



VISION ZERO
— Safe Streets for Midland —

MIDLAND

Comprehensive Safety Action Plan

JUNE 2024 | *FINAL DOCUMENT*



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Expect More. Experience Better.

LETTER FROM THE MAYOR

In Midland, every fatality on our roads is regarded as one too many. Our road network serves as the lifeline of our community, facilitating access to essential services such as employment, education, healthcare, and leisure activities. It is our responsibility to ensure that Midland's transportation networks are not only efficient but, above all, safe.

The collective belief in the importance of protecting every life within our city limits has led to the adoption of Midland's Vision Zero policy. Endorsed by the Midland City Council, our Vision Zero policy solidifies our commitment to safer corridors throughout our city. Traffic incidents do not discriminate, putting all citizens at risk of harm if we do not begin cultivating a community with safety as its foundation for all road users.

As Mayor of Midland, a business owner, and a mother, I am personally invested and committed to achieving our Vision Zero goal: Zero Roadway Fatalities by 2050. To achieve this ambitious objective, we must foster collaboration among community stakeholders, municipal departments, and advocacy groups. Together, we will develop and implement programs, enact ordinances, and establish infrastructure regulations geared toward mitigating common safety concerns facing our community, such as red-light violations, speeding, and impaired driving. Through unified efforts, we will holistically eliminate preventable crashes and fatalities.

I take great pride in presenting Midland's Vision Zero Comprehensive Safety Action Plan—a blueprint designed to guide us toward safer roadways and, ultimately, toward the elimination of preventable fatalities by 2050. Our goal is ambitious, yet attainable, provided each of us commits to identifying and addressing the safety challenges confronting our city streets.

Midland's Vision Zero Comprehensive Safety Action Plan is the first step to shaping a Midland where community well-being and safety are our top priorities not for some, but for all citizens.



Executive Summary





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Executive Summary

Both the City of Midland and Midland County acknowledged the need and opportunity to eliminate fatal and serious crashes for all roadway users through a Comprehensive Safety Action Plan (CSAP). As such, the City and County embarked on a joint planning effort that leveraged shared and regional perspective and responsibility. Although the planning effort leveraged resources and expertise from both jurisdictions through several joint Vision Zero Task Force (VZTF) meetings, two separate documents were produced, specific to Midland City and Midland County. This report only outlines the Comprehensive Safety Action Plan for the City of Midland. The three-phase project approach kicked off in August 2023 and ran through adoption on April 9, 2024. A timeline that outlines and describes each phase of the project is included in **Chapter 2**.

This Plan is organized into three parts, each containing a purpose statement and listing of chapters contained within. The parts of the plan correspond to the various phases of the planning process:

- Part I: Background and Purpose
- Part II: Midland State of Safety
- Part III: Vision Zero Action Plan



The Safe Streets and Roads for All (SS4A) program is a primary driving force behind the CSAP, which is characterized and guided by the Federal Highway Administration's (FHWA) Safe System Approach. The guiding principles for this plan are viewed through a Vision Zero lens, which aims to eliminate all traffic fatalities and severe injuries, prioritizing the principles of safe road design, enforcement, education, and community engagement to achieve this goal. The guiding principles of the Safe System Approach and this document are detailed in **Chapter 1**, but can more generally be summarized as follows:



With these guiding principles in mind, the Task Force worked together to establish a mission that clearly communicates the reason for being and declare how this Plan aims to serve the community and stakeholders into the future. This vision for both the Midland City and Midland County Comprehensive Safety Action Plans is:

*Eliminating deaths on Midland's roads by **BUILDING** complete streets, **ENGAGING** the community, and **INNOVATING** safer solutions to protect all users.*

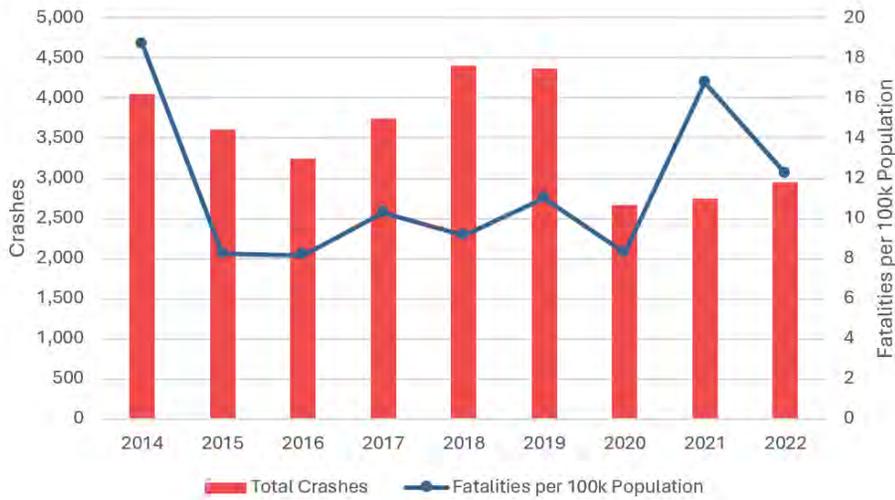
To make this mission a reality, Midland's City Council, along with the Task Force and staff commit to the overall goal of improving safety in Midland by adopting a Vision Zero resolution on April 9, 2024. The Vision Zero Resolution is provided in the **Appendix Item A**.

Part II of the Plan, Midland State of Safety, establishes an empirical understanding of existing conditions and key safety considerations, laying the foundation for Part III of the Plan. Chapter 3 analyzes the Citywide crash history, details safety emphasis areas, and reviews the equitable state of safety throughout the City.

MIDLAND Comprehensive Safety Action Plan

Citywide crash trends revealed that the City of Midland's total crashes peaked in 2018, with a significant decrease in 2020, largely due to the COVID-19 pandemic (**Figure i**). However, since 2020, total crashes in the City of Midland have increased each year, with fatal crashes per 100,000 population spiking dramatically in 2021 with a slight decrease in 2022.

Figure i: City of Midland Total Crash Summary (2014-2022)



To drill down and better understand the causative factors of these crashes, eight safety emphasis areas were analyzed and compared to the statewide observance rate. The eight safety emphasis areas are detailed in **Chapter 3**, but are summarized and compared to the State observance rates in **Table i**.

Table i: City of Midland vs Texas Emphasis Area Crash Percentage

| Emphasis Area | Midland | Texas | Difference |
|-----------------------------|---------|-------|------------|
| Roadway/Lane Departure | 46% | 35% | 11% |
| Intersection-Related | 42% | 32% | 10% |
| Red Light/Stop Sign Running | 34% | 12% | 22% |
| Speed-Related | 32% | 33% | -1% |
| Impaired Driving | 23% | 18% | 5% |
| Unrestrained Persons | 18% | 17% | 1% |
| Vulnerable Road Users | 16% | 13% | 3% |
| Distracted Driving | 12% | 15% | -3% |

Key takeaways when comparing Midland to Texas crash percentage by emphasis area include:

RED LIGHT AND STOP SIGN RUNNING IS A UNIQUE SAFETY CHALLENGE IN MIDLAND

EVEN THOUGH DISTRACTED DRIVING IS LESS COMMON IN MIDLAND, IMPAIRED DRIVING IS MORE COMMON COMPARED TO THE STATE AVERAGE

LANE DEPARTURE, INTERSECTION-RELATED, AND SPEED-RELATED CRASHES REMAIN AN ISSUE IN MIDLAND



An additional key consideration of **Chapter 3** is Equity & Safety in Midland. The analysis considered equity and disadvantaged areas of the City of Midland to better improve historically underserved parts of the community. Disadvantaged areas were identified through an analysis conducted by the United States Department of Transportation. The analysis included population characteristics for five categories:

- Transportation Insecurity
- Environmental Burden
- Social Vulnerability
- Health Vulnerability
- Climate and Disaster Risk Burden

The census tracts within the City of Midland that are considered disadvantaged are primarily located on the west and south sections of the City. The analysis revealed that while approximately 22% of the City of Midland population lives in disadvantaged areas, between 2018 and 2022, a disproportionate amount (38%) of Fatal Injury (K) and Suspected Serious Injury (A) Crashes occurred in those areas (**Table ii**).

Table ii: Citywide vs Disadvantaged Crash Severity

| Crash Severity | Citywide | Disadvantaged | Difference |
|-------------------------------------|----------|---------------|------------|
| K - FATAL INJURY | 0.4% | 0.7% | 0.3% |
| A - SUSPECTED SERIOUS INJURY | 1.8% | 2.5% | 0.7% |
| B - SUSPECTED MINOR INJURY | 10.3% | 10.8% | 0.5% |
| C - POSSIBLE INJURY | 15.7% | 15.0% | -0.7% |
| N - NOT INJURED | 66.4% | 64.1% | -2.3% |
| 99 - UNKNOWN | 5.4% | 6.8% | 1.5% |

MIDLAND Comprehensive Safety Action Plan

A high-injury network (HIN) is a network of roads, intersections, or other transportation infrastructure, that has a higher-than-average rate of crashes resulting in injuries or fatalities. Identifying and prioritizing facilities within the HIN is a crucial step in enhancing road safety to reduce fatal and severe crashes. **Chapter 4** details the methodology used to calculate the following HIN, as well as detailing the individual segments.

Part III of the plan details countermeasures and recommendations for study corridors as well as systemic improvements as part of the Vision Zero Action Plan. This includes policies, programs, and various strategies and actions that provide improvements for specific safety emphasis areas in the City of Midland. **Chapter 5** brings forth five road segments on the High-Injury Network were selected as priority corridors to make targeted recommendations that improve safety on the City’s most unsafe corridors today (**Table iii**). The highest priority study corridors were selected with input from City staff and scored based on equity, engagement, and feasibility.

Table iii: Study Corridors

| Study Corridor | Limits | | Length (mi) | Crashes | | | Daily Volumes |
|--------------------------------------|-------------|--------------|-------------|----------|-----------|-----------|---------------|
| | From | To | | K | A | Total KAs | |
| 1. Wadley Avenue | Mark Ln | Cord Dr | 1.34 | 1 | 3 | 4 | 21,400 |
| 2. Fairgrounds Road | Loop 250 | CR 72 | 1.31 | 0 | 4 | 4 | 4,300 |
| 3. Andrews Highway | Midkiff Rd | Missouri Ave | 1.49 | 1 | 8 | 9 | 67,900 |
| 4. Lamesa Road | BUS 20 | Florida Ave | 1.40 | 2 | 4 | 6 | 12,800 |
| 5. Midkiff Road - Wall Street | Williams St | Front St | 0.30 | 2 | 4 | 6 | 32,500 |
| Total | | | 5.84 | 6 | 23 | 29 | |

Targeted recommendations at study corridors provide detailed and crafted recommendations for specific areas of Midland that have varying crash history, road geometry, intersection control, and land use context. Additionally, systemic recommendations are organized by safety emphasis area and provide a countermeasure toolbox to make Citywide improvements.

Systemic countermeasures can be implemented in all areas of the City to improve safety, not limited to previous recommendations and study corridors. The corresponding toolbox in **Chapter 5** provides a comprehensive collection of strategies and interventions designed to address specific traffic safety issues and challenges. There is also a summary of these countermeasures in **Table iv**.

Table iv: Systemic Countermeasure Toolbox

| Safety Emphasis Areas | Raised Median | Lane Designation Markings and Signs | High Contrast Lane Markings | Wide Edge Lines | Speed Feedback Signs | Roundabouts | Bike Lanes | Retroreflective Backplates | Corridor Access Management | Rectangular Rapid Flashing Beacon | Improve Signaling and Visibility at Signals | Pedestrian Hybrid Beacon | Sidewalks | Roadway Reconfiguration |
|--------------------------|---------------|-------------------------------------|-----------------------------|-----------------|----------------------|-------------|------------|----------------------------|----------------------------|-----------------------------------|---|--------------------------|-----------|-------------------------|
| CMF | 0.29 | 0.75 | 0.75 | 0.97 | 0.95 | 0.59 | 0.435 | 0.85 | 0.93 | 0.31 | 0.732 | 0.883 | 0.598 | 0.53 |
| Roadway & Lane Departure | ● | ● | ● | ● | | | | | | | | | | ● |
| Speed-Related | ● | | | | ● | ● | ● | | | | | | | ● |
| Intersection-Related | | ● | | | | ● | | ● | ● | ● | ● | | | |
| Vulnerable Road Users | ● | | | | | | ● | | | ● | ● | ● | ● | ● |
| Distracted Driving | | ● | ● | ● | | | ● | ● | | | ● | | | |
| Impaired Driving | ● | ● | ● | ● | | | ● | ● | | | ● | | | |
| Unrestrained Persons | ● | | | | ● | ● | ● | | | | | | | ● |



Table v: Action Plan Strategies by Emphasis Area

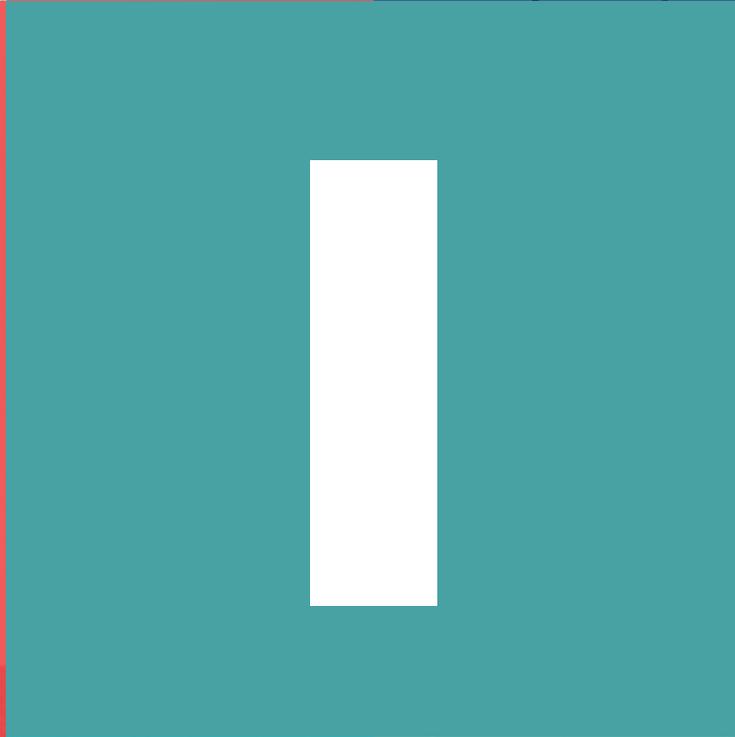
| | |
|---|---|
| <p>Roadway and Lane Departure (LD)</p> <p>Strategy LD1. Partner with TXDOT to identify and promote awareness of public rest stops in Midland.</p> <p>Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/ lane departure crashes.</p> | <p>Impaired Driving (ID)</p> <p>Strategy ID1. Spread awareness about the consequences of impaired driving.</p> <p>Strategy ID2. Encourage businesses and special event holders to provide mobility alternatives for patrons.</p> <p>Strategy ID3. Acquire substance abuse and mental health help resources for the community.</p> <p>Strategy ID4. Develop an understanding of impaired driving citation patterns.</p> |
| <p>Speed-Related (SP)</p> <p>Strategy SP1. Ensure pending projects meet safety needs and opportunities.</p> <p>Strategy SP2. Implement a campaign encouraging safe driving behaviors.</p> <p>Strategy SP3. Establish a neighborhood traffic calming program.</p> <p>Strategy SP4. Support senate bill SB1663.</p> | <p>Unrestrained Persons (UP)</p> <p>Strategy UP1. Develop a seatbelt usage campaign.</p> <p>Strategy UP2. Gather more participation in the Midland Fire and Police Departments' Car Seat Information Program.</p> |
| <p>Intersection-Related (IN)</p> <p>Strategy IN1. Update intersection design standards and access management policies.</p> <p>Strategy IN2. Develop a campaign strategy to remind drivers to use safe driving behaviors at intersections.</p> <p>Strategy IN3. Establish a targeted enforcement program for red light and stop sign running.</p> <p>Strategy IN4. Update Citywide signal timing.</p> <p>Strategy IN5. Implement the use of ITS technologies.</p> | <p>Vulnerable Road Users (VRU)</p> <p>Strategy VRU1. Prioritize the implementation of safer pedestrian and bicycle facilities.</p> <p>Strategy VRU2. Create a Safe Routes to School Partnership Program.</p> <p>Strategy VRU3. Develop a citywide ADA Transition Plan.</p> <p>Strategy VRU4. Spread Awareness on safe practices for bicyclists and pedestrians</p> |
| <p>Distracted Driving</p> <p>Strategy DD1. Develop a campaign that discourages cell phone use when driving.</p> <p>Strategy DD2. Develop enforcement strategies to mitigate for cell phone use when driving.</p> <p>Strategy DD3. Implement streetscaping techniques to reduce distracted driving.</p> | <p>Post Crash Care (PC)</p> <p>Strategy PC1. Leverage technology, policies, and existing personnel to conduct more efficient investigations and reporting of crashes, facilitating swift clearance of crash scenes.</p> <p>Strategy PC2. Identify and implement engineering solutions where possible to reduce response times.</p> |

Chapter 6 outlines the action plan, which is comprised of policies and programs to create solutions for systemic issues and are organized by the eight safety emphasis areas and focus on eliminating deaths on Midland roads. To make goals easier to achieve for each emphasis area, each goal has strategies and actions outlined. The corresponding table provides each strategy outlined in the action plan for each emphasis area (**Table v**).

Chapter 7 expands on the strategies outlined in Chapter 6 and identifies partners, timeframe, and funding sources into an Implementation Matrix. Finally, the annual reporting responsibility for Vision Zero and progress on projects made publicly available is outlined.

