.
      ii. Closed runway operations.
      iii. Modified runway "Aircraft Reference Code" usage.
3. Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
4. Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.
5. Contractor access. Provide the following:
   a. Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   b. Listing of individuals requiring driver training (for certificated airports and as requested).
   c. Radio communications.
      i. Types of radios and backup capabilities.
      ii. Who will be monitoring radios.
      iii. Who to contact if the ATCT cannot reach the contractor's designated person by radio.

d. Details on how the contractor will escort material delivery vehicles.

6. Wildlife management. Discuss the following:
   a. Methods and procedures to prevent wildlife attraction.
   b. Wildlife reporting procedures.
7. Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.
8. Hazardous Materials (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.
9. Notification of construction activities. Provide the following:
   a. Contractor points of contact.
   b. Contractor emergency contact.
   c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   d. Batch plant details, including 7460-1 submittal.
10. Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.
11. Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.
12. Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.
13. Special conditions. Discuss proposed actions for each special condition identified in the CSPP.
14. Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
   a. Equipment and methods for covering signage and airfield lights.
   b. Equipment and methods for temporary closure markings (paint, fabric, other).
   c. Temporary orange construction signs.
   d. Types of temporary Visual Guidance Slope Indicators (VGSI).
15. Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.
16. Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.
17. Work zone lighting for nighttime construction (if applicable). Discuss proposed equipment, locations, aiming, and shielding to prevent interference with air traffic control and aircraft operations.

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
    a. Equipment and methods for maintaining Taxiway Safety Area standards.
    b. Equipment and methods to ensure the safe passage of aircraft where Taxiway Safety Area or Taxiway Object Free Area standards cannot be maintained.
    c. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
19. Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

2.5 **Coordination.**

Airport operators, or tenants responsible for design, bidding and conducting construction on their leased properties, should ensure at all project developmental stages, such as predesign, prebid, and preconstruction conferences, they capture the subject of airport operational safety during construction (see AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects*). In addition, the following should be coordinated as required:

2.5.1 Progress Meetings.

Operational safety should be a standing agenda item for discussion during progress meetings throughout the project developmental stages.

2.5.2 Scope or Schedule Changes.

Changes in the scope or duration at any of the project stages may require revisions to the CSPP and review and approval by the airport operator and the FAA (see paragraph 1.4.2.17).

2.5.3 FAA ATO Coordination.

Early coordination with FAA ATO is highly recommended during the design phase and is required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. Formal agreements between the airport operator and appropriate FAA offices are recommended. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See paragraph 2.13.5.3.2 for required FAA notification regarding FAA-owned NAVAIDs.)

2.6 **Phasing.**

Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In this case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

2.6.1 Phase Elements.

For each phase the CSPP should detail:

- Areas closed to aircraft operations.
- Duration of closures.
- Taxi routes and/or areas of reduced TSA and TOFA to reflect reduced ADG use.
- ARFF access routes.
- Construction staging, disposal, and cleanout areas.
- Construction access and haul routes.
- Impacts to NAVAIDs.
- Lighting, marking, and signing changes.
- Available runway length and/or reduced RSA and ROFA to reflect reduced ADG use.
- Declared distances (if applicable).
- Required hazard marking, lighting, and signing.
- Work zone lighting for nighttime construction (if applicable).
- Lead times for required notifications.

2.6.2 Construction Safety Drawings.

Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should also be included in the contract drawing package.

2.7 **Areas and Operations Affected by Construction Activity.**

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA ATO will support operational simulations. See Appendix E for an example of a table showing temporary operations versus current operations. The tables in Appendix E can be useful for coordination among all interested parties, including FAA Lines of Business.

2.7.1 Identification of Affected Areas.

Identifying areas and operations affected by the construction helps to determine possible safety problems. The affected areas should be identified in the construction safety drawings for each construction phase. (See paragraph 2.6.2.) Of particular concern are:

2.7.1.1 **Closing, or Partial Closing, of Runways, Taxiways and Aprons, and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or takeoff in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is normally available for take-off in the direction of the displacement and for landing and takeoff in the opposite direction. Misunderstanding this difference, may result in issuance of an inaccurate NOTAM, and can lead to a hazardous condition.

2.7.1.1.1 Partially Closed Runways.

The temporarily closed portion of a partially closed runway will generally extend from the threshold to a taxiway that may be used for entering and exiting the runway. If the closed portion extends to a point between taxiways, pilots will have to back-taxi on the runway, which is an undesirable operation. See Figure 2-1 for a desirable configuration.

2.7.1.1.2 Displaced Thresholds.

Since the portion of the runway pavement between the permanent threshold and a standard displaced threshold is available for takeoff and for landing in the opposite direction, the temporary displaced threshold need not be located at an entrance/exit taxiway. See Figure 2-2.

2.7.1.2 Closing of aircraft rescue and fire fighting access routes.

2.7.1.3 Closing of access routes used by airport and airline support vehicles.

2.7.1.4 Interruption of utilities, including water supplies for fire fighting.

2.7.1.5 Approach/departure surfaces affected by heights of objects.

2.7.1.6 Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

Figure 2-1. Temporary Partially Closed Runway

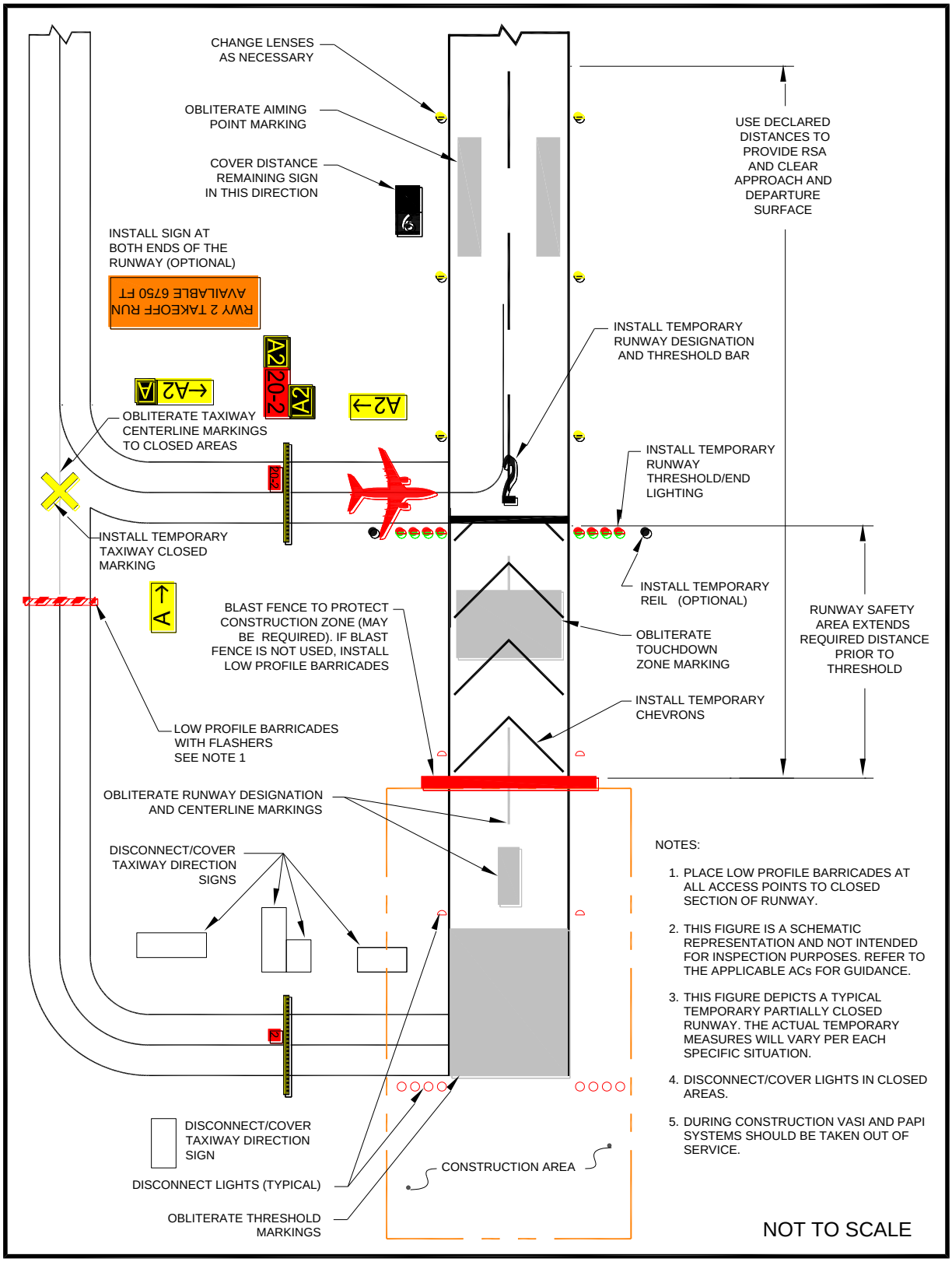
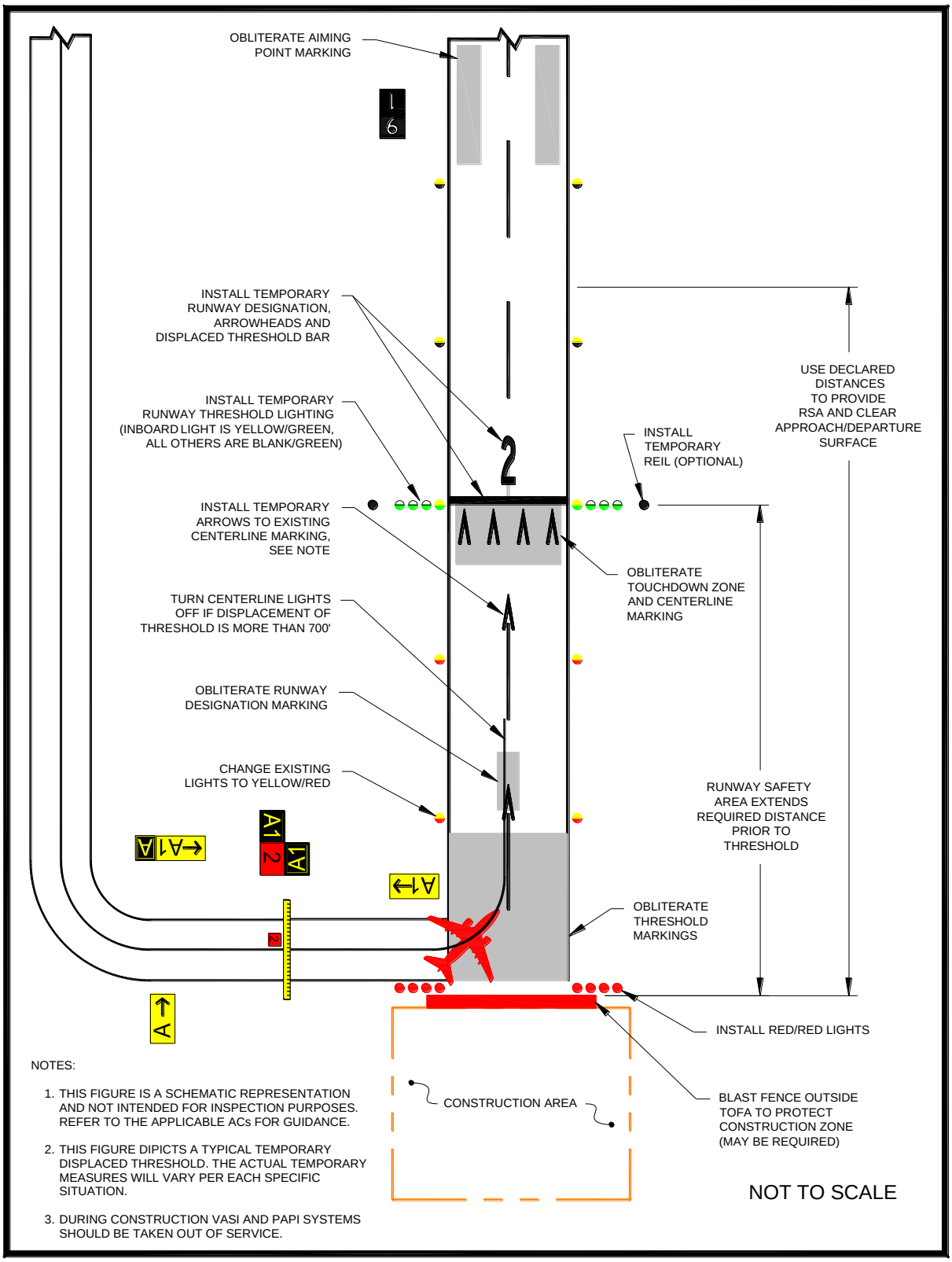


Figure 2-2. Temporary Displaced Threshold



Note: See paragraph 2.18.2.5.

2.7.2 Mitigation of Effects.

Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

2.7.2.1 Temporary changes to runway and/or taxi operations.

2.7.2.2 Detours for ARFF and other airport vehicles.

2.7.2.3 Maintenance of essential utilities.

2.7.2.4 Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

2.8 Navigation Aid (NAVAID) Protection.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 2.13.5.3.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 2.13.2). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 2.13.5.3.)

2.9 Contractor Access.

The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

2.9.1 Location of Stockpiled Construction Materials.

Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 2.18.2.) This includes determining and

verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage from blowing or tracked material. See paragraphs 2.10 and 2.11.

2.9.2 Vehicle and Pedestrian Operations.

The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, with associated training requirements:

2.9.2.1 **Construction Site Parking.**

Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

2.9.2.2 **Construction Equipment Parking.**

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 2.13.1 for further information.

2.9.2.3 **Access and Haul Roads.**

Determine the construction contractor’s access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul

roads does not interfere with NAVAIDs or approach surfaces of operational runways. Address whether access gates will be blocked or inoperative or if a rally point will be blocked or inaccessible.

2.9.2.4 Marking and lighting of vehicles in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport.*

2.9.2.5 Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

2.9.2.6 Required escorts.

2.9.2.7 **Training Requirements for Vehicle Drivers to Ensure Compliance with the Airport Operator's Vehicle Rules and Regulations.**

Specific training should be provided to vehicle operators, including those providing escorts. See AC 150/5210-20, *Ground Vehicle Operations on Airports*, for information on training and records maintenance requirements.

2.9.2.8 **Situational Awareness.**

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

2.9.2.9 **Two-Way Radio Communication Procedures.**

2.9.2.9.1 General.

The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

1. Airport operations
2. ATCT

3. Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
4. Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

2.9.2.9.2 Areas Requiring Two-Way Radio Communication with the ATCT.

Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

2.9.2.9.3 Frequencies to be Used.

The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

2.9.2.9.4 Proper radio usage, including read back requirements.

2.9.2.9.5 Proper phraseology, including the International Phonetic Alphabet.

2.9.2.9.6 Light Gun Signals.

Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (see "Signs & Markings Vehicle Dashboard Sticker") or obtained from the FAA Airports Regional Office.

2.9.2.10 **Maintenance of the secured area of the airport, including:**

2.9.2.10.1 Fencing and Gates.

Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-

00/52, *Recommended Security Guidelines for Airport Planning and Construction*, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

2.9.2.10.2 Badging Requirements.

Airports subject to 49 CFR Part 1542, *Airport Security*, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

2.10 Wildlife Management.

The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports,* and CertAlert 98-05, *Grasses Attractive to Hazardous Wildlife.* Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

2.10.1 Trash.

Food scraps must be collected from construction personnel activity.

2.10.2 Standing Water.

2.10.3 Tall Grass and Seeds.

Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, *Standards for Specifying Construction of Airports,* Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

2.10.4 Poorly Maintained Fencing and Gates.

See paragraph 2.9.2.10.1.

2.10.5 Disruption of Existing Wildlife Habitat.

While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

2.11 **Foreign Object Debris (FOD) Management.**

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, *Foreign Object Debris (FOD) Management.*

2.12 **Hazardous Materials (HAZMAT) Management.**

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, *Management of Airport Industrial Waste.*

2.13 **Notification of Construction Activities.**

The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

2.13.1 List of Responsible Representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours.

2.13.2 NOTAMs.

Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must either enter the NOTAM into NOTAM Manager, or provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators,* for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 2.7.1.1 about issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

2.13.3 Emergency notification procedures for medical, fire fighting, and police response.

2.13.4 Coordination with ARFF.

The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

1. The deactivation and subsequent reactivation of water lines or fire hydrants, or
2. The rerouting, blocking and restoration of emergency access routes, or
3. The use of hazardous materials on the airfield.

2.13.5 Notification to the FAA.

2.13.5.1 **Part 77.**

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e., cranes, graders, other equipment) on airports. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix A to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

2.13.5.2 **Part 157.**

With some exceptions, Title 14 CFR Part 157, *Notice of Construction, Alteration, Activation, and Deactivation of Airports*, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, *Notice of Landing Area Proposal*, to the nearest FAA Airports Regional or District Office. See Appendix A to download the form.

2.13.5.3 **NAVAIDs.**

For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

2.13.5.3.1 Airport Owned/FAA Maintained.

If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

2.13.5.3.2 FAA Owned.

1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.
2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

2.14 **Inspection Requirements.**

2.14.1 Daily Inspections.

Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix D, Construction Project Daily Safety Inspection Checklist. See also AC 150/5200-18, *Airport Safety Self-Inspection.* Airport operators holding a Part 139 certificate are required to conduct self-inspections during unusual conditions, such as construction activities, that may affect safe air carrier operations.

2.14.2 Interim Inspections.

Inspections should be conducted of all areas to be (re)opened to aircraft traffic to ensure the proper operation of lights and signs, for correct markings, and absence of FOD. The contractor should conduct an inspection of the work area with airport operations personnel. The contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the air traffic control tower be notified to open the area to aircraft operations. The contractor should be required to retain a suitable workforce and the necessary equipment at the work area for any last minute cleanup that may be requested by the airport operator prior to opening the area.

2.14.3 Final Inspections.

New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

2.15 **Underground Utilities.**

The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that "One Call" or "Miss Utility" services do not include FAA ATO/Technical Operations.

2.16 **Penalties.**

The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

2.17 **Special Conditions.**

The CSPP must detail any special conditions that affect the operation of the airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

2.18 **Runway and Taxiway Visual Aids.**

This includes marking, lighting, signs, and visual NAVAIDs. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs that are to continue to perform their functions during construction remain in place and operational. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary. The CSPP must address the following, as appropriate:

2.18.1 General.

Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents and constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact. Items used to secure such markings must be of a color similar to the marking.

2.18.2 Markings.

During the course of construction projects, temporary pavement markings are often required to allow for aircraft operations during or between work periods. During the design phase of the project, the designer should coordinate with the project manager,

airport operations, airport users, the FAA Airports project manager, and Airport Certification Safety Inspector for Part 139 airports to determine minimum temporary markings. The FAA Airports project manager will, wherever a runway is closed, coordinate with the appropriate FAA Flight Standards Office and disseminate findings to all parties. Where possible, the temporary markings on finish grade pavements should be placed to mirror the dimensions of the final markings. Markings must be in compliance with the standards of AC 150/5340-1, *Standards for Airport Markings*, except as noted herein. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 2.18.2.1.2.)

2.18.2.1 **Closed Runways and Taxiways.**

2.18.2.1.1 Permanently Closed Runways.

For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place an X at each end and at 1,000-foot (300 m) intervals. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X.

2.18.2.1.2 Temporarily Closed Runways.

For runways that have been temporarily closed, place an X at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X. See Figure 2-3. See also paragraph 2.18.3.3.

2.18.2.1.3 Partially Closed Runways and Displaced Thresholds.

When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 2.7.1.1 for the difference between partially closed runways and runways with displaced thresholds. Because of the temporary nature of threshold displacement due to construction, it is not necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach. Some of the requirements below may be waived in the cases of low-activity airports and/or short duration changes that are measured in days rather than weeks. Consider whether the presence of an airport traffic

control tower allows for the development of special procedures. Contact the appropriate FAA Airports Regional or District Office for assistance.

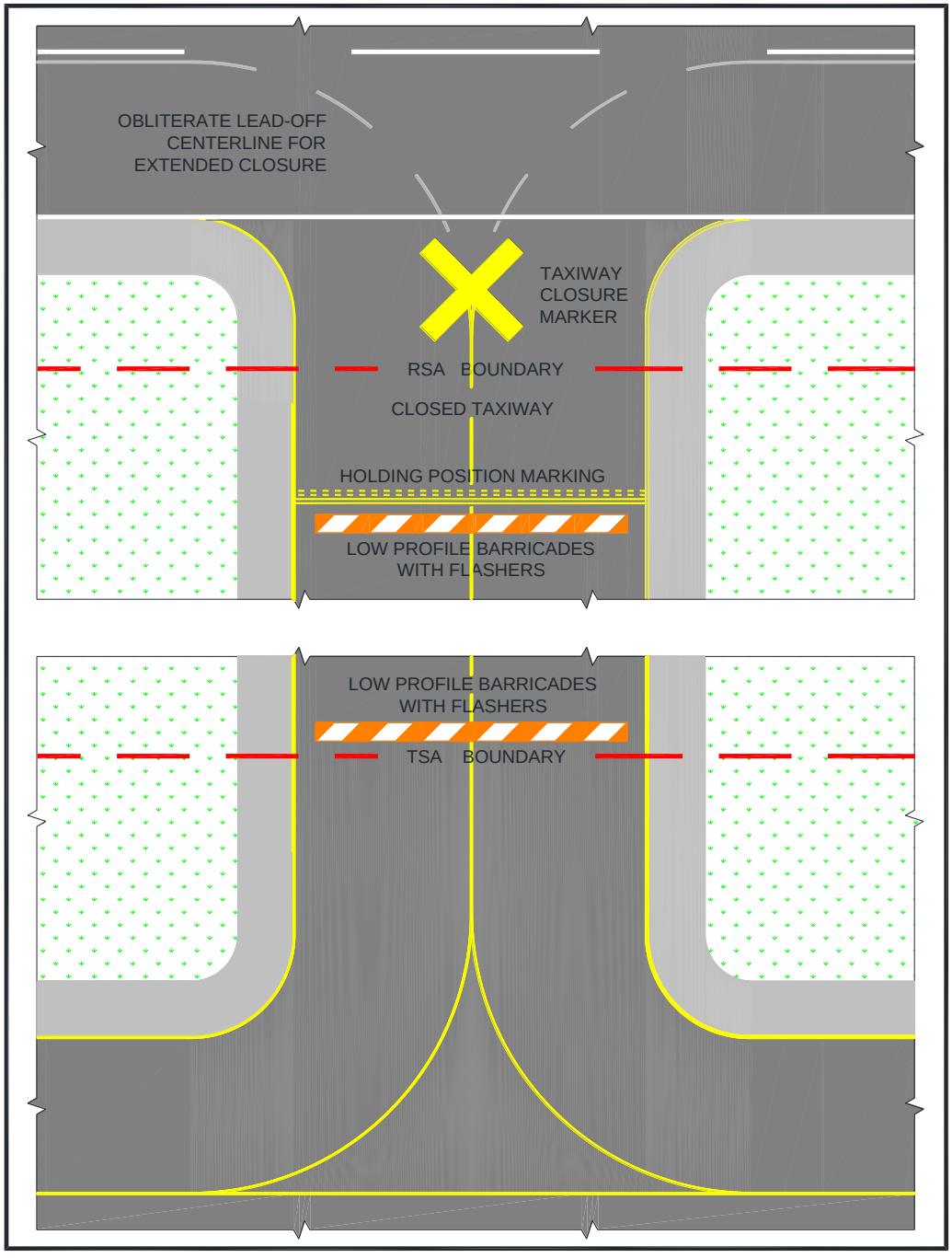
Figure 2-3. Markings for a Temporarily Closed Runway

1. **Partially Closed Runways.** Pavement markings for temporary closed portions of the runway consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1). Obliterate or cover markings prior to the moved threshold. Existing touchdown zone markings beyond the moved threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-4.
2. **Displaced Thresholds.** Pavement markings for a displaced threshold consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1. Obliterate markings prior to the displaced threshold. Existing touchdown zone markings beyond the displaced threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-2.

2.18.2.1.4 Taxiways.

1. **Permanently Closed Taxiways.** AC 150/5300-13 *Airport Design*, notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. See Figure 2-4.

Figure 2-4. Temporary Taxiway Closure



2. **Temporarily Closed Taxiways.** Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section. Always obliterate runway lead-off lines for high speed exits, regardless of the duration of the closure. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed. See Figure 2-4.

2.18.2.1.5 Temporarily Closed Airport.

When the airport is closed temporarily, mark all the runways as closed.

2.18.2.2 If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents. Items used to secure such markings must be of a color similar to the marking.

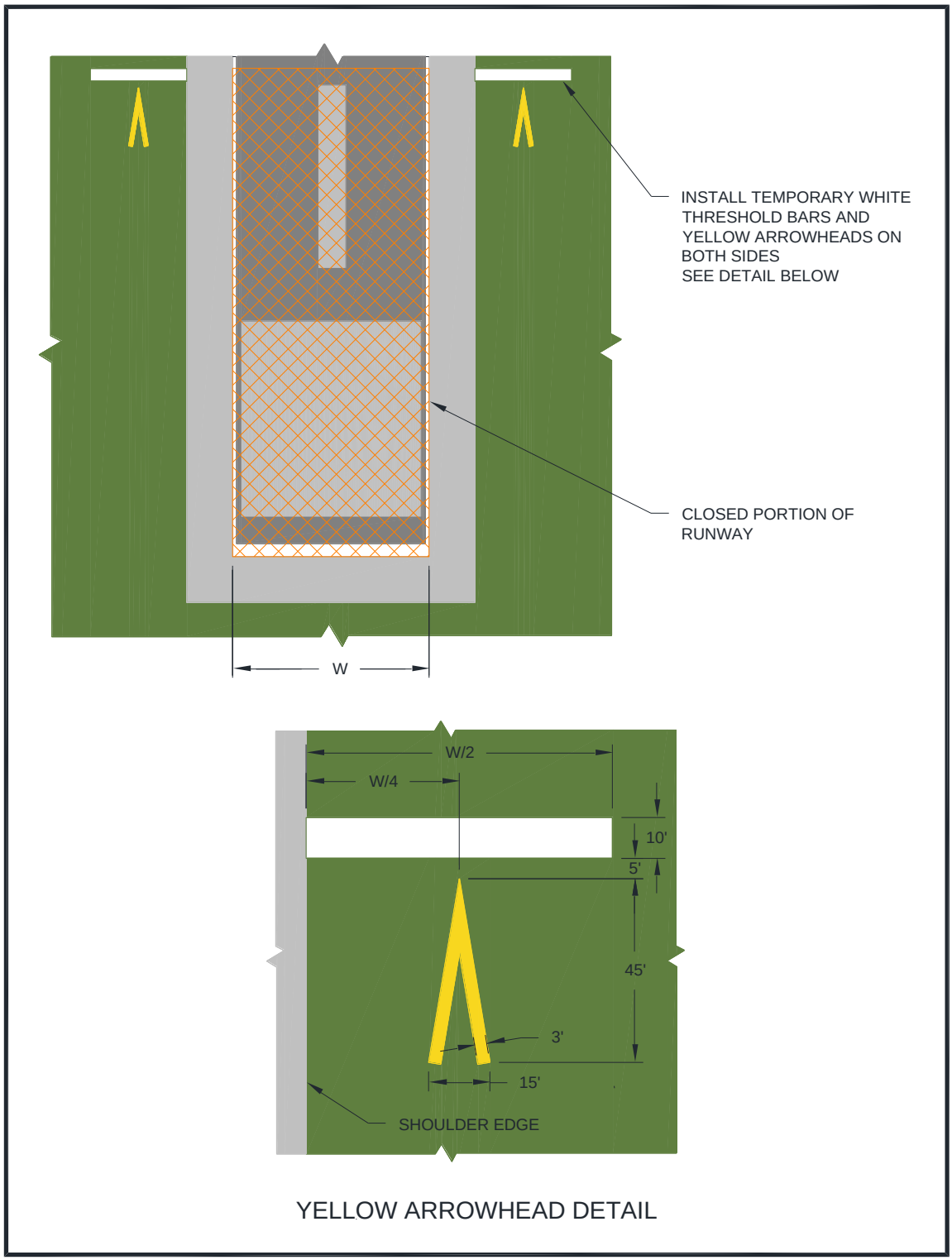
2.18.2.3 It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

2.18.2.4 If it is not possible to install threshold bars, chevrons, and arrows on the pavement, "temporary outboard white threshold bars and yellow arrowheads", see Figure 2-5, may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimensions must be as shown in Figure 2-5. If the markings are not discernible on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

2.18.2.5 The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, "Runway and Taxiway Painting," in AC 150/5370-10), but the dimensions must meet the existing standards. When applying temporary markings at night, it is recommended that the fast curing, Type II paint be used to help offset the higher humidity and cooler temperatures often experienced at night. Diluting the paint will substantially increase cure time and is not recommended. Glass beads are not recommended for temporary markings. Striated markings may also be used for certain temporary markings. AC

150/5340-1, *Standards for Airport Markings*, has additional guidance on temporary markings.

Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads



2.18.3 Lighting and Visual NAVAIDs.

This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting installation must be in conformance with AC 150/5340-30, *Design and Installation Details for Airport Visual Aids,* and fixture design in conformance with AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights.* When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. See AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*, for disconnect procedures and safety precautions. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Maintain mandatory hold signs to operate normally in any situation where pilots or vehicle drivers could mistakenly be in that location. At towered airports certificated under Part 139, holding position signs are required to be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, install a jumper to the taxiway circuit to provide power to the holding position sign for nighttime operations. Where it is not possible to maintain power to signs that would normally be operational, install barricades to exclude aircraft. Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4 illustrate temporary changes to lighting and visual NAVAIDs.

2.18.3.1 **Permanently Closed Runways and Taxiways.**

For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

2.18.3.2 **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.**

If available, use a lighted X, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note that the lighted X must be illuminated at all times that it is on a runway.) The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, *Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure.* For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-6 shows a lighted X by day. Figure 2-7 shows a lighted X at night.

Figure 2-6. Lighted X in Daytime

Figure 2-7. Lighted X at Night

2.18.3.3 **Partially Closed Runways and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially

closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.

2.18.3.3.1 Partially Closed Runways.

Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixtures in such a way as to prevent light leakage. See Figure 2-1.

2.18.3.3.2 Temporary Displaced Thresholds.

Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, blank out centerline lights in the direction of approach or place the centerline lights out of service. If the displacement is over 700 feet, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds. See Figure 2-2.

2.18.3.3.3 Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

2.18.3.3.4 A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 2.18.2.1.3. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, *Specification for L-853, Runway and Taxiway Retroreflective Markers.*

2.18.3.3.5 Temporary threshold lights and runway end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

2.18.3.3.6 Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may

be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

2.18.3.3.7 When runway thresholds are temporarily displaced, reconfigure yellow lenses (caution zone), as necessary, and place the centerline lights out of service.

2.18.3.3.8 Relocate the Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense. See FAA JO 6850.2, *Visual Guidance Lighting Systems,* for installation criteria for FAA owned and operated NAVAIDs.

2.18.3.3.9 Issue a NOTAM to inform pilots of temporary lighting conditions.

2.18.3.4 **Temporarily Closed Taxiways.**

If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), cover the light fixture in a way as to prevent light leakage.

2.18.4 Signs.

To the extent possible, signs must be in conformance with AC 150/5345-44, *Specification for Runway and Taxiway Signs*, and AC 150/5340-18, *Standard for Airport Sign Systems.*

2.18.4.1 **Existing Signs.**

Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

2.18.4.2 **Temporary Signs.**

Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot "information overload," the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, *Guidance for the Assembly and Installation of Temporary Orange Construction Signs.* Many criteria in AC 150/5345-44, *Specification for Runway and Taxiway Signs,* are referenced in the Engineering Brief. Permissible sign legends are:

1. CONSTRUCTION AHEAD,
2. CONSTRUCTION ON RAMP, and
3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

2.18.4.2.1 Takeoff Run Available (TORA) signs.

Recommended: Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position. See EB 93 for sign size and location.

2.18.4.2.2 Sign legends are shown in Figure F-1.

Note: See Figure E-1, Figure E-2, Figure E-3, Figure F-2, and Figure F-3 for examples of orange construction sign locations.

2.19 **Marking and Signs for Access Routes.**

The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, *Frangible Connections,* which may require modification to size and height guidance in the MUTCD.

2.20 **Hazard Marking, Lighting and Signing.**

2.20.1 Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

2.20.2 Equipment.

2.20.2.1 **Barricades.**

Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude aircraft, gaps between barricades must be smaller than the wingspan of the smallest aircraft to be excluded; if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

2.20.2.2 **Lights.**

Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

2.20.2.3 **Supplement Barricades with Signs (for example) As Necessary.**

Examples are “No Entry” and “No Vehicles.” Be aware of the increased effects of wind and jet blast on barricades with attached signs.

2.20.2.4 **Air Operations Area – General.**

Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground. Figure 2-8 and Figure 2-9 show sample barricades with proper coloring and flags.

Figure 2-8. Interlocking Barricades

Figure 2-9. Low Profile Barricades

2.20.2.5 **Air Operations Area – Runway/Taxiway Intersections.**

Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

2.20.2.6 **Air Operations Area – Other.**

Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

2.20.2.7 **Maintenance.**

The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

2.21 **Work Zone Lighting for Nighttime Construction.**

Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Refer to AC 150/5370-10 for minimum illumination levels for nighttime paving projects. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely

illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways.

2.22 **Protection of Runway and Taxiway Safety Areas.**

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (see paragraph 2.13.5) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

2.22.1 Runway Safety Area (RSA).

A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

2.22.1.1 No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. (See AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published, and appropriate NOTAMs issued. See AC 150/5300-13 for guidance on the use of declared distances.

2.22.1.2 The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

2.22.1.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

2.22.1.4 **Excavations.**

2.22.1.4.1 Open trenches or excavations are not permitted within the RSA while the runway is open. Backfill trenches before the runway is opened. If backfilling excavations before the runway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

2.22.1.4.2 Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.1.5 **Erosion Control.**

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.2 Runway Object Free Area (ROFA).

Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

2.22.3 Taxiway Safety Area (TSA).

2.22.3.1 A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Since the width of the TSA is equal to the wingspan of the design aircraft, no construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. Give special consideration to TSA dimensions at taxiway turns and intersections. (see AC 150/5300-13).

2.22.3.2 The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

2.22.3.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

2.22.3.4 **Excavations.**

1. Curves. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.
2. Straight Sections. Open trenches or excavations are not permitted within the TSA while the taxiway is open for unrestricted aircraft operations. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations to allow the safe passage of ARFF equipment and of the heaviest aircraft operating on the taxiway across the trench without causing damage to the equipment or aircraft. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the following restrictions:
   a. Taxiing speed is limited to 10 mph.
   b. Appropriate NOTAMs are issued.
   c. Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.
   d. Low mass, low-profile lighted barricades are installed.
   e. Appropriate temporary orange construction signs are installed.
3. Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.3.5 **Erosion control.**

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.4 Taxiway Object Free Area (TOFA).

Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus, the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

2.22.4.1 The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available. Give special consideration to TOFA dimensions at taxiway turns and intersections.

2.22.4.2 Offset taxiway centerline and edge pavement markings (do not use glass beads) may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting, centerline reflectors, or taxiway edge reflectors are required. Existing lighting that does not coincide with the temporary markings must be taken out of service.

2.22.4.3 Construction activity, including open excavations, may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

2.22.4.3.1 Taxiing speed is limited to 10 mph.

2.22.4.3.2 NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.

2.22.4.3.3 Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.

2.22.4.3.4 If desired, appropriate orange construction signs are installed. See paragraph 2.18.4.2 and Appendix F.

2.22.4.3.5 Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

2.22.4.3.6 Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Due to liability issues, the airport operator should require airlines to provide flaggers for directing taxiing aircraft.

2.22.5 Obstacle Free Zone (OFZ).

In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6 Runway Approach/Departure Areas and Clearways.

All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6.1 Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

2.22.6.2 **Caution About Partial Runway Closures.**

When filing a NOTAM for a partial runway closure, clearly state that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

2.22.6.3 **Caution About Displaced Thresholds.**

Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, or other work within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

2.23 **Other Limitations on Construction.**

The CSPP must specify any other limitations on construction, including but not limited to:

2.23.1 Prohibitions.

2.23.1.1 No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2.23.1.2 No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

2.23.1.3 No use of electrical blasting caps on or within 1,000 feet (300 meters) of the airport property. See AC 150/5370-10.

2.23.2 Restrictions.

2.23.2.1 Construction suspension required during specific airport operations.

2.23.2.2 Areas that cannot be worked on simultaneously.

2.23.2.3 Day or night construction restrictions.

2.23.2.4 Seasonal construction restrictions.

2.23.2.5 Temporary signs not approved by the airport operator.

2.23.2.6 Grades changes that could result in unplanned effects on NAVAIDs.

CHAPTER 3. GUIDELINES FOR WRITING A CSPP

3.1 General Requirements.

The CSPP is a standalone document written to correspond with the subjects outlined in paragraph 2.4. The CSPP is organized by numbered sections corresponding to each subject listed in paragraph 2.4, and described in detail in paragraphs 2.5 - 2.23. Each section number and title in the CSPP matches the corresponding subject outlined in paragraph 2.4 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

3.2 Applicability of Subjects.

Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA ILS cables during trenching operations could be considered FAA ATO coordination (Coordination, paragraph 2.5.3), an area and operation affected by the construction activity (Areas and Operations Affected by the Construction Activity, paragraph 2.7.1.4), a protection of a NAVAID (Protection of Navigational Aids (NAVAIDs), paragraph 2.8), or a notification to the FAA of construction activities (Notification of Construction Activities, paragraph 2.13.5.3.2). However, it is more specifically an underground utility requirement (Underground Utilities, paragraph 2.15). The procedure for protecting underground ILS cables during trenching operations should therefore be described in 2.4.2.11: "The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings." All other applicable sections should include a reference to 2.4.2.11: "ILS cables shall be identified and protected as described in 2.4.2.11" or "See 2.4.2.11 for ILS cable identification and protection requirements." Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

3.3 Graphical Representations.

Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

3.4 **Reference Documents.**

The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor. Where this AC recommends references (e.g. as in paragraph 3.9) the intent is to include a reference to the corresponding section in the CSPP, not to this Advisory Circular.

3.5 **Restrictions.**

The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

3.6 **Coordination.**

Include in this section a detailed description of conferences and meetings to be held both before and during the project. Include appropriate information from AC 150/5370-12. Discuss coordination procedures and schedules for each required FAA ATO Technical Operations shutdown and restart and all required flight inspections.

3.7 **Phasing.**

Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 3.8, as appropriate.

3.8 **Areas and Operations Affected by Construction.**

Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. See Appendix F for sample operational effects tables and figures.

3.9 **NAVAID Protection.**

List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 3.6 for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 3.14 for the

issuance of NOTAMs as required. Include a reference to paragraph 3.16 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 3.19. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

3.10 **Contractor Access.**

This will necessarily be the most extensive section of the CSPP. Provide sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

3.10.1 Location of Stockpiled Construction Materials.

Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 3.11 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 3.12 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

3.10.2 Vehicle and Pedestrian Operations.

While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying HAZMAT vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

3.10.3 Two-Way Radio Communications.

Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor CTAF at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light

signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

3.10.4 Airport Security.

Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

3.11 **Wildlife Management.**

Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 3.10 for security (wildlife) fence integrity maintenance as required.

3.12 **FOD Management.**

In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 3.15 for inspection requirements as required.

3.13 **HAZMAT Management.**

Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Safety Data Sheet (SDS), Material Safety Data Sheet (MSDS) or Product Safety Data Sheet (PSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be identified. Include a reference to paragraph 3.10 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

3.14 **Notification of Construction Activities.**

List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to

Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. Identify the E911 address of the airport and the emergency access route via haul roads to the construction site. Require the contractor to have this information available to all workers. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 3.10. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

3.15 **Inspection Requirements.**

Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) or other airport operator's representative and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

3.16 **Underground Utilities.**

Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 3.14 for notification of utility owners of accidental utility disruption as required.

3.17 **Penalties.**

Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, VPD, and others.

3.18 **Special Conditions.**

Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 3.10 for compliance with airport safety and security measures and for radio communications as required. Include

a reference to paragraph 3.14 for emergency notification of all involved parties, including police/security, ARFF, and medical services.

3.19 **Runway and Taxiway Visual Aids.**

Include marking, lighting, signs, and visual NAVAIDS. Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, *Standards for Airport Markings;* AC 150/5340-18, *Standards for Airport Sign Systems;* and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

3.20 **Marking and Signs for Access Routes.**

Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration MUTCD and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

3.21 **Hazard Marking and Lighting.**

Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 3.14. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

3.22 **Work Zone Lighting for Nighttime Construction.**

If work is to be conducted at night, specify all lighting equipment, including when and where each type of device is to be used. Indicate the direction lights are to be aimed and any directions that aiming of lights is prohibited. Specify any shielding necessary in instances where aiming is not sufficient to prevent interference with air traffic control and aircraft operations. Attach drawings to graphically indicate the placement and aiming of lighting equipment. Where the plan only indicates directions that aiming of lights is prohibited, the placement and positioning of portable lights must be proposed by the Contractor and approved by the airport operator’s representative each time lights are relocated or repositioned.

3.23 **Protection of Runway and Taxiway Safety Areas.**

This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13, as required. Include a reference to paragraph 3.10 for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 3.10 for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide the required Runway Safety Area, include a reference to paragraphs 3.14 and 3.19. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13, as required. Include a reference to paragraph 3.24 for height (i.e., crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional "box" within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

3.24 **Other Limitations on Construction.**

This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e., crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 3.7 for project phasing requirements based on construction limitations as required.

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APPENDIX A. RELATED READING MATERIAL

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

Table A-1. FAA Publications

Number	Title and Description
AC 150/5200-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5210-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program

Number	Title and Description
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	*Specification for L-853, Runway and Taxiway Retroreflective Markers*
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*

Number	Title and Description
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS) Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://www.ecfr.gov/.

Table A-2. Code of Federal Regulation

Number	Title
Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

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APPENDIX B. TERMS AND ACRONYMS

Table B-1. Terms and Acronyms

Term	Definition
Form 7460-1	Notice of Proposed Construction or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. (See guidance available on the FAA web site at https://oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000-26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
AT	Air Traffic
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under

Term	Definition
	the authority of 14 CFR Part 139, *Certification of Airports*.
CFR	Code of Federal Regulations
Construction	The presence of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety and Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris/Damage
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
HMA	Hot Mix Asphalt
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.

Term	Definition
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13 for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicator
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area
SMS	Safety Management System

Term	Definition
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area, or Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicator
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicator (PAPI), visual approach slope indicator (VASI), and pulse light approach slope indicator (PLASI).
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5				
Operational safety is a standing agenda item for construction progress meetings.	2.5				
Scheduling of the construction phases is properly addressed.	2.6				
Any formal agreements are established.	2.5.3				
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1				
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1				
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2				
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3				
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5				
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1				
Temporary changes to taxi operations are addressed.	2.7.2.1				
Detours for ARFF and other airport vehicles are identified.	2.7.2.2				
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3				
Temporary changes to air traffic control procedures are addressed.	2.7.2.4				
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8				
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8				
Protection of NAVAID facilities is addressed.	2.8				
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8				
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1				
Contractor Access					
The CSPP addresses areas to which contractor will have access and how	2.9				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
the areas will be accessed.					
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9				
The location of stockpiled construction materials is depicted on drawings.	2.9.1				
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1				
Requirements for proper stockpiling of materials are included.	2.9.1				
Construction site parking is addressed.	2.9.2.1				
Construction equipment parking is addressed.	2.9.2.2				
Access and haul roads are addressed.	2.9.2.3				
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport,* is included.	2.9.2.4				
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6				
Training requirements for vehicle drivers are addressed.	2.9.2.7				
Two-way radio communications procedures are described.	2.9.2.9				
Maintenance of the secured area of the airport is addressed.	2.9.2.10				
Wildlife Management					
The airport operator’s wildlife management procedures are addressed.	2.10				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11				
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12				
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13				
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1				
A list of local ATO/Technical Operations personnel is included.	2.13.1				
A list of ATCT managers on duty is included.	2.13.1				
A list of authorized representatives to the OCC is included.	2.13.2				
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9				
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2				
Emergency notification procedures for medical, fire fighting, and police	2.13.3				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
response are addressed.					
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4				
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5				
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2				
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2				
Final inspections at certificated airports are specified when required.	2.14.3				
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15				
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16				
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17				
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1				
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2				
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2				
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids;* AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3				
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2				
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs;* AC 50/5340-18, *Standards for Airport Sign Systems;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4				
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2				
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1				
The CSPP considers less obvious construction-related hazards.	2.20.1				
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1				
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1				
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2				
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3				
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3				
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5				
Markings for temporary closures are specified.	2.20.2.5				
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21				
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1				
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2				
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3				
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4				
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4				
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4				
Grading and soil erosion control to maintain RSA/TSA standards are	2.22.3.5				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
addressed.					
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2				
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3				
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4				
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6				
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6				
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2				
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3				

APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

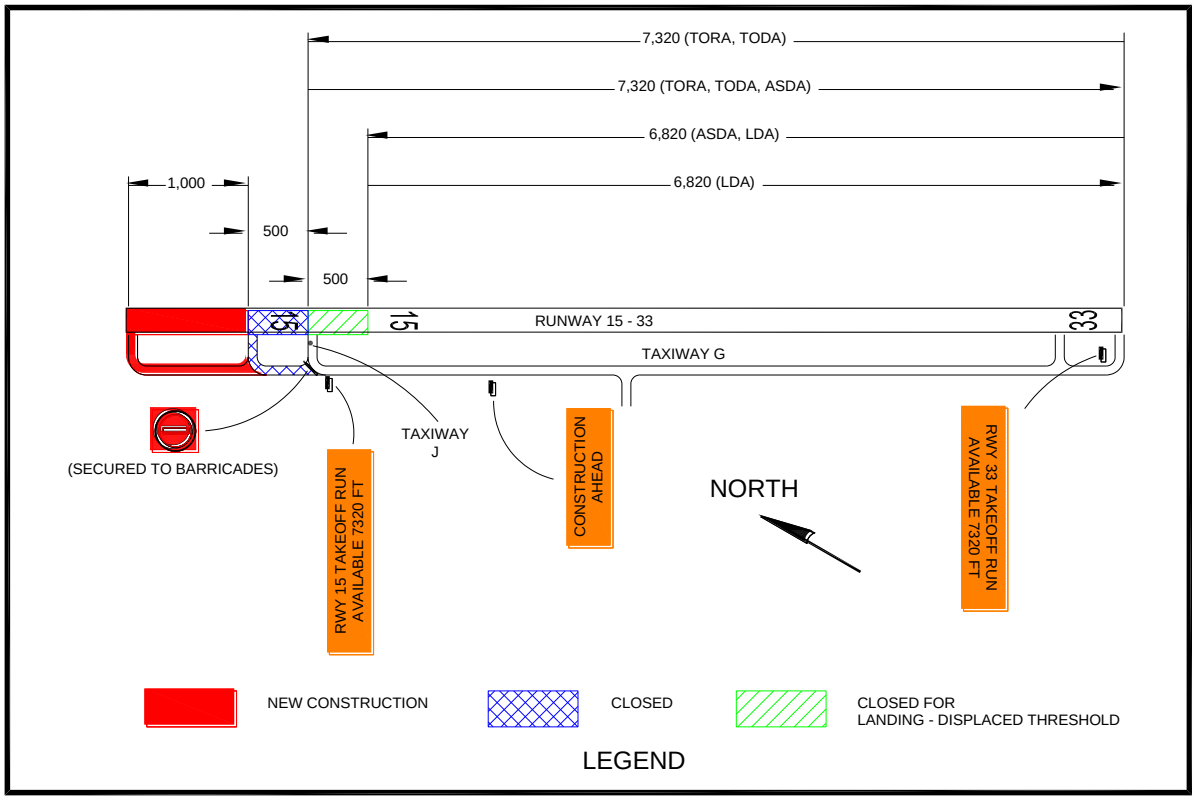
APPENDIX E. SAMPLE OPERATIONAL EFFECTS TABLE

E.1 **Project Description.**

Runway 15-33 is currently 7820 feet long, with a 500 foot stopway on the north end. This project will remove the stopway and extend the runway 1000 feet to the north and 500 feet to the south. Finally, the existing portion of the runway will be repaved. The runway 33 glide slope will be relocated. The new runway 33 localizer has already been installed by FAA Technical Operations and only needs to be switched on. Runway 15 is currently served only by a localizer, which will remain in operation as it will be beyond the future RSA. Appropriate NOTAMS will be issued throughout the project.

E.1.1 During Phase I, the runway 15 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 15 takeoff and the departure end of runway 33 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 33 will be adjusted to provide the required RSA and applicable departure surface. Excavation near Taxiway G will require its ADG to be reduced from IV to III. See Figure E-1.

Figure E-1. Phase I Example

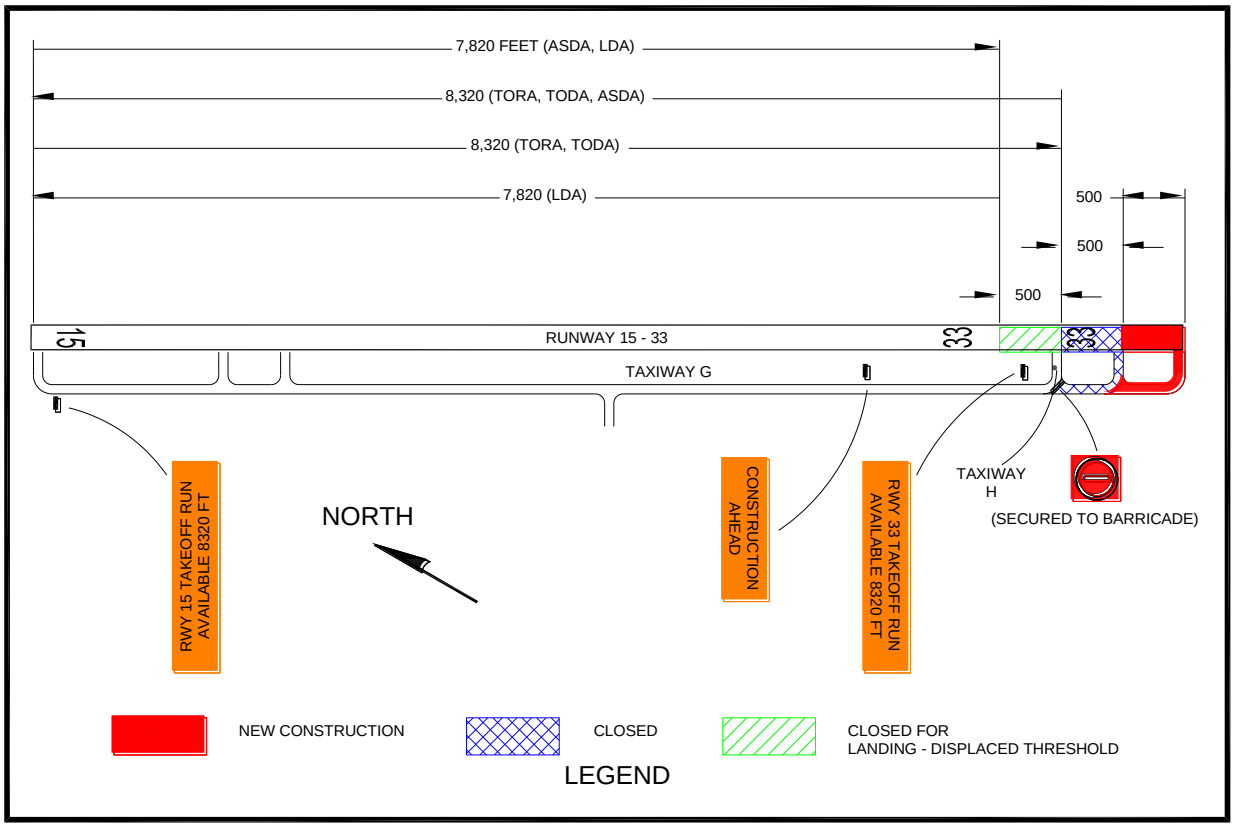


Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 33 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.2 During Phase II, the runway 33 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 33 takeoff and the departure end of runway 15 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 15 will be adjusted to provide the required RSA and applicable departure surface. See Figure E-2.

Figure E-2. Phase II Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 15 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.3 During Phase III, the existing portion of the runway will be repaved with Hot Mix Asphalt (HMA) and the runway 33 glide slope will be relocated. Construction will be accomplished between the hours of 8:00 pm and 5:00 am, during which the runway will be closed to operations.

Figure E-3. Phase III Example

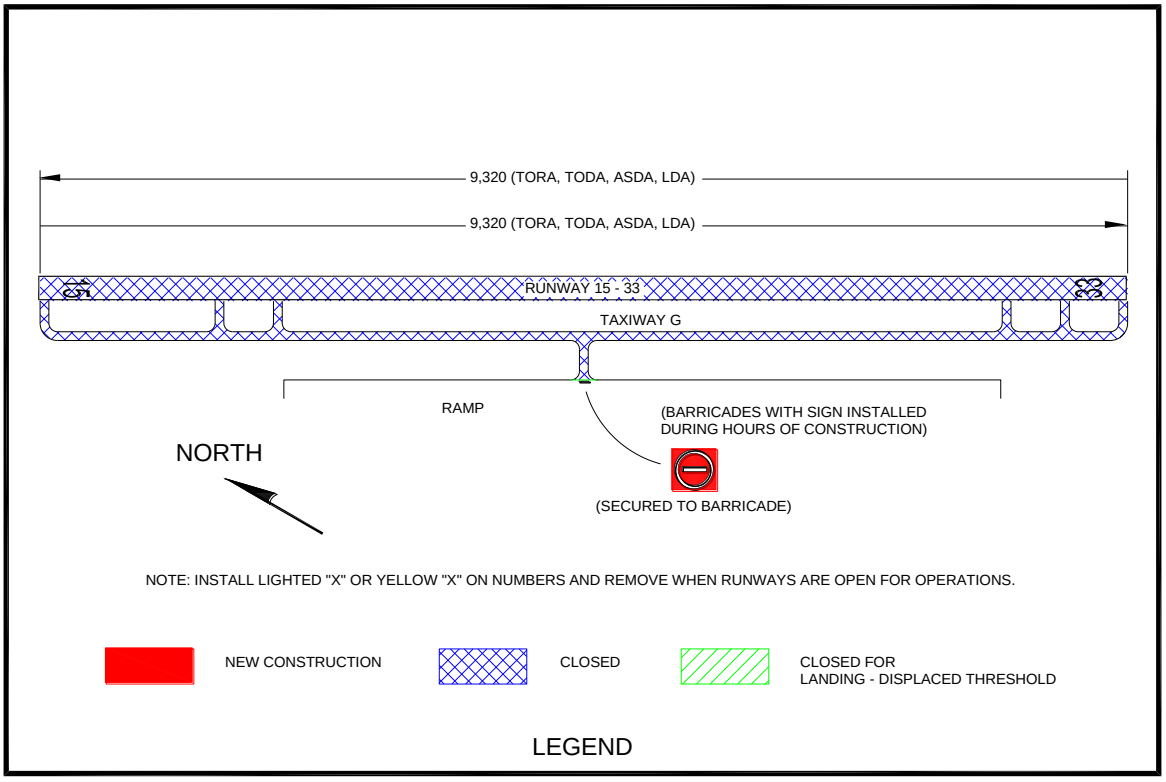


Table E-1. Operational Effects Table

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Scope of Work	N/A	Extend Runway 15-33 1,000 ft on north end with Hot Mix Asphaltic Concrete (HMA).	Extend Runway 15-33 500 ft on south end with Hot Mix Asphaltic Concrete (HMA).	Repave existing runway with HMA Relocate Runway 33 Glide Slope
Effects of Construction Operations	N/A	Existing North 500 ft closed	Existing South 500 ft closed	Runway closed between 8:00 pm and 5:00 am Edge lighting out of service
Construction Phase	N/A	Phase I (Anticipated)	Phase II (Anticipated)	Phase III (Anticipated)
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 40 /day GA: 26 /day Military: 0 /day	Carrier: 45 /day GA: 26 /day Military: 5 /day	Carrier: 45 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 30 /day GA: 18 /day Military: 0 /day	Carrier: 25 /day GA: 18 /day Military: 5 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 Aircraft Category	C-IV	C-IV	C-IV	C-IV
Runway 15 Approach Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	¾ mile	¾ mile	1 mile

Note: Proper coordination with Flight Procedures group is necessary to maintain instrument approach procedures during construction.

Project		Runway 15-33 Extension and Repaving			
Phase		**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Runway 15 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	7,820	7,320	7,820	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 33 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	8,320	6,820	8,320	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 15 Approach Procedures		LOC only	LOC only	LOC only	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 33 Approach Procedures		ILS	ILS	ILS	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 15 NAVAIDs		LOC	LOC	LOC	LOC
Runway 33 NAVAIDs		ILS, MALSR	ILS, MALSR	ILS, MALSR	LOC, MALSR
Taxiway G ADG		IV	III	IV	IV
Taxiway G TDG		4	4	4	4
ATCT (hours open)		24 hours	24 hours	24 hours	0500 - 2000
ARFF Index		D	D	D	D

Project	Runway 15-33 Extension and Repaving			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Special Conditions	Air National Guard (ANG) military operations	All military aircraft relocated to alternate ANG Base	Some large military aircraft relocated to alternate ANG Base	All military aircraft relocated to alternate ANG Base
Information for NOTAMs		Refer above for applicable declared distances. Taxiway G limited to 118 ft wingspan	Refer above for applicable declared distances.	Refer above for applicable declared distances. Airport closed 2000 – 0500. Runway 15 glide slope OTS.

Note: This table is one example. It may be advantageous to develop a separate table for each project phase and/or to address the operational status of the associated NAVAIDs per construction phase.

Complete the following chart for each phase to determine the area that must be protected along the runway and taxiway edges:

Table E-2. Runway and Taxiway Edge Protection

Runway/Taxiway	Aircraft Approach Category* A, B, C, or D	Airplane Design Group* I, II, III, or IV	Safety Area Width in Feet Divided by 2*

*See AC 150/5300-13 to complete the chart for a specific runway/taxiway.

Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Table E-3. Protection Prior to Runway Threshold

Runway End Number	Airplane Design Group* I, II, III, or IV	Aircraft Approach Category* A, B, C, or D	Minimum Safety Area Prior to the Threshold*	Minimum Distance to Threshold Based on Required Approach Slope*	
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1

*See AC 150/5300-13 to complete the chart for a specific runway.

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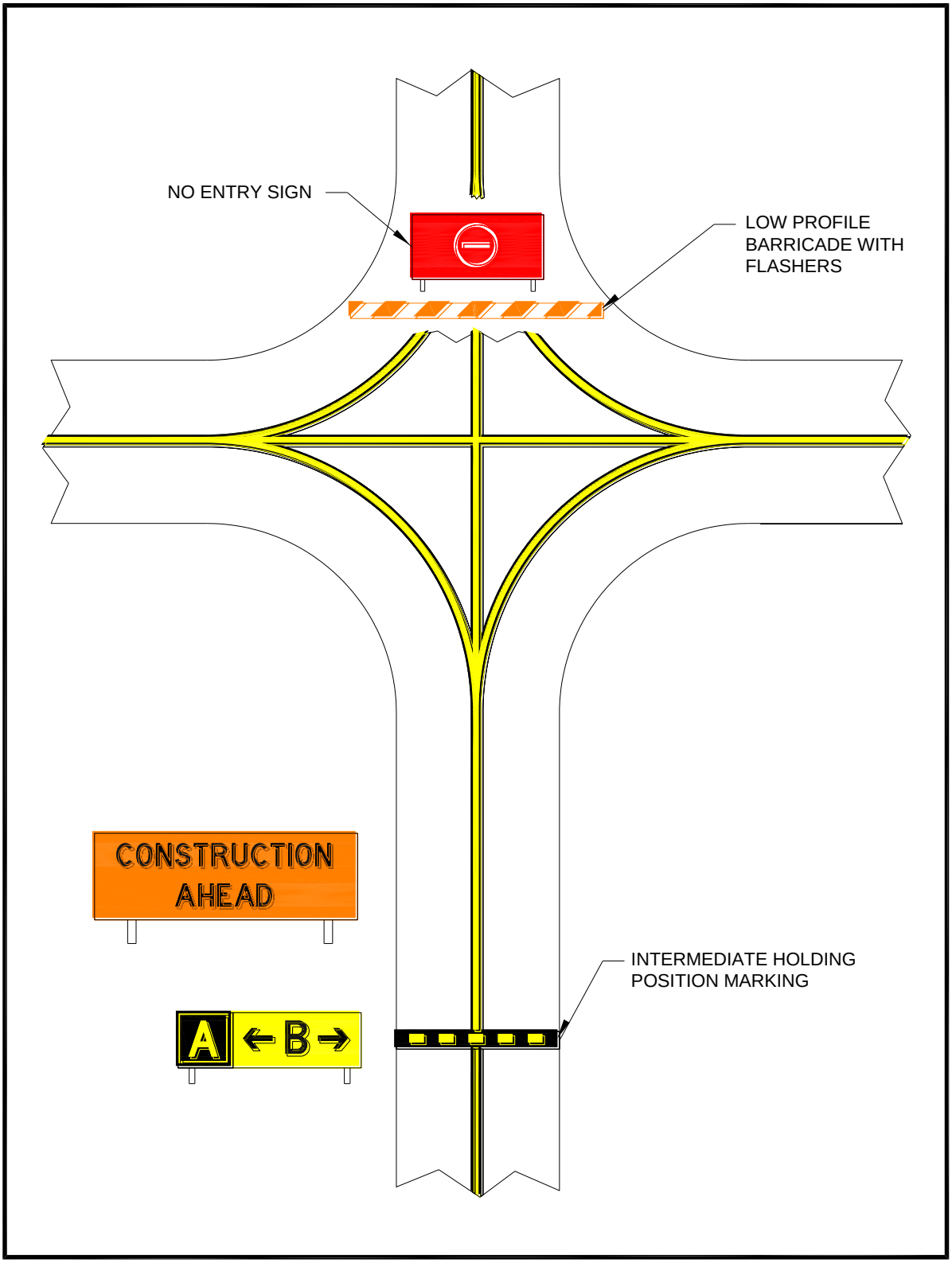
APPENDIX F. ORANGE CONSTRUCTION SIGNS

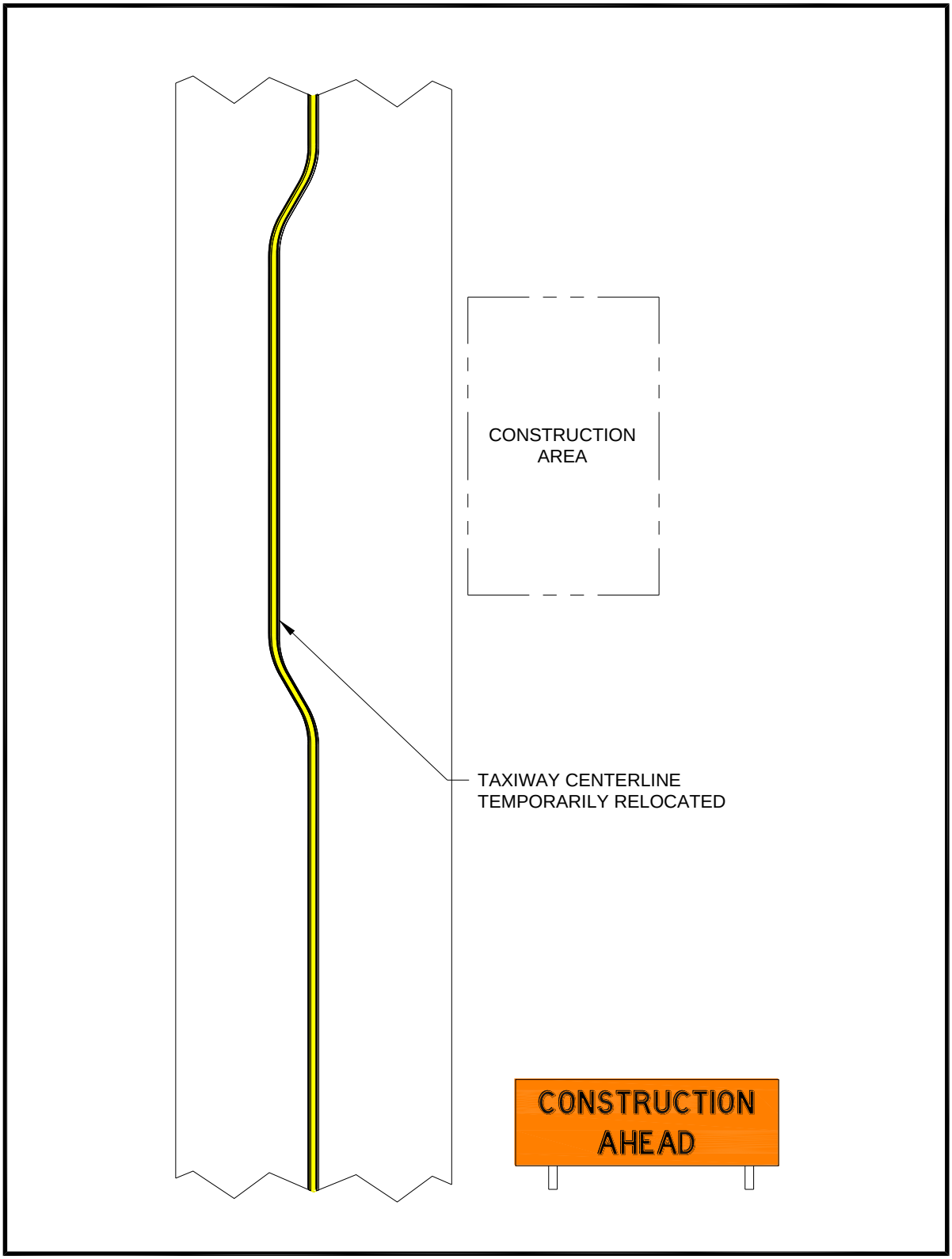
Figure F-1. Approved Sign Legends

Figure F-2. Orange Construction Sign Example 1



Note: For proper placement of signs, refer to EB 93.

Figure F-3. Orange Construction Sign Example 2



Note: For proper placement of signs, refer to EB 93.

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Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5370-2G Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____

Submitted by: _____ Date: _____

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APPENDIX D

SAFETY DETAILS

(REFER TO PHASING SHEETS)

APPENDIX B

Construction Management Plan

Construction Management Plan

Midland International Air & Space Port

Midland, Texas

Midland International Air & Space Port

Northwest Taxilane & Executive Apron Rehabilitation

FAA AIP Project No. 3-48-0150-058-2018

September 2019

PSC Project #01977018

PARKHILLSMITH&COOPER

Construction Management Plan

Midland International Air & Space Port

Midland, Texas

Midland International Air & Space Port

Northwest Taxilane & Executive Apron Rehabilitation

FAA AIP Project No. 3-48-0150-058-2018

09/20/19

September 2019

PSC Project #01977018

PARKHILLSMITH&COOPER

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A. INTRODUCTION

The project to be accomplished under this program consists of the rehabilitation of existing Northwest Taxilane and Executive Apron via sealing all existing pavement cracks, application of P-631 Slurry Seal Surface Treatment & new pavement marking.

B. PERSONNEL

a. Sponsor's Agent
Ms. Justine Ruff
Director of Airports
P.O. Box 60305
Midland, Texas 79711

The Sponsor's Agent shall be responsible for contract administration on behalf of the Sponsor, Midland International Air & Space Port, with the authority to comply with the contract.

b. Consulting Engineer and Staff
Mr. Danny Winchester, P.E.
Project Manager
Parkhill, Smith & Cooper, Inc.
1700 W. Wall, Suite 100
Midland, Texas 79701
432.697.1447

Mr. Larry Valdez, P.E.
Project Engineer
Parkhill, Smith & Cooper, Inc.
4222 85th Street
Lubbock, Texas 79423
806.473.2200

Mr. Rodrigo Vela,
Engineer in Training
Parkhill, Smith & Cooper, Inc.
12301-B Riata Trace Parkway, Suite 100
Austin, Texas 78723
512.676.2111

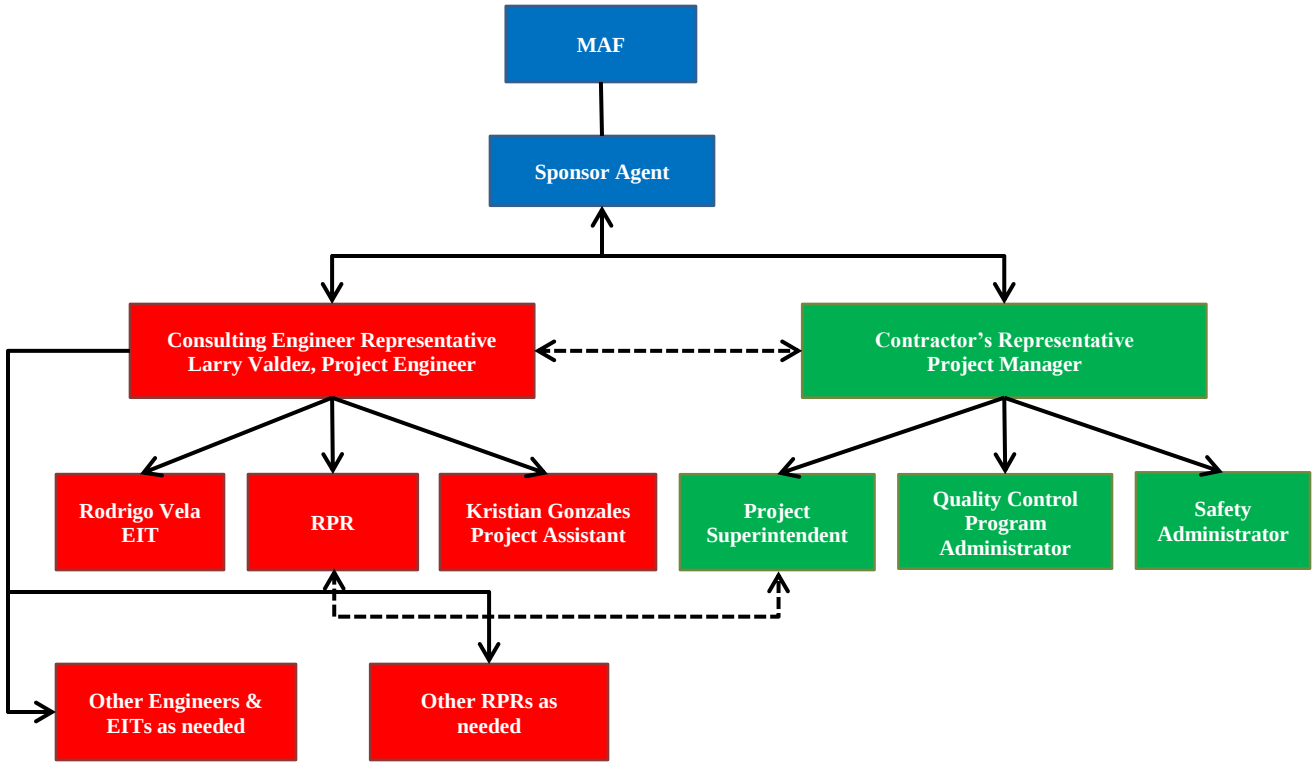
RPR (TBD)

Ms. Kristian Gonzales
Project Assistant
Parkhill, Smith & Cooper, Inc.
4222 85th Street
Lubbock, Texas 79423
806.473.3734

PSC will provide oversight during construction. PSC will also provide one full-time Resident Project Representative (RPR) during construction of the project. The RPR will report directly to the PSC Project Manager and Project Engineer. PSC will compile a copy of all test reports to deliver to the sponsor.

Owner's testing laboratory on this project is to be determined. The testing laboratory will report all construction period and material compliance test results to PSC and Sponsor. The testing laboratory will also report construction period test results to Contractor on the project. The testing laboratory will report directly to the PSC Project Manager and Project Engineer. Contractor will be responsible for selecting a testing laboratory for all required pre-construction material submittal testing and Quality Control testing.

1) Mr. Larry Valdez will oversee construction period services. PSC will also provide one full-time Resident Project Representative (RPR) during Project construction. A second RPR will be provided if needed. The duties, responsibilities, and limitations of authority of the RPR are described in the Professional Engineering Services Agreement. The RPR will report directly to the Parkhill, Smith & Cooper Inc. (PSC) Project Manager. PSC will compile a copy of all test reports to be delivered to FAA. Key personnel and chain of communication is described as follows:



2) Contractor (TBD)

3) Testing Lab(s)

If required, the Sponsor's Quality Assurance (QA) testing laboratory will be TBD, certified according to ASTM D3666 and C1077 (refer to Appendix B for applicable certificate). Testing laboratory will report all construction period and material compliance test results to PSC RPR and Sponsor. Testing laboratory will also report construction period test results to Project Contractor. TBD will report directly to the PSC Project Manager. Contractor will be responsible for selecting a separate testing laboratory for all required preconstruction material submittal testing and Quality Control (QC) testing.

C. INSPECTION PROCEDURES AND FREQUENCIES

4) For Surveying and Grade Control.

a. Engineer provides grade control as part of the Construction Documents. Contractor will be responsible for verifying the control network at Project onset to confirm agreement. If necessary, all construction staking is Contractor's responsibility and Contractor will be required to immediately report any deviations. Engineer will employ a Texas-licensed RPLS to perform periodic verification of Contractor work, where applicable. This will include isolated spot checks only. Any discrepancies found will result in an immediate coordination meeting between Engineer and Contractor.

5) By Contractor.

a. Contractor is required to execute daily inspections on work performed and work to be performed. All inspection notes shall be captured in the Contractor's daily log, submitted as required. Contractor also required to perform certain Quality Control testing, where applicable. This testing will be performed by the Contractor's lab. Test reports shall be made available to Engineer daily. Frequencies are defined in Project specifications and in Item E. Contractor will detail Quality Control testing further in the Quality Control Plan.

6) By Consulting Engineer.

a. Observation Procedures: PSC RPR will be onsite full-time daily throughout Project duration. A second RPR will assist when needed. As per the Agreement for Professional Services, RPR will check for "general conformance to plans and specifications." RPR will not "inspect" every detail of the Contractor's project nor direct Contractor operations. RPR will make observations, document findings, and bring concerns to the PSC project manager's attention. RPR will also coordinate Owner's QA testing laboratory. Tests will be performed per Project specifications in Item F. RPR will also monitor daily activity to confirm Contractor performs required Quality Control testing. Observation notes will be captured in the PSC Procore system and Project Diary Book provided by PSC.

b. Daily Reporting/Diary: RPR will maintain daily logs for activity, progress, concerns, communication, testing, and other activity related to construction. The logs will be

submitted to the Sponsor's Agent and FAA as part of the Project Final Report, if applicable. RPR will also collect photos for reference where appropriate. All photos will be included in PSC Procore and transmitted as part of the Project Final Report.

c. Weekly Reporting: As required by FAA, PSC will prepare and submit weekly Construction Progress Reports by email to the Project Manager with electronic copies to the Sponsor/Sponsor's Agent.

D. SUBMITTAL PROCESS

7) Contractor is required to prepare and submit a complete submittal list at preconstruction meeting. List will be populated in Procore and shall be updated and maintained throughout Project. Engineer will also maintain a record of submittal status in Procore. All submittals shall address "Buy American" and FAA-approved source requirements by having the Contractor submit a written certification statement indicating requirements are met.

8) For a preliminary list of anticipated submittal items and applicable test(s), see Appendix C - Table 1: Summary of Submittals. Test values are included in Project specifications.

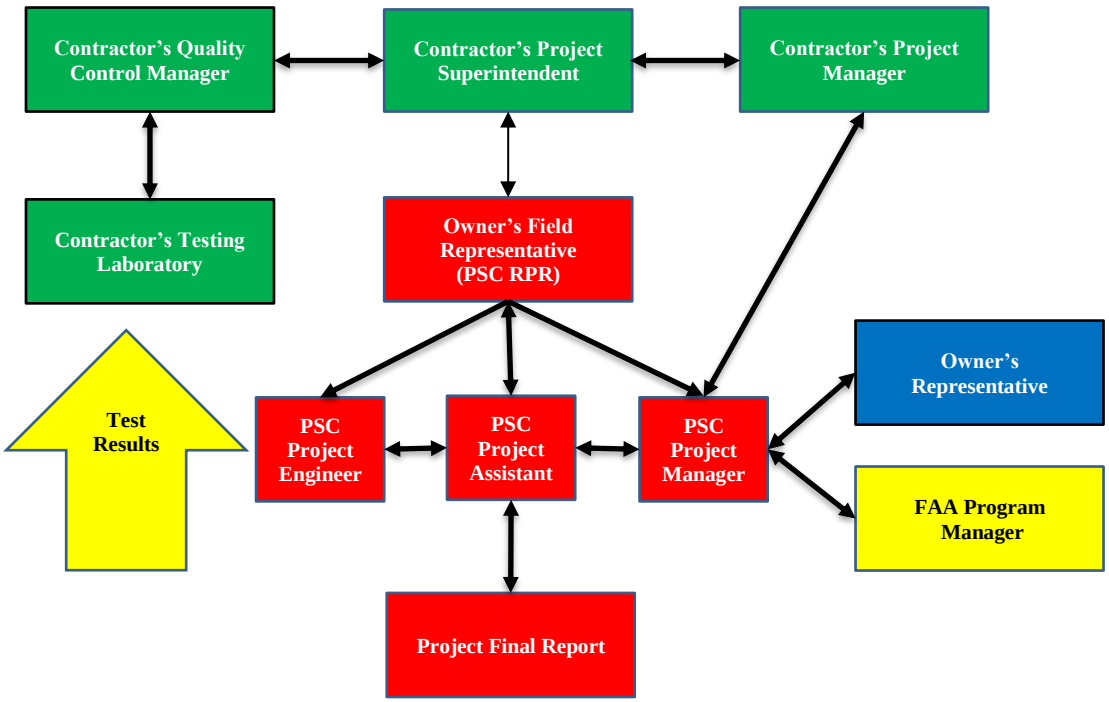
9) All submittals will be routed through the PSC Procore system for review and approval.

E. QUALITY CONTROL TESTING (BY CONTRACTOR)

10) Contractor must visually inspect all items to be used upon arrival and maintain control charts for applicable material production. Contractor shall perform and document all daily inspections and tests as determined in Section 100 of the specifications. Contractor shall make Quality Control (QC) reports, test results, and inspection reports available to Engineer. Test results will be provided before start of the following day. Inspection reports will be provided on the work day after day of record. All items of material and equipment shall be subject to Engineer surveillance. If Contractor determines to be noncompliant regarding any requirements of the Quality Control Program, the Engineer will have the option to order Contractor to:
    a) Replace ineffective or unqualified quality control personnel or subcontractors; or
    b) Stop operations until appropriate corrective action is taken.

11) For a list of anticipated Quality Control Tests, see Appendix D - Table 2: Quality Control Testing (By Contractor). Test values are included in the project specifications.

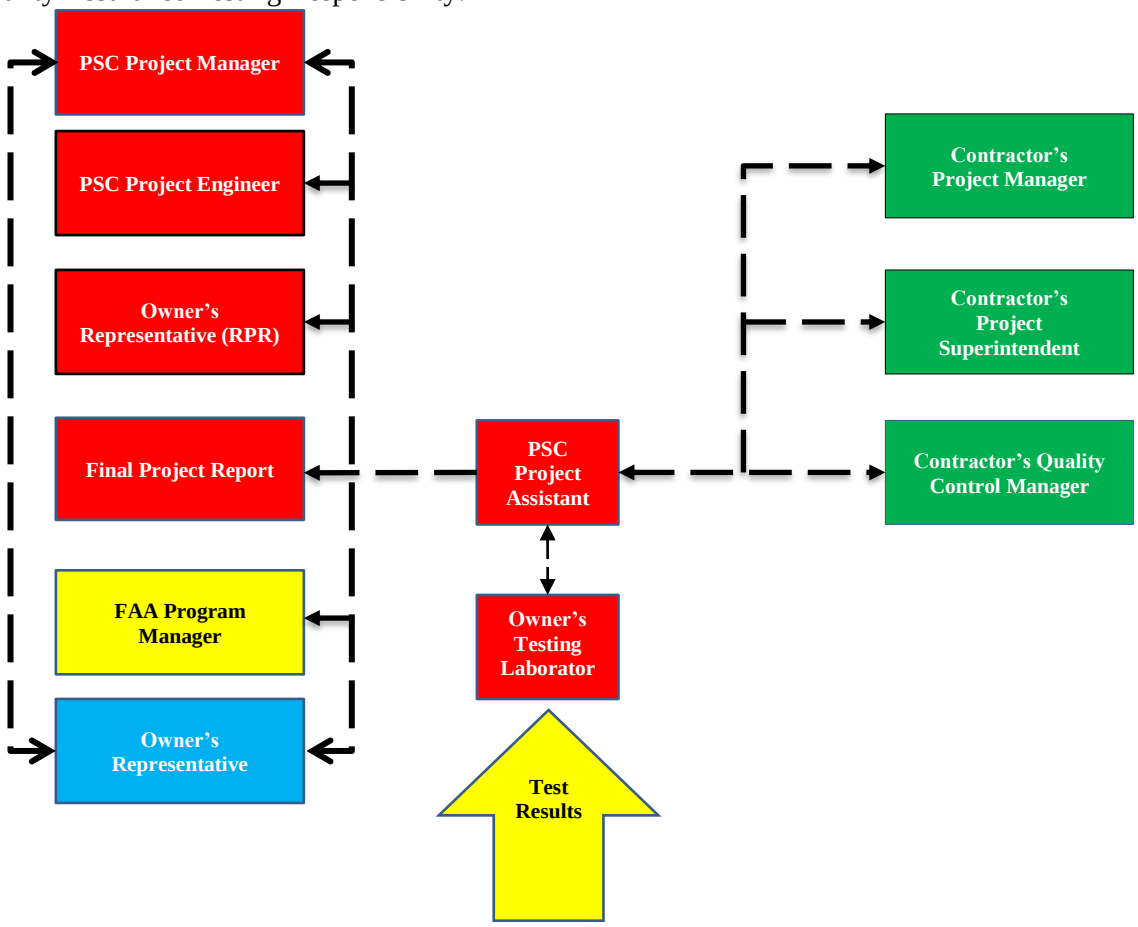
12) Quality Control Testing Responsibility



4. Summary of Action: If/when deficiencies arise during construction; immediate communication will occur as indicated above. Action will include but not limited to:
   a. Discussion of test results and potential implications.
   b. Re-test by Contractor to verify results.
   c. If re-test confirms deficiency, Contractor shall rework deficiency or potentially replace material depending on deficiency.
   d. Re-worked area or replaced material to be tested by Contractor's laboratory.
   e. Contractor shall develop a plan for avoiding same deficiency on future segments of work.
   f. Other specific courses of action to be defined in the Contractor's Quality Control Plan.

F. ACCEPTANCE TESTING (BY OWNER'S REPRESENTATIVE)

13) For Testing Methods, see Appendix E - Table 3: Quality Assurance (by Engineer).
14) Quality Assurance Testing Responsibility:



G. PAY FACTORS

15) There are no Pay Factors for this Project.

H. TEST RESULTS

1. Documentation

a. Quality Control Tests (Daily): Contractor is required to document all Quality Control Tests results performed on Project. Test results shall be submitted to RPR for review the day after testing is performed. If results are deficient, RPR will initiate dialogue with Contractor's Superintendent. If results are favorable, RPR will forward results to PSC Project Assistant to be compiled for Project Final Report.
b. Quality Acceptance Tests (Daily): RPR will coordinate testing with Owner's Laboratory. RPR will also document all test results at point of testing, using this data to reconcile test reports received from Owner's Testing Laboratory. RPR will also note tests performed in Procore. Deficient test results will be communicated to Contractor's Project Superintendent immediately.
c. Failing Tests:
    1) Quality Control Testing: Whether passing or failing, RPR will obtain a copy of all Quality Control Test results performed by Contractor. Deficient results will result in immediate communication between Contractor and Engineer and subsequent action determined. Corresponding re-tests will be taken and documented.
    2) Quality Assurance Testing: As previously mentioned, RPR will document all test results at point test is performed by Owner's Testing Laboratory. Deficient results will result in immediate communication between Contractor and Engineer and an action plan for remediation developed. Re-test results will be documented and all charges for failing tests invoiced to Contractor.

I. FINAL TEST AND QUALITY CONTROL REPORT

As part of the Project Final Report, Engineer, Contractor, and Owner's Testing Laboratory will coordinate preparation of a Final Test and Quality Control Report. The report will summarize number of tests performed versus number of tests required for each specification item. Failed tests and subsequent re-tests will be included. Where necessary, acceptance of specification deficiencies will be documented.

APPENDIX A

Consulting Staff Resumes

Danny Winchester, PE
Principal / Civil Engineer

Bachelor of Science, Civil Engineering, Texas Tech University, 1984

Licensed Professional Engineer, TX, 65060

Years of experience 35

Danny Winchester, PE, is a Principal and a Team Leader for PSC's Aviation Sector. His 30 years at PSC have been spent in aviation design and project management. Danny's aviation design has been mostly with FAA Certificated Airports (Part 139). He has been involved in aviation projects at Midland International Airport since he came to work for PSC. He has developed a strong expertise in FAA funding processes for Airport Improvement Project funding and Passenger Facility Charge funding. This expertise has allowed Danny to assist the City of Midland in acquiring over $150 million of funding from FAA for Capital Improvement Projects at the Midland International Airport over the past 30 years. Danny assisted Midland International Airport in becoming the first Commercial Service Airport (Part 139) to receive an FAA Certified Space Launch Site Operator License. Danny has also served the engineering profession by serving in many roles at the local and state levels of the Texas Society of Professional Engineers. He has been recognized by the Texas Society of Professional Engineers as both the Young Engineer of the Year and Engineer of the Year for the Permian Basin Chapter. He also received the Distinguished Engineer Award from the Texas Engineering Foundation - 2004

Relevant Project Experience

- MAF Air Carrier Runways and Taxiways Rehabilitation
- MAF Aircraft Ramp Lighting System Improvements
- MAF ARFF Vehicles Replacement
- MAF Construct Taxiway and Apron at CAF
- MAF Lavatory Disposal Station Modifications
- MAF PFC Application and Amendments
- MAF Rehab Entrance Road Pavement and Guidance Signage
- MAF RIM (Runway 10 End)
- MAF Security Checkpoint Expansion
- MAF Terminal Vehicle Parking Rehabilitation and Parking Equipment Replacement
- Midland International Airport Access Control System and Cable Upgrade
- Midland International Airport Airfield Lighting Cabling Replacement and Airfield Signage
- Midland International Airport Emergency Roadway and Gates Rehabilitation
- Midland International Airport Executive Apron Reconstruction
- Midland International Airport Northwest Taxilane Extension - Phase 2
- Midland International Airport NW Roads and Parking - Phase 2
- Midland International Airport Runway 16L-34R Preliminary Engineering Report Phase
- Midland International Airport Spaceport Launch Site License Application
- Midland International Airport Taxiway P Aircraft Run-up
- Midland International Airport Terminal Vehicle Parking Expansion
- Runway 16L-34R Environmental Assessment and AGIS Aeronautical Obstruction Survey
- Spaceport Business Park Environmental and Asbestos Survey

Larry Valdez, PE
Senior Associate / Civil Engineer

Bachelor of Science, Civil Engineering, Texas Tech University, 1984

Licensed Professional Engineer, TX, 65358

Years of experience 43

Larry Valdez, PE, is a Senior Associate and Team Leader for PSC's Aviation Sector. His aviation engineering experience touches almost every facet of airport design, including project planning and programming, evaluation of existing facilities, rigid and flexible pavement design, drainage, security and fencing, terminal buildings and hangars, NAVAIDs and lighting, and construction. His professional experience includes multi-million dollar design and construction projects for airports across Texas, including Air Carrier facilities like Lubbock's Preston Smith International Airport, Midland International Airport, and El Paso International Airport as well as General Aviation facilities like Temple's Draughon-Miller Central Texas Regional Airport, New Braunfels Municipal Airport, Canadian's Hemphill County Airport, Snyder's Scurry County Airport, and Big Spring's McMahon-Wrinkle Airpark. As a founding member on the FISD Foundation for Leadership and member of the FISD Long-Range Facility Master Plan Committee from 2008-2014, he has been involved with the Frenship Independent School District for over 20 years. He continues to serve on the FISD Engineering and Technology Committee. Through junior high and high school student lectures and hands-on demonstrations with the Texas Alliance for Minorities in Engineering, he helped promote minority interest in engineering. He is also a graduate of the Lubbock Chamber of Commerce's Leadership Lubbock Class of 1997-98.

Relevant Project Experience

- Big Spring Airpark Fuel Farm
- Big Spring Airpark Joint Seal
- Box Hangar Foundation & Ramp Paving
- DCOA Eagle Aviation Hangar Modifications
- El Paso International Airport Taxiway A Realignment and Taxiways D & F Reconstruction
- Gaines County Airport ALP and Development Plan
- MAF Rehab NW Taxilane and Exec. Apron
- MAF Runway 16L/34R Reconstruction
- Midland Airpark Hangar Study
- Midland International Airport Taxiway P Aircraft Run-up
- Reagan Co Airport Rwy Ext
- TxDOT-Rockwall Pavement Rehabilitation and Drainage Project
- TxDOT Aviation Seymour Municipal Airport 2018
- TxDOT Big Spring Air Hangar
- TxDOT Big Spring McMahon Airpark Apron
- TxDOT Culberson Co Air (Van Horn)
- TxDOT Dimmitt Municipal Airport 2011
- TxDOT Hemphill County Airport 2013
- TxDOT Hereford Airport 2014
- TxDOT Lampasas Air 2016
- TxDOT Lampasas Airport 2013
- TxDOT Littlefield Air 2016
- TxDOT Midland Airpark Hangars
- TxDOT Midland Airpark Improvements
- TxDOT Odessa Ector Co Air
- TxDOT Reagan County Airport Runway
- TxDOT Temple Airport Airfield-Wide Pavement Improvements
- TxDOT Winkler CO AP Pavement Improvements
- Winkler Co Air Hangars

Michael Krusing, PE
Associate/Civil Engineer

Bachelor of Science, Civil Engineering, Texas Tech University, 2007

Licensed Professional Engineer, TX, 111822
Licensed Professional Engineer, NM, 20863

Years of experience 12

Michael Krusing, PE, is an Associate and Team Leader for PSC's Aviation Sector. After joining PSC in 2007, Michael worked with the infrastructure team in Amarillo, until 2010, when he joined PSC's Aviation team. In November 2014, Michael transferred from PSC's Amarillo office to the Lubbock office to better serve PSC's clients. Michael has gained experience by designing multiple projects for TxDOT Aviation and New Mexico Department of Transportation. He has also worked on projects benefiting Lubbock Preston Smith International Airport, Midland International Airport, and El Paso International Airport. Michael played a vital role in the designs of two projects that won Most Improved Airport in 2015 (Hemphill County) and 2017 (Hale County).

Relevant Project Experience

- Artesia Municipal Airport Runway 12-30 Phase II Reconstruction
- Artesia Municipal Airport Runway 12-30 Reconstruction
- Artesia Municipal Airport Runway 3-21 Rehabilitation
- Artesia Municipal Airport Taxiway A1 Construction
- Borger Northwest Wellfield
- CAF Museum Buildings Demolition
- El Paso International Airport FBO Ramp Addition and Taxiway U & V Realignment
- El Paso International Airport Taxiway A Realignment and Taxiways D & F Reconstruction
- Hemphill County Lake Marvin Maintenance Project
- Lubbock Runway 17R-35L Construction
- MAF NW Basin Wildlife Improvements
- MAF Rehabilitate Concrete Apron
- MAF Terminal Vehicle Parking Rehabilitation and Parking Equipment Replacement
- Midland International Airport Emergency Roadway and Gates Rehabilitation
- Panhandle 2009 CDBG Distribution Improvements
- Roger Mills Memorial Hospital Renovation & Addition
- TxDOT-Floydada Municipal Airport
- TxDOT Aviation Graham Municipal Airport
- TxDOT Dimmitt Municipal Airport 2011
- TxDOT Hale County Airport 2013 CSJ No 1305PLNVW
- TxDOT Hemphill County Airport 2013
- TxDOT Hereford Airport 2014
- Xcel Energy, Yoakum Substation, SWP3, Contract #289515, Release 37
- Xcel Tolk Station Well #73

APPENDIX B

LABORATORY CERTIFICATION

APPENDIX C

SUBMITTAL PROCESS SUMMARY

Table 1: SUMMARY OF SUBMITTALS									
Specification	**Spec Section**	**Submitted By**	**Material**	**Test Standard**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
P-101 Preparation/Removal of Existing Pavements	101-3.2	C	Hot-Applied Joint and Crack Sealants	ASTM D6690	ied Joint and Crack	Source	1 / Project		
P-605 Joint Sealants for Pavements	605-2.2	C	Joint Sealant	ASTM D6690	Hot-Applied Joint and Crack Sealants	Source	1 / Project	Conforms to test method	Material shall be 25% ± 5 % larger in diameter than the nominal width of the joint
	605-2.3	C	Backer Rod	ASTM 5249	-	Source	1 / Project	Melting point at least 5°F (3°C) greater than the pouring temperature of the sealant	
	605-3.2	C	Equipment	-		Source	1 / Project	List of proposed equipment	
P-608-R Emulsified Asphalt Seal Coat	608-R-2.1	C	Aggregate	ASTM C136	Sieve Analysis	Source	1 / Project	Gradation table	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM C117	Material Finer than No. 200 Analysis	Source	1 / Project	Gradation table	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM D7428	Micro Deval	Source	1 / Project	15% maximum	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM C88	Mg-S Soundness	Source	1 / Project	2% Maximum	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM C1252-TEST METHOD A	Aggregate Angularity	Source	1 / Project	45% Maximum	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM C566	Moisture Content (%)	Source	1 / Project	2% Maximum	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM C128	Bulk Dry Specific Gravity	Source	1 / Project	2.6-3.0	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	ASTM D2216	Absorption (%)	Source	1 / Project	3% Maximum	Certificate of Analysis (COA)
	608-R-2.1	C	Aggregate	MOHS SCALE	Mohs Hardness	Source	1 / Project	7 Min	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion	ADTM D4402	Kinematic Viscosity @ 140°F (60°C)	Source	1 / Project	10-30 cSt	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion	ASTM D402	Percent Residue by Distillation	Source	1 / Project	30-45%	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion	ASTM D5	Penetration @ 77°F (25°C)	Source	1 / Project	2-12 dmm	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion	ASTM D36	Softening Point	source	1/Project	180-200	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion	ASTM D2042	Solubility in 1,1,1 Trichloroethylene	Source	1 / Project	99% min.	Certificate of Analysis (COA)
	608-R-2.2	C	Asphalt Emulsion		HCI Precipitation Value		1 / Project	18-25	Certificate of Analysis (COA)
		C	Water	ASTM C1602		Source	1 / Project		potable, with a maximum hardness of 90ppm calcium and 15ppm magnesium; deleterious iron, sulfates, and phosphates maximum 7ppm, and less than 1ppm of organic byproducts
	608-R-2.4	C	Asphalt Material		Polymer Properties	Source	Project	Polymer properties.	
	608-R-2.3	C	Seal Coat with Aggregate	AC150/5320-12	Friction Test	Example Project	1/ Project	Minimum friction per AC	
	608-R-5.1	C	-	-	-	Example Project	1/ Project	Manufacturer Rep's seal coat application experience and knowldege.	
	608-R-5.2	C	-	-	-	Example Project	1/ Project	Contractor seal coat application experience	Example of least three (3) applications similar to this project in the past two (2) years.
P-620 Runway And Taxiway Marking	620-2.2	C	Paint			Source	Project	Paint Type	
	620-2.2.	C	Paint	FED SPEC TT-P-1952E	Paint Spec.	Source	1 / Project	Conform to test method.	
	620-2.2	C	Reflective Media	FED SPEC TT-B-1325D	Reflective Media	Source	1 / Project	Conform to test method.	

APPENDIX D

QUALITY CONTROL TESTING (BY CONTRACTOR)

Table 2: QUALITY CONTROL (by Contractor)									
Specification	**Spec Section**	**Test By**	**Material**	**Test Procedure**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
P-101 Preparation/Removal of Existing Pavements	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
P-605 Joint Sealants for Pavements	605-3.4	C	Seal	Visual	None	On site	Daily	Proper width, depth, alignment, and preparation	
P-608-R Emulsified Asphalt Seal Coat	608-R-3.2	C	Asphalt Seal Coat	Control Strip	Skid Resistance	Control area	1/ Project	AC 150/5320-12	Calibrate Application to Satisfy Skid Resistance to Engineer's satisfaction
	608-R-4.2	C	Asphalt Seal Coat	Temperature	-	On Site	Daily	>60°F ; Do not apply in windy, rainy foggy, dusty conditions	
	608-R-6.2	C	Asphalt Seal Coat	AC 150/5320-12	Skid Resistance	On Site	1/ Project	Each test includes performing friction tests at 40 mph and 60 mph both wet, 15 feet to each side of runway centerline with approved continuous friction measuring equipment (CFME	
P-620 Runway And Taxiway Marking					None				

APPENDIX E

ACCEPTANCE TESTING/QUALITY ASSURANCE (BY ENGINEER)

Table 3: QUALITY ASSURANCE (by Engineer)									
Specification	**Spec Section**	**Test By**	**Material**	**Test Procedure**	**Test Required**	**Sampling Locations**	**Minimum Test Frequency**	**Requirements**	**Notes**
P-101 Preparation/Removal of Existing Pavements	101-3.9.4	E	Subgrade	ASTM D1557	Nuclear Density Test	In-Place	As Needed	95% Compaction	Test under removed pipe and buried structures
P-605 Joint Sealants for Pavements	605-3.4	E	Seal	Visual	None	On site	Daily	Proper width, depth, alignment, and preparation	
P-608-R Emulsified Asphalt Seal Coat	608-R-2.2	E	Asphalt Seal Coat	Visual	None	On site	Daily	See table 2:1 dilution	
	608-R-4.3b & d	E	Equipment	ASTM D2995	Observe Calibratio	On site	Daily	Observe Calibration	
	608-R-6.1	E	Equipment	ASTM D2995	Application Rate	On site	Daily	Application Rate	
P-620 Runway And Taxiway Marking					None				

City of Midland
Office Memorandum

DATE: March 30, 2020

TO: The Honorable Mayor and City Council Members

FROM: John Ohnemiller, City Attorney

SUBJECT: Resolution authorizing legal fees related to oil and gas matters to be paid from the General Liability Fund (702370) Legal Fees (53410) budget account

---

The proposed resolution changes the budget account from which legal fees incurred in connection with oil and gas transactional matters are paid. This change will help simplify the annual budgeting process in that legal fees will be paid from the same budget account.

One important thing to note, is that legal fees incurred by the City in relation to oil and gas transactional matters are more often than not reimbursed to the City by the counterparty in the transaction (*i.e.*, the operator, midstream company, *etc.*).

If you have any questions, please do not hesitate to contact me.

RESOLUTION NO. _____

RESOLUTION AUTHORIZING LEGAL FEES RELATED TO OIL AND GAS MATTERS TO BE PAID FROM THE GENERAL LIABILITY FUND (702730) LEGAL FEES (53410) BUDGET ACCOUNT

WHEREAS, the City Council finds it to be in the public interest to authorize legal fees related to oil and gas matters to be paid from the General Liability Fund (702370) Legal Fees (53410) budget account;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

THAT the City Comptroller is hereby authorized and directed to pay legal fees related to oil and gas matters from funds available in the General Liability Fund (702370) Legal Fees (53410) budget account upon receipt of proper invoice or statement approved by the City Attorney.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2020, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Courtney Sharp, City Manager

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

City Council Agenda

Approved for Agenda:
CSharp
City Manager's Office

MEETING DATE: 3/24/2020

TO: City Council / City Manager

FROM: Seth Herman,

SUBJECT: Consider a resolution approving the issuance of an Operating Certificate for XPress Routes Limousine Service

---

Purpose:

Consider a resolution approving the issuance of an Operating Certificate for XPress Routes Limousine Service (a subsidiary of Ridey Transportation Inc.).

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

None

Discussion:

Anthony E. Alfa, owner of XPress Routes Limousine Service (a subsidiary of Ridey Transportation Inc.), has filed an application for the issuance of an Operating Certificate. Mr. Alfa has successfully passed the requisite background investigation consisting of both criminal and driving records conducted by the Midland Police Department. Furthermore, the applicant has furnished all necessary documents related to proof of insurance and has signed a copy of the Operating Certificate indicating his acknowledgement and acceptance of the established provisions.

CITY OF MIDLAND

APPLICATION FOR OPERATING CERTIFICATE FOR LIMOUSINE BUSINESS

The City of Midland reserves the right to deny this application and to require additional information as needed.

Please print in **black ink or type**:

1. Applicant Information:

   a. Name (complete): ANTHONY E ALFA
   Permanent Address: 19906 MALIN MANOR LANE, KATY TX 77449
   Mailing Address: 5101 N A STREET, APT 269
   City MIDLAND State TX Zip 79705
   Phone: 325-603-7750

   b. Is this application filed by a partnership? Yes _____ No X
   If Yes, list all partners' names, addresses and phone numbers:

Name	Address	Phone

   c. Is this application filed by a corporation? Yes X No ___
   If Yes, list the name and location of its principal place of business: RIDEY TRANSPORTATION INC. 4201 ANDREWS HWY MIDLAND TX 79703

   Attach a list of the names and addresses of all officers, directors and stockholders in the corporation.

   d. List all persons with an interest in this limousine business:

Name	Address	Occupation
ANTHONY ALFA	5101 N A STREET, APT 269 MIDLAND TX 79705	UBER DRIVER

2. Limousine Business Information:
   a. Headquarters Address: 4201 ANDREWS HIGHWAY #61, MIDLAND TX
   Headquarters Phone: 432-934-3149

   b. Location and Description of Additional Limousine Stands:
   Street parking lot. would be in the apartment

   c. Trade Name: XPRESS ROUTES

   d. Color Scheme: NOT APPLICABLE (VARIES)

e. Description of each limousine:

Year	Make	Model	Limo #	Owner	Leased?
2018	CHRYSLER	PACIFICA	LH1 0432	Anthony Mfg	financing

3. Do you currently operate or have an interest in any limousine business other than Midland? If yes, provide complete information concerning same. NO

4. Please outline below your program and requirements to test employees to determine use of illegal drugs? (Minimum requirement: Test 50% of employees and 50% of contract drivers at least once a year.) Will BE Outsourced to a third party Company like Labs Corp or Any other Place as requested by the City

5. The following should be attached and made a part of this application:

Attachment A: financial statement of applicant and for all partners or corporation.

Attachment B: statement of assets and liabilities dedicated to limousine business.

Attachment C: liability insurance certificate to be approved by City Attorney's office.

Attachment D: applicants must supply a copy of their corporate charter or a copy of the corporation's certificate from the Texas Secretary of State indicating authority to conduct business in the State of Texas.

Attachment E: applicant's experience record.

Attachment F: City chauffeur's license application information.

6. Affidavit

I hereby swear or affirm that the information on this application and the attachments to same are true and correct to the best of my knowledge.

Applicant's signature

Subscribed and sworn to before me by the said this the 26 day of February, 2020 to certify which witness my hand and seal of office.

MADISON CLEMENTS
Notary Public, State of Texas
Comm Expires 09-17-2023
Notary ID 132175288

Notary Public

PLEASE BE ADVISED THAT CRIMINAL RECORDS OF ALL APPLICANTS WILL BE CHECKED PURSUANT TO TEX. REV. CIV. STAT. ANN. ART. 6252-13c (VERNON SUPP. 1998)

Return completed application and attachments to:

City Secretary's Office
300 N. Loraine, Room 340
Midland, Texas 79701

Attachment A

FINANCIAL STATEMENT

The following is a financial statement for ANTHONY ALFA, an applicant for a limousine operating certificate in the application attached. This constitutes a full disclosure of my financial status. (Attach additional pages if necessary.)

ASSETS	LIABILITIES
REAL ESTATE	
NONE	
AUTOMOBILES	
CHRYSLER PACIFICA 2018	
PERSONAL AND HOUSEHOLD GOODS	
FURNITURES & ELECTRONICS, $3,000	~~$3,000~~ NA
CASH	
$800	NA
SECURITIES, STOCKS, OTHER INVESTMENTS	
NONE	NA
OTHER	

Applicant

Attachment B

ASSETS AND LIABILITIES DEDICATED TO LIMOUSINEBUSINESS

I, ANTHONY ALPA, the applicant for an operating certificate in the attached application hereby designate the following of my assets and liabilities as being dedicated to the limousine business for which I seek an operating certificate. The following represents a full disclosure of my financial commitment to that limousinebusiness.

ASSETS	LIABILITIES
REAL ESTATE	
NA	NO
AUTOMOBILES	
2018 CHRYSLER PACIFICA	NA
PERSONAL AND HOUSEHOLD GOODS	
NONE	NA
CASH	
$500	NA
SECURITIES, STOCKS, OTHER INVESTMENTS	
NONE	NA
OTHER	
NONE	NA

Applicant

Attachment C

INSURANCE COVERAGE

A Certificate of Insurance listing coverage and each vehicle covered shall be filed with this application as set forth in City Code 5-6-2(F).

Coverage shall be:

(a) not less than twenty thousand dollars ($20,000.00) for bodily injury or death in any one accident;

(b) not less than forty thousand dollars ($40,000.00) because of injury or death of two (2) or more persons in any one accident;

(c) not less than fifteen thousand dollars ($15,000.00) for property damage;

(d) not less than two thousand dollars ($2,000.00) for personal injury protection for passengers; and

(e) include uninsured motorists coverage in the same amounts as required for liability coverage.

Attachment D

CORPORATE CHARTER OR CERTIFICATE

Corporate applicants must supply a copy of their Corporate Charter or a copy of the corporation's certificate from the Texas Secretary of State indicating the corporation's authority to conduct business in the State of Texas. Please attach as Attachment D.

Attachment E

EXPERIENCE RECORD

I, ARTHUR ALFA, the applicant for a limousine operating certificate in the attached application, have the following experience record in relation to limousineand other commercial transportation:

Company Name and Address	Dates of Service	Position with Company
UBER / LYFT	2014 - DATE	DRIVER
RIDEY TAXI/BISMARCK ND	2014 - 2017	DRIVER

Total number of years driving a taxicab:

How long have you held a driver's license? 9 YEARS Date of Birth: 01/06/88

Provide information below for States in which you have held a Driver's License:

State of Issuance	Dates Held	Type	Driver's License Number
IDAHO	2011 - 2014	D	DON'T REMEMBER
NORTH DAKOTA	2014 - 2019	D	ALFA-88-6270
TEXAS	10/14/19 - DATE	C	45225651

Describe any accident with a motor vehicle which you have had in the last ten years. Specific responsibility for the accident, any property damaged and the extent of any injuries suffered by any person involved:

Attachment F
CITY CHAUFFEUR'S LICENSE

Full Name (including Maiden):
Address: ANTHONY ENEJOH ALFA Phone:
Business Address: Phone:
Birth Place: ZARIA KADUNA NIGERIA Birth Date: 01/06/88 Age: 32
Race: BLACK Sex: M Hgt 6'04 Wgt: 204 Hair: BLACK Eyes: Brown Complexion: BLACK
List any body or facial marks/defects: NONE
Length of Residence: Midland 2 YEARS State TX U.S. Citizen? (Yes) or No:
Driving Experience-Number of Years: 9 YEARS Social Security #: 715-95-3488

TX DRIVERS LICENSE #: 45225651

LIMOUSINE COMPANY YOU ARE WORKING FOR:
Name of Limousine Company: XPRESS ROUTES
Limousine Company Address: 4201 ANDREWS HIGHWAY # 61, MIDLAND TX 79703
Physician Name: NONE FOR NOW, I DONT FALL SICK, JUST HEADACHES
Physician Address: NONE Phone #: NONE

HAVE YOU EVER BEEN ARRESTED? Yes _____ No X

List the charge(s) whether or not you know the date and/or disposition, and whether or not you were convicted: (Do not list traffic violations here.)

Place Arrested	Date	Charge	Disposition
NA	NA	NA	NA
NA	NA	NA	NA

(List additional arrests on the back of this sheet.)

If convicted of a criminal offense, you may attach any recommendations from authorities regarding your record of good conduct.

List all traffic violations you have received (if any):

Place	Date	Charge	Disposition
NA	NA	NA	NA

(List additional traffic violations on the back of this sheet.)

Any omission will result in a denial of this application. This information is true and correct to the best of my knowledge.

Signed: [signature]

Dated: 02/28/2020

Other Comments:

Anthony Affs

Applicant

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 02/27/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Gulf Coast Underw riters 11073 Countryw ay Blvd Tampa, FL 33626	CONTACT NAME: Brenda Shirley PHONE (A/C, No, Ext): 813-864-4428 FAX (A/C, No): 813-864-4429 E-MAIL ADDRESS: brenda@gcuins.com	
		INSURER(S) AFFORDING COVERAGE	NAIC #
		INSURER A : Natl Liability Fire Ins Co	20052
INSURED	Ridey Transportation Inc dba Xpress Routes 1401 Andrew Hw y #61 Midland, TX 79703	INSURER B :	
		INSURER C :	
		INSURER D :	
		INSURER E :	
		INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER						GENERAL AGGREGATE	$
	☐ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$
	OTHER							$
A	AUTOMOBILE LIABILITY			73APR385308	02/25/2020	02/25/2021	COMBINED SINGLE LIMIT (Ea accident)	$ 500,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY ✓ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
	✓ PIP 2,500						UM/UIM	$ 500,000
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N						PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ N/A						E L EACH ACCIDENT	$
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E L DISEASE - EA EMPLOYEE	$
							E L DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

City of Midland is listed as a Designated Insured.

CERTIFICATE HOLDER

City's Secretary's Office
City Of Midland
300 N Loraine, Room 340
Midland, TX 79701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Alison Haley, Midland County Clerk
500 N. Loraine, 4th Floor
Midland, Midland County, Texas 79701

ASSUMED NAME RECORDS CERTIFICATE OF OWNERSHIP FOR UNINCORPORATED BUSINESS OR PROFESSION

NOTICE: Certificates of ownership are valid only for a period not to exceed 10 years from the date filed in the County Clerk's office. The County Clerk is not responsible for verifying the accuracy of the information contained in a certificate of ownership. This certificate properly executed is to be filed with the County Clerk.

NAME IN WHICH BUSINESS OR PROFESSIONAL SERVICES IS OR WILL BE CONDUCTED

BUSINESS NAME XPRESS ROUTES

BUSINESS ADDRESS: 4201 ANDREWS HIGHWAY #61

CITY: MIDLAND STATE: TX ZIP: 79703 PHONE: 432-934-3149

PERIOD (not to exceed 10 yrs.) DURING WHICH ASSUMED NAME WILL BE USED _____

BUSINESS IS TO BE CONDUCTED AS: (Check one) ☐ Sole Proprietorship ☐ Joint Venture ☐ General Partnership

☒ Other _____

CERTIFICATE OF OWNERSHIP

I/We, the undersigned, are the owner(s) of the above business and my/our name(s) and address(es) given is/are true and correct, and there is/are no ownership(s) in said business other than those listed herein below.

NAMES OF OWNER(S)

Name: ANTHONY ALFA Signature: [signature]

Address 4201 ANDREWS HIGHWAY #61, MIDLAND TX 79703

Name: _____ Signature: _____

Address _____

Name: _____ Signature: _____

Address _____

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

BEFORE ME, THE UNDERSIGNED AUTHORITY, on this day personally appeared Anthony Alfa

known to me to be the person(s) whose name(s) is/~~are~~ subscribed to the foregoing instrument and acknowledged to me that s/he/they is/~~are~~ the owner(s) of the above named business and that s/he/they signed the same for the purpose and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, on February 25th 2020.

ELIZABETH LOPEZ NOTARY PUBLIC STATE OF TEXAS ID# 128506829 EXPIRES 1-31-2023

Elizabeth Lopez

NOTARY PUBLIC

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Ruth R. Hughs
Secretary of State

Office of the Secretary of State

CERTIFICATE OF FILING
OF

Ridey Transportation Inc.
File Number: 803533349

The undersigned, as Secretary of State of Texas, hereby certifies that a Certificate of Formation for the above named Domestic For-Profit Corporation has been received in this office and has been found to conform to the applicable provisions of law.

ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing filing effective on the date shown below.

The issuance of this certificate does not authorize the use of a name in this state in violation of the rights of another under the federal Trademark Act of 1946, the Texas trademark law, the Assumed Business or Professional Name Act, or the common law.

Dated: 01/30/2020

Effective: 01/30/2020

Ruth R. Hughs
Secretary of State

RESOLUTION NO. _____

RESOLUTION AUTHORIZING AN OPERATING CERTIFICATE FOR RIDEY TRANSPORTATION INC. DBA XPRESS ROUTES TO OPERATE A TAXICAB BUSINESS; SETTING FORTH CONDITIONS ACCOMPANYING THE CERTIFICATE; AND ESTABLISHING THE TERMS OF THE CERTIFICATE

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Secretary is hereby authorized and directed to act on behalf of the City of Midland to grant to Ridey Transportation Inc. dba Xpress Routes an Operating Certificate for a taxicab business pursuant to Title V, Chapter 6 of the Midland City Code. The provisions of said certificate to be as set forth in Exhibit A, attached hereto and incorporated herein for all purposes.

SECTION TWO. Notwithstanding Section One, above, the City Secretary shall not issue the Operating Certificate set forth above unless and until:

A. Ridey Transportation Inc. dba Xpress Routes has delivered to the City Secretary a current certificate of insurance indicating compliance with the insurance requirements set forth in Section 5-6-2(F) of the Midland City Code for all motor vehicles to be used as taxicabs under the Operating Certificate; and

B. Ridey Transportation Inc. dba Xpress Routes has paid to the City the amount of the annual fee required under Section 5-6-2(G) of the City Code; and

C. Ridey Transportation Inc. dba Xpress Routes has signed a copy of the Operating Certificate indicating acceptance of the provisions set forth therein.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2020, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Courtney Sharp, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Seth Herman, Police Chief

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

CITY OF MIDLAND OPERATING CERTIFICATE FOR TAXICAB BUSINESS

THIS OPERATING CERTIFICATE is issued to Ridey Transportation Inc. dba Xpress Routes (hereafter called "*Operator*") whose address is 4201 Andrews Highway, Midland, Texas 79703, pursuant to Title V, Chapter 6 of the Midland City Code, for the purpose of granting to Operator the privilege of operating a taxicab business along, across, and over the public streets of the City of Midland, Texas, now laid out or dedicated, and all extensions thereof, subject to the following provisions and conditions:

1. Business Name: The name of the taxicab business operated pursuant to this certificate shall be Ridey Transportation Inc. dba Xpress Routes.

2. Term: This certificate shall be valid and in effect for five years from the date of issuance indicated below, subject to earlier termination as set forth in the Midland City Code.

3. Suspension of Certificate for Non-Payment: This certificate shall be automatically suspended on March 1 of any year during the term of this certificate if Operator has not paid the annual fee required by Section 5-6-2(G) of the Midland City Code when due, and shall remain suspended until the annual fee is paid.

4. Compliance With All Laws: Operator must at all times operate the above-named taxicab business in compliance with all applicable federal, state, and local laws, regulations, and ordinances, including, but not limited to, Title V, Chapter 6 and Title XIII, Chapter 2 of the Midland City Code, as amended from time to time, and this certificate may be revoked by the Midland City Council at any time for Operator's non-compliance with said laws, regulations, or ordinances.

5. Assignability and Transferability: This certificate is personal to the Operator named above and may not be assigned by sale or otherwise to any other person or entity. Any attempt to assign this certificate or any interest in this certificate shall be void and will serve as grounds for termination of this certificate by the City.

6. Airport Privileges: This certificate grants to the Operator the privilege of operating at Midland International Airport, provided that such operations shall not be permitted until Operator has complied with Section 5-6-8 of the Midland City Code.

ISSUED THIS _____ DAY OF _____, 2020.

_____
Amy M. Turner, City Secretary
City of Midland, Texas

S:\Resolutions\Police\Taxi\2020\Ridey Transportation Inc.wpd

Exhibit A

ACCEPTANCE

The Operator herein named accepts this Operating Certificate and agrees to abide by all its provisions and all applicable federal, state, and local laws, ordinances, and regulations, including, but not limited to, applicable provisions of the Midland City Code, as amended, and the regulations governing the charging of fares between the City of Midland and the City of Odessa.

Name:_____ Date:_____

City Council Agenda

Approved for Agenda:
csharp
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: **Seth Herman/Police**

SUBJECT: Consider a motion accepting a fiscal year 2019 grant award modification from the High Intensity Drug Trafficking Areas Program in the total amount of $53,552.00; and appropriating the amount of $53,552.00 from the General Fund (001) Unappropriated Fund Balance (35650) to the FY2019 HIDTA Grant Project (700224-005).

Purpose:

Consider a motion accepting a fiscal year 2019 grant award modification from the High Intensity Drug Trafficking Areas Program in the total amount of $53,552.00; and appropriating the amount of $53,552.00 from the General Fund (001) Unappropriated Fund Balance (35650) to the FY2019 HIDTA Grant Project (700224-005).

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

Discussion:

City of Midland

Midland Police Department

Interoffice Memorandum

Date: **April 8, 2020**

To: **City Council/City Manager**

From: **Seth Herman, Chief of Police**

Subject: **Addendum to 2019 HIDTA Grant**

In order to enhance personnel safety and operational efficiency, the Southwest Border – West Texas HIDTA Group has approved the purchase of 2-Tactical ID Narcotics Analyzers complete with accompanying computer hardware and software. To accomplish this purchase, an additional $53,552 approved by the Office of National Drug Control Policy / High Intensity Drug Trafficking Area Initiative is assigned to the FY2019 Midland Police Department HIDTA budget.

City Council Agenda

Approved for Agenda:
CSharp
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Seth Herman,

SUBJECT: Consider a motion to accept the FY2020 grant award in the amount of $158,737 from the Southwest Border - West Texas High Intensity Drug Trafficking Area (HIDTA) Program

---

Purpose:

Consider a motion to accept the FY2020 grant award in the amount of $158,737 from the Southwest Border - West Texas High Intensity Drug Trafficking Area HIDTA) Program.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

N/A

Discussion:

The purpose of the High Intensity Drug Trafficking Area (HIDTA) program, as authorized by the Anti-Drug Act of 1988, is to enhance and coordinate illicit drug control efforts among federal, state, and local law enforcement agencies. The program provides participating agencies with resources in the way of technology, equipment, and funding to better combat the importation and distribution of drugs throughout the country. The Midland Police Department has participated in this endeavor as a contributing member of the Southwest Border / West Texas HIDTA group since August of 2008.

West Texas HIDTA
High Intensity Drug Trafficking Area

Travis B. Kuykendall
Director

AGENCIES

APD
Alpine Police Department

APD
Anthony Police Department

BCBP
Bureau of Customs and Border Protection

BCSO
Brewster County Sheriff's Office

CCSO
Culberson County Sheriff's Office

DA
34th Judicial District Attorney's Office

DEA
Drug Enforcement Administration

DPS
Texas Department Of Public Safety

ECSO
ector County Sheriff's Office

EPCSO
El Paso County Sheriff's Office

EPPD
El Paso Police Department

FBI
Federal Bureau of Investigation

HCSO
Hudspeth County Sheriff's Office

ICE
Immigration and Customs Enforcement

MPD
Midland Police Department

MSO
Midland County Sheriff's Office

NPS
National Park Service

PCSO
Pecos County Sheriff's Office

TOAG
Texas Office of the ttorney General

USAO
U.S. Attorney's Office

USMS
U.S. Marshal

February 24, 2020

City Manager Courtney Sharp
Midland Police Department
300 N. Loraine, Suite 310
Midland, TX 79701-4725

Dear City Manager Sharp,

We are pleased to inform you that the FY 2020 grant award (G20SW0012) has been approved for the Midland Police Department in support of Permian Basin Multi-Agency Task Force initiative.

The Award with Grant Conditions is enclosed. If you accept this award, sign all necessary documents and return a copy to our office. Keep the original in your files. We will forward your acceptance documents to the HIDTA Assistance Center in Miami.

If you have any questions pertaining to this agreement, please feel free to contact Rosa Marquez at (915) 532-9567.

Sincerely,

Travis B. Kuykendall

Travis B. Kuykendall
Executive Director

5801 Acacia Circle
El Paso, TX 79912-4859
Office: (915) 532-9550 Fax: (915) 532-9931

February 24, 2020

City Manager Courtney Sharp
Midland Police Department
300 N. Loraine, Suite 310
Midland, TX 79701-4725

Dear City Manager Sharp:

We are pleased to inform you that your request for funding from the High Intensity Drug Trafficking Areas (HIDTA) Program has been approved, and a grant (Grant Number G20SW0012A) has been awarded in the amount of $158,737.00. This grant will support initiatives designed to implement the Strategy proposed by the Executive Board of the SWB - West Texas HIDTA and approved by the Office of National Drug Control Policy (ONDCP).

The original Grant Agreement, including certain Special Conditions, is enclosed. By accepting this grant, you assume the administrative and financial responsibilities outlined in the enclosed Grant Conditions, including the timely submission of all financial and programmatic reports, the resolution of audit findings, and the maintenance of a minimum level of cash-on-hand. Should your organization not adhere to these terms and conditions, ONDCP may terminate the grant for cause or take other administrative action.

If you accept this award, please sign both the Grant Agreement and the Grant Conditions and return a copy to:

Finance Unit
National HIDTA Assistance Center
11200 NW 20th Street, Suite 100
Miami, FL 33172
(305) 715-7600
Or via email to your respective NHAC accountant.

Please keep the original copy of the Grant Agreement and Grant Conditions for your file. If you have any questions pertaining to this grant award, please contact Sherri Lucas at (202) 395 - 5506.

Sincerely,

Shannon J. Kelly

Shannon Kelly
National HIDTA Director

Executive Office of the President Office of National Drug Control Policy	**Grant Agreement**	
1. Recipient Name and Address Courtney Sharp Midland Police Department 300 N. Loraine Suite 310 Midland, TX 79701-4725	4. Award Number (FAIN): G20SW0012A 5. Period of Performance: From 01/01/2020 to 12/31/2021	
2. Total Amount of the Federal Funds Obligated: $158,737	6. Federal Award Date: February 24, 2020	7. Action: Initial
2A. Budget Approved by the Federal Awarding Agency $158,737	8. Supplement Number	
3. CFDA Name and Number: *High Intensity Drug Trafficking Areas Program - 95.001*	9. Previous Award Amount:	
3A. Project Description *High Intensity Drug Trafficking Areas (HIDTA) Program*	10. Amount of Federal Funds Obligated by this Action: $158,737.00 11. Total Amount of Federal Award: $158,737.00	
12. This Grant is non-R&D and approved subject to such conditions or limitations as are set forth on the attached pages.		
13. Statutory Authority for Grant: *Public Law 116-93*		
AGENCY APPROVAL	**RECIPIENT ACCEPTANCE**	
14. Typed Name and Title of Approving Official Shannon Kelly National HIDTA Director Office of National Drug Control Policy	15. Typed Name and Title of Authorized Official City Manager Courtney Sharp Midland Police Department	
16. Signature of Approving ONDCP Official Shannon J. Kelly	17. Signature of Authorized Recipient/Date Courtney Sharp	
AGENCY USE ONLY		
18. Accounting Classification Code DUNS: 073186579 EIN: 1756000608A2	19. HIDTA AWARD *OND1070DB2021XX OND6113* *OND2000000000 OC 410001*	

GRANT CONDITIONS

A. General Terms and Conditions

1. This award is subject to The Uniform Administrative Requirements, Cost Principles, and Audit Requirements in 2 C.F.R. Part 200 (the "Part 200 Uniform Requirements"), as adopted and implemented by the Office of National Drug Control Policy (ONDCP) in 2 C.F.R. Part 3603. For this award, the Part 200 Uniform Requirements supersede, among other things, the provisions of 28 C.F.R. Parts 66 and 70, as well as those of 2 C.F.R. Parts 215, 220, 225, and 230.

   For more information on the Part 200 Uniform Requirements, see https://cfo.gov/cofar/. For specific, award-related questions, recipients should contact ONDCP promptly for clarification.

2. This award is subject to the following additional regulations and requirements:

   - 28 CFR Part 69 – "New Restrictions on Lobbying"
   - Conflict of Interest and Mandatory Disclosure Requirements, set out in paragraph 7 of these terms and conditions
   - Non-profit Certifications (when applicable)

3. Audits conducted pursuant to 2 CFR Part 200, Subpart F, "Audit Requirements" must be submitted no later than nine months after the close of the grantee's audited fiscal year to the Federal Audit Clearinghouse at https://harvester.census.gov/facweb/.

4. Grantees are required to submit Federal Financial Reports (FFR) to the Department of Health and Human Services, Division of Payment Management (HHS/DPM). Federal Financial Report is required to be submitted quarterly and within 90 days after the grant is closed out.

5. The recipient gives the awarding agency or the Government Accountability Office, through any authorized representative, access to, and the right to examine, all paper or electronic records related to the grant.

6. Recipients of HIDTA funds are not agents of ONDCP. Accordingly, the grantee, its fiscal agent (s), employees, contractors, as well as state, local, and Federal participants, either on a collective basis or on a personal level, shall not hold themselves out as being part of, or representing, the Executive Office of the President or ONDCP.

These general terms and conditions, as well as archives of previous versions of the general terms and conditions, are available online at www.whitehouse.gov/ondcp/grants-programs.

7. Conflict of Interest and Mandatory Disclosures

   A. Conflict of Interest Requirements

As a non-Federal entity, you must follow ONDCP's conflict of interest policies for Federal awards. Recipients must disclose in writing any potential conflict of interest to an ONDCP Program Officer; recipients that are pass-through entities must require disclosure from subrecipients or contractors. This disclosure must take place immediately whether you are an applicant or have an active ONDCP award.

The ONDCP conflict of interest policies apply to sub-awards as well as contracts, and are as follows:

i. As a non-Federal entity, you must maintain written standards of conduct covering conflicts of interest and governing the performance of your employees engaged in the selection, award, and administration of subawards and contracts.

ii. None of your employees may participate in the selection, award, or administration of a subaward or contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from an organization considered for a sub-award or contract. The officers, employees, and agents of the non-Federal entity must neither solicit nor accept gratuities, favors, or anything of monetary value from subrecipients or contractors or parties to subawards or contracts.

iii. If you have a parent, affiliate, or subsidiary organization that is not a state, local government, or Native American tribe, you must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of relationships with a parent company, affiliate, or subsidiary organization, you are unable or appear to be unable to be impartial in conducting a sub-award or procurement action involving a related organization.

B. Mandatory Disclosure Requirement

As a non-Federal entity, you must disclose, in a timely manner, in writing to ONDCP all violations of Federal criminal law involving fraud, bribery or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award that includes the term and condition outlined in 200 CFR Part 200, Appendix XII "Award Term and Condition for Recipient Integrity and Performance Matters," are required to report certain civil, criminal, or administrative proceedings to System for Award Management (SAM). Failure to make required disclosures can result in remedies such as: temporary withholding of payments pending correction of the deficiency, disallowance of all or part of the costs associated with noncompliance, suspension, termination of award, debarment, or other legally available remedies outlined in 2 CFR 200.338 "Remedies for Noncompliance".

8. Federal Funding Accountability and Transparency (FFATA) / Digital Accountability and Transparency Act (DATA Act). Each applicant is required to (i) Be registered in SAM before submitting its application; (ii) provide a valid DUNS number in its application; (iii) continue to maintain an active System for Award Management registration with current information at all times during which it has an active Federal award; and (iv) provide all relevant grantee information required for ONDCP to collect for reporting related to FFATA and DATA Act requirements.

9. Subawards are authorized under this grant award. Subawards must be monitored by the award recipient as outlined in 2 CFR 200.331.

10. Recipients must comply with the Government-wide Suspension and Debarment provision set forth at 2 CFR Part 180, dealing with all sub-awards and contracts issued under the grant.

11. As specified in the HIDTA Program Policy and Budget Guidance, recipient must:

a) Establish and maintain effective internal controls over the Federal award that provides reasonable assurance that Federal award funds are managed in compliance with Federal statutes, regulations and award terms and conditions. These internal controls should be in compliance with the guidance in "Standards for Internal Control in the Federal Government," issued by the Comptroller General of the United States and the "Internal Control Integrated Framework," issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

b) Comply with Federal statutes, regulations, and the terms and conditions of the Federal awards.

c) Evaluate and monitor compliance with applicable statute and regulations, and the terms and conditions of the Federal award.

d) Take prompt action when instances of noncompliance are identified, including noncompliance identified in audit findings.

e) Take reasonable measures to safeguard protected PII and other information ONDCP or the recipient designates consistent with applicable Federal, state, and local laws regarding privacy and obligations of confidentiality.

B. Recipient Integrity and Performance Matters

Reporting of Matters Related to Recipient Integrity and Performance

1. General Reporting Requirement

If the total value of your currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds $10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient during that period of time must maintain and report current information to the SAM that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition (below). This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

2. Proceedings About Which You Must Report

Submit the information required about each proceeding that:

a. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;

b. Reached its final disposition during the most recent 5 year period; and

c. Is one of the following:

(1) A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition (below);

(2) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of $5,000 or more;

(3) An administrative proceeding, as defined in paragraph 5 of this award term and condition, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of $5,000 or more or reimbursement, restitution, or damages in excess of $100,000; or

(4) Any other criminal, civil, or administrative proceeding if:

(i) It could have led to an outcome described in paragraph 2.c.(1), (2), or (3) of this award term and condition;

(ii) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and

(iii) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

3. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.

4. Reporting Frequency

During any period of time when you are subject to the requirement in paragraph 1 of this award term and condition, you must report proceedings information through SAM for the most recent 5 year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than $10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

5. Definitions

For purposes of this award term and condition:

a. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and state level, but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

b. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.

c. Total value of currently active grants, cooperative agreements, and procurement contracts includes—

(1) Only the Federal share of the funding under any Federal award with a recipient cost share or match; and

(2) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

C. Program Specific Terms and Conditions

The following special conditions are incorporated into each award document.

1. This grant is awarded for above program. Variation from the description of activities approved by ONDCP and/or from the budget attached to this letter must comply with the reprogramming requirements as set forth in ONDCP's HIDTA Program Policy and Budget Guidance (PPBG).
2. This award is subject to the requirements in ONDCP's HIDTA PPBG.
3. No HIDTA funds shall be used to supplant state or local funds that would otherwise be made available for the same purposes.
4. The requirements of 28 CFR Part 23, which pertain to information collection and management of criminal intelligence systems, shall apply to any such systems supported by this award.
5. Special accounting and control procedures must govern the use and handling of HIDTA Program funds for confidential expenditures; i.e., the purchase of information, evidence, and services for undercover operations. Those procedures are described in Section 7 of the HIDTA Program Policy and Budget Guidance.
6. Property acquired with these HIDTA grant funds is to be used for activities of the SWB - West Texas HIDTA. If your agency acquires property with these funds and then ceases to participate in the HIDTA, this equipment must be made available to the HIDTA's Executive Board for use by other HIDTA participants.
7. All law enforcement entities that receive funds from this grant must report all methamphetamine laboratory seizure data to the National Clandestine Laboratory Database/National Seizure System at the El Paso Intelligence Center.

D. Federal Award Performance Goals

1. All entities that receive funds from this award are responsible for achieving performance goals established in the HIDTA Performance Management Process (PMP) and approved by the HIDTA's Executive Board and ONDCP.
2. All entities that receive funds from this award must report progress in achieving performance goals at least quarterly using the PMP.

See also Section A. 4 regarding Federal Financial Reports.

E. Payment Basis

1. A request for Advance or Reimbursement shall be made using the HHS/DPM system (https://pms.psc.gov/).
2. The grantee, must utilize the object classes specified within the initial grant application each time they submit a disbursement request to ONDCP. Requests for payment in the DPM system will not be approved unless the required disbursements have been entered using the corresponding object class designations. Payments will be made via Electronic Fund Transfer to the award recipient's bank account. The bank must be Federal Deposit Insurance Corporation (FDIC) insured. The account must be interest bearing.

3. Except for interest earned on advances of funds exempt under the Intergovernmental Cooperation Act (31 U.S.C. 6501 et seq.) and the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450), awardees and sub-awardees shall promptly, but at least annually, remit interest earned on advances to HHS/DPM using the remittance instructions provided below.

   Remittance Instructions - Remittances must include pertinent information of the payee and nature of payment in the memo area (often referred to as "addenda records" by Financial Institutions) as that will assist in the timely posting of interest earned on Federal funds. Pertinent details include the Payee Account Number (PAN), reason for check (remittance of interest earned on advance payments), check number (if applicable), awardee name, award number, interest period covered, and contact name and number. The remittance must be submitted as follows:

   Through an electronic medium using either Automated Clearing House (ACH) network or a Fedwire Funds Service payment.

   (i) For ACH Returns:

   Routing Number: 051036706
   Account number: 303000
   Bank Name and Location: Credit Gateway—ACH Receiver St. Paul, MN

   (ii) For Fedwire Returns*:

   Routing Number: 021030004
   Account number: 75010501
   Bank Name and Location: Federal Reserve Bank Treas NYC/Funds Transfer Division New York, NY
   (* Please note organization initiating payment is likely to incur a charge from your Financial Institution for this type of payment)

   For recipients that do not have electronic remittance capability, please make check** payable to: "The Department of Health and Human Services."

   Mail Check to Treasury approved lockbox:
   HHS Program Support Center, P.O. Box 530231, Atlanta, GA 30353-0231
   (** Please allow 4-6 weeks for processing of a payment by check to be applied to the appropriate PMS account)

   Any additional information/instructions may be found on the PMS Web site at http://pms.psc.gov/.

4. The grantee or subgrantee may keep interest amounts up to $500 per year for administrative purposes.

RECIPIENT ACCEPTANCE OF GRANT CONDITIONS

Courtney Sharp

Date: March 4, 2020

Courtney Sharp

Midland Police Department

City Council Agenda

Approved for Agenda:
CSharp
City Manager's Office

MEETING DATE: 3/24/2020

TO: City Council / City Manager

FROM: Seth Herman,

SUBJECT: Consider a motion authorizing the appropriation of proceeds from the sale of outdated service weapons and court awarded firearms

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Purpose:

Consider a motion authorizing the appropriation of proceeds from the sale of outdated service weapons and court awarded firearms.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

The sum of $5,568.50 is hereby appropriated from the General Fund (001) Unappropriated Fund Balance (35650) to the Police Technology and Equipment fund (075110).

Discussion:

Funds derived from the sale of outdated service weapons and firearms awarded by the courts are to be used for the purchase of replacement duty weapons for assignment to police department personnel.

DOCUMENT IS PRINTED ON CHEMICALLY REACTIVE PAPER - THE BACK OF THIS DOCUMENT INCLUDES A TAMPER EVIDENT CHEMICAL WASH WARNING BOX

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043272

88-2299/1113
3423

DATE	AMOUNT
2/21/2020	$5,568.50

PAY Five Thousand Five Hundred Sixty Eight Dollars and 50 Cents

TO THE ORDER OF
Midland Police Dept
601 North Loraine Street

Midland TX 79701

AUTHORIZED SIGNATURE

HEAT SENSITIVE
COLOR FADES WITH HEAT

⑈043272⑈ ⑆111322994⑆4300009968⑈

Sale of Weapons

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: John Simmons,

SUBJECT: Consider a motion authorizing the execution of a Right-of-Way License between the City of Midland and Fasken Oil and Ranch, Ltd.. regarding city-owned property described as Section 30, Block 39, Township 1 South, T&P RR Co. Survey, Midland County, Texas.

Purpose:

This motion will allow Fasken Oil and Ranch, Ltd. 3 pipeline bores in this location and place private water, gas and crude oil pipelines under City of Midland owned Princeton Ave. The proposed pipeline bores will be placed approximately 500' West of the Idlewilde Road and Princeton Ave. intersection in the Midland City limits.

This Right-of-Way License is proposed for a single five (5) year period with the option for a single five (5) year renewal. Terms are consistent with the City's standard license for pipeline facilities of this nature.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

Application fee (one time): $1,000

Annual Lease Rate (3.75 rods x $20/rod): $75 / $400.00 minimum per year per bore for a total of $1,200 per year.

Surface Damages: none

Total collected this application: $2,200.00

Discussion:

Applicant will have a total of fifteen feet of right of way to place three Pipelines in cased bores. All pipelines and bores shall be placed and maintained as per City of Midland road standards. The bores will be a minimum ten feet deep and maintain at least a two foot separation under existing City of Midland water and sewer pipelines

City of Midland does not own the real property located on either side of the Road at this location. This location Bore pits will be placed on privately owned land on either side of Princeton Ave.

Applicant has a Certificate of Insurance on file and City secretary shall record this Right of Way License.

RIGHT OF WAY LICENSE

THE STATE OF TEXAS	§	
	§	KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF MIDLAND	§	

Date:	April 15, 2020
Licensor:	CITY OF MIDLAND, TEXAS, a home-rule municipal corporation
Licensor's Representative:	Robert Patrick, Assistant City Manager
Licensor's Mailing Address:	P.O. Box 1152 Midland, Texas 79702
Licensee:	Fasken Oil and Ranch, Ltd.
Licensee's Representative:	Cory Frederick
Licensee's Mailing Address:	6101 Holiday Hill Road, Midland, Texas 79707
Property:	See **Exhibit A** attached hereto and incorporated herein for all purposes.

Licensee desires use of property owned by Licensor in Midland County, Texas (the "Property"), for purposes set forth below. Licensee acknowledges and agrees that it must obtain a license (the "License") in order to use the public lands of Licensor.

W I T N E S S E T H:

For and in consideration of the execution of this License and the mutual promises and covenants of the parties hereto, it is mutually promised, understood and agreed as follows:

I. Term

A. Initial Term. This License shall be for a term of five (5) years (the "Initial Term"), commencing with the date of this License (the "Commencement Date") unless terminated earlier as provided hereafter.

B. Renewal Term. This License shall automatically renew at the end of the Initial Term for one (1) additional term of five (5) years, upon the written request of Licensee received by Licensor on or before one hundred twenty (120) days prior to the expiration of the Initial Term then in effect, subject to the express written consent of the governing body of Licensor.

C. Termination. Licensor may terminate this License if Licensee fails to pay, when due, any amount owing under this License and that failure continues for sixty (60) days or, if Licensee commits any material breach or material default in performance of any obligation, prohibition,

restriction, provision or covenant contained in this License, and the breach or default continues for a period of thirty (30) days after Licensor delivers notice to Licensee reasonably detailing the breach or default.

Additionally, Licensor may terminate this License at will for any or no reason upon giving at least three hundred sixty-five (365) days' written notice to Licensee. The parties to this License understand and agree that it is in Licensor's sole discretion to cancel the License during the term of the License without penalty to Licensor. Licensee has no expectation and has received no guarantees that this License will not be terminated before the end of the License term. The parties have bargained for the flexibility of terminating this License upon tender of the requisite notice at any time during the term of the License. All work and services under the License shall be suspended upon termination of the License becoming effective.

Upon termination of this License, Licensee shall remove all equipment and structures associated with the undertakings contemplated by this License. After removal of all equipment and structures associated with the undertakings contemplated by this License, the surface shall be restored at the expense of Licensee to its original condition, as close thereto as may be practical, subject to the approval of Licensor upon inspection by Licensor's Representative, which approval shall not be unreasonably withheld. All of said work shall be completed within one hundred and eighty (180) days after termination of this License.

II. Financial Consideration

A. License Fee. The first year's license fee in the amount of ONE THOUSAND TWO HUNDRED and No/100 Dollars ($1,200.00) shall be due and payable on or prior to the Commencement Date of this License ("License Fee"). Licensee's failure to make the License Fee payment within thirty (30) days after the License Fee is due shall constitute a late payment and Licensee shall pay Licensor a late charge of five percent (5%).

B. Surface Damage Fee. Intentionally omitted.

C. Annual Fee. Licensee shall pay to Licensor an annual fee in the amount of ONE THOUSAND TWO HUNDRED and No/100 Dollars ($1,200.00), which shall be payable each year on or before the anniversary of the Commencement Date of this License.

D. Application Fee. At the same time the first year License Fee is due, Licensee shall pay a non-refundable one-time fee of ONE THOUSAND and No/100 Dollars ($1,000.00) to Licensor's Representative. Said fee shall revert to Licensor and Licensee shall have no claim to said fee. The fee shall be used to process the application for the License.

E. Fee Adjustment. Prior to commencement of any renewal term, Licensor and Licensee shall negotiate in good faith to agree to an adjustment of the Annual Fee. If Licensor and Licensee are unable to reach an agreement regarding an adjustment to the Annual Fee, then the Annual Fee shall be determined by Licensor in its sole discretion, provided the new Annual Fee shall not exceed twenty-five percent (25%) of the Annual Fee paid for the last year of the Initial Term.

F. Delivery of Payment. The License Fee payment shall be made to Licensor at the office of Licensor's Representative, Attn: Right of Way Manager, P.O. Box 1152, Midland, Texas, 79702.

The License Fee payment shall be exclusive of and in addition to all general municipal taxes of whatever nature, including but not limited to ad valorem taxes and special taxes and assessments for public improvements.

III. Use

A. Permitted Use. Licensor does hereby grant unto Licensee, the right to enter upon the Property, being fifteen (15) feet in width of the pipeline locations as shown on **Exhibit A** attached hereto and incorporated herein for the purpose of boring, placing, operating, repairing, maintaining, replacing and removing, thereon, along the herein described pipeline locations, three (3) private carrier pipelines, each not to exceed eight (8) inches in diameter and placed in a sixteen (16) inch casing, for the transportation of crude oil, gas and water, and to have the right of ingress and egress at convenient points for such purpose.

B. Road Repair. Licensee covenants and agrees that it will repair any of Licensor's roads that Licensee damages on Licensor's property so that such roads will comply with Licensor's Standard Specifications.

C. Utility Repair. Licensee covenants and agrees that Licensee shall, at its own expense, repair all water lines, sewer lines, service lines and water meters owned by Licensor that Licensee, its employees, its agents or assigns, damage so that such water lines, sewer lines and water meters shall comply with the requirements of Licensor's Standard Specifications.

D. Depth. Licensee covenants and agrees that it will bury the pipeline(s) to be bored hereunder no less than ten (10) feet in depth. All backfill used in burying such line shall be compacted to a density of ninety percent (90%), except where such pipeline(s) crosses under a paved or traveled portion of City of Midland right of way where such backfill shall be compacted to a density of ninety-five percent (95%). Licensor shall be afforded the opportunity to test the density on all backfill. Notwithstanding any provision to the contrary contained herein, Licensee covenants and agrees that, at any point that Licensee's pipeline(s) intersects with a City of Midland utility line location, the pipeline(s) shall be bored at a depth of a least (i) nine (9) feet under all City of Midland water utility lines and (ii) two (2) feet under all City of Midland sewer utility lines. Licensee agrees that it shall comply with 30 Tex. Admin. Code § 290.44(e), as amended, to the extent applicable to this License.

E. Approval of Bids. Before Licensee seeks bids on any phase of the repair of public streets, alleys, water lines, sewer lines or any other public utilities, the specifications shall be approved by Licensor's Representative.

F. Reservation of Rights. Licensor expressly reserves the right to install, repair, or reconstruct streets or roads and all ancillary public uses usual and customary in connection with streets and roads, expressly including but not limited to drainage facilities and related structures in the rights of way used and occupied by Licensee.

Licensor reserves the right to lay and permit to be laid, sewer, gas, water, and other pipelines or cables and conduits, and to do and permit to be done, any underground or overhead installation or improvement that may be deemed necessary or proper by the governing body of Licensor, in, on, across, along, over, under, and through any property occupied by Licensee. In permitting such

system or property, **NOR SHALL LICENSOR BE LIABLE TO LICENSEE FOR ANY DAMAGES TO LICENSEE'S PIPELINE(S), CASING, OR COMPRESSOR STATION, ARISING OUT OF THE NEGLIGENCE BY LICENSOR, ITS EMPLOYEES, OFFICERS OR AGENTS, OR LICENSOR'S CONTRACTORS OR SUBCONTRACTORS.** If Licensor requires Licensee to remove, alter, change, adapt, or conform Licensee's facilities because of changes in the grade or construction of a street or in the location or manner of constructing a water pipe, sewer pipe, or other surface, underground or aboveground structure owned by Licensor, Licensee shall make the alterations or changes as soon as practicable, and in no event longer than one hundred eighty (180) days, when ordered in writing by Licensor, without claim for reimbursement for the cost of the relocation or for damages against Licensor. If these requirements impose a financial hardship upon Licensee, Licensee shall have the right to present alternative proposals for Licensor's consideration.

G. Non-exclusive. Licensor expressly reserves the full right to grant other easements or rights of way crossing or running parallel with the rights of way used by Licensee.

H. Abandonment. It is especially provided, however, that as an express condition of this License, and not as a mere covenant, in the event Licensee abandons any equipment or appurtenances to the undertakings contemplated by this License, or the Property ceases to be used for the purposes enumerated herein for any period of twelve (12) consecutive months, or longer, other than the time elapsing between the date hereof and construction, and upon giving Licensee one hundred and twenty (120) days' written notice, then and in that event, this License shall automatically revert to Licensor, its successors or assigns, free and clear of any right, title, or interest in Licensee, or any re-entry by Licensor.

I. Approval of Specifications. In the event Licensee desires to reconstruct, repair, maintain, replace or remove any pipeline or casing system built hereunder, Licensee shall submit the plans and specifications that pertain to the rebuilding or repairs of Licensor's streets and roads and the rebuilding or repairs of any of Licensor's public utilities to Licensor's Representative for his or her approval. In the event of emergency repairs necessary to restore service, Licensee shall notify Licensor's Representative before making any repairs if during a Licensor work day. If not on a work day, Licensee shall notify Licensor's Representative on the first work day after repairs have begun.

J. Gates and Fences. Licensee agrees to use existing gates and roadways where available, to enter, leave and cross the Property; provided that Licensee shall not use any road marked "Closed." Licensee and all persons entering or leaving the Property in connection with Licensee's operations hereunder shall keep all outside and interior gates securely closed except during operations related to this License. Licensee shall keep all outside gates, and all other gates designated by Licensor, securely locked except during operations related to this License. At any gate that is to be locked, Licensor may install its own lock in addition to Licensee's lock.

Licensee agrees that Licensee shall not cut or go over any fence at any time or in connection with any operations on the Property without first obtaining Licensor's express consent thereto in writing. All gates or openings in fences shall be at mutually agreeable location(s) between Licensee and Licensor and shall be constructed as reasonably required by Licensor. Upon the termination of this License, at Licensor's election, gates in fences shall be left in place and shall thereafter be owned by Licensor or Licensee shall remove such gates and restore the fence to its original

condition as nearly as reasonably practicable. The terms, provisions and requirements of this provision shall survive the termination or expiration of this License.

K. Trash. Licensee shall keep the Property free of trash and debris at all times. Under no circumstances, will Licensee be allowed to bury any trash, debris or foreign material of any kind on or under the Property. Licensor shall have the right to expel and permanently ban from the Property any person observed disposing of trash on the Property. Upon the completion of any operations, all ribbons, flags, stakes and similar items shall by promptly removed from the Property.

L. Hunting, Fishing and Alcohol Prohibited. No agent, employee, representative, contractor or subcontractor of Licensee or any other person allowed to enter the Property by Licensee shall be permitted to hunt, fish, trap, camp, picnic, ride motorcycles or four-wheelers or otherwise conduct any social gathering on the Property, nor shall any such persons be permitted to bring firearms, archery equipment, dogs, alcoholic beverages or illegal drugs on the Property at any time. Violations of this provision shall cause the violator to be regarded as a trespasser and subject to prosecution under trespass laws of the State of Texas. Licensor shall have the right to expel and permanently ban from the Property any person observed on the Property in violation of this provision.

M. Storage of Machinery and Equipment. Licensee shall use no part of the Property to store machinery, equipment, or other property of Licensee while it is not being used.

N. Additional Reservations. Licensor reserves the right to use the surface, subsurface or airspace above the land covered by this License for any purpose allowed by law and deemed necessary by Licensor and to do and permit to be done, any work in connection therewith which may be deemed necessary or proper by Licensor in, on, across, along, over, under, and through said right of way occupied by Licensee. In the event of such work in connection with said purposes it shall be deemed necessary by Licensor, at Licensor's sole discretion, to alter, change, adapt, conform or relocate any pipeline, property, or casing of Licensee, such alteration or change or relocation shall be commenced and completed by Licensee within one hundred eighty (180) days after being ordered in writing by Licensor pursuant to directions from Licensor's City Council without any claim for reimbursement for the cost of the relocation or damages against Licensor. The relocation or alteration shall be at the sole cost of Licensee. Provided, however, that Licensee shall at all times be entitled to receive from appropriate governmental bodies, excluding Licensor, payment for alteration or relocation of its system to which it may be lawfully entitled to under applicable federal or state laws with respect to relocation payments.

IV. Standard General Conditions

A. Insurance. Licensee shall at all times during the term of this License maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):

- Personal Injury: $1,000,000.00 per person
  $1,000,000.00 per occurrence
- Property Damage: $100,000.00 per occurrence

Business Automobile Liability:	$1,000,000.00 combined single limit-- Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$1,000,000.00 per accident or occurrence
Umbrella Liability:	$10,000,000.00 each occurrence $10,000,000.00 aggregate

The Commercial General Liability shall be on an occurrence basis. This insurance shall name Licensor as an additional insured and all insurance shall waive subrogation in favor of Licensor.

The Workers' Compensation coverage provided by Licensee shall inure to the benefit of employees injured during the course and scope of their employment by Licensee pursuant to this License. The Workers' Compensation insurance shall waive all rights of subrogation against Licensor.

The Business Automobile Liability insurance provided by Licensee shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-owner vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $1,000,000.00 covering any vehicle used for the execution of the work that is the subject of this License. This insurance shall name Licensor as an additional insured and all insurance shall waive subrogation in favor of Licensor.

The parties agree that, prior to the execution of the License, Licensee shall provide one or more certificates of insurance showing that the requirements of this article have been met. This decision shall be in Licensor's sole discretion.

Licensor shall be provided the notice by Licensee's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage. Licensor shall not be required to provide any insurance whatsoever pursuant to this License.

Licensee shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this License to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts as required by Licensee, and name the City of Midland as an additional insured. Licensee certifies that the one or more certificates of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. Licensee shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of Licensee.

B. Indemnity. LICENSEE SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND LICENSOR, AND ALL OF LICENSOR'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES AND EXPENSE OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR

OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY ON ACCOUNT OF ANY NEGLIGENT ACT OF LICENSEE, LICENSEE'S OFFICERS, AGENTS OR EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH LICENSEE OR LICENSEE'S EMPLOYEES', AGENTS' OR SUBCONTRACTORS' NEGLIGENCE, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS LICENSE INCLUDING SUCH NEGLIGENT ACTS ARISING FROM OR IN ANY WAY CONNECTED WITH THE PLACEMENT, CONSTRUCTION, OPERATION, REPAIR, MAINTENANCE, REPLACEMENT OR REMOVAL OF ANY PART OF LICENSEE'S PIPELINE(S),CASING SYSTEM, OR COMPRESSOR STATION IN LICENSOR'S RIGHT OF WAY. LICENSEE WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST LICENSOR OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

LICENSEE AGREES THAT LICENSEE SHALL INDEMNIFY AND SAVE LICENSOR HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS, ALL SUPPLIES, CONSTRUCTION, OPERATION, REPAIR, MAINTENANCE, REPLACEMENT OR REMOVAL OF THE PIPELINE(S), CASING SYSTEM, OR COMPRESSOR STATION DESCRIBED HEREIN.

LICENSEE SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND LICENSOR, AND ALL OF LICENSOR'S OFFICERS, AGENTS OR EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES AND EXPENSE OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY ON ACCOUNT OF ANY NEGLIGENT ACT OF LICENSOR, LICENSOR'S OFFICERS, AGENTS OR EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH LICENSEE OR LICENSEE'S EMPLOYEES', AGENTS' OR SUBCONTRACTORS' NEGLIGENCE, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS LICENSE INCLUDING SUCH NEGLIGENT ACTS ARISING FROM OR IN ANY WAY CONNECTED WITH THE PLACEMENT, CONSTRUCTION, OPERATION, REPAIR, MAINTENANCE, REPLACEMENT OR REMOVAL OF ANY PART OF LICENSEE'S PIPELINE(S),CASING SYSTEM, OR COMPRESSOR STATION IN LICENSOR'S RIGHT OF WAY. LICENSEE WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST LICENSOR OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

LICENSEE SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND LICENSOR, AND ALL OF LICENSOR'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL CLAIMS, LOSSES, DAMAGES, LIABILITIES, LIENS, FINES, PENALTIES, CAUSES

OF ACTION, SUITS, CHARGES, JUDGMENTS, ADMINISTRATIVE ORDERS, REMEDIATION REQUIREMENTS, ENFORCEMENT ACTIONS OF ANY KIND, AND ALL COSTS AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF FAILURE OF LICENSEE, ANY CONTRACTOR, SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THEM, OR ANYONE THAT THEY CONTROL OR EXERCISE CONTROL OVER TO COMPLY WITH ALL APPLICABLE LOCAL, FEDERAL AND/OR STATE ENVIRONMENTAL LAWS, INCLUDING BUT NOT LIMITED TO THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) AND THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) (AS THEY MAY BE REAUTHORIZED AND/OR AMENDED) AND ALL OTHER LOCAL, FEDERAL AND STATE LAWS, IN CONNECTION WITH OR RELATED TO ANY OF LICENSEE'S OPERATIONS OR ACTIVITIES ON THE PROPERTY, OR ANY OF LICENSEE'S HANDLING, STORING, RELEASING, TRANSPORTING OR DISPOSING OF ALL SUBSTANCES, INCLUDING, BUT NOT LIMITED TO HAZARDOUS SUBSTANCES AND HAZARDOUS WASTES, ON OR FROM THE PROPERTY OR ANY OTHER LANDS OF LICENSOR.

C. Assignment. The rights granted by this License inure to the benefit of Licensee. The rights and privileges shall not be assignable by Licensee without the express written consent of Licensor's City Manager. Any required consent is to be evidenced by a letter written by Licensor's City Manager that fully recites the terms and conditions, if any, upon which consent is given. The granting of consent is in the sole discretion of Licensor's City Manager.

D. Independent Contractor. It is expressly understood and agreed that Licensee shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of Licensor; that Licensee shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondeat superior shall not apply as between Licensor and Licensee, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Licensor and Licensee. No person performing any of the work and services described hereunder shall be considered an officer, agent, servant or employee of Licensor. Further, it is specifically understood and agreed that nothing in this License is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Licensee shall be an independent contractor under this License and shall assume all of the rights, obligations and liabilities applicable to it as such independent contractor hereunder. Licensor does not have the power to direct the order in which the work is done. Licensor shall not have the right to control the means, methods or details of Licensee's work. Licensee shall assume exclusive responsibility for the work. Licensee is entirely free to do the work in its own way.

E. Waiver of Attorney Fees. BY EXECUTING THIS LICENSE, LICENSEE AGREES TO WAIVE, AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE, ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST LICENSOR REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE LICENSE, THE CONSTRUCTION, OR

INTERPRETATION, VALIDITY OR BREACH OF THE LICENSE. LICENSEE SPECIFICALLY AGREES THAT IF LICENSEE BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS LICENSE, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS LICENSE, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, LICENSEE AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH LICENSEE MIGHT OTHERWISE BE ENTITLED.

LICENSEE AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING, KNOWN RIGHT. LICENSEE ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THIS LICENSE. LICENSEE FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN LICENSOR AND LICENSEE. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF GOVERNMENTAL IMMUNITY.

LICENSEE AND LICENSOR ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS LICENSE WITH LEGAL COUNSEL PRIOR TO ITS EXECUTION.

F. Governing Law & Venue. All performance and payment made pursuant to this License shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this License or the performance of this License shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this License shall be deemed to have been performed in Midland County, Texas. This License shall be construed, interpreted and enforced under the laws of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all other claims or disputes, arising from or relating in any way to the subject matter of this License, without regard to conflict of laws and rules that would direct application of the laws of another jurisdiction.

G. Release. NOTWITHSTANDING ANY OTHER PROVISIONS, LICENSEE HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES LICENSOR, LICENSOR'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH LICENSEE HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR LICENSOR'S NEGLIGENCE.

H. Governmental Immunity. By executing this License, Licensor is not waiving its right of governmental immunity. Licensor is retaining its immunity from suit. Licensor is not granting consent to be sued by legislative resolution or action. **THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.**

I. Third Party Beneficiary. Licensor's approval of this License does not create a third party beneficiary. There is no third party beneficiary to this License. No person or entity who is not a party to this License shall have any third party beneficiary or other rights hereunder.

J. Notices. Any notice or communication required in the administration of this License shall be sent by certified mail, return receipt requested, to the parties' respective mailing addresses as set forth hereinabove.

K. Notice of Alleged Breach; Statutory Prerequisite. As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this License, Licensee or its legal representative, shall give the City Manager, or any other reasonable official of Licensor, notice in writing (consisting of one (1) original and seven (7) copies of notice attached to a copy of this License) of such damages, duly verified, within one hundred eighty (180) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which Licensee will settle, the physical and mailing addresses of Licensee at the time and date the claim was presented and the physical and mailing addresses of Licensee for the six (6) months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom Licensee relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except Licensor from any liability whatsoever. Licensor is under no obligation to provide notice to Licensee that Licensee's notice is insufficient. Licensor reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Licensee's failure to comply with the requirements herein shall perpetually bar Licensee's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Licensor has actual or constructive notice or knowledge of said claim or alleged damages. Licensee agrees that the requirements of this entire License are reasonable.

L. Consideration. The terms of this License are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

M. Waiver of Governmental Immunity; Chapter 271, TEX. LOC. GOV'T CODE. The parties agree that this License does not constitute a License or Contract for providing goods and/or services to Licensor as discussed in Subchapter I of Chapter 271 of the Texas Local Government Code, and Licensor does not waive, to the maximum extent allowed by law, any constitutional, statutory or common law right to sovereign immunity or governmental immunity from liability or suit. Licensor expressly does not consent to be sued or be liable. To the greatest extent allowed by law, nothing in this License constitutes a waiver of Licensor's governmental immunity and the parties expressly agree that this License shall not constitute, nor be interpreted as a waiver of Licensor's governmental immunity under Subchapter I of Chapter 271 of the Texas Local Government Code, nor shall it constitute nor be interpreted as a waiver of Licensor's governmental immunity for the benefit of any third party lacking privity to the License.

This License does not obligate Licensee to use the Property to construct, repair, operate, replace, and maintain Licensor's facilities or structures described herein, it merely prohibits Licensee from using the Property for any other purpose. This License restricts the use of the Property to a specific purpose, but does not require the use of the Property for a specific purpose. This License does not require Licensee to construct, operate, repair, maintain, replace or remove any of Licensee's facilities or structures described herein. Licensee is not providing a service to Licensor but is providing a service to Licensee's customers. Licensee is paying Licensor for a temporary interest in real property not for a service. Any such provision shall be deemed to be a covenant against noncomplying use, not a covenant to use. Licensee's use of the Property in compliance with a restriction shall not constitute a service, and such complying use shall not operate to waive Licensor's governmental immunity.

N. Compliance. Licensee agrees that it shall comply with Texas Government Code Section 2252.908, as amended, to the extent that this statute applies to this License. Licensee agrees that it shall comply with Texas Local Government Code Section 176.006, as amended, to the extent that this statute applies to this License.

O. Texas Historical Commission Survey. Licensee agrees that it shall comply with Chapter 191 of the Texas Natural Resources Code. By executing this License, Licensee represents that it has contacted the Texas Historical Commission (the "Commission") for the purpose of determining whether the Commission will request that an archaeological survey be completed before Licensee commences operations on the Property, as contemplated herein. Licensee agrees that it shall complete or cause to be completed an archaeological survey before commencing any operations on the Property if the Commission so requests and deliver the same to Licensor. Notwithstanding any provision contained herein, in the event that any site, object, artifact, or other feature of archaeological, scientific, educational, cultural, or historical interest is encountered during the operations authorized by this License, Licensee will immediately notify Licensor and the Commission so that adequate measures may be undertaken to protect or recover such discoveries or findings, as deemed appropriate by Licensor or the Commission.

LICENSOR:
CITY OF MIDLAND, TEXAS

By:_____
Courtney Sharp, City Manager

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT AND COMPLETENESS:

Robert Patrick, Assistant City Manager

APPROVED ONLY AS TO FORM:

John Ohnemiller, City Attorney

LICENSEE:
FASKEN OIL AND RANCH, LTD.

By: Cory Frederick
Printed Name: Cory Frederick
Title: Senior Drilling Engineer

THE STATE OF TX §
§
COUNTY OF Midland §

BEFORE ME, the undersigned authority, on this 26th day of March, 2020 personally appeared Cory Frederick an officer of Cory Frederick known to me to be the person and official whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said entity, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 26th day of March, 2020.

Debra S Yates
Notary Public, State of Texas

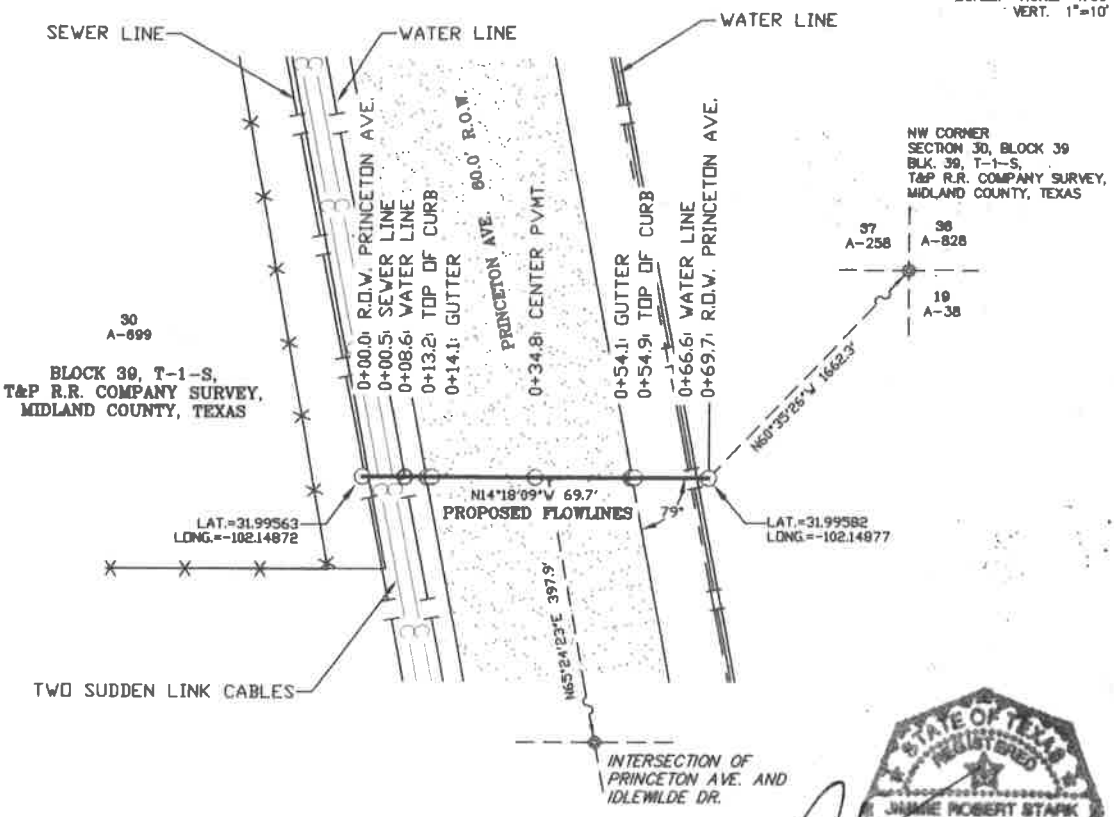
DEBRA S. YATES
Notary Public, State of Texas
Comm. Expires 01-21-2021
Notary ID 8522761

Reference No. 20-329-009

"Exhibit A"

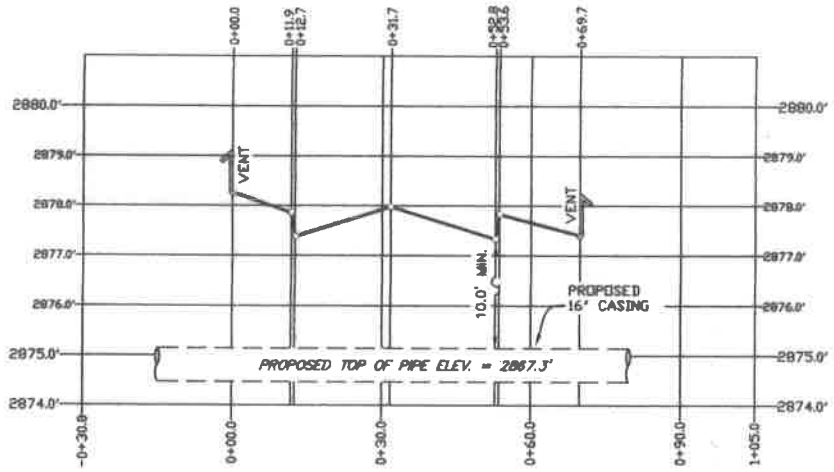
PLAN & PROFILE OF PROPOSED FLOWLINES CROSSING PRINCETON AVE.

SCALE: HORZ. 1:30
VERT. 1"=10'



STATE OF TEXAS
REGISTERED
JAIME ROBERT STARK
4980
PROFESSIONAL
LAND SURVEYOR

NOTE:
LATITUDE AND LONGITUDE COORDINATES
NAD 83 DECIMAL DEGREE, TX83-CF,
DISTANCES ARE SURFACE



Stark Surveying LLC. 13000 West Highway 80 East Odessa, TX 79765-9639 Phone: 432-563-1070 Fax: 432-563-1155 EMAIL: STARKSURVEYING@ATT.NET Firm No. 10102700 COPYRIGHT 2019 STARK SURVEYING LLC.	PLAN & PROFILE OF PROPOSED FLOWLINES CROSSING PRINCETON AVE. LOCATED IN SECTION 30, BLK. 39, T-1-S, T&P R.R. COMPANY SURVEY, MIDLAND COUNTY, TEXAS	MADISON MIDLAND DEVELOPMENT LLC. SS Job No. 87286 DATE: December 4, 2019

Legend

Proposed ROW

Street

Survey Section

15.16

Madison Midland Development LLC.
Proposed Flowlines Crossing on Princeton Ave.
Total Length : 13.39 Rods (221.02 Feet)

Date: 3/25/2020

0 50 100 Feet

©THE CITY OF MIDLAND - 2020
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/19/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh & McLennan Agency LLC
15 Smith Rd.
Suite 6000
Midland TX 79705

CONTACT NAME: LaCrisha Wynne
PHONE (A/C, No, Ext): 432-618-4569 **FAX (A/C, No):** 432-618-4619
E-MAIL ADDRESS: lacrisha.wynne@marshmma.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : St. Paul Fire and Marine Insurance Co	24767
INSURER B : Underwriters at Lloyd's London (IL)	15792
INSURER C : Travelers Cas & Surety Co of America	31194
INSURER D :	
INSURER E :	
INSURER F :	

INSURED FASKEOIL
Fasken Oil and Ranch, LTD
6101 Holiday Hill Road
Midland TX 79707-1631

COVERAGES **CERTIFICATE NUMBER:** 1124472384 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY**			ZLP12R7410620N	2/15/2020	2/15/2021	EACH OCCURRENCE	$ 1,000,000
	[ ] CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
	X S&A Pollution						MED EXP (Any one person)	$ 5,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	$ 1,000,000
	X POLICY [ ] PRO-JECT [ ] LOC						GENERAL AGGREGATE	$ 2,000,000
	OTHER:						PRODUCTS - COMP/OP AGG	$ 2,000,000
							S&A Pollution	$ 1,000,000
A	**AUTOMOBILE LIABILITY**			ZLP12R7410620N	2/15/2020	2/15/2021	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[ ] HIRED AUTOS [ ] NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
A	X **UMBRELLA LIAB** X OCCUR			ZLP12R7410620N	2/15/2020	2/15/2021	EACH OCCURRENCE	$ 25,000,000
	EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 25,000,000
	DED X RETENTION $ 10,000							$
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N			UB0K24715318N4G	2/15/2020	2/15/2021	X PER STATUTE [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B	Control of Well			JHBGU3089904652	10/1/2019	10/1/2020	Cost of Control	$5,000,000
A	Inland Marine			ZLP12R7410620N	2/15/2020	2/15/2021	Rented/Leased Equip.	$600,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Additional Insured form #OG037 edition 01/16 applies to the General Liability policy.
Waiver of subrogation form #OG028 edition 01/16 applies to the General Liability policy.
Primary & Non-Contributory General Liability form #OG001 edition 01/16.
Notice of Cancellation form #D0166 edition 03/11 applies to the General Liability policy.