The background of the slide is a photograph of an oil pumpjack, a common piece of machinery used in oil extraction. The pumpjack is shown in profile, with its long walking beam and counterweight visible. The entire image is overlaid with a semi-transparent red filter. The text 'Background & Purpose' is written in a large, bold, white sans-serif font, positioned in the lower-left quadrant of the image.

Background & Purpose



Part I: Background & Purpose

Introduction

The City of Midland's Comprehensive Safety Action Plan (CSAP) was developed over a one-year period to help Midland achieve their goal of zero traffic-related fatalities on roads in the City of Midland. The CSAP for Midland will assist City Staff, City Council, and other local partners in making informed decisions when identifying projects that will enhance the safety of all roadway users in the greater Midland area. This portion of the document (Part I of III) includes several chapters that detail the plan's purpose and process.

Chapter 1: Purpose

Guiding Principles

Chapter 2: Process

Project Timeline

Vision Zero Task Force

Public Engagement

Leadership Commitment



The Vision Zero movement utilizes a **paradigm shift** to address how communities take ownership of traffic-related injuries and fatalities. **By choosing to take ownership** and dismissing the notion that injuries and fatalities are simply a byproduct of modern transportation networks, **real change can begin to take place through the Vision Zero lens.**

Chapter 1. Purpose

This chapter outlines the guiding principles of the City of Midland CSAP while highlighting the importance of each and how they will be used in creating safe streets and roads for all users. The guiding principles are Vision Zero, Safe System Approach, and the Six E's of Safety. Each plays a vital role in the Safe Streets and Roads for All (SS4A) campaign and initiatives.

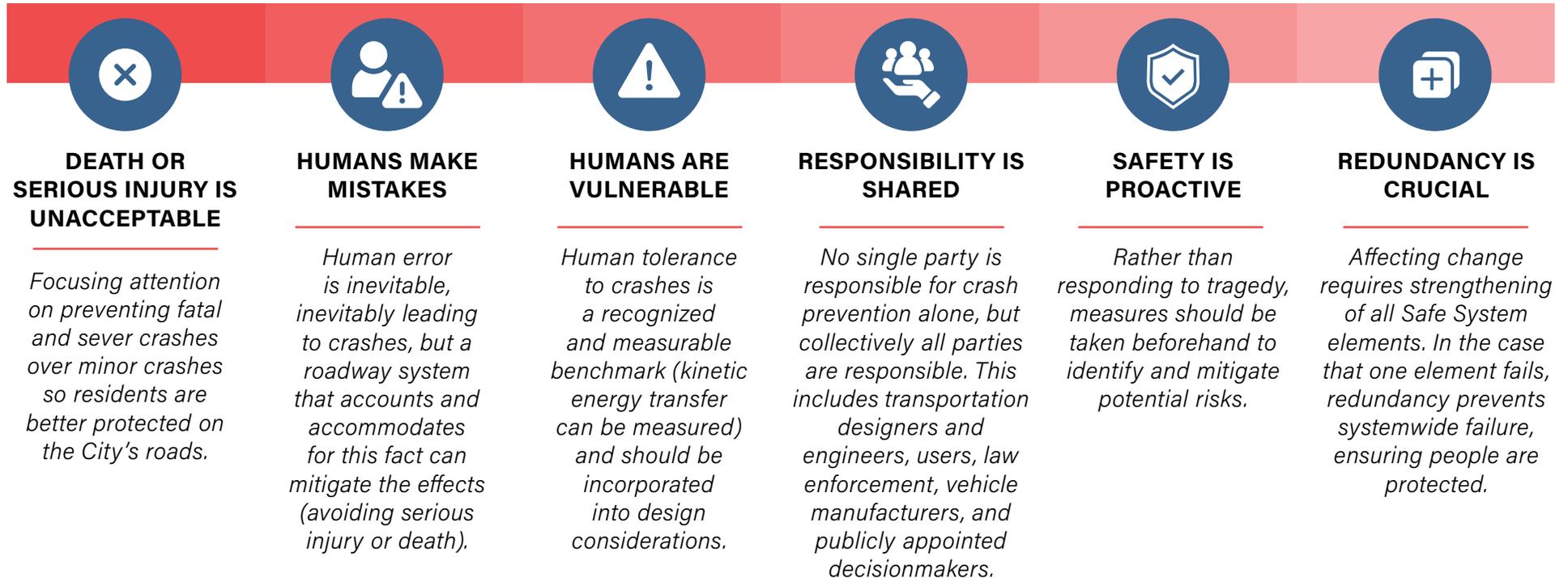
Guiding Principles

Vision Zero

Vision Zero is a traffic safety initiative that aims to eliminate all traffic fatalities and severe injuries, prioritizing the principles of safe road design, enforcement, education, and community engagement to achieve this goal. It emphasizes a holistic approach to transportation safety, recognizing that human error is inevitable and that road systems should be designed to minimize the consequences of mistakes. It represents a comprehensive approach to improving quality of life, safety, and mobility of communities through crash-related injury reduction.

Safe System Approach

The Safe System Approach was pioneered in the 1990's by Swedish road safety expert, Claes Tingvall. The Safe System Approach is the framework and mechanism by which this Vision Zero Action Plan can be implemented. There are six key principles that can be utilized to implement the elements of the Safe System Approach, and are as follows:

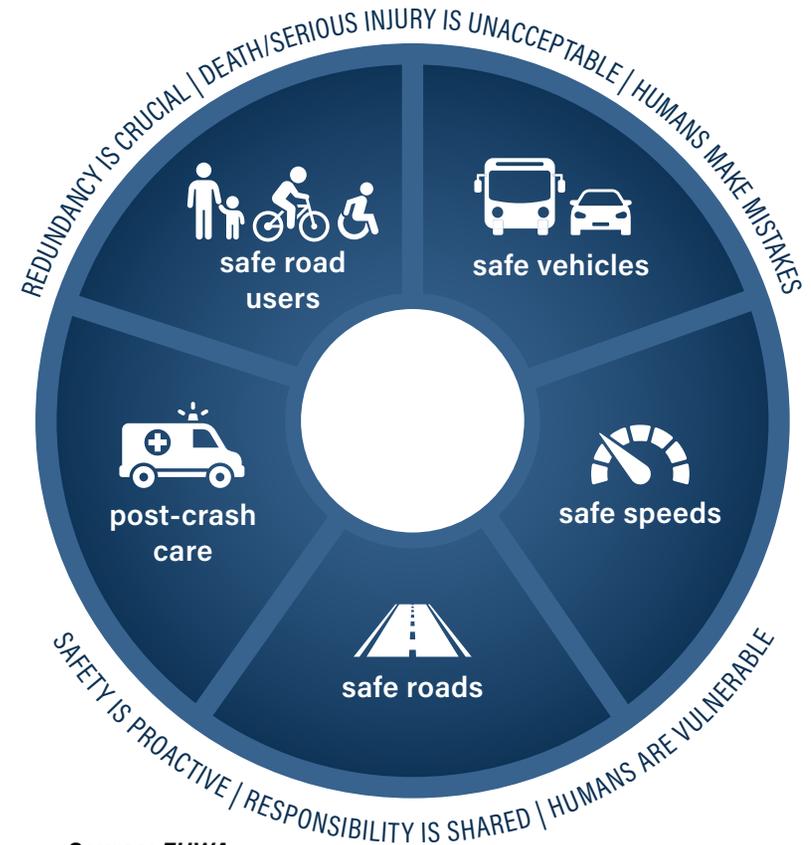




A principles-based approach intended to eliminate serious and fatal injuries, the Safe System Approach relies on accommodating for human mistakes and keeping potential impacts on the human body at tolerable levels. Accommodating for human mistakes can be accomplished through roadway design features and technological advancements in vehicles (lane departure assist, autonomous emergency braking, etc.). Efforts to mitigate or lessen the physical impacts on the human body include reducing speeds, physically separating automobiles from alternative mode users, as well as technological advancements in vehicles. There are five complementary objectives outlined by the U.S. Department of Transportation (USDOT) that correspond and support implementation of the Safe System Approach as provided in **Figure 1**:

- 1 Safe road users** bear the burden of responsibility for complying with rules and regulations of the roadway.
- 2 Safe vehicles** are responsible for mitigating or preventing the potential impacts of crashes. Active safety measures can help prevent crashes from occurring, while passive measures can lessen the implications of a crash.
- 3 Safe speeds** have a direct correlation with increased rate of survival in crashes. Reducing speeds reduce impact, improve visibility, and afford drivers additional braking time.
- 4 Safe roads** are not defined by their design alone. Rather, the road design, construction, maintenance, operation, and countermeasures work collaboratively to improve safety.
- 5 Post-crash care** accounts for the actions of those that respond to an crash, whether it be emergency services, law enforcement, or clean up.

Figure 1: The Safe System Approach



Source: FHWA

The Six “E’s” of Safety

Similar to how the Safe System Approach works, the Six E’s of safety are components of an integrated and comprehensive framework. While every community varies in its composition and understanding of safety, the Six E’s can be deployed at all levels to enhance the user experience and improve safety. The Safety Action Plan (Part III) of this report utilizes each of the Six E’s as an organizing approach to implementation.

ENGINEERING

Engineering projects and interventions in support of Vision Zero may be implemented through the built environment to improve safety. Calming traffic and improving safety for all users is the primary goal. Examples of engineering projects proven include the implementation of safety countermeasures, or traffic calming measures that reduce speeding.

EDUCATION

Education can improve safety by raising awareness of transportation choices, furthering, or establishing the benefits of multimodal transportation, and demonstrating the proper way to utilize the system, thus reducing the margin of error.

EVALUATION

Evaluation can support both proactive and responsive measures. Understanding the when, where, and why of crashes allows us to respond to historical trends and adjust improve future safety. Similarly, careful evaluation can help head off potential issues before they reach greater severity.

EQUITY

Equity efforts must be made to acknowledge and rectify the imbalance and additional burden that disadvantaged populations carry. Vulnerable and disadvantaged populations are historically hard-to-reach and deserve access to the same information and infrastructure as everyone else.

ENFORCEMENT

Enforcement can ensure that traffic laws and regulations are being followed by system users, while also ensuring that profiling does not occur. Enforcement can also target and prioritize problem behaviors like speeding and other dangerous behavior over minor infractions.

ENCOURAGING

Encouraging the community to further their knowledge and understanding of safety principles can be fun and interactive. Events and activities can support and promote better behavior.



This chapter provides an overview of the project timeline, including the **role that the Vision Zero Task Force (VZTF) aided in developing the CSAP.**

Chapter 2. Process

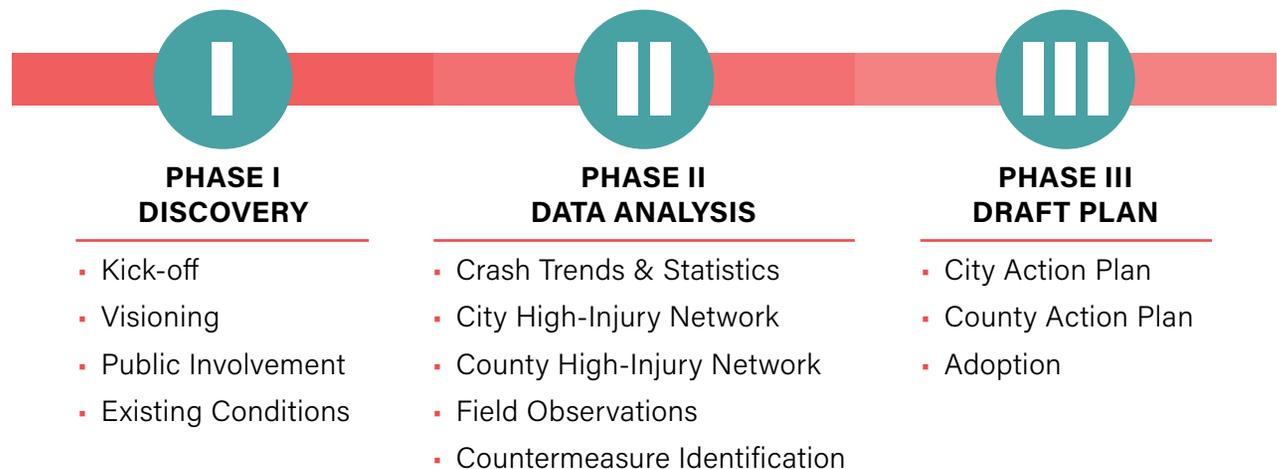
This chapter provides an overview of the project timeline, including the role that the Vision Zero Task Force (VZTF) aided in developing the CSAP. Additionally, it highlights the public engagement efforts throughout the project that provided key takeaways and perspectives to improve safety. As part of the project, commitment from the Task Force and other City leadership provided important guidance in the process as well.

Coordination with Midland County CSAP

The early stages of the project, the implementation of the City CSAP joined efforts with Midland County to kick off their perspective CSAP projects. City and County staff wanted to unify efforts throughout the Midland area to improve safety. The first two VZTF meetings were joint meetings where important local information was shared between City and County representatives in the desire to achieve Vision Zero.

Project Timeline

As the largest municipality in the Permian Basin, the City of Midland plays a critical role in informing, developing, and advancing regional priorities. Through this conjunctive planning process between the City, County, and stakeholders, Midland has taken the opportunity to serve as a leader for safety efforts in the region. The Midland CSAP's development was divided into three primary phases throughout the process:



MIDLAND Comprehensive Safety Action Plan

The Discovery phase of the project initiated with a data exchange with relevant parties to establish a strong foundation for the quantitative analysis to be conducted. The initial VZTF meeting was conducted on September 7, 2023, to establish a qualitative understanding of the project, roles and responsibilities of the committee and consulting team members, as well as establishment of a singular mission statement. A project website was constructed and launched in coordination with several Pop-Up public engagement events to generate awareness and solicit feedback.

The Data Analysis phase of the project included qualitative and quantitative analysis. Quantitative analysis generally centered around various crash analyses and the creation of the High-Injury Network (HIN) model. Qualitative analysis conducted during this phase included field observations, countermeasure identification, and input from the public and the VZTF.

The Draft Plan Phase of the project is the third and final phase of the project. During this phase, the work completed during the Data Analysis and Discovery phases are both analyzed through the lens of implementation. The VZTF and public were brought up to speed and provided input on the direction of the Action Plan through this phase. Ultimately, feedback and input were incorporated into the draft plan and celebrated through adoption on April 9, 2024.

A timeline for Task Force and Public Meetings for the City's CSAP is displayed in the table below:

| | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PHASE I: DISCOVERY | | | | | | | | | | | | |
| TF Meeting 1: Kick-Off & Visioning | | ● | | | | | | | | | | |
| TF Meeting 2: Public Involvement & Existing Conditions | | | ● | | | | | | | | | |
| Public Engagement Pop-Ups (Vision & Existing Conditions) | | | ● | | | | | | | | | |
| PHASE II: DATA ANALYSIS | | | | | | | | | | | | |
| TF Meeting 3: Citywide High-Injury Network | | | | | ● | | | | | | | |
| TF Meeting 4: City Strategic Session | | | | | | | | ● | | | | |
| PHASE III: DRAFT PLAN | | | | | | | | | | | | |
| TF Meeting 5: Draft City CSAP | | | | | | | | | ● | | | |
| Public Engagement Pop-Up (Draft City CSAP) | | | | | | | | | ● | | | |
| Adoption Celebration | | | | | | | | | | | | ● |



Vision Zero Task Force

The Vision Zero Task Force (VZTF) was established to help guide the planning process, build consensus and ownership of the plan, and provide critical feedback at major milestones. Consisting of an interdepartmental working group of City and County staff, with additional public representation, the VZTF made conscious efforts throughout the process to unite both Midland City and Midland County Safety Action Plans. The initial two meetings were held collectively between the group, while City and County subcommittees were formed and utilized throughout Phases II and III to evaluate and respond to issues directly related to their jurisdictional representation. The two initial task force meetings were held on the following days:

- **Meeting 1:** Kick-Off & Goal-Setting – September 7, 2023
- **Meeting 2:** Public Engagement & Map Activity – October 26, 2023

There were three VZTF City Subcommittee meetings that occurred during Phase II and III, with two meetings occurring during Phase II and one during Phase III. The following dates are when these VZTF City Subcommittee meetings occurred:

- **Meeting 3:** Citywide Analysis & High-Injury Network – December 6, 2023
- **Meeting 4:** City Strategic Session – February 21, 2024
- **Meeting 5:** City CSAP Draft Review – April 25, 2024

The VZTF not only served as champions and ambassadors of the plan throughout the process but will continue to serve and be instrumental in helping to spread awareness and education related to the plan implementation. Utilizing several working sessions through Phase I with the VZTF, a mission statement was established to communicate the reason for being and declare how it aims to serve the community and stakeholders into the future. Through the various work sessions and input from committee members, the following mission statement was established:

*Eliminating deaths on Midland's roads by **BUILDING** complete streets, **ENGAGING** the community, and **INNOVATING** safer solutions to protect all users.*

Once both the City and County Safety Action Plans are adopted, the VZTF will reconvene as a group to celebrate their progress and prepare to enter the implementation phase of these plans to continue the ongoing work of improving roadway safety.