Additional Insured form #A0265 edition 09/03 applies to the Automobile Liability policy.
Waiver of subrogation form #A0186 edition 04/00 applies to the Automobile Liability policy.
Notice of Cancellation form #D0166 edition 03/11 applies to the Automobile Liability policy
See Attached...

CERTIFICATE HOLDER

City of Midland, the City's Officials, employees, agents and officers
PO Box 1152
Midland TX 79702
USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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AGENCY CUSTOMER ID: FASKEOIL

LOC #:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Marsh & McLennan Agency LLC	Fasken Oil and Ranch, LTD 6101 Holiday Hill Road Midland TX 79707-1631
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Waiver of subrogation form #WC420304B edition 06/14 applies to the Workers Compensation policy.
Alternate Employer Form #WC00030 edition 01/94 applies to the Workers Compensation.

Follow Form #OG500 edition 01/16 applies to the Umbrella Liability.

The General Liability policy includes a blanket additional insured endorsement to the certificate holder only when there is a written contract between the named insured and the certificate holder that requires such status.

The General Liability policy contains an endorsement with “Primary and NonContributory” wording that may apply only when there is a written contract between the named insured and the certificate holder that requires such wording.

The General Liability policy contains a blanket waiver of subrogation endorsement that may apply only when there is a written contract between the named insured and the certificate holder that requires such wording.

The Automobile Liability policy includes a blanket additional insured endorsement to the certificate holder only when there is a written contract between the named insured and the certificate holder that requires such status.

The Automobile Liability policy contains a blanket waiver of subrogation endorsement that may apply only when there is a written contract between the named insured and the certificate holder that requires such wording.

The Worker’s Compensation policy includes a waiver of subrogation endorsement that may apply only when there is a written contract between the named insured and the certificate holder that requires such wording.

The Worker’s Compensation policy includes an alternate employer endorsement.

The General Liability, Automobile Liability and Excess liability policies includes a blanket notice of cancellation to the certificate holder endorsement, providing for (30) days’ advance written notice if the policy is canceled by the company, or 10 days’ written notice before the policy is canceled for nonpayment of premium. Notice is sent to certificate holders with mailing addresses on file with the agent or the company. The endorsement does not provide for notice of cancellation to the certificate holder if the named insured requests cancellation.

The Umbrella policy is a follow form of the underlying General Liability, Automobile Liability and Employers Liability policies.

The City of Midland, the City's officials, employees, agents and officers are included as Additional Insureds as required by written contract, but limited to the operations of the Insured under said contract. A waiver of Subrogation is granted in favor of Certificate Holder as required by written contract but limited to the operations of the Insured under said contract. No deductible is applicable to the coverage.

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THIS CHECK IS VOID WITHOUT A BLUE AND GREEN BACKGROUND AND AN ARTIFICIAL WATERMARK ON THE BACK - HOLD AT AN ANGLE TO VIEW

Fasken Oil and Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707-1631

BANK OF AMERICA
Midland, TX

CHECK NO	CHECK DATE	CHECK AMOUNT
16536	04/01/20	$**********6,600.00

PAY ***6,600 Dollars and No Cents

PAY TO THE ORDER OF
City of Midland
PO Box 1152
Midland TX 79702-1152

Tommy E. Taylor

Audra Simmons

BORDER CONTAINS MICROPRINTING

⑈00165360⑈ ⑆111000025⑆ ⑈4880845715880⑈

City Council Agenda

Approved for Agenda:
mwilliams
City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **City Council / City Manager**

FROM: Elizabeth Shaughnessy, Senior Planner

SUBJECT **Consider an ordinance on second reading on a request by Cumberland & Western Resources, LLC, for the initial zoning of a 37.9539 - acre tract of land located in Section 35, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas. (Generally located on the west side of State Highway 158, approximately 2,372-feet north of State Highway 191 Extraterritorial Jurisdiction.)**

Purpose:

Consider an ordinance on second reading on a request by Cumberland and Western Resources, LLC and L & L Austex, LLC for the initial zoning of a 37.9539 - acre tract of land located in Section 35, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas, located on the west side of State Highway 158, approximately 2,372-feet north of State Highway 191, which is currently being annexed, to be MF-22, Multiple-Family Dwelling District.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Discussion:

The applicant, Cumberland and Western Resources, LLC, is requesting the initial zoning of a 37.9539 - acre tract of land located in Section 35, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas, located on the west side of State Highway 158, approximately 2,372-feet north of State Highway 191, which is currently being annexed, to be MF-22,

Multiple-Family Dwelling District. The site is currently in the process of being annexed into City Limits as well as in the process of being platted.

The proposed site plan attached hereto illustrates fifteen (15) three-story buildings with a total of 360 units. The proposed density is 18.84 units per acre. The site plan also encompasses a clubhouse and other amenity areas.

Adequate parking is provided with a total of 678 spaces of which 602 are surface and 76 are garage spaces. Per Section 6.02, Off-Street Parking and Loading Requirements of the zoning ordinance, the proposed project is required to provide 630 parking spaces. The applicant is exceeding this requirement. Per Section 3.13 MF-22, Multiple-Family Dwelling District of the zoning ordinance, a minimum of 25 percent of the total number of units in the complex shall have a one-car enclosed garage, 240 square feet minimum, attached or detached, per dwelling unit. Per the site plan, the applicant is providing 76 garage spaces, which is 14 short of the required garages.

This case has been circulated to and reviewed by all pertinent City departments for internal review and has received no objections. Their comments are as follows.

Engineering: (Approved with Conditions)

No objection to zone change.

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

Transportation: (Approved with Conditions)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

No objection to zone change.

Fire: (Approved)

No objection to zoning change.

Code Administration: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Oil and Gas: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat. No wells identified in the annex area.

Planning:

The Tall City Tomorrow Comprehensive Plan calls for Urban-Medium uses in this location. That displays vibrant, urban areas that draw customers and employees from outside the immediate area. Encompassing a mix of housing types, neighborhood and community commercial, office and service uses.

This request was approved at the March 24, 2020 City Council meeting

Staff recommends approval of this initial zoning of MF-22, Multiple-Family Dwelling District, subject to conditions A and B.

Conditions:

A. That the use and development of this property shall conform to the regulations of the MF-22, Multiple-Family Dwelling District.

B. That the use and development of the property shall conform to the site plan, which is attached hereto and incorporated herein as Exhibit C.

Letters of Objection:

As of March 19, 2020, staff has received no letters of objection to this request.

Attachments:

Petition (Exhibit A)
Metes and Bounds (Exhibit B)
Site Plan (Exhibit C)
Application
Maps
Petition

ORDINANCE NO. _____

AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 37.9539-ACRE TRACT OF LAND OUT OF SECTION 35, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN MF-22, MULTIPLE-FAMILY DWELLING DISTRICT; SAID TRACT BEING GENERALLY LOCATED ON THE WEST SIDE OF STATE HIGHWAY 158, APPROXIMATELY 2,372 FEET NORTH OF STATE HIGHWAY 191; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, notice has been given to all parties in interest and citizens by publication in the official newspaper and otherwise of a hearing to be held before the City Council on March 24, 2020, to consider an amendment to the Zoning District Map of the City of Midland, Texas, so as to establish the initial zoning classification of the property described in Section One hereof as an MF-22, Multiple-Family Dwelling District and to adopt a site plan therefor, as set out in Title XI, Chapter 1 of the City Code of Midland, Texas; and

WHEREAS, such a public hearing was held in the Council Chambers on March 24, 2020, as advertised; and

WHEREAS, after a full hearing, at which all parties in interest and citizens were given an opportunity to be heard; and after considering among other things, the character of the property involved and the surrounding area and its peculiar suitability for particular uses; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such municipality, the Council finds it to be in the best interest of the health, safety, morals and general welfare of the City of Midland to amend the Zoning District Map accordingly;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the initial zoning classification of the area indicated on

Exhibit "A", which is attached hereto and incorporated herein by reference, is hereby established as an MF-22, Multiple-Family Dwelling District, and the Zoning District Map of the City of Midland, Texas, is hereby amended to reflect the establishment of this initial zoning classification.

SECTION TWO. That a site plan, which is attached hereto as Exhibit "B" and incorporated herein by reference, is hereby adopted, and the use and development of the property described in Section One shall be subject to the following conditions and restrictions:

> That the use and development of the property shall conform to the regulations of the MF-22, Multiple-Family Dwelling District and the conditions shown on Exhibit "B".

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by

the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the ___day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the ___ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

ANNEXATION DESCRIPTION:

BEING a 37.9539 acre tract of land situated in Section 35, Block 40, Township 1-S, T&P RR Co Survey, Abstract No. 378, Midland County, Texas; said tract being part of Tract Seven in Warranty Deed to Cumberland and Western Resources, LLC recorded in Instrument No. 2008-26873 of the Official Public Records of Midland County, Texas; said tract also being part of State Highway No. 158 (a 120-foot wide right-of-way); said tract being more particularly described as follows:

BEGINNING at a 5/8-inch iron rod with “KHA” cap set at the east end of a future right-of-way corner clip at the intersection of the future southwest right-of-way line of State Highway No. 158 (an existing 120-foot wide right-of-way and a proposed 150-foot wide right-of-way) and the future southeast right-of-way line of Wadley Avenue (a variable width right-of-way, 150-feet wide at this point);

THENCE South 75°54'54" West, along the southeast line of said corner clip, a distance of 28.29 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

THENCE along the said future southeast line of Wadley Avenue, the following four (4) calls:

> South 30°55'12" West, a distance of 579.76 feet to a 5/8-inch iron rod with “KHA” cap set for corner;
>
> South 36°37'39" West, a distance of 151.02 feet to a 5/8-inch iron rod with “KHA” cap set for corner;
>
> South 30°46'03" West, a distance of 7.15 feet to a 5/8-inch iron rod with “KHA” cap set at the beginning of a non-tangent curve to the right having a central angle of 43°01'09", a radius of 1,344.00 feet, a chord bearing and distance of South 52°25'46" West, 985.58 feet;
>
> In a southwesterly direction, with said curve to the right, an arc distance of 1,009.11 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

THENCE North 14°19'25" West, departing the said future southeast line of Wadley Avenue, a distance of 120.06 feet to a 5/8-inch iron rod with “KHA” cap set at the beginning of a non-tangent curve to the left having a central angle of 2°00'56", a radius of 1,224.00 feet, a chord bearing and distance of North 72°45'40" East, 43.06 feet; said point being in the future northwest right-of-way line of said Wadley Avenue;

THENCE along the said future northwest line of Wadley Avenue and in a northeasterly direction, with said curve to the left, an arc distance of 43.06 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

THENCE North 14°19'25" West, departing the said future northwest line of Wadley Avenue, a distance of 984.97 feet to a 5/8-inch iron rod with “KHA” cap set for corner; from said point a 1-inch iron pipe found for the northwest corner of said Section 35 bears North 22°30’16” West, a distance of 956.67 feet;

THENCE North 38°07'57" East, a distance of 483.02 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

THENCE South 59°04'45" East, a distance of 921.69 feet to a 5/8-inch iron rod with “KHA” cap set for corner in the said future northwest line of Wadley Avenue;

THENCE North 30°55'12" East, along the said future northwest line of Wadley Avenue, a distance of 364.79 feet to a 5/8-inch iron rod with “KHA” cap set for corner at the south end of a future right-of-way corner clip at the intersection of the said future northwest line of Wadley Avenue and the said future southwest line of State Highway No. 158;

THENCE North 14°05'06" West, along the west line of said corner clip, a distance of 28.28 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

THENCE North 59°05'24" West, along the said future southwest line of State Highway No. 158, a distance of 1,337.53 feet to a 5/8-inch iron rod with “KHA” cap set for corner;

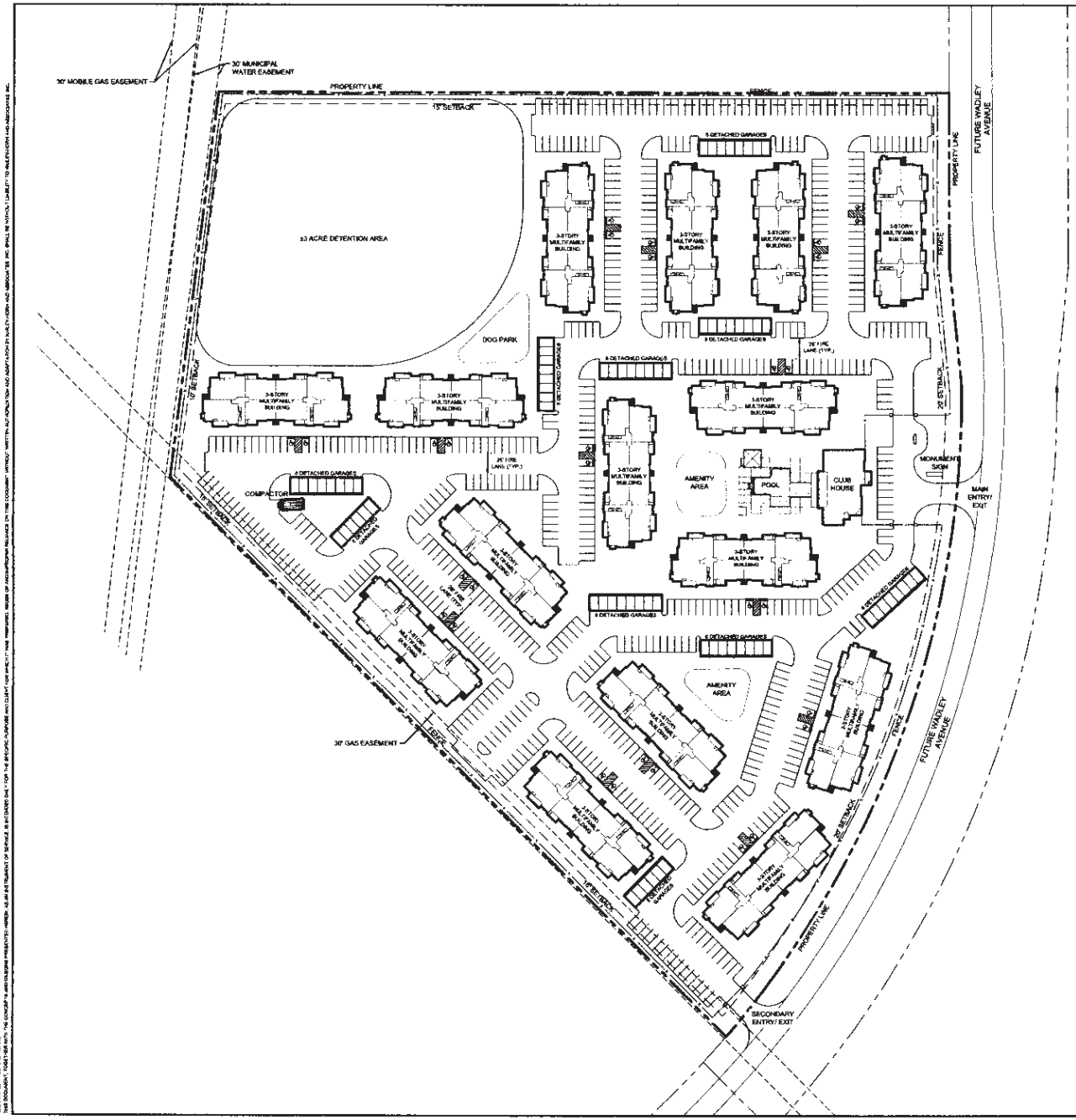
THENCE North 30°54'36" East, a distance of 130.00 feet to a point for corner in the northeast line of said State Highway No. 158;

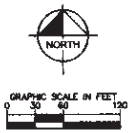
THENCE South 59°05'24" East, along the said northeast line of State Highway No. 158, a distance of 4,563.73 feet to a point for corner;

THENCE South 30°54'36" West, departing the said northeast line of State Highway No. 158, a distance of 130.00 feet to a 5/8-inch iron rod with “KHA” cap set for corner in the said future southwest line of State Highway No. 158;

THENCE North 59°05'24" West, along the said future southwest line of State Highway No. 158, a distance of 3,036.20 feet to the POINT OF BEGINNING and containing 37.9539 acres or 1,653,270 square feet of land, more or less.

EXHIBIT **B**





HIGHWAY 191		STONEHAWK CAPITAL PARTNERS	
UNIT TABULATION - 3-STORY BREEZEWAY			
UNIT TYPE	UNIT COUNT	% BREAKDOWN	REQUIRED PARKING
1 BEDROOM	204	57%	306 SPACES
2 BEDROOM	132	37%	264 SPACES
3 BEDROOM	24	7%	60 SPACES
TOTAL	360	100%	630 SPACES

Project Data

Acreage	19.1053 AC
Density	18.84 UNITS/ ACRE
Parking	
Required	630 SPACES
Provided	678 TOTAL SPACES
	76 DETACHED GARAGE
	602 SURFACE SPACES

AMENITY NOTES:

1. THIS DEVELOPMENT SHALL CONTAIN, BUT NOT BE LIMITED TO THE FOLLOWING AMENITIES:
   - POOL SPA
   - COVERED TRELLIS OR GAZEBO
   - OUTDOOR SEATING AREAS
   - DOG PARK
   - SCORED AND COLORED CONCRETE PAVERS
   - PLANTING BEDS
   - LAWN AREAS
   - BBQ PITS AND PICNIC TABLES
   - HORSESHOE PITS/ OUTDOOR GAMING.
2. THE OWNER MAY SUBSTITUTE SIMILAR AMENITY TYPES AT THEIR DISCRETION.

GENEARL NOTES:

1. THIS PLAN SHALL COMPLY WITH ALL LANDSCAPING STANDARDS IN TITLE IX, CHAPTER 8.
2. COMPACTOR SCREEN SHALL MATCH THE STONE MATERIALS OF THE APARTMENT BUILDINGS.
3. THIS PLAN SHALL COMPLY WITH ALL SIGNAGE REGULATIONS IN TITLE IX.
4. A PHOTOMETRIC PLAN SHALL BE PROVIDED AT THE TIME OF PERMIT REVIEW.
5. THE CLUBHOUSE SHALL CONSIST OF THE SAME MATERIALS AND COLORS AS THE APARTMENT BUILDINGS, AND SHALL BE 1 STORY IN HEIGHT.
6. IN LOCATIONS WHERE DETACHED GARAGE ARE ALONG PROPERTY LINES, THE GARAGE STRUCTURE SHALL ACT AS THE FENCE. THE FENCE SHALL CONNECT TO THE GARAGE STRUCTURE AND SHALL BE ERECTED BETWEEN GARAGE STRUCTURE WHERE THEY ARE IN CLOSE PROXIMITY.
7. ANY STRUCTURE PARKING SPACE SHALL BE ABLE TO BE A COVERED CARPORT SPACE AT THE TIME OF CONSTRUCTION PER THE OWNERS DISCRETION.
8. FINAL LOCATIONS OF DRIVEWAYS, PARKING, AND LANDSCAPE ISLANDS TO BE DETERMINED AT PERMITTING.

Kimley»Horn
1400 NOEL ROAD, TWO GALLERIA OFFICE TOWER, SUITE 700
DALLAS, TEXAS 75240
PHONE: 972 770-1300 FAX: 972 239-3820
TEXAS REGISTERED ENGINEERING FIRM F-928

NO.	REMARKS	DATE	BY

PROJECT NO. 069000000
DATE: OCTOBER 2019
SCALE: AS SHOWN
DESIGNED BY: --
DRAWN BY: --
CHECKED BY: --

STONEHAWK SH 158 PH II APARTMENTS
MIDLAND, TX

ARCHITECTURAL SITE PLAN

SHEET NUMBER
EX-01

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.

16.10

MIDLAND
Planning Division

Annexation/Initial Zoning Application

Project Number: 2-19-0164
Case Number: A-19-0020

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Stonehawk Capital Partners, LLC		Phone (714) 686-7242 Email bwoidneck@stonehawkcaptial.com	
Address 2722 Routh Street	City Dallas	State TX	Zip 75201

Property Owner Printed Name: Cumberland & Western Resources, LLC		Phone (941) 488-4422 Email Greg@Bettertonlaw.com	
Address 2300 Lapsley Ln.	City Bowling Green	State KY	Zip 42103

Representative *(if different from Applicant or Property Owner)* Firm: Rendall Sikes, PLLC Printed Name: Robert V. Rendall		Phone (432) 704-5450 Email rrendall@rendallsikes.com	
Address 6 Desta Drive, Suite 1000	City Midland	State TX	Zip 79705

Street Address: Area west of SH 158 adjacent to future extension of Wadley Avenue. Shown on attachment.

Legal Description Attached hereto
Lot: Block: Subdivision:

Current Zoning: None	**Proposed Zone:** MF-1 *(List by tracts if more than one district is requested)*

Reason for Annexation/Zone Change Request: Property to be developed

Present Use of Property: Vacant

Proposed Use of Property: Apartment Complex

How would this annexation/zone change affect the public health, safety and welfare?
Provide much needed housing for community.

Describe how this annexation/zone change will affect adjacent properties: N/A

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

RECEIVED
DEC 26 2019
CITY OF MIDLAND
PLANNING DIVISION OFFICE

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature):	Date: 12/16/19
Property Owner (printed) : Greg Bertelson, Cumberland and Western	

The Annexation/Initial Zoning shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Robert Rendall who, being by me duly sworn, upon oath says: That (s)he is authorized by Cumberland & Western Resources, LLC, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 16th day of December, 2019, to certify which witness my hand and seal of office.

CLAUDIA CANTU
Notary Public, State of Texas
Comm. Expires 12-09-2021
Notary ID 129647113

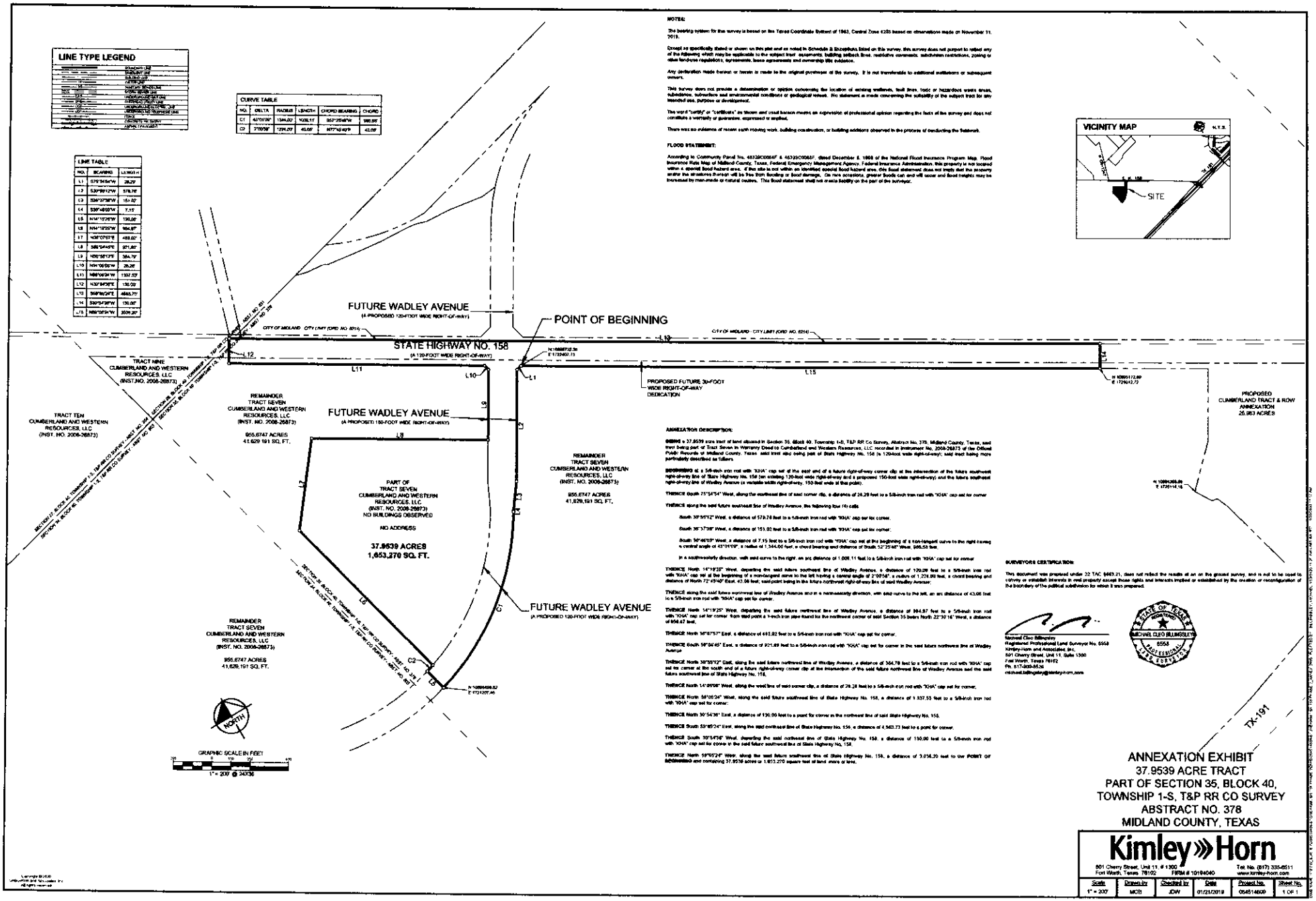
Claudia Cantu
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # 2407	
Received By: ES	Date:

RECEIVED
DEC 26 2019
CITY OF MIDLAND
PLANNING DIVISION OFFICE

****Application will not be considered for scheduling until reviewed by a planner.****



ANNEXATION DESCRIPTION:

BEING a 37.9539 acre tract of land situated in Section 35, Block 40, Township 1-S, T&P RR Co Survey, Abstract No. 378, Midland County, Texas, said tract being part of Tract Seven in Warranty Deed to Cumberland and Western Resources, LLC recorded in Instrument No. 2008-26873 of the Official Public Records of Midland County, Texas, said tract also being part of State Highway No. 158 (a 120-foot wide right-of-way), said tract being more particularly described as follows:

BEGINNING at a 5/8-inch iron rod with "KHA" cap set at the east end of a future right-of-way corner clip at the intersection of the future southwest right-of-way line of State Highway No. 158 (an existing 120-foot wide right-of-way and a proposed 150-foot wide right-of-way) and the future southeast right-of-way line of Wadley Avenue (a variable width right-of-way, 150-feet wide at this point);

THENCE South 75°54'54" West, along the southwest line of said corner clip, a distance of 26.29 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE along the said future southeast line of Wadley Avenue, the following four (4) calls:

South 39°55'12" West, a distance of 579.76 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

South 36°37'38" West, a distance of 151.02 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

South 56°46'03" West, a distance of 7.15 feet to a 5/8-inch iron rod with "KHA" cap set at the beginning of a non-tangent curve to the right having a central angle of 43°01'09", a radius of 1,344.00 feet, a chord bearing and distance of South 52°25'48" West, 985.05 feet;

In a southwesterly direction, with said curve to the right, an arc distance of 1,008.11 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE North 14°19'25" West, departing the said future southeast line of Wadley Avenue, a distance of 120.00 feet to a 5/8-inch iron rod with "KHA" cap set at the beginning of a non-tangent curve to the left having a central angle of 2°00'58", a radius of 1,234.00 feet, a chord bearing and distance of North 72°45'40" East, 43.05 feet, said point being in the future northwest right-of-way line of said Wadley Avenue;

THENCE along the said future northwest line of Wadley Avenue and in a northeasterly direction, with said curve to the left, an arc distance of 43.05 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE North 14°19'25" West, departing the said future northwest line of Wadley Avenue, a distance of 964.87 feet to a 5/8-inch iron rod with "KHA" cap set for corner from said point a 1-inch iron pipe found for the northwest corner of said Section 35 bears North 22°30'16" West, a distance of 958.87 feet;

THENCE North 36°07'57" East, a distance of 483.82 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE South 56°04'45" East, a distance of 921.89 feet to a 5/8-inch iron rod with "KHA" cap set for corner in the said future northwest line of Wadley Avenue;

THENCE North 36°55'12" East, along the said future northwest line of Wadley Avenue, a distance of 364.79 feet to a 5/8-inch iron rod with "KHA" cap set for corner at the south end of a future right-of-way corner clip at the intersection of the said future northwest line of Wadley Avenue and the said future southwest line of State Highway No. 158;

THENCE North 14°05'06" West, along the west line of said corner clip, a distance of 26.26 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE North 89°06'24" West, along the said future southwest line of State Highway No. 158, a distance of 1,337.53 feet to a 5/8-inch iron rod with "KHA" cap set for corner;

THENCE North 39°54'36" East, a distance of 150.00 feet to a point for corner in the northwest line of said State Highway No. 158;

THENCE South 89°06'24" East, along the said northwest line of State Highway No. 158, a distance of 4,563.73 feet to a point for corner;

THENCE South 39°54'54" West, departing the said northwest line of State Highway No. 158, a distance of 150.00 feet to a 5/8-inch iron rod with "KHA" cap set for corner in the said future southwest line of State Highway No. 158;

THENCE North 89°54'54" West, along the said future southwest line of State Highway No. 158, a distance of 3,039.20 feet to the POINT OF BEGINNING and containing 37.9539 acres or 1,653,270 square feet of land more or less.

SURVEYOR'S CERTIFICATION:

This document was prepared under 22 TAC §663.21, does not reflect the results of an on the ground survey, and is not to be used to convey or establish interests in real property except those rights and interests implied or established by the creation or reconfiguration of the boundary of the political subdivision for which it was prepared.

Michael Cleo Billingsley
Registered Professional Land Surveyor No. 6558
Kimley-Horn and Associates, Inc.
801 Cherry Street, Unit 11, Suite 1300
Fort Worth, Texas 76102
Ph. 817-339-9536
michael.billingsley@kimley-horn.com

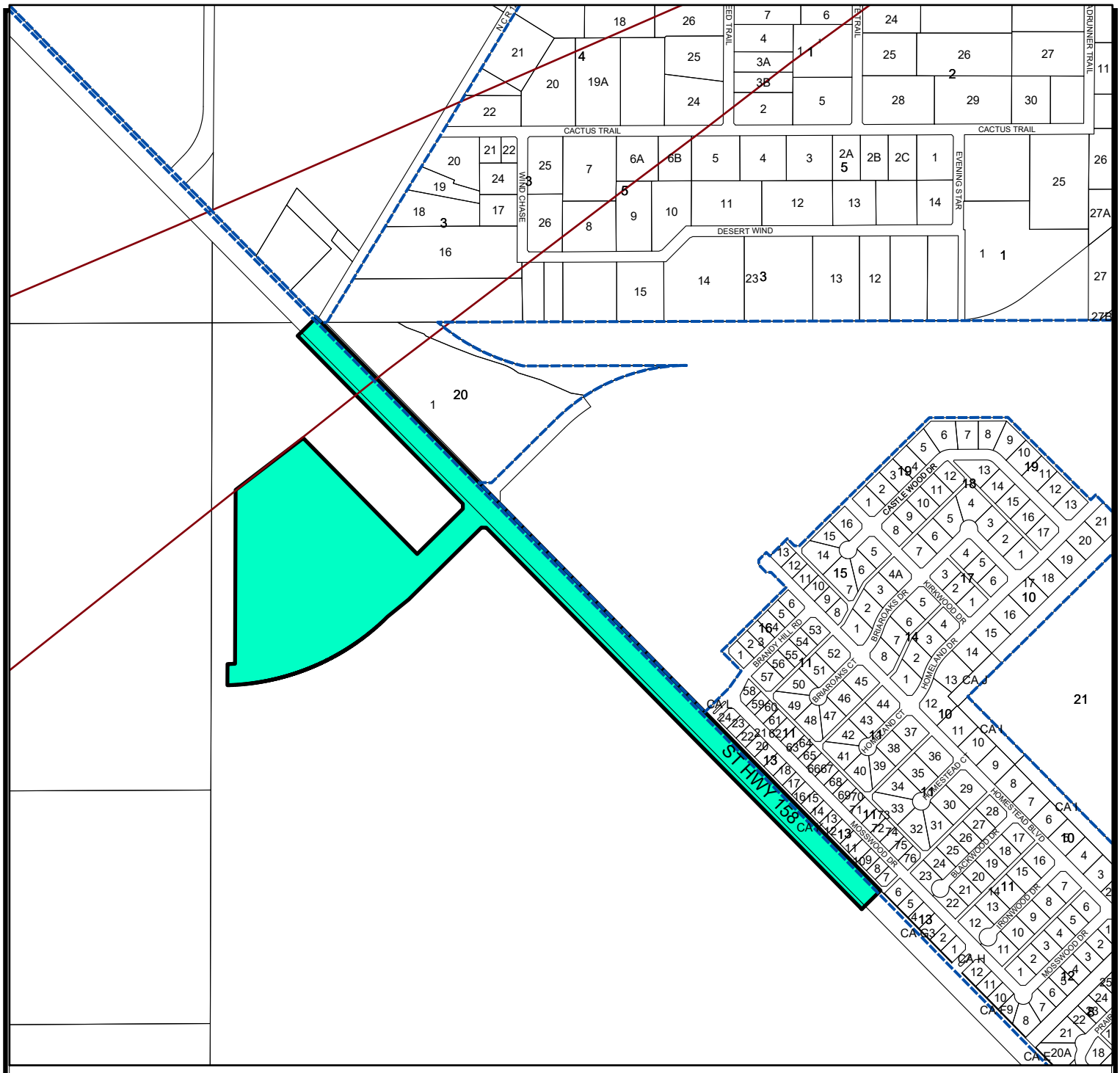
STATE OF TEXAS
MICHAEL CLEO BILLINGSLEY
6558
REGISTERED
LAND SURVEYOR

ANNEXATION EXHIBIT
37.9539 ACRE TRACT
PART OF SECTION 35, BLOCK 40, TOWNSHIP 1-S, T&P RR CO SURVEY
ABSTRACT NO. 378
MIDLAND COUNTY, TEXAS

Kimley»Horn
801 Cherry Street, Unit 11, # 1300
Fort Worth, Texas 76102
Tel No. (817) 335-6511
FIRM # 10194040
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 200'	MCB	JDW	01/23/2019	064514600	1 OF 1

16.13



LOCATION MAP

A-19-0020

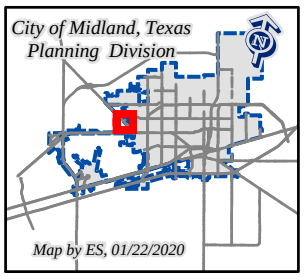
Scale: 1" = 800'

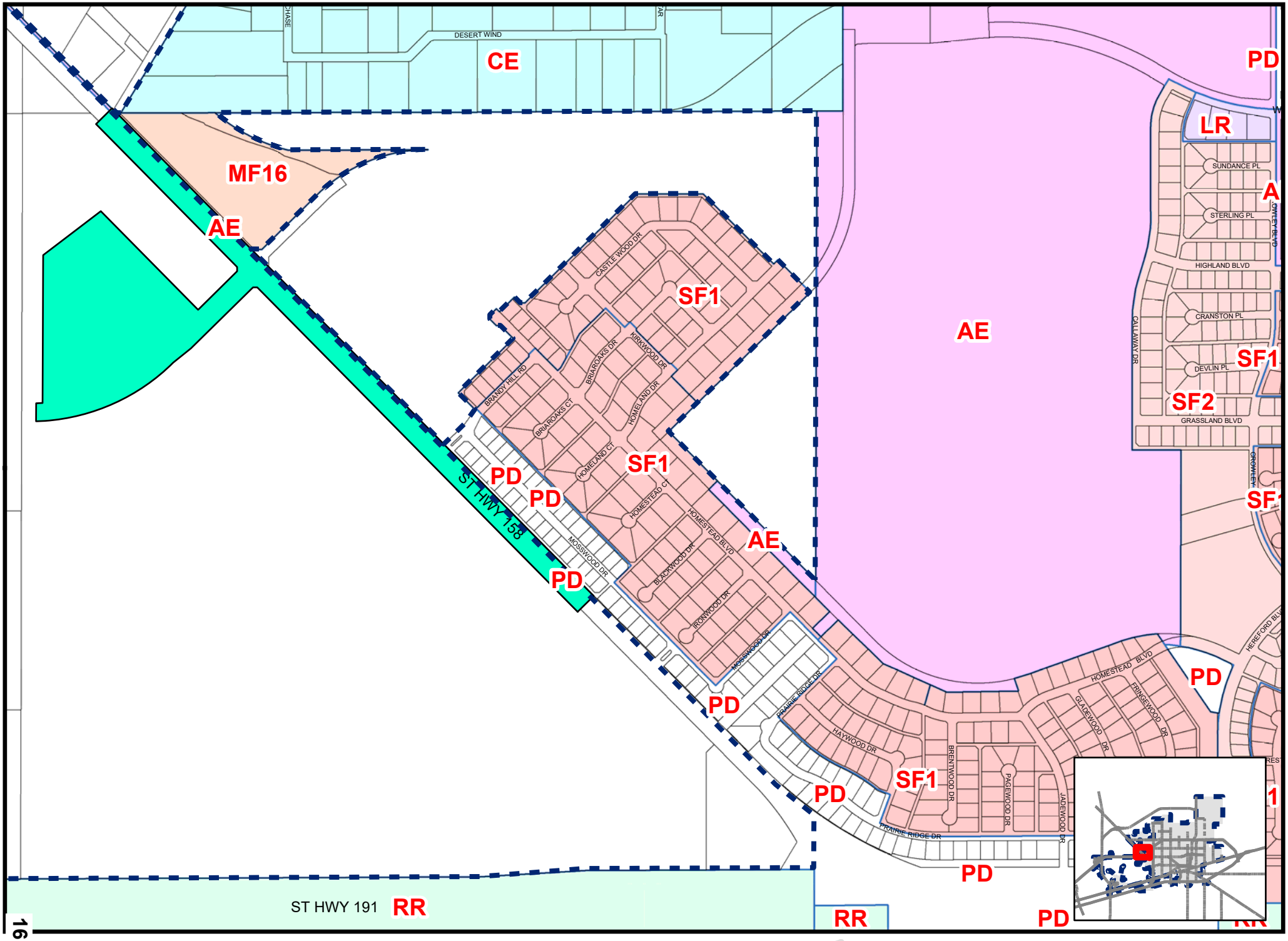
Consider a request for the annexation of a 40.0492-acre tract of land located in Section 35, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas.

Generally located on the west side of State Highway 158, approximately 2,372-feet north of State Highway 191. (Extraterritorial Jurisdiction)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS





16.15

ap By ES, 1/30 /2020

SUB-20-0312

Scale: 1" = 1,200'

ZONING MAP

16.16

16.17

16.18

16.19

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL**

FROM: **Elizabeth Shaughnessy, Senior Planner**

SUBJECT: **Consider an ordinance on second reading on a request by Cornerstone Funding, LLC for a Zone Change from PD, Planned District for an Office Center to an Amended PD, Planned Development District for an Office Center on Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas. (Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4)**

Purpose:

The applicant, J. Luis DelValle, is requesting a zone change from a PD, Planned District for an Office District to an Amended PD, Planned Development District for an Office Center on Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas for the construction of an office building.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Discussion:

The current Planned District (Ordinance No. 7830) was established in April 1999 with an underlying zoning of O-1, Office District and a condition that requires a detailed site plan to be approved in the same manner prescribed for a zone change prior to the issuance of any

building permits. The applicant, J. Luis DelValle, is now requesting to have the submitted site plan approved for the construction of an office building.

The proposed site plan and elevations show a two-story building with a total area of 33,212 square feet, which includes office space, a gym and recreation areas. The site plan also shows forty-nine parking spaces, which exceeds the required parking for the office space.

The applicant will be required to adhere to the site plan review standards outlined within the City of Midland Zoning Ordinance Chapter 10-S*ite Plan Review Standards* as well as Chapter 9- *Landscape Regulations* for future landscaping.

The proposed height for the building will not exceed the allowed maximum height of 35'.

This request has been circulated to and reviewed by respective City departments for internal review and their comments, conditions, and requirements are as follows:

Engineering: Approved

No objection to zone change.

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

Transportation: Approved

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

No objection to zone change.

Fire: Approved

No objections.

Code Administration: Approved

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Oil and Gas: Approved

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-

permitted well radius of location on plat.

Planning:

This request is in compliance with the *Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision*, Principle 8, "Land use policies and regulations should create and support balanced neighborhoods." (Tall City Tomorrow, Page 59) This request will aid in promoting balanced neighborhoods offering residents easy access to a variety of places to live, shop, work, play and engage in community life.

This request was recommended for approval at the February 18, 2020 Planning and Zoning meeting.

This request was approved at the March 24, 2020 City Council meeting.

Staff recommends approval of the zone change from PD, Planned District for an Office Center to an Amended PD, Planned Development District for an Office Center, subject to the following conditions.

Condition:

A. That the use and development of this property shall be subject to the regulations of the O-1, Office District, except as otherwise stated below.

B. That the use and development of this property shall conform to the site plan and elevations, which are attached hereto and incorporated as Exhibit A.

C. That the maximum building height shall not exceed 35-feet.

D. That the landscaping shall conform to the regulations set forth in Title XI, Chapter 9 of the City Code.

E. That the signage for this property shall conform to the regulations set forth in Title XI, Chapter 7a. of the City Code.

Letters of Objection:

As of March 19, 2020, staff has received six letters of objection to this request, which equals 10% of objections in the 200-foot notification area.

Attachments:

Site Plan and Elevations (Exhibit A)
Ordinance No. 7830
Application
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1A, BLOCK 2, GRASSLAND ESTATES WEST, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER TO AN AMENDED PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HOMESTEAD BOULEVARD AND HEREFORD BOULEVARD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas (the "Property"), to an amended PD, Planned Development District for an Office Center and adopting a site plan therefor, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from PD, Planned Development District for an Office Center to an amended PD, Planned Development District for an Office Center.

SECTION TWO. That the base zoning district to which the use and development of the Property shall conform, except as modified by Section Three of this ordinance, is the O-1, Office District.

SECTION THREE. That a site plan, which is attached hereto as Exhibit "A" and

incorporated herein for all purposes, is hereby adopted, and the use and development of the Property shall be subject to the following conditions and restrictions:

A. That the use and development of the Property shall conform to the site plan and elevation drawings, which are attached hereto as Exhibit "A" and incorporated herein for all purposes.

B. That the maximum building height shall not exceed 35 feet.

C. That the landscaping shown in Exhibit "A" shall be considered illustrative. The landscaping shall conform to the regulations set forth in Title XI, Chapter 9 of the City Code.

D. That the signage shall conform to the regulations set forth in Title XI, Chapter 7a of the City Code.

SECTION FOUR. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION FIVE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION SIX. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION SEVEN. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION EIGHT. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

01 PRELIMINARY SITE PLAN
SCALE: 1" = 20'

PARKING CALCULATION
PARKING REQUIRED: 1 SPACE / 400 SQ.FT. OFFICE AREA = 14,718 SQ.FT. (GROSS) 14,718/400 = 37 SPACES REQUIRED 49 SPACES PROVIDED

LANDSCAPING AND PLANTING
LANDSCAPING AND PLANTING LOCATIONS SHOWN ARE PRELIMINARY. FULL LANDSCAPE PLANS AND DETAILS WILL BE SUBMITTED WITH PERMIT DRAWING PACKAGE.

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW AND PERMITTING ONLY
BY REGISTERED PROFESSIONAL ENGINEER

DATE
2/4/2020
REVISION
DRAWN BY
LUIS

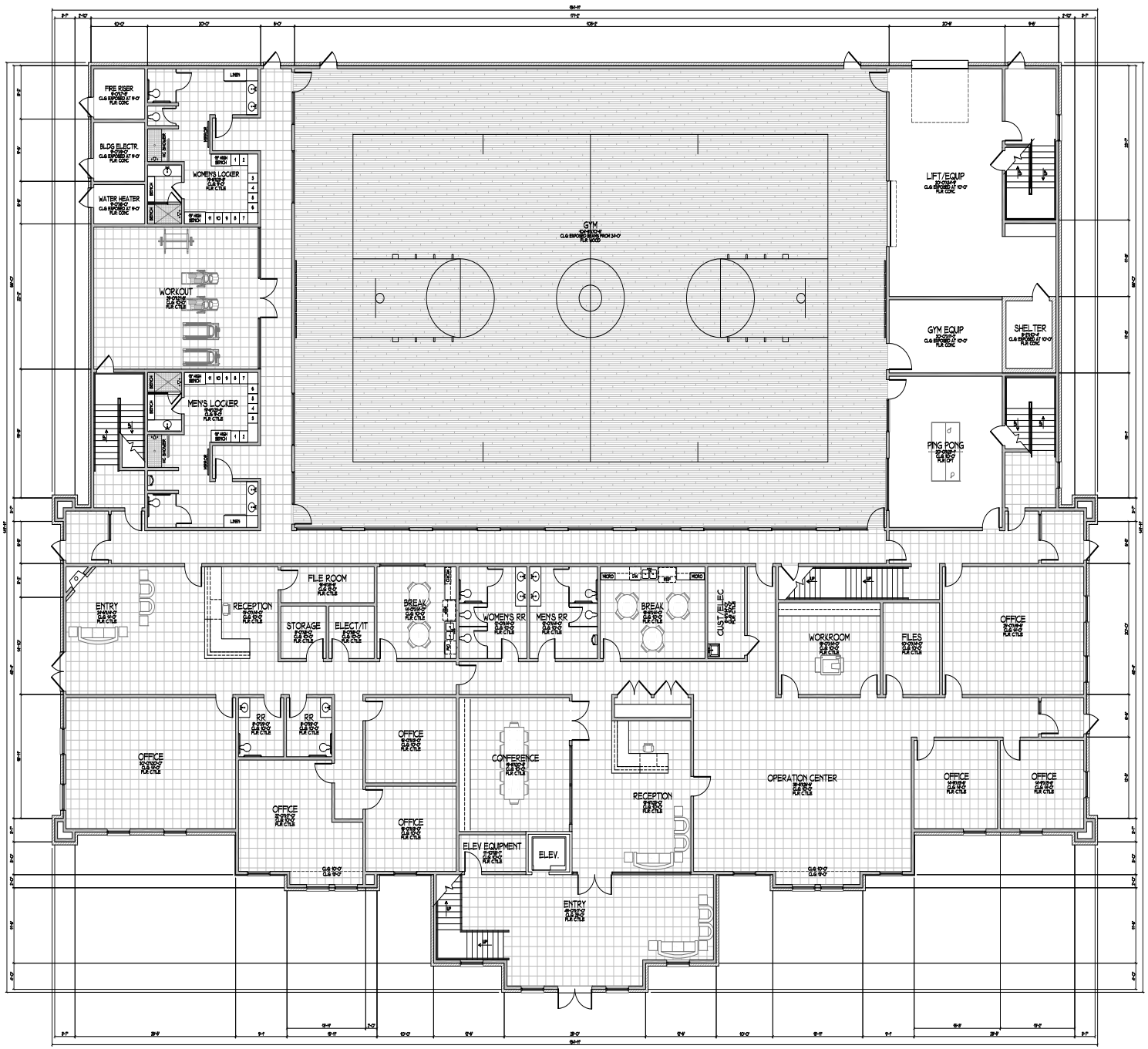
DESIGN & DRAFTING BY:
CORNERSTONE DESIGN GROUP
PHONE: (432)634-8005

SHEET TITLE
PRELIMINARY
SITE PLAN

PROPOSED OFFICES

5905 HOMESTEAD BLVD.
MIDLAND, TEXAS
PROJECT NUMBER: 19095

SHEET NUMBER
A-1.1
SHEET 01 OF 06



01 1ST FLOOR PLAN
SCALE: 1/8" = 1'-0"

SQUARE FOOTAGES	
NAME	FOOTAGE
LOBBY/COMMON	948 SQ. FT.
EAST OFFICE SUITE	3,187 SQ. FT.
WEST OFFICE SUITE	5,025 SQ. FT.
GYM 1ST FLOOR	13,241 SQ. FT.
LEASE OFFICES 2ND FLOOR	5,588 SQ. FT.
RECREATION 2ND FLOOR	4,321 SQ. FT.
GUEST 2ND FLOOR	191 SQ. FT.
TOTAL 1ST FLOOR	22,401 SQ. FT.
TOTAL 2ND FLOOR	10,341 SQ. FT.
TOTAL AREA	32,212 SQ. FT.

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW AND DISCUSSION ONLY
NOT FOR BIDDING, APPROVAL, PERMITTING OR CONSTRUCTION

DATE
2/4/2020
REVISION
DRAWN BY
LUIS

DESIGN & DRAFTING BY:
CORNERSTONE DESIGN GROUP
PHONE: (432)684-8005

SHEET TITLE
1ST FLOOR PLAN

PROPOSED OFFICES
5905 HOMESTEAD BLVD.
MIDLAND, TEXAS
PROJECT NUMBER: 19095

SHEET NUMBER
A-2.1
SHEET 02 OF 06

1:34 PM
17.9

01 2ND FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE
2/4/2020

REVISION

DRAWN BY
LUIS

DESIGN & DRAFTING BY:
CORNERSTONE
DESIGN GROUP
PHONE: (432)634-8005

SHEET TITLE
2ND FLOOR
PLAN

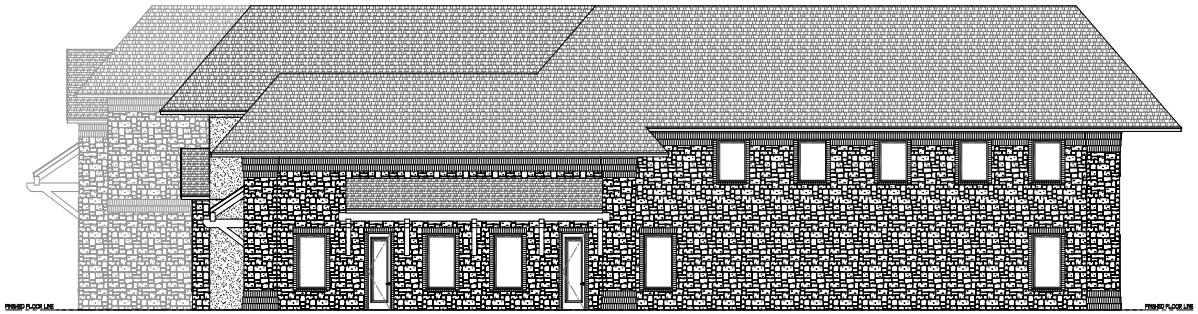
PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW AND DISCUSSION ONLY.
NOT FOR BIDDING, PERMITTING OR CONSTRUCTION

PROPOSED OFFICES
5905 HOMESTEAD BLVD.
MIDLAND, TEXAS
PROJECT NUMBER: 19095

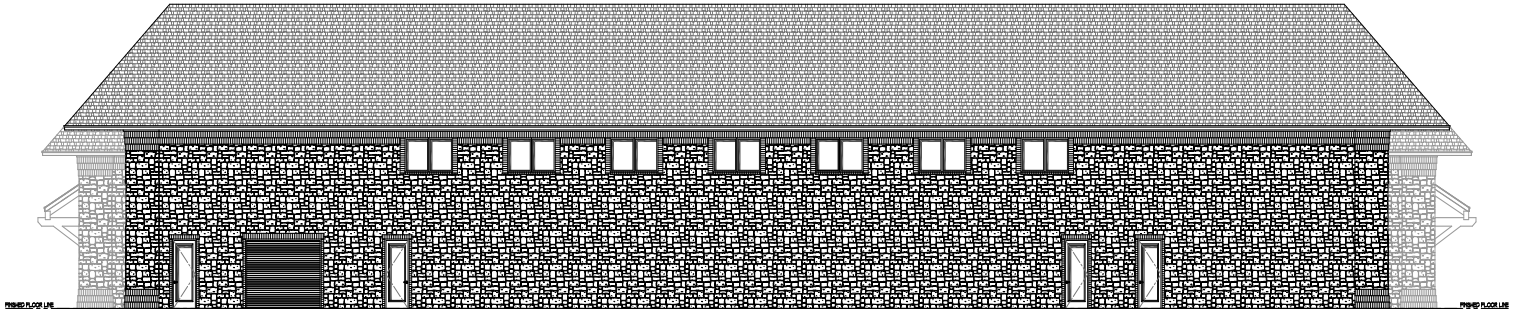
SHEET NUMBER
A-2.2
SHEET 03 OF 06

17.10 PM

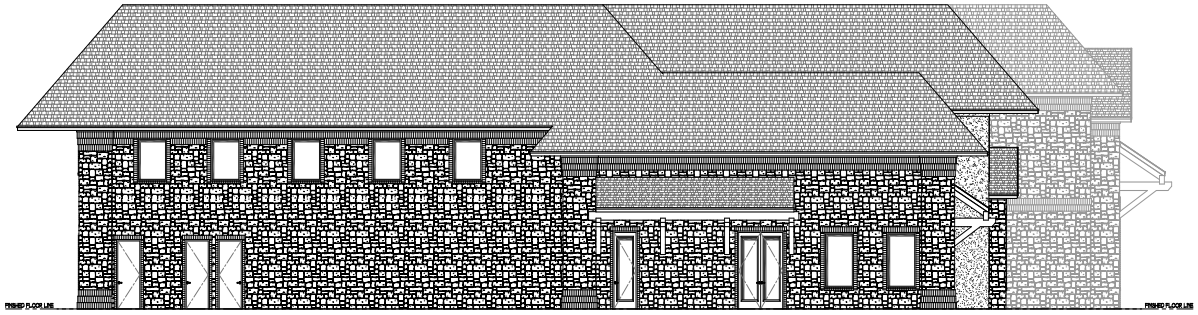
01 FRONT ELEVATION
SCALE: 1/8" = 1'-0"



02 RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



03 REAR ELEVATION
SCALE: 1/8" = 1'-0"



04 LEFT ELEVATION
SCALE: 1/8" = 1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW AND DISCUSSION ONLY
NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

DATE
2/4/2020
REVISION
DRAWN BY
LUIS

DESIGN & DRAFTING BY:
CORNERSTONE
DESIGN GROUP
PHONE: (432)684-8005

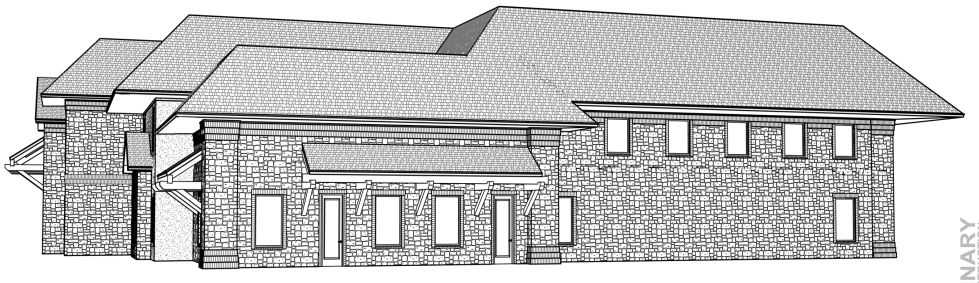
SHEET TITLE
EXTERIOR
ELEVATIONS

PROPOSED OFFICES
5905 HOMESTEAD BLVD.
MIDLAND, TEXAS
PROJECT NUMBER: 19095

SHEET NUMBER
A-3.1
SHEET 04 OF 06

17.11 PM

01 FRONT PERSPECTIVE
SCALE: NOT TO SCALE



02 RIGHT PERSPECTIVE
SCALE: NOT TO SCALE

03 REAR PERSPECTIVE
SCALE: NOT TO SCALE

04 LEFT PERSPECTIVE
SCALE: NOT TO SCALE

DATE
2/4/2020
REVISION
DRAWN BY
LUIS

DESIGN & DRAFTING BY:
CORNERSTONE
DESIGN GROUP
PHONE: (432)684-8005

SHEET TITLE
EXTERIOR
PERSPECTIVES

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW AND DISCUSSION ONLY
NOT FOR RECORDING, PERMITTING OR CONSTRUCTION

PROPOSED OFFICES
5905 HOMESTEAD BLVD.
MIDLAND, TEXAS
PROJECT NUMBER: 19095

SHEET NUMBER
A-3.2
SHEET 05 OF 06

17.12

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: _____

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: J. Luis DelValle		Phone (432) 684-8005 Email luis@cdgmidland.com	
Address 4904 N. Midkiff	City Midland	State TX	Zip 79705

Property Owner Printed Name: Cornerstone Funding, LLC		Phone ( ) Email kharrington@cornerstone-funding.com	
Address 24 Smith Rd. #302	City Midland	State TX	Zip 79705

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 5905 Homestead Blvd.

Legal Description
Lot: 1A Block: 2 Subdivision: Grassland Estates West - Section 2

Current Zoning:	**Proposed Zone:** *(List by tracts if more than one district is requested)*

Reason for Zone Change Request: Amend/update PD Site Plan. No proposed change of designated use.

Present Use of Property: Vacant

Proposed Use of Property: O-1 (office building)

How would this zone change affect the public health, safety and welfare? _____

Describe how conditions affecting the property have changed since present zoning designation: No change. The current PD for this lot specifies O-1 use.

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): J Luis DelValle	Date: 2/4/2020
Applicant (printed): J. Luis DelValle	
Property Owner (signature):	Date: 1/30/2020
Property Owner (printed) : Kevin Harrington	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

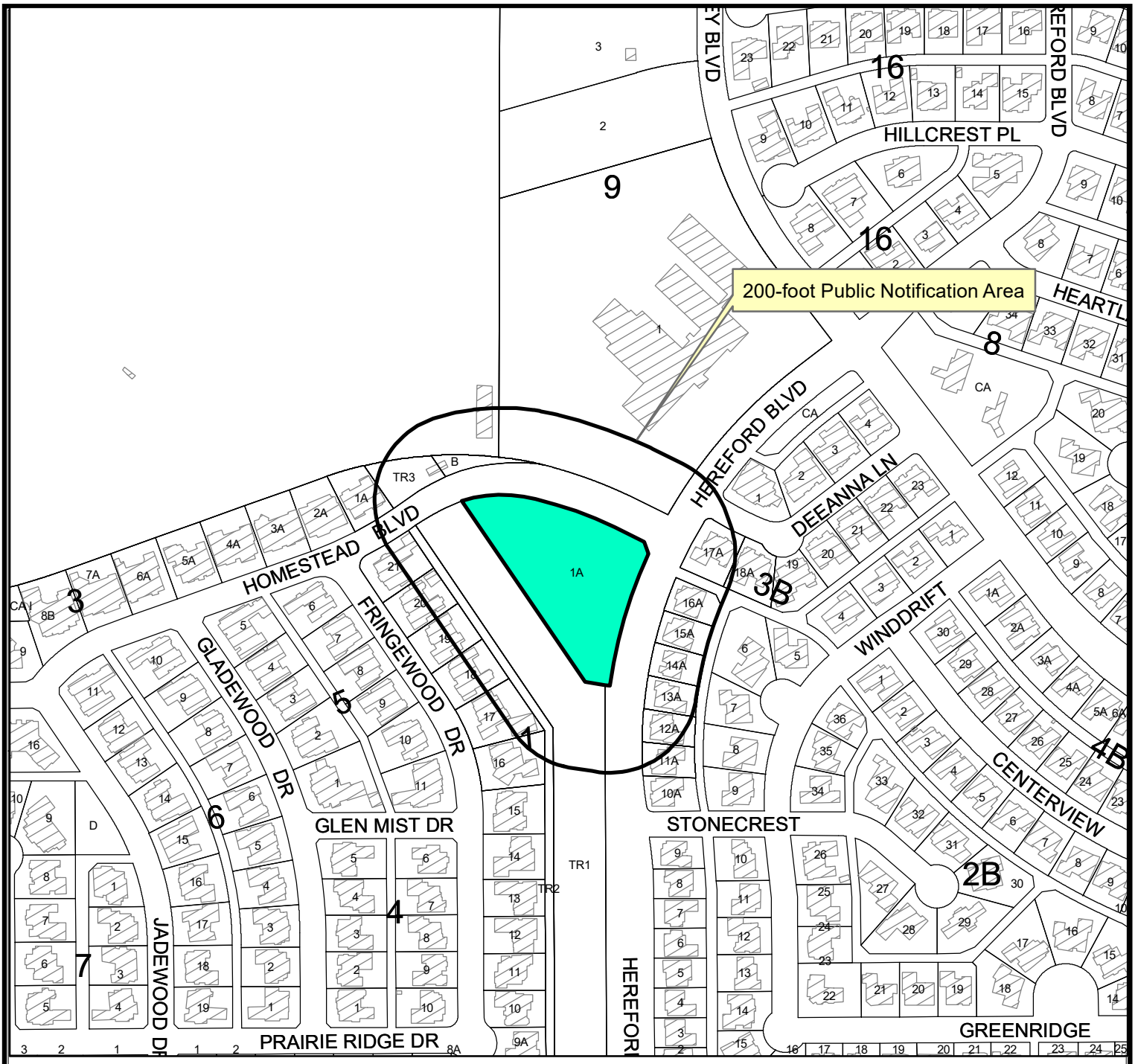
Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☐ Property Owner Authorization	☐ Dimensioned Site Plan
☐ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check #_____	
Received By:	Date:

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

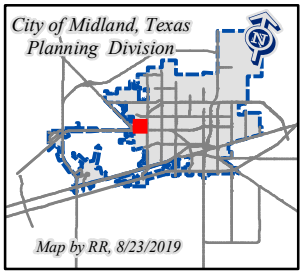
Z-19-0123 **Scale: 1" = 200'**

Consider a request for a zone change from a PD, Planned District for an Office Center to an Amened Planned District for an Office District on Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas.

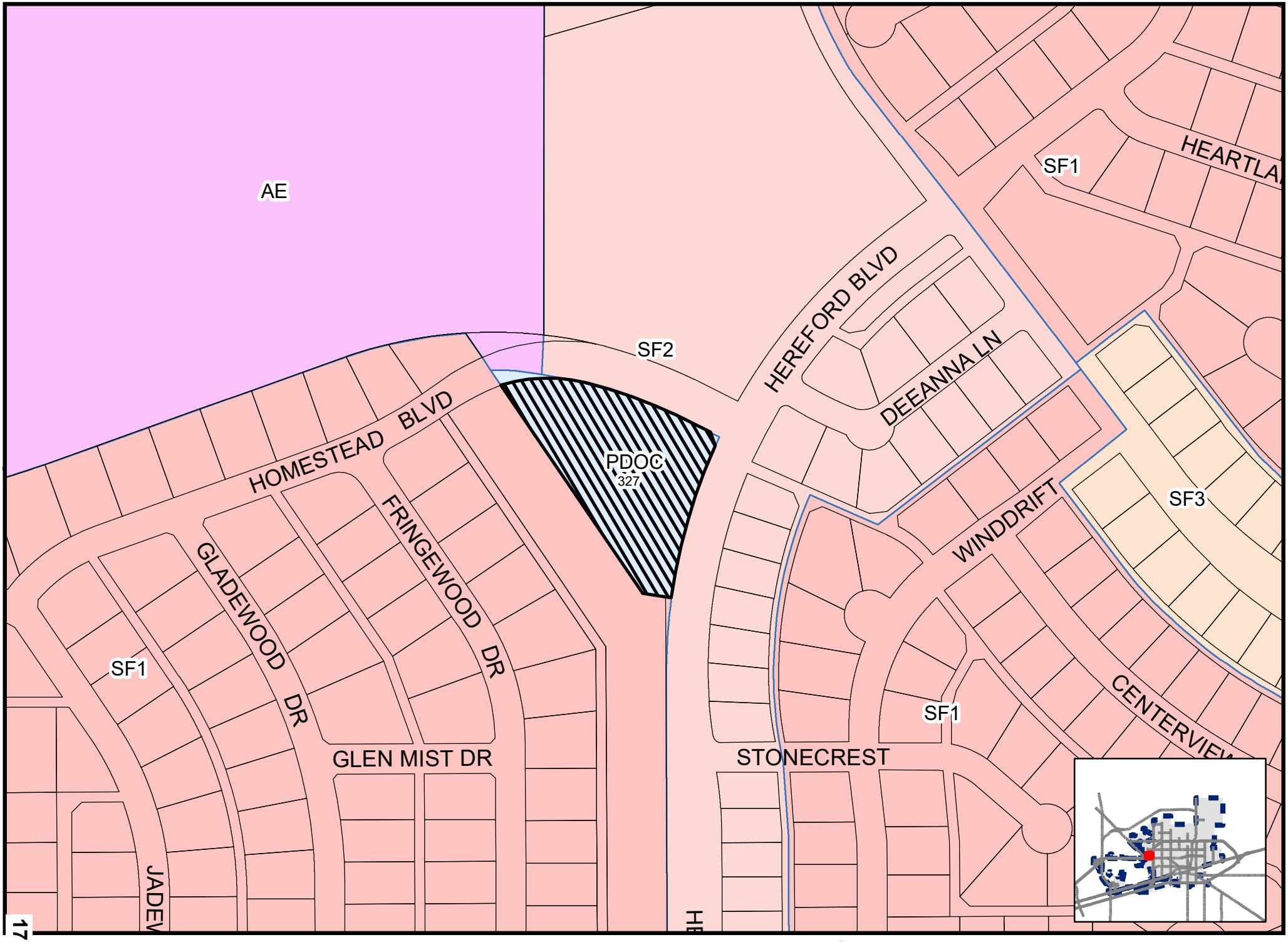
Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2019
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE I ANY DECISIONS BASED UPON THE USE OF THIS DAT



17.16

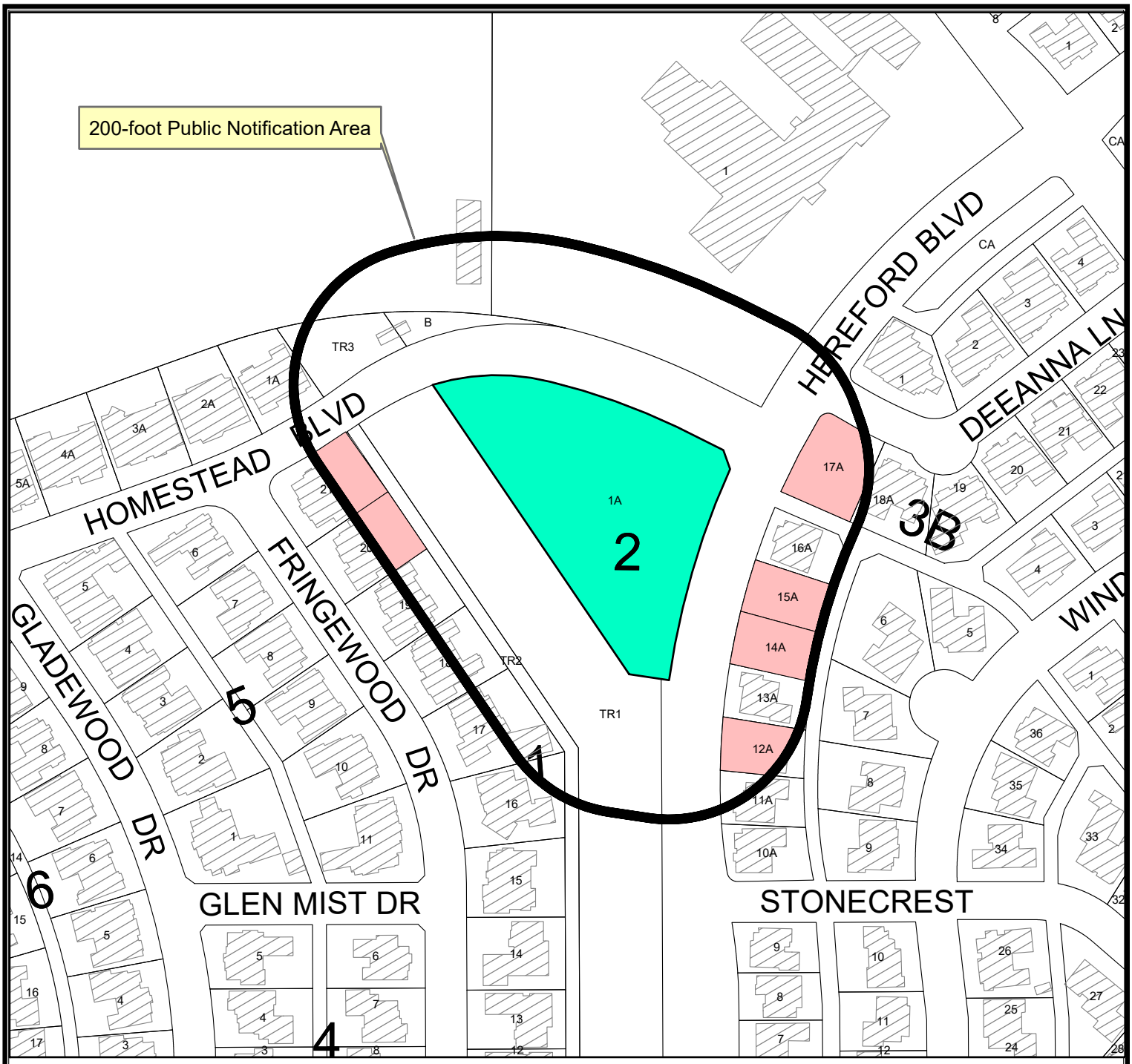
Map By RR, 8/23/2019

Z-19-0123

Scale: 1" = 200'

ZONING MAP

© THE CITY OF MIDLAND - 2019: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



LOCATION MAP

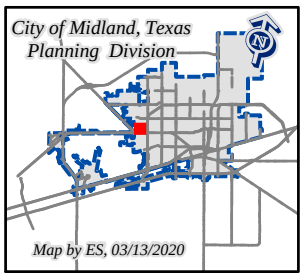
Z-19-0123 **Scale: 1" = 200'**

Consider a request for a zone change from a PD, Planned District for an Office Center to an Amened Planned District for an Office District on Lot 1A, Block 2, Grassland Estates West, Section 2, City and County of Midland, Texas.

Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS
- 10% OBJECTIONS



MIDLAND
Planning Division

RECEIVED
MAR 13 2020
BY: .....

TERRY CHARLES LYNN
2020 FRINGEWOOD DR
MIDLAND TX 79707

PUBLIC NOTICE

The **City Council** of the City of Midland, Texas will hold a public hearing at **10:00 a.m.** on **Tuesday, March 24, 2020** in the Council Chambers, City Hall, 300 N. Loraine, Midland, TX 79702 on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:

From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request ✓ **Comments:** THIS IS ZONED FOR BUSINESS NOT A GYMNASIUM. YOU ARE SUPPOSED TO REPRESENT THE RESIDENCE OF THIS COMMUNITY!

Required Information:

Property Owner's Signature	Charles Terry Printed Name	2020 Fringewood Dr 79707 midland Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: March 6, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

MIDLAND
Planning Division

RECEIVED
FEB 19 2020
BY: .....

HERRING PAUL
2100 DEEANNA
MIDLAND TX 79707

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, February 18, 2020,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79702, on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:

From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request ✓ **Comments:** OBJECT TO OFFICE BLDG W/ GYM FOR PERSONAL USE IN NEIGHBORHOOD

Required Information:

Paul Herring — Property Owner's Signature
PAUL HERRING — Printed Name
2100 DEEANNA — Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: February 7, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

MIDLAND
Planning Division

RECEIVED
FEB 14 2020
BY: DS

HENDLEY VIRGINIA B
2010 HEREFORD BLVD
MIDLAND TX 79707

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, February 18, 2020,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79702, on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:

From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request ✓ **Comments:** Previously stated – too high – tall structure

Required Information:

Virginia B Hendley — Property Owner's Signature
Virginia B Hendley — Printed Name
2010 Hereford Blvd. — Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: February 7, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

RECEIVED
FEB 14 2020
BY: .....

SALAZAR VICTOR JR
2008 HEREFORD BLVD
MIDLAND TX 79707

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, February 18, 2020,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79702, on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:

From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

Not to be considered a part of the Public Notice: 1) See reverse side for location map; 2) In order to be considered as an official objection to this request a response **must be submitted by mail or delivered *in writing*** to the Planning Division at the address listed above. An official objection may be filed by completing this notice and returning it to the address listed above.

I object to this request V **Comments:** Same as before - building does not fit neighborhood design

Required Information:

Property Owner's Signature	Printed Name	Property Address (**No P. O. Boxes**)
	Victor Salazar	2008 Hereford BLVD

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: February 7, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

RECEIVED
FEB 14 2020
BY: .....

SCOTT THOMAS WAYNE &
2024 FRINGEWOOD DR
MIDLAND TX 79707

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, February 18, 2020,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79702, on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:
From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

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I object to this request ✓ **Comments:** I'm against the gym (35' wall) and the apartment in the building

Required Information:

Thomas W. Scott	Thomas W. Scott	2024 Fringewood, 79707
Property Owner's Signature	Printed Name	Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: February 7, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

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MIDLAND
Planning Division

RECEIVED
FEB 14 2020
BY: DB

Not zoned for a gym or an apartment

Megan & Andrew Vizcaino

~~MAYON CHRISTOPHER~~
2004 HEREFORD BLVD
MIDLAND TX 79707

PUBLIC NOTICE

The **Planning and Zoning Commission** of the City of Midland, Texas will hold a public hearing at **3:30 p.m.** on **Tuesday, February 18, 2020,** in the Council Chambers, City Hall, 300 N. Loraine, Midland, Texas 79702, on a request by **Cornerstone Funding, LLC** for approval of a **Zone Change** on the following described property:

LEGAL DESCRIPTION: Lot 1A, Block 2, Grassland Estates West, Section 2, City and Council of Midland, Texas.

LOCATION: Generally located on the southwest corner of the intersection of Homestead Boulevard and Hereford Boulevard. Council District 4

PROPOSED ZONING:

From: PD, Planned District for an Office Center
To: Amended Planned District for an Office Center

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I object to this request V **Comments:** We do Not want to look at this massive building everyday!

Required Information:

M. Vizcaino — Property Owner's Signature
Megan Vizcaino — Printed Name
2004 Hereford Blvd Midland TX 79707 — Property Address (**No P. O. Boxes**)

If any further information is desired, please contact the Planning Division, at 685-7400. Si ud. desea más información en Español sobre esta cuestión, llame al : 685-7400.

Notices Mailed: 21
Date Mailed: February 7, 2020
Case Number: Z-19-0123
Case Name: Luis DelValle
ES Planner's Initials

Cristina Odenborg Burns
Planning Division Manager
Department of Development Services

The meeting facility is accessible to disabled persons. A wheelchair entry ramp is located at the southeast entrance to City Hall. A parking space designated for use by disabled persons is available near the southeast entrance doors. Any disabled person needing special accommodations or hearing impaired persons wishing to have an interpreter should request services through the Administrative Services Department at least 48 hours prior to the scheduled meeting by contacting Compliance Coordinator for the City of Midland at (432) 685-7251. If communication via TDD is required, please call 1-800-735-2989.

Hello-My name is Megan Vizcaino. I recently purchased the home at 2004 Hereford in October. We actually signed on the property the day they had their first meeting about this giant building. October 21st 2019.
I want to just let you know my personal feeling on said building. I hope you hear my heart when you read this.
My husband and I are the true middle class citizen. We work hard for everything we have. We live on a strict budget. I take lots of pride on my money management and budgeting skills. I say that to help you understand how humble and proud we are to be able to buy our forever home in Grassland Estates. 😍 We have achieved a goal we never thought we would make but we are here! It use to be a dream to think we could live in this area of Midland. We love our new home. It's beautiful. The neighborhood is amazing. It's so quiet and peaceful. We feel so blessed. One of my favorite things about this home are the beautiful sunsets outside my front door. This massive building in question will block my view for sure! 😭 We just can't believe this is happening. So besides my personal, I just don't want the huge unattractive gym/offices/apartment in front of my house argument. Lol, which I know doesn't matter to anyone but me.. I do have a few other things that affect everyone else.
1. He has decreased the parking lot. I think if the gym is built he will have games. I fear the entire side of Hereford will end up being the overfills of parking.
I feel He will say at the meeting that he doesn't plan to hold games but once it's built he can do whatever he wants!
2. Traffic is going to be nuts. It's definitely not a good location for business, school and neighborhood. Again my opinion, he will say there won't be any traffic but once he gets the ok and it's built, that gym will bring traffic, even the offices will bring traffic
3. Night time noise and light pollution
There is a slight dip/crack in the road right outside my house, every time a

vehicle speeds over it it makes a pretty load noise. Currently we have pretty light traffic outside of school hrs. It would be very noisy and bothersome if this new place generates lots of new traffic
4. It's massive and unattractive. It doesn't fit in with our neighborhood.
5. My husband thinks it may cause our homes taxes to go up. I'm not sure if that would be affected or not.
6. I'm afraid it will decrease the value of our homes
7. It is not zoned recreational for the gym or residential for the apartment inside.
8. Grassland is an HOA neighborhood. It needs to blend and improve the neighborhood.

I do understand that he purchased the spot of land. And I know he is going to build there. I just feel like it needs to be reasonable and not so invasive to us all across the street.

Thank you for your time.
Megan Vizcaino

17.27

17.28

17.29

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL**

FROM: **Joseph Marynak, Planner**

SUBJECT: **Consider an ordinance on second reading on a request by Midland Community Development Corporation for a Zone Change from C, Commercial District, to SF-3, Single Family Dwelling District, on Lot 9, Block 9, Greenwood Addition, Section 2, City and County of Midland, Texas. (Generally located on the east side of S. Stonewall Street, approximately 173-feet south of E. Indiana Avenue. Council District 2).**

Purpose:

The applicant, Midland Community Development Corporation, is requesting a Zone Change from C, Commercial District to SF-3, Single Family Dwelling District on Lot 9, Block 9, Greenwood Addition, Section 2, City and County of Midland, Texas, to build a single family home.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Discussion:

The property to the north is zoned C, Commercial District, and is the location of an office building. The properties to the east, south, and west are also zoned C, Commercial District and the location of vacant lots.

Analysis:

The applicant is requesting a zone change from C, Commercial District to SF-3, Single Family Dwelling District. The prevailing uses in the area are single-family dwellings and vacant lots. As a result, this zone change and subsequent housing construction would blend in well with the surrounding neighborhood.

This proposed project has been circulated to and reviewed by respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objections.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Engineering: (Approved)

No objection to zone change.

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

Oil and Gas: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

No objection to zone change.

Planning:

Per 5.04, Residential Zoning District Dimensional Regulations Chart of the Zoning Ordinance, the following are required for the SF-3, Single Family Dwelling District:

Minimum Lot Area: 5,500 SF
Minimum Lot Width: Interior Lot: 50’
Minimum Lot Depth: 100’

The lot meets these minimum lot dimensions:
Lot Area: 7,000 SF
Lot Width: 50’
Lot Depth: 140’

This request is in compliance with the Tall City Tomorrow plan. The Future Land Use Plan recommends urban residential low uses in this area. This designation lists potential zoning as single-family dwelling districts and relies on, “A mix of complementary uses including mostly single-family…”

Staff recommends approval of the zone change from C, Commercial District to an SF-3, Single Family Dwelling District, subject to condition A.

This request was approved at the March 2, 2020 Planning and Zoning Commission meeting.

This request was approved at the March 24, 2020 City Council meeting.

Conditions:

A. That the use and development of this property shall conform to the regulations of the SF-3, Single Family Dwelling District

Letters of Objection:

Staff has not received any objections as of March 20, 2020.

Attachments:

Application
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 9, BLOCK 9, GREENWOOD ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM C, COMMERCIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF SOUTH STONEWALL STREET, APPROXIMATELY 173 FEET SOUTH OF EAST INDIANA AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lot 9, Block 9, Greenwood Addition, Section 2, City and County of Midland, Texas (the "Property") to SF-3, Single-Family Dwelling District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from C, Commercial District to SF-3, Single-Family Dwelling District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances

inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: 2-20-0168

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Midland Community Development Corp		Phone (432) 682-2520 Email david@midlandedc.org	
Address 208 S. Marienfeld	City Midland	State TX	Zip 79701

Property Owner Printed Name: Midland Community Dev. Corp		Phone ( ) Email Same Above	
Address 208 S. Marienfeld	City Midland	State TX	Zip 79701

Representative *(if different from Applicant or Property Owner)* Firm: Same Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 307 S. Stonewall

Legal Description
Lot: 9 Block: 9 Subdivision: Greenwood Addition, Second Section

Current Zoning: Commercial

Proposed Zone: SF
(List by tracts if more than one district is requested)

Reason for Zone Change Request: Change Zoning to Allow for Residential Housing

Present Use of Property: Vacant

Proposed Use of Property: Build Single family home

How would this zone change affect the public health, safety and welfare? No change

Describe how conditions affecting the property have changed since present zoning designation: Undeveloped

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

RECEIVED
JAN 29 2020
BY: .....

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): David Diaz - Midland CDC	Date: 1-28-2020
Applicant (printed): DAVID DIAZ	
Property Owner (signature): David Diaz	Date: 1-28-2020
Property Owner (printed) : _____	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared David Diaz who, being by me duly sworn, upon oath says: That (s)he is authorized by Midland CDC, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

David Diaz
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 28 day of JANUARY, 2020, to certify which witness my hand and seal of office.

REBECCA MONTOUR NATIVIDAD
My Notary ID # 130165202
Expires March 24, 2023

Rebecca Montour Natividad
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY	
☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # Waived	
Received By: ES	Date: JAN 29 2020

****Application will not be considered for scheduling until reviewed by a planner.****

OFFICIAL PAYMENTS

Make A Payment

: Select Service : Enter Amount : Accept Terms : Provide Details : Confirm Details : **Digital Receipt**

Midland County Clerk, TX

Recording (POS)

Your payment has been completed successfully.

Confirmation Number:	**09830G**
Payment Date:	**Tuesday, June 11, 2019**
Payment Time:	**02:03PM PT**

Print Confirmation

Payer Information

First Name:	DAVID DIAZ
Country:	United States
Daytime Phone Number:	(432) 682 - 2520
Payment Description:	RECORDING

Payment Option

Card Type:	Visa
Card Number:	************7676

Payment Information

Payment Type:	Recording (POS)
Payment Amount:	$50.00
Convenience Fee:	$4.25
Total Payment:	$54.25

Continue

PAID
Date 6/11/19 CK# MCDC
VISA*7676

This page supports 128-bit SSL encryption as verified by DigiCert.

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Alison Haley
Midland County Clerk
500 N. Lorraine Street
Midland, TX 79701

Main: (432) 688-4401

Receipt: 20190814000069
Date: 08/14/2019
Time: 10:38AM
By: Chonna G
Station: cc10297
Status: ORIGINAL COPY

Seq	Item	Document Description	Number	Number Of	Amount	Serial Number
1	General Copy			8	$8.00	

Order Total (1) $8.00

Seq	Payment Method	Transaction Id	Comment	Total
1	Cash			$20.00

Total Payments (1) $20.00

Change Due $-12.00

MIDLAND CDC

For more information about the County Clerk's office and to search property records online, please visit https://midlandtx.search.kofile.com

307 S. Stonewall

CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OF THE FOLLOWING INFORMATION FROM THIS INSTRUMENT BEFORE IT IS FILED FOR RECORD IN PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

QUITCLAIM DEED

THE STATE OF TEXAS §
§ **KNOW ALL MEN BY THESE PRESENTS:**
COUNTY OF MIDLAND §

I.

That the undersigned, **CITY OF MIDLAND, TEXAS, A Texas Home Rule Municipal Corporation,** P.O. Box 1152, Midland, Texas 79702 of the County of Midland, State of Texas, hereinafter referred to as "Grantor", for and in consideration of Grantee herein named to use the property in a manner that primarily promotes a public purpose of the City of Midland in accordance with House Bill 122, passed by the Seventy-Seventh Texas Legislature during its regular session, the public purpose being to develop a single-family housing project for individuals with low and moderate income, the receipt and sufficiency of which is hereby acknowledged, has QUIT CLAIMED, and by these presents does QUIT CLAIM unto **Midland Community Development Corporation,** 208 S. Marienfeld St., Midland, Texas 79701, herein referred to as "Grantee", the real property described as follows:

LOT NINE (9), BLOCK NINE (9), GREENWOOD ADDITION, SECOND SECTION, an addition to the City of Midland, Midland County, Texas.

The Agreement stating the terms and conditions by which the City shall convey real property purchased with Community Development Block Grant Funds to Midland

Community Development Corporation for the purpose of developing single family housing affordable to low income households is to be in the form attached hereto as Exhibit "A" and made a part hereof for all legal purposes.

II.

BY EXECUTING THIS QUITCLAIM DEED, THE GRANTOR AND THE GRANTEE AGREE THAT GRANTEE IS TAKING THE PROPERTY **"AS IS" WITH ANY AND ALL LATENT AND PATENT DEFECTS AND THAT THERE IS NO WARRANTY, EXPRESS OR IMPLIED BEING MADE BY THE CITY OF MIDLAND, TEXAS THAT THE PROPERTY IS FIT FOR A PARTICULAR PURPOSE**. THE GRANTEE ACKNOWLEDGES THAT GRANTEE IS NOT RELYING UPON ANY REPRESENTATION MADE BY THE CITY OF MIDLAND WITH RESPECT TO THE CONDITION OF THE PROPERTY, BUT IS RELYING UPON GRANTEE'S EXAMINATION OF THE PROPERTY. GRANTEE ALSO RECOGNIZES BY AGREEING TO PURCHASE THE PROPERTY **"AS IS"** THAT GRANTEE AGREES TO MAKE GRANTEE'S OWN APPRAISAL OF THE PROPERTY AND TO ACCEPT THE RISK THAT GRANTEE MAY BE WRONG. THE GRANTOR GIVES NO ASSURANCES, EXPRESS OR IMPLIED CONCERNING THE VALUE OR CONDITION OF THE PROPERTY SOLD. IN NO EVENT SHALL A GRANTEE HAVE A RIGHT TO RECOVER CONSEQUENTIAL DAMAGES. THEREFORE, THE GRANTEE WILL TAKE THE PROPERTY UNDER THE EXPRESS UNDERSTANDING THE PROPERTY

IS ACCEPTED **"AS IS"** AND WITH ALL FAULTS, EXCLUDING EXPRESS OR IMPLIED WARRANTIES. PROVISIONS OF THIS PARAGRAPH SURVIVE THE CLOSING.

III.

In accordance with Section 253.011 of the Texas Local Government Code, the ownership of the above-referenced property automatically reverts back to the Grantor in the event the Grantee at any time fails to use the property to promote the public purpose of developing a single-family housing project for individuals with low and moderate income. Further, the ownership of any undeveloped lots from the above-referenced property automatically reverts back to the Grantor two years from the execution date of this instrument.

IV. RELEASE

NOTWITHSTANDING ANY OTHER PROVISIONS, GRANTEE HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES GRANTOR, GRANTOR'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH GRANTEE HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR

GRANTOR'S NEGLIGENCE.

V. INDEMNITY

GRANTEE WILL INDEMNIFY AND HOLD HARMLESS AND DEFEND GRANTOR AND ALL OF GRANTOR'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING REASONABLE ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF GRANTEE, ITS AGENTS OR EMPLOYEES, OR ANY CONTRACTOR OR SUBCONTRACTOR, ARISING OUT OF, OR RESULTING FROM, GRANTEE'S USE OF, OR ACTIVITIES ON, THE AGREEMENT PREMISES, AND GRANTEE WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST GRANTOR OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING REASONABLE ATTORNEY'S FEES.

GRANTEE SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND GRANTOR AND ALL OF GRANTOR'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER

WHATSOEVER INCLUDING REASONABLE ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF GRANTOR, GRANTOR'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH GRANTEE OR GRANTEE'S EMPLOYEES, AGENTS, CONTRACTORS OR SUBCONTRACTORS NEGLIGENCE, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PROPERTY AND GRANTEE WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST GRANTOR OR ANY OF GRANTOR'S OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

VI.

PROVIDED, HOWEVER, that all the oil, gas, and other minerals in and under said land are hereby expressly excepted from this conveyance, and this conveyance is also subject to any existing easements of record and/or on the ground for pipelines, utilities or other purposes, and all stipulations, conditions and terms of this instrument including but not limited to those listed in (II) above.

VII.

TO HAVE AND TO HOLD all of Grantor's right, title and interest in and to the above described property and premises unto the Grantee, and Grantee's heirs, administrators, executors, successors and/or assigns forever; so that neither Grantor nor Grantor's heirs, administrators, executors, successors and/or assigns shall have, claim or demand any right or title to the aforesaid property, premises or appurtenances or any part thereof.

EXECUTED this 9th **day of** April, **2018.**

GRANTOR:

CITY OF MIDLAND

By: Courtney Sharp
Courtney Sharp, City Manager

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me on the 9th day of April, 2018, by COURTNEY SHARP, City Manager, City of Midland, Texas.

MARCIA BENTLEY-GERMAN
Notary Public, State of Texas
Comm. Expires 12-06-2021
Notary ID 131372487

Marcia Bentley-German
Notary Public, State of Texas

Printed Name of Notary:

Marcia Bentley-German

My Commission Expires: 12/6/2021

ACCEPTED BY GRANTEE

By: David Diaz
Name: David Diaz
Title : Exec. Dir

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me on the 2nd day of April, 2018, by David Diaz in the capacity herein stated.

Darlene Eastin
Notary Public, State of Texas

DARLENE EASTIN
NOTARY PUBLIC
ID# 130794381
State of Texas
Comm. Exp. 08-25-2020

Printed Name of Notary:

Darlene Eastin

My Commission Expires: 8-25-2020

VG-86-2019-17150

Midland County
Alison Haley
Midland County Clerk

Instrument Number: 17150

Real Property Recordings

DEED

Recorded On: June 12, 2019 08:34 AM

Number of Pages: 8

" Examined and Charged as Follows: "

Total Recording: $50.00

********** THIS PAGE IS PART OF THE INSTRUMENT **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	17150
Receipt Number:	20190612000029
Recorded Date/Time:	June 12, 2019 08:34 AM
User:	Crystal C
Station:	cc10297

Record and Return To:

DAVID DIAZ
208 S. MARIENFELD

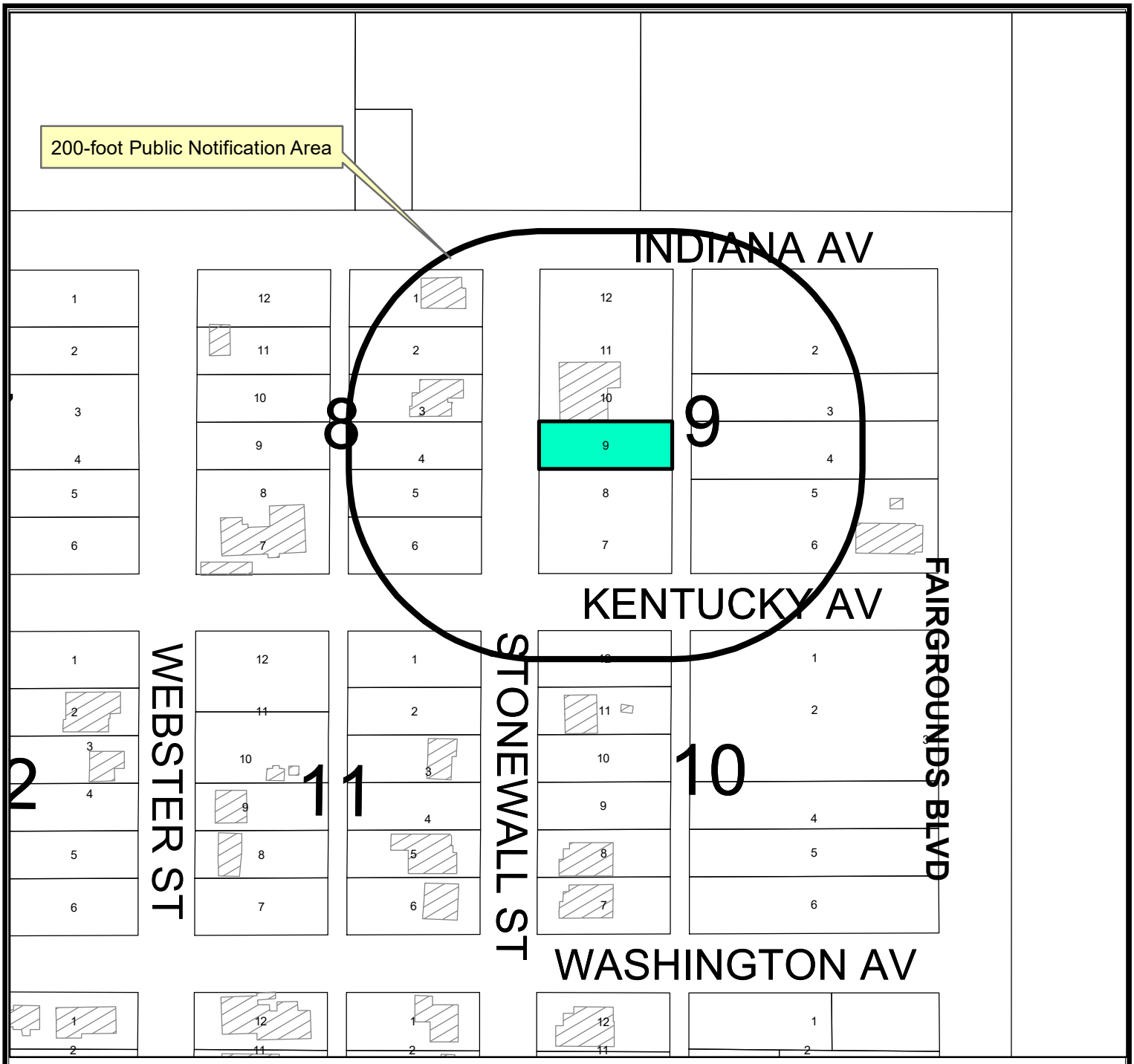
MIDLAND TX 79701

COUNTY COURT
MIDLAND COUNTY, TEXAS

STATE OF TEXAS
Midland County
I hereby certify that this Instrument was filed in the File Number sequence on the date/time printed hereon, and was duly recorded in the Official Records of Midland County, Texas

Alison Haley
Midland County Clerk
Midland County, TX

Alison Haley



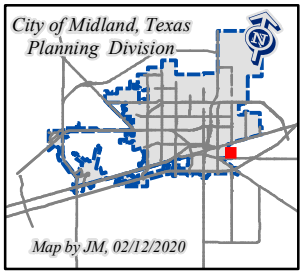
LOCATION MAP

Z-20-0168 **Scale: 1" = 150'**

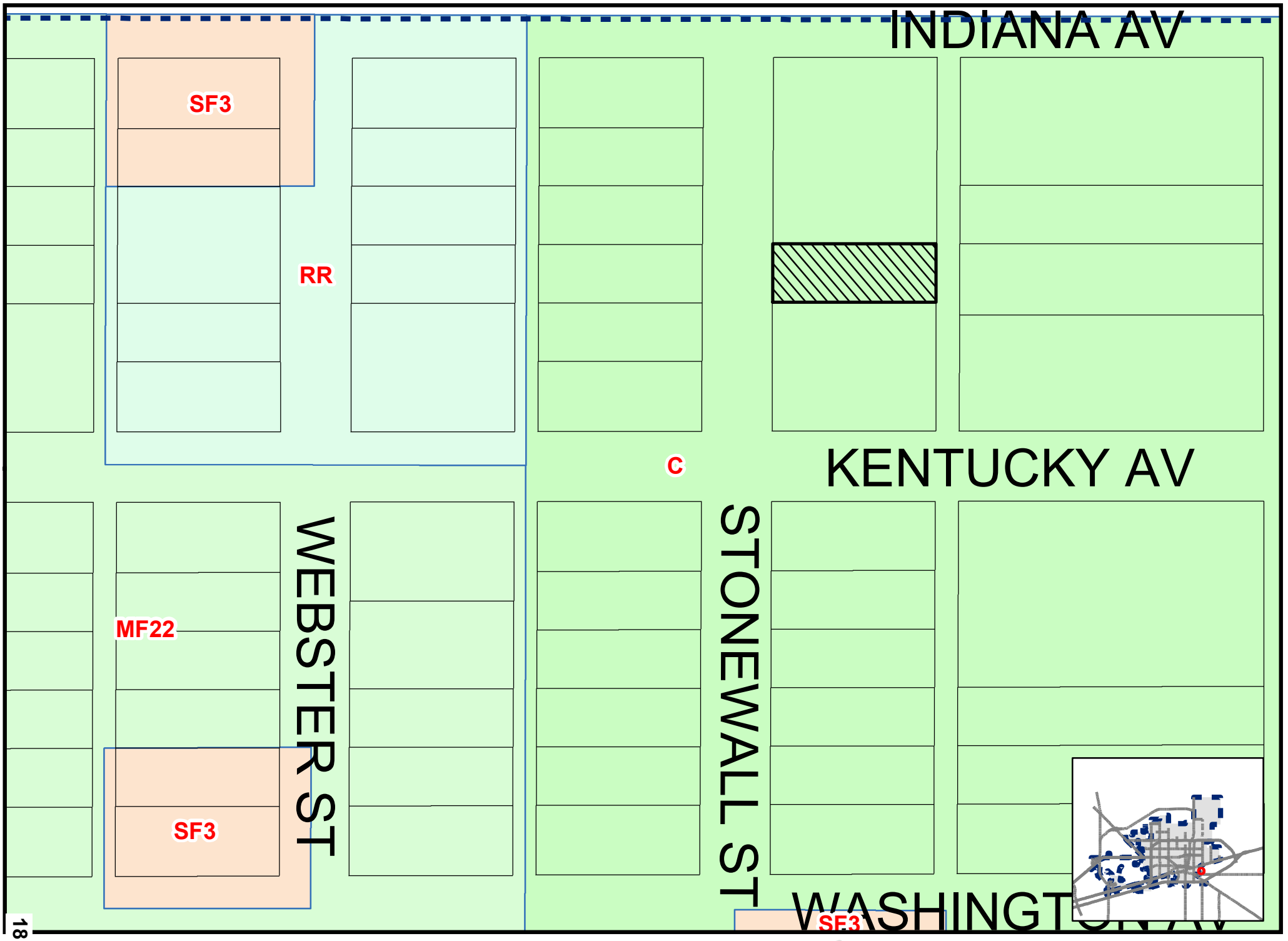
Consider a request by Midland Community Development Corporation, for a zone change from C, Commercial to SF-3, Single Family Dwelling District, on Lot 9, Block 9, Greenwood Addition, Section 2, City and County of Midland, Texas. Generally located on the east side of S. Stonewall Street, approximately 173-feet south of E. Indiana Avenue. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2020
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE I ANY DECISIONS BASED UPON THE USE OF THIS DAT



18.20

ip By JM, 02/12/2020

Z-20-0168

Scale: 1" = 1000'

ZONING MAP

© THE CITY OF MIDLAND - 2020: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

18.21

18.22

18.23

18.24

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Glenda Arroyo-Cruz, Planner

SUBJECT: Consider an ordinance on a second reading on a request by Edward Martinez for a zone change from a MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District on Lot 7, Block 24, Greenwood Addition, Third, Fourth and Fifth Sections, City and County of Midland, Texas. (Generally located on the northeast corner of the intersection of East New York Avenue and South Benton Street. Council District 2)

Purpose:

The applicant, Edward Martinez, is requesting approval of a zone change for the development of a single-family residential home.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Discussion:

The properties to the north, east, south and west are zoned MF-22, Multiple-Family Dwelling District and the location of vacant land and residences, respectively.

Analysis:

The property is located at 511 South Benton Street and is currently vacant. The applicant is proposing the development of a single-family residential home on this lot. The current zoning of this property is MF-22, Multiple-Family Dwelling District. Per the previous zoning ordinance, single-family detached dwellings were allowed within this zoning district. As of July 1, 2019, the new zoning ordinance does not allow the use of single-family detached

dwellings within the MF-22, Multiple-Family Dwelling District.

The planning department has researched the surrounding neighborhood and based on the existing characteristics of the area, the zone change request to allow for a single-family detached dwelling would be appropriate.

In addition to having the appropriate zoning for the development, the property meets the minimum lot requirements. The appropriate setbacks and maximum height must also be met as described in the SF-3, Single-Family Dwelling District Dimensional Regulations chart.

This proposed zone change has been circulated to and reviewed by respective City departments and their comments, conditions, and requirements are as follows:

Engineering: (Approved)

No objection to zone change.

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

Fire: (Approved)

No objection to zoning change.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Code Compliance: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

No objection to zone change.

Planning:

Per the Future Land Use map, this location is designated as Urban Residential-

Medium. Potential zoning for this area includes Single-Family Dwelling Districts; therefore, this zone change is in compliance with the Future Land Use plan. It would also support the existing neighborhood characteristics and uses of the area.

This request was recommended for approval at the February 18, 2020 Planning and Zoning meeting.

This request was approved at the March 24, 2020 City Council meeting.

Staff recommends approval of this request for approval of a zone change subject to condition A.

Conditions:

A. That the use and development of this property shall conform to the regulations of the SF-3, Single-Family Dwelling District.

Letters of Objection:

As of March 18, 2020, staff has not received any letters of objection.

Attachments:

Proposed Site Plan
Application
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 7, BLOCK 24, GREENWOOD ADDITION, THIRD, FOURTH AND FIFTH SECTIONS, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF EAST NEW YORK AVENUE AND SOUTH BENTON STREET); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lot 7, Block 24, Greenwood Addition, Third, Fourth and Fifth Sections, City and County of Midland, Texas (the "Property"), to SF-3, Single-Family Dwelling District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as

that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: Z-20-01606

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: Edward MARTINEZ		Phone (432) 634.0877 Email Platino6old7@GMail	
Address 11456 W EDNA ST	City Odessa	State ~~TX~~	Zip 79763

Representative *(if different from Applicant or Property Owner)* Firm: Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 511 S. Benton ST

Legal Description
Lot: 7 Block: 24 Subdivision: Greenwood Addition

Current Zoning: MF2.2

Proposed Zone: SF3
(List by tracts if more than one district is requested)

Reason for Zone Change Request: Building single family Home

Present Use of Property: VACANT

Proposed Use of Property: Single family home

How would this zone change affect the public health, safety and welfare? N/A

Describe how conditions affecting the property have changed since present zoning designation: N/A

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature): Edward Martinez	Date: 1·10·20
Property Owner (printed) : Edward Martinez	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear_____who, being by me duly sworn, upon oath says: That (s)he is the owner of _____or authorized by_____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this_____day of_____, 20____, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☒ Property Owner Authorization
☐ Application Fee
Check # Waived
☒ Dimensioned Site Plan
☒ Plans in Digital Format (PDF/JPEG)

Received By:
Date: RECEIVED JAN 10 2020

****Application will not be considered for scheduling until reviewed by a planner.****

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM THIS INSTRUMENT BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

WARRANTY DEED

STATE OF TEXAS §
§
COUNTY OF MILDAND §

That **G&G MIDESSA INVESTMENTS, LLC**, ("Grantor"), whose address is: Post Office Box 52688, Midland, Texas, 79710 for and in consideration of the sum of $10.00, in hand paid, and other good and valuable consideration, paid by the Grantee herein named, the receipt of which is hereby acknowledged, have GRANTED, SOLD, and CONVEYED, and by these presents do hereby GRANT, SELL, and CONVEY, unto **EDWARD MARTINEZ** ("Grantee"), whose address is: 11456 West Edna Street, Odessa, Texas, 79763, all right, title, and interest in the following described real property in Midland County, Texas, to wit:

> Lot 7, Block 24, Greenwood Addition to the City of Midland, Midland County, Texas, more commonly known as 511 Benton Avenue, Midland, Texas.
>
> The property herein conveyed constitutes no part of Grantor's homestead. Grantor reserves unto themselves all oil, gas, and other minerals, in, on, or under said lands herein described.

This conveyance is subject to any and all prior reservations of easements, exceptions, covenants, conditions and restrictions contained in the chain of title of said premises, including any visible and apparent or recorded easements and roadways for roads or utility lines over and across said premises.

TO HAVE AND TO HOLD the above described premises, together with all and singular the rights and appurtenances thereto in

anywise belonging, unto the said Grantee, his heirs and assigns forever, and Grantor does hereby bind itself, its assigns, and its successors, to WARRANT AND FOREVER DEFEND all and singular the said premises unto the said Grantee, his heirs and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

EXECUTED this the 23 day of December, 2019.

JOEL AMOS GORDON, MANAGING MENBER

BOOKER T. GREEN, MANAGING MENBER

THE STATE OF TEXAS §
COUNTY OF Midland §

The above and foregoing Warranty Deed instrument was acknowledged before me on this, the 23 day of December, 2019 by JOEL AMOS GORDON AND BOOKER T. GREE, MANAGING MEMBERS OF G&G MIDESSA INVESTMENTS, LLC.

RACHEL L. STONE
Notary Public, State of Texas
Comm. Expires 05-04-2020
Notary ID 4558375

NOTARY PUBLIC, STATE OF TEXAS
My commission expires:

After recording return to:
Edward Martinez
11456 West Edna Street
Odessa, Texas 79763

THIS INSTRUMENT WAS PREPARED FROM INFORMATION FURNISHED BY THE PARTIES HERETO AND NO EXAMINATION HAS BEEN MADE, NOR HAS ANY OPINION BEEN GIVEN REGARDING THE TITLE TO THE PROPERTY, DESCRIPTION OF THE PROPERTY OR TAXES.

VG-209-2019-39163

Midland County
Alison Haley
Midland County Clerk

Instrument Number: 39163

Real Property Recordings

Recorded On: December 23, 2019 12:13 PM

Number of Pages: 3

" Examined and Charged as Follows: "

Total Recording: $30.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	39163
Receipt Number:	20191223000103
Recorded Date/Time:	December 23, 2019 12:13 PM
User:	Crystal C
Station:	cc10297

Record and Return To:

EDWARD MARTINEZ
11456 WEST EDNA STREET

ODESSA TX 79763

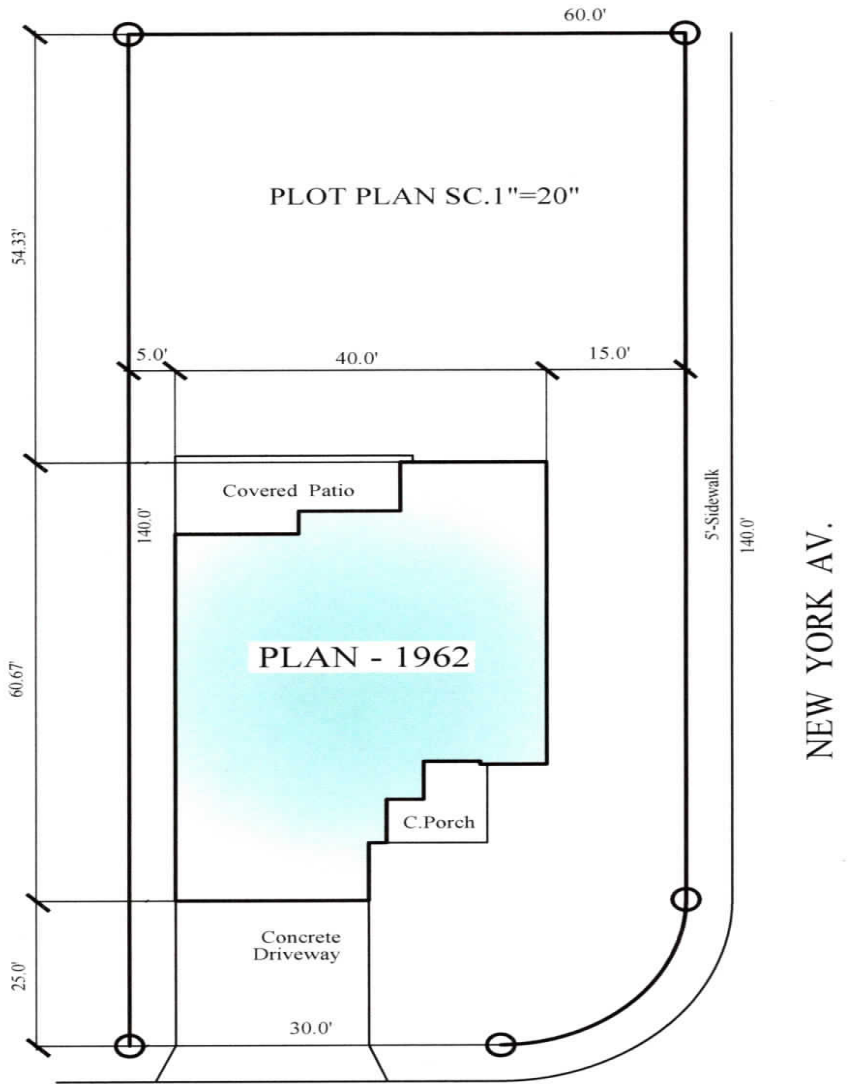
COUNTY COURT
MIDLAND COUNTY, TEXAS

STATE OF TEXAS
Midland County
I hereby certify that this Instrument was filed in the File Number sequence on the date/time printed hereon, and was duly recorded in the Official Records of Midland County, Texas

Alison Haley
Midland County Clerk
Midland County, TX

Alison Haley

19.11

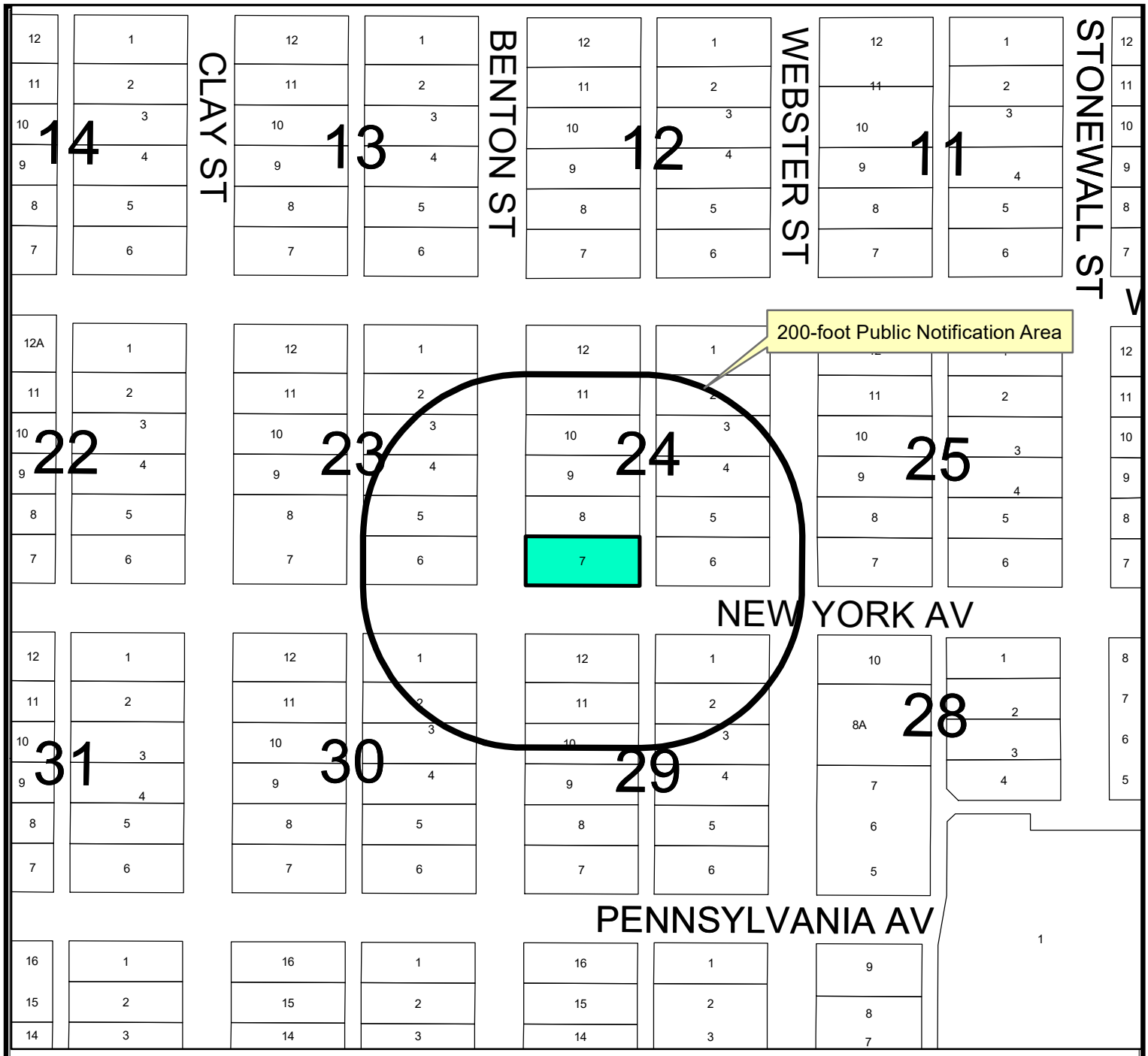


511 S. BENTON ST.

GREENWOOD ADDITION
LOT - 7 Block 24
An Addition To The City O f Midland
MIDLAND,TEXAS

EDWARD MARTINEZ

RECEIVED
JAN 10 2020



LOCATION MAP

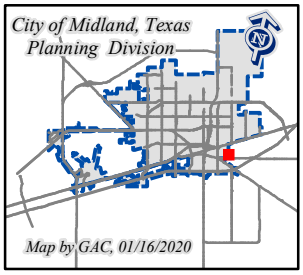
Z-20-0166 **Scale: 1" = 400'**

Consider a request by Edward Martinez for a zone change from a MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District on Lot 7, Block 24, Greenwood Addition, Third, Fourth and Fifth Sections, City and County of Midland, Texas.

Generally located on the northeast corner of the intersection of East New York Avenue and South Benton Street. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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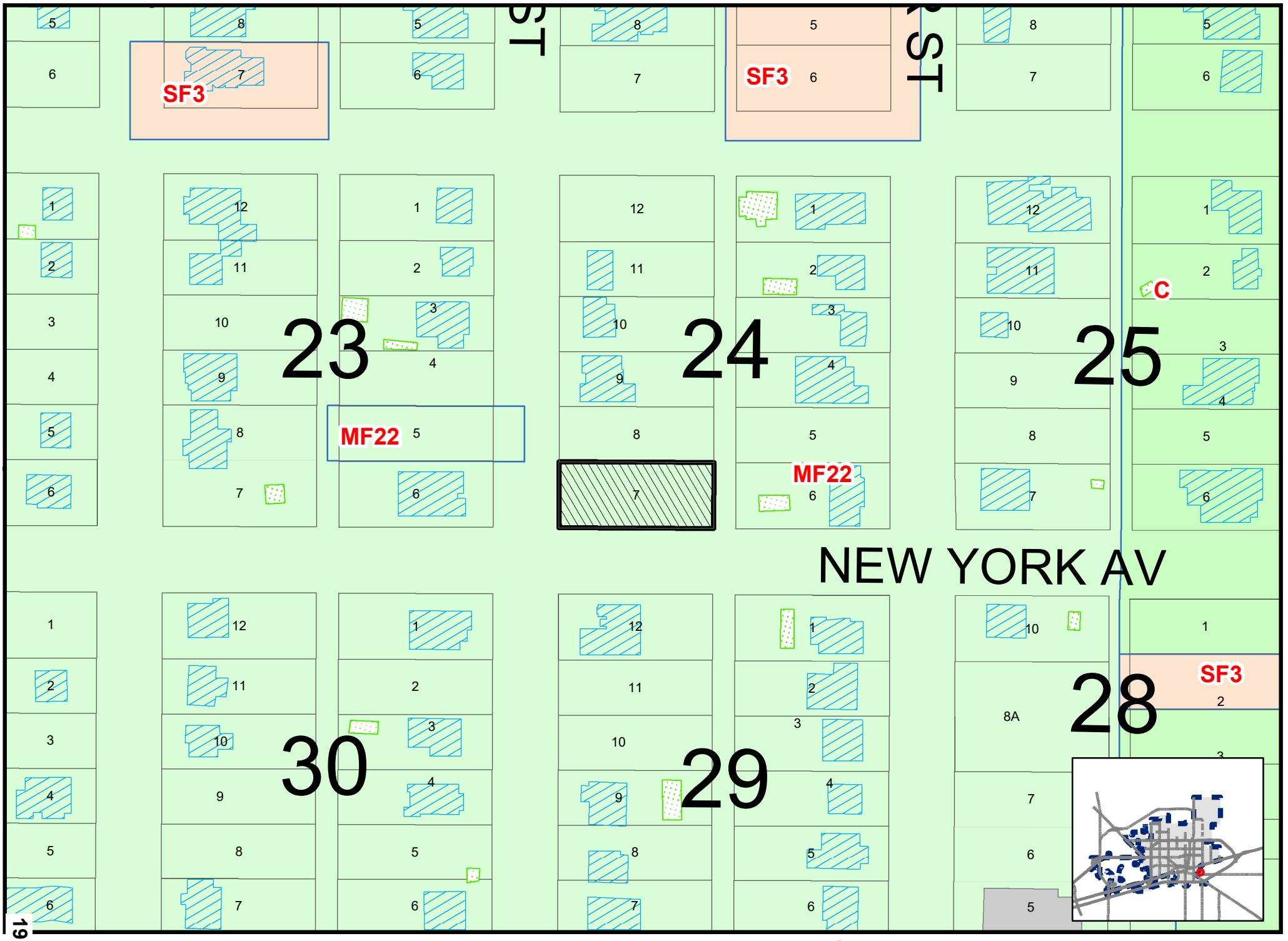
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE I ANY DECISIONS BASED UPON THE USE OF THIS DAT



19.14

By GAC, 01/16/2020

Z-20-0166

Scale: 1" = 200'

ZONING MAP

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19.15

19.16

19.17

S BENTON ST
500
WARNING
CALL 911
WS02

City Council Agenda

Approved for Agenda:

City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL**

FROM: **Eric Myers, Planner**

SUBJECT: **Consider an ordinance on second reading on a request by Joe Dominguez for a Zone Change from LI, Light Industrial District, to SF-3, Single Family Dwelling District, on Lots 15 and 16, Block 133, Southern Addition, City and County of Midland, Texas. (Generally located on the east side of S. Weatherford Street, approximately 86-feet north of E. Washington Avenue. Council District 2)**

Purpose:

The applicant, Joe Dominguez, is requesting a Zone Change from LI, Light Industrial District to SF-3, Single-Family Dwelling District, on Lots 15 & 16, Block 133, Southern Addition, City and County of Midland, Texas, to allow for the placement of a modular home.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Surrounding Zoning and Land Use:

The properties to the north, east, south, and west are zoned LI, Light Industrial District, and are the locations of residences.

Discussion:

The property is located at 409 S. Weatherford Street and is currently vacant. The applicant is proposing to place a modular home at this location.

Per the previous zoning ordinance, single-family detached dwellings were allowed in this zoning district. As of July 1, 2019, the new zoning ordinance does not allow the use of single-family detached dwellings within the LI, Light Industrial District.

The planning department has researched the surrounding neighborhood and based on the existing characteristics of the area, the zone change request to allow for a single-family detached dwelling would be appropriate.

The dimensions of the property are approximately 50 feet (shared between two lots) by 140 feet and would meet the dimensional regulations of the SF-3, Single Family Dwelling Districts. The appropriate setbacks and maximum height must also comply with the residential zoning district dimensional regulations for the SF-3, Single Family Dwelling District.

This proposed zone change has been circulated to and reviewed by respective City departments and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No comments.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Engineering: (Approved)

No comments.

Code: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Transportation: (Approved)

No comments.

Planning:

Per the Future Land Use map, this location is designated as Urban-Medium Neighborhood Center. Potential zoning or this area includes Single-Family Dwelling

Districts; therefore, this zone change complies with the Future Land Use plan. The surrounding lots consist of vacant lots and residences. This zone change will follow the existing characteristics of the surrounding neighborhood and provide additional housing for residents of the City of Midland.

The Planning and Zoning recommended approval of this request at the March 2, 2020 meeting.

This request was approved at the March 24, 2020 City Council meeting.

Staff recommends approval of the zone change from LI, Light Industrial District to a SF-3, Single-Family Dwelling District subject to condition A.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the SF-3, Single-Family Dwelling District.**

Letters of Objection:

Staff has received one objection letter as of March 19, 2020.

Attachments:

Application
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 15 AND 16, BLOCK 133, SOUTHERN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM LI, LIGHT INDUSTRIAL DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE EAST SIDE OF SOUTH WEATHERFORD STREET, APPROXIMATELY 86 FEET NORTH OF EAST WASHINGTON AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lots 15 and 16, Block 133, Southern Addition, City and County of Midland, Texas (the "Property") to SF-3, Single-Family Dwelling District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from LI, Light Industrial District to SF-3, Single-Family Dwelling District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as

that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: 2-20-0170

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: JOE DOMINGUEZ		Phone ( ) Email	
Address	City	State	Zip

Property Owner Printed Name: JOE DOMINGUEZ		Phone (432) 634-2681 Email IRMAGONZALES35@YAHOO.COM	
Address 409 S. WEATHERFORD	City MIDLAND	State TX	Zip 79701

Representative *(if different from Applicant or Property Owner)* Firm: Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address:

Legal Description
Lot: Block: Subdivision:

Current Zoning: LI

Proposed Zone: MH
(List by tracts if more than one district is requested)

Reason for Zone Change Request: MADE by a Modular or Mobile Home to put on PROPERTY

Present Use of Property: VACANT lot

Proposed Use of Property: residential (FOR a mobile or modular home)

How would this zone change affect the public health, safety and welfare? none

Describe how conditions affecting the property have changed since present zoning designation: mobile homes around property

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): Joe Dominguez	Date: 02-04-2020
Applicant (printed): JOE DOMINGUEZ	
Property Owner (signature):	Date:
Property Owner (printed) : _____	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear_____who, being by me duly sworn, upon oath says: That (s)he is the owner of _____or authorized by_____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this_____day of_____, 20____, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

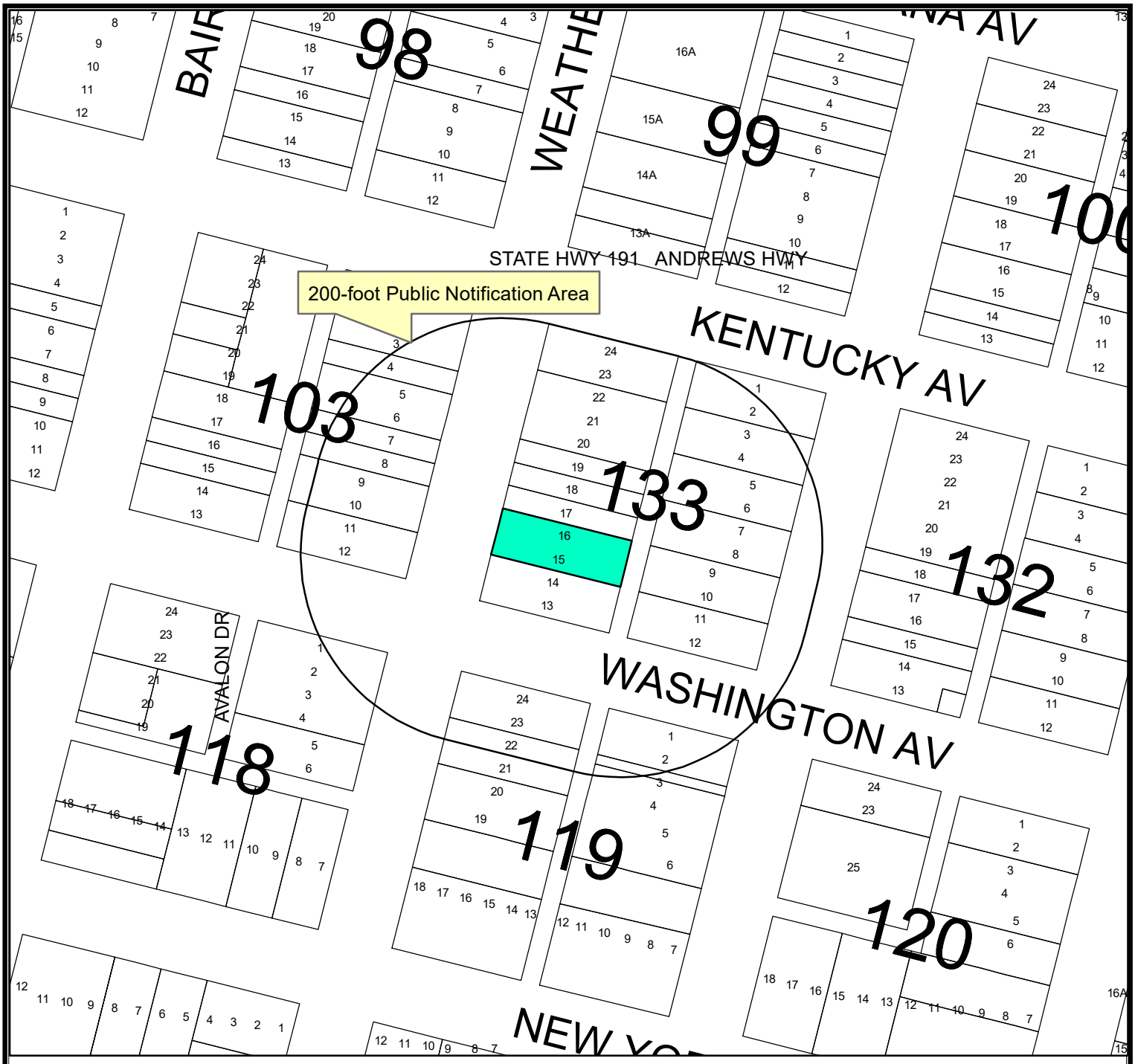
FOR OFFICE USE ONLY

☑ Property Owner Authorization
☑ Application Fee
Check # Waived
☑ Dimensioned Site Plan
☐ Plans in Digital Format (PDF/JPEG)

RECEIVED
FEB 0 4 2020

Received By: DK
Date:
BY: .....

****Application will not be considered for scheduling until reviewed by a planner.****



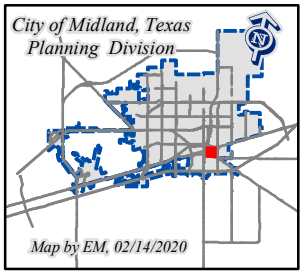
LOCATION MAP

Z-20-0170 **Scale: 1" = 150'**

Consider a request by Joe Domingez, for a zone change from LI, Light Industrial District to SF-3, Single-Family District on Lots 15 and 16, Block 133, Southern Addition City and County of Midland, Texas. Generally located on the east side of S. Weatherford Street, approximately 86-feet north of E. Washington Avenue. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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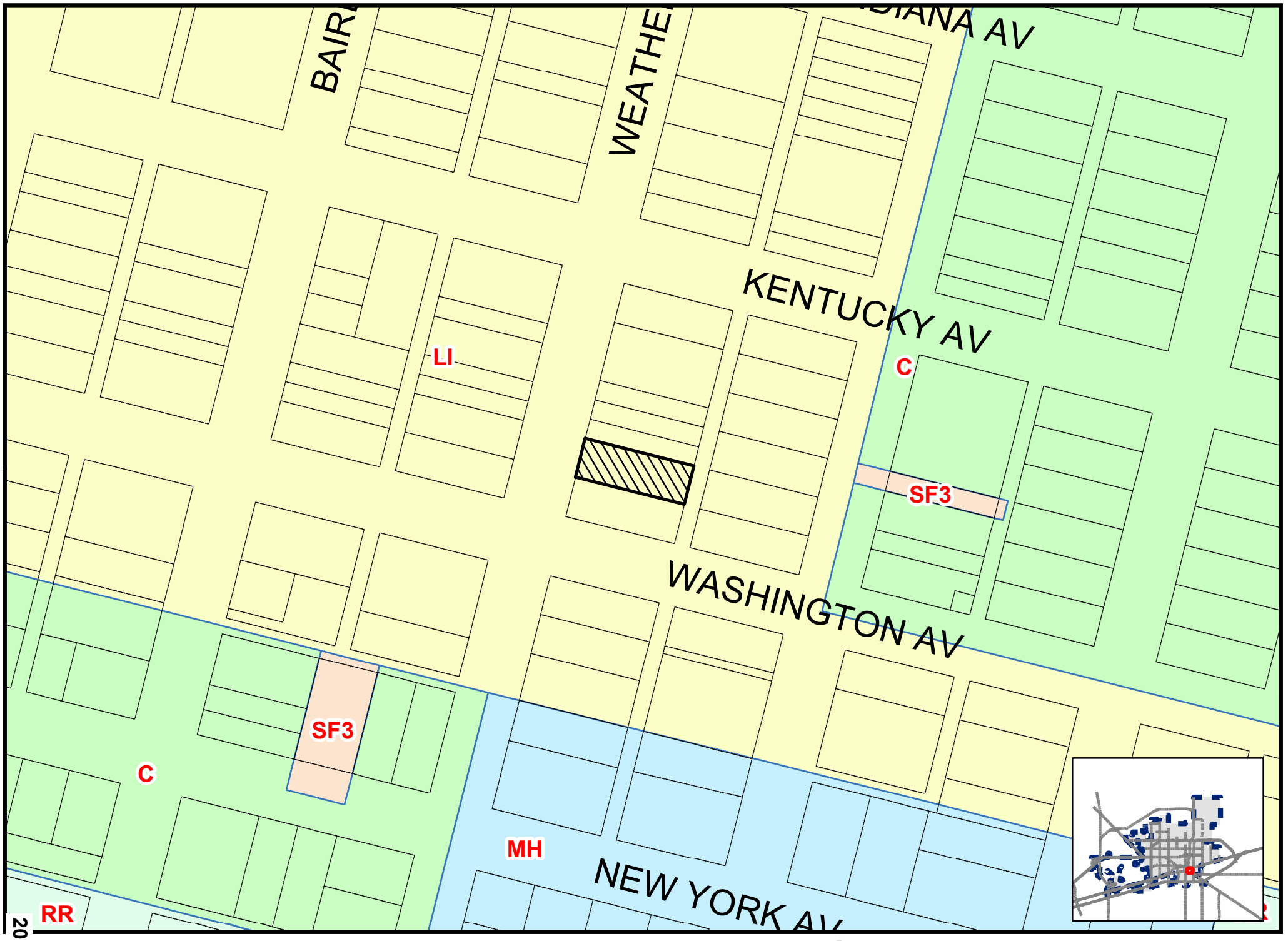
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



20.10

p By EM, 02/14/2020

Z-20-0170

Scale: 1" = 150'

ZONING MAP

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20.11

20.12

20.13

20.14

City Council Agenda

Approved for Agenda:

City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL**

FROM: **Eric Myers, Planner**

SUBJECT: **Consider an ordinance on second reading on a request by Irma Ogle for a Zone Change from PD, Planned District for a Shopping Center, to RR, Regional Retail District, on Lots 5A and 5B, Block 3, Westridge Park Addition, Section 14, City and County of Midland, Texas. (Generally located on the northwest corner of the intersection of Tradewinds Boulevard and Deauville Boulevard. Council District 4)**

Purpose:

The applicant, Irma Ogle, is requesting a Zone Change from PD, Planned District for a Shopping Center, to RR, Regional Retail District, on Lots 5A and 5B, Block 3, Westridge Park Addition, Section 14, City and County of Midland, Texas, to build a retail plaza.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Surrounding Zoning and Land Use:

The properties to the north, east, and west are zoned PD, Planned District for a Shopping Centers, and are the locations of hotels and vacant land, respectively.

The property to the south is zoned RR, Regional Retail, and is the location of a restaurant.

Discussion:

The property is located at 1201 and 1207 Tradewinds Boulevard, and is currently Zoned PD, Planned Development for a Shopping Center. The applicant is now seeking to construct a retail plaza on the vacant lot.

Instead of amending the existing planned district with a new site plan, the applicant is requesting a standard zone change to RR, Regional Retail District.

This proposed zone change has been circulated to and reviewed by respective City departments and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objections.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Engineering: (Approved)

No comments.

Code: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.
No objection to zone change.

Planning:

This zone change will follow the existing characteristics of the surrounding neighborhood and will provide additional retail services for residents of the City of Midland. Therefore, staff recommends approval of the zone change from PD,

Planned Development for a Shopping Center to RR, Regional Retail, subject to condition A.

The Planning and Zoning recommended approval of this request at the March 2, 2020 meeting.

This request was approved at the March 24, 2020 City Council meeting.

Staff recommends approval of the zone change from PD, Planned District for a Shopping Center, to RR, Regional Retail subject to condition A.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the RR, Regional Retail District.**

Letters of Objection:

Staff has received one objection letter as of March 19, 2020.

Attachments:

Application
Maps
Ordinance No. 7981

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 5A AND 5B, BLOCK 3, WESTRIDGE PARK ADDITION, SECTION 14, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER TO RR, REGIONAL RETAIL DISTRICT (GENERALLY LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF TRADEWINDS BOULEVARD AND DEAUVILLE BOULEVARD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lots 5A and 5B, Block 3, Westridge Park Addition, Section 14, City and County of Midland, Texas (the "Property") to RR, Regional Retail District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from PD, Planned Development District for a Shopping Center to RR, Regional Retail District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as

that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: 2-20-0169

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Irma Ogle		Phone (432 634 4762 Email osakaima@yahoo.com	
Address 1207 and 1201 Tradwind Blv	City Midland	State TX	Zip 79706

Property Owner Printed Name: Irma Ogle or Riom Corporation		Phone (432) 634 4762 Email osakaima@yahoo.com	
Address 1207 and 1201 Tradwinds Blv	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 1207 and 1201 Tradwinds Blvr.

Legal Description
Lot: 1207 / 1201 lot 50/55 Block: 3, 3 Subdivision: westridge. Park. Sec 14

Current Zoning:	**Proposed Zone:** *(List by tracts if more than one district is requested)*

Reason for Zone Change Request: Change Request plan to build a retail plaza

Present Use of Property: vacant lot

Proposed Use of Property: 6 unit retail plaza for least.

How would this zone change affect the public health, safety and welfare? It would provide the opportunity for a business to lease a space for anything form fast food to laundrymat to small retail

Describe how conditions affecting the property have changed since present zoning designation:

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

RECEIVED
FEB 0 3 2020

BY: .....

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): Irma Ogle	Date: 1/31/20
Applicant (printed):	
Property Owner (signature):	Date:
Property Owner (printed) :	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Irma Ogle who, being by me duly sworn, upon oath says: That (s)he is the owner of Osaka or authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Irma Ogle
Authorized Agent (*signature*)

Subscribed and sworn to before me, this 3 day of February, 2020, to certify which witness my hand and seal of office.

Shaida Lucero

SHAIDA LUCERO
Notary Public, State of Texas
Comm. Expires 02-15-2021
Notary ID 129307604

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

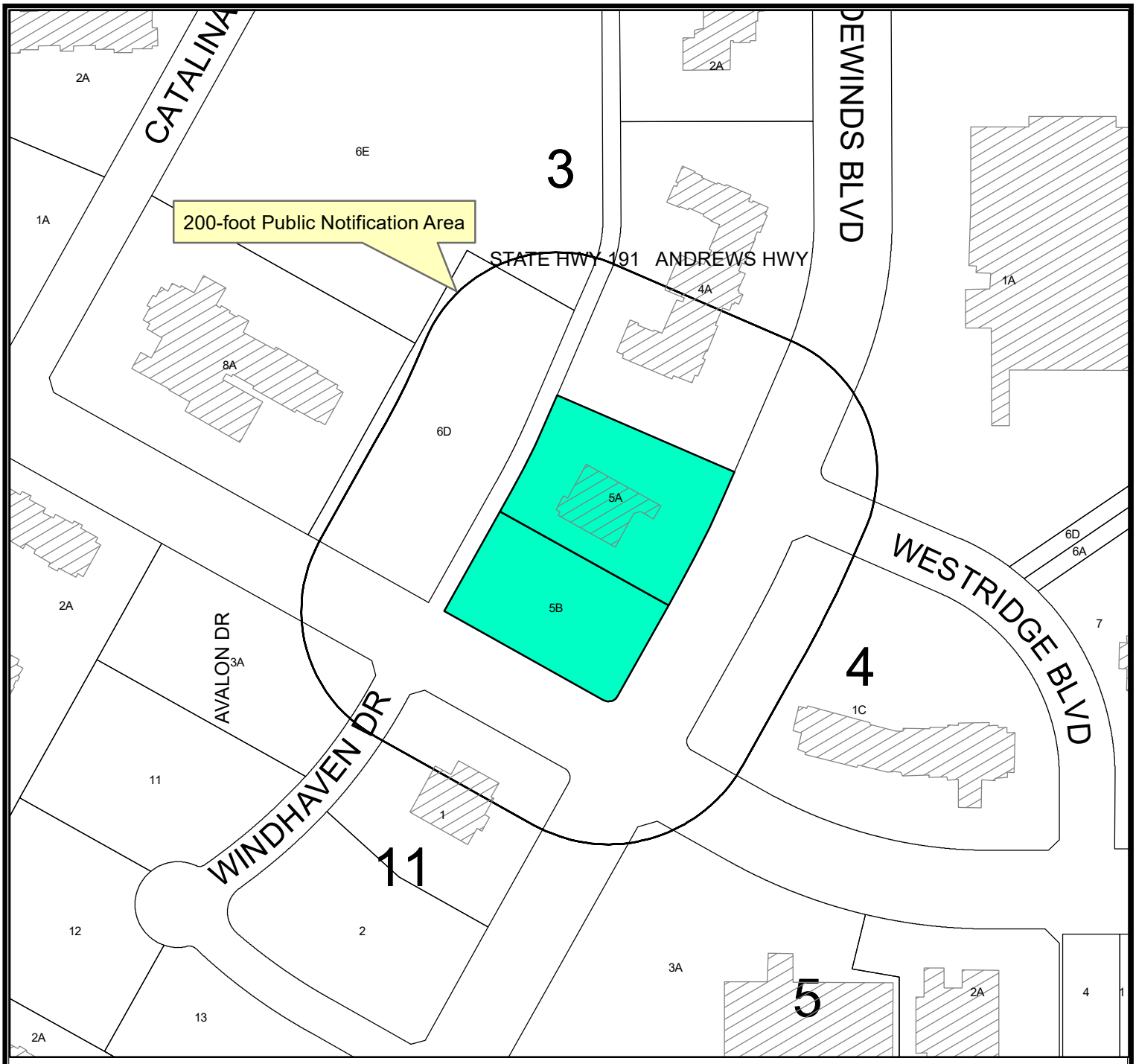
FOR OFFICE USE ONLY

- [x] Property Owner Authorization
- [x] Application Fee — Check # 15809
- [x] Dimensioned Site Plan
- [ ] Plans in Digital Format (PDF/JPEG)

Received By: _____ Date: _____

RECEIVED
FEB 03 2020
BY: .....

****Application will not be considered for scheduling until reviewed by a planner.****



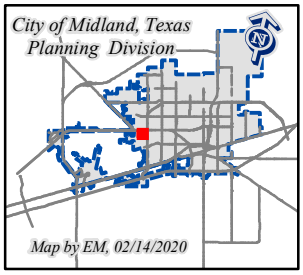
LOCATION MAP

Z-20-0169 **Scale: 1" = 200'**

Consider a request by Irma Ogle, for a zone change from PD, Planned Development for a Shopping Center to RR, Regional Retail District on Lots, 5A and 5B, Block 3, Westridge Park, Midland County, Texas. Generally located on the northwest corner of the intersection of Tradewinds Boulevard, and Deauville Boulevard. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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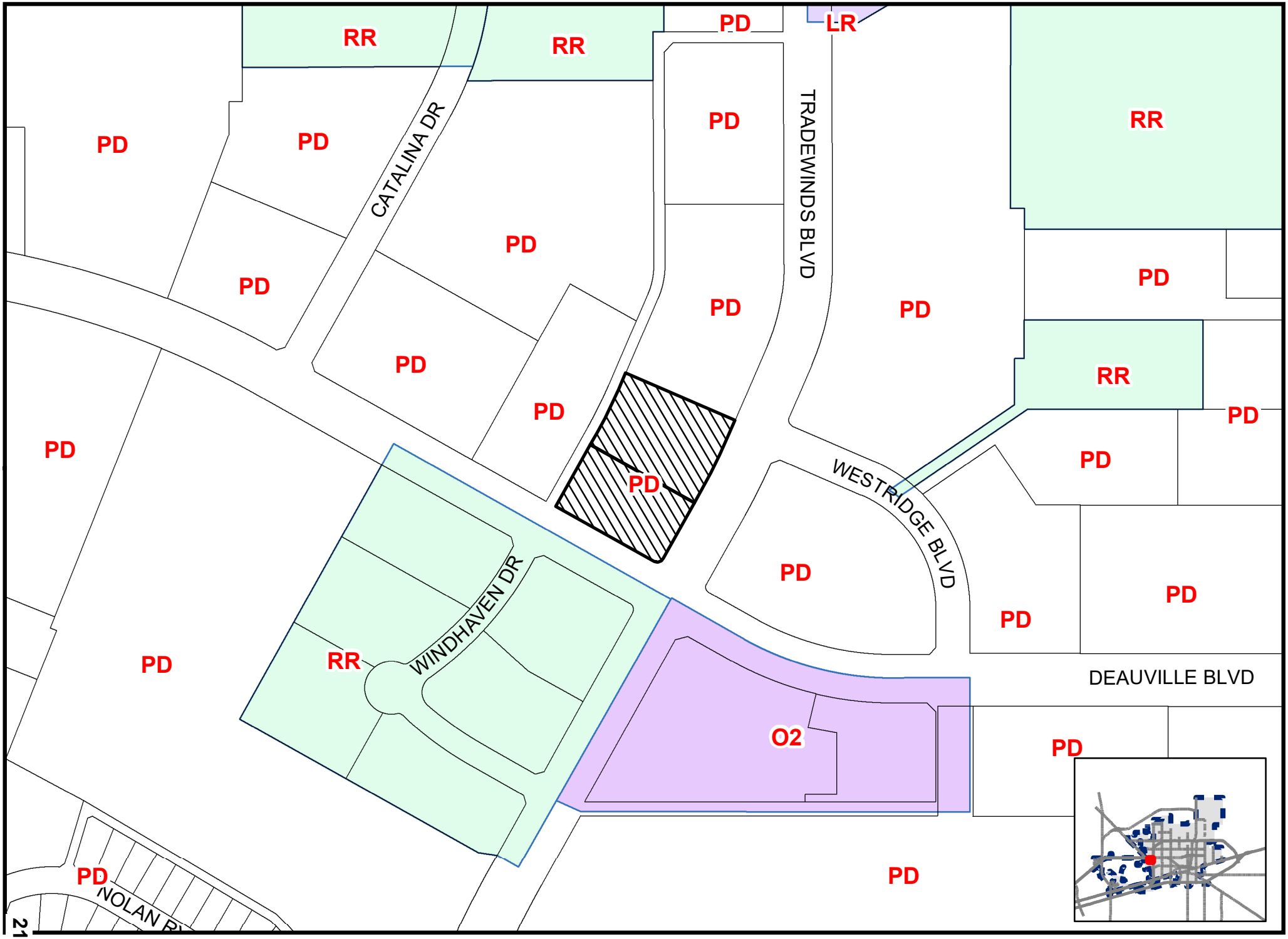
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



21.10

ap By EM, 2/14/2020

Z-20-0169

Scale: 1" = 200'

ZONING MAP

© THE CITY OF MIDLAND - 2020: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

ORDINANCE NO. 7981

AN ORDINANCE CHANGING THE ZONING CLASSIFICATION OF THE AREA SET OUT AND DESCRIBED IN SECTION ONE HEREOF FROM AE, AGRICULTURE ESTATE DISTRICT, TO PD, PLANNED DISTRICT FOR A SHOPPING CENTER; AND ESTABLISHING THE ZONING CLASSIFICATION OF LAND IN SECTION 37, BLOCK 40, T-1-S, T&P RR. SURVEY, MIDLAND COUNTY, TEXAS AS PD, PLANNED DISTRICT FOR A SHOPPING CENTER; PROVIDING FOR SUCH USE TO BE SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS AS SET OUT HEREIN; PROVIDING THAT THE PROPERTY SHALL BE IMPROVED ACCORDING TO THE ORDINANCES, SITE PLAN AND OTHER SPECIFICATIONS SET OUT AND REFERRED TO HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, notice has been given to all parties in interest and citizens by publication in the official newspaper and otherwise, of a hearing to be held before the City Council on October 10, 2000, to consider an amendment to the zoning regulations and map changing the zoning classification of the property described in Section One hereof from AE, Agriculture Estate District, to PD, Planned District for a Shopping Center; and establishing the zoning classification of the area set out and described in Section Two hereof as PD, Planned District for a Shopping Center, as set out in Section 11-1-6 of the City Code of Midland, Texas; and

WHEREAS, such public hearing was held in the Council Chambers beginning at 11:03 a.m. on said October 10, 2000, as advertised; and

WHEREAS, after a full hearing, at which all parties in interest and citizens were given an opportunity to be heard; and after receiving and considering the recommendations of the

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sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and

Planning and Zoning Commission; and after considering among other things, the character of the property involved and the surrounding area and its peculiar suitability for particular uses; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such municipality, the Council finds it to be in the best interest of the health, safety, morals and general welfare of the City of Midland to amend the zoning regulations accordingly;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the zoning classification of the property described in Exhibit "A" attached hereto and incorporated herein by reference is, hereby changed from AE Agriculture-Estate District to PD, Planned District for a Shopping Center subject to the conditions set forth in Section Two.

SECTION TWO. That the zoning classification of the property described in Exhibit "B" attached hereto and incorporated herein by reference is, hereby established as PD, Planned District for a Shopping Center subject to the following conditions:

A. That the use and development of this property shall be subject to the regulations of the LR-2, Local Retail District, except as otherwise stated below.

B. That the use and development of this property shall conform to the attached site plan in all respects.

C. That the indicated landscaping shown on each respective lot shall be installed with the initial development of each lot. The landscaping shall be irrigated with an automatic sprinkler system, and shall be maintained in a healthy, growing condition.

D. That all buildings shall be located only within the indicated maximum building envelopes as set forth in the Site Plan by dashed blue lines.

E. The parking plan indicated on the Site Plan shall be considered illustrative only. The minimum number of parking spaces shall be determined through the building permit process, based on actual uses and building sizes.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and

directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the 10th **day of** October**, A.D., 2000; and passed to second reading on motion of Council member** Wood**, seconded by Council member** Simpson**, by the following vote:**

Council members voting "AYE": Wood, Simpson, Morgan, Dingus, Burns, Canon and Bradford

Council members voting "NAY": None

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member Wood**, seconded by Council member** Simpson**, on the** 24th **day of** October**, A.D., 2000, at a regular meeting of the City Council:**

Council members voting "AYE": Wood, Simpson, Morgan, Dingus, Burns, Canon and Bradford

Council members voting "NAY": None

PASSED AND APPROVED THIS 24th **day of** October**, A.D., 2000.**

Robt. E. Burns, Mayor

ATTEST:

Kaylah J. McCord

Kaylah J. McCord, City Secretary

APPROVED AS TO FORM:

Keith Stretcher, City Attorney

21.16

21.17

21.19

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: 4/14/2020

TO: City Council / City Manager

FROM: Michael Pacelli, City Traffic Engineer

SUBJECT: Consider an ordinance on second reading of the City of Midland, Texas, amending the Tall City Tomorrow Comprehensive Plan as authorized by Chapter 213 of the Texas Local Government Code so as to revise the thoroughfare plan; providing a savings and severability clause; and providing an effective date of May 1, 2020.

Purpose:

Consider an ordinance on second reading of the City of Midland, Texas, amending the Tall City Tomorrow Comprehensive Plan as authorized by Chapter 213 of the Texas Local Government Code so as to revise the thoroughfare plan; providing a savings and severability clause; and providing an effective date of May 1, 2020.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

None.

Discussion:

Many public infrastructure improvement requirements tied to platting and new development, as well as various other sections of the City Code, make reference to the City's master thoroughfare plan. This plan is essentially a map that conceptually shows existing and proposed future roadway alignments and classifies major roadways by functional type (e.g., highways, arterials, collectors).

In the past, the thoroughfare plan was issued by the City as a standalone document, with the last standalone version published in 2012. As part of the preparation of the Tall City Tomorrow Comprehensive Plan, an updated map was wrapped into the overall document and adopted by the Planning and Zoning Commission and then by City Council in 2016.

Thoroughfare plans are typically updated every few years as new development occurs, plans for growth evolve, and funding for road construction projects changes. Therefore, since four years has now passed since the last update, staff recommends adopting the attached “2020 Thoroughfare Plan” as an amendment to the Tall City Tomorrow Plan, replacing “Map 5.1: Transportation” in the original document. It is anticipated that future updates will be issued every few years, also amending the comprehensive plan.

The Planning and Zoning Commission recommended approval of this amendment on March 2, 2020.

Staff recommends approval.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF MIDLAND, TEXAS, AMENDING THE TALL CITY TOMORROW COMPREHENSIVE PLAN AS AUTHORIZED BY CHAPTER 213 OF THE TEXAS LOCAL GOVERNMENT CODE SO AS TO REVISE THE THOROUGHFARE PLAN; PROVIDING A SAVINGS AND SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE OF MAY 1, 2020

WHEREAS, the City of Midland recognizes the need for a comprehensive plan for the long-range development of the City; and

WHEREAS, Chapter 213 of the Texas Local Government Code provides for the adoption of municipal comprehensive plans; and

WHEREAS, on July 12, 2016, the City Council adopted Ordinance No. 9578, by which the Tall City Tomorrow Comprehensive Plan was adopted; and

WHEREAS, the amendment of the Tall City Tomorrow Comprehensive Plan, as set forth in this ordinance, will promote the sound development of the City of Midland and promote public health, safety, and welfare; and

WHEREAS, on March 6, 2020, notice was published in a newspaper having general circulation in the City of Midland, Texas, of a public hearing to be held on March 24, 2020, in the Council Chamber regarding a proposal to amend the Tall City Tomorrow Comprehensive Plan; and

WHEREAS, on March 6, 2020, notice was published on the City of Midland, Texas' Internet website, of a public hearing to be held on March 24, 2020, in the Council Chamber regarding a proposal to amend the Tall City Tomorrow Comprehensive Plan; and

WHEREAS, on March 24, 2020, as advertised, a public hearing was held in the Council Chamber at which the public was given the opportunity to give testimony and present written evidence, all pursuant to law, regarding a proposal to amend the Tall City Tomorrow Comprehensive Plan; and

WHEREAS, the Council finds it to be in the public interest to amend the Tall City

Tomorrow Comprehensive Plan as described below;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Tall City Tomorrow Comprehensive Plan, is hereby amended so as to replace the map identified as "Map 5.1" with the thoroughfare plan map attached hereto and incorporated herein as Exhibit "A". Said thoroughfare plan map shall be the Thoroughfare Plan of the City of Midland. The Tall City Tomorrow Comprehensive Plan, as amended by this ordinance, shall remain in full force and effect.

SECTION TWO. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION THREE. The effective date of this ordinance is May 1, 2020.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular

meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

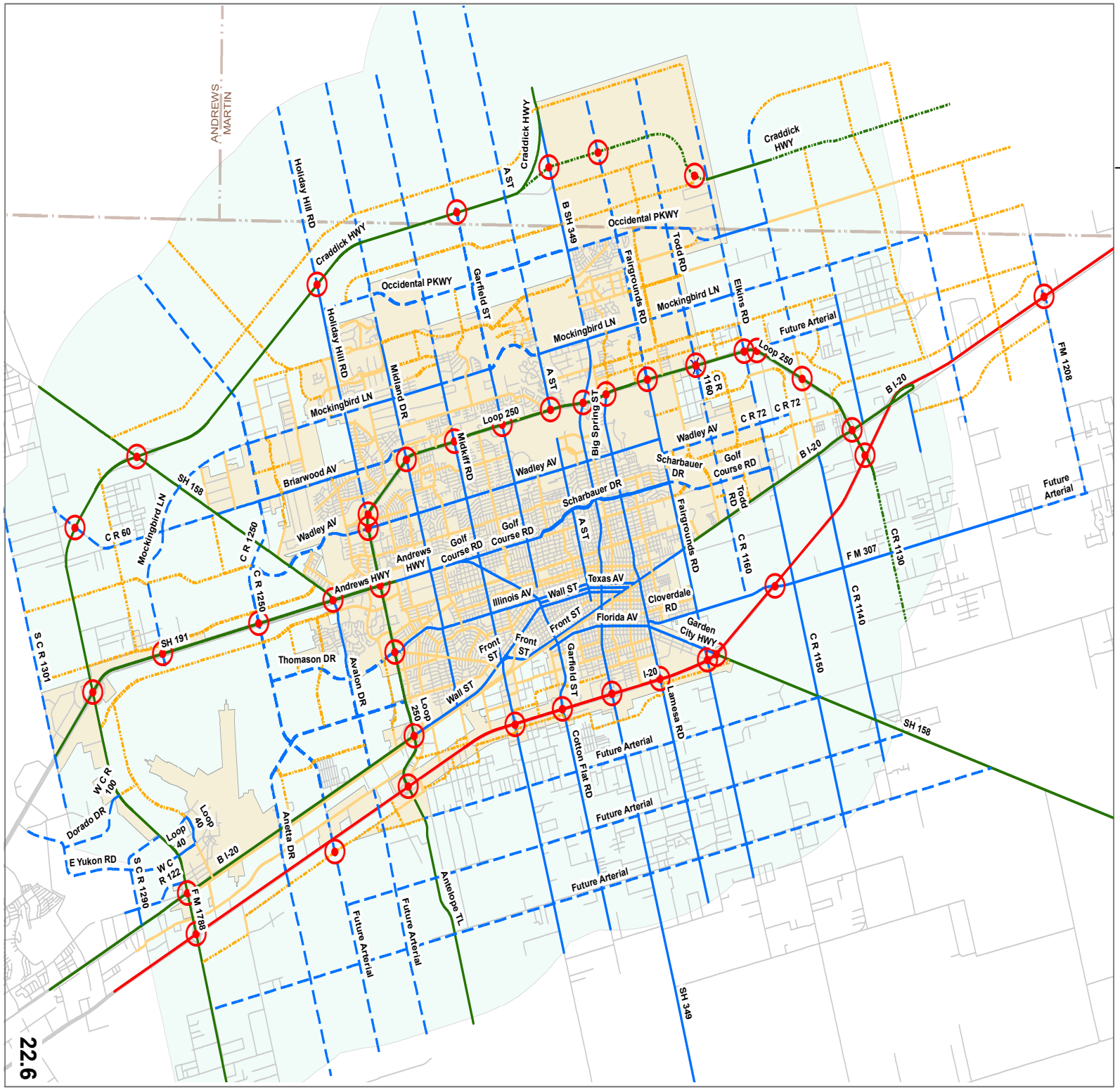
APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney



22.6

MIDLAND
Feel the Energy!

City of Midland, Texas 2020 Thoroughfare Plan

Legend

- Interchanges
- Interstate (Existing)
- Interstate (Proposed)
- Principal Arterialt/Freeway (Existing)
- Principal Arterialt/Freeway (Proposed)
- Arterial (Existing)
- Arterial (Proposed)
- Collector (Existing)
- Collector (Proposed)
- City Limit
- ETJ
- County Boundaries

0 1 2 4 Miles

N W E S

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This data is not a substitution for a survey product, nor is it designed to be used as a primary tool in permitting or other decisions based solely on the information contained herein.
THE CITY OF MIDLAND SHALL NOT BE RESPONCIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

NAD 1983 Texas Central Feet 01/02/2020 DA

City Council Agenda

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL/CITY MANAGER**

FROM: **Ron Jenkins, Oil & Gas Coordinator**

SUBJECT: Hold a public hearing regarding the proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC for the drilling of the following oil and gas wells: Charger #H110WB; Charger #H115WA; Mustang #H145WA; Mustang #H150WB; Mustang #H155WA; and Mustang #H160WB; said wells being generally located between 862 feet and 2,050 feet west of Rankin Highway and between 590 feet and 620 feet north of Dayton Road.

Purpose:

Permian Deep Rock Oil Co., LLC, for the drilling of oil gas wells, as listed prior. This is an opportunity for the Council to receive public comment. Council may consider this permit following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action

☐ Approve ☐ Deny ☒ Direction/Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed these well sites in detail and recommends approval noting including an additional exhibit. These applications are for previously approved permits that have expired. A sound wall will be used during drilling and fracing operations being located on the south side of location being 980 feet long and 16 feet high for the Charger wells. The sound wall will be 450 feet long and 16 feet high for the Mustang wells. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

(1) Permian Deep Rock Oil Company requests variance to residence or commercial structure within 500 ft:
Charger #H110WB– Variance of 271 ft.
Charger #H1115WA- Variance of 316 ft.
Mustang #H145WA- Variance of 227 ft.
Mustang #H150WB- Variance of 255 ft.
Mustang #H155WA- Variance of 226 ft.
Mustang #H160WB- Variance of 228 ft.

(2) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation since city water is not available.
(3) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.
(5) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location;

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. / Rep. Fax
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	Rep. Tele. 432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is**

Current Tax Roll from Midland Central Appraisal District), **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/p lat/satellite/aerial photo)*** **depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Charger #H110WB- Previosly approved, permitted under different number (Charger A H110UH), permit will be expired

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 240' FNL & 1720' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K (if applicable) **is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M: **No city roads will be used**

ATTACHED AS EXHIBIT N **is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** *Letter of Credit/Certificate of Deposit* **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **: Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith E. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

SCALE: 1" = 300'

0' 150' 300'

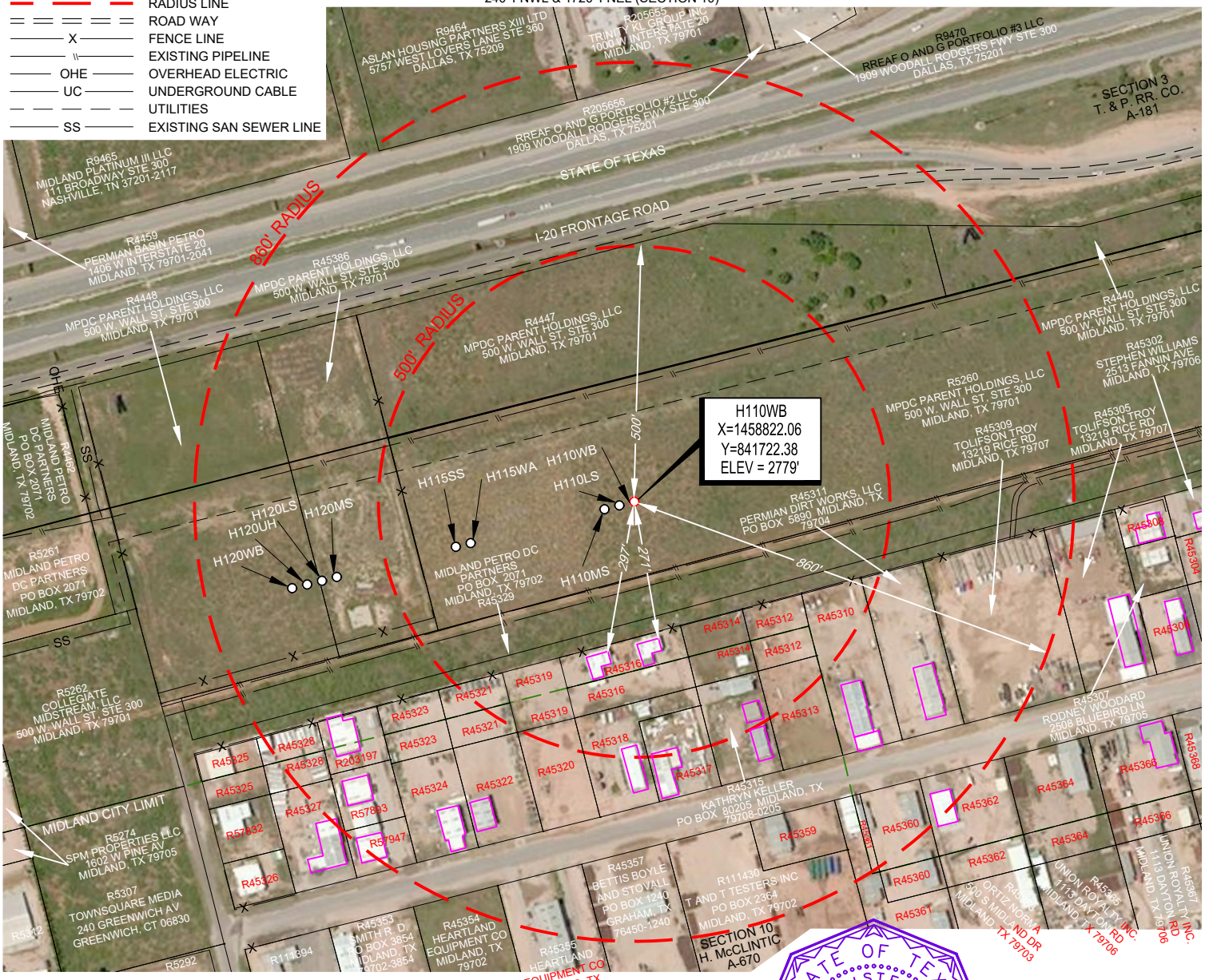
LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- UC — UNDERGROUND CABLE
- UTILITIES
- SS — EXISTING SAN SEWER LINE

SECTION 10, T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **CHARGER H110WB**
240' FNWL & 1720' FNEL (SECTION 10)

PERMIAN DEEP ROCK OIL CO., L.L.C.



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TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
MARCH 29, 2018

CHARGER H110WB	REVISION:	
	A.V.F.	03/28/2018
	A.V.F.	03/29/2018
DATE: 02/16/2018	D.R.H.	11/11/2019
FILE: CD_CHARGER_H110WB_REV7	D.R.H.	11/14/2019
DRAWN BY: A.V.F.	D.R.H.	12/10/2019
SHEET : 1 OF 2	D.R.H.	12/13/2019

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
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3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
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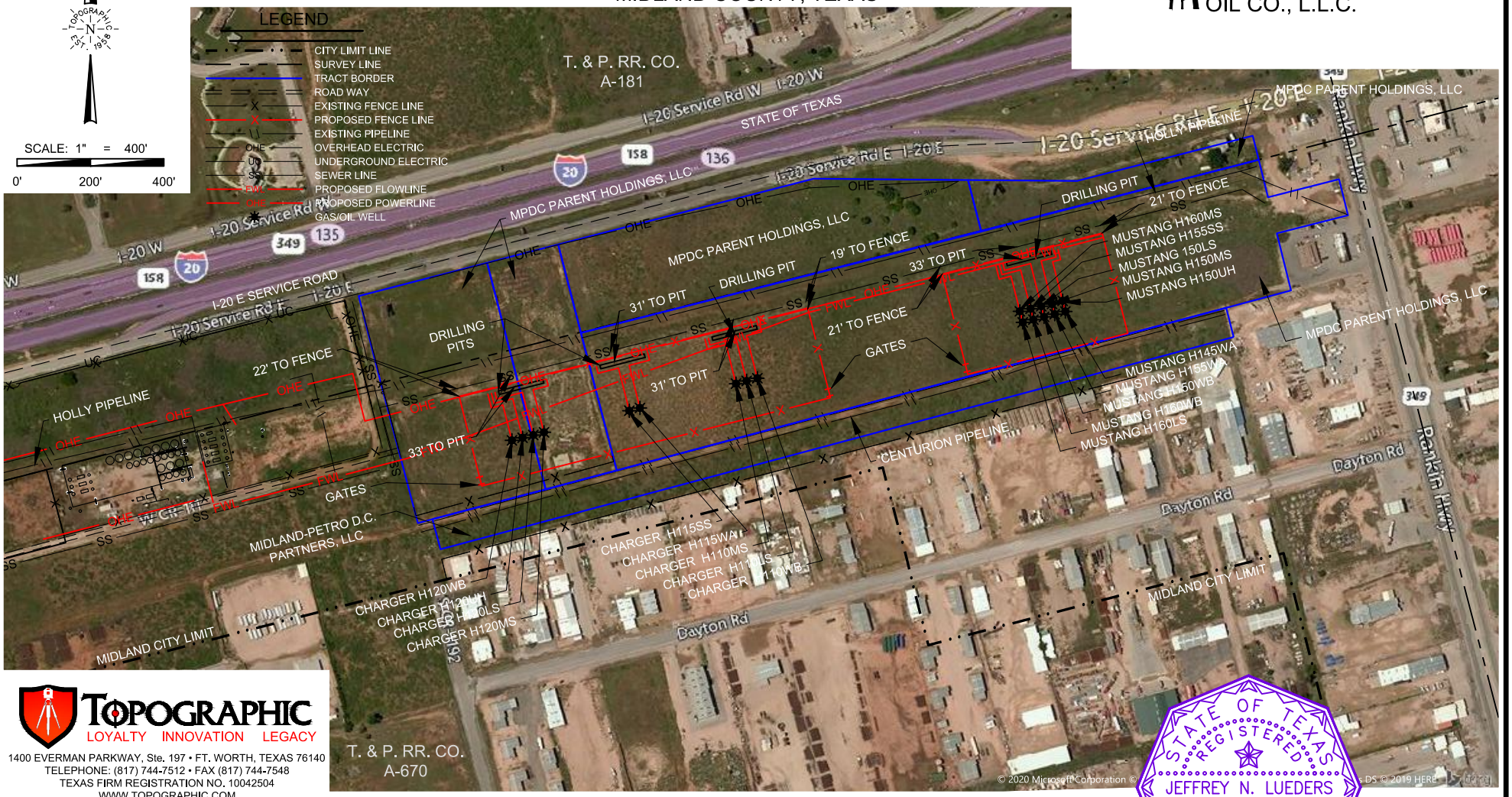
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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CHARGER UNIT CITY PERMIT	REVISION:	
	GJU	04/09/18
	JRH	11/16/18
	MJM	11/26/18
DATE: 03/28/2018	JRH	11/07/19
FILE: SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8	DRH	11/13/19
DRAWN BY: GJU	DRH	11/14/19
SHEET : 2 OF 11	DRH	12/13/19

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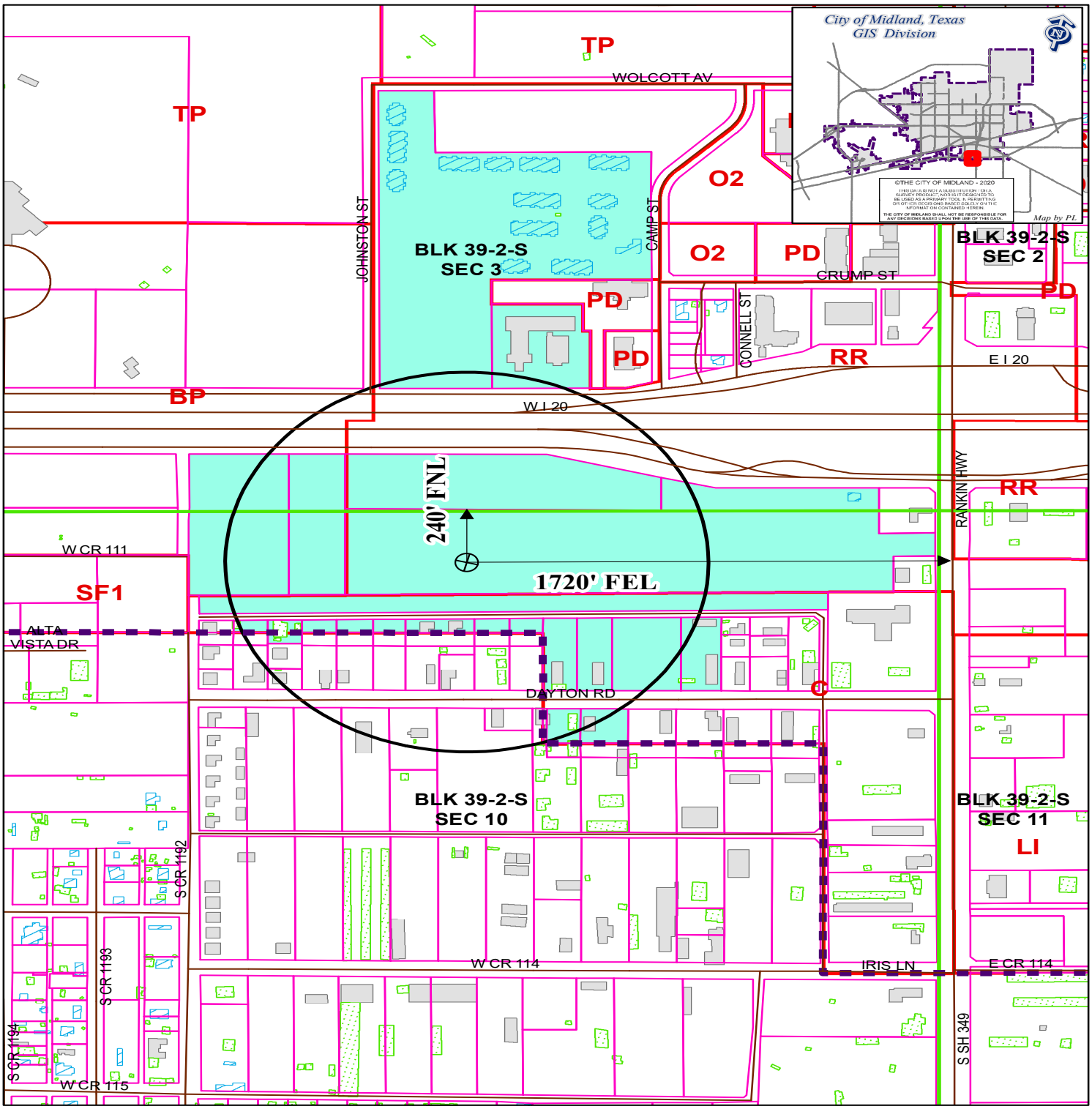
7. C.C.O.R.M.C.T. = C. C. OFFICIAL RECORDS MIDLAND COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.8

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022669 - 2020 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 240' FNL and 1,720' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,720 feet west of Rankin Highway and 620 feet north of Dayton Road.