Figure 2: Photos from VZTF Meetings 1-3

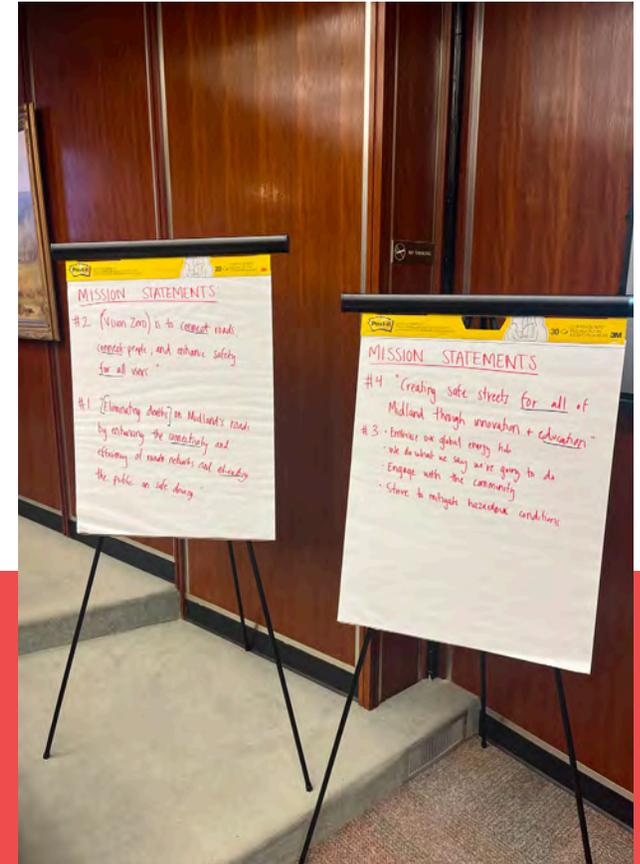




Figure 3: Project Website



MIDLAND SAFETY ACTION PLAN HOME PAGE

Welcome to the project home page for the City of Midland and Midland County's Safety Action Plan!

The City of Midland and Midland County have partnered to develop a comprehensive Safety Action Plan. The purpose of this Plan is tied directly to the local **Vision Zero Plan** which will identify and prioritize roadway safety projects aimed at significantly reducing and eliminating serious injuries and fatal crashes on Midland's streets and county roads. Important roadway safety projects will be identified through data analysis, public feedback, and with assistance from a Vision Zero task force. Projects will include safety improvements to roadways, intersections, sidewalk and bicycle infrastructure, lighting improvements, and more.

The online survey and interactive map are now closed for commenting. Thank you for your responses and commitment for making safer streets for all roadway users in Midland.

Public Engagement

Public engagement for the Midland City Safety Action Plan involved online engagement opportunities, pop-up events, and promotional materials and advertisements. Residents, community leaders, and other key stakeholders in Midland were actively involved in this public engagement effort to ensure this plan reflects the safety concerns of all who use Midland's roads. Additionally, all online engagement material is available both English and Spanish to promote an equitable public engagement experience.

Online Engagement

Social Pinpoint was used throughout the plan's development serving as a central online hub for online engagement such as information on upcoming events, links to surveys, as well as the plan itself. Midland residents had two online opportunities to provide input on their thoughts on safety within the City. The efforts received positive feedback from residents and stakeholders in Midland. Additionally, the online website served in conjunction with the Midland County Safety Action Plan (**Figure 3**).

Roadway Safety Survey

The Midland Vision Zero Roadway Safety Survey collected information on demographics, commute, mode choice, and roadway safety concerns. The survey was comprised of 24 questions, divided into 4 sections. This survey was available on the project website as well as the in-person public events. In total, the Roadway Safety Survey received 371 responses, 304 (73%) of which indicating that they live within the City of Midland. As summarized in **Figure 4**, personal vehicles are the primary mode of transportation in Midland at 98% and most residents spend 15 to 30 minutes or less than 15 minutes to commute to work, 47% and 46%, respectfully.

The top three safety concerns for survey participants include aggressive driving, red light /stop sign running, and distracted driving, as shown in **Figure 5**.

Figure 4: Commute Statistics

| P1 Q8 - 5. Is your place of work located outside the home? | | |
|--|-----|------|
| Yes | 225 | 74% |
| Not Applicable | 43 | 14% |
| No | 36 | 12% |
| | | |
| P1 Q9 - 6. How long is the commute to your workplace? | | |
| 15 to 30 minutes | 105 | 47% |
| Less than 15 minutes | 103 | 46% |
| Not applicable | 2 | 1% |
| 30 to 45 minutes | 11 | 5% |
| Longer than 45 minutes | 4 | 2% |
| | | |
| Q0 - 7. What mode of transportation do you primarily use for your comm | | |
| Personal Vehicle (Car) | 221 | 98% |
| Pedestrian | 1 | 0.4% |
| Other (Please specify) | 3 | 1% |

Figure 5: Top 3 Safety Concerns

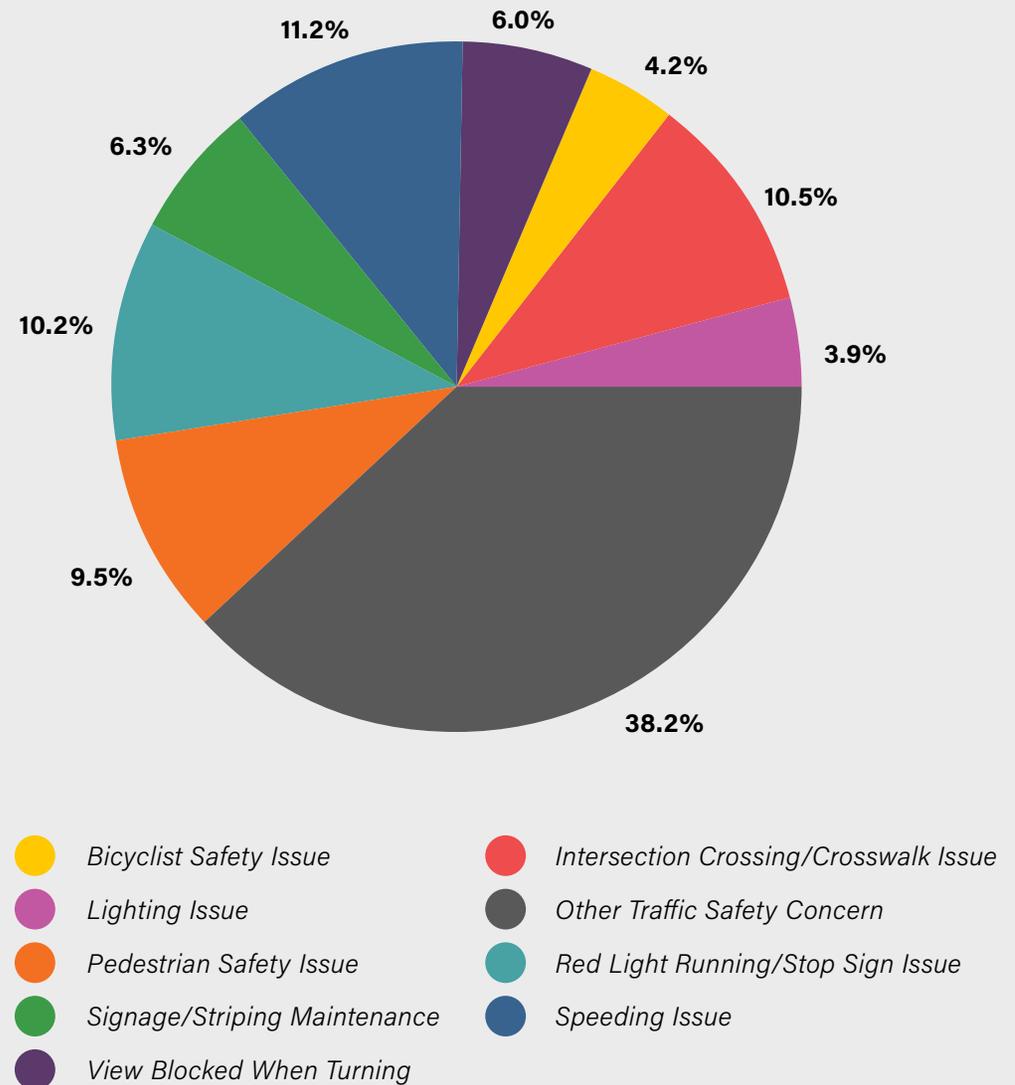
| Category | Total | Percentage |
|---|-------|------------|
| Aggressive Driving | 177 | 16.4% |
| Redlight running/not stopping at stop signs | 174 | 16.2% |
| Distracted Driving | 172 | 16.0% |



Interactive Map Survey

Midland residents also had the opportunity to provide feedback on the existing roadway safety conditions through an online interactive map survey. This engagement tool gave users the ability to place a point or line on a map with nine comment types available to help organize the information, such as "Speeding Issue" or "Pedestrian Safety Issue." Additionally, participants had the ability to up or down vote on other ideas to indicate agreement or disagreement. **Figure 6** and **Exhibit 1** on Page 18 provide an overview of the 285 comments received from this activity.

Figure 6: Interactive Map Comments



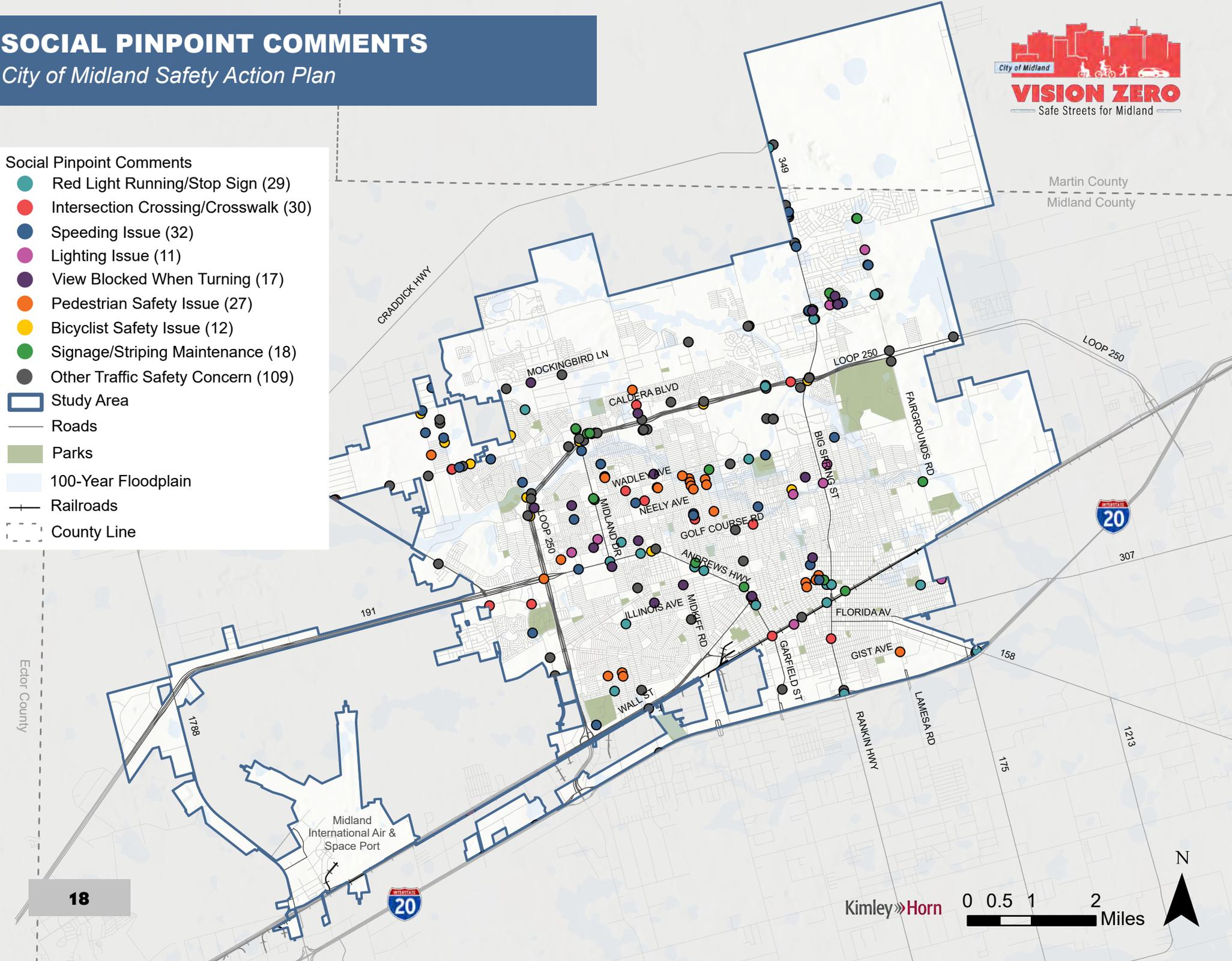
SOCIAL PINPOINT COMMENTS

City of Midland Safety Action Plan



Social Pinpoint Comments

- Red Light Running/Stop Sign (29)
 - Intersection Crossing/Crosswalk (30)
 - Speeding Issue (32)
 - Lighting Issue (11)
 - View Blocked When Turning (17)
 - Pedestrian Safety Issue (27)
 - Bicyclist Safety Issue (12)
 - Signage/Striping Maintenance (18)
 - Other Traffic Safety Concern (109)
- ▭ Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- - - County Line





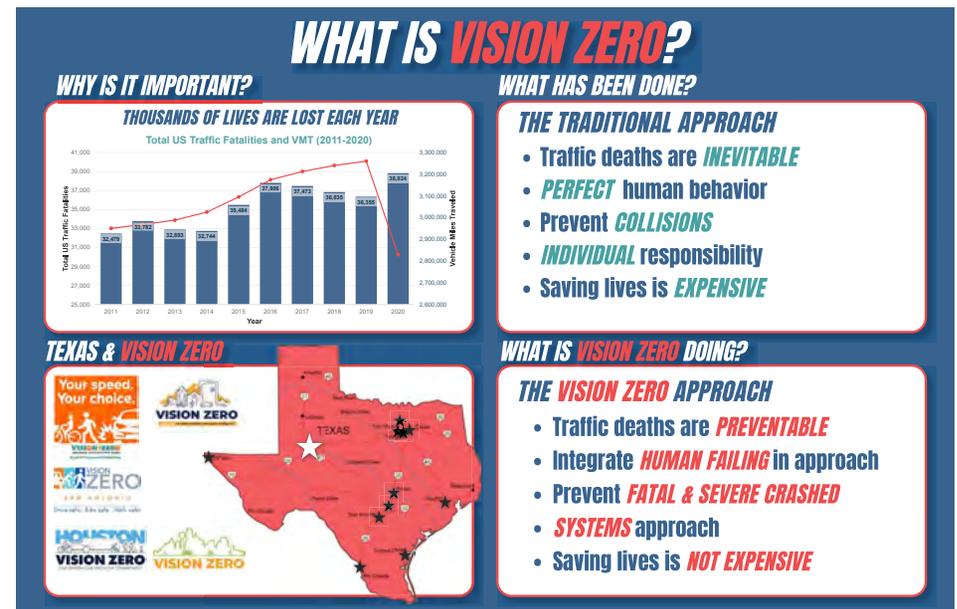
Public Events

The final method used to engage the public in the planning process was through in-person public pop-up events. The pop-up events gave residents the opportunity to interact with the project team, understand the importance of safety in Midland, and learn about what residents can do to improve safety locally. Ultimately, these events were held in public settings intended to spread awareness about the City and County of Midland Safety Action Plans and about Vision Zero.

Two pop-up events were held in October 2023 at the Midland Trunk-or-Treat Halloween event and the Movies in the Park at Centennial Park. These events primarily served to inform the community about the safety efforts being made for the City and County. Ultimately, these events allowed the project team to engage in valuable discussion with the people of Midland on their top safety concerns.

The Midland Trunk-or-Treat Halloween event was a family-friendly booth spreading awareness about the Safety Action Plans and Vision Zero (**Figure 7**). The project team provided English and Spanish surveys for attendees to fill out, as well as visual aids for people to read and learn about the CSAP, Vision Zero, and locally relevant trends on roadway safety.

Figure 7: Halloween Pop-Up



The Movies in the Park event was also a family-friendly booth for parents and their kids to interact and learn about safety (**Figure 8**). QR Codes to the online engagement options were handed out to attendees of the event, leading to a spike in online engagement in the following week.

The final pop-up event was held in April 2024 at the Midland Rockhounds game at Momentum Bank Ballpark. This event served to present the draft City CSAP to the public and inform City residents on recommendations, actions, and potential improvements for safety. This event provided a great opportunity to talk to families in a casual and fun environment, while teaching residents of all ages the importance of safety in the goal of Vision Zero within the community.

Leadership Commitment

City leadership plays a crucial role in developing a Vision Zero resolution for their City by spearheading the initiative, setting goals, and rallying community support. They establish a commitment to eliminating traffic fatalities and severe injuries, allocating resources, and implementing policies to prioritize road safety. Through collaboration with various stakeholders, City leaders create and implement comprehensive strategies, including infrastructure improvements, education campaigns, and enforcement measures, to achieve the Vision Zero goals and create safer streets for all road users.

Midland's City Council, along with the Task Force and staff commit to the overall goal of improving safety in Midland by adopting a Vision Zero resolution on April 9, 2024. The Vision Zero Resolution is provided in the **Appendix Item A**.

Figure 8: Movies in the Park





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The image shows an oil pumpjack in a desert landscape, overlaid with a semi-transparent red filter. The pumpjack is a large mechanical structure with a long arm and a counterweight, used for extracting oil from a well. The background is a hazy, arid environment with some distant structures and a clear sky. The text "Midland State of Safety" is prominently displayed in the lower-left quadrant in a bold, white, sans-serif font.

Midland State of Safety



Part II: Midland State of Safety

Introduction

As established through Part I of this report, improving safety equitably for all mobility modes in Midland is a paramount priority for City staff and Task Force members. Part II delves into a review of crash history, equity considerations, and contributing elements to understand the State of Safety. Part II establishes an empirical understanding of existing conditions and key safety considerations. Combined with the input from public engagement, the VZTF, and key stakeholders, Part II lays the foundation for Part III, the Vision Zero Action Plan.