Charger #H110WB

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. / Rep. Fax
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	Rep. Tele. 432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is**

Current Tax Roll from Midland Central Appraisal District)**, which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/p lat/satellite/aerial photo)*** **depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Charger #H115WA- Original approved city permit (Charger A H115WA)will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 240' FNL & 2050' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K (if applicable) **is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M: **No city roads will be used**

ATTACHED AS EXHIBIT N **is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** ***Letter of Credit/Certificate of Deposit*** **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **: Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith F. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

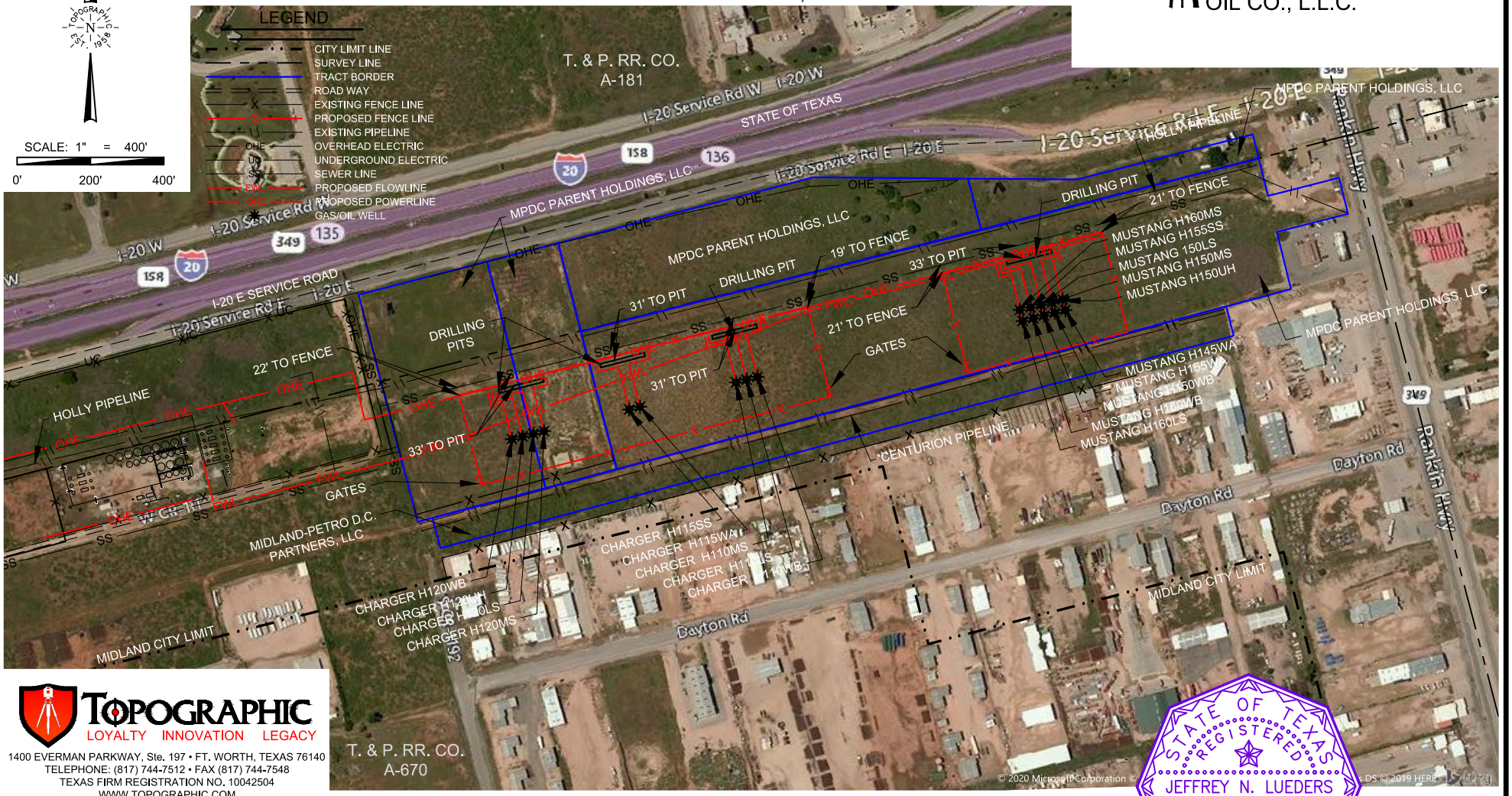
CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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CHARGER UNIT CITY PERMIT	REVISION:	
	GJU	04/09/18
	JRH	11/16/18
	MJM	11/26/18
DATE: 03/28/2018	JRH	11/07/19
FILE: SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8	DRH	11/13/19
DRAWN BY: GJU	DRH	11/14/19
SHEET : 2 OF 11	DRH	12/13/19

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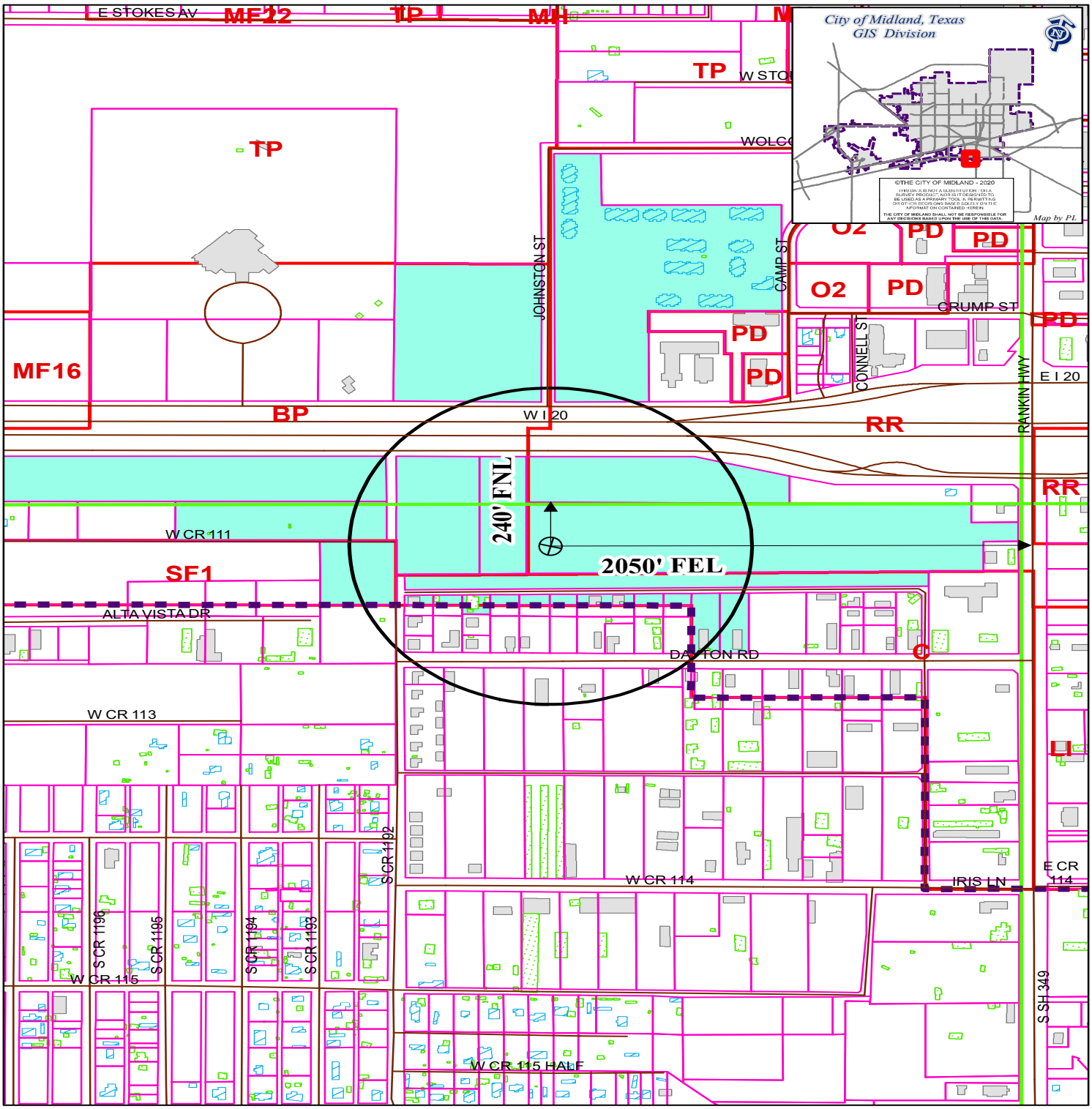
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.14

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022668 - 2020 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 240' FNL and 2,050' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 2,050 feet west of Rankin Highway and 620 feet north of Dayton Road.

Charger #H115WA

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- UC — UNDERGROUND CABLE
- UTILITIES
- SS — EXISTING SAN SEWER LINE
- STRUCTURES

SECTION 10, T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **CHARGER H115WA**
135' FNWL & 2052' FNEL (SECTION 10)

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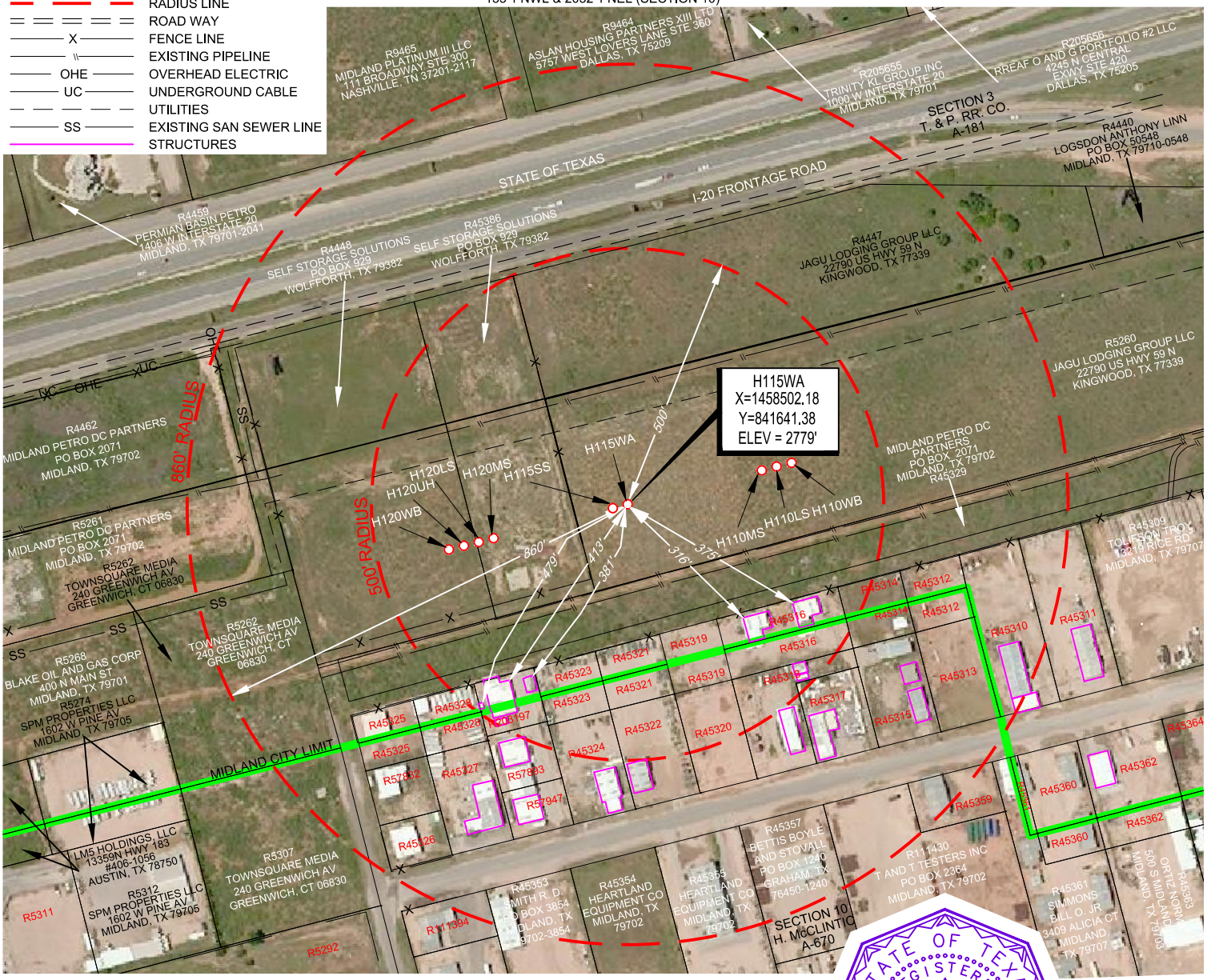

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Jeffrey N. Lueders, R.P.L.S. No. 6512
MARCH 29, 2018

CHARGER H115WA	REVISION:	
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FILE: CD_CHARGER_H115WA_REV7	D.R.H.	11/11/2019
DRAWN BY: A.V.F.	D.R.H.	11/14/2019
SHEET : 1 OF 2	H.P.G	11/23/2019

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MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. / Rep. Fax
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	Rep. Tele. 432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is**

Current Tax Roll from Midland Central Appraisal District), **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/p lat/satellite/aerial photo)*** **depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang #H145WA- Original approved city permit (Mustang A H145WA) will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 270' FNL & 862' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Location Site Plan [See § J(9)].**

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ATTACHED AS EXHIBIT M: **No city roads will be used**

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Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** ***Letter of Credit/Certificate of Deposit*** **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **: Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith E. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

SCALE: 1" = 300'

0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG H145WA**
270' FNWL & 862' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.

N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
MARCH 30, 2018

	REVISION:	
MUSTANG H145WA	A.V.F.	03/28/2018
	A.V.F.	03/30/2018
DATE: 02/20/2018	H.B.	04/5/2018
FILE: CD_MUSTANG_145WA_REV7	H.B.	04/9/2018
DRAWN BY: A.V.F.	D.R.H.	11/11/2019
SHEET : 1 OF 2	D.R.H.	12/10/2019

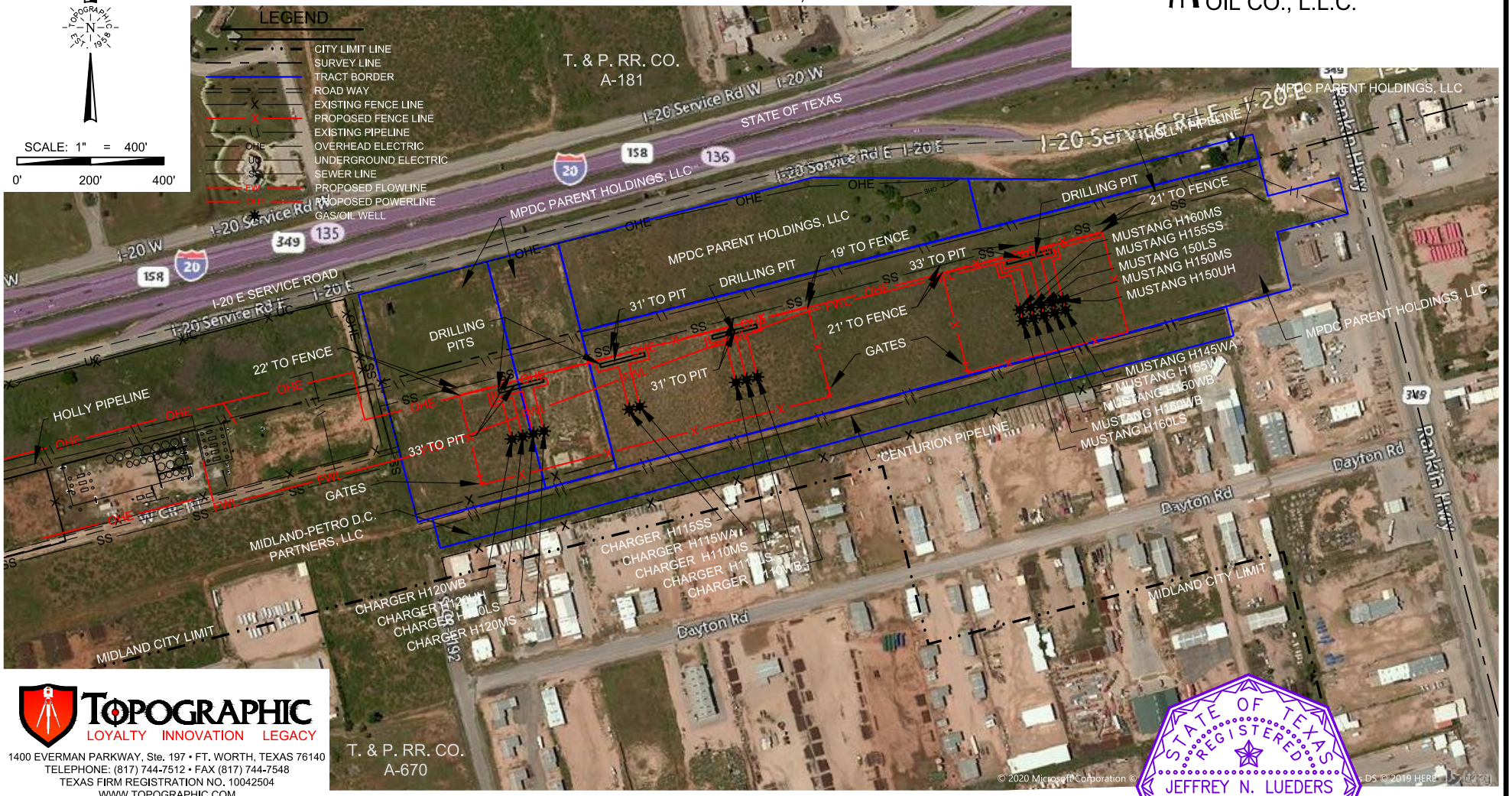
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE
3. SYSTEM OF 1927, U.S. SURVEY FEET.
4. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
5. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
6. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD27\CD_MUSTANG_145WA_REV7.DWG 12/12/2019 12:56:25 PM dharris

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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CHARGER UNIT CITY PERMIT	REVISION:	
	GJU	04/09/18
	JRH	11/16/18
	MJM	11/26/18
DATE: 03/28/2018	JRH	11/07/19
FILE: SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8	DRH	11/13/19
DRAWN BY: GJU	DRH	11/14/19
SHEET : 2 OF 11	DRH	12/13/19

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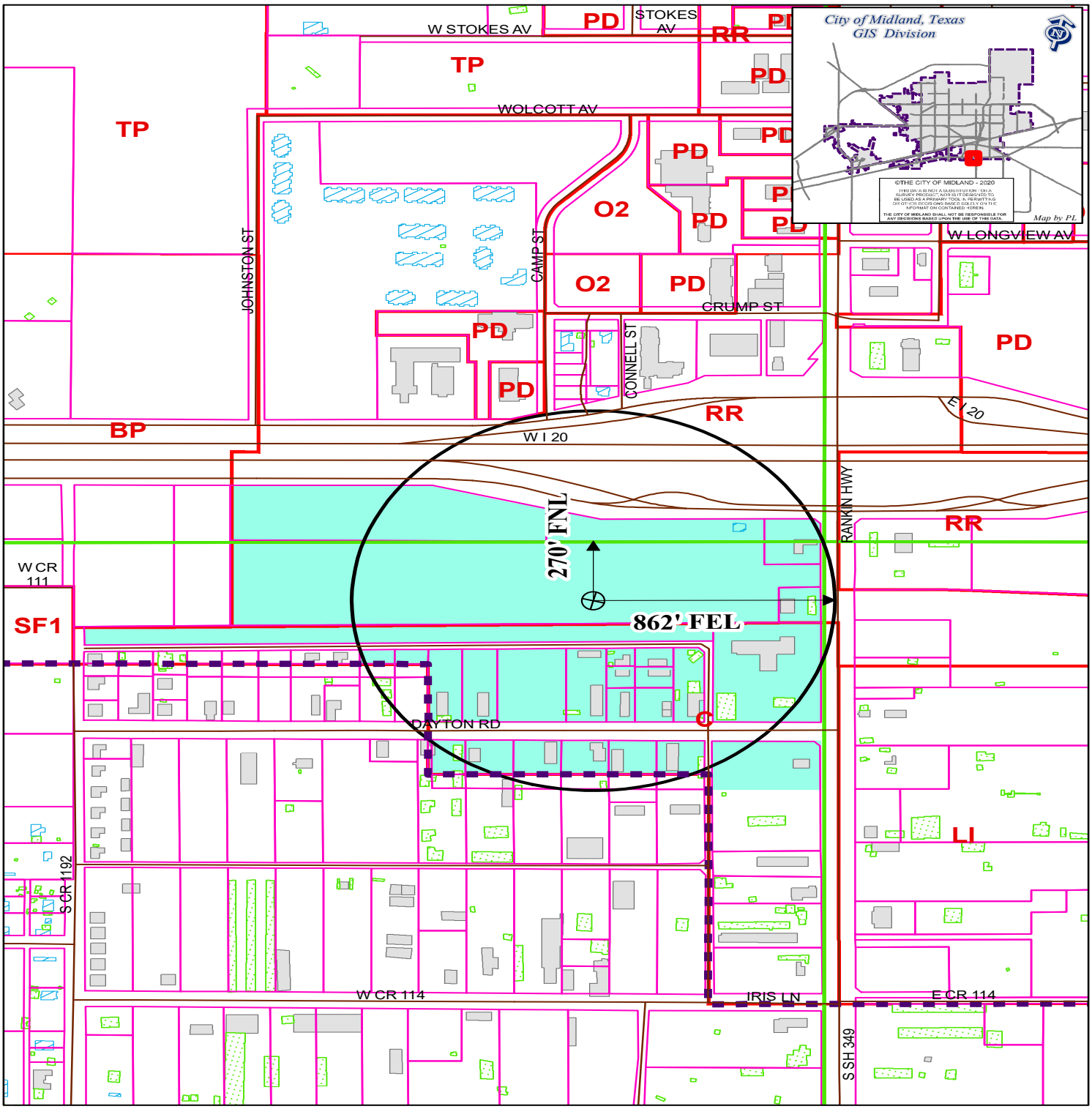
7. C.C.O.R.M.C.T. = C. C. OFFICIAL RECORDS MIDLAND COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.22

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022666 - 2020 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 270' FNL and 862' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 862 feet west of Rankin Highway and 590 feet north of Dayton Road.

Mustang #H145WA

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,
Current Tax Roll from Midland Central Appraisal District)**, which lists**
the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

ATTACHED AS EXHIBIT E **is a** ***(map/p lat/satellite/aerial photo)*** **depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang #H150WB- Original approved city permit (Mustang A H150WB) will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 270' FNL & 922' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K (if applicable) **is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M: **No city roads will be used**

ATTACHED AS EXHIBIT N **is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

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Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

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[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

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Notary Public, State of Texas

CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[SEAL]

SCALE: 1" = 300'

0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG H150WB**
270' FNWL & 922' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.

H150WB
X=1459603.47
Y=841889.77
ELEV = 2778'
860'
500'
500' RADIUS
360' RADIUS
T. & P. RR. CO. A-181
T. & P. RR. CO. A-670
T. & P. RR. CO. A-63
I-20 FRONTAGE RD. W
I-20 FRONTAGE RD. E
STATE OF TEXAS
R28725 C D P ENTERPRISES 4813 N BENTWOOD DR SAN ANGELO, TX 76904-4814
R9470 PREAF O AND G PORTFOLIO #3, LLC 1909 WOODALL RODGERS FWY STE 300 DALLAS, TX 75201
R9464 ASLAN HOUSING PARTNERS XIII LTD 5757 WEST LOVERS LANE STE 360 DALLAS TX 75209
R205655 TRINITY KL GROUP INC 1000 W INTERSTATE 20 MIDLAND, TX 79701
R4440 MPDC PARENT HOLDINGS, LLC 500 W. WALL ST. STE 300 MIDLAND, TX 79701
R4485 MPDC PARENT HOLDINGS, LLC 500 W. WALL ST. STE 300 MIDLAND, TX 79701
R4447 MPDC PARENT HOLDINGS, LLC 500 W. WALL ST. STE 300 MIDLAND, TX 79701
R5260 MPDC PARENT HOLDINGS, LLC 500 W. WALL ST. STE 300 MIDLAND, TX 79701
R45385 STRIPES, LLC 5020 PARK LN STE 200 DALLAS, TX 75231
R45302 KLAUSS E THOMAS BRISTOL CT MIDLAND, TX 79705-8203
STEPHEN WILLIAMS 2513 FANNIN AVE MIDLAND, TX 79706
R216087 WHITSON REALTY LP P.O. BOX 4190 MIDLAND, TX 79704
R5390 WHITSON REALTY, LP P.O. BOX 4190 MIDLAND, TX 79704
R45300 MRYLAND LLC 6 DESTA DRIVE, STE 3600 MIDLAND, TX 79705
MIDLAND PIPE & EQUIPMENT INC P.O. BOX 4190 MIDLAND, TX 79704
MIDLAND PETRO DC PARTNERS PO BOX 2071 MIDLAND, TX 79702 R45329
WATTS TOMMY P O BOX 2364 MIDLAND TX 79702-2364 R45310
WATTS TOMMY P O BOX 2364 MIDLAND TX 79702-2364 R45312
SINGH TUL SI DR 31 SADDLE CLUB DR MIDLAND TX 79705-1835 R45314
R45309 TOLIFSON TROY 3219 RICE RD MIDLAND TX 79707
R45308 TOLIFSON TROY 3219 RICE RD MIDLAND TX 79707
R45311 PERMIAN DIRT WORKS, LLC PO BOX 5890 MIDLAND, TX 79704
R45307 RODNEY WOODARD 2508 ELMHURST LN MIDLAND, TX 79705
R45303 MARADY X INC 3 HIALEAH DR MIDLAND, TX 79705
R45304 THORSAND INC P O BOX 12596 ODESSA TX 79768 R45306
R45305 PENWELL COMPANY LLC 330 N A ST BLDG 2 STE 215 MIDLAND TX 79705-5408
R45366 UNION ROYALTY INC 1110 DAVIS RD MIDLAND TX 79706
R45368 JEFFCOAT LEON P O BOX 9758 MIDLAND TX 79708-9758
R45330 WESTERN PETROLEUM P O BOX 54446 LEXINGTON KY 40555
STAFFORD W DENNIS 1408 E COUNTY RD 120 MIDLAND, TX 79706 R45301
R45371 ZUBIA MAURO P O BOX 10845 MIDLAND TX 79702
R45331 ENVIRONMENTAL EVOLUTION SERV LLC P O BOX 1226 ROBSTOWN TX 78380
R45332
R45372 CLARK CHASTEN
R45373 HEMPHILL LEON
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EXHIBIT "G"

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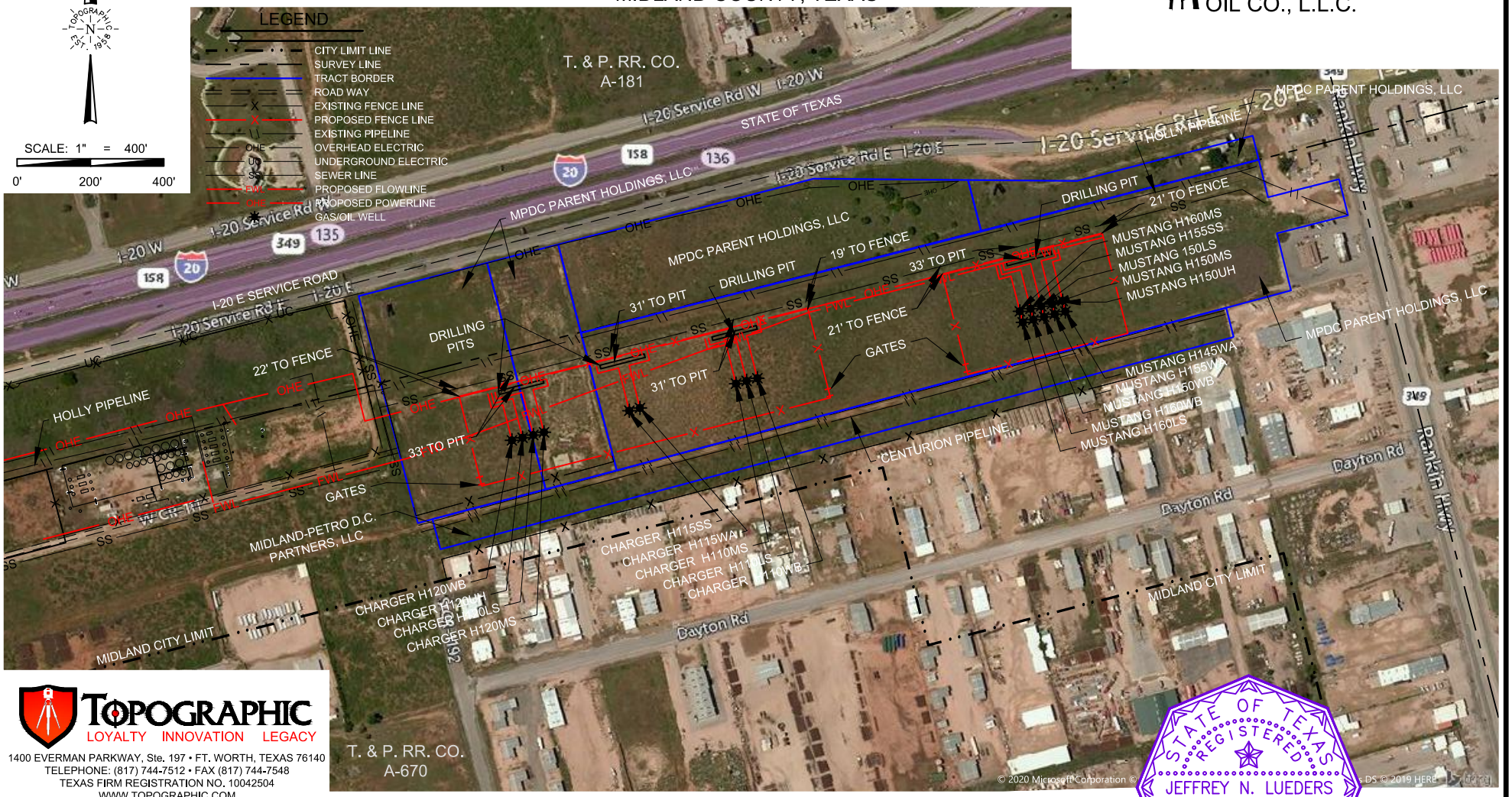

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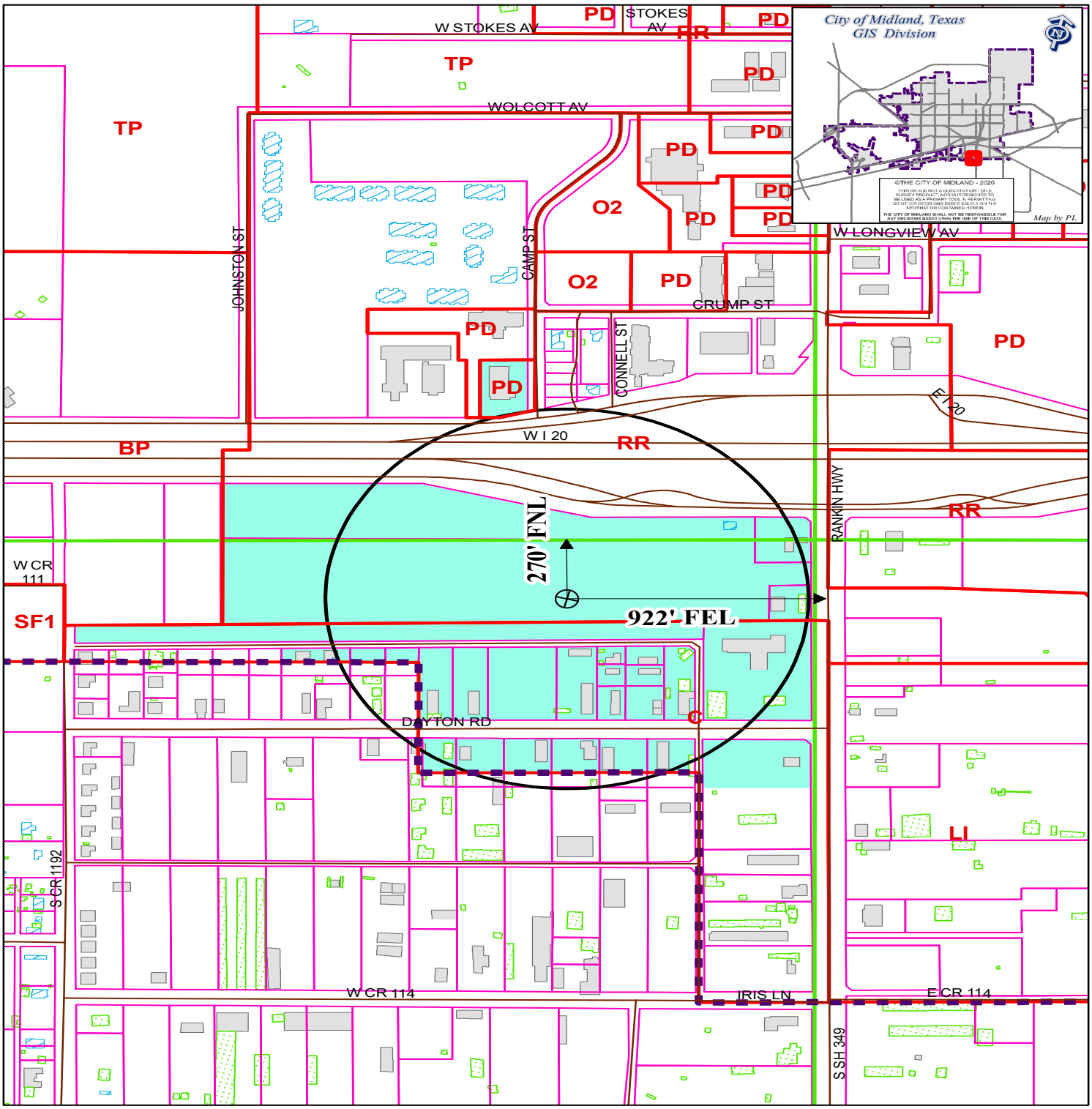
STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.29

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022665 - 2020 **Scale: 1" = 500'**

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Generally located 922 feet west of Rankin Highway and 590 feet north of Dayton Road.

Mustang #H150WB

LEGEND

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MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
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Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

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24/7 Answering Services - No. 1 (Tele.): No. 2 (Tele.):

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Company Compliance Representative (Name, Address, Local Telephone) *(ATTACH STATEMENT AS EXHIBIT A):* See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City *(ATTACH EXHIBIT B* [see § J(26)]). See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C is List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D is ,
Current Tax Roll from Midland Central Appraisal District), which lists
the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

ATTACHED AS EXHIBIT E is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].

ATTACHED AS EXHIBIT F is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].

IV. Well & Operations Information

Proposed Well Name: Mustang #H155WA- Original approved city permit (Mustang A H150LS) will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 270' FNL & 892' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G is the Location Site Plan [See § J(9)].

ATTACHED AS EXHIBIT H is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].

ATTACHED AS EXHIBIT I is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].

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ATTACHED AS EXHIBIT L is the Fencing and Irrigation Plan. [See § J(30)].

ATTACHED AS EXHIBIT M: No city roads will be used

ATTACHED AS EXHIBIT N is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** *Letter of Credit/Certificate of Deposit* **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **: Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

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ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith E. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

SCALE: 1" = 300'

0' 150' 300'

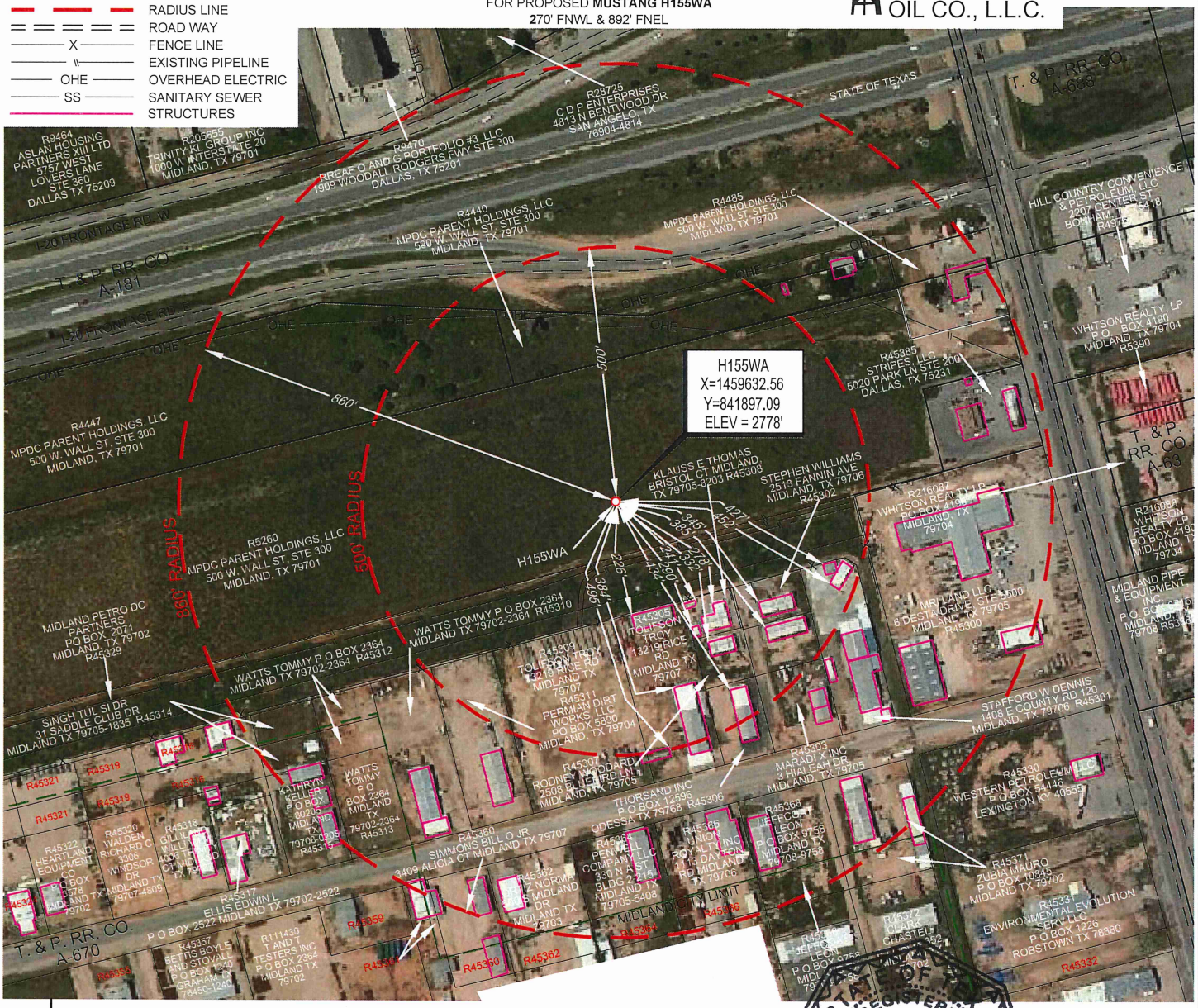
LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG H155WA**
270' FNWL & 892' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
MARCH 30, 2018

MUSTANG H155WA	REVISION:	
	A.V.F.	03/28/2018
	A.V.F.	03/28/2018
DATE: 02/20/2018	A.V.F.	03/30/2018
FILE: CD_MUSTANG_155WA_REV7	H.B.	04/5/2018
DRAWN BY: A.V.F.	H.B.	04/6/2018
SHEET : 1 OF 2	D.R.H.	12/10/2019

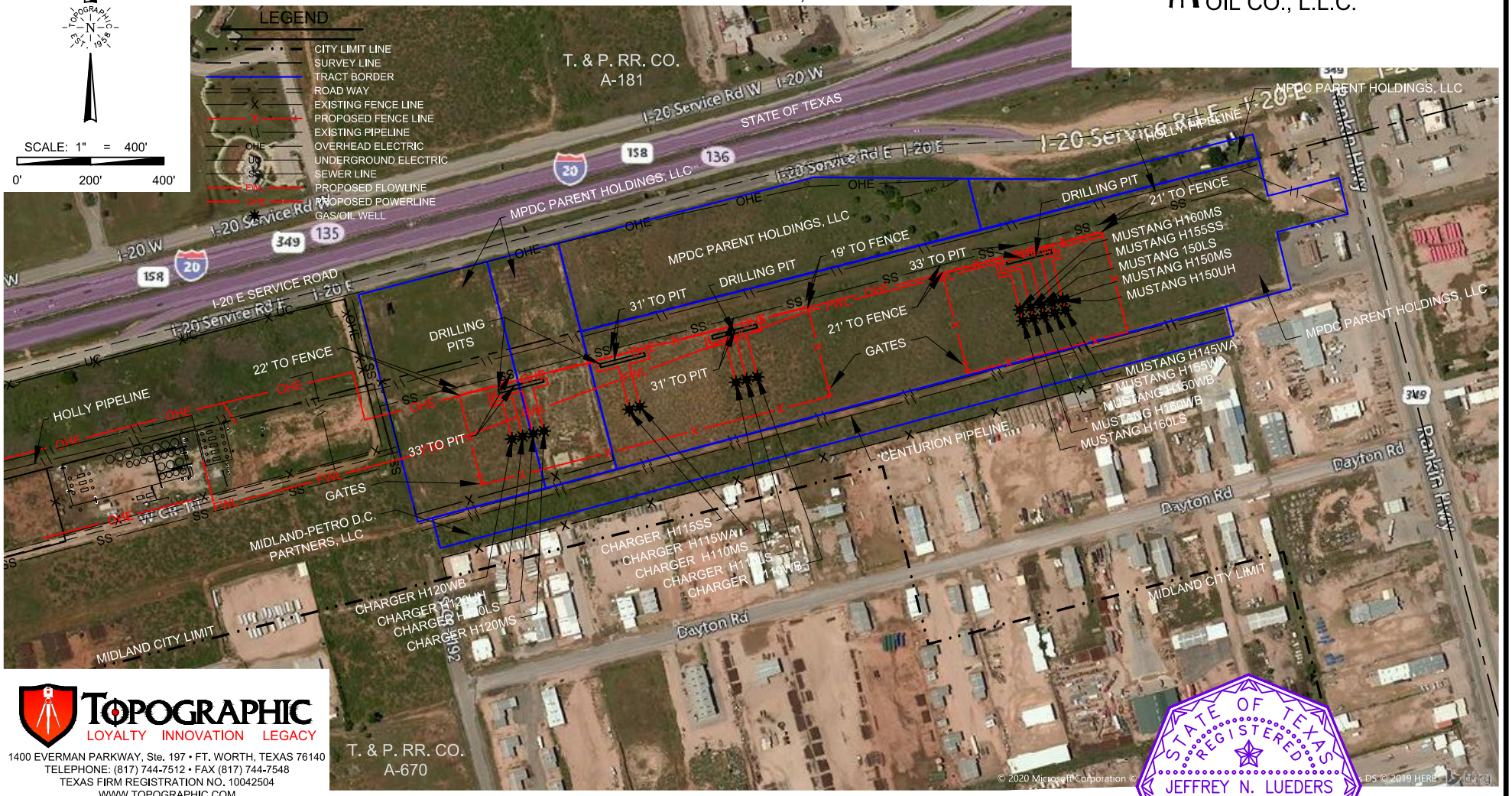
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE
3. SYSTEM OF 1927, U.S. SURVEY FEET.
4. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
5. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
6. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD27\CD_MUSTANG_155WA_REV7.DWG 12/12/2019 12:56:52 PM dharris

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

CHARGER UNIT CITY PERMIT	REVISION:	
	GJU	04/09/18
	JRH	11/16/18
	MJM	11/26/18
DATE: 03/28/2018	JRH	11/07/19
FILE: SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8	DRH	11/13/19
DRAWN BY: GJU	DRH	11/14/19
SHEET : 2 OF 11	DRH	12/13/19

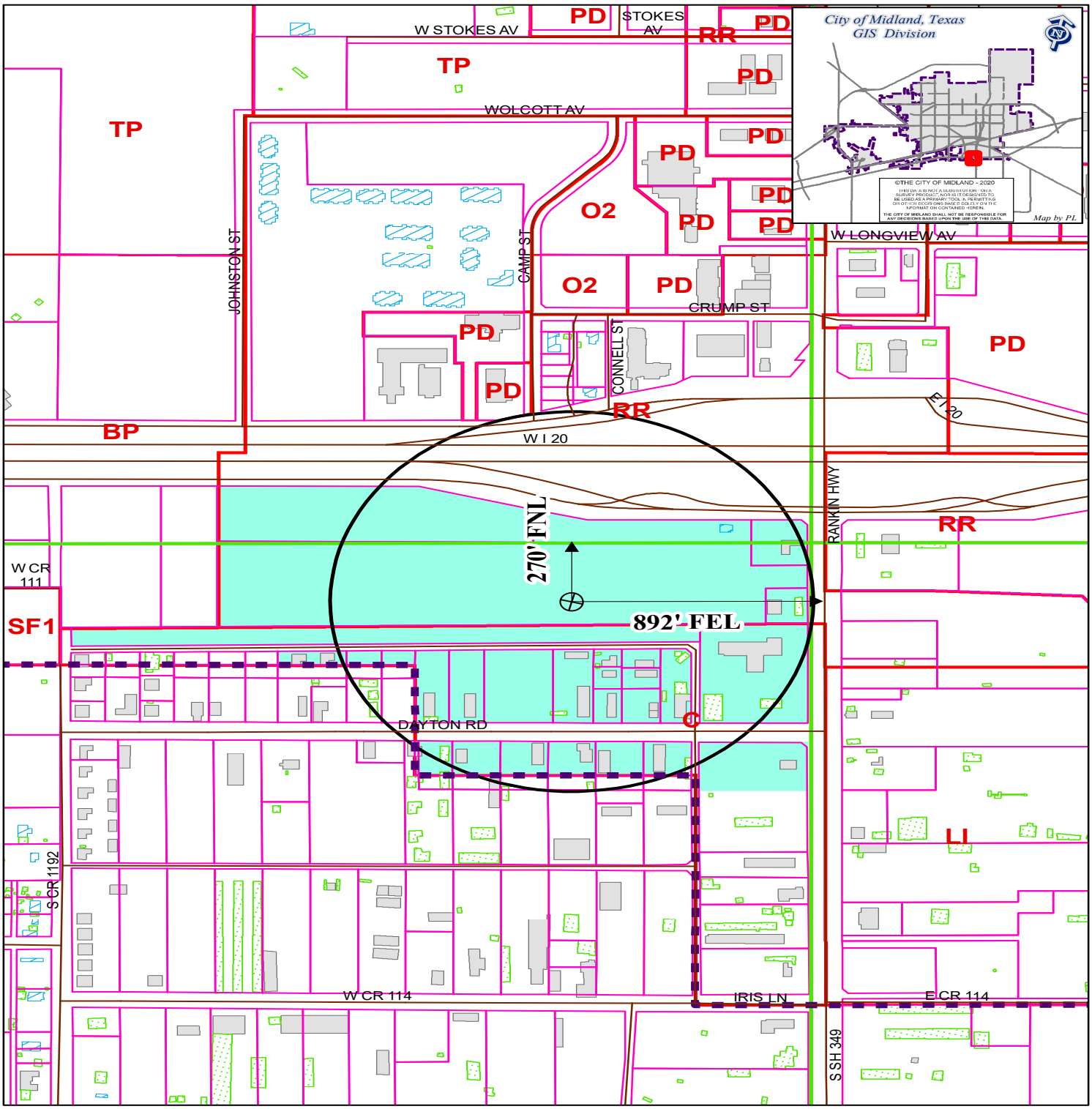
NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
6. D.R.M.C.T. = DEED RECORDS MIDLAND COUNTY, TEXAS
7. C.C.O.R.M.C.T. = C. C. OFFICIAL RECORDS MIDLAND COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
T.B.P.L.S.
LICENSED PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.36

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022664 - 2020 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 270' FNL and 892' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 892 feet west of Rankin Highway and 590 feet north of Dayton Road.

Mustang #H155WA

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

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1.

2.

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See Exhibit "C"

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General Description of Current Surface Use (within 860 feet of proposed surface location):
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See Exhibit "D"

ATTACHED AS EXHIBIT D **is**

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ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang #H160WB- Original approved city permit (Mustang A H160WB will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

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Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

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ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

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Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith E. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

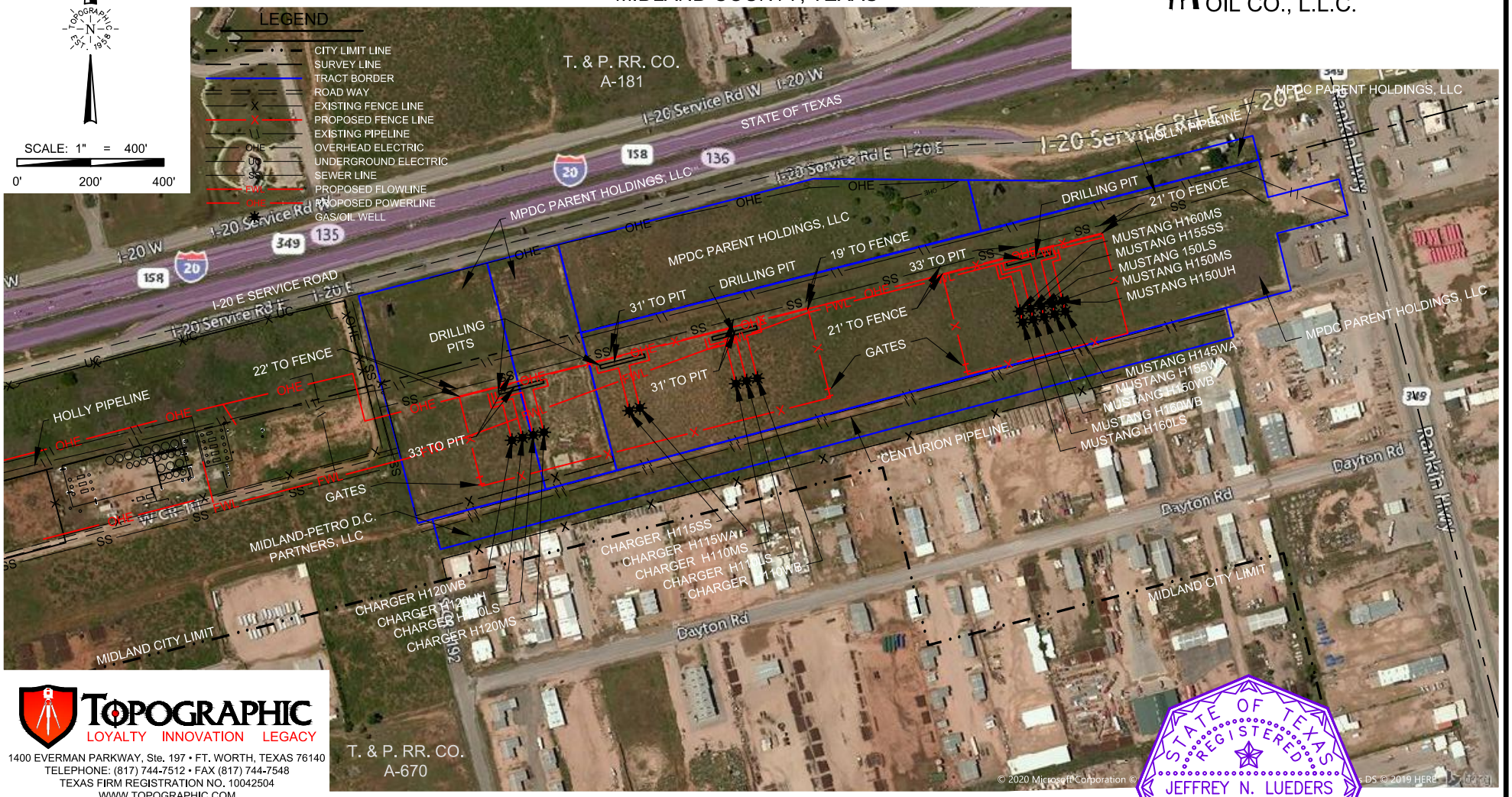
CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

CHARGER UNIT CITY PERMIT	REVISION:	
	GJU	04/09/18
	JRH	11/16/18
	MJM	11/26/18
DATE: 03/28/2018	JRH	11/07/19
FILE: SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8	DRH	11/13/19
DRAWN BY: GJU	DRH	11/14/19
SHEET : 2 OF 11	DRH	12/13/19

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
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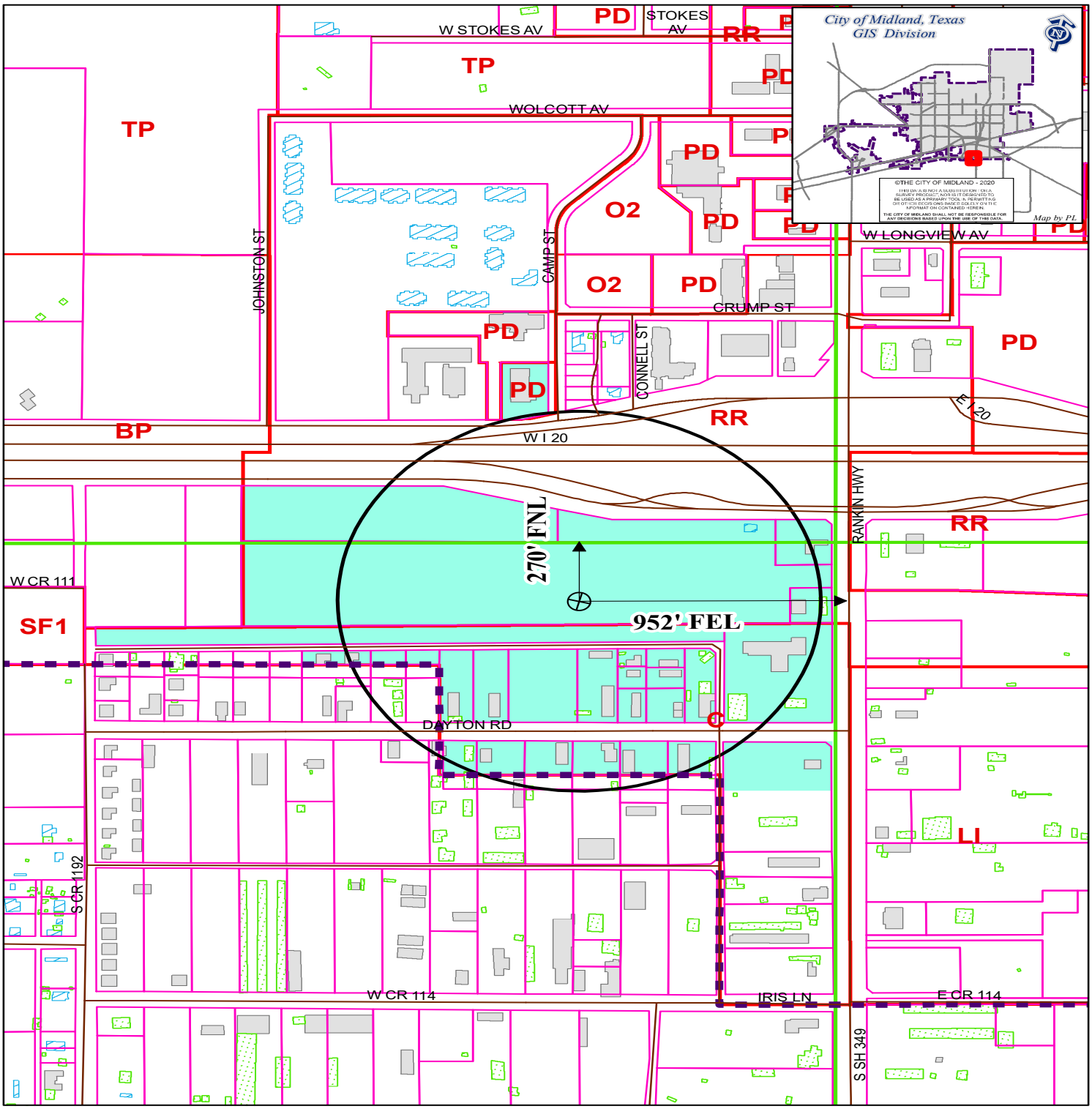
STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

23.42

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV8.DWG 1/13/2020 6:50:45 AM jlueders



LOCATION AND ZONING MAP

Oil - 022663 - 2020 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 270' FNL and 952' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 952 feet west of Rankin Highway and 590 feet north of Dayton Road.

Mustang #H160WB

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- SS — SANITARY SEWER
- STRUCTURES

T. & P. RR. CO. SURVEY, A-670
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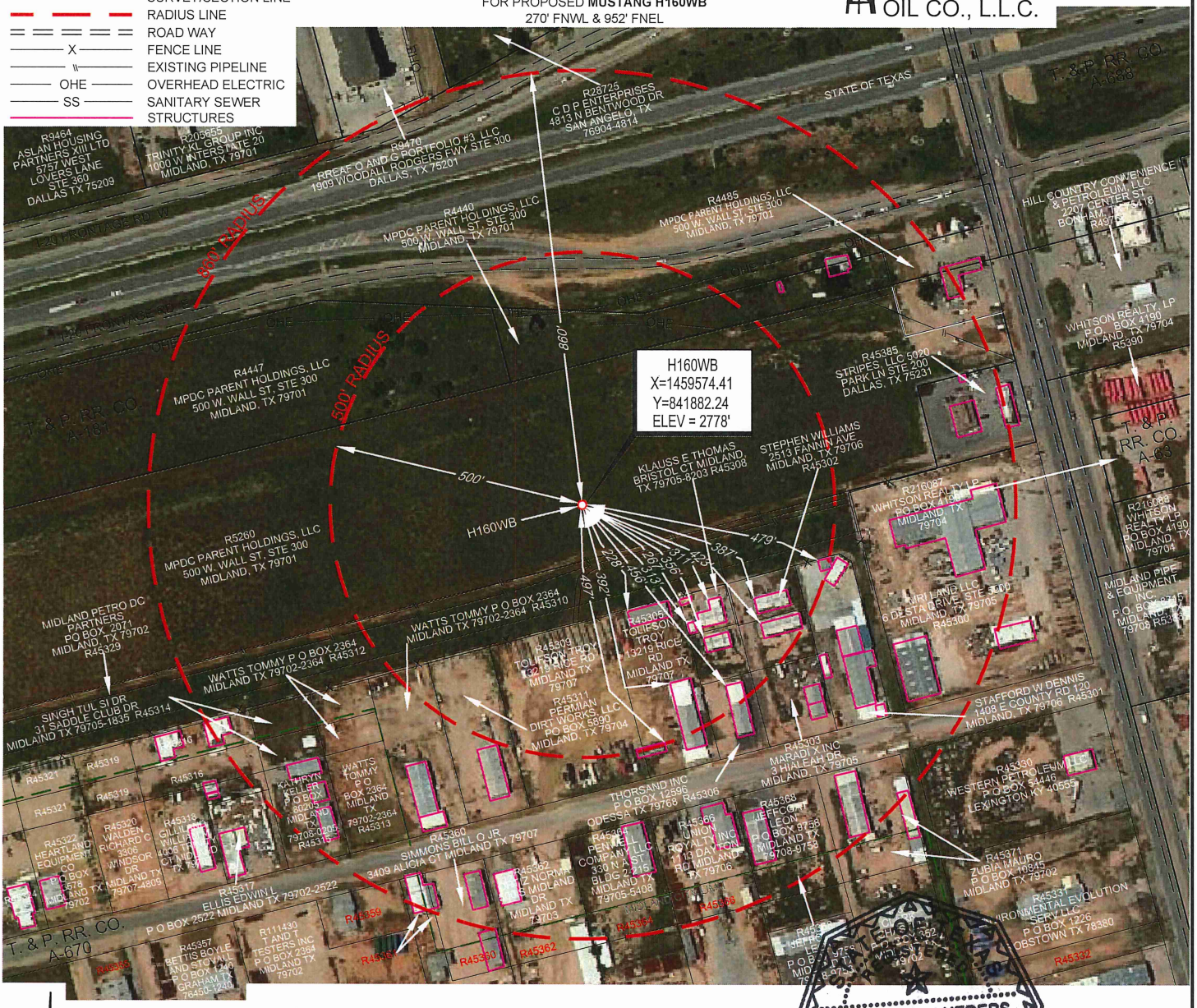
SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG H160WB**
270' FNWL & 952' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.



JEFFREY N. LUEDERS 6512 PROFESSIONAL LAND SURVEYOR

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Jeffery N. Lueders, R.P.L.S. No. 6512
MARCH 30, 2018

MUSTANG H160WB	REVISION:	
	A.V.F.	03/28/2018
	A.V.F.	03/30/2018
DATE: 02/20/2018	H.B.	04/5/2018
FILE: CD_MUSTANG_160WB_REV7	H.B.	04/9/2018
DRAWN BY: A.V.F.	D.R.H.	11/11/2019
SHEET : 1 OF 2	D.R.H.	12/10/2019

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE
3. SYSTEM OF 1927, U.S. SURVEY FEET.
4. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
5. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
6. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD27\CD_MUSTANG_160WB_REV7.DWG 12/12/2019 12:55:55 PM dharris

City Council Agenda

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL/CITY MANAGER**

FROM: **Ron Jenkins, Oil & Gas Coordinator**

SUBJECT: Hold a public hearing regarding the proposed granting of an oil and gas well permit to Permian Deep Rock Oil Co., LLC for the drilling of the following oil and gas well: Charger #H125WA; said well being generally located 2,433 feet west of South Garfield Street and 320 feet north of West County Road 111.

Purpose:

Permian Deep Rock Oil Co., LLC, for the drilling of oil gas well, as listed prior. This is an opportunity for the Council to receive public comment. Council may consider this permit following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action

☐ Approve ☐ Deny ☒ Direction/Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval. This application is for a previously approved permit that has expired. A sound wall will be used during drilling and fracing operations being located on the north side of location being 800 feet long and 16 feet high. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

(1) Permian Deep Rock Oil Company requests variance to residence or commercial structure within 491 feet.
(2) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation since city water is not available.
(3) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.
(5) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location;

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
02/03/2020	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Keith E. Bucy	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped Rangeland, service company yards and apartment complex
Surface ownership: Two residences, apartment complex and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is**

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

ATTACHED AS EXHIBIT E **is a** ***(map/p lat/satellite/aerial photo)*** **depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Charger #H125WA- Original approved city permit (Charger A H125WA) will be expiring

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 108' FSL & 2370' FWL, Section 3
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K (if applicable) **is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M: **No city roads will be used**

ATTACHED AS EXHIBIT N **is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** ***Letter of Credit/Certificate of Deposit*** **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **: Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Attached as Exhibit V: Applicants variances

Permian Deep Rock Oil Company LLC
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Keith E. Bucy, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

_____
Notary Public, State of Texas

CHRISTOPHER HALL
Notary Public, State of Texas
Comm. Expires 08-11-2023
Notary ID 128701314

[S E A L]

SCALE: 1" = 300'

0' 150' 300'

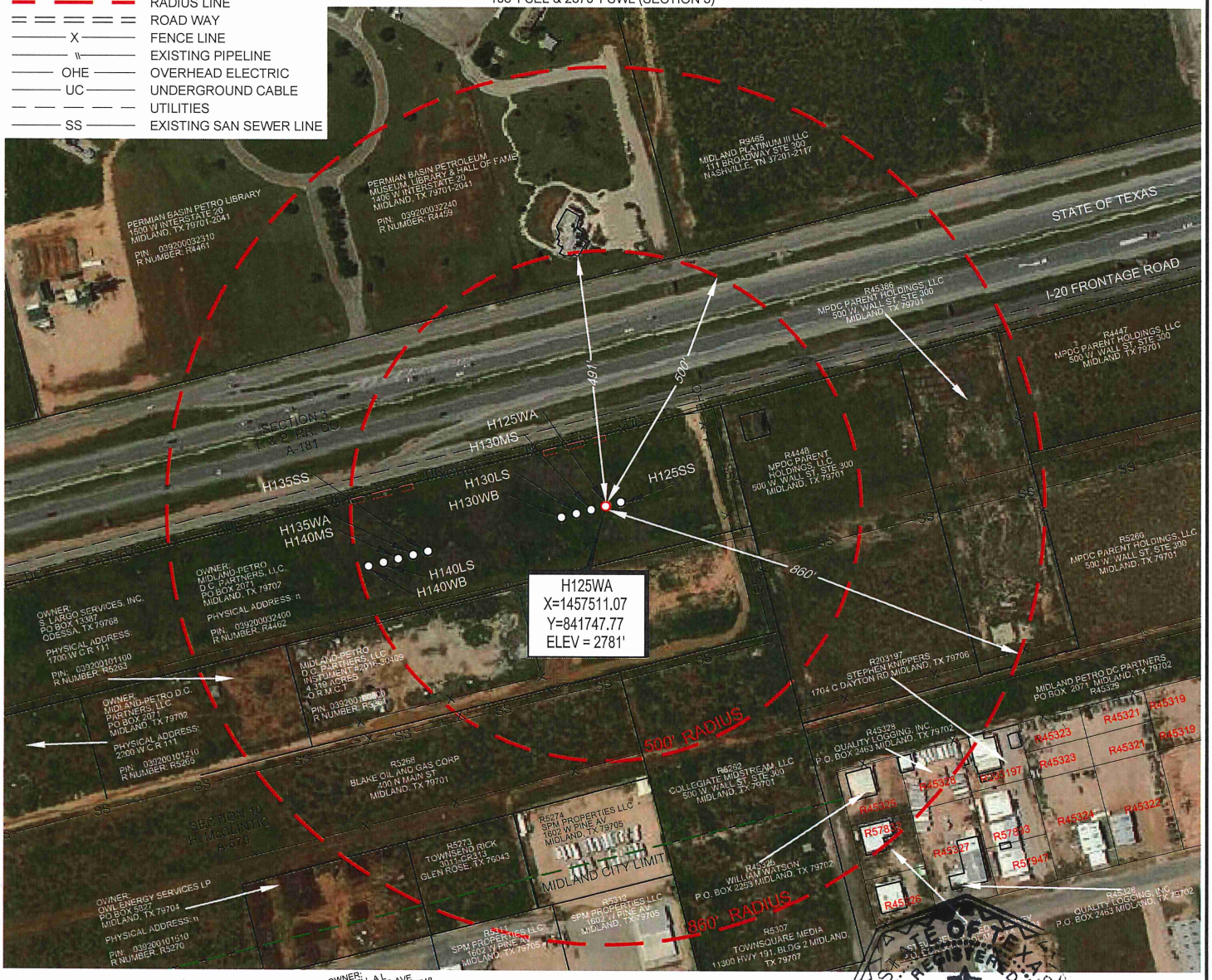
LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- UC UNDERGROUND CABLE
- UTILITIES
- SS EXISTING SAN SEWER LINE

SECTION 3, T. & P. RR. CO. SURVEY, A-181
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **CHARGER H125WA**
108' FSEL & 2370' FSWL (SECTION 3)

PERMIAN DEEP ROCK OIL CO., L.L.C.



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TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: MAY 24, 2018

CHARGER H125WA	REVISION:	
	INT	DATE
	DRH	11/11/2019
DATE: 07/03/2018	DRH	12/10/2019
FILE: CD_CHARGER_H125WA_REV2		
DRAWN BY: J.R.H.		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
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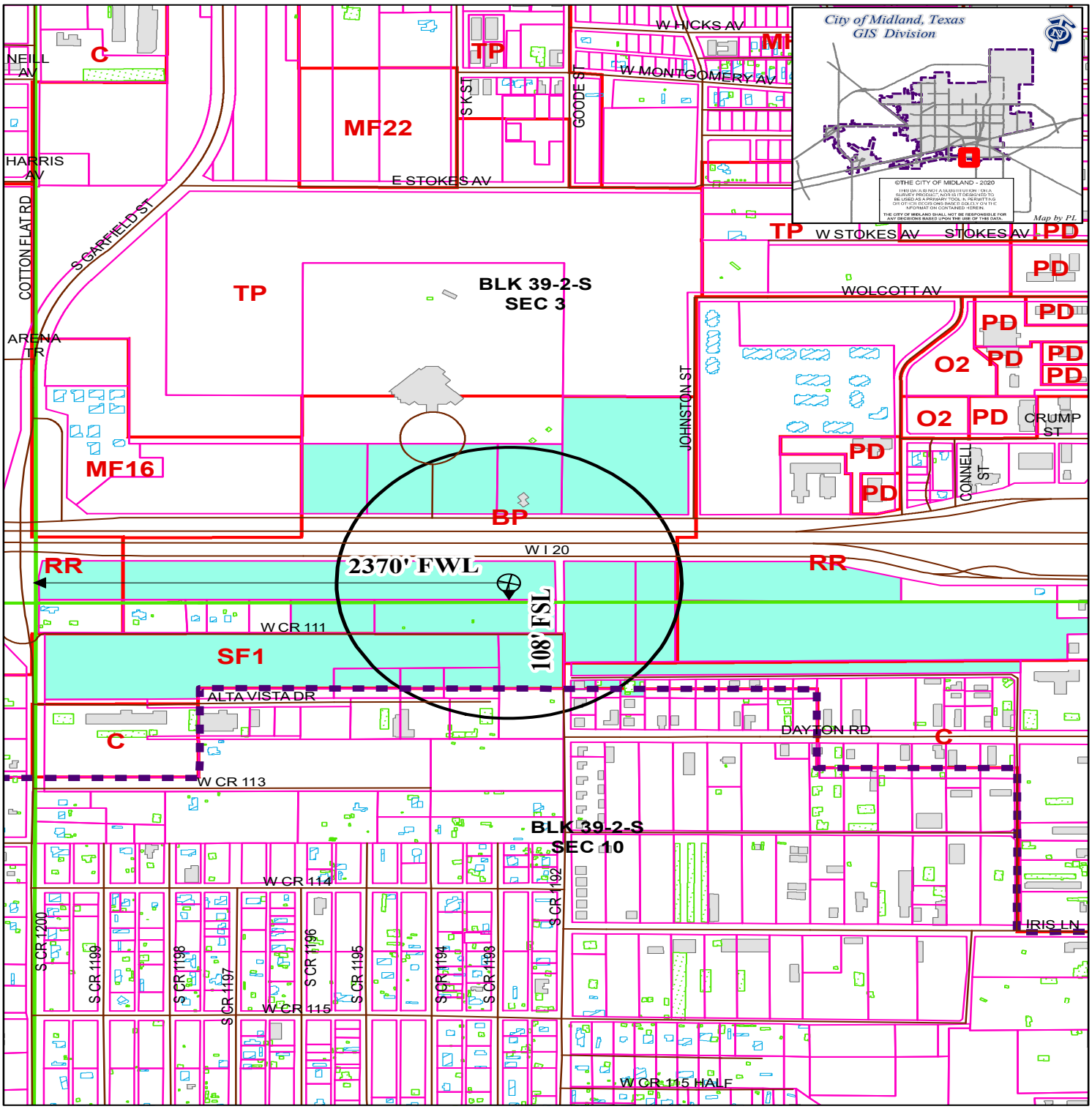
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

S:\SURVEY\ARRINGTON\CHARGER_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD_27\CD_CHARGER_H125WA_REV2.DWG 12/12/2019 1:01:49 PM dharris



LOCATION AND ZONING MAP

Oil - 022667 - 2020 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 108' FSL and 2,370' FWL, Section 3, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 2,433 feet west of South Garfield Street and 320 feet north of West County Road 111.

Charger #H125WA

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

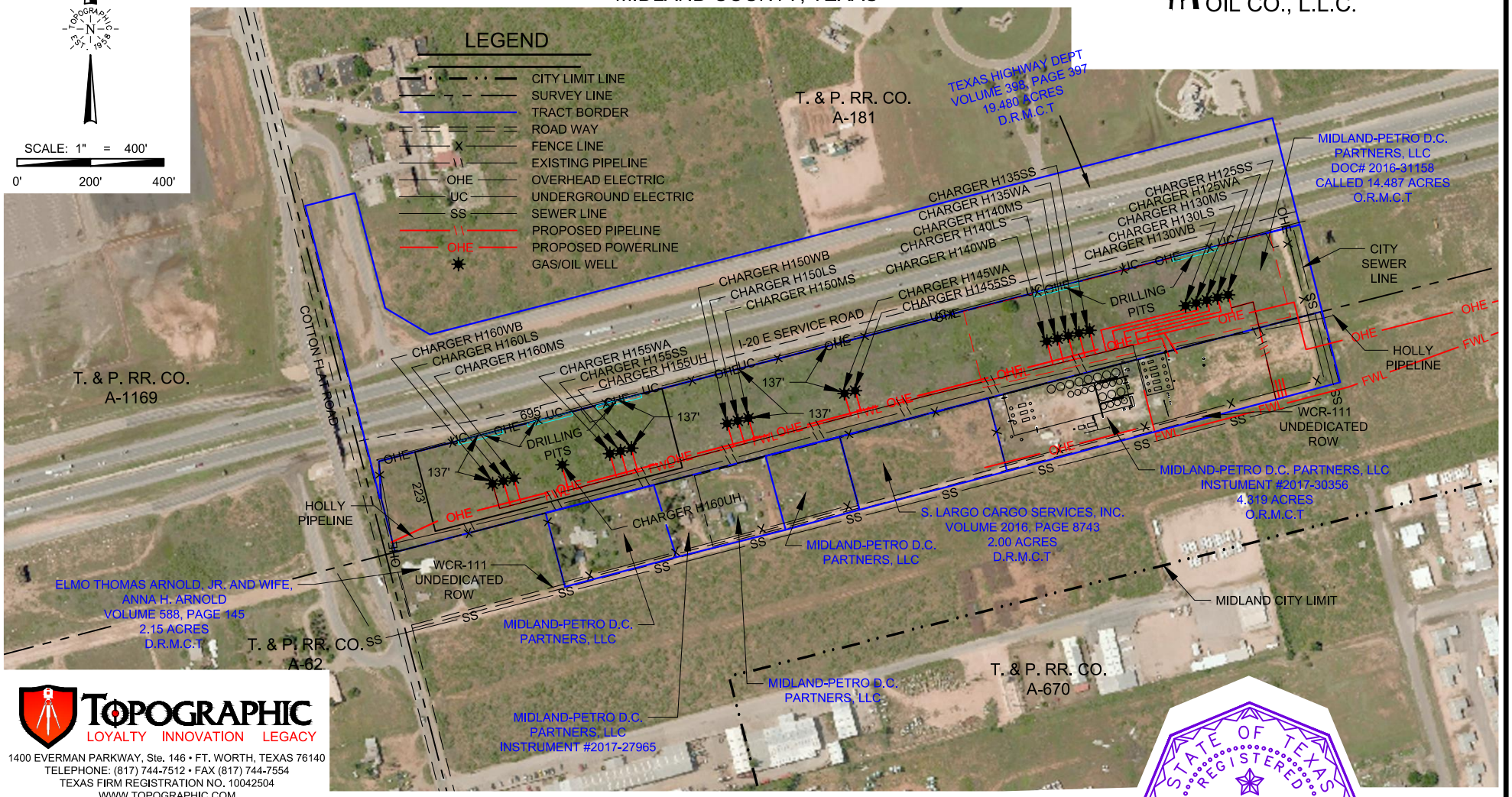
ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

CHARGER UNIT
CITY PERMIT

REVISION:	
JNL	07/27/17
JNL	08/18/17
MBB	09/19/17
AMD	06/22/18
JRH	07/18/18
JRH	05/24/19
JRH	11/07/19

DATE: 07/05/2017
FILE: SK_CHARGER_UNIT_CL_PERMIT_REV20
DRAWN BY: CAR
SHEET : 2 OF 11

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
6. D.R.M.C.T. = DEED RECORDS MIDLAND COUNTY, TEXAS
7. C.C.O.R.M.C.T. = C. C. OFFICIAL RECORDS MIDLAND COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: OCTOBER 7, 2016

24.9

S:\SURVEY\ARRINGTON\CHARGER_UNIT\FINAL_PRODUCTS\SKETCH\SK_CHARGER_UNIT_CL_PERMIT_REV20.DWG 1/16/2020 7:41:01 AM jlueders

City Council Agenda

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL/CITY MANAGER**

FROM: **Ron Jenkins, Oil & Gas Coordinator**

SUBJECT: Hold a public hearing regarding the proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. for the drilling of the following oil and gas wells: Bankhead 4-33 Unit 2A #253; Bankhead 4-33 Unit 2A #261; Bankhead 4-33 Unit 2A #271; Bankhead 4-33 Unit 2A #272; and Bankhead 4-33 Unit 2A #281; said wells being generally located between 590 feet and 591 feet north of West I-20 and between 1,179 feet and 1,279 feet east of South Midkiff Road.

Purpose:

Endeavor Energy Resources, L.P., for the drilling of oil gas wells, as listed prior. These wells sharing pad site areas. This is an opportunity for the Council to receive public comment. Council may consider this permit following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action

☐ Approve ☐ Deny ☒ Direction/Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed these well sites in detail and recommends approval. A sound study has been completed and a 260' long and 24' high sound wall will be used during completions operation. Endeavor has a has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Endeavor Energy Resources is requesting the following variances:

1. Requesting a variance to have a perimeter fence around the well pad instead of individual wellheads.
2. Requesting a variance to the hours of operation for fracture stimulations and to allow for frac operations to occur during a 24-hour period.
3. Requesting a variance to a larger reserve pit being 307 ft. X 281 ft. for the drilling of five wells on the pad and have cuttings transported off site and processed in accordance with Railroad Commission regulations.
4. Requesting a variance to the landscaping would impede future commercial development for the surface owner.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location;

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
December 19, 2019	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	Rep. Fax (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 ECR 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C –is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application. **[See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Field, Commercial

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].

ATTACHED AS EXHIBIT F is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].

IV. Well & Operations Information

Proposed Well Name: Bankhead 4-33 Unit 2A #253

ATTACHED AS EXHIBIT G is Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:
ATTACHED AS EXHIBIT G is 24 hour Fracing Operations Variance

Legal Description of Proposed Well Site:

Surface Hole Location: 1128' FSL 1279' FWL, Section 4, Block 39, T-2-S, T&P RR Co Survey, Midland County, Texas

ATTACHED AS EXHIBIT G is the Plat and Location Site Plan [See § J(9)].

ATTACHED AS EXHIBIT H is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].

ATTACHED AS EXHIBIT I is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].

ATTACHED AS EXHIBIT J is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].

ATTACHED AS EXHIBIT K is the location agreement letter with current Surface Owner. [See § J(27)].

ATTACHED AS EXHIBIT L is the Fencing and Irrigation Plan. [See § J(30)].

ATTACHED AS EXHIBIT M is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].

ATTACHED AS EXHIBIT N is the written Concept Plan and Site Plan. [See § J(32)].

Description of Public Utilities required during (1) drilling and (2) operations:

(1) **Drilling:** Electricity TXU: 1-800-233-2133

(2) **Operations:** Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. Operator also has freshwater wells in the area, and will be utilizing a frac pond located outside of City limits.

Description of all electric lines to production facilities (reference exhibits as necessary)
ATTACHED AS EXHIBIT G. [See § L(10)]

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
ATTACHED AS EXHIBIT O. [See § J(35)]

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P is the ***Blanket Bond and Rider*** in accordance with Subsection (K)(2). [See § J(18)].

ATTACHED AS EXHIBIT Q is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].

ATTACHED AS EXHIBIT R is the required Insurance Certificate. [See § J(19) and § K(3)].

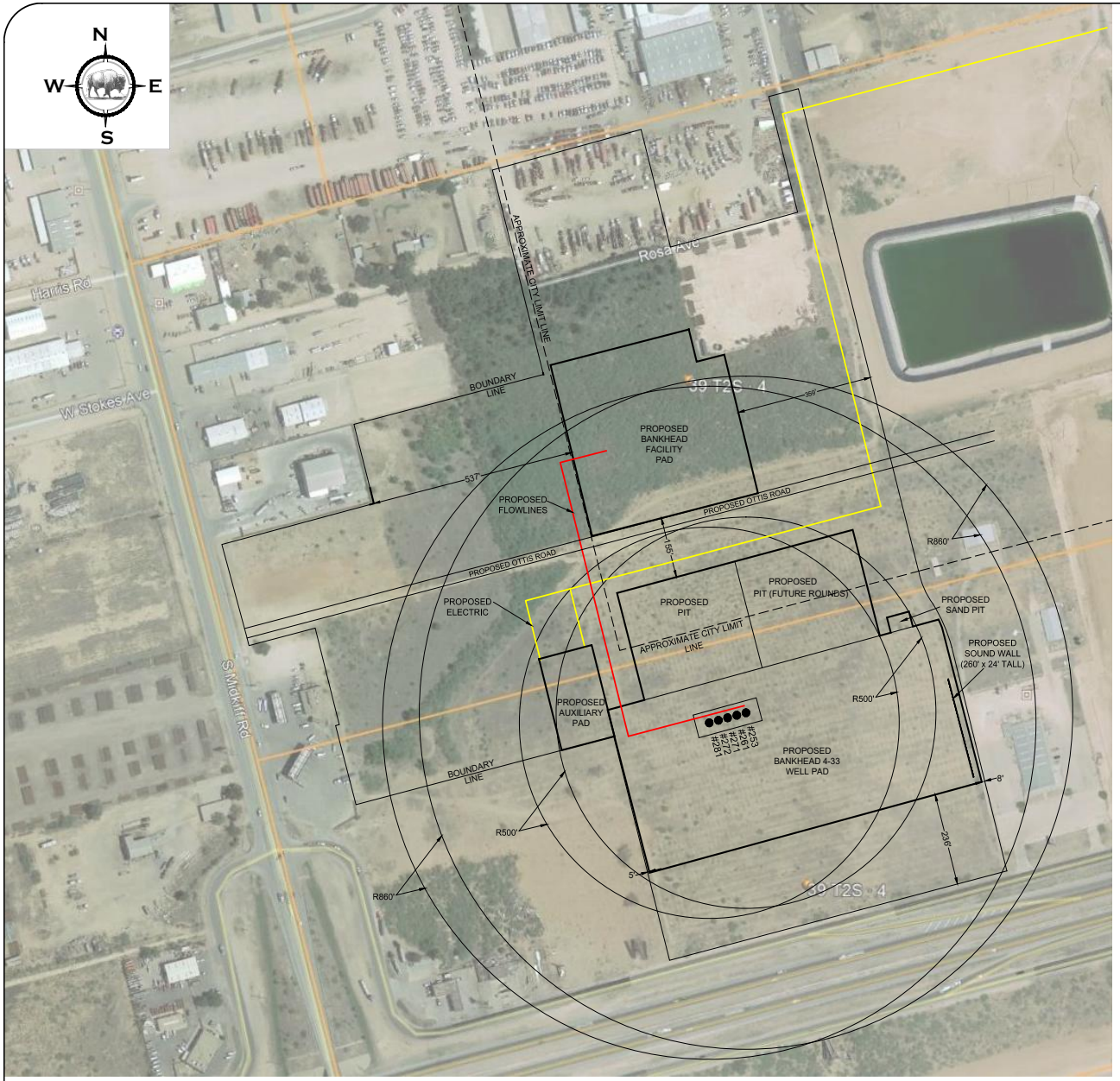
ATTACHED AS EXHIBIT S (if applicable) is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].

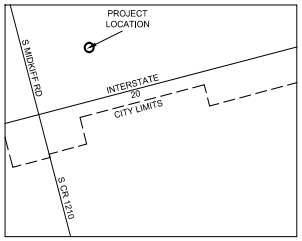
ATTACHED AS EXHIBIT T is Applicant's Emergency Action Response Plan. [See § J(22)].

ATTACHED AS EXHIBIT U is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].

ATTACHED AS EXHIBIT V is Applicant's Summary List of Variances

ATTACHED AS EXHIBIT W is Acoustic Impact Study and Noise Mitigation Plan





VICINITY MAP
NOT TO SCALE

LEGEND

- PROPOSED FLOWLINE
- E PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- W PROPOSED FRESH WATER LINE

SCALE: = 1" = 200'

200 100 0 200 400

GRAPHIC SCALE

OVERALL SITE PLAN

SCALE: 1"=200'

COORDINATES		
BANKHEAD 4-33 #253 (SHL) NORTHING: 10683697.5 EASTING: 1747530.2	COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83	BANKHEAD 4-33 #281 (SHL) NORTHING: 10683671.8 EASTING: 1747433.6
BANKHEAD 4-33 #261 (SHL) NORTHING: 10683691.1 EASTING: 1747506.0		CENTER OF BANKHEAD WELL PAD NORTHING: 10683612.8 EASTING: 1747657.6
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STATE OF TEXAS REGISTERED JAMES P. KEENE 5100 PROFESSIONAL LAND SURVEYOR

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OVERALL SITE PLAN

BANKHEAD
OVERALL SITE PLAN SITUATED IN THE
CITY OF MIDLAND, SECTION 4, BLOCK 39, T-2-S, T & P RR CO.
SURVEY, ABSTRACT NO. 1168, MIDLAND COUNTY, TEXAS.

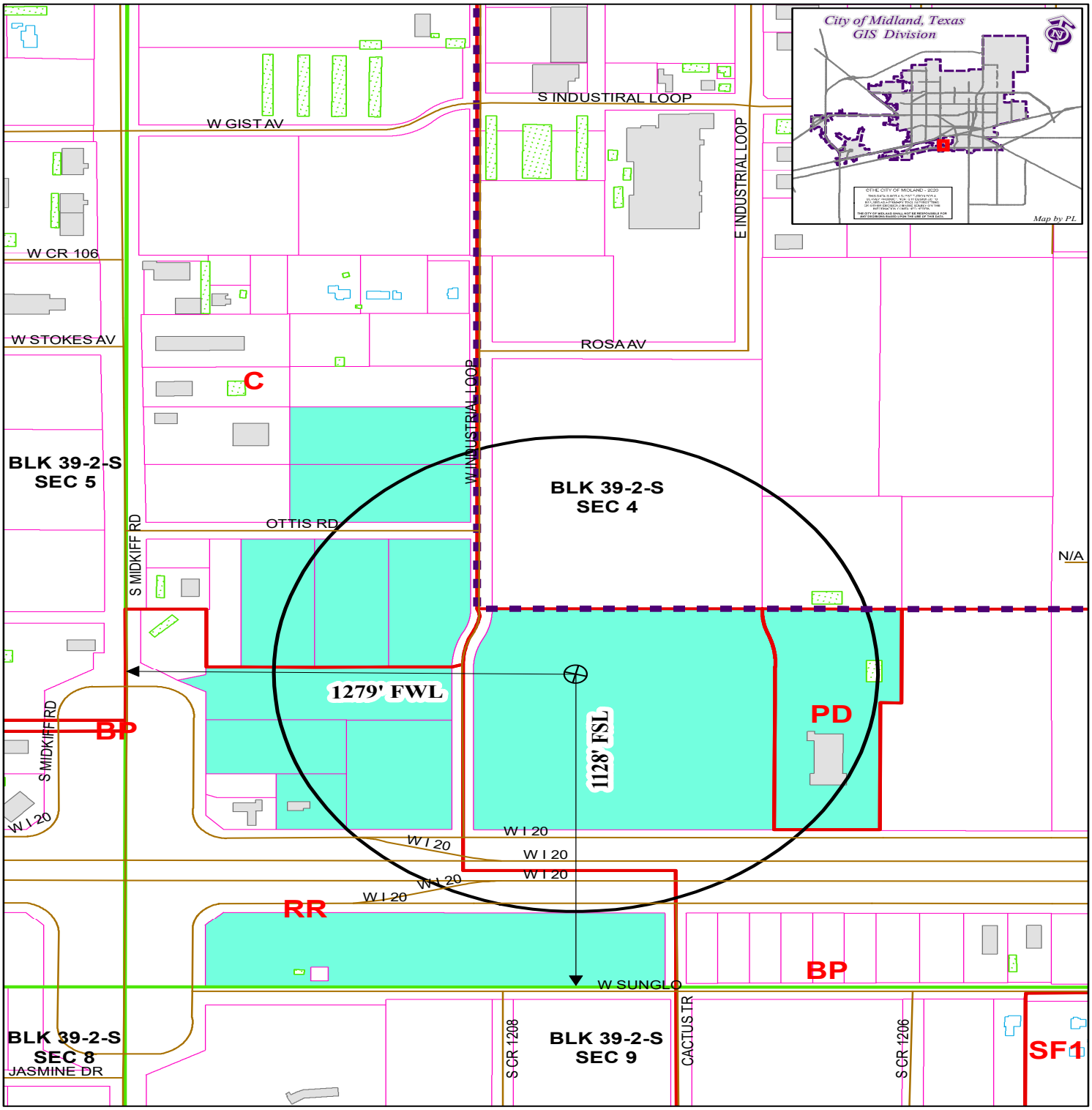
ENDEAVOR ENERGY RESOURCES, L.P.

SCALE: 1" = 200'
DATE: 09/06/19
APPROVED BY: JPK
DRAWN BY: DV
CREW: BAM
PROJECT NO: 16-02490 OVERALL SITE PLAN

SHEET 1 OF 1

BISON CREEK LAND SERVICES, LLC 24443 INTERSTATE 20, BLDG. 9, WILLS POINT, TEXAS 75169 PHONE: 903-873-3600 WWW.BISON-CREEK.COM

Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND COUNTY\MIDLAND CO PROJECTS\BLOCK 39 T2S BANKHEAD\SECTION 4 BLOCK 39 T2S\SITE PLANS\16-02490-BANKHEAD OVERALL SITE PLAN.dwg, 1/7/2020 7:20:07 AM



LOCATION AND ZONING MAP

Oil - 022386 - 2020 **Scale: 1" = 400'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,128' FSL and 1,279' FWL, Section 4, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,128 feet north of West Sunglo Street and 1,279 feet east of South Midkiff Road.

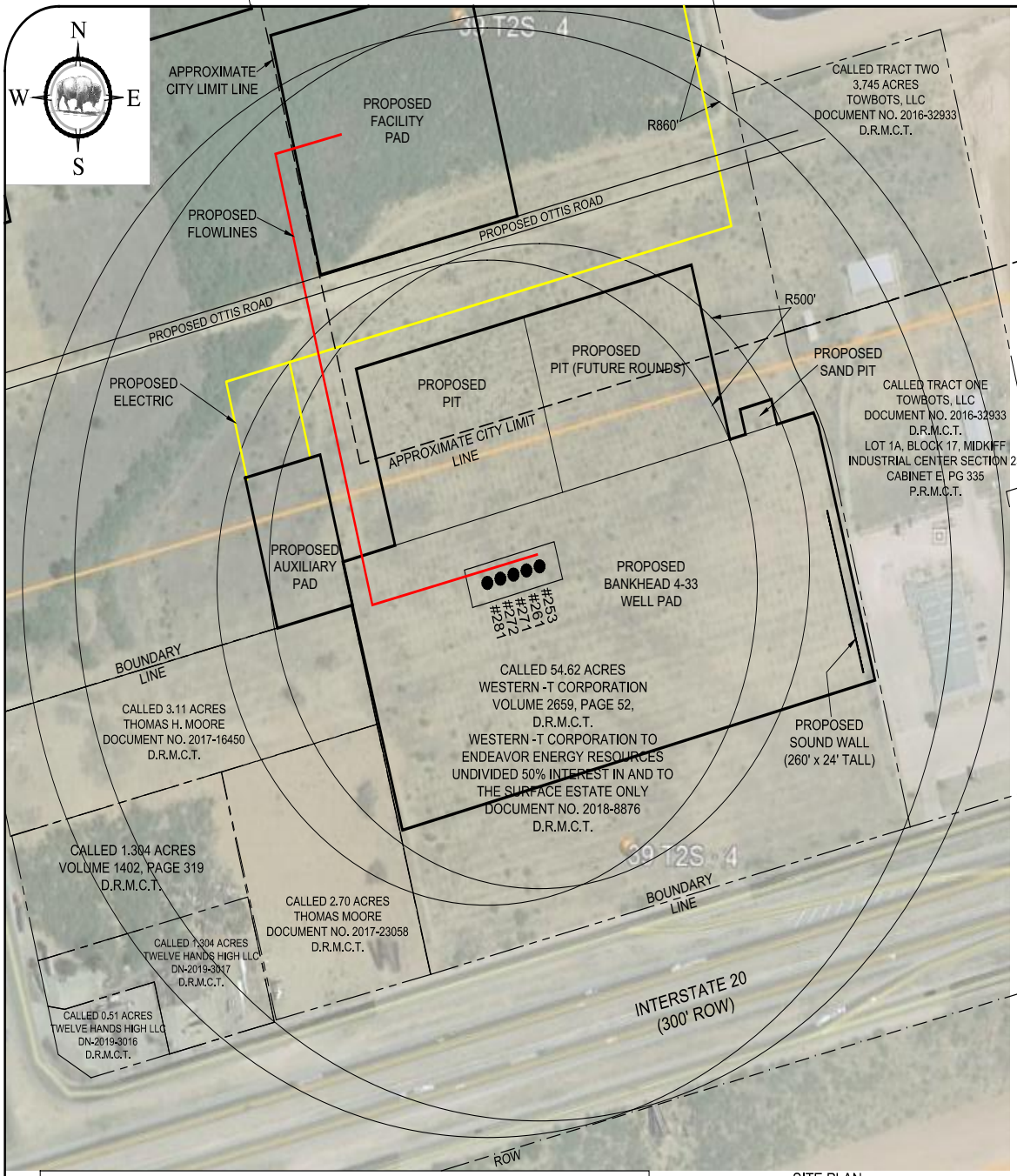
Bankhead 4-33 Unit 2A #253

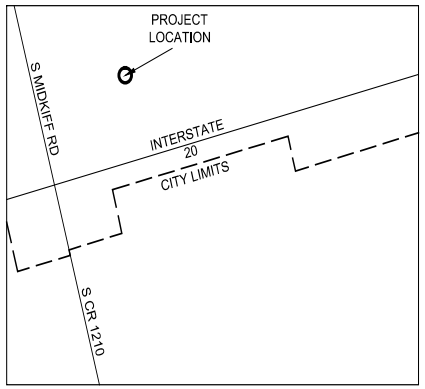
LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

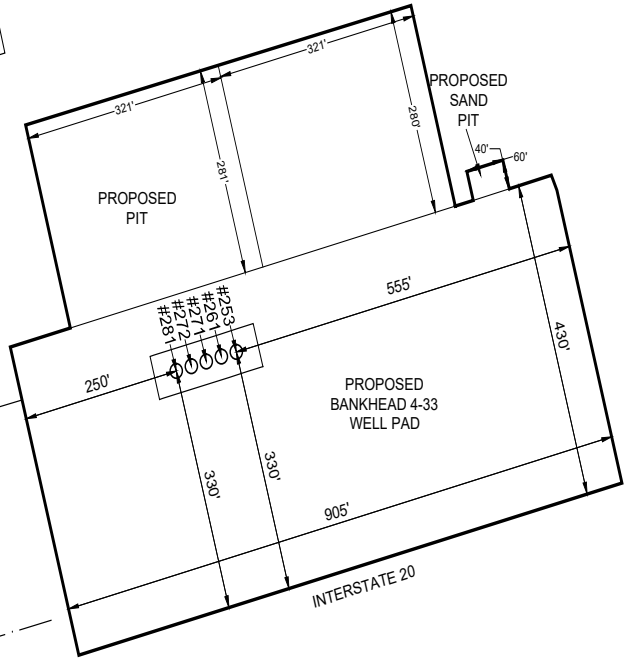
ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY





VICINITY MAP
NOT TO SCALE



LAYOUT PLAN
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SITE PLAN
1" = 200'
SCALE: 1" = 200'
200 100 0 200 400
GRAPHIC SCALE

STATE OF TEXAS REGISTERED
JAMES P. KEENE
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PROFESSIONAL LAND SURVEYOR

LEGEND
- PROPOSED FLOWLINE
- E — PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
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- W — PROPOSED FRESH WATER LINE

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ENDEAVOR ENERGY RESOURCES, L.P.
BANKHEAD 4-33 WELL PAD
SITUATED IN THE
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SCALE: 1"= 200' DATE: 09/04/19
DRAWN BY: DV
APPROVED: JPK
FIELD CREW: DC
PROJECT NO. 16-02490-BANKHEAD WELL PAD

SHEET 1 OF 1

25.8

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
December 19, 2019	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	Rep. Fax (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 ECR 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
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Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C – is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application. **[See § J(5)].**

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General Description of Current Surface Use (within 860 feet of proposed surface location): Open Field, Commercial

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/plat/satellite/aerial photo)*** **depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Bankhead 4-33 Unit 2A #261

ATTACHED AS EXHIBIT G is **Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
ATTACHED AS EXHIBIT G is **24 hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1128' FSL 1254' FWL, Section 4, Block 39, T-2-S, T&P RR Co Survey, Midland County,

Texas

ATTACHED AS EXHIBIT G **is the Plat and Location Site Plan [See § J(9)].**

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ATTACHED AS EXHIBIT N **is the written Concept Plan and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) **Drilling:** Electricity TXU: 1-800-233-2133

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Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. Operator also has freshwater wells in the area, and will be utilizing a frac pond located outside of City limits.

Description of all electric lines to production facilities (reference exhibits as necessary)
ATTACHED AS EXHIBIT G. **[See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
ATTACHED AS EXHIBIT O. **[See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].

ATTACHED AS EXHIBIT Q is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].

ATTACHED AS EXHIBIT R is the required Insurance Certificate. [See § J(19) and § K(3)].

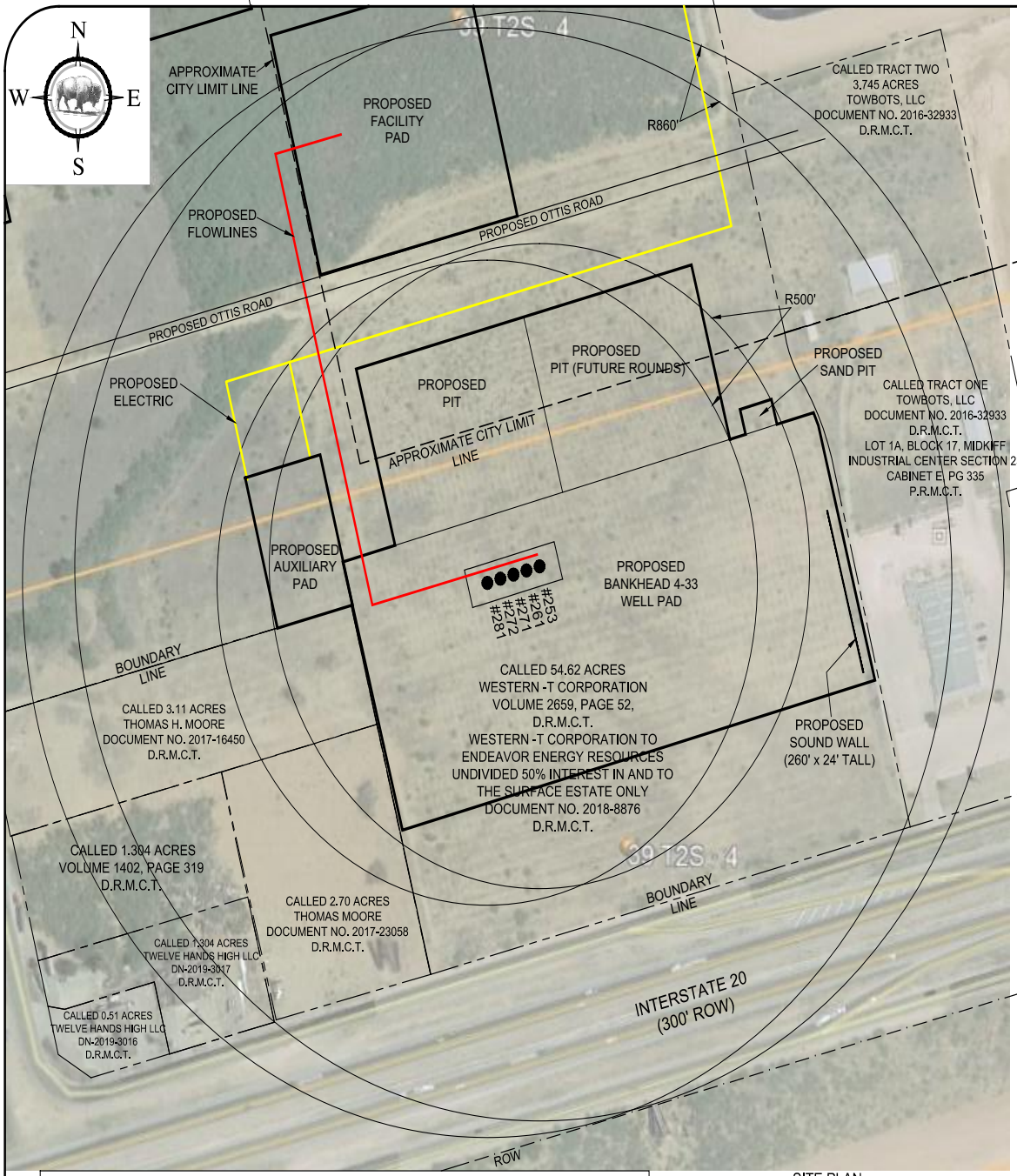
ATTACHED AS EXHIBIT S (if applicable) is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].

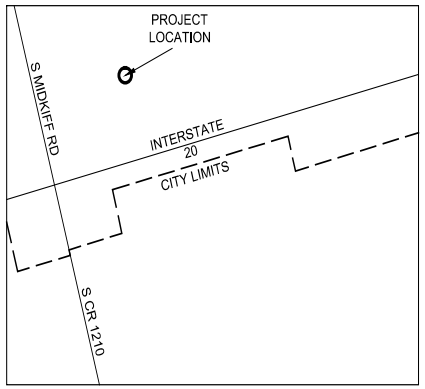
ATTACHED AS EXHIBIT T is Applicant's Emergency Action Response Plan. [See § J(22)].

ATTACHED AS EXHIBIT U is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].

ATTACHED AS EXHIBIT V is Applicant's Summary List of Variances

ATTACHED AS EXHIBIT W is Acoustic Impact Study and Noise Mitigation Plan





VICINITY MAP
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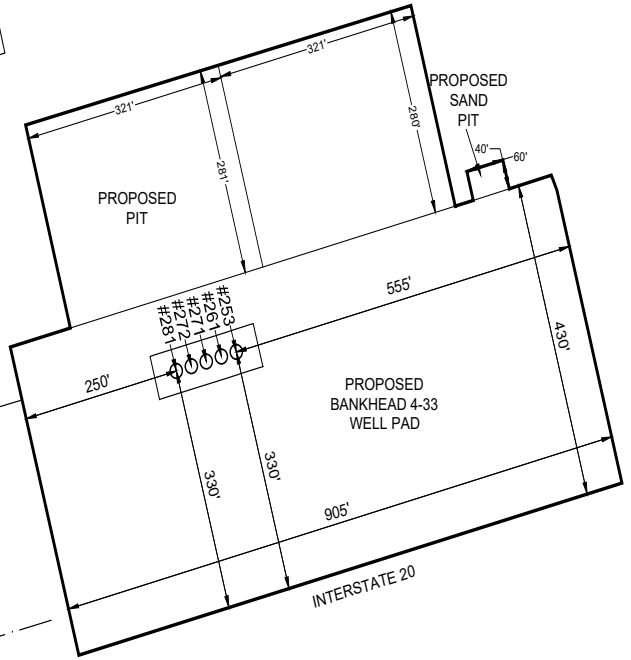

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1" = 200'

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SITE PLAN
1" = 200'
SCALE: 1" = 200'
200 100 0 200 400
GRAPHIC SCALE

STATE OF TEXAS
REGISTERED
JAMES P. KEENE
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LEGEND
PROPOSED FLOWLINE
E PROPOSED ELECTRIC
PROPOSED LEASE ROAD
PROPOSED FUTURE LEASE ROAD
W PROPOSED FRESH WATER LINE

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SITUATED IN THE
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SHEET 1 OF 1

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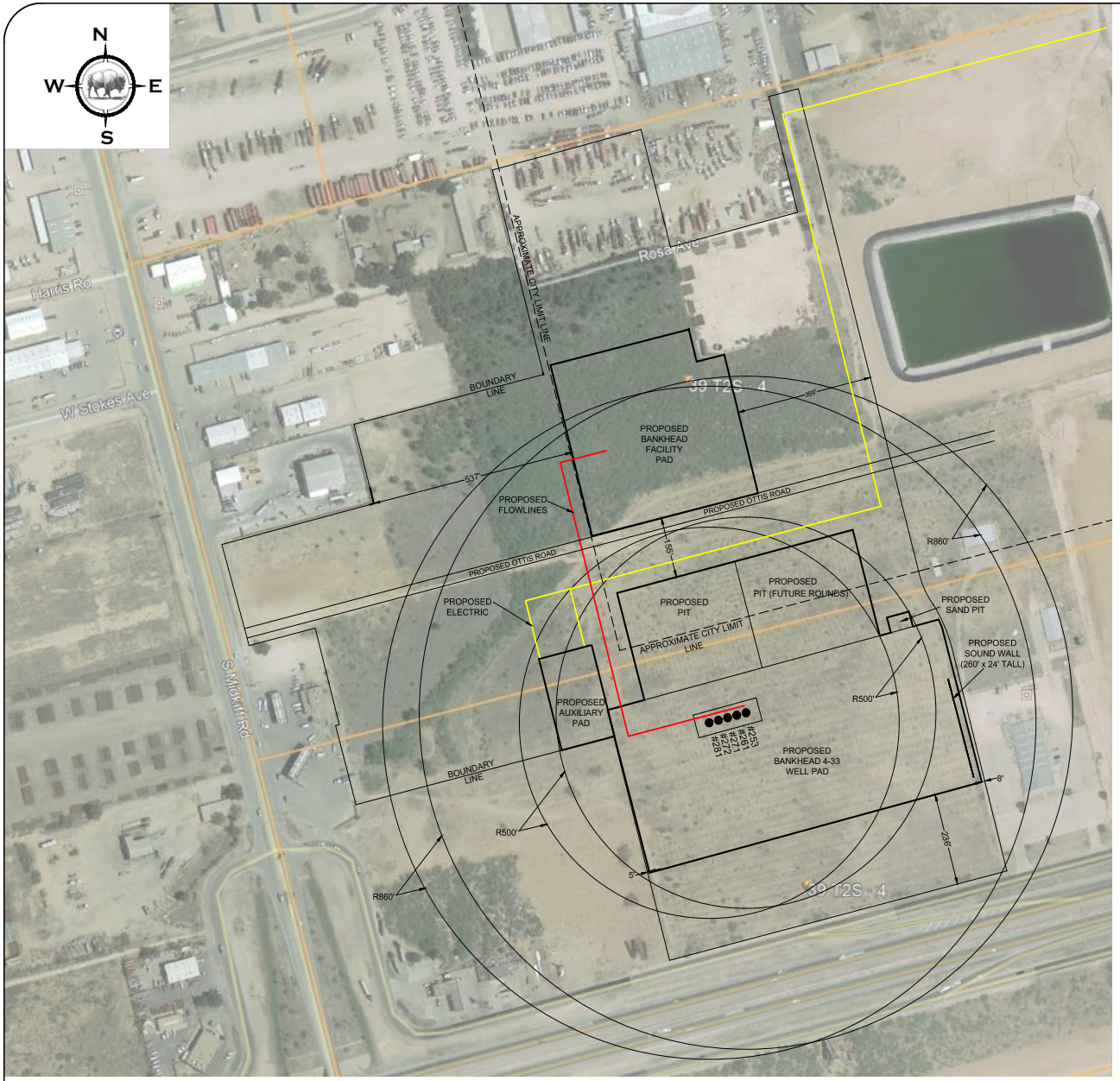

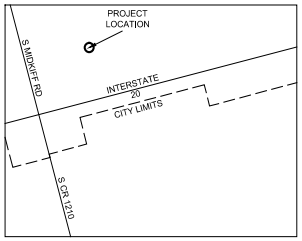

VICINITY MAP
NOT TO SCALE

LEGEND

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- E PROPOSED ELECTRIC
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SCALE: = 1" = 200'

200 100 0 200 400

GRAPHIC SCALE

OVERALL SITE PLAN

SCALE: 1"=200'

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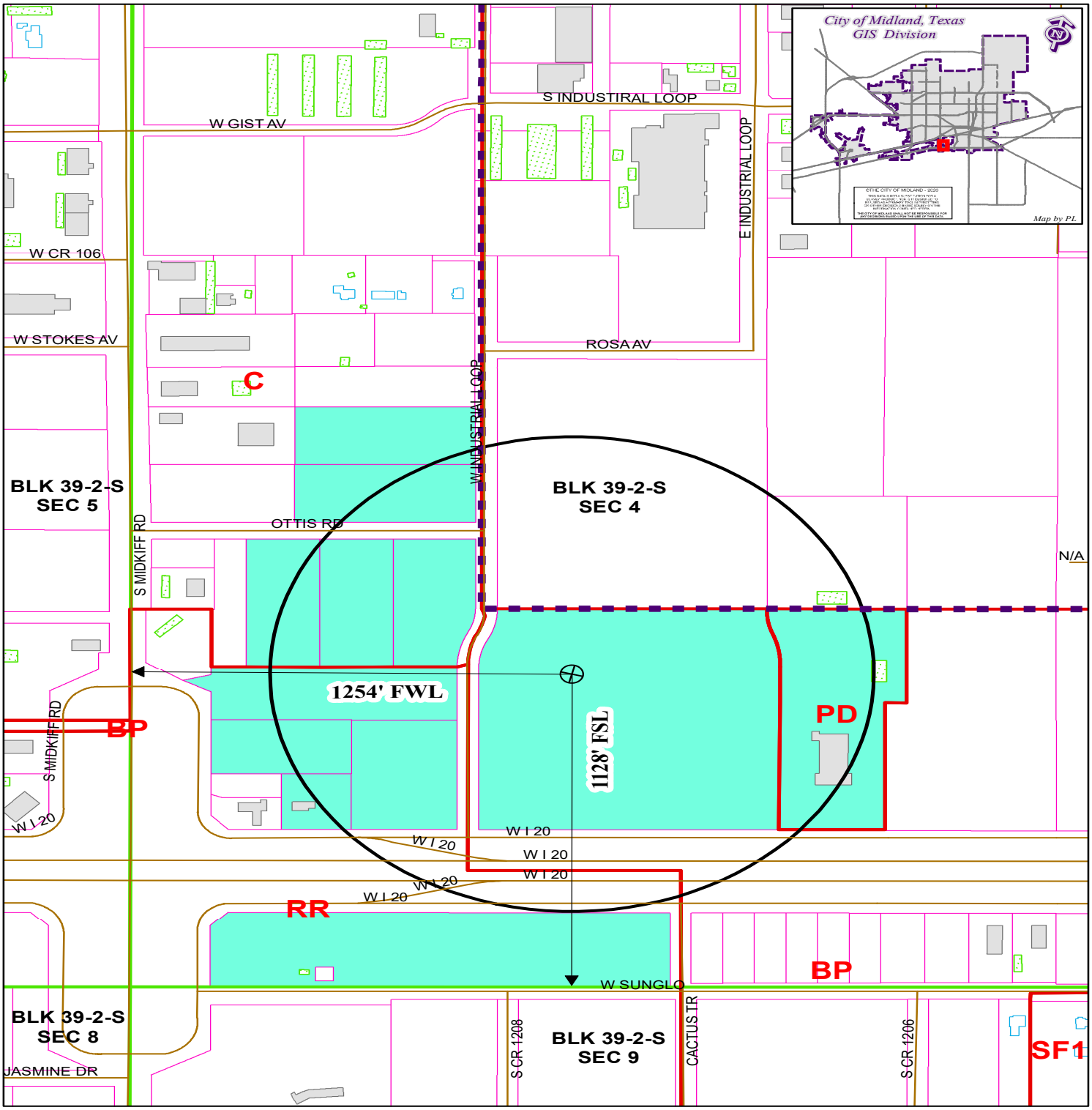

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Bankhead 4-33 Unit 2A #261

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ZONING	ACCESSORY BLDGS	SURVEY SEC.

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MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

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Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	Rep. Fax (432)-682-3088
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Midland, Texas 79706
Office: (432) 262-4271
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Proposed Well Name: Bankhead 4-33 Unit 2A #271

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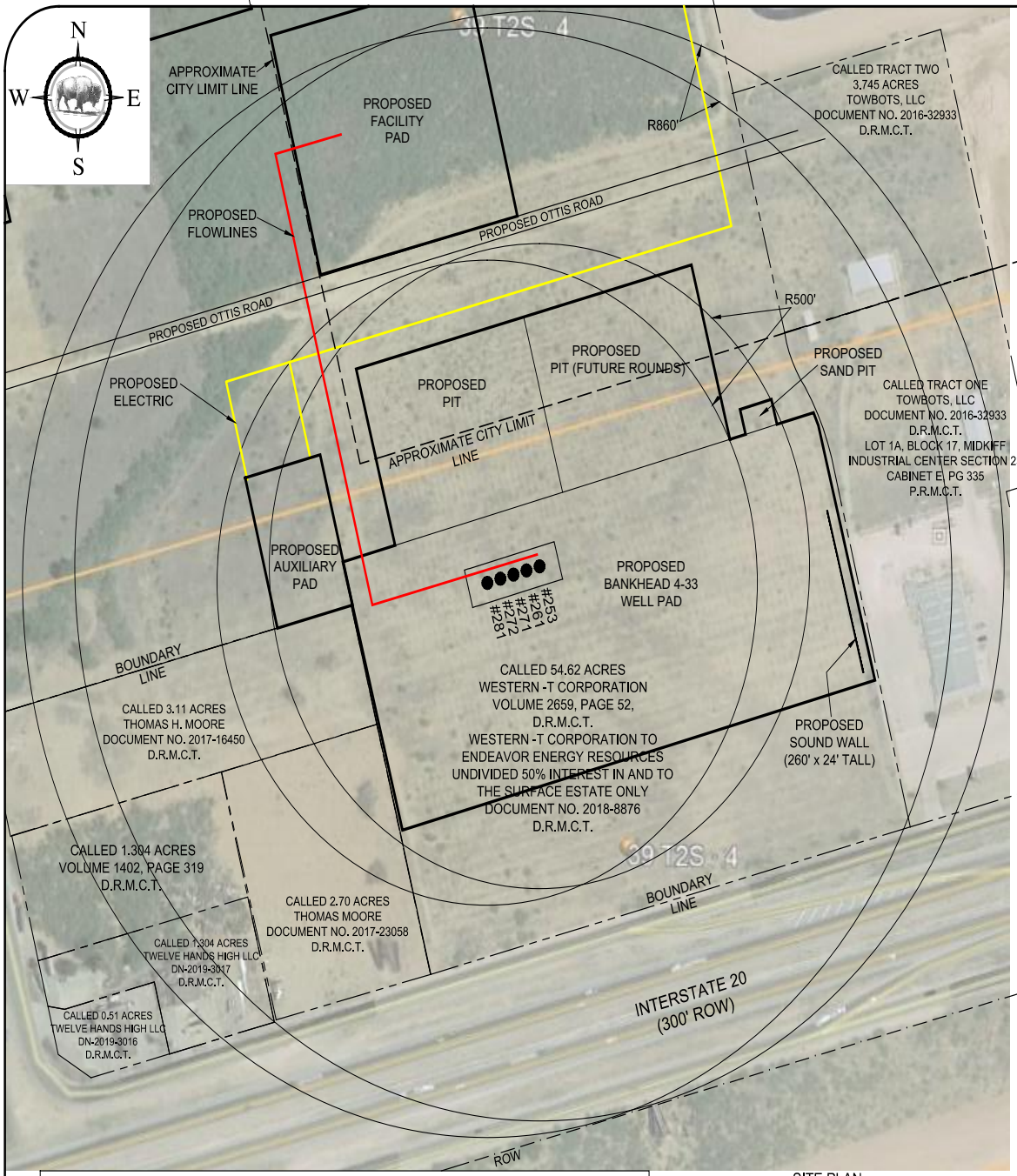
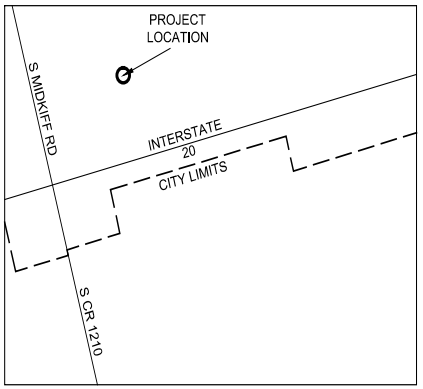
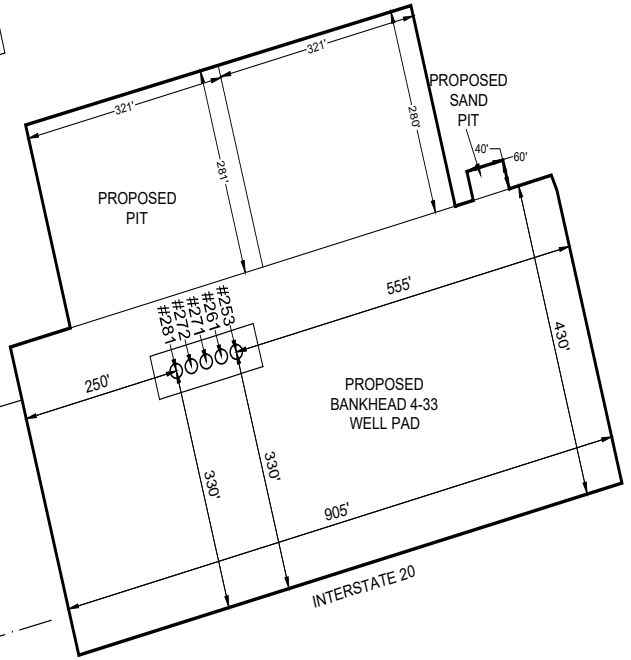




VICINITY MAP
NOT TO SCALE



LAYOUT PLAN
1" = 200'

COORDINATES		
COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83		
BANKHEAD 4-33 #281 (SHL)	CENTER OF BANKHEAD WELL PAD	BANKHEAD 4-33 #253 (SHL)
NORTHING: 10683671.8	NORTHING: 10683612.8	NORTHING: 10683697.5
EASTING: 1747433.6	EASTING: 1747657.6	EASTING: 1747530.2

SITE PLAN
1" = 200'
SCALE: 1" = 200'
200 100 0 200 400
GRAPHIC SCALE

STATE OF TEXAS
REGISTERED
JAMES P. KEENE
5100
PROFESSIONAL
LAND SURVEYOR

LEGEND
- PROPOSED FLOWLINE
- E PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- W PROPOSED FRESH WATER LINE

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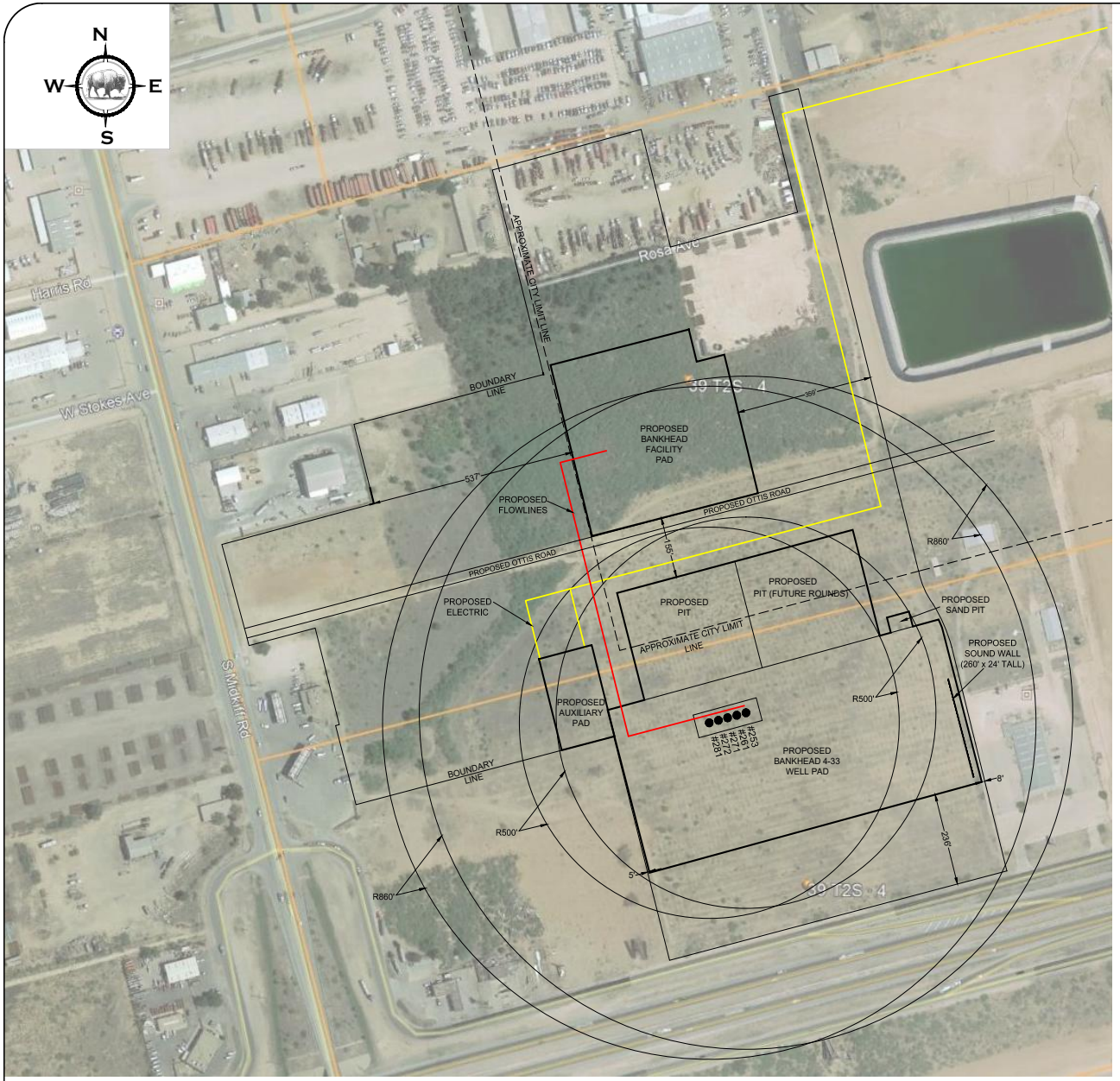
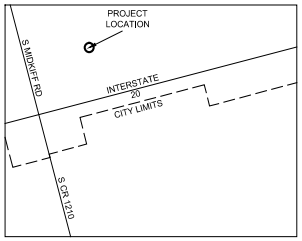
SITE PLAN
ENDEAVOR ENERGY RESOURCES, L.P.
BANKHEAD 4-33 WELL PAD
SITUATED IN THE
CITY OF MIDLAND, SECTION 4, BLOCK 39, T-2-S, T & P RR CO.
SURVEY, ABSTRACT NO. 1168, MIDLAND COUNTY, TEXAS.

SCALE: 1"= 200' DATE: 09/04/19
DRAWN BY: DV
APPROVED: JPK
FIELD CREW: DC
PROJECT NO. 16-02490-BANKHEAD WELL PAD

SHEET 1 OF 1

25.18





VICINITY MAP
NOT TO SCALE

LEGEND

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- E PROPOSED ELECTRIC
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SCALE: = 1" = 200'

200 100 0 200 400

GRAPHIC SCALE

OVERALL SITE PLAN

SCALE: 1"=200'

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STATE OF TEXAS REGISTERED JAMES P. KEENE 5100 PROFESSIONAL LAND SURVEYOR

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OVERALL SITE PLAN

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SHEET 1 OF 1

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Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND COUNTY\MIDLAND CO PROJECTS\BLOCK 39 T2S BANKHEAD\SECTION 4 BLOCK 39 T2S\SITE PLANS\16-02490-BANKHEAD OVERALL SITE PLAN.dwg, 1/7/2020 7:20:07 AM

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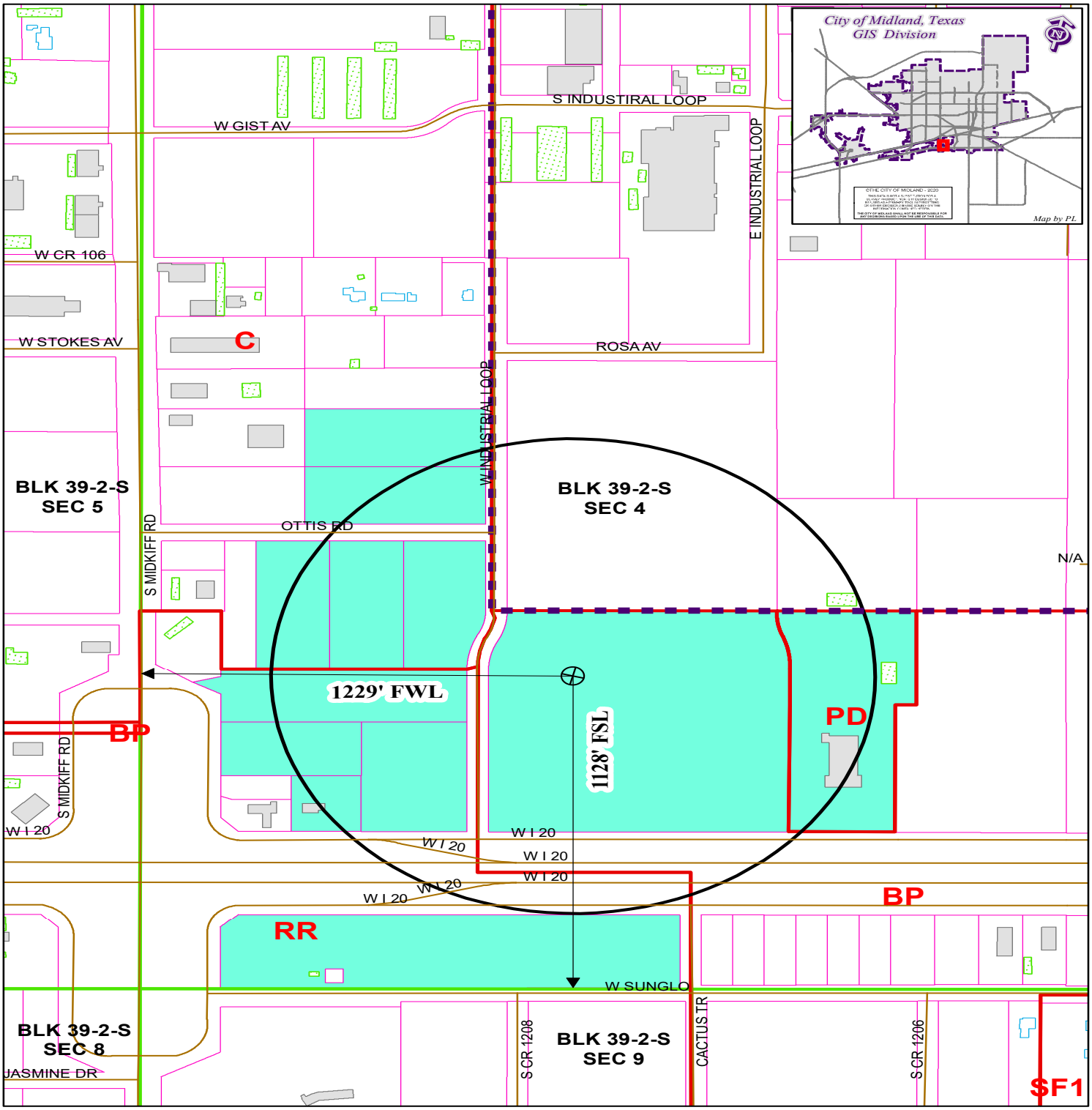

LOCATION AND ZONING MAP

Oil - 022384 - 2020 **Scale: 1" = 400'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,128' FSL and 1,229' FWL, Section 4, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,128 feet north of West Sunglo Street and 1,229 feet east of South Midkiff Road.

Bankhead 4-33 Unit 2A #271

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

25.20

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
December 19, 2019	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	Rep. Fax (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 ECR 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C –is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application. **[See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Field, Commercial

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/plat/satellite/aerial photo)*** **depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Bankhead 4-33 Unit 2A #272

ATTACHED AS EXHIBIT G is **Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
ATTACHED AS EXHIBIT G is **24 hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1127' FSL 1204' FWL, Section 4, Block 39, T-2-S, T&P RR Co Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Plat and Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K **is the location agreement letter with current Surface Owner. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M **is the Road Repair Agreement and** ***Letter of Credit/Certificate of Deposit/Surety Bond*** **in the amount of at least $75,000.** ***Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):*** **Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000** ***letter of credit/certificate of deposit/surety bond*** **in conjunction with this request. [See § J(31)].**

ATTACHED AS EXHIBIT N **is the written Concept Plan and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) **Drilling:** Electricity TXU: 1-800-233-2133

(2) **Operations:** Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. Operator also has freshwater wells in the area, and will be utilizing a frac pond located outside of City limits.

Description of all electric lines to production facilities (reference exhibits as necessary)
ATTACHED AS EXHIBIT G. **[See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
ATTACHED AS EXHIBIT O. **[See § J(35)]**

V. Additional Required Exhibits

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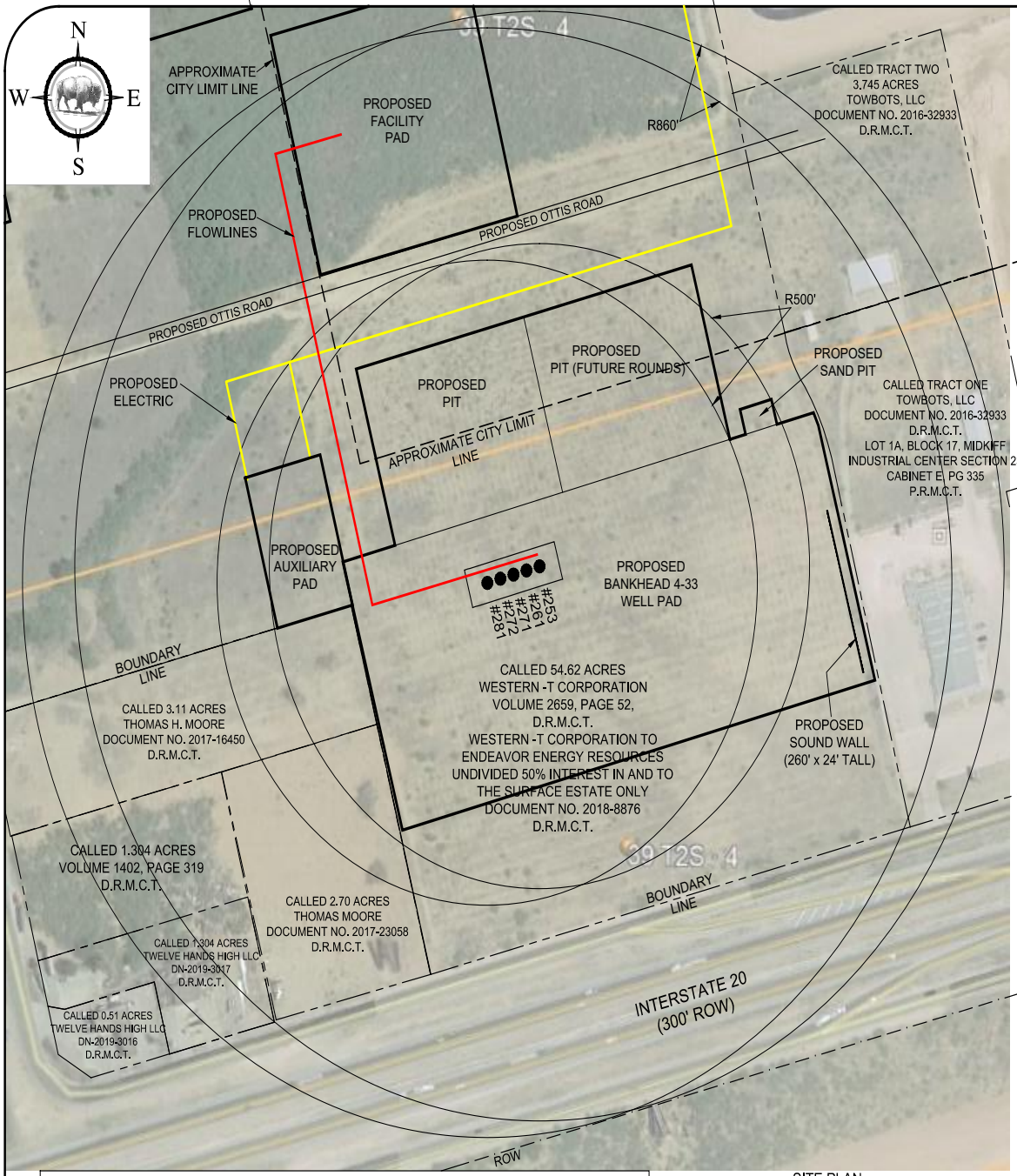

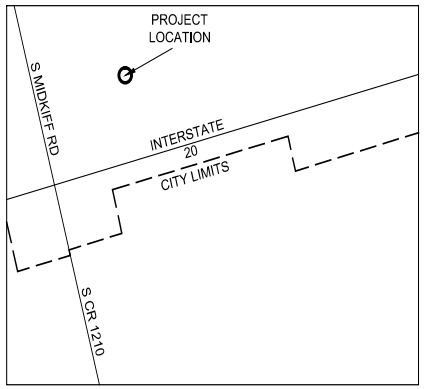

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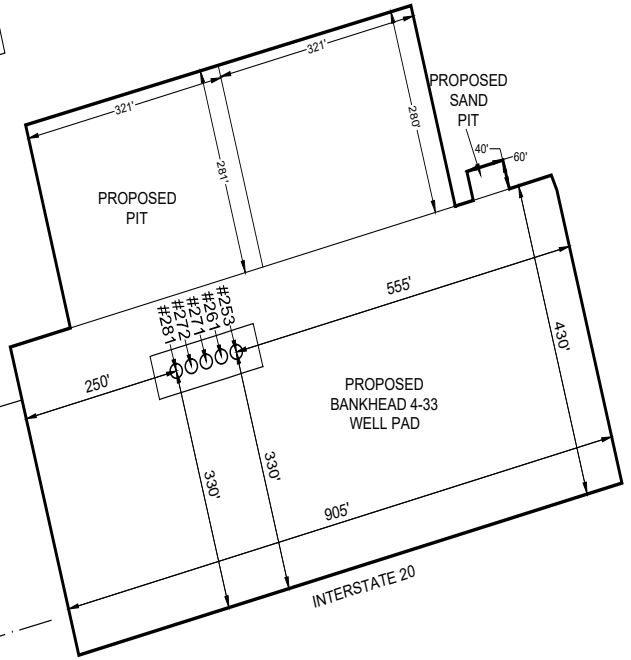

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SITE PLAN
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BANKHEAD 4-33 WELL PAD
SITUATED IN THE
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FIELD CREW: DC
PROJECT NO. 16-02490-BANKHEAD WELL PAD

SHEET 1 OF 1

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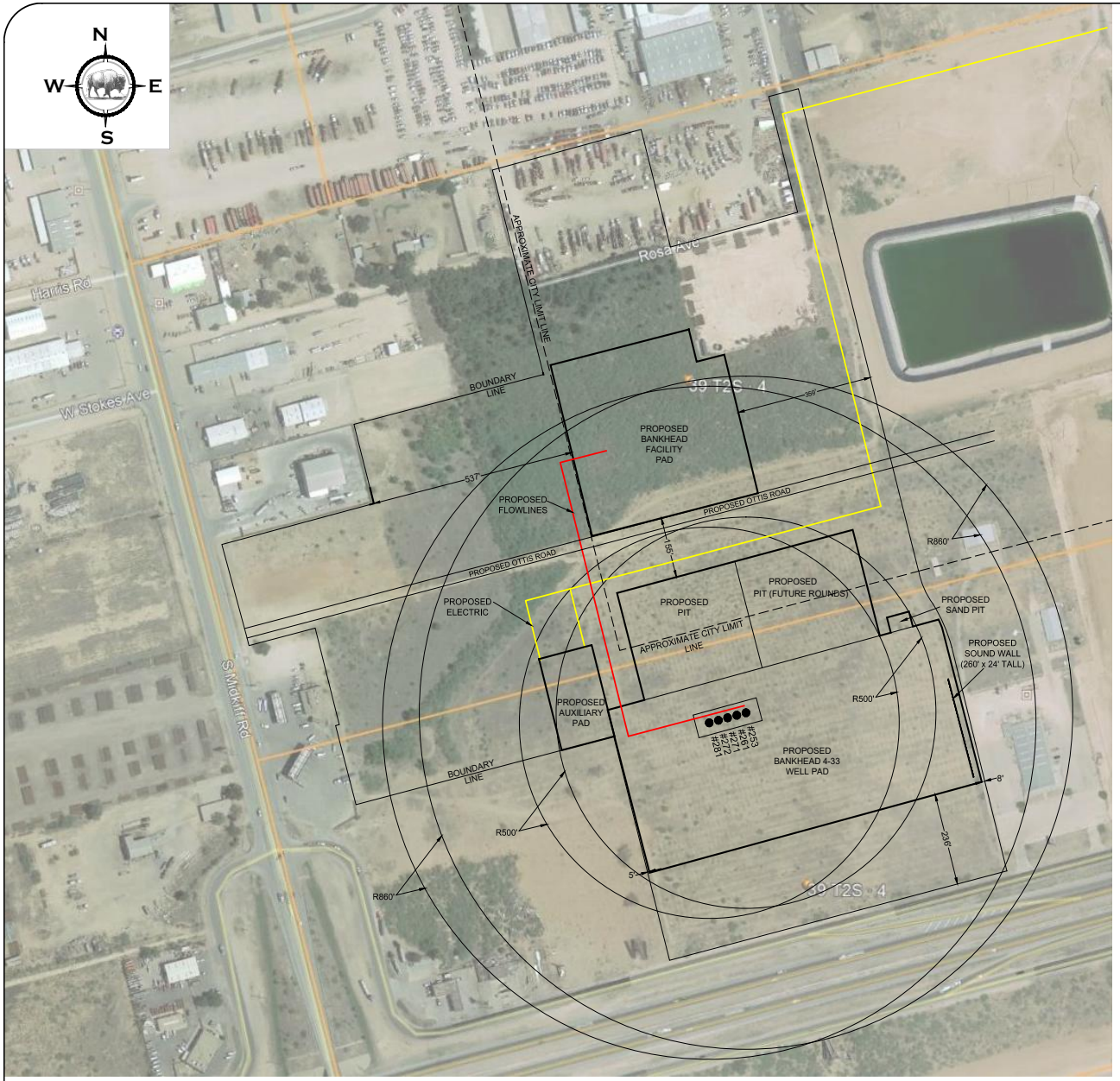

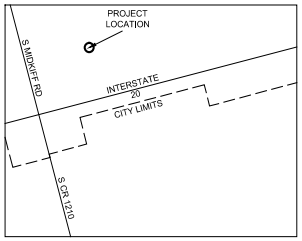

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GRAPHIC SCALE

OVERALL SITE PLAN

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SHEET 1 OF 1

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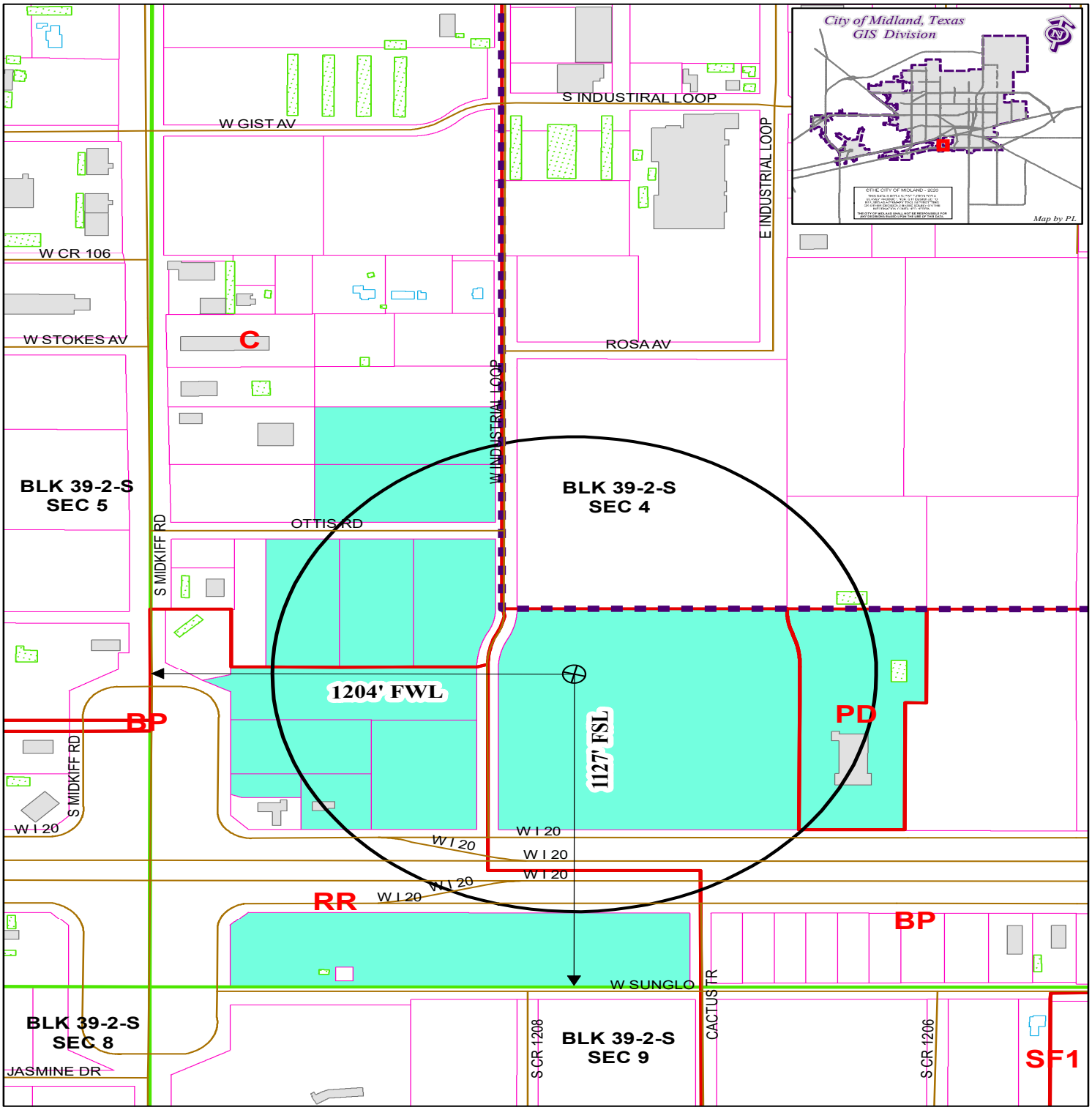
Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND COUNTY\MIDLAND CO PROJECTS\BLOCK 39 T2S BANKHEAD\SECTION 4 BLOCK 39 T2S\SITE PLANS\16-02490-BANKHEAD OVERALL SITE PLAN.dwg, 1/7/2020 7:20:07 AM



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Bankhead 4-33 Unit 2A #272

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

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AE	AGRICULTURE ESTATE	01, O2	OFFICE
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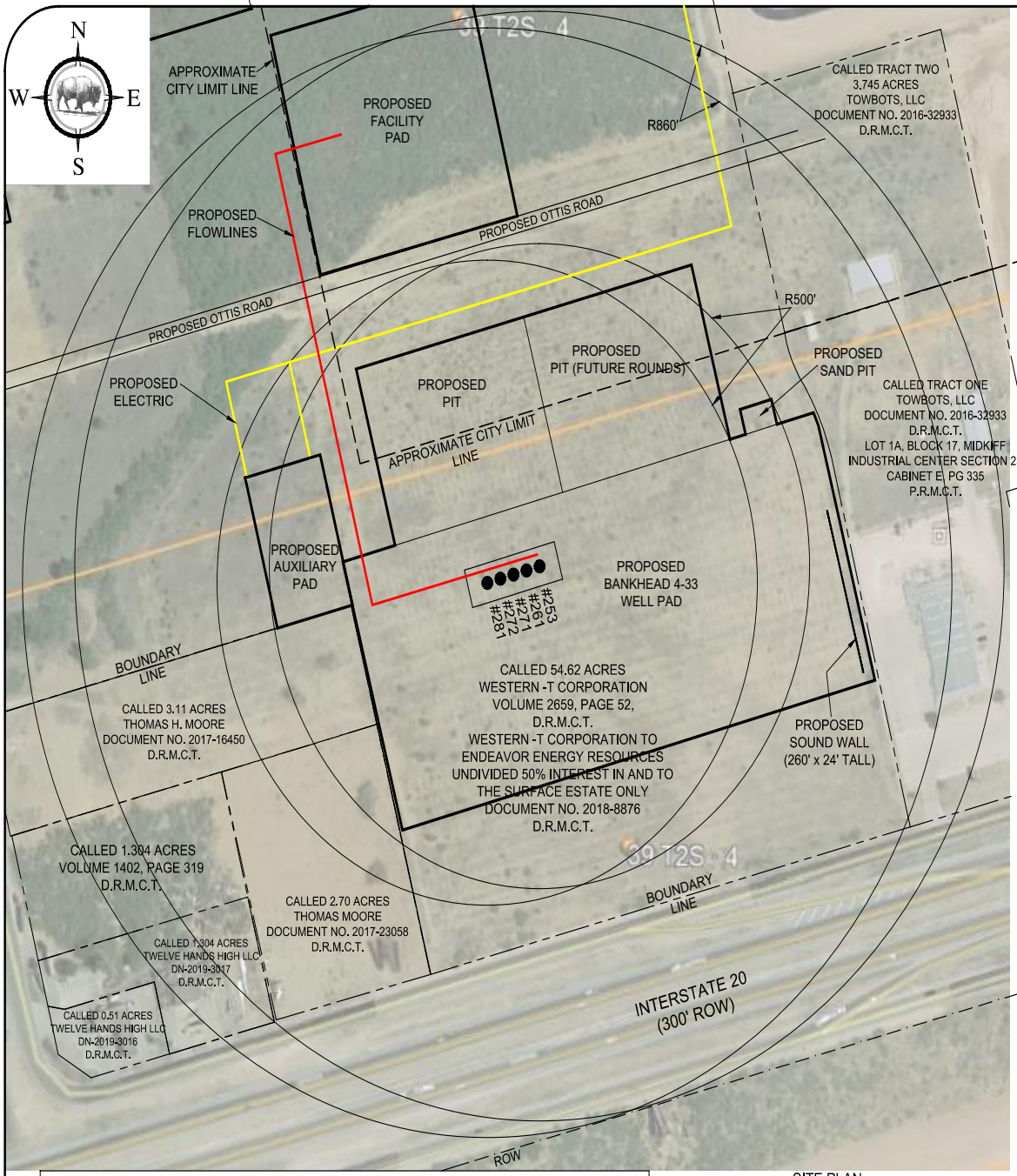

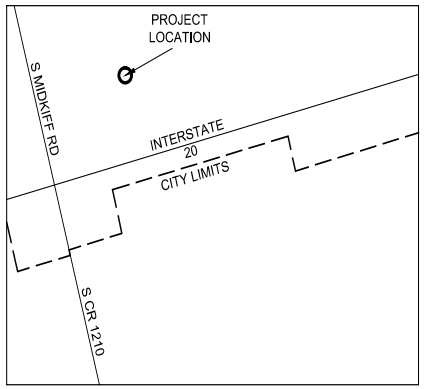

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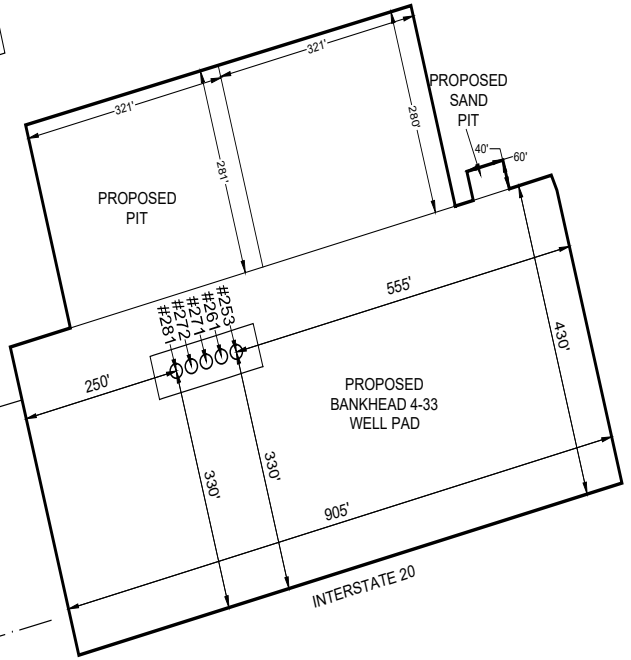

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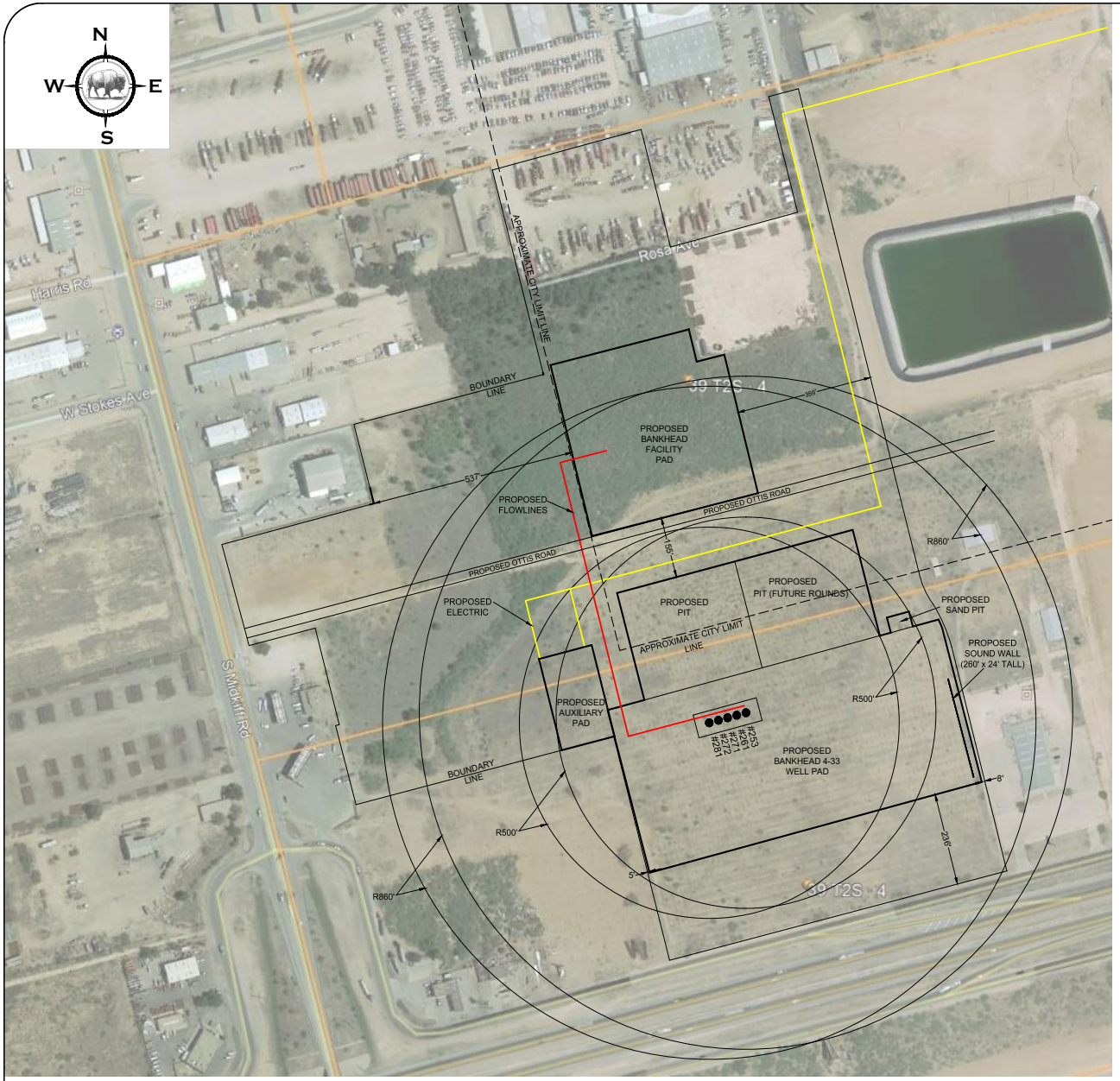
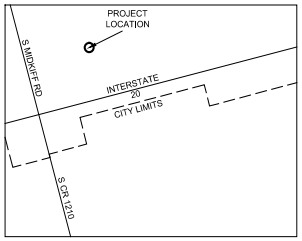
SITUATED IN THE
CITY OF MIDLAND, SECTION 4, BLOCK 39, T-2-S, T & P RR CO.
SURVEY, ABSTRACT NO. 1168, MIDLAND COUNTY, TEXAS.

SCALE: 1"= 200' DATE: 09/04/19
DRAWN BY: DV
APPROVED: JPK
FIELD CREW: DC
PROJECT NO. 16-02490-BANKHEAD WELL PAD

SHEET 1 OF 1

25.27





VICINITY MAP
NOT TO SCALE

LEGEND
PROPOSED FLOWLINE
— E — PROPOSED ELECTRIC
PROPOSED LEASE ROAD
PROPOSED FUTURE LEASE ROAD
— W — PROPOSED FRESH WATER LINE

SCALE: = 1" = 200'

200 100 0 200 400

GRAPHIC SCALE

OVERALL SITE PLAN

SCALE: 1"=200'

COORDINATES		
BANKHEAD 4-33 #253 (SHL) NORTHING: 10683697.5 EASTING: 1747530.2	COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83	BANKHEAD 4-33 #281 (SHL) NORTHING: 10683671.8 EASTING: 1747433.6
BANKHEAD 4-33 #261 (SHL) NORTHING: 10683691.1 EASTING: 1747506.0		CENTER OF BANKHEAD WELL PAD NORTHING: 10683612.8 EASTING: 1747657.6
BANKHEAD 4-33 #271 (SHL) NORTHING: 10683684.7 EASTING: 1747481.9		
BANKHEAD 4-33 #272 (SHL) NORTHING: 10683678.2 EASTING: 1747457.7		CENTER OF BANKHEAD FACILITY PAD NORTHING: 10684380.2 EASTING: 1747260.7

STATE OF TEXAS REGISTERED JAMES P. KEENE 5100 PROFESSIONAL LAND SURVEYOR

BISON CREEK
LAND SERVICES, LLC
WWW.BISON-CREEK.COM
FIRM LICENSE NO. 10193880

COPYRIGHT 2019

OVERALL SITE PLAN

BANKHEAD
OVERALL SITE PLAN SITUATED IN THE
CITY OF MIDLAND, SECTION 4, BLOCK 39, T-2-S, T & P RR CO.
SURVEY, ABSTRACT NO. 1168, MIDLAND COUNTY, TEXAS.

ENDEAVOR ENERGY RESOURCES, L.P.

SCALE: 1" = 200'
DATE: 09/06/19
APPROVED BY: JPK
DRAWN BY: DV
CREW: BAM
PROJECT NO: 16-02490 OVERALL SITE PLAN

SHEET 1 OF 1

BISON CREEK LAND SERVICES, LLC 2444S INTERSTATE 20, BLDG. 9, WILLS POINT, TEXAS 75169 PHONE: 903-873-3600 WWW.BISON-CREEK.COM

Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND COUNTY\MIDLAND CO PROJECTS\BLOCK 39 T2S BANKHEAD\SECTION 4 BLOCK 39 T2S\SITE PLANS\16-02490-BANKHEAD OVERALL SITE PLAN.dwg, 1/7/2020 7:20:07 AM

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
December 19, 2019	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	Rep. Fax (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	NOTE: All attachments need to bound and put in a binder before submitting.	Pages 1-4

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 ECR 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C –is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application. **[See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Field, Commercial

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/plat/satellite/aerial photo)*** **depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Bankhead 4-33 Unit 2A #281

ATTACHED AS EXHIBIT G is **Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
ATTACHED AS EXHIBIT G is **24 hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1127' FSL 1179' FWL, Section 4, Block 39, T-2-S, T&P RR Co Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Plat and Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K **is the location agreement letter with current Surface Owner. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M **is the Road Repair Agreement and** ***Letter of Credit/Certificate of Deposit/Surety Bond*** **in the amount of at least $75,000.** ***Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):*** **Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000** ***letter of credit/certificate of deposit/surety bond*** **in conjunction with this request. [See § J(31)].**

ATTACHED AS EXHIBIT N **is the written Concept Plan and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) **Drilling:** Electricity TXU: 1-800-233-2133

(2) **Operations:** Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. Operator also has freshwater wells in the area, and will be utilizing a frac pond located outside of City limits.

Description of all electric lines to production facilities (reference exhibits as necessary)
ATTACHED AS EXHIBIT G. **[See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
ATTACHED AS EXHIBIT O. **[See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].

ATTACHED AS EXHIBIT Q is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].

ATTACHED AS EXHIBIT R is the required Insurance Certificate. [See § J(19) and § K(3)].

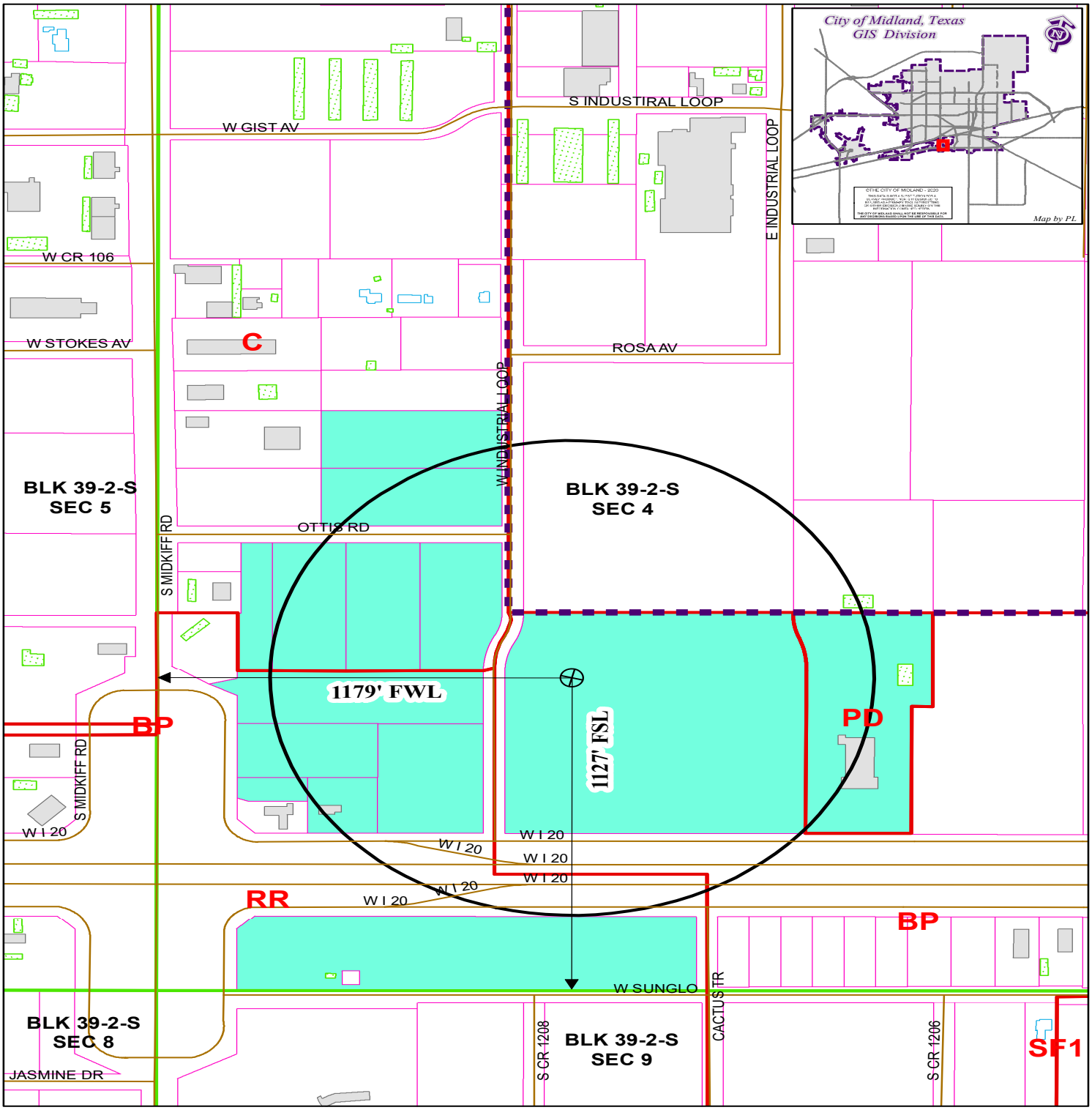
ATTACHED AS EXHIBIT S (if applicable) is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].

ATTACHED AS EXHIBIT T is Applicant's Emergency Action Response Plan. [See § J(22)].

ATTACHED AS EXHIBIT U is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].

ATTACHED AS EXHIBIT V is Applicant's Summary List of Variances

ATTACHED AS EXHIBIT W is Acoustic Impact Study and Noise Mitigation Plan



LOCATION AND ZONING MAP

Oil - 022382 - 2020 **Scale: 1" = 400'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,127' FSL and 1,179' FWL, Section 4, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,127 feet north of West Sunglo Street and 1,179 feet east of South Midkiff Road.

Bankhead 4-33 Unit 2A #281

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

City Council Agenda

Approved for Agenda:
sreyes
City Manager's Office

MEETING DATE: April 14, 2020

TO: City Council / City Manager

FROM: Elizabeth Shaughnessy, Senior Planner

SUBJECT: Hold a public hearing and consider an ordinance on a request by the YMCA of Midland for a vacation of a 0.2825-acre portion of alley right-of-way, located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas. (Generally located on the north side of W. Kansas Avenue, approximately 481-feet east of N. Big Spring Street. Council District 2)

Purpose:

The applicant, YMCA of Midland, is requesting to vacate a 0.2825-acre portion of alley right-of-way, located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas, for future expansion.

Recommended Planning and Zoning Commission Action:

☒ Approve ☐ Deny ☐ Direction/Informational

Fiscal Impact:

The 2020 appraised value of the right-of-way is $2.00 per square feet, for a total value of $24,608.00 for the 0.2825 – acre portion of alley right-of-way, located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition.

Discussion:

The applicant, YMCA of Midland, is requesting to vacate a 0.2825-acre portion of alley right-of-way, located adjacent to Lot 2, Blocks 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas, for future expansion.

The Midland Central's Appraisal District's appraisal of the land is $2.00 per square feet, for a total value of $24,608.00 for the 0.496 - acre portion of alley right-of-way, located adjacent to Blocks 19 and 6, Elmwood Addition, Section 3.

The applicant will need to retain a nonexclusive utility easement for all affected utilities until each existing easement user abandons its use of the easement and replat the property prior to the alley right-of-way being vacated.

This request has been circulated and reviewed by all pertinent City departments and franchise utility companies. Their comments, conditions, and requests are as follows:

Code Compliance: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Code Administration: (Approved)

No objections.

Engineering: (Approved)

No objections to vacation. Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

Fire: (Approved)

No objections.

Transportation: (Denied)

No issue with concept of vacating, but as proposed, this creates a dead end alley to the north which will be an issue if the YMCA ever sells those lots. Alley should be vacated all the way to Cuthbert. If adjacent property owner on west side is not agreeable, then dedicate new ROW to turn remaining north alley to the east to access Whitaker.