Chapter 3: Crash History Analysis

- Citywide Crash Trends
- Safety Emphasis Areas
- Equity & Safety in Midland

Chapter 4: High-Injury Network

- Critical Crash Rate Method
- Critical Crash Rate Calculation
- High-Injury Network Development and Results



...improving
safety equitably
for all mobility
modes in Midland
is a **paramount**
priority for City
staff and Task
Force members.

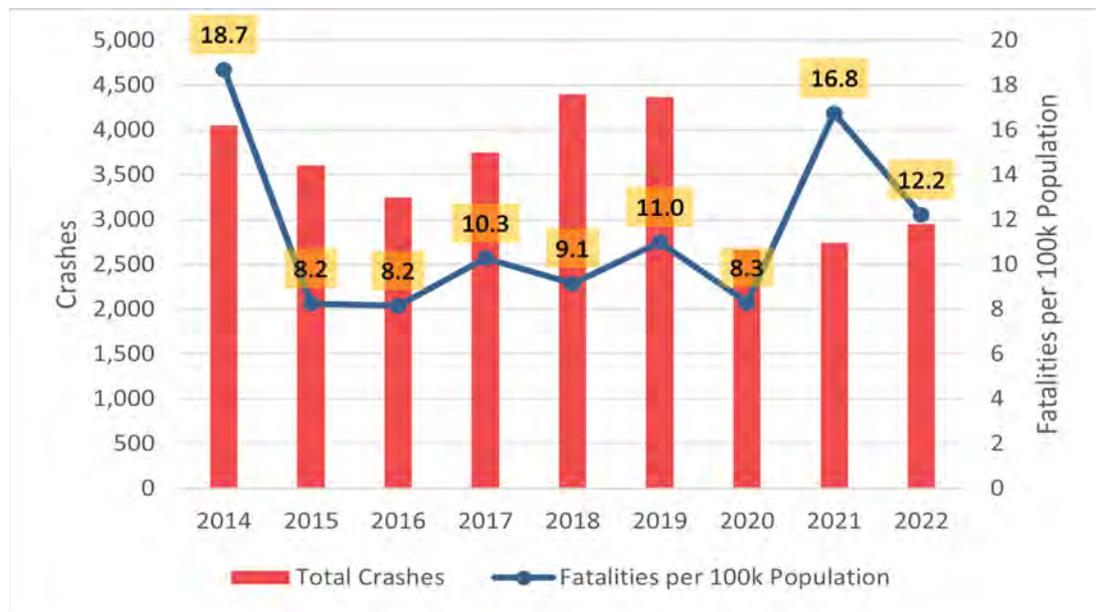
Chapter 3. Crash History Analysis

This chapter highlights the crash history in the City of Midland, details safety emphasis areas, and reviews the equitable state of safety throughout the City. Historical crash data from TxDOT's Crash Record Information System (CRIS) for the last five years (2018-2022) was used in the crash history analysis and determination of the High-Injury Network.

Citywide Crash Trends

This chart below uses historical crash data from 2014 to 2022 to highlight Citywide crash trends. The City of Midland peaked at 4,398 total crashes in 2018 and has seen a significant decrease since due largely to the COVID-19 pandemic in 2020. However, since 2020, total crashes in the City of Midland have increased each year (**Figure 9**). Fatal crashes per 100,000 population varied slightly from 2015 to 2020, however, they increased in 2021 dramatically with a slight decrease into 2022. Since 2020, fatal crashes are increasing.

Figure 9: Total Crash Summary (2014-2022)



As total crashes have increased since 2020, fatal injury (K) and suspected serious injury (A) crashes followed the same trend of increasing each year (**Table 1**). In the year 2022, 97 KA crashes were reported, the most since 2017. Not injured (N) crashes were at an all-time low for the City since 2020. However, there were 76 suspected serious injury crashes, an all-time high in 2022.

Table 1: Total Crashes by Severity (2014-2022)

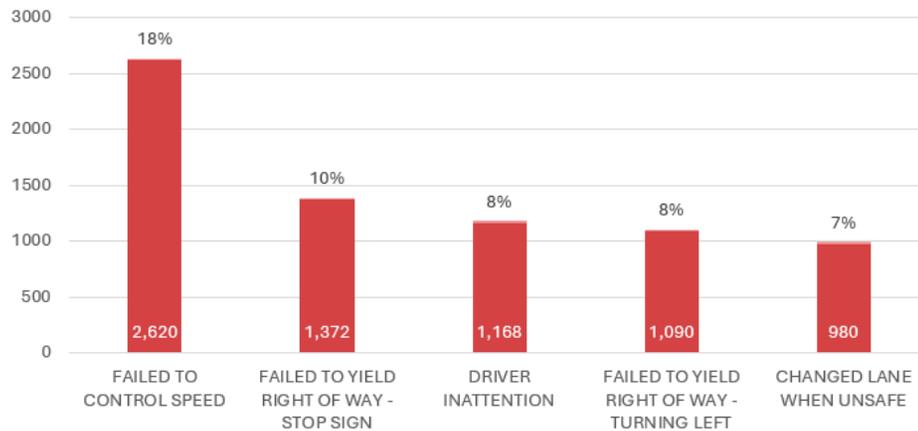
| Year | K - FATAL INJURY | | A - SUSPECTED SERIOUS INJURY | | B - SUSPECTED MINOR INJURY | | C - POSSIBLE INJURY | | N - NOT INJURED | | 99 - UNKNOWN | |
|-------------|------------------|------|------------------------------|------|----------------------------|-------|---------------------|-------|-----------------|-------|--------------|------|
| 2014 | 24 | 0.6% | 57 | 1.4% | 341 | 8.4% | 550 | 13.6% | 2891 | 71.3% | 191 | 4.7% |
| 2015 | 11 | 0.3% | 59 | 1.6% | 355 | 9.8% | 497 | 13.8% | 2513 | 69.7% | 170 | 4.7% |
| 2016 | 11 | 0.3% | 48 | 1.5% | 306 | 9.4% | 425 | 13.1% | 2304 | 70.9% | 155 | 4.8% |
| 2017 | 14 | 0.4% | 72 | 1.9% | 384 | 10.2% | 495 | 13.2% | 2630 | 70.2% | 153 | 4.1% |
| 2018 | 13 | 0.3% | 66 | 1.5% | 429 | 9.8% | 648 | 14.7% | 3062 | 69.6% | 180 | 4.1% |
| 2019 | 17 | 0.4% | 61 | 1.4% | 424 | 9.7% | 700 | 16.0% | 2973 | 68.1% | 190 | 4.4% |
| 2020 | 11 | 0.4% | 54 | 2.0% | 337 | 12.7% | 408 | 15.3% | 1671 | 62.8% | 180 | 6.8% |
| 2021 | 22 | 0.8% | 57 | 2.1% | 326 | 11.9% | 430 | 15.7% | 1715 | 62.6% | 191 | 7.0% |
| 2022 | 21 | 0.7% | 76 | 2.6% | 298 | 10.1% | 501 | 17.0% | 1910 | 64.7% | 146 | 4.9% |

Indicates the two worst years by percent



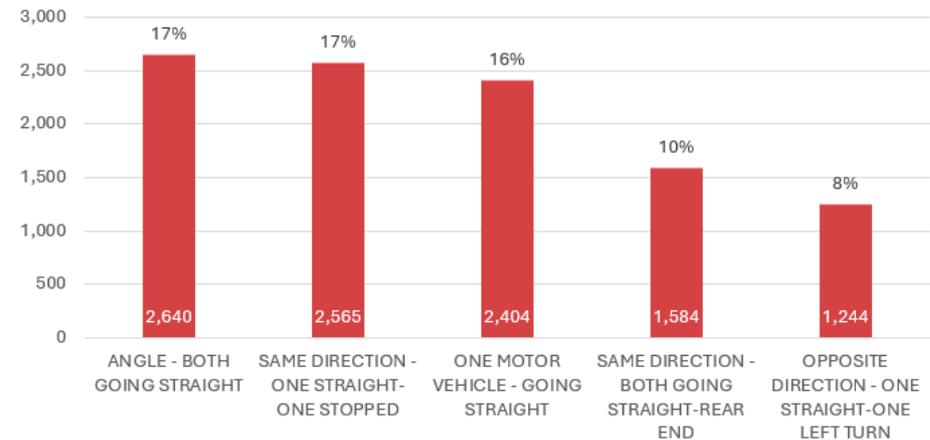
For the previous five years (2018-2022), the top contributing factors for crashes in the City of Midland are outlined in **Figure 10**. 'Speeding' or 'Failed to control speed' is the top contributing factor for all crashes in the City with nearly double the number of crashes than any other contributing factor.

Figure 10: Top Contributing Factors (2018-2022)



Manners of collision refer to how the crash occurred between vehicles. The top manners of collision were 'Angle - Both Going Straight' (17%), 'Same Direction - One Straight - One Stopped' (17%), and 'One Motor Vehicle - Going Straight' (16%). 'Angle - Both Going Straight' crashes can include sideswipe crashes, T-bone crashes, or other intersection crashes. 'Same Direction - One Straight - One Stopped' are most commonly known as rear-end crashes. Finally, 'One Motor Vehicle - Going Straight' frequently involves vehicles that run off the road and fail to maintain the vehicle in the travel lane. The top manners of collision are summarized in **Figure 11**.

Figure 11: Top Manners of Collision (2018-2022)



Crash Heat Map

Exhibit 2 on Page 27 displays a crash heat map that highlights the density of crashes within the City of Midland from 2018-2022. The crash heat map visualizes the pure density of crash counts at various locations in the City, not accounting for traffic volumes, number of lanes, or speed limit. All these factors also play a role in frequency of crashes.

The highest densities of crashes are at intersections where the traffic volumes are the highest. Andrews Highway, between Midkiff Road and Wall Street, stands out with a high crash density. Big Springs Street also has a high crash density, especially near downtown and to the south of the City.

CRASH HEAT MAP

(2018-2022)

City of Midland Safety Action Plan



Crash Density

Sparse
Dense

Study Area

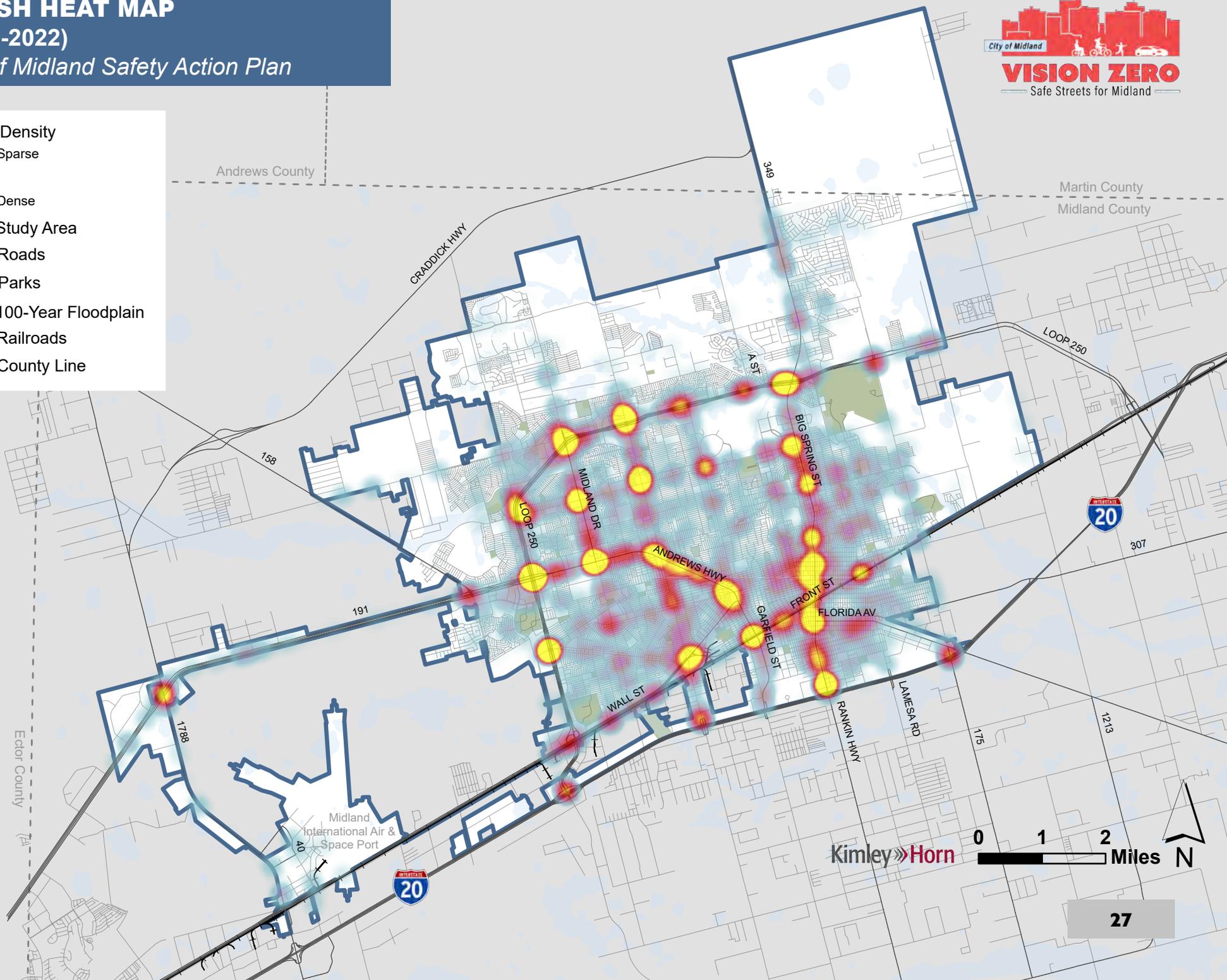
Roads

Parks

100-Year Floodplain

Railroads

County Line



Kimley Horn 0 1 2 Miles N

High Crash Intersections

The majority of crashes in the City are located at intersections, which are where most conflicts for vehicles, pedestrians, and bicyclists occur. The intersection with the most crashes over last five years (2018-2022) is Loop 250 & Andrews Highway/SH 191. This is an interchange with frontage road connections and is the intersection of two major divided highways within the City. Four of the top five high crash intersections are also located along Loop 250. **Table 2** summarizes the intersections with the highest number of crashes. **Exhibit 3** on Page 29 displays the map of the high crash intersection locations.

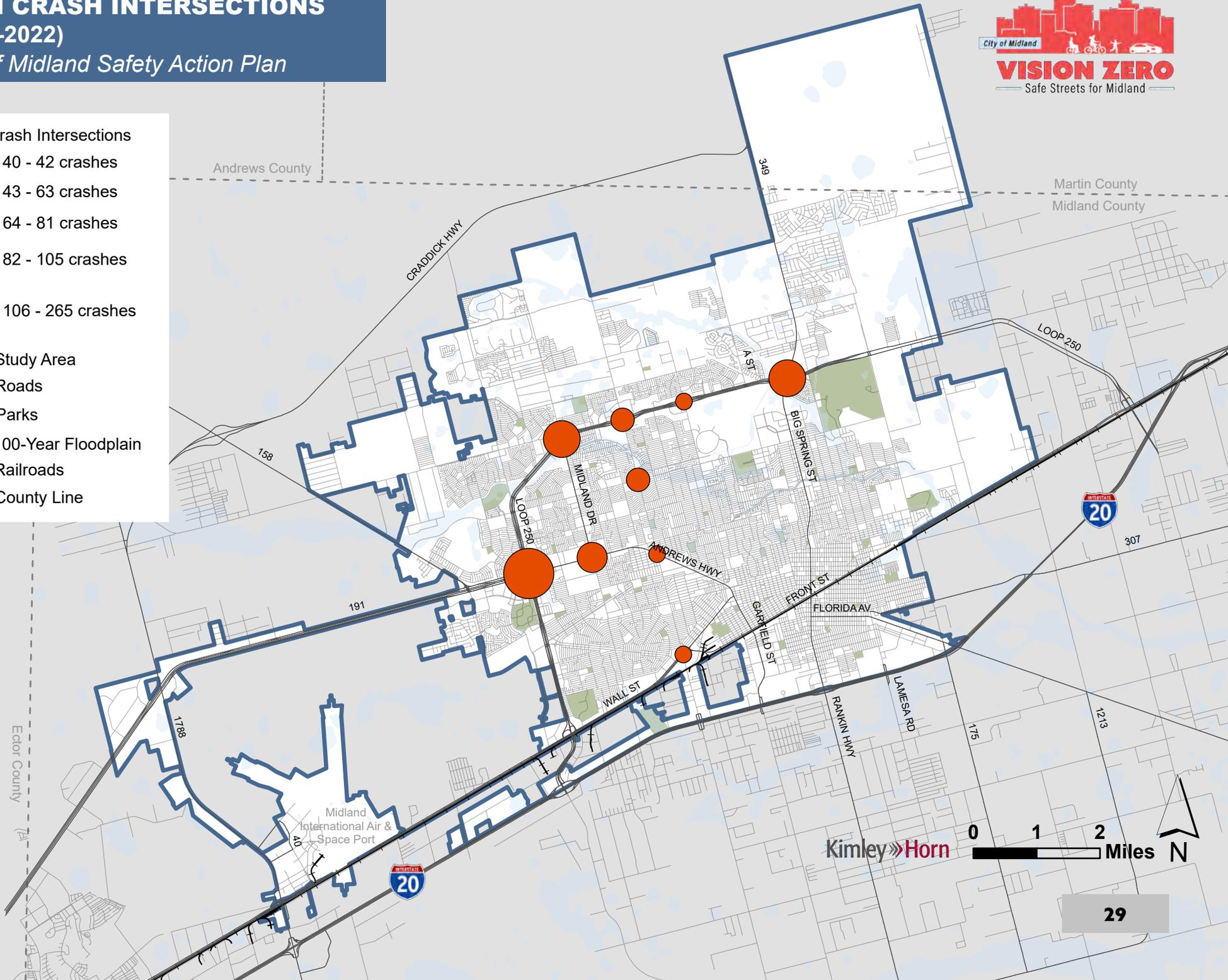
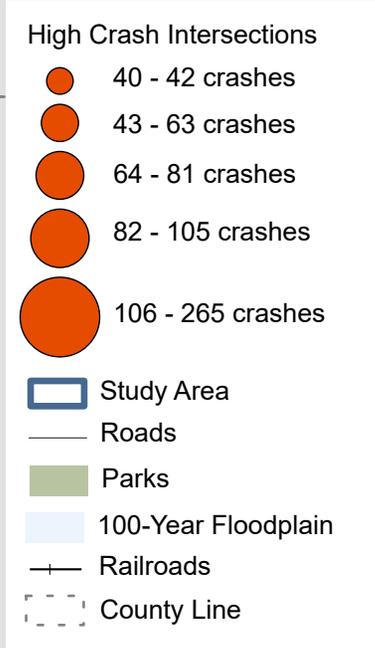
Table 2: High Crash Intersections

| Rank | Intersection | Number of Crashes |
|------|-------------------------------|-------------------|
| 1 | Loop 250 & Andrews Hwy/SH 191 | 265 |
| 2 | Loop 250 & N Big Spring St | 105 |
| 3 | Loop 250 & N Midland Dr | 95 |
| 4 | Andrews Hwy & N Midland Dr | 81 |
| 5 | Loop 250 & N Midkiff Rd | 63 |
| 6 | N Midkiff Rd & W Wadley Ave | 50 |
| 7 | Andrews Hwy & N Midkiff Rd | 42 |
| 8 | W Wall St & S Midkiff Rd | 40 |
| 9 | Loop 250 & N Garfield St | 40 |

HIGH CRASH INTERSECTIONS

(2018-2022)

City of Midland Safety Action Plan



Kimley Horn



Bicycle & Pedestrian Crashes

Bicyclists and pedestrians are the most vulnerable to fatal or serious injuries during crashes. Within the last five years, the City of Midland had 36 bicycle crashes and 117 pedestrian crashes (**Exhibit 4** on page 31). Of the 36 bicycle crashes, 8 were fatal or suspected serious injury (KA) crashes, or approximately 22%. Of the 117 pedestrian crashes, 41 were KA crashes, or approximately 35%.