Applicant shall be responsible for relocating any utilities, if existing, or providing easements as needed.

Midland Central Appraisal District:

The estimated value of the property vacation requested is $2.00 per square feet or $24,608.00 for tax year 2020.

AT&T: (Approved with conditions)

AT&T does have facilities in this area and it would be at the cost of the customer to relocate the facilities before any vacation of an alley could be done. However, is ok to

vacate is a utility easement is in place and as long as there isn't a time limit on it and we have to move after a certain time.

Atmos: (Approved)

Atmos Energy has no objection to the above referenced change to the alley right of way between Big Spring and Main Street north of Kansas Ave. We have no gas lines or facilities located within this section of right of way.

Grande: (Approved with Conditions)

Grande Communications does have both Aerial Coax facilities in the Right-Of-Way Segment known as Vacate V-20-0027. Costs to relocate our facilities can be provided upon request. However, is ok to vacate is a utility easement is in place and as long as Grande was allowed easy access for maintenance purposes. We would be opposed to being locked out or having to ask for permission to do repair and maintenance of our existing plant.

Oncor: (Approved with Conditions)

I had one of my people look at this today. He advised me we have an overhead line in the alley. I will drive by and look at it myself this afternoon, but after speaking with him, we will not be able to vacate the alley way without an easement for our facilities.

Suddenlink: (Approved with Conditions)

We have multiple coax plant in this area, we will need to do a cost estimate to see what it'll cost to relocate & who will pay for it, we are not vacating anything unless someone pays to relocate. However, should be ok, as long as the vacate request is put on hold until such a time as to work out payment details.

Planning:

Pertinent City departments and franchise utility companies have reviewed this vacation request and have approved it with the condition that a utility easement is retained until each existing easement user abandons its use of the easement.

Therefore, staff recommends approval for the vacation of the 0.2825-acre portion of alley right-of-way, located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas, subject to conditions A through C.

Conditions:

A. **That the City retains a nonexclusive utility easement until each existing easement user abandons its use of the easement; and**

B. **That the city of Midland has received from the property owner the sum of $24,608.00**

C. **That a replat of the subject property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County.**

Letters of Objection:

As of April 8, 2020, staff has not received any letters of objection to this request.

Attachments:

Application
Maps
Metes and Bounds (Exhibit A)
Vacation Exhibit
Responses from Franchise Utility Companies and Midland Central Appraisal District

ORDINANCE NO. _____

AN ORDINANCE VACATING AND ABANDONING A 0.2825-ACRE PORTION OF ALLEY RIGHT-OF-WAY LOCATED ADJACENT TO LOT 2, BLOCK 19, ELMWOOD ADDITION, SECTION 3, AND LOTS 1 THROUGH 12, BLOCK 6, S. W. ESTES ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE NORTH SIDE OF WEST KANSAS AVENUE, APPROXIMATELY 481 FEET EAST OF NORTH BIG SPRING STREET); ADOPTING THE APPRAISAL BY THE CITY MANAGER OF $24,608.00; AND ORDERING RECORDATION BY THE CITY SECRETARY

WHEREAS, it has been determined by the Midland City Council that a 0.2825-acre portion of alley right-of-way located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas, as described in Exhibits "A" and "B" attached hereto and made a part hereof for all legal purposes (the "Property"), is no longer needed for public use; and

WHEREAS, Section 272.001 of the Texas Local Government Code provides that a political subdivision may not convey, sell, or exchange its interest in land without observing notice and bid requirements, unless the conveyance is to one or more abutting property owners; and

WHEREAS, an application for vacating the Property has been received by the City from the abutting property owner; and

WHEREAS, the City Manager has appraised the value of the City's property interest in the Property at $24,608.00, as shown in Exhibit "C" attached hereto and incorporated herein by reference; and

WHEREAS, the Council finds it to be in the public interest to abandon and vacate the Property;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Property is hereby vacated and abandoned for all public

purposes. Provided, however, that the City is hereby abandoning only the public interest in the Property, and this ordinance in no way affects any private easement or access easement which abutting property owners may have in the Property.

SECTION TWO. That this ordinance shall not be effective until:

A. the City of Midland has received from the abutting property owner(s) the sum of $24,608.00; and

B. a replat of the Property is approved by the City of Midland and filed and recorded with the County Clerk of Midland County, Texas.

SECTION THREE. That the City herein retains a nonexclusive utility easement across, through, over, under, on and along the Property until all entities that were using the Property for utility purposes as of the date of approval of this ordinance have abandoned their uses of the Property.

SECTION FOUR. That upon the City's receipt of the sum set forth in Section Two hereof, the City Secretary is hereby authorized and directed to file a certified copy of this ordinance with the County Clerk of Midland County, Texas, for purposes of recording in the Official Records of Midland County, Texas.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting “AYE”:

Council members voting “NAY”:

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT 'A'

METES AND BOUNDS

BEING a 0.2825 acre tract of land situated in Section 26, Block 39, Township 1 South, T & P RR Co. Survey, Miguel Gil Survey, Abstract No. 438, Midland County, Texas, said tract being a part of a 10 foot Alley as dedicated by S.W. Estes Addition, an addition to the City of Midland, Texas, as recorded in Volume 40, Page 93, Deed Records, Midland County, Texas (D.R.M.C.T.), said tract also being part of a 10 foot Alley as dedicated by Elmwood Addition, Section 3, an addition to the City of Midland, Texas, as recorded in Cabinet D, Page 41, Plat Records, Midland County, Texas (P.R.M.C.T), said 0.2825 acre tract being more particularly described as follows:

BEGINNING at the southwest corner of said 10 foot Alley (Elmwood Addition) and the southeast corner of Lot 2, Block 19 of said Elmwood Addition, said corner being on the north right-of-way line of Kansas Avenue, from which a found 5/8-inch iron rod bears South 66 degrees 32 minutes 06 seconds East, a distance of 0.20 feet, said corner being locatable by NAD83 Grid Coordinate N= 10,697,179.47, E= 1,756,122.58;

THENCE North 14 degrees 20 minutes 44 seconds West, departing said north right-of-way line and along the east line of said Lot 2, a distance of 611.36 feet to the northeast corner of said Lot 2 and the southeast corner of Lot 1, Block 19 of said Elmwood Addition, from which a found 1/2-inch iron rod bears South 75 degrees 40 minutes 57 seconds West, a distance of 0.22 feet;

THENCE North 75 degrees 40 minutes 57 seconds East, departing the east line of said Lot 2, a distance of 10.00 feet to a point for corner on the east line of said 10 foot Alley (Elmwood Addition) and the west line of said 10 foot Alley (S.W. Estes Addition);

THENCE North 14 degrees 20 minutes 44 seconds West, along said common Alley line, a distance of 2.49 feet to a point for corner;

THENCE North 75 degrees 40 minutes 57 seconds East, departing said common Alley line, a distance of 10.00 feet to a point for corner on the east line of said 10 foot Alley (S.W. Estes Addition) and the northwest corner Lot 12, Block 6 of said S.W. Estes Addition, from which a found 5/8-inch iron rod with a cap stamped “WEST CO.” bears North 14 degrees 20 minutes 44 seconds West, a distance of 415.00 feet;

THENCE South 14 degrees 20 minutes 44 seconds East, along the east line of said 10 foot Alley (S.W. Estes Addition) and the west line of Lots 1-12 of said S.W. Estes Addition, a distance of 619.01 feet to a found 2-inch iron pipe for the southeast corner of said 10 foot Alley (S.W. Estes Addition) and the southwest corner of said Lot 1 of said S.W. Estes Addition, said corner being on the north right-of-way line of Kansas Avenue;

THENCE North 89 degrees 49 minutes 18 seconds West, along said north right-of-way line, a distance of 20.66 feet to the POINT OF BEGINNING and containing 12,304 square feet or 0.2825 acres of land, more or less.

NOTE: The basis of bearing for this survey is the Texas State Plane Coordinate System, Central Zone, (NAD 83) based upon GPS measurements. Distances and areas are surface values. A Grid factor of 0.999899 was used for this project.

B006170.001

A plat of even date accompanies this metes and bounds description.

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
FIRM REGISTRATION 10096100

STATE OF TEXAS
REGISTERED
HAL MOLLENKOPF
5439
PROFESSIONAL
LAND SURVEYOR

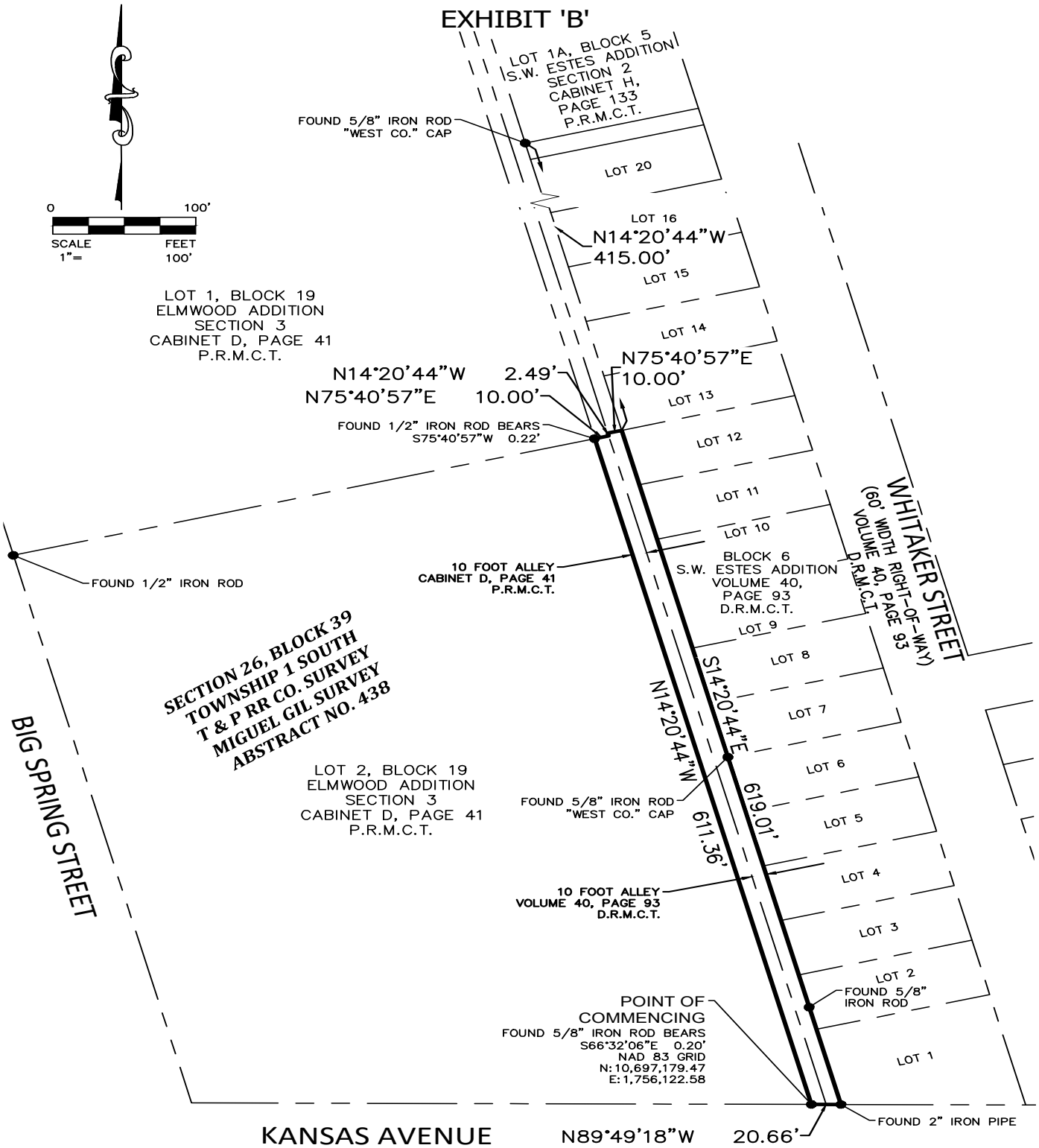
04-06-2020

VACATION EXHIBIT
0.2825 ACRES or 12,304 SQ. FT.

10 FOOT WIDTH ALLEY,ELMWOOD ADDITION,
SECTION 3,
CABINET D, PAGE 41, P.R.M.C.T.
AND
10 FOOT WIDTH ALLEY, S.W. ESTES ADDITION,
VOLUME 40, PAGE 93, D.R.M.C.T.
ABSTRACT NO. 438, CITY OF MIDLAND,
MIDLAND COUNTY, TX

PLOTTED BY: James Gardella ON: Monday, April 06, 2020 AT: 2:05 PM FILEPATH: G:\Production4000\006100\6170\001\Survey\Drawings\B006170.001 - YMCA VACATION.dwg

EXHIBIT 'B'



NOTE: The basis of bearing for this survey is the Texas State Plane Coordinate System, Central Zone, (NAD 83) based upon GPS measurements. Distances and areas are surface values. A Grid factor of 0.999899 was used for this project.

B006170.001

A metes and bounds description of even date accompanies this plat.

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
FIRM REGISTRATION 10096100

STATE OF TEXAS
REGISTERED
HAL MOULENKOPF
5439
PROFESSIONAL
LAND SURVEYOR

04-06-2020

VACATION EXHIBIT
0.2825 ACRES or 12,304 SQ. FT.

10 FOOT WIDTH ALLEY,ELMWOOD ADDITION,
SECTION 3,
CABINET D, PAGE 41, P.R.M.C.T.
AND
10 FOOT WIDTH ALLEY, S.W. ESTES ADDITION,
VOLUME 40, PAGE 93, D.R.M.C.T.
ABSTRACT NO. 438, CITY OF MIDLAND,
MIDLAND COUNTY, TX

PLOTTED BY: James Gardella ON: Monday, April 06, 2020 AT: 2:10 PM FILEPATH: G:\Production4000\006100\6170\001\Survey\Drawings\B006170.001 - YMCA VACATION.dwg

MIDLAND
Feel the Energy!

Office of the City Manager

April 3, 2020

Midland City Council
City of Midland, Texas

RE: Request for vacation of a 0.2825-acre portion of alley right-of-way located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas

Dear Members of the City Council:

The above-referenced property has been appraised in accordance with Chapter 272 of the Texas Local Government Code. The fair market value of the property is $24,608.00. The property can be vacated and recorded in the Midland County Clerk's office when the City of Midland has received this amount from the adjoining property owner(s).

Very truly yours,

Courtney Sharp
City Manager

EXHIBIT "C"

EXHIBIT 'A'

METES AND BOUNDS

BEING a 0.2825 acre tract of land situated in Section 26, Block 39, Township 1 South, T & P RR Co. Survey, Miguel Gil Survey, Abstract No. 438, Midland County, Texas, said tract being a part of a 10 foot Alley as dedicated by S.W. Estes Addition, an addition to the City of Midland, Texas, as recorded in Volume 40, Page 93, Deed Records, Midland County, Texas (D.R.M.C.T.), said tract also being part of a 10 foot Alley as dedicated by Elmwood Addition, Section 3, an addition to the City of Midland, Texas, as recorded in Cabinet D, Page 41, Plat Records, Midland County, Texas (P.R.M.C.T), said 0.2825 acre tract being more particularly described as follows:

BEGINNING at the southwest corner of said 10 foot Alley (Elmwood Addition) and the southeast corner of Lot 2, Block 19 of said Elmwood Addition, said corner being on the north right-of-way line of Kansas Avenue, from which a found 5/8-inch iron rod bears South 66 degrees 32 minutes 06 seconds East, a distance of 0.20 feet, said corner being locatable by NAD83 Grid Coordinate N= 10,697,179.47, E= 1,756,122.58;

THENCE North 14 degrees 20 minutes 44 seconds West, departing said north right-of-way line and along the east line of said Lot 2, a distance of 611.36 feet to the northeast corner of said Lot 2 and the southeast corner of Lot 1, Block 19 of said Elmwood Addition, from which a found 1/2-inch iron rod bears South 75 degrees 40 minutes 57 seconds West, a distance of 0.22 feet;

THENCE North 75 degrees 40 minutes 57 seconds East, departing the east line of said Lot 2, a distance of 10.00 feet to a point for corner on the east line of said 10 foot Alley (Elmwood Addition) and the west line of said 10 foot Alley (S.W. Estes Addition);

THENCE North 14 degrees 20 minutes 44 seconds West, along said common Alley line, a distance of 2.49 feet to a point for corner;

THENCE North 75 degrees 40 minutes 57 seconds East, departing said common Alley line, a distance of 10.00 feet to a point for corner on the east line of said 10 foot Alley (S.W. Estes Addition) and the northwest corner Lot 12, Block 6 of said S.W. Estes Addition, from which a found 5/8-inch iron rod with a cap stamped “WEST CO.” bears North 14 degrees 20 minutes 44 seconds West, a distance of 415.00 feet;

THENCE South 14 degrees 20 minutes 44 seconds East, along the east line of said 10 foot Alley (S.W. Estes Addition) and the west line of Lots 1-12 of said S.W. Estes Addition, a distance of 619.01 feet to a found 2-inch iron pipe for the southeast corner of said 10 foot Alley (S.W. Estes Addition) and the southwest corner of said Lot 1 of said S.W. Estes Addition, said corner being on the north right-of-way line of Kansas Avenue;

THENCE North 89 degrees 49 minutes 18 seconds West, along said north right-of-way line, a distance of 20.66 feet to the POINT OF BEGINNING and containing 12,304 square feet or 0.2825 acres of land, more or less.

NOTE: The basis of bearing for this survey is the Texas State Plane Coordinate System, Central Zone, (NAD 83) based upon GPS measurements. Distances and areas are surface values. A Grid factor of 0.999899 was used for this project.

B006170.001

A plat of even date accompanies this metes and bounds description.

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
FIRM REGISTRATION 10098100

STATE OF TEXAS
REGISTERED
HAL MOLLENKOPF
5439
PROFESSIONAL
LAND SURVEYOR

04-06-2020

VACATION EXHIBIT
0.2825 ACRES or 12,304 SQ. FT.

10 FOOT WIDTH ALLEY,ELMWOOD ADDITION,
SECTION 3,
CABINET D, PAGE 41, P.R.M.C.T.
AND
10 FOOT WIDTH ALLEY, S.W. ESTES ADDITION,
VOLUME 40, PAGE 93, D.R.M.C.T.
ABSTRACT NO. 438, CITY OF MIDLAND,
MIDLAND COUNTY, TX

PLOTTED BY: James Cardella ON: Monday, April 06, 2020 AT: 2:05 PM FILEPATH: G:\Production4000\006100\6170\001\Survey\Drawings\B006170.001 - YMCA VACATION.dwg

MIDLAND
Planning Division

Vacate Right-of-Way/Public Utility Easement/Land/Street Application

Project Number: V-20-0027

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)*
Printed Name: YMCA of Midland
Phone (432) 682-2551
Email: Cthomas@midlandymca.org
Address: 300. N. Big Spring St | City: Midland | State: Tx | Zip: 79701

Application is hereby made to the City Council to vacate the following:

- ☒ Right-of-Way
- ☐ Public Utility Easement
- ☐ Land
- ☐ Street

Description of Address: YMCA - Community recreation & Youth Services
Elmwood 3rd Addition Lot 2 Block 19 & SW Estates Addition Lot 1-12 Block 16

Reason for Request: Future Expansion

Reasons, in applicant's opinion, why the requested vacation will not adversely affect the public welfare or will contribute to it in a positive way: We own both property on either side of Alleyway

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Sealed metes and bounds description of the property to be vacated (included on the map) and total square feet of vacation. Include ownership, legal and deed information for adjacent property owners
- Digital Copies of Survey (PDF/JPEG)

Utility Company Approval
Clearance is needed from the following utility companies:

- City of Midland
- AT&T
- Atmos Energy
- Suddenlink Cable TV Co.
- Oncor Electric
- Grande Communications

The City will route the request to these companies, but it is the applicant's responsibility to ensure clearance has been obtained to resolve any issues that may arise.

RECEIVED
MAR 13 2020
EM

Policies

1. If the vacation request involves only a portion of a section right-of-way, such that approval would not affect the public's ability to travel along said right-of-way, then the request will be scheduled for consideration by the City Council. No public hearing will be needed.

2. If the vacation request involves an entire section of right-of-way, such that approval would cause the public to lose all rights to use it, then the following procedures apply:

   a. Nearby land owners who have a reasonable expectation to use said right-of-way, as determined by the Transportation Division, must first agree to the proposed vacation. It is the applicant's responsibility to obtain a letter of concurrence signed by the affected landowners.

   b. If all letters are received indicating that the affected landowners agree to the request, then a public hearing before the City Council will be scheduled. The Transportation Division will mail public notice of the hearing to landowners within 400 feet of the affected right-of-way.

   c. If a request is approved, the right-of-way shall be divided into two equal parts, with each half becoming the property of the respective abutting owner. If the applicant desires to own the entire width, he or she must negotiate with the opposite landowner.

Signatures Christine R. Bearden		
Applicant (signature): Christine R Bearden		Date: 3-13-2020
Affected Property Owners:		
Signature:	Print:	Date:
Signature:	Print:	Date
Signature:	Print:	Date
Signature:	Print:	Date

The Vacation of right-of-way/public utility easement/land/street shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

FOR OFFICE USE ONLY

☑ 1 FOLDED Copy of Survey ☐ Survey in Digital Format (PDF/JPEG)

☑ Application Fee

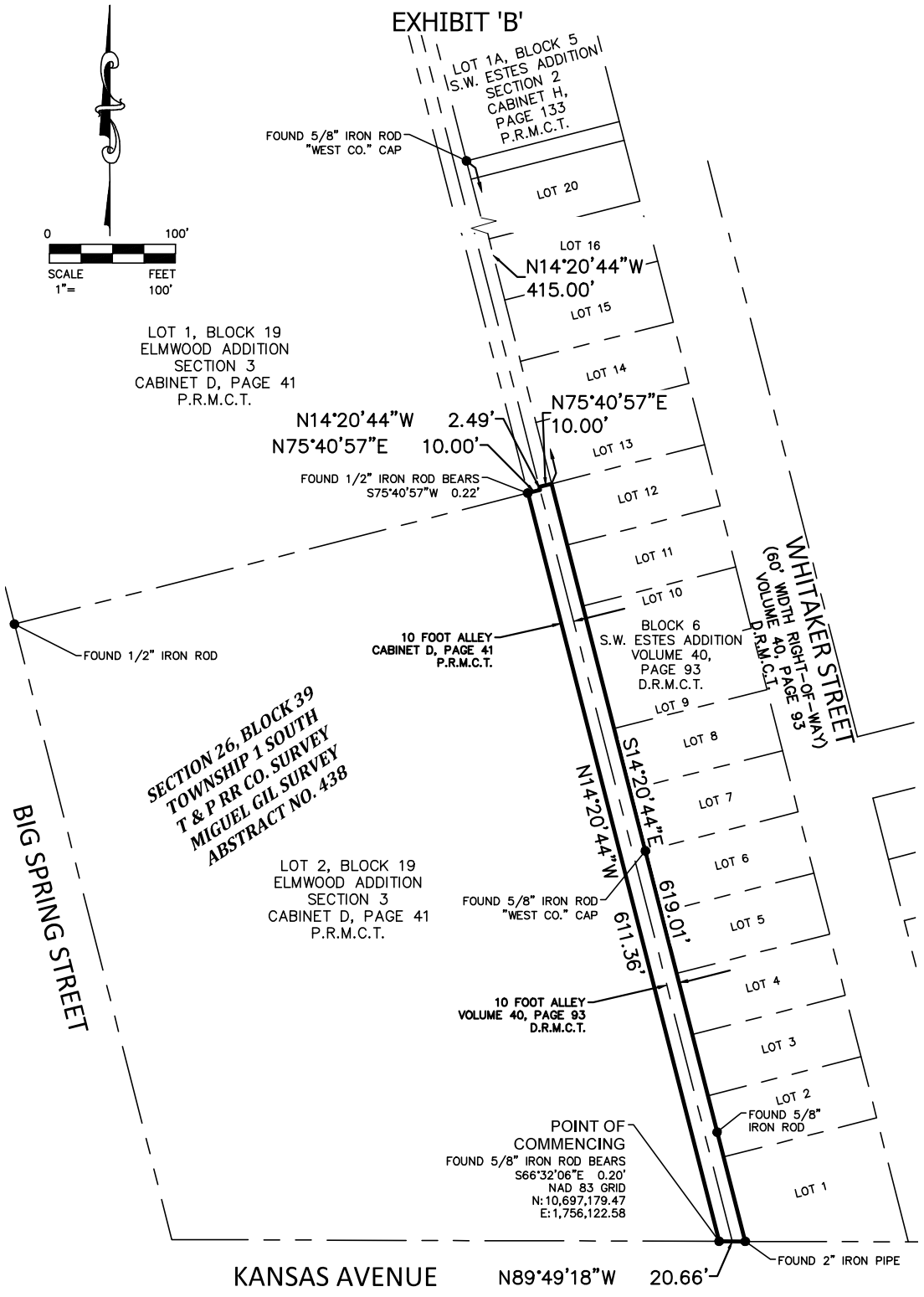
Check # 40126

Received By: EM	Date:

RECEIVED
MAR 13 2020

****Application will not be considered for scheduling until reviewed by a planner.****

EXHIBIT 'B'



NOTE: The basis of bearing for this survey is the Texas State Plane Coordinate System, Central Zone, (NAD 83) based upon GPS measurements. Distances and areas are surface values. A Grid factor of 0.999899 was used for this project.

B006170.001

A metes and bounds description of even date accompanies this plat.

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
FIRM REGISTRATION 10098100

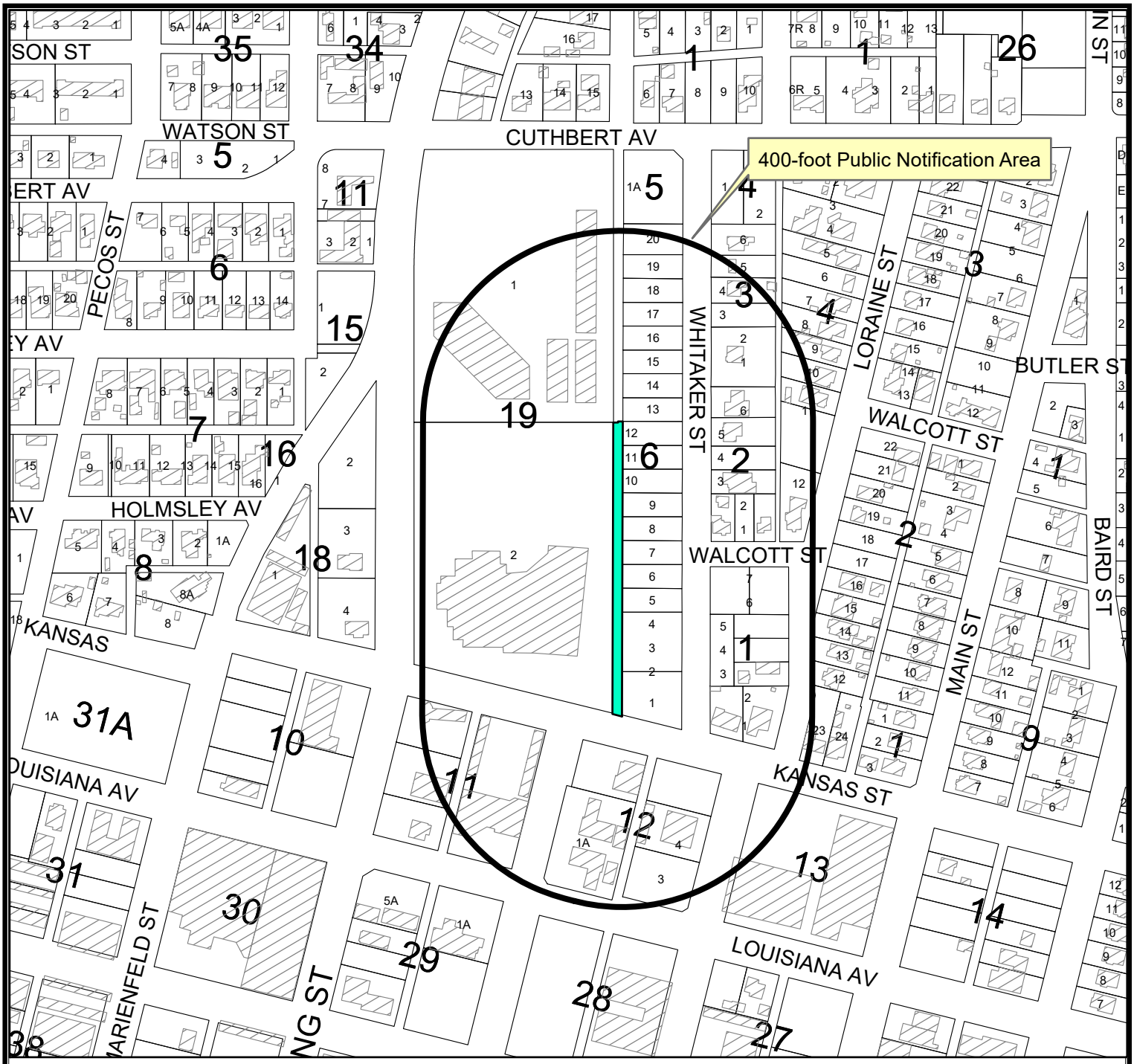
STATE OF TEXAS
REGISTERED
HAL MOLENKOPF
5439
PROFESSIONAL
LAND SURVEYOR

04-06-2020

VACATION EXHIBIT
0.2825 ACRES or 12,304 SQ. FT.

10 FOOT WIDTH ALLEY,ELMWOOD ADDITION,
SECTION 3,
CABINET D, PAGE 41, P.R.M.C.T.
AND
10 FOOT WIDTH ALLEY, S.W. ESTES ADDITION,
VOLUME 40, PAGE 93, D.R.M.C.T.
ABSTRACT NO. 438, CITY OF MIDLAND,
MIDLAND COUNTY, TX

PLOTTED BY: James Cardella ON: Monday, April 06, 2020 AT: 2:10 PM FILEPATH: G:\Production4000\006100\6170\001\Survey\Drawings\B006170.001 - YMCA VACATION.dwg



LOCATION MAP

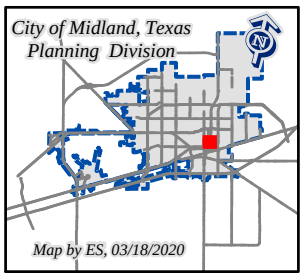
V-20-0027 **Scale: 1" = 300'**

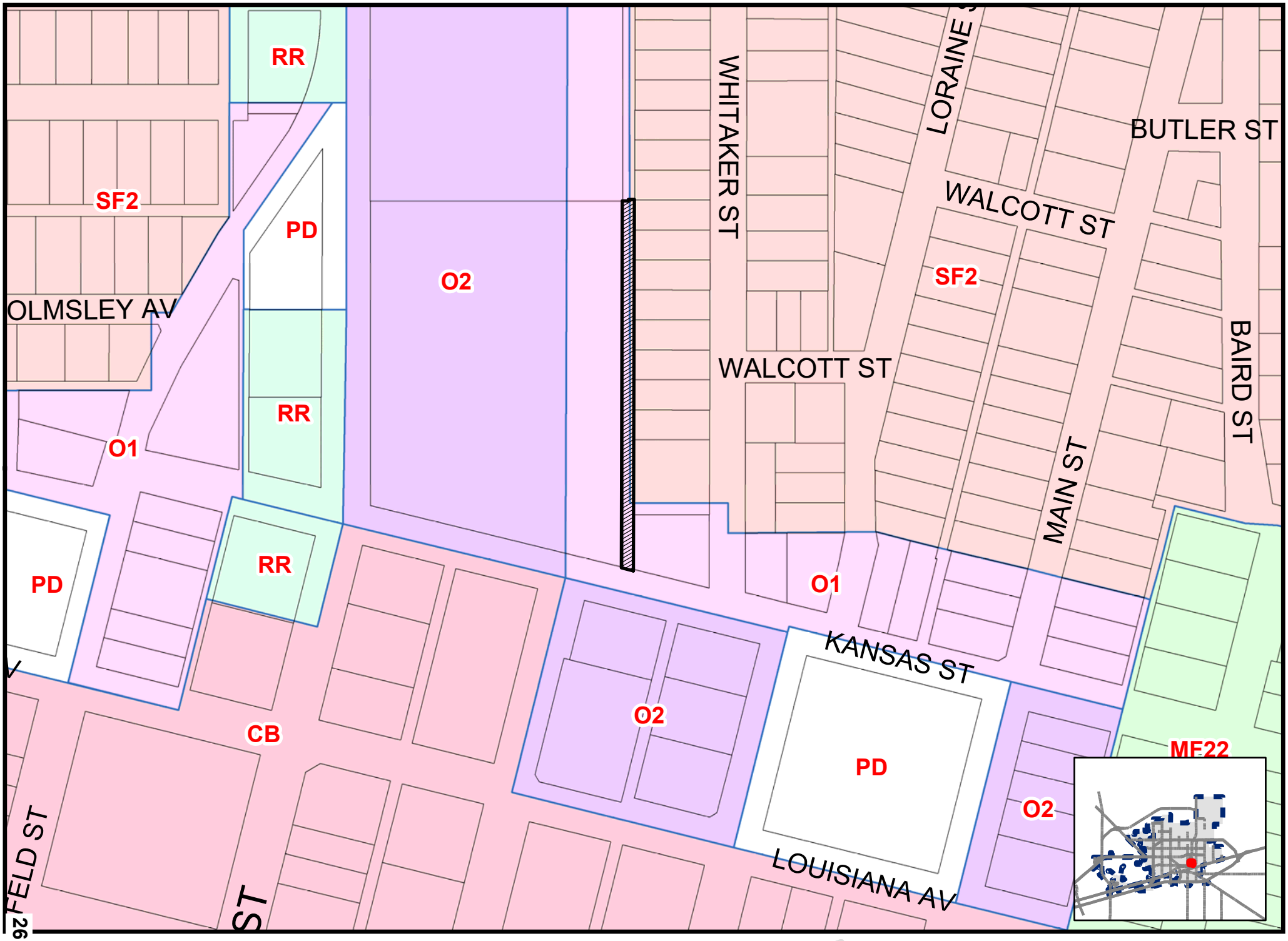
Consider a request for a vacation of a 0.2825-acre portion of alley right-of-way, located adjacent to Lot 2, Block 19, Elmwood Addition, Section 3, and Lots 1 through 12, Block 6, S. W. Estes Addition, City and County of Midland, Texas.

Generally located on the north side of W. Kansas Avenue, approximately 481-feet east of N. Big Spring Street. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS





26.16

Map By ES, 3/18/2020

V-20-0027

Scale: 1" = 200'

ZONING MAP

Elizabeth Shaughnessy

From: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Sent: Wednesday, April 1, 2020 2:06 PM
To: Elizabeth Shaughnessy
Subject: RE: External E-mail - RE: Vacation Request - The YMCA of Midland

Should be ok, as long as the vacate request is put on hold until such a time as to work out payment details.

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Wednesday, April 1, 2020 1:56 PM
To: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Subject: FW: External E-mail - RE: Vacation Request - The YMCA of Midland

[External Email]

Caution: This email originated outside of Altice USA. Please do not click links or attachments unless you recognize the sender and know the content is safe.

Good Afternoon,

I was checking in to see if you got my last email and to know if you are ok with the easement?

Thank you!

Elizabeth

From: Elizabeth Shaughnessy
Sent: Friday, March 27, 2020 2:58 PM
To: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Subject: RE: External E-mail - RE: Vacation Request - The YMCA of Midland

What that does is, that it will not allow them to build over that portion of land (in this case alley) and you have all rights to enter and conduct business as usual until they come to an agreement with you to remove/relocate the cable plant.

From: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Sent: Friday, March 27, 2020 2:55 PM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Subject: RE: External E-mail - RE: Vacation Request - The YMCA of Midland

I'm not exactly sure how that nonexclusive utility easement would work? Our cable plant is all overhead & we would have to relocate all the plant to be able to continue to service our existing customers.

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Friday, March 27, 2020 1:51 PM

To: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Subject: External E-mail - RE: Vacation Request - The YMCA of Midland

[External Email]

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Hi Luis,

Will you be in favor to move forward with the vacation if the City retains a nonexclusive utility easement until each existing easement user abandons its use of the easement?

Thank you!

Elizabeth Shaughnessy

From: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Sent: Wednesday, March 25, 2020 6:51 PM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation Request - The YMCA of Midland

We have multiple coax plant in this area, we will need to do a cost estimate to see what it'll cost to relocate & who will pay for it, we are not vacating anything unless someone pays to relocate.

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Wednesday, March 25, 2020 11:15 AM
To: Luis Montez <luis.montez@AlticeTechServicesUSA.com>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation Request - The YMCA of Midland

[External Email]
Good Morning,

I was just checking in to see if you had any questions regarding the vacation for YMCA of Midland.
It is schedule to go to City Council on April 14, therefore, we would appreciate your comments as soon as possible.

Thank you!

Best Regard,
Elizabeth Shaughnessy

From: Elizabeth Shaughnessy
Sent: Wednesday, March 18, 2020 5:05 PM
To: Luis Montez <luis.montez@suddenlink.com>
Cc: Cesar.Padilla@atmosenergy.com
Subject: Vacation Request - The YMCA of Midland

Mr. Montez,

The YMCA of Midland has requested to vacate the above described Right of Way (see attachments: Exhibit A and B). Please advise this office if your company has utilities within this right-of-way. We would appreciate any comments you may have concerning this requested vacation returned to us within 5-7 days. You may reach me at (432) 685-7407 if you have any questions.

Please let me know if you have any questions regarding vacations!

Respectfully,

Elizabeth Shaughnessy
Senior Planner|Development Services
O. 432-685-7400
E. eshaughnessy@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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Elizabeth Shaughnessy

From: drambo@midcad.org
Sent: Thursday, March 26, 2020 10:21 AM
To: Elizabeth Shaughnessy
Subject: Re: Vacation Request - The YMCA of Midland

Elizabeth...the vacation request for the 12,304 sf if valued at $ 24,608 or $ 2.00 per square foot.

Dennis Rambo
Assistant Chief Appraiser
Midland Central Appraisal District
432 699 4991 ext 3030
432 689 7185 fax

From:	Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
To:	Dennis Rambo <drambo@midcad.org>
Cc:	Cristina Burns <coburns@midlandtexas.gov>
Date:	03/18/2020 05:04 PM
Subject:	Vacation Request - The YMCA of Midland

Mr. Rambo,
The YMCA of Midland has requested to vacate the above described Right of Way (see attachments: Exhibit A and B). Please advise this office if your company has utilities within this right-of-way. We would appreciate any comments you may have concerning this requested vacation returned to us within 5-7 days. You may reach me at (432) 685-7407 if you have any questions.
Please let me know if you have any questions regarding vacations!
Respectfully,

Elizabeth Shaughnessy
Senior Planner|Development Services
O. 432-685-7400
E. eshaughnessy@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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[attachment "V-20-0027, Metes and Bounds (Exhibit A).pdf" deleted by Dennis Rambo/MCAD] [attachment "V-20-0027, Plat (Exhibit B).pdf" deleted by Dennis Rambo/MCAD] [attachment "V-20-0027, MCAD.pdf" deleted by Dennis Rambo/MCAD]

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Elizabeth Shaughnessy

From: Elizabeth Shaughnessy
Sent: Friday, March 27, 2020 4:08 PM
To: UNDERWOOD, JERRY D
Subject: RE: Vacation request - YMCA of Midland

There will not be a time limit. Thank you.

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Friday, March 27, 2020 4:06 PM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Subject: RE: Vacation request - YMCA of Midland

I will agree to that as long as there isn't a time limit on it and we have to move after a certain time.

Thanks,
Jerry

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Friday, March 27, 2020 2:51 PM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: RE: Vacation request - YMCA of Midland

What that does is, that it will not allow them to build over that portion of land (in this case alley) and you have all rights to enter and conduct business as usual until they come to an agreement with you to remove facilities.

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Friday, March 27, 2020 1:54 PM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Subject: RE: Vacation request - YMCA of Midland

I'm not sure what that means.

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Friday, March 27, 2020 1:53 PM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Subject: RE: Vacation request - YMCA of Midland

Hi Jerry,

Will you be in favor to move forward with the vacation if the City retains a nonexclusive utility easement until each existing easement user abandons its use of the easement?

Thank you!

Elizabeth Shaughnessy

From: UNDERWOOD, JERRY D <ju1659@att.com>
Sent: Thursday, March 19, 2020 7:13 AM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation request - YMCA of Midland

AT&T does have facilities in this area and it would be at the cost of the customer to relocate the facilities before any vacation of an alley could be done.

Thanks,
Jerry

From: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
Sent: Wednesday, March 18, 2020 5:05 PM
To: UNDERWOOD, JERRY D <ju1659@att.com>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: Vacation request - YMCA of Midland

Mr. Underwood,

The YMCA of Midland has requested to vacate the above described Right of Way (see attachments: Exhibit A and B). Please advise this office if your company has utilities within this right-of-way. We would appreciate any comments you may have concerning this requested vacation returned to us within 5-7 days. You may reach me at (432) 685-7407 if you have any questions.

Please let me know if you have any questions regarding vacations!

Respectfully,

Elizabeth Shaughnessy
Senior Planner|Development Services
O. 432-685-7400
E. eshaughnessy@midlandtexas.gov

MIDLAND
Feel the Energy!

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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ATMOS energy

ATMOS ENERGY

West Texas Division
P.O. Box 1111,
Midland, Texas 79702

City of Midland
Elizabeth Shaughnessy
300 N. Loraine
Midland, Texas 79701

March 22, 2020

Re: Case Name: YMCA Alley Vacation
Case Number: V-20-0027

Mrs. Shaughnessy,

Atmos Energy has no objection to the above referenced changes to the alley right of way between Big Spring Street and Main Street north of Kansas Ave. We have no gas lines or facilities located within this section of right of way.
Please let me know if you have any further questions.

Sincerely,

Mark Lieb

Mark Lieb
Project Specialist
Atmos Energy/Permian Basin
432-617-3447 office
mark.lieb@atmosenergy.com

Elizabeth Shaughnessy

From: William Bentley <william.bentley@mygrande.com>
Sent: Monday, March 30, 2020 6:05 AM
To: Elizabeth Shaughnessy
Cc: Kelley Carson; Vicki Byler
Subject: Re: Vacation Request - The YMCA of Midland

Elizabeth,
I would as long as Grande was allowed easy access for maintenance purposes. We would be opposed to being locked out or having to ask for permission to do repair and maintenance of our existing plant.
Thanks,
Bill

On Fri, Mar 27, 2020 at 1:52 PM Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov> wrote:

> Hi William,
>
> Will you be in favor to move forward with the vacation if the City retains a nonexclusive utility easement until each existing easement user abandons its use of the easement?
>
> Thank you!
>
> Elizabeth Shaughnessy
>
> ---
>
> **From:** William Bentley <william.bentley@mygrande.com>
> **Sent:** Thursday, March 19, 2020 7:58 AM
> **To:** Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>
> **Cc:** Cristina Burns <coburns@midlandtexas.gov>; Kelley Carson <kelley.carson@mygrande.com>; Vicki Byler <vicki.byler@mygrande.com>
> **Subject:** Re: Vacation Request - The YMCA of Midland
>
> Elizabeth, See the attached letter.
>
> Thanks,
>
> Bill

On Wed, Mar 18, 2020 at 5:03 PM Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov> wrote:

Mr. Bentley,

The YMCA of Midland has requested to vacate the above described Right of Way (see attachments: Exhibit A and B). Please advise this office if your company has utilities within this right-of-way. We would appreciate any comments you may have concerning this requested vacation returned to us within 5-7 days. You may reach me at (432) 685-7407 if you have any questions.

Please let me know if you have any questions regarding vacations!

Respectfully,

Elizabeth Shaughnessy

Senior Planner|Development Services

O. 432-685-7400

E. eshaughnessy@midlandtexas.gov

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

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--

William (Bill) Bentley

Construction Coordinator

Midland/Odessa

432.272.3086 Office

432.653.9369 Cell

william.bentley@mygrande.com

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--

William (Bill) Bentley

Construction Coordinator

Midland/Odessa

432.272.3086 Office

432.653.9369 Cell

william.bentley@mygrande.com

2401 E IH 20 Odessa Tx 79766

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Grande Construction Office
Midland-Odessa
2401 East Interstate Highway 20
Odessa Texas 79766

March 19th, 2020

Elizabeth Shaughnessy,

Senior Planner

City of Midland

Planning Division

Re: V-20-0027, YMCA Alley Vacation

Dear Elizabeth,

Grande Communications does have both Aerial Coax facilities in the Right-of-Way Segment known as Vacate V-20-0027. Costs to relocate our facilities can be provided upon request.
Please let me know if I can be of further assistance.

Sincerely

Bill Bentley

William (Bill) Bentley
Construction Coordinator
Midland/Odessa
432.272.3086 Office
432.653.9369 Cell
william.bentley@mygrande.com

GRANDE COMMUNICATIONS

Elizabeth Shaughnessy

From: Henderson, Jeffrey <Jeffrey.Henderson@oncor.com>
Sent: Wednesday, April 1, 2020 2:21 PM
To: Elizabeth Shaughnessy; Pino, Mariana; Matai, Sarah
Cc: Cristina Burns
Subject: RE: Vacation Request - The YMCA of MIdland

I had one of my people look at this today. He advised me we have an overhead line in the alley. I will drive by and look at it myself this afternoon but after speaking with him we will not be able to vacate the alley way without an easement for our facilities.
I will let you know more soon.
Thanks.
Jeff

Jeffrey R. Henderson
PMDS Supervisor-NCM
Oncor Electric Delivery
Midland Service Center
2401 W. Industrial Ave.
Midland, TX 79701
Ofc: 432-756-4113
jeffrey.henderson@oncor.com

Oncor.com

From: Elizabeth Shaughnessy [mailto:eshaughnessy@midlandtexas.gov]
Sent: Wednesday, April 01, 2020 1:59 PM
To: Henderson, Jeffrey; Pino, Mariana; Matai, Sarah
Cc: Cristina Burns
Subject: RE: Vacation Request - The YMCA of MIdland

Good Afternoon,

I was just checking in to know the status on your approval for this vacation. Also wanted to let you know that they will be leaving a utility easement until all utilities have been removed or relocated.

Please let me know if you have any questions.

Thank you!

Elizabeth Shaughnessy

From: Henderson, Jeffrey <Jeffrey.Henderson@oncor.com>
Sent: Friday, March 27, 2020 4:11 PM
To: Elizabeth Shaughnessy <eshaughnessy@midlandtexas.gov>; Pino, Mariana <Mariana.Pino@oncor.com>; Matai, Sarah <Sarah.Matai@oncor.com>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation Request - The YMCA of MIdland

I will go look at it tomorrow. Sorry for the delay. I am the only one at this time doing vacate requests at this time. Just so you know, Sarah is no longer working at Oncor. She can be removed from any further correspondences.
Thanks.
Jeff

Jeffrey R. Henderson
PMDS Supervisor-NCM
Oncor/WTX Major Design
Midland Service Center
2401 W. Industrial Ave.
Midland, TX 79701
Ofc: 432-756-4113

jeffrey.henderson@oncor.com

From: Elizabeth Shaughnessy [mailto:eshaughnessy@midlandtexas.gov]
Sent: Friday, March 27, 2020 3:49 PM
To: Henderson, Jeffrey <Jeffrey.Henderson@oncor.com>; Pino, Mariana <Mariana.Pino@oncor.com>; Matai, Sarah <Sarah.Matai@oncor.com>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation Request - The YMCA of MIdland

Good Afternoon,

I was just checking in to see if you had any questions regarding the vacation for YMCA of Midland.
It is schedule to go to City Council on April 14, therefore, we would appreciate your comments as soon as possible.

Please let me know if you have any questions.

Thank you!

Best,

Elizabeth Shaughnessy

From: Elizabeth Shaughnessy
Sent: Wednesday, March 25, 2020 11:13 AM
To: 'Henderson, Jeffrey' <Jeffrey.Henderson@oncor.com>; 'Pino, Mariana' <Mariana.Pino@oncor.com>; 'sarah.matai@oncor.com' <sarah.matai@oncor.com>
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: RE: Vacation Request - The YMCA of MIdland

Good Morning,

I was just checking in to see if you had any questions regarding the vacation for YMCA of Midland.
It is schedule to go to City Council on April 14, therefore, we would appreciate your comments as soon as possible.

Thank you!

Best Regard,
Elizabeth Shaughnessy

From: Elizabeth Shaughnessy
Sent: Wednesday, March 18, 2020 5:05 PM
To: Henderson, Jeffrey <Jeffrey.Henderson@oncor.com>; Pino, Mariana <Mariana.Pino@oncor.com>; sarah.matai@oncor.com
Cc: Cristina Burns <coburns@midlandtexas.gov>
Subject: Vacation Request - The YMCA of MIdland

Mr. Henderson, Ms. Matia and Ms. Pino,

The YMCA of Midland has requested to vacate the above described Right of Way (see attachments: Exhibit A and B). Please advise this office if your company has utilities within this right-of-way. We would appreciate any comments you may have concerning this requested vacation returned to us within 5-7 days. You may reach me at (432) 685-7407 if you have any questions.

Please let me know if you have any questions regarding vacations!

Respectfully,

Elizabeth Shaughnessy
Senior Planner|Development Services
O. 432-685-7400
E. eshaughnessy@midlandtexas.gov

MIDLAND
Feel the Energy!

300 N. Loraine | P.O. Box 1152 | Midland, TX 79702

ATTENTION ELECTED OFFICIALS:
A "Reply to All" of this e-mail could lead to violations of the Texas Open Meetings Act. Please reply only to the sender.

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CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

26.35

26.37

City Council Agenda

Approved for Agenda:
rwpatrick
City Manager's Office

MEETING DATE: **April 14, 2020**

TO: **CITY COUNCIL**

FROM: **Eric Myers, Planner**

SUBJECT: **Hold a public hearing and consider an ordinance on a request by Midland (King) DTP, LLC, for a zone change from LI, Light Industrial District to C, Commercial District on Lots 3 and 4, Block 2, Overstreet Addition, Section 2, City and County of Midland, Texas. (Generally located on the southwest corner of the intersection of Garden City Highway and King Street. Council District 2)**

Purpose:

The applicant, Midland (King) DTP, LLC, is requesting a Zone Change from LI, Light Industrial District to C, Commercial District on Lots 3 and 4, Block 2, Overstreet Addition, Section 2, City and County of Midland, Texas, to build a retail store.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Surrounding Zoning and Land Use:

The properties to the north, east, south, and west are zoned LI, Light Industrial District, and are the locations of industrial buildings.

Discussion:

The property is located at 2410 Garden City Highway and is currently vacant. The applicant

is proposing to build a 9,000 square foot retail store.

Per the previous zoning ordinance, retail would have been permitted in the existing zoning district, but the zoning ordinance adopted on July 1, 2019, does not allow retail use in the LI, Light Industrial District.

This proposed zone change has been circulated to and reviewed by respective City departments and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objections

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Engineering: (Approved)

No objection to zone change.
Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

Code: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.

No objection to zone change.

Planning:

Per the Future Land Use Map, this location is designated as a special study area. Although this area is primarily used for industrial purposes, Garden City Highway is a major corridor where retail uses would be appropriate.

The Planning and Zoning Commission recommended approval of this request at the March 16, 2020 meeting.

Staff recommends **approval** of the zone change from LI, Light Industrial District to C, Commercial District.

Conditions:

A. That the use and development of this property shall conform to the regulations of the C, Commercial District.

Letters of Objection:

Staff has received one objection letter as of March 11, 2020.

Attachments:

Application
Site Plan
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 3 AND 4, BLOCK 2, OVERSTREET ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM LI, LIGHT INDUSTRIAL DISTRICT TO C, COMMERCIAL DISTRICT (GENERALLY LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF GARDEN CITY HIGHWAY AND KING STREET); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lots 3 and 4, Block 2, Overstreet Addition, Section 2, City and County of Midland, Texas (the "Property") to C, Commercial District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from LI, Light Industrial District to C, Commercial District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances

inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2020; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2020, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2020.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, Assistant City Manager

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: Z-20-0171

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)*		Phone (615) 370-0670
Printed Name: Midland (King) DTP, LLC		Email gglaser@gbtrealty.com
Address 9010 Overlook Blvd	City Brentwood	State TN / Zip 30727

Property Owner		Phone (432) 978-754
Printed Name: Alfredo Chavez		Email
Address 900 W. Florida Ave.	City Midland	State TX / Zip 79701

Representative *(if different from Applicant or Property Owner)*		Phone (615) 519-8208
Firm: GBT Realty Corporation		
Printed Name: Bob Gage		Email bgage@gbtrealty.com
Address 9010 Overlook Blvd	City Brentwood	State TN / Zip 37027

Street Address: 2410 Garden City Highway

Legal Description

Lot: 003 & 004 Block: 002 Subdivision: Overstreet Sec 2, City of Midland

Current Zoning: LI Light Industrial

Proposed Zone: C- Commercial
(List by tracts if more than one district is requested)

Reason for Zone Change Request: Build a retail store

Present Use of Property: Vacant

Proposed Use of Property: Construct a 9,000 square foot retail store with parking and utilities on the 1.05 acre tract

How would this zone change affect the public health, safety and welfare?
The retail development would benifit the public and community. Neighboring busineses are supply and rental facilities

Describe how conditions affecting the property have changed since present zoning designation: This area of town is just north of Highway 20. It would benifit the community to have more retail developments and less industrial facilities.

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature):	Date: 2-10-2020
Applicant (printed): Greg Glaser, Development Manager	
Property Owner (signature):	Date: 2-8-2020
Property Owner (printed) : Alfredo Chavez	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF ~~TEXAS~~ Tennessee
COUNTY OF ~~MIDLAND~~ Davidson

Before me, the undersigned authority, on this day personally appeared GREG GLASER who, being by me duly sworn, upon oath says: That (s)he is authorized by Alfredo Chavez, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

JULIA FRANKS LOYD NOTARY PUBLIC STATE OF TENNESSEE COUNTY OF DAVIDSON

Subscribed and sworn to before me, this 10th day of February, 2020, to certify which witness my hand and seal of office.

NOTARY PUBLIC, ~~MIDLAND~~ Davidson COUNTY, ~~TEXAS~~ Tennessee

FOR OFFICE USE ONLY

☑ Property Owner Authorization	☐ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # 023218	
Received By:	Date: RECEIVED FEB 19 2020

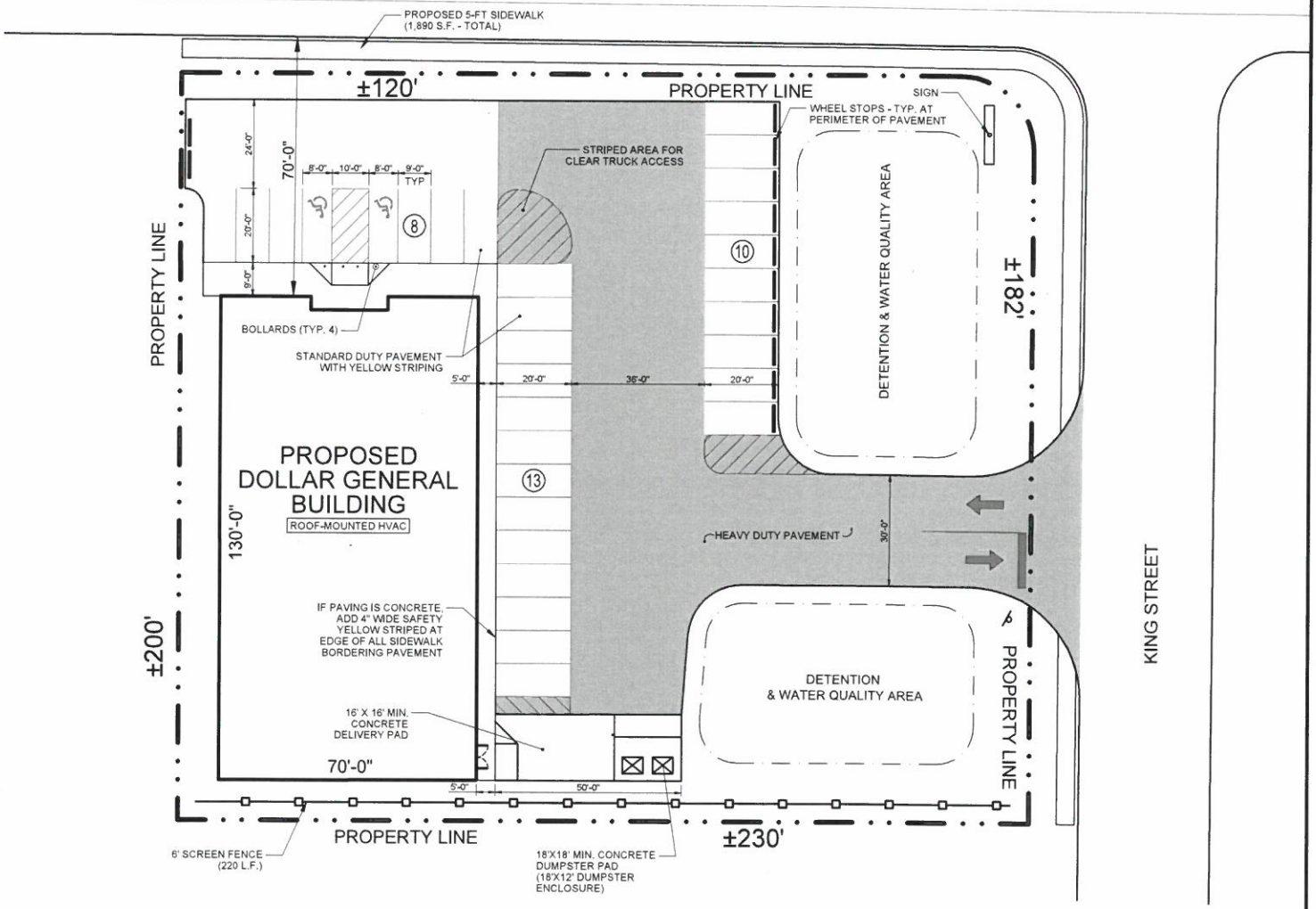
BY: .....

****Application will not be considered for scheduling until reviewed by a planner.****

PRELIMINARY SITE PLAN

MIDLAND, TEXAS (140)
Garden City Highway (TX-158) & King Street

PROTOTYPE:	A	DEVELOPER		DESIGNER		DATE
BLDG/SALES SF:	9,026 / 7,263	Company:	GBT Realty Corp.	Company:	GBT Realty Corp.	01-28-20
ACREAGE:	1.05	Name:	Austin Rogers	Name:	Jacob Carter	
PARKING SPACES:	31	Phone #:	(615) 370-0670	Phone #:	(615) 370-0670	



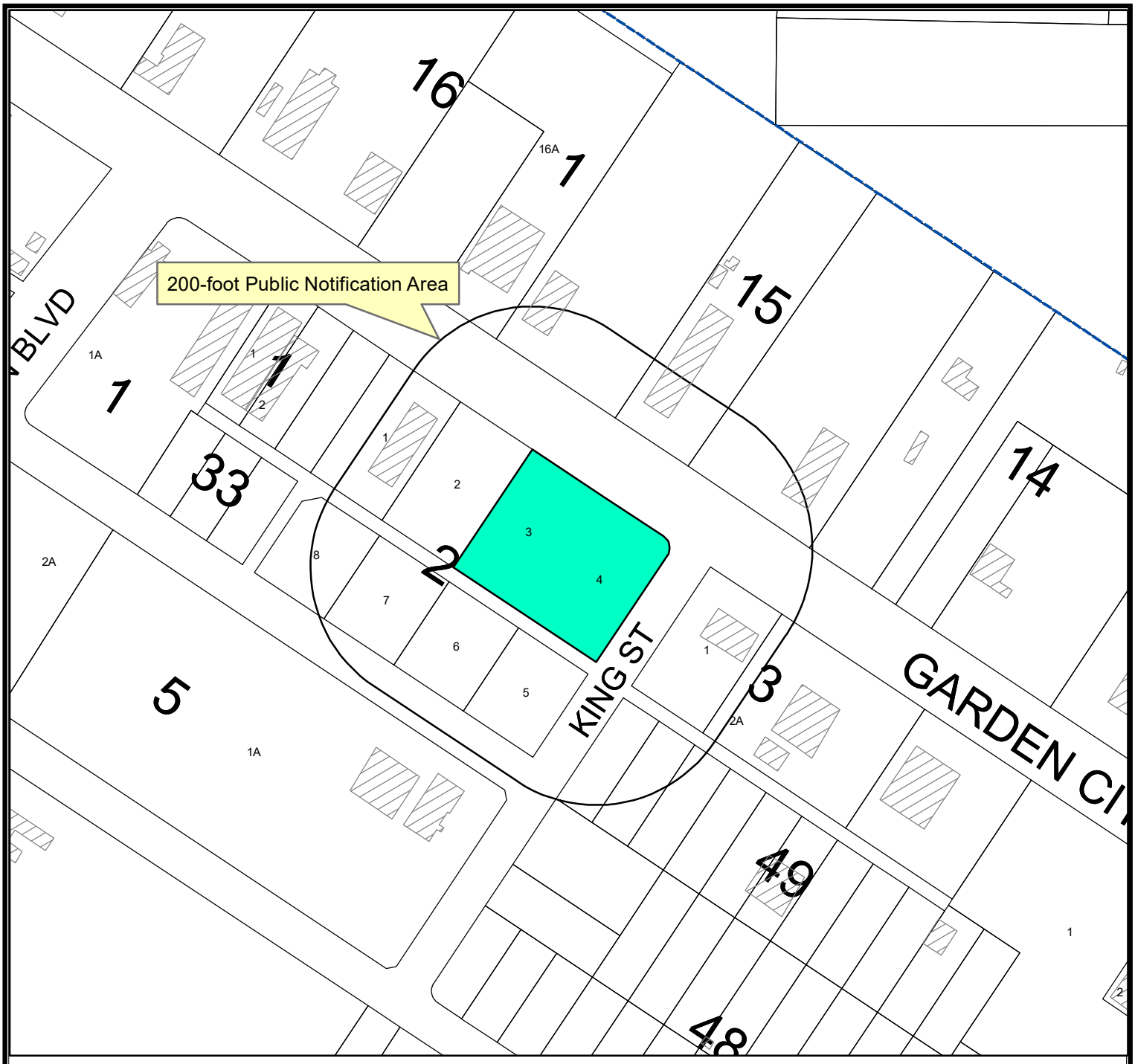
NOTE:
DIMENSIONS SHOWN ALONG PROPERTY, RIGHT-OF-WAY, AND/OR LEASE LINES ARE PRELIMINARY AND SHOWN FOR INFORMATIONAL PURPOSES ONLY

NOTE:
PARKING REQUIRED BY CODE:
1 SPACE / 300 G.F.A. = 31 SPACES

RE-PLATTING REQUIRED

NORTH

SCALE = NTS



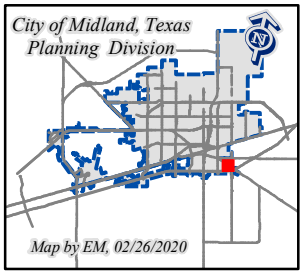
LOCATION MAP

Z-20-0171 **Scale: 1" = 200'**

Consider a request by Midland (King) DTP, LLC, for a zone change from LI, Light Industrial District to C, Commercial District on Lots 3 & 4, Block 2, Overstreet Addition, Section 2, City and County of Midland, Texas. Generally located on the southwest corner of the intersection of Garden City Highway and King Street. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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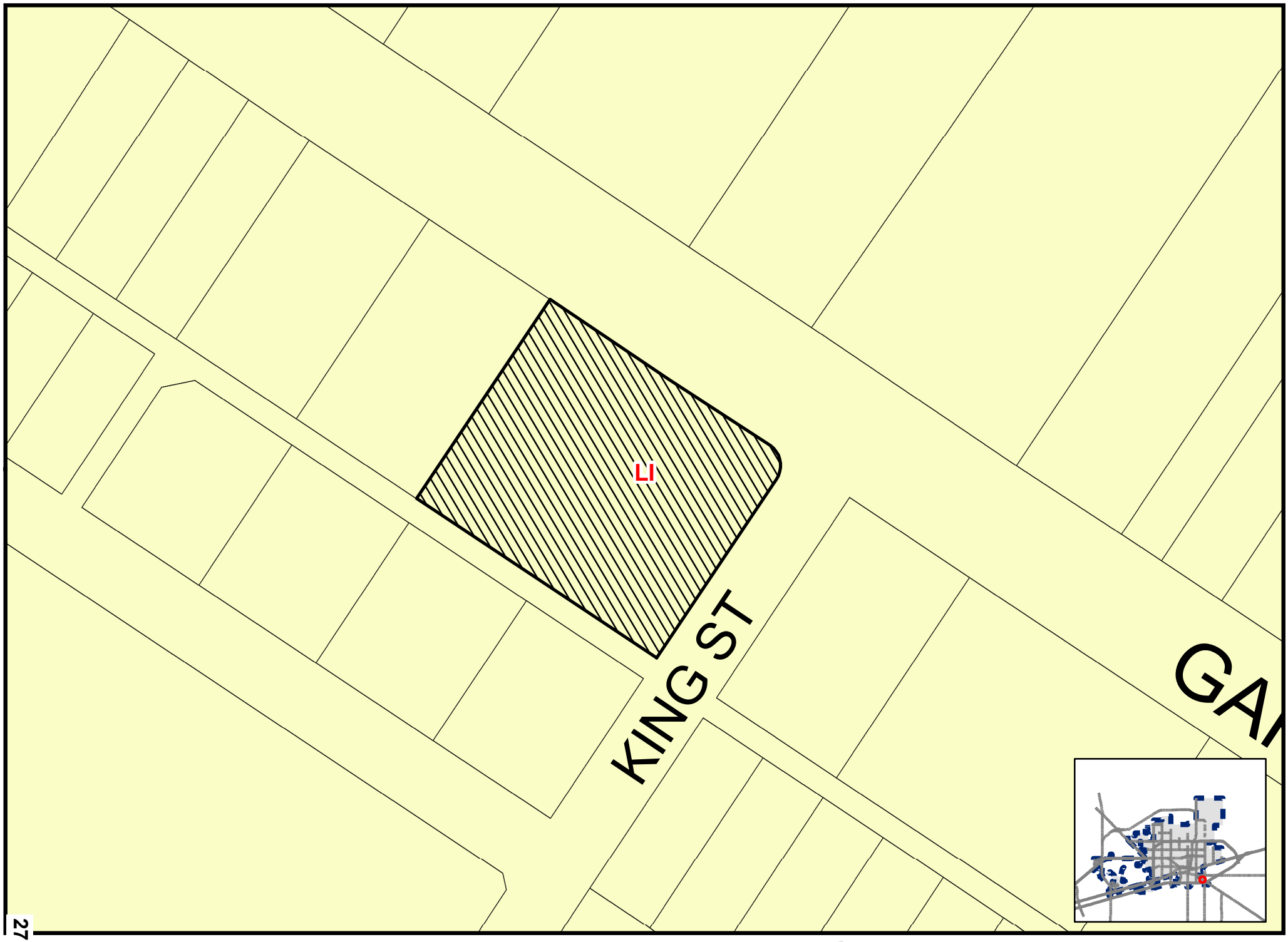

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ap By EM, 2/26/2020

Z-20-0171

Scale: 1" = 100'

ZONING MAP

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BOARDS AND COMMISSIONS OF THE CITY OF MIDLAND
April 14, 2020

AIRPORT PLANNING AND DEVELOPMENT BOARD

(Advisory)
(Membership-10; Terms - 3 Years expiring 3-3-4.)

	Appt Date	Term Expires	Eligibility Expires
John Trischitti III	*09/13	Sept 30 2020	Sept 30 2020
Bill Dingus	09/14	Sept 30 2020	Sept 30 2020
Wes Reeves	08/15*	Sept 30 2020	Sept 30 2023
Keith Valentine	04/15*	Sept 30 2020	Sept 30 2023
Armand “Chip” Smith	09/18	Sept 30 2021	Sept 30 2024
Nick Hood	09/15	Sept 30 2021	Sept 30 2021
Earl Erdman	02/16*	Sept 30 2022	Sept 30 2022
Scooter Brown	09/16	Sept 30 2022	Sept 30 2022
Justin Kuethe	09/19	Sept 30 2022	Sept 30 2025
Nick McClure	09/19	Sept 30 2022	Sept 30 2025

Lori Blong (Liaison)

Ex-Officio members are Earl Erdman and Harry Spannaus, the City Manager and the City Attorney. The Secretary is the Director of Aviation.

ANIMAL SERVICES ADVISORY COMMISSION

(Advisory)
(Membership - 6; Terms - 4 Years)

	Appt Date	Term Expires	Eligibility Expires
Sara Harris	03/18*	Sept 30 2021	Sept 30 2029
Leah Lewis	09/17	Sept 30 2021	Sept 30 2025
Robert “Robin” Donnelly	11/13	Sept 30 2021	Sept 30 2021
Dr. (Erickson) Lee (Veterinarian)	05/14	Sept 30 2022	Sept 30 2022
LuAnn Morgan	07/15*	Sept 30 2022	Sept 30 2026
Alyson Dial	09/18	Sept 30 2022	Sept 30 2026

Spencer Robnett (Liasion)

BUILDING AND FIRE CODE REVIEW COMMITTEE/CONSTRUCTION BOARD OF ADJUSTMENTS & APPEALS

(Membership – 9; Terms – 6 Years)

Shall consist of two architects, a fire protection contractor or specialist, a general contractor, an electrical contractor, a homebuilder, a plumbing and mechanical contractor, a structural engineer, a City Council Liaison

	Appt Date	Term Expires	Eligibility Expires
Ryan Almand (Electrical Contractor)	12/18	Sept 30 2024	Sept 30 2030
Jay Bradford (Architect)	12/18	Sept 30 2024	Sept 30 2030
Ron Ainsworth (Plumbing & Mechanical Contractor)	12/18	Sept 30 2024	Sept 30 2030
T.J. McClure (Architect)	12/18	Sept 30 2024	Sept 30 2030
Laurence Oeth (Structural Engineer)	12/18	Sept 30 2024	Sept 30 2030
David Hickman (Fire Protection)	12/18	Sept 30 2024	Sept 30 2030
Gary Glasscock (General Contractor)	12/18	Sept 30 2024	Sept 30 2030
Robert Anderson (Homebuilder)	12/18	Sept 30 2024	Sept 30 2030
Spencer Robnett (Liaison)	12/18	Sept 30 2024	Sept 30 2030

CAPITAL IMPROVEMENT ADVISORY COMMITTEE

(Advisory)

(Membership – 7)

A minimum of 40% must be representative of real estate, development, or building industries who are not employees or officials of a political subdivision or governmental entity.)

	Appt Date
Carl Craigo	10/19
Walter Pate	06/18
Mark Payne	06/18
Courtney Black	06/18
Brian Sales	06/18
Chuck Harrington	06/18
Jose Ortiz	06/18

CITIZENS DEVELOPMENT AND HOTEL/MOTEL ADVISORY BOARD

(Advisory)

(Membership - 7; Terms - 2 Years Staggered)

4 2020, 3 -2021

	Appt Date	Term Expires	Eligibility Expires
Joey Hopkins	10/18	Sept 30 2020	Sept 30 2022
Ashlee Nelson	10/18	Sept 30 2020	Sept 30 2022
Alex Singh	10/18	Sept 30 2020	Sept 30 2022
Becky Wisdom	10/18	Sept 30 2020	Sept 30 2022
Ellen K. Ramsey	10/18	Sept 30 2021	Sept 30 2023
Kate Williamson	10/18	Sept 30 2021	Sept 30 2023
David Blackketter	10/18	Sept 30 2021	Sept 30 2023
Sharla Hotchkiss (Liaison)			

*** Indicates appointment to an unexpired term.**

MANAGED COMPETITION COMMITTEE

(Ad Hoc)

	Appt. Date
Jon Morgan	01/02
Wes Perry	01/02
Roy Nelson	01/02
Hugh “Andy” Shaffer	12/03
Scott Dufford	01/02
Ted Tipton	04/04
Kevin Sparks	11/07
Scott Lovett	04/10
P. Lourcey Sams	04/10

Ex-Officio members are the Mayor and the City Manager.

MIDLAND CENTRAL APPRAISAL DISTRICT BOARD OF DIRECTORS

Five Directors, Elected by Local Taxing Entities.
City Nominates/Cast Vote for one Director
(Terms - 2 Years)

	Appt Date	Term Expires
Robert McNaughton	11/15	Dec 31 2021

MIDLAND DEVELOPMENT CORPORATION

(Membership - 5; Terms -3 Years - Staggered)

	Appt Date	Term Expires	Eligibility Expires
Chase Gardaphe	01/19	Jan 14 2022	Jan 14 2025
Wesley Bownds	07/15*	Jan 14 2022	Jan 14 2022
Barry Simpson	01/19	Jan 14 2022	Jan 14 2025
Stephen Lowery	01/17	Jan 14 2023	Jan 14 2023
Lori Blong	02/20	Jan 14 2023	Jan 14 2026

MIDLAND FRESH WATER SUPPLY DISTRICT #1

(Ad Hoc)
(3 Non Voting Members)

	Appt Date
Wes Perry	05/12
Gary Harris	05/12
Wayne Merritt	05/12

*** Indicates appointment to an unexpired term.**

MIDLAND HIGHER EDUCATION FACILITIES CORPORATION

(Membership - 7; Terms - 2 Years Staggered)

	Appt Date	Term Expires	Eligibility Expires
Steve Jones	**09/08***	**Jan 1 2010**	**Jan 1 2012**
Cathy Oestmann	**11/05***	**Jan 1 2010**	**Jan 1 2010**
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2007**	
Vacancy		**Jan 1 2009**	
Curt Kamradt	**11/05***	**Jan 1 2014**	**Jan 1 2014**

Sharla Hotchkiss (Liaison)

MIDLAND HOUSING AUTHORITY COMMISSION

(Membership - 5; Terms - 2 Years expiring 2 even & 3 odd.)

Appointments Made by Mayor (LGC 392.031)

	Appt Date	Term Expires
Dennis Bade	09/12	Oct 2020
Marjorie McQuerry	10/16	Oct 2020
Brandon Bradley	09/17	Oct 2021
Sylvestor Cantu	09/18*	Oct 2021
Cheryl Wadley (Resident Commissioner)	11/19	Oct 2021

Isaac Garnett (Staff Liasion)

MIDLAND MUNICIPAL MANAGEMENT DISTRICT BOARD

(Ad Hoc)

	Appt. Date
Vacancy	
W. L. “Scooter” Brown	09/04
Vacancy	
Richard Hatchett	11/08
Vacancy	
Ted H. Jones	09/04
Mitch Malouf	11/08
Christi Newton	09/04
Dan Rush	09/04

*** Indicates appointment to an unexpired term.**

MIDLAND-ODESSA URBAN TRANSIT DISTRICT BOARD

(Decision Making)
(Membership - 6; Terms - 2 Years Staggered)

	Appt Date	Term Expires	Eligibility Expires
Jody Sneed	05/15*	Sept 30 2019	Sept 30 2019
Sharla Hotchkiss	02/14*	Sept 30 2019	Sept 30 2019
VACANT (Westmoreland)	06/18*	Sept 30 2020	Sept 30 2022
E. J. Baldridge	10/18	Sept 30 2020	Sept 30 2022
Iris Foster	06/18*	Sept 30 2020	Sept 30 2022
Joseph Sanchez	12/19	Sept 30 2021	Sept 30 2023

MIDLAND SPACEPORT DEVELOPMENT CORPORATION

(Membership – 7, Terms – 2 Years)

	Appt Date	Term Expires
Gina Lewis (City)	10/19	Jun 1 2021
Lori Blong (City)	01/20	Jun 1 2022
Zackary Deck (City)	02/20	Jun 1 2022
Frank Tarzian (City)	02/20	Jun 1 2022
Scott Ramsey (County)	11/17	Jun 1 2021
Robert Donnelly (County)	06/14	Jun 1 2021
VACANT (Echols)(County)	06/14	Jun 1 2021

Justine Ruff (Liaison)

OIL AND GAS ADVISORY COMMITTEE

(Advisory)
(Membership – 5; Terms – 3 Years expiring 2-2-1)
2 real property developer, real estate sales, or developer; 3 Lic. petroleum engineer, engineer w/ bachelor, or geologist

	Appt Date	Term Expires	Eligibility Expires
Stephen Brumley (Petroleum Eng.)	11/15	Sept 30 2021	Sept 30 2021
Court Adkins (Petroleum Eng.)	09/17	Sept 30 2020	Sept 30 2023
Bill Lanier (Real Estate)	09/18	Sept 30 2021	Sept 30 2024
Scott Bowden (Real Estate)	10/19	Sept 30 2022	Sept 30 2025
Ross Klabon (Petroleum Eng.)	10/19	Sept 30 2022	Sept 30 2025

*** Indicates appointment to an unexpired term.**

PARKS AND RECREATION COMMISSION

(Advisory)
(Membership - 9; Terms - 3 Years expiring 3-3-3.)

	Appt Date	Term Expires	Eligibility Expires
Lisa Fitzgerald	09/17	Sept 30 2020	Sept 30 2023
VACANT (Stralow)		Sept 30 2020	
Michael Harris	09/14	Sept 30 2020	Sept 30 2020
VACANT (Ladd)		Sept 30 2021	
Shirley Howard	02/16*	Sept 30 2021	Sept 30 2024
Connie Ferguson	09/16	Sept 30 2022	Sept 30 2022
Stephanie Martin	10/16	Sept 30 2022	Sept 30 2022
Laura Smith	10/19	Sept 30 2022	Sept 30 2025
Francis Schammel	10/19	Sept 30 2022	Sept 30 2025
Tina Juaz (Liaison)			

PERMIAN BASIN COMMUNITY CENTER FOR MENTAL HEALTH AND MENTAL RETARDATION

(Decision Making)
(Membership - 2 (City); Terms - 2 Years)

	Appt Date	Term Expires
Mark Dettman (City)	07/18	June 2020
Larry Edgerton (City)	07/10*	June 2021

PERSONNEL BOARD OF APPEALS

(Decision Making)
(Membership - 3; No designated terms. Mayor appoints.)

	Appt. Date
Scott Dufford	01/14
John B. Love III	01/14
Hugh A. “Andy” Shaffer	09/05

*** Indicates appointment to an unexpired term.**

PLANNING AND ZONING COMMISSION

(Advisory & Decision Making)
(Membership - 7; Terms - 3 Years)

	Appt Date	Term Expires	Eligibility Expires
Warren Ivey	10/12*	Sept 30 2020	Sept 30 2020
Joshua Sparks	01/14*	Sept 30 2020	Sept 30 2020
Diane Williams	09/17	Sept 30 2020	Sept 30 2023
Reggie Lawrence	09/14*	Sept 30 2021	Sept 30 2021
Chase Gardaphe	01/14*	Sept 30 2022	Sept 30 2022
Kevin Wilton	09/16	Sept 30 2022	Sept 30 2022
Karmen Bryant	02/19*	Sept 30 2022	Sept 30 2025
ALTERNATES:			
Stacey Jo Grosse	07/18*	Sept 30 2021	Sept 30 2024
Lucy Sisniega	09/19	Sept 30 2022	Sept 30 2025

ZONING BOARD OF ADJUSTMENT AND AIRPORT ZONING BOARD OF ADJUSTMENT

(Decision Making)
(Membership - 5; Terms - 2 Years expiring 3 odd & 2 even.)

	Appt Date	Term Expires	Eligibility Expires
Matthew Wallace	07/15*	Sept 30 2020	Sept 30 2020
Joby Rittenhouse	02/19*	Sept 30 2020	Sept 30 2024
Derek Whiting	01/18*	Sept 30 2021	Sept 30 2023
Reed Claybrook	03/19*	Sept 30 2021	Sept 30 2023
E.J. Baldridge	02/18	Sept 30 2021	Sept 30 2023
ALTERNATES: (not applicable to Airport Zoning)			
James Robert Franklin		Sept 30 2021	
VACANCY		**Sept 30 2020**	

***** **Indicates appointment to an unexpired term.**

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date:_____

Name:_____

Phone:_____ **(Home)**

Address:_____

_____**(Business)**

_____

Email:_____

(City) (State) (Zip)

I am ____ I am not ____ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ____yes _____no

I have lived in Midland _____ years.

Occupation:_____

Professional and/or Community Activities:

_____

_____

_____

What is your personal vision for the City?

_____

_____

_____

Please specify any time constraints you may have.

_____

_____

_____

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

_____

_____

_____

Please tell us why you are interested in serving on this board or commission.

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

(2) Name of Board/Commission:

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

_____

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date:_____

Name:_____ **Phone:**_____ **(Home)**

Address:_____ _____**(Business)**

_____ **Email:**_____

(City) (State) (Zip)

I am ____ I am not ____ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ____yes _____no

I have lived in Midland _____ years.

Occupation:_____

Professional and/or Community Activities:

_____

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_____

What is your personal vision for the City?

_____

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Please specify any time constraints you may have.

_____

_____

_____

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

_____

_____

_____

Please tell us why you are interested in serving on this board or commission.

_____

_____

_____

What contribution would you most like to make?

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_____

Additional pertinent information or references:

_____

_____

_____

(2) Name of Board/Commission:

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

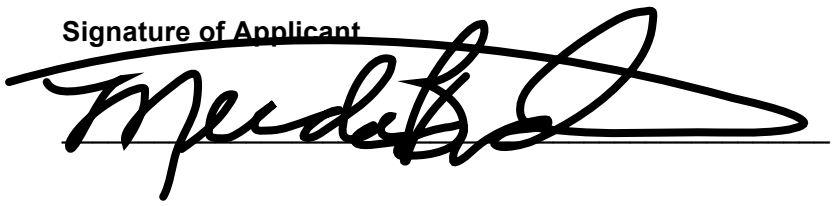
_____

_____

_____

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

MIDLAND
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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 1-07-2020

Name: ADRIAN CARRASCO

Phone: 432-553-7787 (Home)
432-695-6228 (Business)

Address: 2009 Mosswood Dr.

Email: adriantcar@yahoo.com.

Midland (City) TX (State) 79707 (Zip)

I am [X] I am not [ ] a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] yes [X] no

I have lived in Midland 12 years.

Occupation: Owner - Premier Energy Services LLC

Professional and/or Community Activities:

Member - Communidad In Action, Member - St Ann's Catholic Church, Incoming Board Member Midland Hispanic Chamber of Commerce, Oil & Gas Business Owner for over 8 years. Bachelor of Arts Political Science - University of Texas San Antonio

What is your personal vision for the City?

Vision for Midland is for unity Amongst all fronts, Opportunity for new leaders on Boards & Commissions, Bring new ideas & Collaborate with City Leadership, Build upon Midland's great Reputation of An Awesome City to live in.

Please specify any time constraints you may have.

None at all.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Planning & Zoning

Please tell us why you are interested in serving on this board or commission.

I feel I can bring an open mind & positive attitude to this Board. I have alot of Experience with Construction plans, Re-Locating Well pads & Lines for Residential & Commercial growth, I have positive Negotiating skills, I bring an open mind to everything I do & work well with others for the common good!

What contribution would you most like to make?

POSITIVE ATTITUDE AND SKILLS to BRING PEOPLE together to MAKE SOUND DECISIONS. GREAT COMMUNICATION SKILLS. ABLE to THINK THINGS THROUG WITHOUT OUTSIDE INFLUENCES. NO POLITICAL TIES or AGENDA IN MAKING DECISIONS.

Additional pertinent information or references:

ABRAHAM GUTIERREZ - 432-352-2747

LUIS SANCHEZ - MIDLAND County COMMISSIONER - 432-352-8130

JERRY MORALES - EX MAYOR MIDLAND, TX - 432-889-1706

(2) Name of Board/Commission:

PARKS & RECREATION

What contribution would you most like to make?

I WORK WELL WITH others & HAVE the INTEREST OF MIDLAND at HEART. MY VISION IS REALISTIC ON What WE CAN & DO FOR the PARKS. I CAN CREATE & BUILD COMMUNITY PARTNERSHIPS With CORPORATIONS IN MIDLAND to help build A MEANINGFUL MONETARY CAMPAIGN to help PAY FOR PROJECTS.

Additional pertinent information or references:

VICKIE HAZLEY - EX CITY COUNCIL - 432-235-2044

DR. GREG WILLIAMS - PRESIDENT ODESSA COLLEGE - 432-202-7191

CHARLENE MELENDEZ - DIRECTOR HISPANIC CULTURAL CENTER - 432-638-9486

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 2/3/2020

Name: KATHRYN CHANDLER

Phone: 432-307-8388 **(Home)**

Address: 2004 W. INDIANA AVE. 432-221-0603 **(Business)**

MIDLAND TX 79701

Email: KATCHANDLER81@GMAIL.COM

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 30 **years.**

Occupation: ATTORNEY / LAND SPECIALIST

Professional and/or Community Activities:

I have served on the Board of Directors for Girl Scouts of the Desert Southwest for the past four years and continue serving currently as the Board Secretary. I also volunteer regularly with Legal Aid of NorthWest Texas and the Aphasia Center of West Texas. In past years, I served as the President of the Permian Basin Outing Club and of the Midland County Young Lawyers.

What is your personal vision for the City?

I would like to see Midland move into the future by investing in expansion and continued maintenance of infrastructure, which will encourage private development and investment from within and outside of this community. I grew up in Midland and have lived here the majority of my professional life, and I would like to see the city as a place to live rather than a way-stop for young professionals.

Please specify any time constraints you may have.

I work full-time, but my employer (Concho Resources) is supportive of community involvement and allows employees flexibility.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

MIDLAND DEVELOPMENT CORPORATION

Please tell us why you are interested in serving on this board or commission.

I want to be involved in the community in ways that make Midland a better place to live. Encouraging investment and economic development seem to be the best ways for the community to move forward, and the MDC is the vehicle for that encouragement.

What contribution would you most like to make?

The Midland Development Corporation has a vital role in our community's development and yet has a very mixed reputation among citizens. I would most like to assist with improving the community understanding of the important role of an economic development corporation in overseeing the sales tax dollars dedicated to economic development.

Additional pertinent information or references:

(2) Name of Board/Commission:

PARKS & RECREATION COMMISSION

What contribution would you most like to make?

I would like to be a participant in the process of upgrading and maintaining the community's parks. I can see Dennis the Menace from my front porch, and it is an incredible facility that is utilized by the entire community. More parks on or near the level of Dennis the Menace would greatly improve Midland's quality of life factor for families.

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Kathryn Chandler

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland
City Secretary's Office
PO Box 1152
Midland, TX 79702
FAX: (432) 685-7433

Submit Via Email

Print Application

Kathryn Chandler

2004 W. Indiana Ave.
Midland, Texas 79701

Cell: (432) 307-8388
Email: katchandler81@gmail.com

Professional Work Experience

November 2017-Present COG Operating, LLC Midland, Texas

Land Specialist (Sept 2018-Present) and Lease Analyst (Nov 2017-Sept 2018)

- Reviewing legal documents to ensure clearance of title requirements.
- Communicating with royalty owners, landmen, and title attorneys regarding clearing title requirements.
- Special projects in land department.
- Reviewed and entered oil and gas leases, amendments, extensions, mineral deeds, agreements, and rights of way into P2 Land system.
- Maintained lease and related records, including updates as wells are drilled and plugged.

2016-2017 Perdue, Brandon, Fielder, Collins & Mott, LLP Midland, Texas

Associate Attorney

- Represented government entities in west and south Texas in collection of delinquent receivables, with focus upon ad valorem property taxes.
- Tried delinquent tax suits to judgment, conducted tax foreclosure sales, and responded to client questions about the Texas Property Tax Code.
- Entertained clients, including local governmental and school board officials, and regularly attended governmental conferences and educational seminars with clients.

2013-2016 Foster & Harvey, P.C. Midland, Texas

Associate Title Attorney

- Examined chain of title documents to identify any ownership issues which could affect client oil and gas operations.
- Drafted drilling, acquisition, and division order title opinions tailored to the needs of the individual client's oil and gas operations.

2007-2013 City of Midland Midland, Texas

Assistant City Attorney

- Prosecuted class C misdemeanors at municipal court.
- Tried criminal cases to judgment at bench and jury trials and participated in hearings on motions for discovery, motions for new trial, and motions for revocation of deferred disposition.
- Completed responses to Open Records Requests and attended City Council meetings, as needed.

2006-2007 Legal Aid of Northwest Texas Odessa, Texas

Staff Attorney

- Represented low-income clients in family law, estate planning, and landlord/tenant cases at no cost to client.

2005 Daniel & Stark, P.C. College Station, Texas

Associate Attorney

- Drafted demand letters in personal injury cases and negotiated settlements with insurance companies.

Licenses to Practice Law

- State of Texas (2006)
- State of New Mexico (2016)
- State of Colorado (2016)
- State of Florida – currently inactive status (2016)

Education

2002-2005 Texas Tech School of Law Lubbock, Texas
- J.D.

1999-2002 Texas Lutheran University Seguin, Texas
- B.A., Political Science (Summa Cum Laude).

1999 Trinity School Midland, Texas
- High school diploma (Valedictorian).

Special Projects and Awards

- Vending Coordinator for the Tall City Blues Festival (2016-2018)
- Legal Aid of NorthWest Texas pro bono awards (2008, 2009, 2010, 2011, and 2012)
- Chairperson for Camp Mitre Peak Alumni Reunion for the Girl Scouts of the Desert Southwest (2006-2007, 2011-2012)
- Adult mentor at Camp CEO program (2007, 2008, 2009, 2011, 2012)
- Texas Tech University School of Law President's Scholarship (2002-2004)
- Section Tutor for first-year Constitutional Law and Torts classes at Texas Tech University School of Law (2003, 2005)
- Intern with Judge Fred Biery, U.S. District Court, Western District of Texas in San Antonio, Texas (Spring 2001)
- Intern with Organization of American States, Unit for Sustainable Development and the Environment, Natural Hazards Project in Washington, DC (Fall 2001)
- Texas Lutheran University Pacesetter Award for College Excellence (1999-2002)
- Girl Scouts of the United States of America Gold Award (1999)

Memberships

- **Board of Directors for Girl Scouts of the Desert Southwest – Southern New Mexico & West Texas** – Board Secretary (2017-2021); At-Large Director (2016-present)
- **Pro Bono Advisory Board for Legal Aid of NorthWest Texas** – Member (2008-present)
- **Midland County Young Lawyers** – Immediate Past President (2012-2013), President (2011-2012), Social Chair (2010-2011), Member (2008-2016)
- **Permian Basin Outing Club** - President (2014-2016)

Professional References

Available upon request.

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 02/18/2020

Name: Kimberly Crisp

Phone: 432-238-4045 **(Home)**

Address: 3304 Douglas Ave

— **(Business)**

Midland TX 79703

Email: KDCrisp8@gmail.com

(City) (State) (Zip)

I am ☑ **I am not** ☐ **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ **yes** ☑ **no**

I have lived in Midland 32 **years.**

Occupation: Licensed Professional Counselor

Professional and/or Community Activities:

As a counselor, I believe I have good communication skills. I have a following in our community as an advocate and am active in our local government.

What is your personal vision for the City?

I want to help foster improved community involvement through transparency. I believe that the residents want to be more plugged in, but do not know where to start.

Please specify any time constraints you may have.

With adequate notice, I can be available at any time.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Spaceport Development Corporation

Please tell us why you are interested in serving on this board or commission.

I am familiar with AST and science and other aspects of the spaceport and would like to be more active in this developing industry.

What contribution would you most like to make?

I would like to be a bridge between the Midland Spaceport Development Corporation and the public to bring increased transparency and accountability.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

K Gipp

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 02/11/2020

Name: Heather Ferrell

Phone: 580-695-8723 (Home)

Address: 801 Shell Ave

432-234-5866 (Business)

Midland TX 79705

Email: hdferrell21@gmail.com

(City) (State) (Zip)

I am [✔] I am not [ ] a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] yes [✔] no

I have lived in Midland 8 years.

Occupation: EHS Specialist

Professional and/or Community Activities:

American Society of Safety Professionals - Permian Basin Member

Callon Cares Committee - We provide volunteer work and/or monetary donations to community organizations in the Permian Basin

What is your personal vision for the City?

I believe that Midland has the potential to be an elite city in the state of Texas with the monetary resources we have here in the community. Having lived in five states and several communities ranging in population from 400 - 643,000, this gives me a unique perspective on what worked in these communities for parks and activities.

Please specify any time constraints you may have.

I work Monday - Thursday 7:00 AM - 5:00 PM and Friday 7:00 AM - 11:00 AM. I would be able to attend the commission meetings as my director is flexible when it comes to community work.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

I would like to enhance the quality of life for all Midlandnites through advancing environmental conservation efforts, social equality, and health and wellness.

What contribution would you most like to make?
I want to create parks and recreations facilities that provide social and equity benefits to Midlandites. I want create friendly parks for all ages, genders, socioeconomic status, ethnicity, or ability to help foster community pride. I would like to see "pocket parks" that are accessible, comfortable and social places. There are a couple of these in my hometown that bring a wonderful aesthetic appeal to the downtown area.

Additional pertinent information or references:
Beverly Rogers 956-645-2188. Beverly and I have worked together on the Callon Cares Committee for the last year and a half.

Gary George 432-238-1384. Gary was my direct VP at Warren Equipment Company for 4 years.

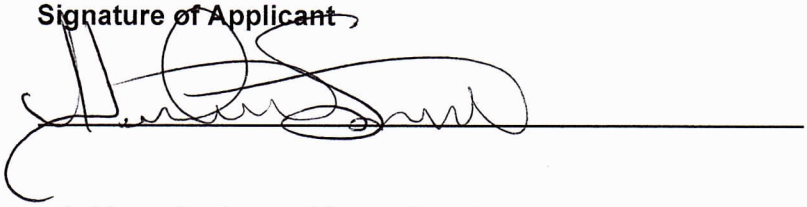
(2) Name of Board/Commission:
N/A

What contribution would you most like to make?
N/A

Additional pertinent information or references:
N/A

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



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City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

MIDLAND
Feel the Energy!

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 1-29-20

Name: Tracye Gearhart

Phone: (432) 934-6555 (Home)

Address: 6706 Mosswood (Business)

Midland Texas 79707

(City) (State) (Zip)

Email: tcgearhart@gmail.com

I am [X] I am not [ ] a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] yes [X] no

I have lived in Midland 23 years.

Occupation: Local Business Owner

Professional and/or Community Activities:

President MASA Rescue Animal Rescue, Board Grassland West HOA
Past - Board of SafePlace, Board Lee Youth Center,
PTA President & Boardmember

What is your personal vision for the City?

To see Midland progress to what is today's relative standards of other well known cities.

Please specify any time constraints you may have.

None

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Animal Services Advisory Committee

Please tell us why you are interested in serving on this board or commission.

To learn existing state and city regulations. Contribute ideas to further the care of animals not just in the shelter but to the community as well.

What contribution would you most like to make?

To gain the knowledge on the shelter in order to educate the public and bring awareness to the public of the influx of animals into the shelter.

Additional pertinent information or references:

It's important to know the policies and procedures of the shelter. To be part of the solution, one must educate themselves on the process.

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Tracy Grant

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date:_____

Name:_____

Phone:_____ **(Home)**

Address:_____

_____**(Business)**

Email:_____

_____

(City) (State) (Zip)

I am ____ I am not ____ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ____yes _____no

I have lived in Midland _____ years.

Occupation:_____

Professional and/or Community Activities:

_____

_____

_____

What is your personal vision for the City?

_____

_____

_____

Please specify any time constraints you may have.

_____

_____

_____

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

_____

_____

_____

Please tell us why you are interested in serving on this board or commission.

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

(2) Name of Board/Commission:

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

_____

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City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Name: Wes Gotcher

Address: 6824 Island Circle

Midland (City) TX (State) 79707 (Zip)

Date: 3/2/2020

Phone: 432.853.9783 **(Home)**

432.682.2510 **(Business)**

Email: wes@moriahgroup.net

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

I have lived in Midland 9 **years.**

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

Occupation: Commercial Real Estate Broker

Professional and/or Community Activities:

Leadership Midland Graduate, Missions Coordinator | Golf Course Road Church of Christ, Board Member &Assistant Baseball Coach | Mid-Cities Little League Baseball, Ministry Leader | Teen Challenge of the Permian Basin

What is your personal vision for the City?

Midland is a special place because it rewards hard work and ingenuity, is a great place to raise a family and provides a small town feel despite having a major place on the world's stage when it comes to oil production. I want to do what I can for a City that has been a blessing to me and my family.

Please specify any time constraints you may have.

My schedule is fairly flexible during business hours since I set my own appointments.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov***)**

(1) Name of Board/Commission:

1. Midland Development Corporation, 2. Midland Housing Authority, 3. Planning and Zoning Commission

Please tell us why you are interested in serving on this board or commission.

My 22-year career has been in commercial real estate and would be complementary to the Boards/Commissions referenced above.

What contribution would you most like to make?

Provide feedback and decision-making based on career in a complementary field.

Additional pertinent information or references:

Dale A. Brown - Former City Council Member

Spencer Robnett - City Council Member

Bobby Burns - Former Mayor

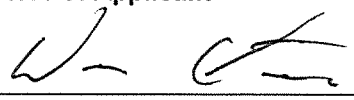
(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

MIDLAND
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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: _____

Name: T. Annette Jensen, D.V.M.

Phone: 432-556-4305 (Home)
432-682-0787 (Business)

Address: 200 E. County Rd 130

Midland TX 79706
(City) (State) (Zip)

Email: _____

I am [X] I am not [ ] a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] yes [X] no

I have lived in Midland 40 **years.**

Occupation: Veterinarian

Professional and/or Community Activities:

Member of Texas Veterinary Medical Association and American Veterinary Medical Association

What is your personal vision for the City?

Midland to be a progressive and innovative city, while maintaining a friendly West Texas atmosphere.

Please specify any time constraints you may have.

Tuesday and Wednesday mornings

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Animal Services

Please tell us why you are interested in serving on this board or commission.

To help maintain the health and well-being of the animals in the care of Midland Animal Services, and to aid in protecting the public from zoonotic diseases.

What contribution would you most like to make?

Improve Health and well-being of the Animals

Additional pertinent information or references:

I have 43 years of experience as a Veterinarian.

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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PLEASE TYPE OR PRINT CLEARLY:

Date:_____

Name:_____

Phone:_____ **(Home)**

Address:_____

_____**(Business)**

_____

Email:_____

(City) (State) (Zip)

I am ____ I am not ____ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ____yes _____no

I have lived in Midland _____ years.

Occupation:_____

Professional and/or Community Activities:

_____

_____

_____

What is your personal vision for the City?

_____

_____

_____

Please specify any time constraints you may have.

_____

_____

_____

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

_____

_____

_____

Please tell us why you are interested in serving on this board or commission.

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

(2) Name of Board/Commission:

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

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Signature of Applicant

_____

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PLEASE TYPE OR PRINT CLEARLY:

Date: 1/29/2020

Name: Robert W Lehrer

Phone: 432-556-8503 **(Home)**

Address: 1910 W Tennessee

432-684-0960 **(Business)**

Midland Texas 79701

Email: rlehrer65@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 12 **years.**

Occupation: Financial Advisor

Professional and/or Community Activities:

Board Chair; the Breaking Bread Kitchen

Past President; Midland, Odessa Business & Estate Planning Council

Midland High Booster Club, Stonegate Fellowship, The Fields Edge, Elementary Mentoring Programs

What is your personal vision for the City?

Volunteering and serving in our community is really low at this point. I would like to see an emphasis of true serving (whether physically or financially) in our community. I see a lot of young people hiding in our city. They don't know their neighbors across town or in other districts. We need to look for way of cooperation and serving together.

Please specify any time constraints you may have.

I try to be in my office from 9:00am to 3:00pm. I do have some commitments where I already serve but can maneuver fairly easily.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Housing Authority Commission

Please tell us why you are interested in serving on this board or commission.

Through my work with different ministries in the southeast side of town, I see where housing is truly an issue. Any apartment development that works is quickly rented with a shortfall still remaining. There are also, so many vacant and/or abandoned houses

in this area that might be used for low income housing? It at least needs to be looked at from different angles.

What contribution would you most like to make?

Through my research with non-profits in other communities and finding different ways to solve problems, I am finding that there are so many answers to the needs that we have and that with our resources in Midland we can truly get stuff done if we really want to.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

Robert W Lehrer Digitally signed by Robert W Lehrer
Date: 2020.01.29 09:44:50 -06'00'

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PLEASE TYPE OR PRINT CLEARLY:

Date: 2/3/2020

Name: Douglas Lance Lunsford

Phone: 432-685-3407 **(Home)**

Address: 1811 Kensington Lane

432-210- 3368 cell **(Business)**

Midland TX 79705

Email: doug.lunsfordmidlandtx@yahoo.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 52 **years.**

Occupation: Retired Oil Field Log Analyst

Professional and/or Community Activities:

Boy Scouts - Assistant SM- Board Member - Eagle Scout - Vigil Honor OA - Silver Beaver - Woodbadge Trainer

former President Sunrise Rotary Club - Community Bible Study - Vice President Partners SS Class 1st Methodist Church

Society of Petroleum Engineers - American Society of Professional Well Log Analysts - West Texas Geological Society

What is your personal vision for the City?

I have returned to Midland four times in my career; this is my home. I want more of our HS Grads to return to Midland to raise familie

To lead our city in growth to attract and retain entertainment facilities to encourage growth. Attracting industry that aids in building

Midland more than just petroleum industry;an educational system growing and leading to leadership on state level and national level.

Please specify any time constraints you may have.

I am retired and I have very good health with a drive to make Midland the city I see in my head, in my dreams, and lead in that

direction. I read to K-I grade at Burnet Elementary to grow their minds and lead away from status quo. That Tuesday morning

and Monday night CBS with Scouts on Tuesday and Wednesday Bible Study.

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(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Parks and Recreation Commission; designed program and facilities for five Boy Scout Councils and three churches

Please tell us why you are interested in serving on this board or commission.

I want to help Midland grow because I am a Native Midlander. My grandmother came here in a covered wagon from Greenville TX

I love Midland and I have been in boom towns, I grew up in booms and busts; I raised a growing family in many towns like Midland

to make it easier for the new "kids" coming along to have it easier than we had it. Dennis the Menace was new when I was 8.

What contribution would you most like to make?

I have the desire to make things better for people coming to Midland and the area. I have drive for Midland to be the epitome of what family cities should be in Texas not just the Permian Basin. I have lived the life through boom and bust;to lead Midland into diverse industry, increased educational and entertainment venues. I have the abilities to grow from humble home to be example.

Additional pertinent information or references:

Degree in Industrial Technology and Distribution, oil field engineer and manager, professional Boy Scout These changes in my life give me the inside track on lifestyle to newcomers and 'natives' alike. My Dad came here in WWII stayed to make a life for a new Midland born wife: an oil field carpenter seen as "oil field" in the new Spraberry Boom.

(2) Name of Board/Commission:

Planning and Zoning Commission

What contribution would you most like to make?

A more efficient and effective business of the growth of Midland/area for safe and secure business growth and home ownership. I have worked in obtaining building permits and working within the system to add new opportunities for continued prosperity. A customer oriented delivery of opinions and standards maintaining the high standards we already have in Midland.

Additional pertinent information or references:

Building programs in BSA required new facilities fitting the framework of safe operations and maintaining standards of the existing area. This experience would allow communications with benefits for the citizens of Midland while keeping high measures of quality Background in education and industry/ construction and governance

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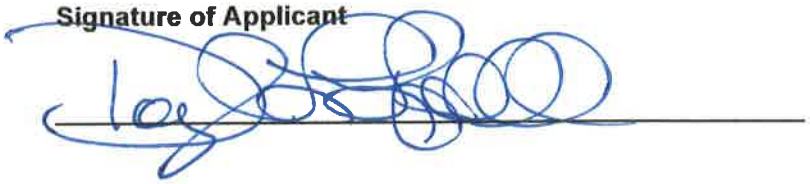
Signature of Applicant



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City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

Douglas Lance Lunsford

1811 Kensington Lane • Midland, Texas 79705
(432) 685-3407 Home (432) 210-5165 Cell

Doug.lunsfordmidlandtx@yahoo.com

Accomplishments

- I have a strong, positive, high level of energy that develops and maintains relationships with key accounts and new customers. My passion in the oil energy industry is to present energy clients with value added technical solutions to their services and assist in solving their problems.
- Possessing strong negotiating skills with positive communication abilities, with successful selling experience within the oil and gas industry, I have the demonstrated the ability to understand sales processes while building strong relationships to close the business sale.
- A well-respected Sales professional I am capable of developing new accounts while growing existing accounts of large oil and gas companies as well as independent operators.
- My experience allows me to work closely with operations and field sales not only in the Permian Basin but throughout the United States
- These include: Wireline Open Hole Engineer, Log Analyst and Sales in Ahwaz, Iran, the Permian Basin Texas and Williston Basin of North Dakota. Pressure Pumping/Frac Sales in Permian Basin OneStim
- Weatherford Product Champion for SecureView (WFT Casing Inspection, Cement Evaluation), Specialty Perforating including StimGun services and Completion Logging
- For nine (9) years I served as Desk Engineer Chevron Mid Continent Business Unit for all Baker Hughes Services in addition to specific service as Open Hole Logging, Cased Hole Completions and new employee trainer for Cement Evaluation and Casing Evaluation; Basic and Specialty Perforating; Frac and pressure pumping
- Skillful Management of Market Information, TAM, Budget, Market Planning and Special Projects; including Social Networking, LinkedIn, Power User inSalesForce.com

Professional Experience

Account Lead – OneStim – Schlumberger ▪ Midland TX ▪ 02/01/2018 – 08/17/2019 (RIF)

- Develop a new active clientele and building existing customer base and increasing it for maximum production for the newly formed OneStim – merged from Frac/PDP/Completion Tools of Schlumberger Ltd. and Weatherford International.
- Increase sales and operations performance with merged equipment and services
- Develop sales plans using TAM with local operators for Pump Down Perforating
- Increase awareness of the OneStim Service Line with Permian Basin Operators
- Assist Science Technology Group with specifications for delineating the Parent/Child relationships and prevent collisions

- Introduce SLB Wireline Division and Completions Tools Division with personal operator contacts for added market

Technical Sales Representative IV – Weatherford Intl. ▪ Midland TX ▪ 11/11/2 M014 – 02/01/2018 Merged with OneStim

- Develop an active clientele for the SecureView Casing Inspection segment building existing customer base and increasing it for maximum production
- Increase sales and operations performance through education and marketing of the SecureView system
- Improve marketing for the Ultrasonic Radial Scanner service (UltraView) in the horizontal segment of drilling with the light cement and casing wear objectives.
- Increase awareness of the SecureView Logging systems in the Permian Basin targeting major production accounts.
- Increase the awareness of CH Completions logging including Production Logging and Pipe Recovery.
- Develop sales with local operators for perforating completions and Pump Down Perforating during the turn down of 2015. To include specialty perforating services such as WEM and StimGun services. Experientially grow the PDP services for the Permian Basin.
- 2016-2017 – Develop sales and marketing for PDP in the Horizontal Programs of the Permian Basin; Casing Inspection Services with SecureView that includes UltraView, FluxView, CalView, and BondView as a leader in sales and Interpretation as well as training.
- Developed three RealResults presentations presented by Weatherford in Sales Marketing for UltraView, CalView, and

Operations Marketing Account Manager II–Baker Hughes Wireline Services • Midland, TX ▪ 8/1/2005 – Nov 2014

- Maintain sales strategy directly related to completions, casing inspection, Pipe Recovery/Production Logging and Horizontal and Stage Perforating.
- Increase sales performance for Open Hole logging programs directly related to Permian Basin clientele
- Develop sales techniques for casing inspection with both corrosion defects and/or mechanical defects;
- Design and conduct training for clients to understand and use Wireline products correctly and lower their operational expenses for Value Added Performance.
- Collaborate in cross divisional team efforts for utilizing Blue Well Bore solutions to customer needs.

Director of Support Service–BSA • Irving TX ▪ Sep 1989 – Aug 2005
Abilene, TX – San Angelo TX – Jacksonville FL – Miami Lakes FL – Corpus Christi TX

- Managed 27 professional and 18 clerical personnel in business development of organization with $25 million budget
- Developed and maintained annual budgets containing costs of from $1.7MM to $25MM in four geographic locations

- Planned and guided two (2) construction projects for $4.5 MM in Orange Park and Hawthorne, FL. Came in under budget and two (2) months earlier than scheduled.
- Established a sales plan to divest company of a camp property valued at $950M which sold for $13.2MM to a non-profit land conservation and restoration group in Inverness FL
- Managed a large number of volunteers and professionals in program, membership and Finance in five (5) different locations.
- Promoted the branding and mission of the organization in all operations and business practices

Sales Engineer • Rice Engineering (DuoLine) • Midland TX and Wichita KS • Jan 89-Jul 89

- Developed new client base for lined tubular use in hazardous area production
- Rice had no experience with sales marketing in the oil industry; developed sales plan for hazardous materials produced
- Instructed two more sales people on use of the new company sales plan in conjunction with their technical training on the product
- Increased sales of product in three major field areas and introduced two new areas including the Yates with Marathon in Pecos Co. TX

VP Operations/Sales Fifty Five Well Service • Midland TX / Lovington NM • Mar 1986- Oct 1989

- Managed a staff of sixty eight (68) well service personnel including three pushers, two sales people two clerical staff and one mechanic.
- Developed and maintained profitable deep work over unit operations with organization and new reporting system on computers
- Build new budget and operating system base for ten (10) deep well workover units
- Developed new Safety Plan with Safety and Company Policy Handbook to decrease Insurance costs and provide safe operations for employees
- Produced a Company Plan of Operation Handbook for 55 with Charles Gillespie Oil personnel included
- With increased quality of service, decreased costs, and increasing sales/marketing was able to lease two more shallower units during the decrease of operating oil prices and declining drilling rigs
- Increased sales and public relations during an industry slowdown operating with a profit and no rigs shut down.

Production Technician / Intern Schoolboy • The Superior Oil Company • Midland and Conroe TX Jun 1970 – Aug 1972 and **Jan 1978-June 1979**

- Rejoined as Production Technician in February 1978 serving as on site company representative for all logging jobs offshore Sabine Pass where Dresser Atlas was logging and perforating
- OH company representative for logging wells in Conroe, Laredo, and Offshore Texas for all Wireline Service Companies
- Assisted with well completions for wireline logging and perforating offshore and land locations
- **1970-1972** –

- Worked Summers, Holidays as a laborer with Construction Carpenter and Production Department from June 1970 until August 1972
- During school sessions at Odessa College, worked as laborer and weekend Yard Gate safety watch

Logging Engineer and Log Analyst – Sales •Dresser Atlas • Odessa TX, Ahwaz Iran, Williston ND, Midland TX

- OH Hole Engineer, in Odessa running Heavy Logger managing a crew of three (3) in Permian Basin during boom years averaging 95 hours a week (1975-76)
- In Ahwaz, Iran 1976-78 worked a Heavy Logger in the toughest terrain of Iran managing a crew of eight (8). Services also included some Free Point/Back-Off and completions logging including CBL and perforating from my OH Truck
- Williston ND opened a base with manager in 1979 with one (1) OH Logger and two (2) CH completion trucks; added Vertilog specialty truck ending with three (3) OH and five (5) Completion vehicles and managing one (1) sales engineer
- Midland TX as Sr. Sales Engineer promoted to Log Analyst (Sales); managed sales for OH, NLL Pulsed neutron, Carbon Oxygen, and Vertilog for two major companies and a host of independents.

Wireline and Sales Skills

Open Hole Logging
Completions Logging
Pulsed Neutron
Perforating
Specialty Perforating (StimGun)
Casing Inspection
Cement Evaluation
Production Logging
Pipe Recovery
Tubing Conveyed Perforating
Stage Perforating (PnP)
Horizontal Pump Down (PDP)
Lunch and Learn Instruction
Financial Administration
Total Quality Management
High Performance Sales
Professional Sales Seminar
Negotiation I
Customer Relations Mgmt
Power Presentations
Professional Sales Seminar
Effective Time Management
SalesForce.com / eCRM
VDIS – Logistics Mgmt
Diversification/Team Building
Land Safe / Safe and Well
Export Control
Emergency Operation Planning
HSE&S Observation Process
MS Office - Power Point, Excel, Word
International Workplace Harassment – Managers
Dale Carnegie Public Speaking and Sales Seminar
Train the Trainer

Hobbies and Outside Interests

Eagle Scout, Vigil Honor, Silver Beaver
Boy Scouts / Assistant Scout Master / OA
James E. West Fellow - BSA
Rotary International
Paul Harris Fellow – Rotary
Genealogy
Wood Working and Toy Making
Native American - Indian Lore
Singing as part of Woapalane Drum
Camping – Fishing – Kayaking

Education

West Texas A&M University – Canyon Texas
Bachelor of Science – Industrial Technology – May 1975

Odessa College – Odessa Texas Sep 1970-May 1972
General Studies - Geology

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PLEASE TYPE OR PRINT CLEARLY:

Date:_____

Name:_____

Phone:_____ **(Home)**

Address:_____

_____**(Business)**

_____

Email:_____

(City) (State) (Zip)

I am ____ I am not ____ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ____yes _____no

I have lived in Midland _____ years.

Occupation:_____

Professional and/or Community Activities:

_____

_____

_____

What is your personal vision for the City?

_____

_____

_____

Please specify any time constraints you may have.

_____

_____

_____

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

_____

_____

_____

Please tell us why you are interested in serving on this board or commission.

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

(2) Name of Board/Commission:

_____

_____

_____

What contribution would you most like to make?

_____

_____

_____

Additional pertinent information or references:

_____

_____

_____

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Signature of Applicant

_____

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PLEASE TYPE OR PRINT CLEARLY:

Date: 1/29/2020

Name: Susannah Prucka

Phone: 512.635.2803 **(Home)**

462.688.4445 **(Business)**

Address: 5913 Llano

Midland TX 76707

(City) (State) (Zip)

Email: suzyprucka@gmail.com

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 21+ **years.**

Occupation: Assistant District Attorney

Professional and/or Community Activities:

Please see attached CV. Career prosecutor (12 years). Grew up playing sports in Midland parks; lifelong athlete. Active in many community and national groups, as detailed in CV, including Midland Soccer Association, Midland Teen Court, Centers for Children and Families, The Junior League of Midland, Inc., and Alpha Xi Delta Foundation.

What is your personal vision for the City?

Midland should be a world class city. We sit on an abudence of resources. We have citizens who work hard, groups that collaborate to solve community needs, and families who want the best living experience. Our city should reflect our best assets - from the roads to the parks to customer service. As the Mayor recently stated: "Maybe, we become a destination, and not tour of duty." This is my home.

Please specify any time constraints you may have.

I typically work 8-5 and am in trial occassionally. With advance notice, I can make meetings and other necessary functions.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

Parks are the heart of any city. I have a life-long passion for athletics and recreations. I spent my youth at many of our city's parks playing spots (soccer, softball, sand volleyball, to name a few). I still spend my evening & weekends at the parks, coaching

and refereeing soccer. I want to give back to my hometown and work to improve our parks and our city's recreational offerings.

What contribution would you most like to make?

I would like to see safer places to ride bicycles and better sports field for our youth. I am interested in reviewing the Commission's recent survey on citizens' interests and work collaboratively with the City, area nonprofits and other grant-making organizations to improve our parks and recreational offerings. I would provide a different point of view, having lives in two urban cities with many city

Additional pertinent information or references:

parks and a strong community program agenda.

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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FAX: (432) 685-7433

Submit Via Email

Print Application

Susannah E. Prucka

5913 Llano Court • Midland, Texas 79707
suzyprucka@gmail.com • (512) 635-2803

PROFESSIONAL EXPERIENCE

Bar Admissions: Maryland (2006), Texas (2011), United States Supreme Court (2013); United States Courts of Appeals for the Fifth Circuit (09/2016); United States District Court for the Southern District of Texas (11/2016); U.S. District Court for District of Maryland (09/2014)

Board Certified in Criminal Appeals, October 2018

Assistant District Attorney, Midland County District Attorney's Office, August 2018-Present.

Deputy District Attorney, Ector County District Attorney's Office, October 2017-August 2018.

Jeff Johnston & Associates, Associate Attorney, June 2017-October 2017.

United States Attorney's Office for the Southern District of Texas, Assistant United States Attorney, Appellate Division, September 2016-March 2017

Brazos County District Attorney's Office, Assistant District Attorney, Appellate Division January 2016-September 2016

Office of the Maryland Attorney General, Criminal Appeals, Division, Honors Attorney/Assistant Attorney General, August 2008-January 2016

Special Assistant State's Attorney, Montgomery County State's Attorney's Office, September/October 2012

Public Service Award (annual award given to an employee recognizing significant contributions to the community), January 2012

The Honorable Clayton Greene, Jr., Court of Appeals of Maryland, Judicial Clerk, 2007-2008

The Honorable Patrick L. Woodward, Maryland Court of Special Appeals, Judicial Clerk, 2006-2007

United States Senate, Subcommittee on Immigration, Border Security, and Citizenship (Senator John Cornyn), Law Clerk, Spring 2006

Civil Rights of Persons with Disabilities Clinic (University of Maryland School of Law Clinical Law Program), Teaching Assistant & Student Attorney, 2005-2006

United States Department of Justice, Office of the Assistant Attorney General, Civil Rights Division, Law Clerk, Summer 2005

Bush-Cheney '04, Legal Policy Intern, Summer 2004

Congressman Pete Session, United States House of Representatives, Front Office Intern, Summer 2000; Summer Intern Coordinator, Summer 2001

City of Midland, Texas, Office of Public Information, Intern, Summer 1999

EDUCATION

J.D., University of Maryland School of Law, 2006
- *The William P. Cunningham Award* (annual award given to a graduating student for exceptional achievement and service to the law school), May 2006
- *Maryland Law Review*, Associate Editor
- *Harvard Journal of Law and Public Policy*, Symposium Issue Editor, Fall 2005
- Moot Court Board Member
  - Semifinalist, Morris Brown Myerowitz Moot Court Competition
- Teaching Assistant & Teaching Fellow
- Student Bar Association, class officer

B.A. *cum laude*, Southwestern University, 2003
- Dean's List
- Pi Sigma Alpha, National Political Science Honor Society
- Chi Alpha Sigma, National College Athlete Honor Society
- Intercollegiate Women's Soccer and Swim Teams
  - All-Southern Collegiate Athletic Conference Soccer Team, First Team & Third Team
  - 2002 Verizon Academic All-District Women's Soccer Team
- Student Government Association, executive officer
- Alpha Xi Delta Women's Fraternity (see separate entry)

The University of Texas at El Paso, 1999-2000
- Intercollegiate Women's Soccer Team
- Honor Council
- Student Government Association

Midland College, 1997-1999; A.A., 2002

Robert E. Lee High School, Honors graduate, 1999

COMMUNITY & BOARD SERVICE

Board of Directors, Centers for Children and Families, January 2019-Present.

Chair, Board of Directors, REACH Network (In-District Charter School of MISD), May 2019-Present.

Museum of the Southwest, Christmas at the Mansion
Preview Party Chair, 2019
Open House Chair, 2017 & 2018

Midland Soccer Association, Appeals & Discipline Chair; Referee, 2017-Present.

Midland Teen Court, 1999-2003, 2017-Present; Midland Teen Court, Board of Directors, Student Representative, 1999.

Trustee, Alpha Xi Delta Foundation, July 2013-July 2021
Chair, Audit Committee (2017-2021); Member, Finance Committee (2015-2019); Chair, Grants Committee (2015-2017); Member, Grants Committee (2013-2015)

The Association of Southwestern University Alumni
Distinguished Young Alumna Award (award given to an alumna who has graduated in the last 10 years and whose achievements in the civic and/or professional realm set a standard of excellence), November 2012
Chair, Alumni Awards & Nominations Committee, 2015-2017; Member, 2010-2011, 2013-2015
Class of 2003 Reunion Committee, 2008, 2013 , 2018
Washington, D.C. Alumni Group, Member, 2006-Present; Steering Committee, 2007-2009

University of Houston Law Center
Moot Court Board, Practitioner-Coach, 2016-2017

Leadership Baltimore County (Maryland), 2014-2015

Pro Bono Attorney, Maryland Volunteer Lawyers Service, 2009-2015

University of Maryland School of Law
Moot Court Board, Practitioner-Coach, 2009-2014
Alumni Mentor Program for 1Ls, 2008-2010

Baltimore Animal Rescue and Care Shelter, Inc., Development Committee, 2010-2012

Texas Girls State Citizen & Girls Nation Senator, 1998.

JUNIOR LEAGUE SERVICE

The Junior League of Midland, Inc.
Public Relations Vice President, 2019-2020
Public Relations Vice President Elect, 2018-2019
Provisional Trainer; Member, Website Committee, 2017-2018

The Junior League of Bryan-College Station, Inc.
Chair, Research & Development Committee, June 2016-October 2016
Spearheaded selection process for League's anniversary grant program (2 $35,000 grants).
Non-Resident Active, October 2016-May 2017

The Junior League of Baltimore, Inc.
Immediate Past President & Nominating Committee Member, June 2015-May 2016

President, June 2014-May 2015
Member of Personnel Committee, Bylaws Committee
Mid-Atlantic Regional Leadership Conference
2015 AJLI Annual Conference
2014 AJLI Fall Leadership Conference

President-Elect, June 2013- June 2014
Member of Personnel Committee, Bylaws Committee
Annapolis Bowl Award (annual award given to member who has demonstrated an exceptional commitment to community service beyond her League involvement), May 2014
2014 AJLI Annual Conference
Mid-Atlantic Regional Leadership Conference
2014AJLI Winter Leadership Conference
2013 AJLI Fall Leadership Conference

Chair, Headquarters Committee, 2012-2013
Oversaw grant-funded construction of an outdoor space on League-owned property
Mary Goodwillie Award (annual award given to a member who throughout her membership has performed exceptional service in the areas of finance and membership), May 2013
2013 AJLI Annual Conference

Treasurer, Board of Directors, 2011-2012
Member of Personnel Committee, Bylaws Committee
Organizational Development Institute, Internal Capacity Track

Chair, Membership Committee, 2010-2011
Member, Bylaws Committee, 2010-2011

Chair-Elect, Membership Committee, 2009-2010
Member, Headquarters Committee, 2009-2010

New Member Year, 2008-2009
Projects: Holiday Sale (*The Wise Penny); Kids in the Kitchen*
New Member Award (annual award given to a new member who has made significant contributions to the League), May 2009
Mid-Atlantic Regional Leadership Conference

MIDLAND
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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 11/30/2020

Name: Lynn Richardson

Phone: 901-568-3109 (Home)
432-227-5970 (Business)

Address: 1405 San Francisco Avenue
Midland TX 79705
(City) (State) (Zip)

Email: Captainsafety55@gmail.com

I am ☒ I am not ☐ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ yes ☒ no

I have lived in Midland 7 years.

Occupation: Regional HSE Manager

Professional and/or Community Activities:

Vice-President Permian Basin Chapter American Society of Safety Professionals
Board of Directors for Adobe Meadows HomeOwners Association
Fairmont Park Church of Christ, Elder and Active in Church work

What is your personal vision for the City?

Our city needs to come together and work together to solve the problems of our community. We need to plan our future rather than dwell on our past, we need to learn from our mistakes and not repeat them.

Please specify any time constraints you may have.

My only time constraint would be if I am out of town on business.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Spaceport Development Corporation

Please tell us why you are interested in serving on this board or commission.

I grew up in Alabama 60 miles ~~west~~ of Huntsville during the space race to the moon. My sister, brother-in-law and uncles worked for NASA, Boeing and others to put us on the moon. If I can help get Midland part of the next generation of space travel

28.50

then I want to be able to help secure that for us.

What contribution would you most like to make?

I would like to supply my technical expertise as an engineer with a deep love for the Space Program to help find the right match for Midland.

Additional pertinent information or references:

see Attached Resume

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Thomas Lynn Richardson

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

THOMAS LYNN RICHARDSON
1405 San Francisco Avenue
Midland, Texas 79705
901-568-3109 (C)
Captainsafety55@gmail.com

ACCOMPLISHMENTS AND PROFICIENCIES

- Two facilities accepted into OSHA Voluntary Protection Program (Region IV) – worked on third facility that achieved VPP status after I left
- Served as Corporate HS&E Manager, Division HS&E Manager, and Plant HS&E Manager in various locations
- Managed safety, environmental and engineering professionals at multiple locations
- Implemented Industrial Hygiene Programs at several plants
- Taught seminars and lectured at conferences
- Implemented Behavior based safety programs at several locations with outstanding results in incident reduction and employee participation
- Coordinated large-scale drills with fire and HAZMAT units at multiple plants
- Developed or upgraded PSM programs at numerous locations
- Wrote or updated Risk Management Plans at numerous locations
- Negotiated settlements with OSHA, EPA, and Local Agencies
- Written facility, division, and corporate policies and procedures
- Achieved Safety and Environmental awards for Plants
- Developed close working relationships with OSHA and EPA in multiple regions
- Prepared budgets for Corporate, Division, and Plant level for HS&E
- Served as Radiation Safety Officer at multiple locations.
- Conducted Seminars for HS&E Topics at Junior College and filmed HAZCOM tape series for Carpet and Rug Institute
- Certified by both accreditation agencies for Safety (CSP, CSS, CSM)
- Media Trained
- Facilitated Responsible Care Committees at multiple locations
- Filed comments with OSHA and EPA on new regulations
- Represented Zeon Chemicals with testimony at State Congressional Committee on Regional Waste Compact
- Chair of Central States Region PSM Network for AFPM 2017-2018; served on multiple API subcommittees
- Managed corporate conversion of MSDSs to SDSs
- Speaker at multiple AFPM conferences
- Wrote Alternate Security Plan (Homeland Security) for Refinery
- Experienced auditor for Safety, Process Safety, and Industrial Hygiene
- Designated as company site representative for depositions
- Hold Green Belt Lean Six Sigma

EDUCATION

BS Auburn University
Chemical Engineering

MS Eastern Kentucky University
Safety, Security, and Emergency Management (4.0 GPA)

EXPERIENCE

2018 – Present **CHEMPLEX | SOLVAY-NOVECARE**
Regional HSE Manager

Responsible for HSE support for multiple plants along with assisting with DOT Fleet Management and site security. Based in Midland with direct responsibility for three local sites. Implementing new corporate Life Saving Rules while updating current policies and procedures. Writing Division HSE Policies to support corporate policies. Involved in new Industrial Hygiene system rollout along with reviewing new policies being developed at Division and Corporate levels. Supporting the Corporate auditing program for PSM and Occupational Safety.

2017 – 2018 **DELEK US REFINING, BIG SPRING, TEXAS REFINERY**
Director of Safety, Process Safety, and Security

See Below – Delek acquired Alon in June 2017

2013-2017 **ALON USA REFINING, BIG SPRING, TEXAS REFINERY**
Director of Safety, Process Safety, and Security

Manage the site safety program, process safety management (PSM) program, Voluntary Protection Program (VPP) effort, and site security which includes Homeland Security, Write new and revise existing procedures; Revived Industrial Hygiene program; Responsible for Emergency Response Team; Upgraded emergency response system and equipment; Moved emergency response system to National Incident Management System (NIMS); Conducted annual multi-agency emergency drills; Reduced overdue PSM action items and post-startup MOC action items; Upgraded PHAs for units along with facilitation; Revised Risk Management Plan; Developed site safety manual for turnarounds and for general plant; Implemented behavior-based job audit system; CPR/First Aid Instructor at Refinery; Certified First Responder; Revised Homeland Security Documentation; IMPACT and ISNETWORLD administrator; Investigate accidents; Developed 2014, 2015, 2016 , 2017 and 2018 Safety, Security, and PSM budgets; Working with OSHA Challenge Program to achieve VPP status; Implementing Ergonomics Program; Negotiated settlements with OSHA and Supplemental Environmental Project

(SEP) with EPA; Supervise two safety professionals, VPP coordinator, one administrative assistants, and the security force.

2005 – 2013 **VALERO ENERGY COMPANY, MEMPHIS REFINERY**
Staff Safety Engineer

Provide support for both Occupational Safety and Process Safety Management; Member of HAZMAT Team, Oil Spill Team, and Medical Team; Incident Commander Trained; Incipient Fire Responder; Safety Officer in EOC; American Heart CPR/First Aid Instructor at Refinery; Certified EMR; Write numerous policies and procedures; Provide Industrial Hygiene Support; Provide Ergonomics Support Qualified PHA facilitator and conduct / assist in performing HAZOPS; Chair Joint Health and Safety Committee; Completed Valero HS&E Auditor Program and served as either a Safety or PSM auditor on Corporate Audits; Help to maintain the PSM Database; IMPACT and ISNETWORLD Administrator at refinery; Provide monthly safety statistics / metrics for Refinery; TOP and Root Cause Incident Investigation Trained; Provide various training as needed; Stepped in for several months in 2007 to fill in for PSM and Safety supervision when Departments were without a manager; prepared budgets in 2007 and 2011; Revised RMP; Compiled VPP Application and developed presentation for Decision Review Board and TOSHA; Serve as CTEMS representative for HS&E Department; Minor environmental assistance; Serve on Volunteer Council; Active as Valero Volunteer. (New Plant Manager did not want safety engineer)

1999 – 2005 **NUTRA-FLO COMPANY, SIOUX CITY, IOWA**
Corporate Environmental Health and Safety Manager

Responsible for all health, safety, and environmental programs including PSM for all Kay-Flo Industry locations (5) in Iowa and Nebraska. Managed one safety professional, one safety technician, corporate draftsperson, and one process engineer; responsible for half of the human resources function and part of the engineering and construction. Worked with all phases of the insurance program along with Worker's Compensation. Wrote and acquired training grants from state. Wrote programs, conducted training, conducted audits, and filed all required government paperwork for OSHA, EPA, and Local Agencies. Negotiated settlements for OSHA and EPA issues that were inherited; conducted Industrial Hygiene testing; filed air, water, and construction permits for multiple facilities; good working relationship with federal and state agencies; Facilitated HAZOPs. (Left for better position at Premcor / Valero Energy.)

1994-1999 **CONSULTING AND SALES, DENVER COLORADO**

Independent contractor for engineering, safety, and environmental work. Worked in sales to augment income.

1993-1994 **TOTAL PETROLEUM, INC., DENVER COLORADO**
Corporate Environment and Safety Auditor

Develop, wrote, and conducted comprehensive safety and environmental Audits including PSM. Wrote audit reports including recommendations for correcting deficiencies. Provided consultation to facilities for training and on rules and regulations. Provided PSM support after audits to gain compliance.

1992-1993 **COASTAL REFINING AND MARKETING, INC., KANSAS REFINING DIVISION, WICHITA, KANSAS**
Division Manager of Environment, Health, and Safety

Supervise two safety and three environmental engineers. Responsible for all environmental, health, and safety activities including serving as the Division PSM Manager for three refineries and one pipeline system. Developed programs for compliance, interfaced with applicable agencies, conducted audits, wrote policies and procedures for EH&S. Negotiated settlements for inherited problems and supervised clean-up operations for environmental issues. Coordinated the development of a process safety program and conducted Process Hazard Analyses on processes. Developed budget for all four EH&S locations.

1990-1992 **ZEON CHEMICALS MISSISSIPPI, HATTIESBURG, MISSISSIPPI**
Safety and Environmental Manager

Provided all safety and environmental support for the facility. This included hazardous and non-hazardous waste disposal, plant safety program, audits, OSHA regulations and agency interface, EPA regulations including SARA III, TSCA, RCRA, CERCLA, storm water, clean air, and fugitive emissions. Engineering for safety and environmental projects. Conducted Process Hazard Analyses for local and corporate projects. Conducted corporate training in PHA, HAZWOPER, clean air, and Process Safety Management. Applied facility into the OSHA Voluntary Protection Program; conducted Industrial Hygiene testing.

1983-1990 **RHONE-POULENC, FORMERLY LYNDAL DIVISION OF COLLOIDS, FORMERLY HI-TEK POLYMERS LIQUID SPECIALTY CHEMICALS (DIVISION OF RTZ CHEMICALS), FORMERLY LYNDAL CHEMICAL COMPANY, DIVISION OF MILLMASTER ONYX GROUP INC., DALTON, GEORGIA**
Safety and Environmental Coordinator

Provided process and project engineering along with HS&E engineering. Developed spill plans, safety programs, hazardous and non-hazardous waste disposal, Industrial Hygiene sampling, wrote operator manuals,

purchased safety supplies, performed engineering and safety projects, constructed waste pre-treatment facility, obtained approval as OSHA VPP site

1982-1983 **KENDALL COMPANY, DIVISION OF COLGATE-PALMOLIVE, BETHUNE, SOUTH CAROLINA**
Temporary Process Engineer

Provided start-up support for new production line. Support included: trouble-Shooting, design modification, design specification, debugging of Equipment, operator training, safety training, process documentation, and production assistance.

1981-1982 **FIBER INDUSTRIES, DIVISION OF CELANESE CORPORATION, SALISBURY, NORTH CAROLINA**
Filament Development Engineer

Implemented R&D projects in the facility, conducted trials, completed special orders for production, troubleshooting of development products, analysis of daily operating problems to determine solutions, and safety audits.

1979-1981 **MONSANTO COMPANY, AGRICULTURAL PRODUCTS DIVISION, ANNISTON, ALABAMA**
Process and Project Engineer

Developed product improvement plans for two product lines. Developed project scopes, purchased equipment, installed equipment, trained operators, conducted safety audits, updated process documentation, process troubleshooting, part of start-up team for new process.

PROFESSIONAL ORGANIZATIONS

American Institute of Chemical Engineers 1979- Present
American Society of Safety Engineers (1984 – Present)
Vice-President West Tennessee Section for 2010-2012
President 2012-2014
American Society of Safety Professionals (Formerly ASSE)
Vice Present Permian Basin Section for 2019-2021
World Safety Organization (1986 – Present)
Member of Board of Directors (2012 - 2014, 2015 - 2017)
American Fuels and Petrochemical Manufacturers Association (2014 –Present)
Vice-Chair PSM Network for Central States Region (2015-2017)
Chaired PSM Network for the Central States Region (2017-2018)
Member of three subcommittees for API Assessment Revisions (2017-2018)

CERTIFICATIONS

Certified Safety Specialist (CSS)
Certified Safety Professional (CSP)
Certified Safety Manager (CSM)
Professional Member of ASSE
Certified Hazardous Materials Manager (expired)
Emergency Medical Responder (EMR)
OSHA 510 and 511 Certified
Green Belt Lean Six Sigma

CIVIC

President of Suburban Rotary Club (Sioux City, Iowa) 2004-2005
Vice-President Suburban Rotary Club 2003-2004
Fairmont Park Church of Christ, Elder and active in church work, 2014-Present
Past member of Board of Directors Howard County (Texas) United Way 2015-2016
Board of Directors for HOA 2017 – Present (term ends 2020)

OTHER

Hold a Transportation Worker Identification Credential (TWIC) card (trusted agent)

HONORS

Phi Kappa Phi and Golden Key Honor Societies at EKU for graduate school

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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 2/21/20

Name: Lynn Rogers

Phone: (432) 553-3300 (Home)
(432) 288-9242 (Business)

Address: 1409 Chestnut Ave

Email: lynn@midlandkm.com

Midland, TX 79701
(City) (State) (Zip)

I am ☑ I am not ☐ a U.S. Citizen

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ yes ☑ no

I have lived in Midland 35 years.

Occupation: Development Coordinator @ Kaleidoscope Ministries

Professional and/or Community Activities:

My professional career has always been in service to the people of my city (church & non-profit). Currently I strive to reach & serve the underresourced in our community through mentoring, community development initiatives.

What is your personal vision for the City?

Being born & raised here I want to see ALL areas of our city thrive. I want to see leaders unified w/ a common goal of what is best for all people of Midland. More access to & more desireable parks.

Please specify any time constraints you may have.

I am very flexible w/ my time to serve however Sunday mornings are reserved for church but again I am flexible during the week

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Parks & Recreation Commission

Please tell us why you are interested in serving on this board or commission.

To improve the desireability, access, & maintenance of our parks/rec areas for the improved over-all health & well-being of our community.

What contribution would you most like to make?

As a long-term & frequent user of our public parks & rec I bring a well baldnced perspective of what makes these areas more enjoyable and functional for the public

Additional pertinent information or references:

I am committed to fulfill this role in the best interest of the public.
Ref: John Norman, District 2 Councilman
Patrick Payton, Mayor

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Lyn Rogers

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland
City Secretary's Office
PO Box 1152
Midland, TX 79702
FAX: (432) 685-7433

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 1/14/2020

Name: P Lourcey Sams

Phone: 432.682.0793 **(Home)**

Address: PO Box 1933

432.682.8261 **(Business)**

Midland Texas 79702

Email: lsams@psams.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 55 **years.**

Occupation: Oil and Gas-Self Employed

Professional and/or Community Activities:

American Assoc. of Petroleum Geologist, West Tx. Geological Society, American Assoc. of Petroleum Landmen,

Midland Chamber Goverment Affairs Committee-Past Member, President COM Parks & Rec. Board-Past Member, West Tx.

MS-Past, MCF Board, MUGS Board-Past, IOGCC-Past, Pecos River Resolution Corp.-Pres. COM Managed Comp. Committee

What is your personal vision for the City?

Continued growth concurrent with expansion of infrastructure (roads, affordable housing, health care, schools, police, fire, etc)

A continuing effort on the revitalization of downtown and an eye on diversification of the economy along with support of the all

important energy sector.

Please specify any time constraints you may have.

I am self employed and envision no time restrains as it would pertain to this application.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Development Corporation

Planning and Zoning Commission

Please tell us why you are interested in serving on this board or commission.

I have had a career being involved in the public sector as a volunteer and in management of various entities and would like to

continue to be involved.

What contribution would you most like to make?

My experience uniquely qualifies me to offer valuable input to the process of the Midland Development Corporation and/or the Planning and Zoning Commission and as such will improve the process for the City of Midland.

Additional pertinent information or references:

I am not new to the importance and functions of the board process. I have served on numerous boards. I have served as President of the City of Midland Parks and Rec. Board, Interstate Oil and Gas Commision for the State of Texas, current President of the Pecos River Resolution Corporation and many others from a community and private business perspective.

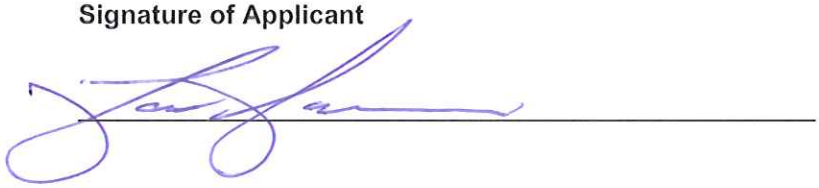
(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

P. LOURCEY SAMS

1606 D Street

Midland, Texas 79705

432/ 682-0793

Over forty years of exploration and production management experience. Managed several exploration and production programs and joint ventures in most major petroliferous basins in the lower United States including the Permian Basin, South Texas, Texas Gulf Coast, Louisiana, the Rocky Mountain Region and California. Administration and management responsibilities have included personnel management and decision making over the specific functions of Engineering, Land, Geology, Geophysics, and Finance.

- Exploration and Production
- Acquisition and Divestitures
- Private Placement and Joint Venture Financing
- Land, Legal and Trade Negotiation
- Knowledge and Experience of Most Domestic Producing Areas
- Extensive Network of Industry Contacts

EXPLORATION AND PRODUCTION

Supervised and directed exploration programs and prospect development in the areas of: (1) Land and Legal, (2) Geology, (3) Geophysics and (4) Engineering. Involved in the Exploration Discovery, Management and Production of over 100 MMBOE.

Decision making managerial experience in drilling, testing, completion, workovers, and production operations

Directly involved in excess of $100 MM in Exploration Drilling

Jointly developed business plans and exploration strategies for specific geological programs and worked with multi-disciplinary teams to finance and implement these

plans

Administrative manager of partnerships and joint ventures

ACQUISITION AND DIVESTITURES

Experience in evaluation, due diligence and acquisition of producing properties

Working experience with industry venture capital and equity funds

Working experience with bank finance from proposal to closing

Prepared brochures, initiated contracts and closed producing property sales

PRIVATE PLACEMENT AND JOINT VENTURE FINANCING

Initialized contacts and finalized capital contributions of private placement offerings and joint venture financing

Supervised preparation of partnerships and joint venture prospectuses

Conducted private placement and industry presentation of exploration programs

Supervised and maintained financials, appraisals and reporting for the benefit of investors

LAND, LEGAL AND TRADE NEGOTIATION

Managerial and working experience in all phases of land management

More than forty years of decision-making managerial responsibilities in trade negotiations, contracts, lease acquisition and maintenance, unitization, government regulation and litigation

Negotiated and administered exploration agreements, operating agreements, farmins, farmouts, leases, etc.

Federal, state and fee Land experience

Retained and supervised outside council

OUTSIDE MANAGERIAL EXPERIENCE

Co-founder and Board Of Managers American Abstract, a federal, state and fee title company in Santa Fe, New Mexico

Professional Landman Schools, Advisory Board Member, Oklahoma City, Oklahoma

Director, Pennant Pipeline, Inc. - Management experience with gas gathering systems in Oklahoma

EMPLOYMENT HISTORY

2002-Present	Brazos Valley Water Alliance, L. P.-CEO and Marketing Director of Brazos Valley Water Works. LLC. general partner for Brazos Valley Water Alliance, L. P. Responsible for all aspects of the business from the acquisition of rights to the marketing, lobbying, coordinating and implementation of the company's plan of development.
1998- Present	Pennant Development and Production, LLC., President. Acquisition and Operation of Producing Properties
1988-Present	Banner Energy, Inc.- President. Banner is an administration entity for numerous limited partnerships and joint ventures engaged in exploration and production

1983-1988	Banner Energy, Inc.- Vice President
1981-1983	Banner Petroleum II, Ltd., Houston, Texas. Worked with multi-disciplinary team in the generation and drilling of exploration prospects in South Texas, Gulf Coast Texas and Louisiana
1977-1981	Amoco Production Company- Houston, Texas. Resigned as Senior Landman, West Texas and New Mexico Division

EDUCATION

1977	BA- Austin College Sherman, Texas

INDUSTRY SCHOOLS

Well log interpretation
Schlumberger
Houston, Texas

Southwest Legal Foundation
Annual Conference
Dallas, Texas

Geology and Well Drilling
Amoco Training Center
Tulsa, Oklahoma

Exploration Economics
Amoco Training Center
Tulsa, Oklahoma

Communication and Negotiation
Amoco Training Center
Tulsa, Oklahoma

Unitization
Amoco Training Center
Tulsa, Oklahoma

Oil and Gas Leasing
Amoco Training Center
Tulsa, Oklahoma

Structuring Deals- Basic
Amoco Training Center
Tulsa, Oklahoma

Structuring Deals- II
Amoco Training Center
Tulsa, Oklahoma

Introduction to Exploration
Amoco Training Center
Tulsa, Oklahoma

PROFESSIONAL AFFILIATIONS AND COMMUNITY SERVICE

American Association of Petroleum Geologists

West Texas Geological Society

Financing Exploration and Production Association

American Association of Professional Landmen

City of Midland Parks and Recreation Advisory Board-Past Chairman

City of Midland Managed Competition Committee

Pecos River Resolution Corporation – President, Board of Directors

Midland Chamber of Commerce Government Affairs Committee- Past Member

Interstate Oil and Gas Commerce Commission- Past Member

West Texas Multiple Sclerosis Society- Past Member

West Texas Hunting Retriever Club- Past President

REFERENCES

Available upon request

Ernest Angelo, Jr.
410 North Main Street
Midland, Texas 79701
(432) 684 4449

February 14, 2020

Amy Turner
Midland City Secretary

Re: Lourcey Sams application MDC Board

Amy,

I am writing to recommend the appointment of Lourcey Sams to the MDC Board. I have known Lourcey and his family for many years. I have served on a non profit board which he chaired and where he always did an admirable job of supervising the organization.

I believe Lourcey has the ability, integrity and commitment to be an excellent MDC Board member.

Please add this note to Lourcey's application

Thank you,

Ernest Angelo, Jr.

EA/mw

ARLEN L. EDGAR
OIL & GAS INVESTMENTS

OFF: (432) 683-5303
FAX: (432) 683-8507
arlen@arlenledgar.com
414 WEST TEXAS, SUITE 208
MIDLAND, TEXAS 79701

February 13, 2020

Ms. Amy Turner
City Secretary
City of Midland, Texas

RE: Lourcey Sams – MDC Board

Dear Ms. Turner:

This letter is in support of Lourcey Sams as a member of the MDC Board.

I have known Lourcey and certain members of his family for a number of years and believe he is qualified for this role.

He is a long-time resident of Midland and has exhibited a keen interest in the well-being of the community. His biographical summary essentially speaks for itself; however, I would like to emphasize certain elements of his background which I believe qualify him for the MDC Board, as follows:

- Business experience
- Financial knowledge
- Community and public service
- Professional organizations

Very important is his goal of playing a role on the MDC Board and thus enabling his community.

Yours very truly,

Arlen L. Edgar

Arlen L. Edgar

ALE/kh

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 3/4/2020

Name: Douglas B. (Doug) Schmidt

Phone: 432-553-1145 **(Home)**

Address: 1503 Harvard Avenue

432-217-5202 **(Business)**

Midland Texas 79701

Email: doug@dxs.cc

(City) (State) (Zip)

I am ☑ **I am not** ☐ **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ **yes** ☑ **no**

I have lived in Midland 32 **years.**

Occupation: VP of Land and Business Development

Professional and/or Community Activities:

Board Member, Petroleum Club of Midland

Chairman, Forms Committee, American Association of Professional Landmen

I was also a member of the Vision 2020 task force and the 2014 Downtown Future Development task force.

What is your personal vision for the City?

As a native Midlander and business owner, I am supportive of investments that make Midland a better place for a demographic that is accustomed to living in large cities and having the cultural, educational and entertainment offerings available there. We also need to encourage growth of businesses that offer jobs for our highly educated, and provide workforce development education in skilled tra

Please specify any time constraints you may have.

I am a partner in an oil and gas company, and outside of work obligations, I have flexibility in my schedule for meetings and to travel.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Midland Development Corporation

Please tell us why you are interested in serving on this board or commission.

Our community has helped me to become who I am today personally and professionally, and I view my service on the MDC as a way to give back and by finding ways to encourage new businesses to locate here, support growth of new career opportunities for others.

I also want to help find creative ways to solve challenges for the energy industry and those we face as a city.

What contribution would you most like to make?

I would like to see a continued/renewed focus on downtown. Centennial Park and the new hotel project are the catalysts we need to kick off significant development downtown, and I'd like to work through the MDC to remove or lessen some of the barriers to entry for businesses in to downtown and the central business district.

Additional pertinent information or references:

Laura Roman, laura.roman@weaver.com

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland
City Secretary's Office
PO Box 1152
Midland, TX 79702
FAX: (432) 685-7433

Submit Via Email

Print Application

Amy Turner

From: Doug Schmidt <dschmidt@pinonres.com>
Sent: Wednesday, March 18, 2020 2:33 PM
To: Amy Turner
Subject: MDC Application
Attachments: SKM_C45820030414440.pdf; ATT00001.htm

Hi Amy,

Thanks for your time on the phone this afternoon. Attached is my application to the MDC. I was encouraged to apply on February 26 after Council decided to expand the number of seats on the board, and I took a few days to visit with a couple of former members and understand more about what the position entails before I applied.

I found out the other day that you didn't receive the application I tried to submit online, so that is why I am late in getting this to you.

Laura Roman will be sending you a letter of recommendation for me via email.

Thank you again,

Doug Schmidt
Vice President - Land & Business Development
Piñon Resources, LLC
(432) 553-1145

Begin forwarded message:

> **From:** "printer@pinonres.com" <printer@pinonres.com>
> **Date:** March 4, 2020 at 2:35:55 PM CST
> **To:** Doug Schmidt <dschmidt@pinonres.com>
> **Subject: Message from KM_C458**
> **Reply-To:** printer@pinonres.com

CAUTION: This email originated from outside your organization — exercise caution when opening attachments or clicking links, especially from unknown senders.

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 2/16/2020

Name: Joseph Schwab

Phone: 432-684-5766 **(Home)**

Address: 5508 Kingston Drive

_____ **(Business)**

Midland TX 79705

Email: 1980jalan@gmail.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 20+ **years.**

Occupation: Retired Geologist

Professional and/or Community Activities:

Former member of American Association of Petroleum Geologists

Former member of West Texas Geologic Society

What is your personal vision for the City?

To improve the quality of life for our citizens

Please specify any time constraints you may have.

None at the current time

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

1) Midland Spaceport Development Corporation

Please tell us why you are interested in serving on this board or commission.

I am currently enrolled in Midland 101 and have learned of the need for residents of Midland to become active on the boards.

What contribution would you most like to make?

I have a strong science background with a graduate degree in geology.

Additional pertinent information or references:

(2) Name of Board/Commission:

Parks & Recreation Commission

What contribution would you most like to make?

I would like to encourage our citizens to take advantage of what our parks have to offer.

I would like to encourage discussions for adding to the variety of recreational activities available to Midland residents.

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Joseph L Church

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Submit Via Email

Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: February 11, 2020

Name: Tasha Sport

Phone: 432-528-5919 **(Home)**

Address: 7112 FM 307 **(Business)**

Midland TX 79706

(City) (State) (Zip)

Email: sport.tf@gmail.com

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 35 **years.**

Occupation: Oil & Gas

Professional and/or Community Activities:

I currently volunteer with local animal rescues and organizations. Active Volunteer with Midland Athletic Company for local running ev

What is your personal vision for the City?

My vision for the City of Midland with regard to animal welfare is to change the mindset that animals are more than property. This is to include education of the public of proper treatment of animals, resources to assist with the care of companion animals and a facility that can safely house lost and found animals until adoption or transportation can be secured.

Please specify any time constraints you may have.

NA

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Animal Services Advisory Commission

Please tell us why you are interested in serving on this board or commission.

I would like the opportunity to serve on the Animal Services Advisory Commission in order to be a voice for the animals of Midland Texas. I feel my experience in animal rescue and animal welfare could greatly benefit the animals of Midland

and those working to make decisions on their behalf. Serving the animals and City of Midland would be an honor.

What contribution would you most like to make?

Dealing with and making decisions regarding animals can often be extremely emotional. I believe my contribution would be the ability to make recommendations and decisions that are not emotionally driven. I recognize the problems the community and shelter f but also realize the limitations of both. I feel I have a strong ability to see and evaluate the facts with an open mind and make practic

Additional pertinent information or references:

Tracye Gearhart - 432-934-6555

Dr. Annette Jensen - 432-556-4305

Mark Bassham - 432-425-9813

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

PETA SPURT

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Print Application

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: February 11, 2020

Name: Ron Stroman

Phone: 432 638 3622 **(Home)**

Address: 5211 Green Tree Blvd

_____ **(Business)**

Midland Texas 79707

Email: roncoair@yahoo.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 41 **years.**

Occupation: Retired Insurance Agent & Rancher

Professional and/or Community Activities:

Owned and managed a commercial insurance agency, employing 40 plus employees. Served on various committees at FUMC, currently on the Staff Parish committee. Served two terms on the board of the West Texas Aphasia Center, and volunteer every Monday at the center. I have also served on the Heart Association Board. I am on the Board of West Texas National Bank.

What is your personal vision for the City?

I am of the belief that Midland can be a Top 100 City in the US. I raised two daughters in Midland and currently have three grandchildren living in Midland. Parks, swimming pools, and golf courses attract families to a area. I would like to be a part of making sure Midland offers the best it can of those facilities.

Please specify any time constraints you may have.

Monday mornings I am at the Aphasia Center, doing my volunteer work. The third Tuesday afternoon is a regular scheduled board meeting at WTNB.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

The need to develop and maintain our facilities is paramount to being a top 100 city.

What contribution would you most like to make?

I recognize the need and use of parks, swimming pools and golf courses. As a rancher I understand how weather and climate effects on these assets.

Additional pertinent information or references:

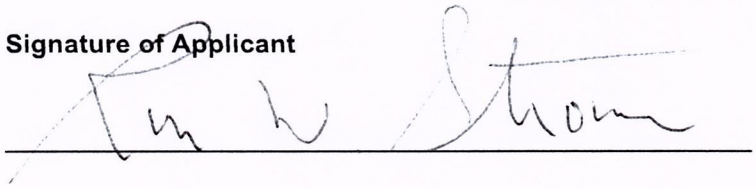
(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant



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APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 1/30/2020

Name: STEVEN VILLELA

Phone: 432-235-4792 **(Home)**

Address: PO BOX 10721

_____ **(Business)**

MIDLAND TX 79702

Email: STEVENVILLELA@GMAIL.COM

(City) (State) (Zip)

I am [✔] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✔] **no**

I have lived in Midland 20 **years.**

Occupation: MANAGER AT TORTILLERIA LA MEXICANA

Professional and/or Community Activities:

I manage two companies; the first one is a tortilla factory my parents have had for many years, and the second one a landman company I started. I'm a board member for the Hispanic Chamber of Commerce, Co-Chair for the Teen F.L.O.W. Youth Ministry Fundraising Committee, leadership for the Midland LLC, and an ambassador for TPUSA.

What is your personal vision for the City?

I want the city to not only be a place to make money but where you can spend it without having to go to DFW, San Antonio, Austin or any other metropolitan area to have fun. I want to help more entertainment companies start/grow in our area. Facilitate Midland grc so young families can decide that this is where they want to plant roots, build a life and send their kids to school here.

Please specify any time constraints you may have.

I am extreamly flexible with my hours.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

Midland Developmet Cororation

Please tell us why you are interested in serving on this board or commission.

I want to serve on this community to bring some newer ideas of entertainment companies we can either help start or bring to the area. Helping our community have more things to do for families and young adults alike.

What contribution would you most like to make?

I would like to help the board get in contact with other companies that want to start entertainment companies that would work in our city/community. Be a different type of thinker to make the board more diverse in ideas, and finally bring somebody on that has more time to be able to visit/travel to other cities to visit companies we might be interested in bringing to Midland.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

Jose Cuevas, work number: 432-520-3529, email: jcuevas@jumburrito.com

John Bergman, Cell 432-638-2001, Email: john@bergmanresources.com

Jay MArquez, Cell 432-214-5301, Email jay@teenflow.com

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Steven Villela

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Print Application

MIDLAND
Feel the Energy!

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 1/31/2020

Name: Rachel Walker

Phone: 325-642-9539 **(Home)**

Address: 4604 Gleneagles DR

_____ **(Business)**

Midland TX 79707

Email: rwalker@crownquest.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ___ **yes** [✓] **no** (↓ I am currently enrolled)

I have lived in Midland 4 **years.**

Occupation: CrownQuest Public Affairs Manager

Professional and/or Community Activities:

I am currently enrolled in Midland 101. I am the Communications/PR lead for the Midland Liberty Leadership Council where young adults discuss politics and policy. I am finishing up my training to volunteer with Reflections Ministries' sex-trafficking victims. Professionally, I am involved in various committeess for oil and gas trade organizations.

What is your personal vision for the City?

Like Mayor Payton has said, I want Midland to be a city people are excited to move to and don't look at it as "passing through." My husband nor I are from Midland or West Texas, but we love this city and are committed to making Midland as beloved for others as it is for us. I want to help Midland be better any way I can because I believe Midland can be the place that people never want to leave.

Please specify any time constraints you may have.

As long as I know dates and times of meetings ahead of time, I should have no issue in shuffling professional or personal commitments.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Parks and Recreation Commission

Please tell us why you are interested in serving on this board or commission.

It's no secret that we live in a desert, but our city's parks are an oasis in the desert. I want to be a part of ensuring our existing and future parks are enjoyable for generations to come. The City of Midland also does a great job of providing citizens with ways to get

out of the house and enjoy our parks (like Movies in the Park). I hope to help dispell the rumor that there's nothing to do in Midland.

What contribution would you most like to make?

I used to work for the city as the police department's Communications Specialist. I learned during that time the delicate balance between meeting citizens' wants and budget restraints. I assume that balance is only escalated in the Parks and Recreation Dept. I would like to help explore new ways to attain the department's wish list while maintaining fiscal responsibility for citizens.

Additional pertinent information or references:

Sergeant Jimmy Young jyoung@midlandtexas.gov

Chief Seth Herman sherman@midlandtexas.gov

Lauren Melear lmelear@crownquest.com

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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MIDLAND
Feel the Energy!

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

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PLEASE TYPE OR PRINT CLEARLY:

Date: 2/18/2020

Name: Dal Watson

Phone: 432-553-3220 **(Home)**

Address: 5609 Los Patios Dr.

432-687-0213 x 106 **(Business)**

Midland TX 79701

Email: watsond966@aol.com

(City) (State) (Zip)

I am [✓] **I am not** [ ] **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? [ ] **yes** [✓] **no**

I have lived in Midland 29 **years.**

Occupation: Insurance Agent

Professional and/or Community Activities:

Past Board Member and Coach, Northern Little League

Former Coach, Greater Midland Football League, Midland Soccer Association, FUMC & UpWard Basketball Leagues

Current Sports Official, Texas Association of Sports Officials, Football-Basketball-Baseball

What is your personal vision for the City?

I've sat in on several of the Priority Midland Quality of Place sessions, and I'd say my vision for the City aligns pretty well with those outlined in the Priority Midland Quality of Place folks. I raised my family here and it's a great place to live but we need to do more to continue to improve the quality of life for families in this community.

Please specify any time constraints you may have.

I'm pretty flexible if given enough advance notice

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at www.midlandtexas.gov)

(1) Name of Board/Commission:

Parks & Recreation Committee

Please tell us why you are interested in serving on this board or commission.

I've been involved in a lot of sports organizations in Midland as I raised my kids here and now that they are grown, I'm interested in putting my time, energy and effort into another aspect of it.

What contribution would you most like to make?

My background in Midland area sports will help in my decisions for the good of the citizens we serve.

Additional pertinent information or references:

(2) Name of Board/Commission:

What contribution would you most like to make?

Additional pertinent information or references:

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Signature of Applicant

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City of Midland

City Secretary's Office

PO Box 1152

Midland, TX 79702

FAX: (432) 685-7433

Print Application

MIDLAND HOUSING AUTHORITY COMMISSION
(Advisory; Membership - 5: Terms - 2 Years Expiring 2-3)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Dennis Bade	Oct 30 2020	42%	5	12		
Marjorie McQuerry	Oct 30 2020	42%	5	12		
Brandon Bradley	Oct 30 2021	25%	3	12		
Sylvester Cantu	Oct 30 2021	33%	4	12		
Cheryl Wadley (Res. Commis.)	Oct 30 2021	0%		12		Appointed 10/2019

Applicants Name	Additional Boards Applying to	COUNCIL NOTES
Robert Lehrer		
West Gotcher	MDC, P&Z	

MIDLAND SPACEPORT DEVELOPMENT CORPORATION
(Advisory; Membership - 7: Terms - 2 Years)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Gina M. Lewis (City)	June 1 2021	0%	0	2		Appointed 10/2019
Lori Blong (City)	June 1 2022	0%	0	2		Appointed 02/2020
Zachary Deck (City)	June 1 2022		0	2		Appointed 02/2020
Frank Tarzian (City)	June 1 2022		0	2		Appointed 02/2020
Scott Ramsey (County	June 1 2021	50%	1	2		
Robert Donnelly (County)	June 1 2021	100%	2	2		
VACANT (Echols)(County)	June 1 2021	50%	1	2		

Applicants Name	Additional Boards Applying to	COUNCIL NOTES
Lynn Richardson		
Joseph Schwab	P & R	
Frank Tarzian		
Kimberly Crisp		
Zachary Deck		

PLANNING AND ZONING COMMISSION
(Advisory; Membership - 7: Terms - 3 Years)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Warren Ivey	Sept 30 2020	75%	9	12		
Joshua Sparks	Sept 30 2020	100%	12	12		
Diane Williams	Sept 30 2020	100%	12	12		
Reggie Lawrence	Sept 30 2021	92%	11	12		
Karmen Bryant	Sept 30 2022	83%	10	12		
Chase Gardaphe	Sept 30 2022	92%	11	12		
Kevin Wilton	Sept 30 2022	83%	10	12		
ALTERNATES:						
Stacey Jo Grosse	Sept 30 2021	17%	2	12		
Lucy Sisniega	Sept 30 2022					

Applicants Name	Additional Boards Applying to	COUNCIL NOTES
P Lourcey Sams	MDC	
Douglas Lunsford	P & R	
Adrian Carrasco	P & R	
Wes Gotcher	MDC, MHA	

ANIMAL SERVICES ADVISORY COMMISSION

(Decision Making; Membership - 6: Terms - 4 Years Expiring 4 odd and 2 even)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Alyson Dial	Sept 30 2021	100%	3	3	Yes	
Sara Harris	Sept 30 2021	0%	0	3	Yes	
Leah Lewis	Sept 30 2021	100%	3	3	Yes	
Robert "Robin" Donnelly	Sept 30 2021	33%	1	3	Yes	
Dr. Laura (Erickson) Lee (Vet)	Sept 30 2022	67%	2	3	Yes	
Luann Morgan	Sept 30 2022	0%	0	3	Yes	
Spencer Robnett (Liason)						

APPLICANTS NAME	Additional Boards Applying to	NOTES
Tasha Sport		
Tracye Gearhart		
J. Annette Jensen		
Sharla Hotchkiss	MDC, CDHMAB, P&R	

CITIZENS DEVELOPMENT AND HOTEL/MOTEL ADVISORY BOARD

(Advisory; Membership - 7: Terms - 2 Years Staggered)

4-2020, 3-2021

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Joey Hopkins	Sept 30 2020	100%	3	3	Yes	
Ashlee Nelson	Sept 30 2020	33%	1	3	Yes	
Alex Singh	Sept 30 2020	100%	3	3	Yes	
Becky Wisdom	Sept 30 2020	67%	2	3	Yes	
Ellen K. Rasmsey	Sept 30 2021	100%	3	3	Yes	
Kate Williamsom	Sept 30 2021	33%	1	3	Yes	
David Blackketter	Sept 30 2021	67%	2	3	Yes	
Sharla Hotchkiss (Liaison)	Sept 30 2021	0%		3	Yes	

APPLICANTS NAME	Additional Boards Applying to	NOTES
Sharla Hotchkiss	MDC, P&R, ASAB	

MIDLAND DEVELOPMENT CORPORATION
(Membership - 5: Terms - 3 Years - Staggered)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Chase Gardaphe	Jan 14 2022		5	12	Yes	Appointed 01/2019
Wesley Bownds	Jan 14 2022	83%	10	12	Yes	
Barry Simpson	Jan 14 2022	58%	7	12	Yes	
Stephen Lowery	Jan 14 2023	92%	11	12	Yes	
Lori Blong	Jan 14 2023		0	12	Yes	Appointed 02/2020

Applicants Name	Additional Boards Applying to	COUNCIL NOTES
P Lourcey Sams	P & Z	
Jill C. Pennington		
Mercedes Buchanan		
Elaine Bedell		
Steven Villela		
Kathryn Chandler	P & R	
James Gerety		
Adam Lawlis		
Wes Gotcher	MHA, P&Z	
Douglas B. Schmidt		
Sharla Hotchkiss	CDHMAB, P&R, ASAC	

PARKS AND RECREATION COMMISSION
(Advisory; Membership - 9: Terms - 3 Years Expiring 3-3-3)

MEMBER	TERM EXPIRES	ATTENDANCE	MEETINGS ATTENDED	TOTAL MTGS	ELIGIBLE	NOTES
Lisa Fitzgerald	Sept 30 2020	67%	4	6		
Josh Stralow	Sept 30 2020	67%	4	6		
Michael Harris	Sept 30 2020	50%	3	6		
Jack Ladd	Sept 30 2021	50%	3	6		
Shirley Howard	Sept 30 2021	50%	3	6		
Laura Smith	Sept 30 2022	0%		6		
Francis Schammel	Sept 30 2022	0%		6		
Connie Ferguson	Sept 30 2022	50%	3	6		
Stephanie Martin	Sept 30 2022	67%	4	6		
Applicants Name	Additional Boards Applying to	COUNCIL NOTES				
Rachel Walker						
Susannah Prucka						
Dougkas Lunsford	P & Z					
Kathryn Chandler	MDC					
Dal Watson						
Adrian Carrasco	P & Z					
Ron Stroman						
Heather Ferrell						
Joseph Schwab	MSDC					
Lynn Rodgers						
Scharla Hotchkiss	MDC, CDHMAB, ASAB					

APPLICATION FOR CITY OF MIDLAND BOARDS/COMMISSIONS/COMMITTEES

As an applicant for a City board, commission, or committee, please be advised that all information on this application is subject to the Texas Open Records Act and will be available to the public.

PLEASE TYPE OR PRINT CLEARLY:

Date: 4/3/2020

Name: Sharla Hotchkiss

Phone: 432-684-6140 **(Home)**

Address: 1701 Community Lane

(Business)

Midland Texas 79701

Email: sehotch@gmail.com

(City) (State) (Zip)

I am ☑ **I am not** ☐ **a U.S. Citizen**

Please tell us about yourself:

Are you a graduate of Midland 101? ☐ **yes** ☑ **no**

I have lived in Midland 49 **years.**

Occupation: retired

Professional and/or Community Activities:

I have been active in most aspects of the community as a volunteer and nonprofit trainer/facilitator.

Past member of P & Z, City Council and other City commissions. Have held leadership positions in state organizations.

Husband Bart and I have owned and operated small businesses (now retired).

What is your personal vision for the City?

Midland is family friendly, supports business development, is progressive and welcoming

We are resilient and hard working with strong values.

Please specify any time constraints you may have.

Please list below the Board(s) or Commission(s) on which you are interested in serving:

(You can find a complete and current list on the City's website at *www.midlandtexas.gov*)

(1) Name of Board/Commission:

I am interested in several commissions: Midland Develpment Corporation, Hotel/Motel, Parks, Animal Services

Please tell us why you are interested in serving on this board or commission.

What contribution would you most like to make?

MDC: I would love to work with this visionary entity. The MDC provides a dedicated staff to research & vette investments for development. It is professional, has impact & provides leadership & innovation for the City. I enjoyed attending meetings with them while on City Council and would appreciate being appointed as a member.

Additional pertinent information or references:

i enjoy research and detail work. Have a broad knowledge of the City. i think this would be interesting - I hate to be bored!

(2) Name of Board/Commission:

HOTEL/MOTEL: as a past liaison to this board i was able to see the impact of our tax dollars on the entities that bring visitors to our community. It is fun to research and give grants to these entities. PARKS: always has been a speial interest to me. I'm currently involved with doing a tree inventory of the parks. Believe parks and open spaces are important for Midland's quality of life.

What contribution would you most like to make?

Continued from above: ANIMAL SERVICES has a special role that demands excellent service and difficult choices for abandoned animals in this town. I'd like to help design their new volunteer opportunities as the facility expands. I was involved in the funding and planning for the new facility & could be helpful during the construction process.

Additional pertinent information or references:

It would be great to continue to serve the City of Midland as a volunteer. Use me if you need me!

Applications are maintained on file in the City Secretary's office for a period of one year. Should you need additional information, please call us at 432-685-7430.

Signature of Applicant

Sharla Hutchison

Applications may be submitted online via email or print in order to send by mail or fax:

City of Midland
City Secretary's Office
PO Box 1152
Midland, TX 79702
FAX: (432) 685-7433

Submit Via Email

Print Application