Bicycle and pedestrians have a much higher risk of fatal or suspected serious injuries compared to vehicles in the City of Midland. Approximately 2% of all vehicle-only crashes were KA crashes compared to the 22% for bicycles and 35% for pedestrians. The bicycle and pedestrian crashes compared to vehicle crashes by crash severity are summarized in **Exhibit 4**.

Table 3: Vehicles vs Bicycle & Pedestrian Crash Severity

| Crash Severity | Vehicles | Bicycle/ Pedestrian | Difference |
|-------------------------------------|----------|------------------------|------------|
| K - FATAL INJURY | 0.4% | 10% | 10% |
| A - SUSPECTED SERIOUS INJURY | 2% | 22% | 20% |
| B - SUSPECTED MINOR INJURY | 10% | 42% | 32% |
| C - POSSIBLE INJURY | 16% | 17% | 1% |
| N - NOT INJURED | 66% | 8% | -58% |
| 99 - UNKNOWN | 5% | 0% | -5% |

The roads with the most bicycle and pedestrian crashes appear to be Big Spring Street, Andrews Highway, and Wall Street. The majority are located on major thoroughfares or arterials, with others spread through local roads and neighborhoods.

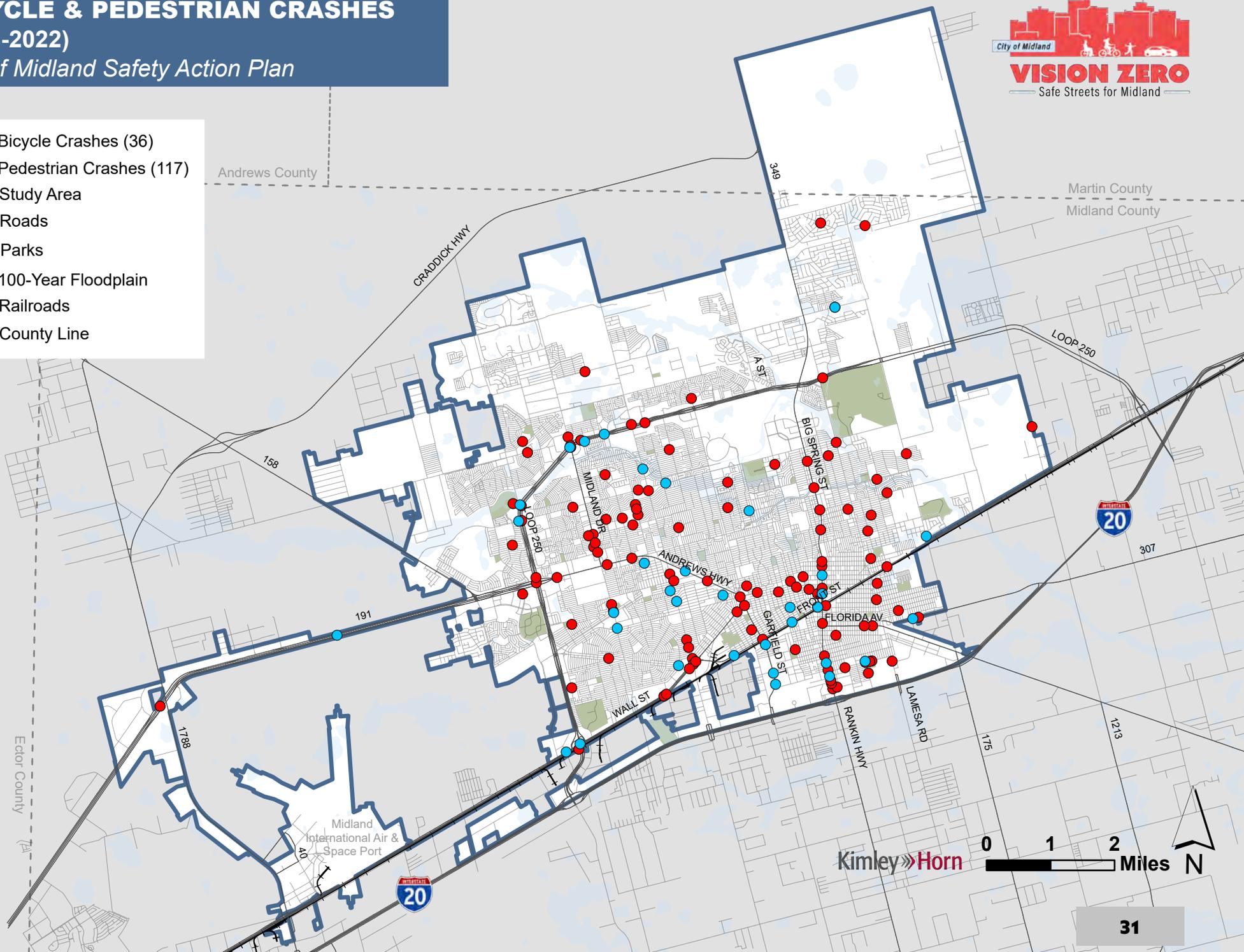
BICYCLE & PEDESTRIAN CRASHES

(2018-2022)

City of Midland Safety Action Plan



- Bicycle Crashes (36)
- Pedestrian Crashes (117)
- Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- County Line



Kimley Horn

0 1 2 Miles N

Safety Emphasis Areas

The Texas Strategic Highway Safety Plan (SHSP) is a comprehensive document outlining strategies and initiatives aimed at reducing traffic-related fatalities and injuries across the state's transportation network. It includes analysis of crash data, identification of high-risk areas, and prioritization of countermeasures. The plan integrates engineering, education, enforcement, and emergency medical services to address key factors contributing to crashes. By implementing targeted interventions, the SHSP seeks to improve overall road safety and save lives on Texas highways.

The Texas SHSP highlights eight safety emphasis areas to improve statewide in order to achieve the goal of zero fatalities. All are data-based, besides Post Crash Care. The eight safety emphasis areas are the following:



Distracted Driving

where distraction in vehicle, drive inattention, or cell phone or mobile use was cited as a contributing factor.



Impaired Driving

where at least one driver was identified as having been drinking, having taken medication, been under the influence of alcohol or drugs, a blood alcohol content greater than zero, or a positive drug test.



Intersection Safety

occurs within the boundaries of an intersection or in which the first harmful event occurred on an approach to or an exit from an intersection and is related to movement through the intersection.



Occupant Protection

where a vehicle occupant was not restrained or not using appropriate child restraints or seat belts.



Roadway and Lane Departures

where single motor vehicles run off the road and head-on collisions.



Speed-Related

where unsafe speed under the limit or over the limit was cited as a contributing factor.



Vulnerable Road Users

consists of pedestrians and bicyclists and separating users in terms of time and/or space.



Post Crash Care

enhance the survivability of crashes through expedient access to emergency medical care, crash investigation, traffic incident management, and justice.



Midland vs Texas

The City of Midland has chosen to follow the same safety emphasis areas of the Texas SHSP, but with an increased focus on Intersection Safety. The City has a unique issue compared to Texas as a whole, which is red light and stop sign running crashes. Red light and stop sign running concerns will be compiled with Intersection Safety. **Table 4** highlights the percentage of crashes for each safety emphasis area for Midland and Texas.

Table 4: City of Midland vs Texas Emphasis Area Crash Percentage

| Emphasis Area | Midland | Texas | Difference |
|------------------------------------|---------|-------|------------|
| Roadway/Lane Departure | 46% | 35% | 11% |
| Intersection-Related | 42% | 32% | 10% |
| Red Light/Stop Sign Running | 34% | 12% | 22% |
| Speed-Related | 32% | 33% | -1% |
| Impaired Driving | 23% | 18% | 5% |
| Unrestrained Persons | 18% | 17% | 1% |
| Vulnerable Road Users | 16% | 13% | 3% |
| Distracted Driving | 12% | 15% | -3% |

Key takeaways when comparing Midland to Texas are the following:

- 1 Red light and stop sign running is a unique safety challenge in Midland.
- 2 Even though distracted driving is less common in Midland, impaired driving is more common compared to the state average.
- 3 Lane departure, intersection-related, and speed-related crashes remain an issue in Midland.

Part III of the report details systemic recommendations, in addition to policies and programs to improve safety throughout Midland. These recommendations and countermeasures are organized by these safety emphasis areas and detail how the City of Midland can achieve Vision Zero, along with Texas.

Equity & Safety in Midland

Underserved communities were identified through data acquired from USDOT's Equitable Transportation Community (ETC) Explorer. The crash history analysis considered equity and disadvantaged areas of the City of Midland to better improve historically underserved parts of the community. The analysis included population characteristics for five categories:

- Transportation Insecurity
- Environmental Burden
- Social Vulnerability
- Health Vulnerability
- Climate and Disaster Risk Burden

The five components are scored, summed, and the resulting percentiles are ranked to create the final index score. USDOT considers a census tract experiencing disadvantage if the overall score places it at 65% or higher than all US census tracts.

Disadvantaged Census Tracts

The census tracts within the City of Midland that are considered disadvantaged are primarily located on the west and south sections of the City. These disadvantaged areas run along SH 191 toward the west, the areas just north of IH-20, and neighborhoods near Front Street. The northern and central parts of Midland are not considered as such. **Exhibit 5** on Page 35 displays the disadvantaged census tracts from the USDOT data.

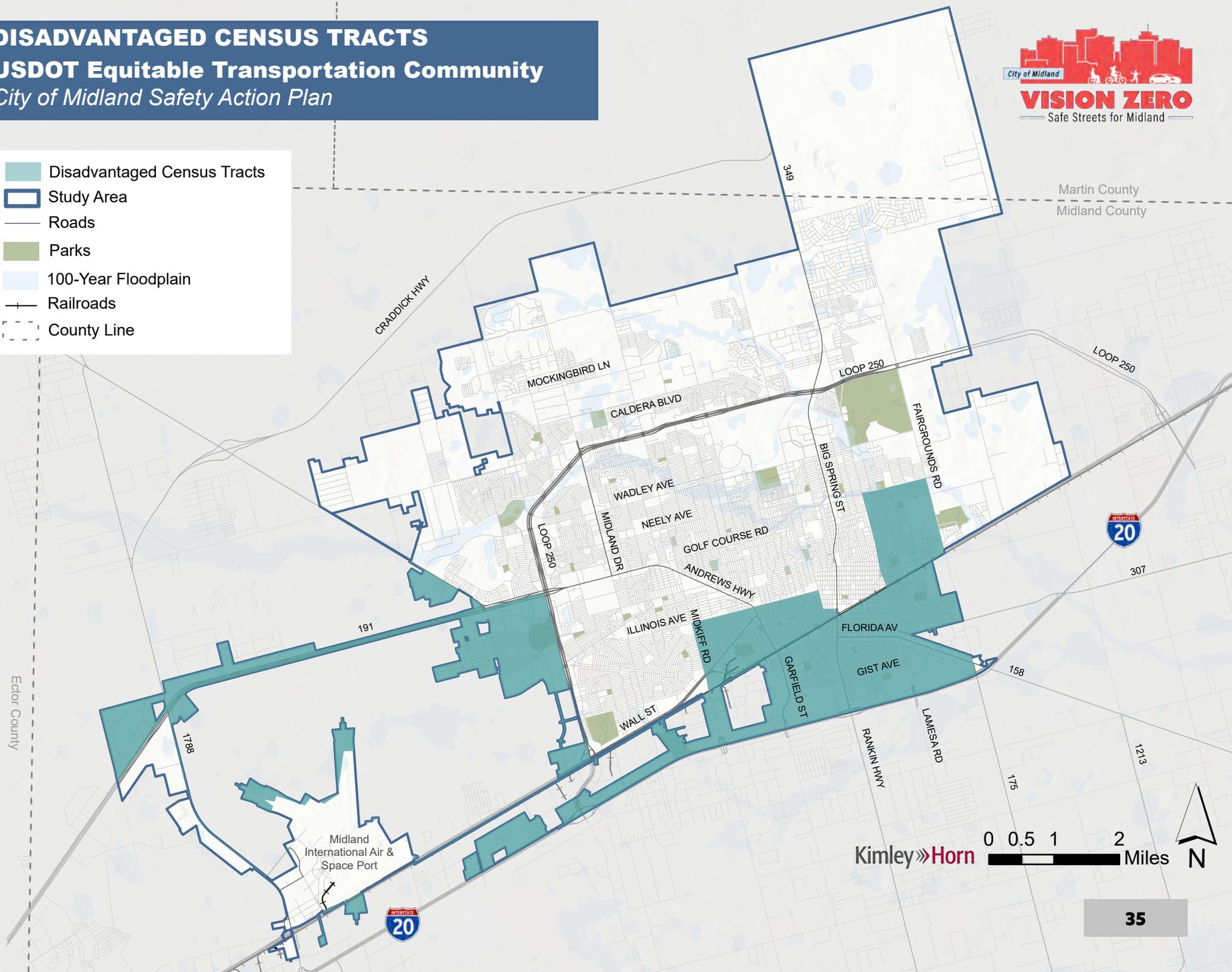
DISADVANTAGED CENSUS TRACTS

USDOT Equitable Transportation Community

City of Midland Safety Action Plan



- Disadvantaged Census Tracts
- Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- County Line



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Disadvantaged Crash History vs. Citywide

Approximately 22% of the City of Midland’s population lives in disadvantaged census tracts. There were 129 total KA crashes in disadvantaged census tracts over the last five years (2018-2022), representing approximately 38% of all KA crashes observed in the City over the same period. Additionally, over the last five years, 20 of the 49 total bicycle and pedestrian KA crashes were in disadvantaged areas (41%).

Throughout the City of Midland, 2.2% of all crashes are KAs, whereas in disadvantaged census tracts, this number is 3.2% (**Table 5**). Overall, this data supports the nationwide trend that fatal and severe crashes are more frequent in disadvantaged areas.

Table 5: Citywide vs Disadvantaged Crash Severity

| Crash Severity | Citywide | Disadvantaged | Difference |
|-------------------------------------|----------|---------------|------------|
| K - FATAL INJURY | 0.4% | 0.7% | 0.3% |
| A - SUSPECTED SERIOUS INJURY | 1.8% | 2.5% | 0.7% |
| B - SUSPECTED MINOR INJURY | 10.3% | 10.8% | 0.5% |
| C - POSSIBLE INJURY | 15.7% | 15.0% | -0.7% |
| N - NOT INJURED | 66.4% | 64.1% | -2.3% |
| 99 - UNKNOWN | 5.4% | 6.8% | 1.5% |



For bicycle and pedestrian crashes in the City of Midland, approximately 32% are KA crashes, whereas in disadvantaged census tracts, 37% of all bicycle and pedestrian crashes are KA (**Table 6**). Again, this follows the vehicle trend that fatal and severe crashes involving a bicycle or pedestrian are more frequent in disadvantaged areas.

Table 6: Citywide vs Disadvantaged Crash Severity – Bicycle & Pedestrians

| Crash Severity | Citywide | Disadvantaged | Difference |
|-------------------------------------|-----------------|----------------------|-------------------|
| K - FATAL INJURY | 10.5% | 11.1% | 0.7% |
| A - SUSPECTED SERIOUS INJURY | 21.6% | 25.9% | 4.4% |
| B - SUSPECTED MINOR INJURY | 42.5% | 35.2% | -7.3% |
| C - POSSIBLE INJURY | 17.0% | 18.5% | 1.5% |
| N - NOT INJURED | 8.5% | 9.3% | 0.8% |
| 99 - UNKNOWN | 0.0% | 0.0% | 0.0% |

A **high-injury network** is a network of roads, intersections, or other transportation infrastructure, that has a **higher-than-average rate of crashes** resulting in injuries or fatalities.

Chapter 4. High-Injury Network

A high-injury network is a network of roads, intersections, or other transportation infrastructure, that has a higher-than-average rate of crashes resulting in injuries or fatalities. This network is determined by traffic crash data, considering factors such as crash frequency and severity. The HIN should be utilized to set future transportation projects and be priorities for the City.

Identifying and prioritizing facilities within the HIN is a crucial step in enhancing road safety to reduce fatal and severe crashes. This is the initial step in the data analysis process to determine safety countermeasures across the network.

Critical Crash Rate Method

The Federal Highway Administration (FHWA) outlines methods to calculate crash rates to prioritize locations where safety improvements are most needed. Outlined in the Highway Safety Manual, Section 4.4.4.5 on Page 4-41, the critical crash rate method identifies crash hotspots by comparing the observed crash rate at a roadway segment to the expected crash rate based on similar functional classification and traffic volumes. If the observed crash rate exceeds the expected crash rate, the roadway segment is considered to have a critical crash rate and is considered for the HIN.

An ArcGIS Pro model was created to calculate the critical crash rate and supporting calculations for each roadway segment in the City. The model assigns crashes to an adjacent segment and performs the calculations in the order outlined by the FHWA. The following section outlines the process used in the calculation of the critical crash rate using fatal and severe crashes from the previous five years (2018-2022) in the City of Midland.

Critical Crash Rate Calculation

The critical crash rate was calculated for each road segment in the City of Midland in the following three steps:

- Assigning Data to Road Segments
- Calculate Variables of Critical Crash Rate
- Calculate Critical Crash Rate Ratio



Assigning Data to Road Segments

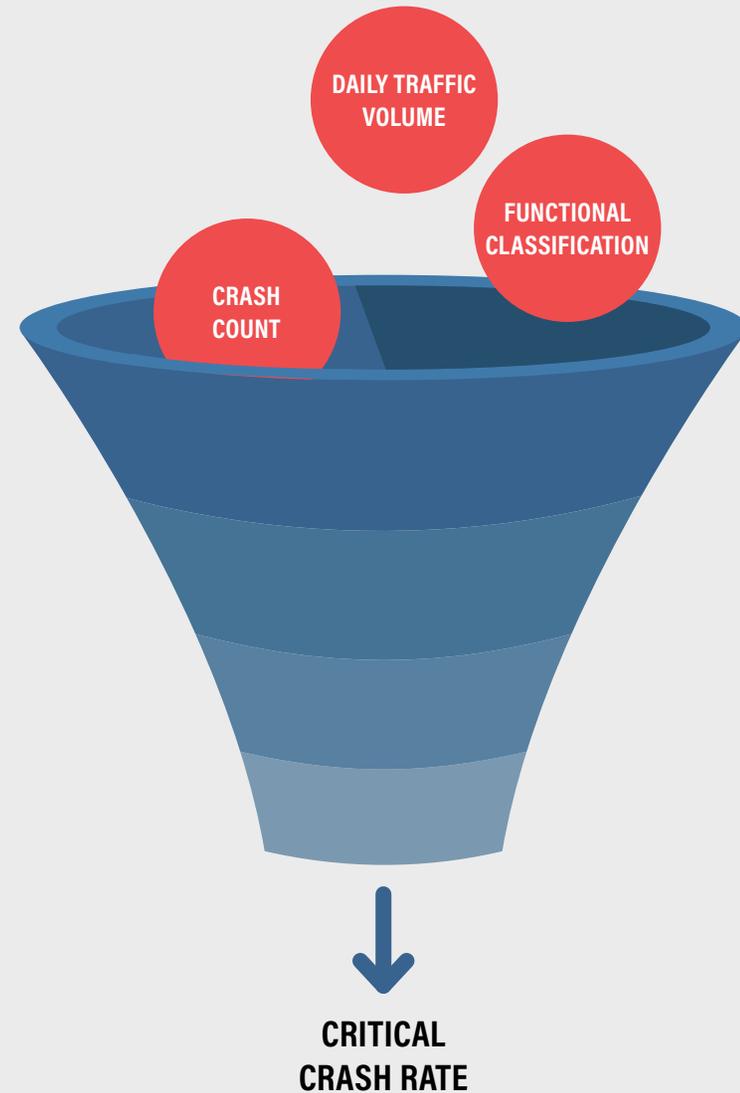
Three data inputs are needed to calculate the critical crash rate: functional classification, daily traffic volumes, and crash counts. Higher traffic volumes, more travel lanes, and even higher speed limits can inflate crash rates along road segments. The critical crash rate compares road segments that have the same functional classification and normalizes the daily traffic volumes to calculate crashes at a more even level to like designed roadways.

Calculate Variables of Critical Crash Rate

Following the equations detailed in the FHWA's Highway Safety Manual, the variables of the critical crash rate were calculated. The observed crash rate is the existing KA crashes at each road segment per 100 million vehicle-miles traveled. The expected average crash rate per 100 million vehicle-miles traveled for each was also calculated, which normalizes the daily volumes for each functional class. Local roads are compared to local roads and so forth with each roadway classification in the City of Midland.

Figure 12 displays the data inputs in the calculation of the critical crash rate.

Figure 12: HIN Data Inputs



Calculate Critical Crash Rate Ratio

To compare the observed and expected crash rates, a ratio is calculated to understand the magnitude of difference. If the ratio is greater than 1, or if the observed crash rate is higher than the expected crash rate, then the road segment's crash history was higher than other road segments of the same functional classification. Any segments with a ratio of 1.0 or greater were flagged as potential HIN segments. The ratio results are summarized in **Exhibit 6** on Page 41.

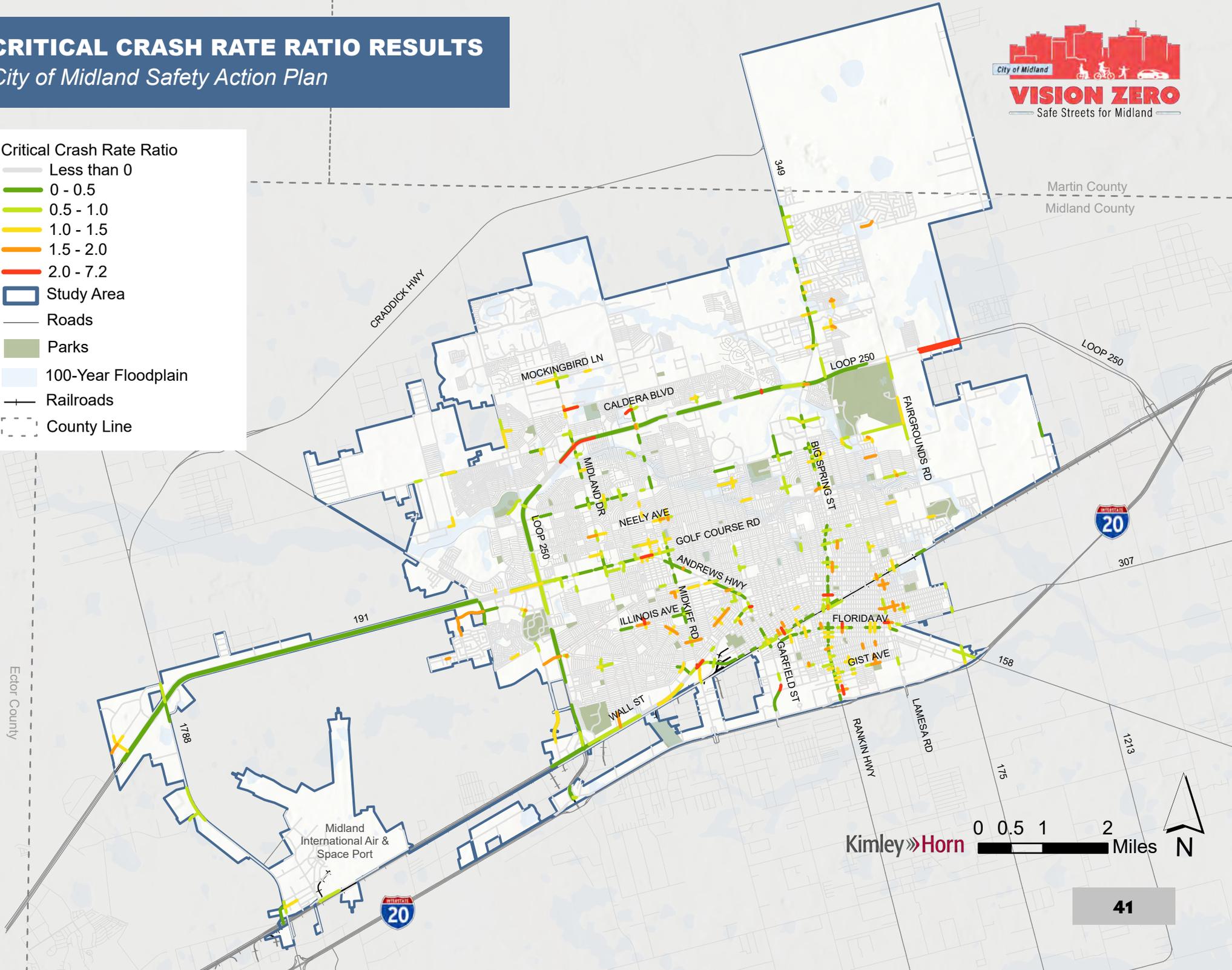
CRITICAL CRASH RATE RATIO RESULTS

City of Midland Safety Action Plan



Critical Crash Rate Ratio

- Less than 0
- 0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 7.2
- Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- County Line



Kimley **Horn** 0 0.5 1 2 Miles N

HIN Development and Results

The process to select segments for the HIN is a data-driven effort combined with a qualitative refinement to the model results. The goal of the HIN is to maximize the total KA crashes and bicycle/pedestrian KA crashes on the smallest amount of City roads.

To refine and clean the model results, one-crash segments that resulted in a greater than 1.0 ratio were removed to prioritize locations with a higher sever crash history. The segments remained that observed more than one KA crash within the last five years and had a higher than the expected crash rate. KA crashes didn't occur at every road segment; however, the influence area of the crash typically bleeds over to adjacent segments. With the aim of creating a coherent and contiguous HIN, gaps between high crash segments were filled.

After calculating the critical crash rate ratios and additional data refinement, the analysis results in the City of Midland HIN. The HIN consists of 4% of the total City road network, while also capturing 52% of KA crashes, 58% of K crashes, and 55% of bicycle and pedestrian KA crashes.

A summary of all the HIN segments is shown in **Table 7** and a map of Midland's High-Injury Network is shown in **Exhibit 7** on Page 43.

Table 7: High-Injury Network Segments

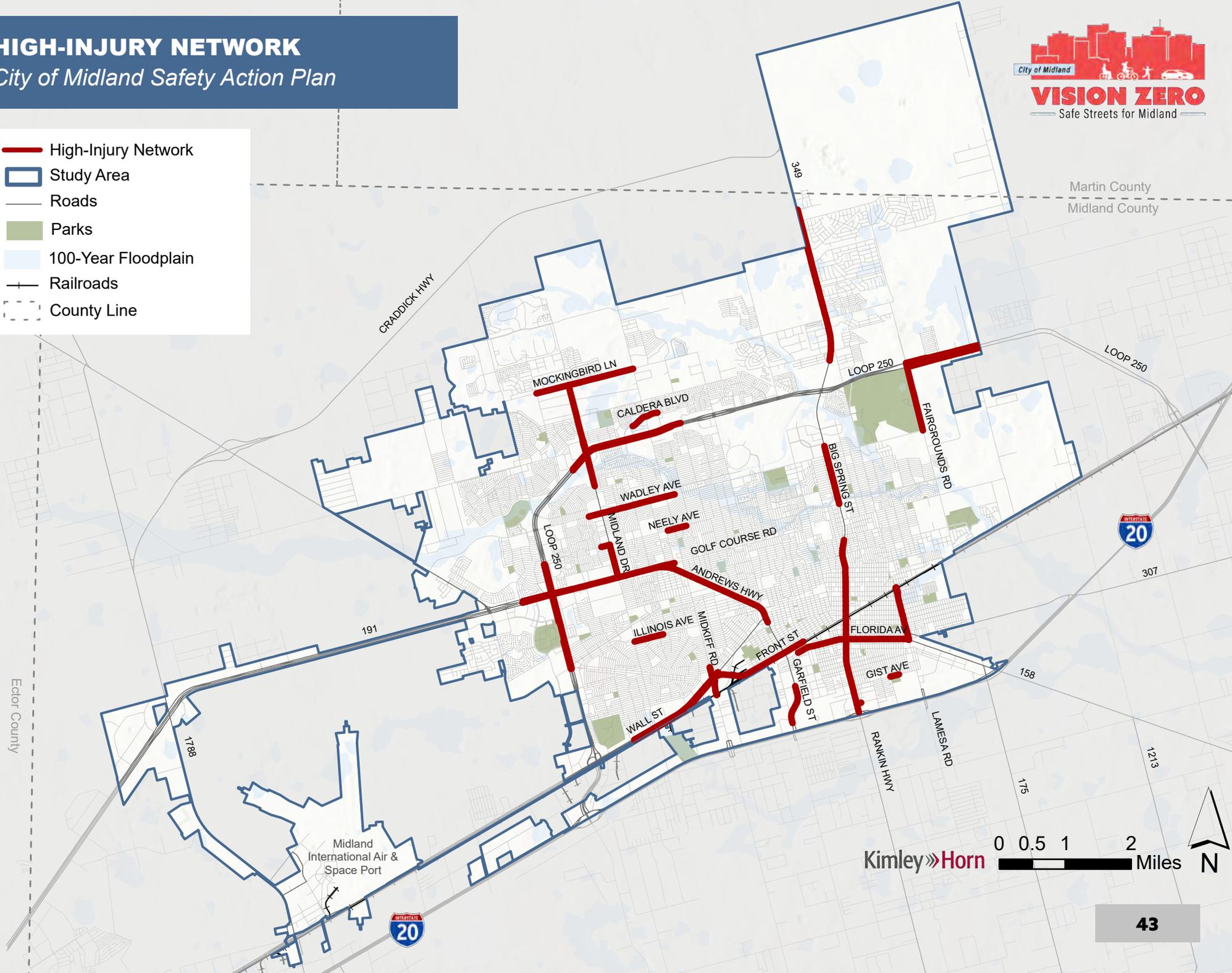
| HIN Segment | Limits | | Length (mi) | Crashes | | | Daily Volume |
|-----------------------|---------------------------|------------------------|-------------|---------|----|-----------|--------------|
| | From | To | | K | A | Total KAs | |
| SH 158/SH 191 | Hereford Blvd | Missouri Ave | 4.50 | 7 | 27 | 34 | 67,900 |
| Loop 250 | Fairground Rd | City Limits | 1.15 | 3 | 2 | 5 | 15,500 |
| Loop 250 | 1,700' W of Midland Dr | 2,600' E of Midkiff Rd | 1.75 | 3 | 11 | 14 | 44,000 |
| Caldera Blvd | Crista Ln | Billingsley Blvd | 0.44 | 2 | 0 | 2 | 2,000 |
| Wall St | Eisenhower Rd | Front St | 3.31 | 1 | 14 | 15 | 32,500 |
| Garfield St | IH-20 Off-Ramp | Francis Ave | 0.59 | 1 | 4 | 5 | 6,700 |
| Midland Dr | Mockingbird Ln | Fairbanks Dr | 1.79 | 1 | 11 | 12 | 41,300 |
| Illinois Ave | Midland Dr | Oxford St | 0.45 | 0 | 4 | 4 | 12,900 |
| Longview Ave | Rankin Hwy | Belmont St | 0.07 | 0 | 3 | 3 | 2,000 |
| Lamesa Rd | BUS 20 | Florida Ave | 0.88 | 2 | 4 | 6 | 12,800 |
| Gist Ave | Terrell St | Marshall St | 0.14 | 1 | 2 | 3 | 2,100 |
| Neely Ave | Rees Ln | Midland Dr | 0.13 | 3 | 0 | 3 | 3,900 |
| Big Spring St | IH-20 | Nobles Ave | 2.67 | 8 | 18 | 26 | 64,700 |
| Neely Ave | Terrace Ave | Whitney Dr | 0.29 | 1 | 2 | 3 | 2,600 |
| Mockingbird Ln | Oriole Dr | N Midkiff Rd | 1.51 | 1 | 2 | 3 | 2,600 |
| Midkiff Rd | Wall St | IH-20 | 0.26 | 2 | 3 | 5 | 11,900 |
| Front St | Wall St | K St | 1.52 | 4 | 13 | 17 | 18,900 |
| Fairgrounds Rd | Loop 250 | CR 72 | 1.31 | 0 | 4 | 4 | 4,300 |
| Midland Dr | Neely Ave | SH 158 | 0.51 | 1 | 5 | 6 | 40,700 |
| Big Spring St | Humble Ave | Fiesta Ave | 0.90 | 1 | 4 | 5 | 72,600 |
| Florida Ave | L St | Lamesa Rd | 1.69 | 2 | 7 | 9 | 35,800 |
| Loop 250 | 2,500' N of SH 158/SH 191 | Thomason Dr | 1.48 | 1 | 8 | 9 | 26,500 |
| Big Spring St | Hollyberry Ln | Badland Blvd | 2.34 | 0 | 7 | 7 | 37,300 |
| Wadley Ave | Mark Ln | Cord Dr | 1.34 | 1 | 3 | 4 | 21,400 |

HIGH-INJURY NETWORK

City of Midland Safety Action Plan



- High-Injury Network
- Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- County Line



Ector County

Martin County
Midland County

Midland International Air & Space Port

Kimley Horn 0 0.5 1 2 Miles N

The image shows an oil pumpjack in a desert-like environment, overlaid with a semi-transparent red filter. The pumpjack is a large piece of machinery used for extracting oil from a well. It consists of a long horizontal beam (the walking beam) pivoted on a vertical support. One end of the beam is connected to a vertical rod that goes down into the well, and the other end is connected to a counterweight. The pumpjack is shown in a slightly elevated position, suggesting it is in the middle of a cycle. The background is a hazy, open landscape with some distant structures and trees. The overall tone is industrial and somewhat somber due to the red overlay.

Vision Zero Action Plan



Part III: Vision Zero Action Plan

Introduction

Part III details countermeasures and recommendations for study corridors and systemic improvements as part of the Vision Zero Action Plan. This includes policies, programs, and various strategies and actions that provide improvements for specific safety emphasis areas in the City of Midland.

Chapter 5: Countermeasures

- Targeted Recommendations

- Systemic Recommendations

Chapter 6: Policies & Programs

- Roadway & Lane Departures

- Speed-Related

- Intersection-Related

- Distracted Driving

- Impaired Driving

- Unrestrained Driving

- Vulnerable Road Users

Chapter 7: Implementation Plan

- Vision Zero Implementation Matrix



Chapter 5. Countermeasures

This chapter details the five study corridors identified by the HIN and VZTF along with their respective targeted recommendations and countermeasures. Targeted recommendations at study corridors provide detailed and crafted recommendations for specific areas of Midland that have varying crash history, road geometry, intersection control, and land use context. Additionally, systemic recommendations are organized by safety emphasis area and provide a countermeasure toolbox to make Citywide improvements.

Targeted Recommendations

To select projects and recommendation that would improve safety, in-field observations were made to understand existing conditions and crash locations. A memorandum with in-depth observations, field photos, and preliminary recommendations can be referenced in **Appendix Item C**.

The following section summarizes the crash history and highlights corridor and intersection-level recommendations for each of the five selected study corridors.

Study Corridors

Five road segments on the High-Injury Network were selected as priority corridors to make targeted recommendations that improve safety on the City's most unsafe corridors today. The highest priority study corridors were selected with input from City staff and scored based on equity, engagement, and feasibility. The criteria for scoring each road segment were the following:



EQUITY

- Disadvantaged Areas (USDOT ETC Explorer)
- Transportation Disadvantaged Areas (USDOT ETC Explorer)



ENGAGEMENT

- Social Pinpoint Map Survey Comments
- Task Force Comments (from Meeting 2)
- Task Force Selection (from Meeting 3)



FEASIBILITY

- Current City Projects
- TxDOT On/Off System

In coordination with City Staff, the five study corridors selected for targeted recommendations are outlined in **Table 8**. The study corridors add up to 5.84 miles of roadway and capture 29 KA crashes within their limits. Each are spread between various parts of the City of Midland and are located near multiple land use contexts.

Table 8: Study Corridors

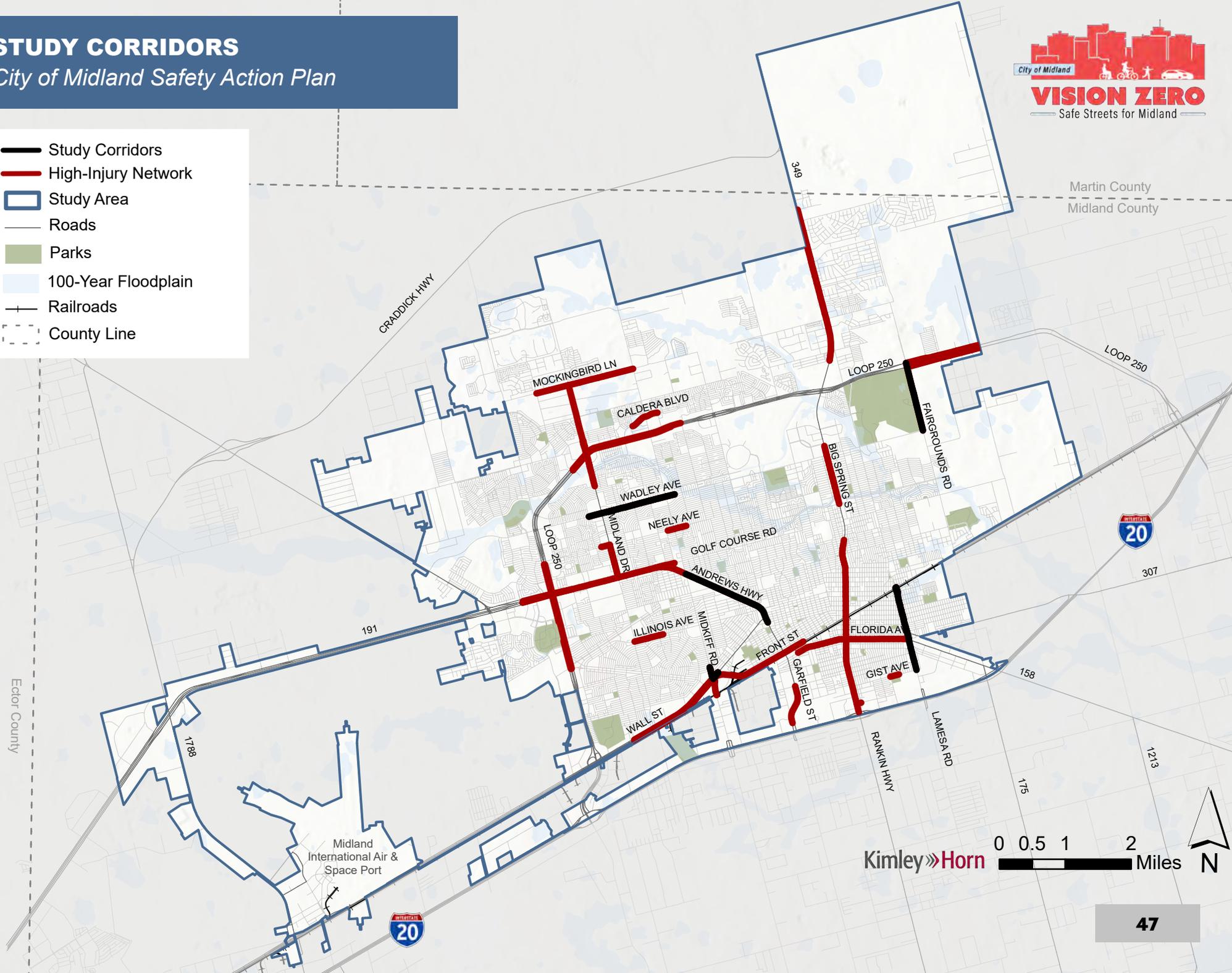
| Study Corridor | Limits | | Length (mi) | Crashes | | | Daily Volumes |
|--------------------------------------|-------------|--------------|-------------|----------|-----------|-----------|---------------|
| | From | To | | K | A | Total KAs | |
| 1. Wadley Avenue | Mark Ln | Cord Dr | 1.34 | 1 | 3 | 4 | 21,400 |
| 2. Fairgrounds Road | Loop 250 | CR 72 | 1.31 | 0 | 4 | 4 | 4,300 |
| 3. Andrews Highway | Midkiff Rd | Missouri Ave | 1.49 | 1 | 8 | 9 | 67,900 |
| 4. Lamesa Road | BUS 20 | Florida Ave | 1.40 | 2 | 4 | 6 | 12,800 |
| 5. Midkiff Road - Wall Street | Williams St | Front St | 0.30 | 2 | 4 | 6 | 32,500 |
| Total | | | 5.84 | 6 | 23 | 29 | |

STUDY CORRIDORS

City of Midland Safety Action Plan



- Study Corridors
- High-Injury Network
- Study Area
- Roads
- Parks
- 100-Year Floodplain
- Railroads
- County Line

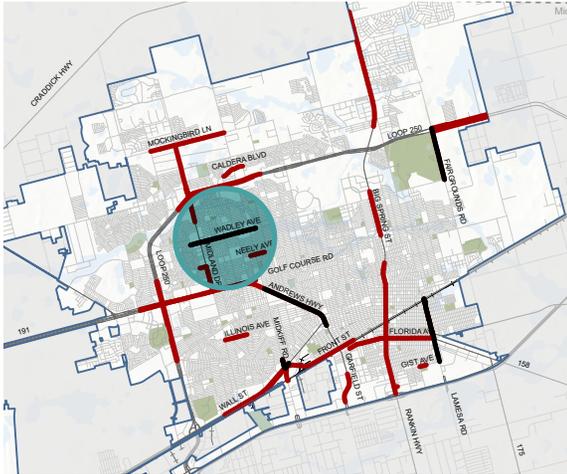


Martin County
Midland County

Ector County

Kimley **Horn** 0 0.5 1 2 Miles N

1 Corridor 1: Wadley Avenue, From Mark Lane to Cord Drive



Context

The section of Wadley Avenue from Mark Lane to Cord Drive is 1.34 miles in length (0.1% of the City's total roadway network) and is located in northwest Midland. The adjacent area is a mixture of residential and commercial land uses, with a school along the corridor. This roadway section has a posted speed of 40 mph and a volume of 21,400 vehicles per day. Wadley Avenue is a seven-lane undivided facility in this section, with six travel lanes and a center turn lane.

Crash History

There were 411 total crashes on this section of Wadley Avenue between 2018-2022. Of these total crashes, 32 were B's, 3 were A's, and 1 was K. Additionally, 2 crashes involved bicycles or pedestrians, resulting in 1 KA. Key takeaways for crash trends along this section of Wadley Avenue were the following:

204

of the 411 total crashes were **intersection-related** (50%), which included 2 of the 4 KA crashes (50%)

77

of the 411 total crashes were **rear-end crashes** (19%)

82

of the 411 total crashes were **speeding related crashes** (20%)

A full summary of crash history at Wadley Avenue is found in **Exhibit 9** on page 50.



Corridor Recommendations

To reduce turning movement conflicts, it is recommended to reconstruct Wadley Avenue with new access management measures and put the storm drain system below ground when feasible. In the short term, it is recommended to update sidewalks with a buffer to the roadway and restripe all lane pavement markings. With the updated access management, it is recommended to keep full access at the following intersections:

- Mark Lane
- Nelson Road
- Greenbriar Drive
- Wedgwood Street
- Godfrey Street
- Jordan Avenue
- Tarleton Street
- Maxwell Drive
- Midkiff Road

In addition, it is recommended to install hooded left-turn lanes at each of the following intersections or site driveways:

- Bush’s Chicken site drive
- Albertson’s site drive
- Trinity School
- Providence Drive

Intersection Recommendations

It is recommended at all signalized intersections along the corridor to install high-visibility pedestrian crosswalks. In addition, it is recommended to install pedestrian signal head, crossing signs, and push buttons for all vulnerable road users to cross at signalized intersections.

Visibility and detection at signalized intersection are recommended to be improved by installing retroreflective backplates on signal heads and updating vehicle detection to radar detection.

Midland Drive

It is recommended to reevaluate the signal timing at the intersection for dilemma zones to provide sufficient yellow and all red intervals for vehicles. Additionally, it is recommended to repave sidewalk and pedestrian area at the intersection due to poor pavement conditions.

Godfrey Street

It is recommended to install and update pedestrian push buttons at the intersection to improve conditions for vulnerable road users to cross Wadley Avenue. **Exhibit 10** summarizes all recommendations and countermeasures for Wadley Avenue.

Table 9 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for Wadley Avenue. **Exhibit 10** on page 51 summarizes all recommendations and countermeasures for Wadley Avenue.

Table 9: Countermeasure Application Results for Wadley Avenue

| ID | Location | Recommendation | Countermeasure | CMF | Crash Type | Total Crashes Reduced over 20-Year Period |
|-------|--------------------------|---|--|-------|--------------|---|
| C.1.1 | Signalized Intersections | Install or update pedestrian crosswalks | Implement Systemic Signing and Visibility Improvements at Signalized Intersections | 0.732 | All | 160 |
| C.2.1 | Signalized Intersections | Install pedestrian signal heads, crossing signs, and push buttons | | | | |
| C.3.1 | Signalized Intersections | Update vehicle detection to radar detection | Improve Signal Timing | 0.85 | All | 90 |
| C.4.1 | Signalized Intersections | Install reflective backplates at signal heads | Add 3-Inch Yellow Reflective Sheeting to Signal Backplates | 0.85 | All | 90 |
| 1.1 | Corridor | Install median | Install Raised Median | 0.29 | All | 881 |
| 1.2 | Corridor | Reconstruct sidewalk with buffer | Install Sidewalk | 0.598 | Vehicle/ Ped | 4 |
| 1.3 | Corridor | Restripe pavement markings | Upgrade Intersection Pavement Markings | 0.75 | All | 310 |
| 1.B.1 | Midland Drive | Reevaluate signal timing for dilemma zones | Increase Yellow Interval and All Red Interval | 0.99 | All | 1 |

CORRIDOR 1: WADLEY AVE CRASH HISTORY

From Mark Ln to Cord Dr

411 CRASHES **4** KAs

40 MPH

21,400 VEH PER DAY

PRINCIPAL ARTERIAL

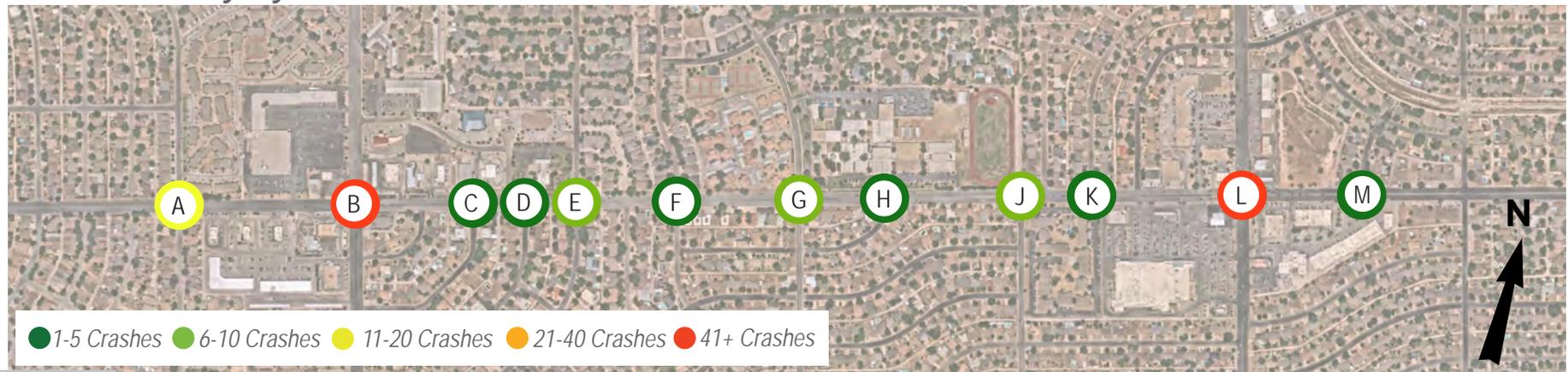
7 LANE UNDIVIDED SECTION



Top Crash Attributes

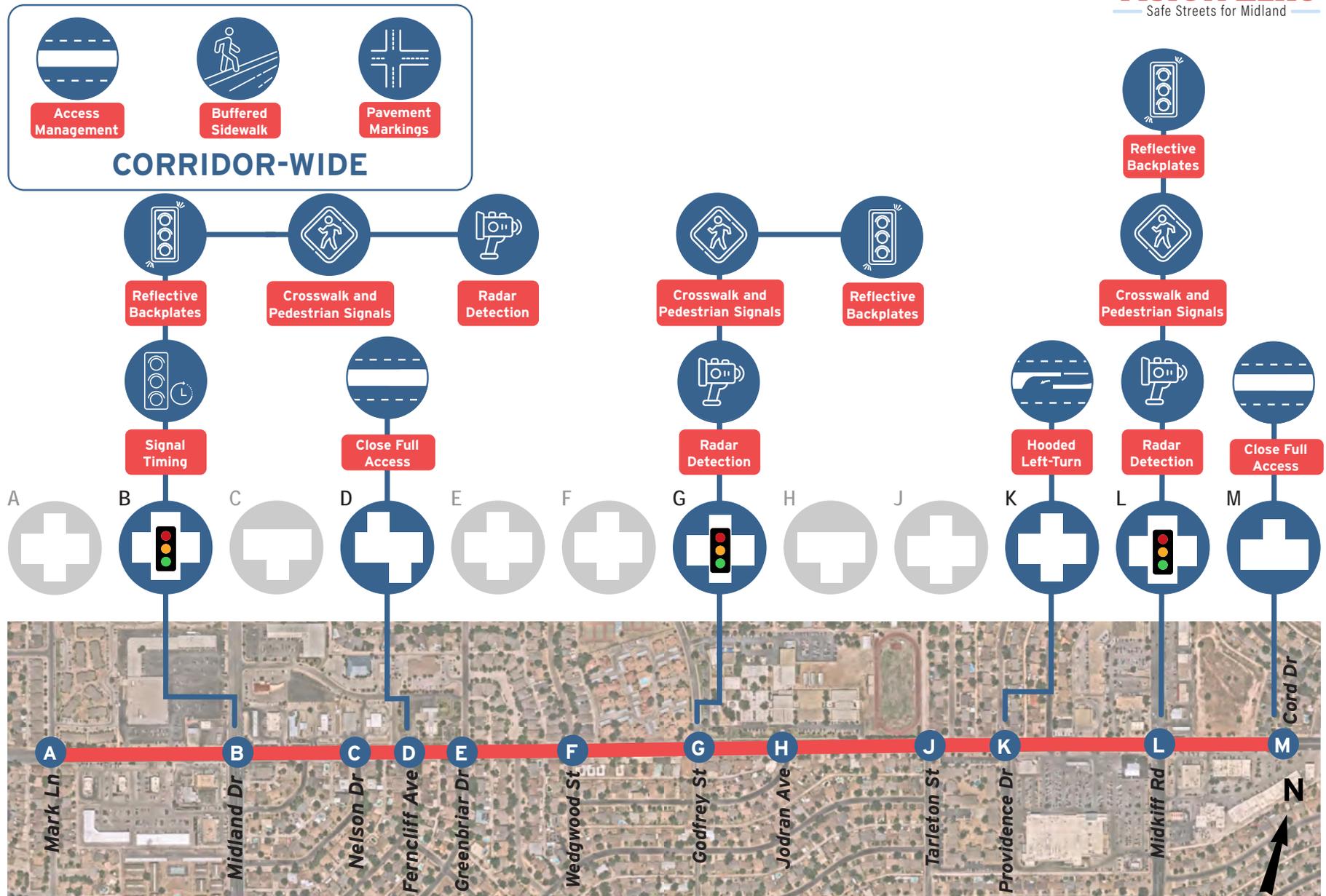
| | | | | |
|--|--|---|---|---|
| <p>Intersection-Related 204 Crashes (50%) 2 KAs (50%)</p> | <p>Vulnerable Road Users 2 Crashes (5%) 1 KA (25%)</p> | <p>Nighttime Crashes 73 Crashes (18%) 1 KA (25%)</p> | | |
| <p>Rear End Crashes 77 Crashes (19%) 0 KAs (0%)</p> | <p>Angle - Both Going Straight 75 Crashes (18%) 2 KAs (50%)</p> | <p>Speeding 82 Crashes (20%) 1 KA (25%)</p> | <p>Failed to Yield ROW - Private Drive 63 Crashes (15%) 1 KA (25%)</p> | <p>Alcohol-Related 12 Crashes (3%) 2 KAs (50%)</p> |

Crash Density by Intersection

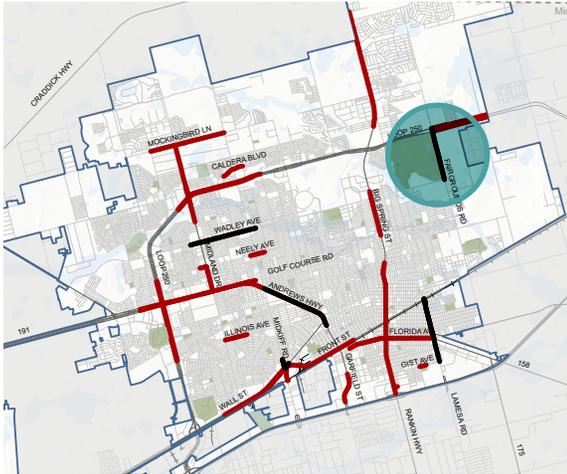


CORRIDOR 1: WADLEY AVE RECOMMENDATIONS

From Mark Ln to Cord Dr



2 Corridor 2: Fairgrounds Road, From Loop 250 to Wadley Avenue



Context

This section of Fairgrounds Road is 1.31 miles in length (0.1% of the City’s total roadway network) and is in northeast Midland. The area adjacent to the study corridor is primarily undeveloped but does have a couple of businesses, including a golf course to the west. It has a posted speed limit of 40 mph, which increases to 55 mph through most of its limits and has a traffic volume of 4,300 vehicles per day. Fairgrounds Road is a five-lane undivided roadway with a center turn lane. A future high school site is anticipated to be constructed just south of Wadley Avenue along Fairgrounds Road.

Crash History

There were 69 total crashes on this section of Fairgrounds Road between 2018-2022. Of these total crashes, 13 were B’s, 4 were A’s, and no fatalities. Key takeaways for crash trends along this section of Fairgrounds Road were the following:

62

of the 69 total crashes were **intersection-related** (90%), which included 2 of the 4 KA crashes (50%)

37

of the 69 total crashes were **rear-end crashes** (54%)

22

of the 69 total crashes were **‘Failed to yield ROW at a stop sign’** (32%)

A full summary of crash history at Fairgrounds Road is found in **Exhibit 11** on page 54.



Corridor Recommendations

To reduce speeds and potential head-on collisions, it is recommended to install access management measures with added illumination along the corridor. It is also recommended to install dynamic speed feedback signs midway between Loop 250 and Wadley Avenue to help reduce speeding along the corridor.

Intersection Recommendations

It is recommended at all signalized intersections along the corridor to install high-visibility pedestrian crosswalks or refresh the existing pavement markings. In addition, it is recommended to install pedestrian signal head, crossing signs, and push buttons for all vulnerable road users to cross at signalized intersections.

Visibility and detection at signalized intersection are recommended to be improved by installing retroreflective backplates on signal heads and updating vehicle detection to radar detection.

Wadley Avenue

It is recommended to refresh the existing pedestrian crosswalk striping to better highlight pedestrian paths at each leg of the intersection.

Table 10 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for Fairgrounds Road. **Exhibit 12** on page 55 summarizes all recommendations and countermeasures for Fairgrounds Road.

Table 10: Countermeasure Application Results for Fairgrounds Road

| ID | Location | Recommendation | Countermeasure | CMF | Crash Type | Total Crashes Reduced over 20-Year Period |
|-------|--------------------------|---|--|-------|------------|---|
| C.1.2 | Signalized Intersections | Install or update pedestrian crosswalks | Implement Systemic Signing and Visibility Improvements at Signalized Intersections | 0.732 | All | 72 |
| C.2.2 | Signalized Intersections | Install pedestrian signal heads, crossing signs, and push buttons | | | | |
| C.3.2 | Signalized Intersections | Update vehicle detection to radar detection | Improve Signal Timing | 0.85 | All | 41 |
| C.4.2 | Signalized Intersections | Install reflective backplates at signal heads | Add 3-Inch Yellow Reflective Sheeting to Signal Backplates | 0.85 | All | 41 |
| 2.1 | Corridor | Add illumination | Install Lighting | 0.68 | All | 81 |
| 2.2 | Corridor | Install median | Install Raised Median | 0.29 | All | 179 |
| 2.3 | Corridor | Install speed feedback signs | Install Dynamic Speed Feedback Sign | 0.95 | All | 13 |

CORRIDOR 2: FAIRGROUNDS RD CRASH HISTORY

From Loop 250 to CR 72

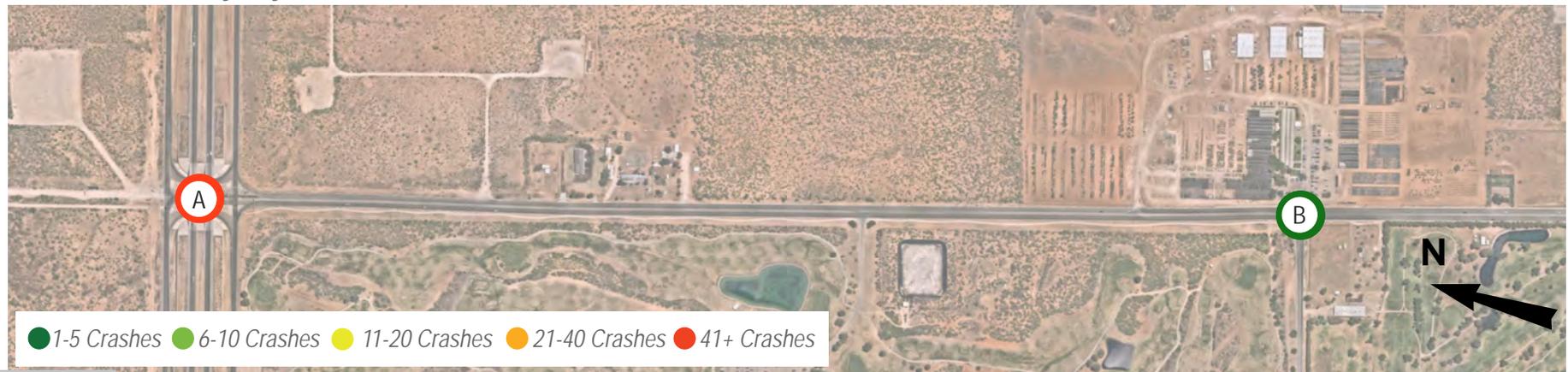
| | | |
|--------------------------------|---------------------------------|--------------------------|
| 69 CRASHES 4 KAs | 40-55 MPH | 4,300 VEH PER DAY |
| PRINCIPAL ARTERIAL | 5 LANE UNDIVIDED SECTION | |



Top Crash Attributes

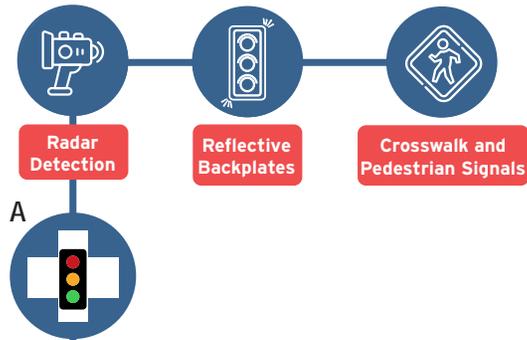
| | | | | |
|---|---|---|---|--|
| <p>Intersection-Related 62 Crashes (90%) 2 KAs (50%)</p> | <p>Vulnerable Road Users 0 Crashes (0%) 0 KAs (0%)</p> | <p>Nighttime Crashes 11 Crashes (16%) 2 KAs (50%)</p> | | |
| <p>Same Direction - One Straight - One Stopped 13 Crashes (19%) 0 KAs (0%)</p> | <p>Angle - Both Going Straight 37 Crashes (54%) 1 KA (25%)</p> | <p>Failed to Yield ROW - Stop Sign 22 Crashes (32%) 1 KA (25%)</p> | <p>Failed to Control Speed 11 Crashes (16%) 0 KAs (0%)</p> | <p>One Vehicle - Going Straight 8 Crashes (12%) 2 KAs (50%)</p> |

Crash Density by Intersection

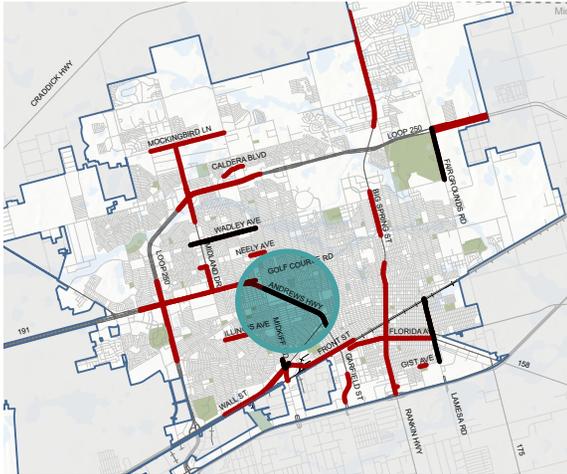


CORRIDOR 2: FAIRGROUNDS RD RECOMMENDATIONS

From Loop 250 to Wadley Ave



3 Corridor 3: Andrews Highway, From Midkiff Road to Missouri Avenue



Context

This section of Andrews Highway is 1.49 miles in length (0.12% of the City's total Roadway Network) and is in central Midland. The adjacent land use is primarily commercial developments, including office, retail, and restaurants. It has a posted speed limit that varies between 30 and 40 mph and traffic volumes of 67,900 vehicles per day. Andrews Highway is a seven-lane undivided roadway with a center turn lane.

Crash History

There were 649 total crashes on this section of Andrews Highway between 2018-2022. Of these total crashes, 69 were B's, 8 were A's, and 1 K. Key takeaways for crash trends along this section of Andrews Highway were the following:

364

of the 649 total crashes were **intersection-related** (56%), which included 8 of the 9 KA crashes (89%)

146

of the 649 total crashes were **rear-end crashes** (22%)

110

of the 649 total crashes were **speeding-related crashes** (17%)

A full summary of crash history at Andrews Highway is found in **Exhibit 13** on page 59.

Corridor Recommendations

It is recommended to restripe all lane pavement markings throughout the corridor to enhance visibility and driver compliance to travel lanes. It is also recommended to update single pole signals with conventional signal poles that are constructed with mast arms at a 90-degree angle to each leg of the intersection. This provides an improved visual angle to drivers and reduces confusion of which approach is permitted to enter the intersection.



Additionally, to reduce turning movement conflicts at various commercial site drives, it is recommended to provide access management between Illinois Avenue and Missouri Avenue along the corridor.

Intersection Recommendations

It is recommended at all signalized intersections along the corridor to install or update to high-visibility pedestrian crosswalks. In addition, it is recommended to install pedestrian signal heads, crossing signs, and push buttons for all users to cross at signalized intersections.

Visibility and detection at signalized intersection are recommended to be improved by installing retroreflective backplates on signal heads and updating vehicle detection to radar detection.

Midkiff Road

It is recommended to restripe the stop bars at the intersection to behind the pedestrian ramp and intended pedestrian crossing path.

Cessna Drive

Dual hooded left turn lanes into Cessna Drive and the McDonald's site drive are recommended to aid in reducing turning movement conflicts. Additionally, it is recommended to provide access management at this location.

Kansas Avenue

In order to improve sight distance at the intersection, it is recommended to trim vegetation at the intersection at the north and south legs. Additionally, it is recommended to restripe the stop bar forward, to provide additional sight distance with the skewed angle with Andrews Highway and also reconfigure the pedestrian ramp to be in front of the stop bar.

Due to high volumes on Andrews Highway and limited sight distance, it is also recommended to conduct a traffic signal warrant analysis at the intersection.

Dodson Street

The intersection operates with five legs, and, in order to improve driver compliance to correct operating directions, it is recommended to stripe directional arrow markings at Dodson Street. It is also recommended to install a raised pedestrian island to distinguish entering and exiting lanes to Andrews Highway.

Illinois Avenue

To aid with safer vehicle turns it is recommended to provide a right turn channelization lane on Illinois Avenue. Acquiring ROW on the Northeast corner of the intersection would allow for the implementation of the right turn channelization lane and give an opportunity to increase the turning radius of the northeast corner of the intersection.

Texas Avenue

With the updated access management along Andrews Highway, it is recommended to close full access at Texas Avenue and remove the traffic signal to convert the east and west legs to right-in/right-out only approaches.

Wall Street

In order to improve sight distance through the skewed intersection, it is recommended to reconfigure the north leg of the intersection with positive left-turn offset. Upon the reconfiguration of the north leg, it is recommended to reduce the receiving lanes travelling northbound from three to two to provide only a single lane for each travel lane crossing the intersection.

Additionally, it is recommended to increase the turning radius of the northeast corner of the intersection that can help with safer vehicle turns and visual of the pedestrian crossing.

Exhibit 14 on page 60 summarizes all recommendations and countermeasures along Andrews Highway. **Table 11** on page 58 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for Andrews Highway.

Table 11: Countermeasure Application Results for Andrews Highway

| ID | Location | Recommendation | Countermeasure | CMF | Crash Type | Total Crashes Reduced over 20-Year Period |
|-------|--------------------------|---|--|-------|------------|---|
| C.1.3 | Signalized Intersections | Install or update pedestrian crosswalks | Implement Systemic Signing and Visibility Improvements at Signalized Intersections | 0.732 | All | 378 |
| C.2.3 | Signalized Intersections | Install pedestrian signal heads, crossing signs, and push buttons | | | | |
| C.3.3 | Signalized Intersections | Update vehicle detection to radar detection | Improve Signal Timing | 0.85 | All | 212 |
| C.4.3 | Signalized Intersections | Install reflective backplates at signal heads | Add 3-Inch Yellow Reflective Sheeting to Signal Backplates | 0.85 | All | 212 |
| 3.1 | Corridor | Restripe pavement markings | Upgrade Intersection Pavement Markings (Corridor) | 0.75 | All | 325 |
| 3.2 | Corridor | Install median | Install Raised Median | 0.29 | All | 1,207 |
| 3.C.1 | Cessna Drive | Install median | Install Raised Median | 0.29 | All | 74 |
| 3.G.1 | Kansas Ave | Conduct signal warrant analysis | Install a Traffic Signal | 0.61 | All | 32 |
| 3.G.2 | Kansas Ave | Trim vegetation | Remove or Relocated Fixed Objects Outside of Clear Zone | 0.62 | All | 31 |
| 3.K.1 | Dodson Street | Install a raised pedestrian island "pork chop" | Median Treatment for Ped/Bike Safety | 0.86 | All | 17 |
| 3.K.2 | Dodson Street | Stripe directional arrow markings | Upgrade Intersection Pavement Markings | 0.75 | All | 30 |
| 3.N.1 | Wall Street | Reconfigure SB left-turn lane with positive left-turn offset | Introducing Zero or Positive Offset Left-Turn Lane on Crossing Roadway | 0.74 | All | 11 |

CORRIDOR 3: ANDREWS HWY CRASH HISTORY

From Midkiff Rd to Missouri Ave

649 CRASHES **9** KAs

30-40 MPH

67,900 VEH PER DAY

PRINCIPAL ARTERIAL

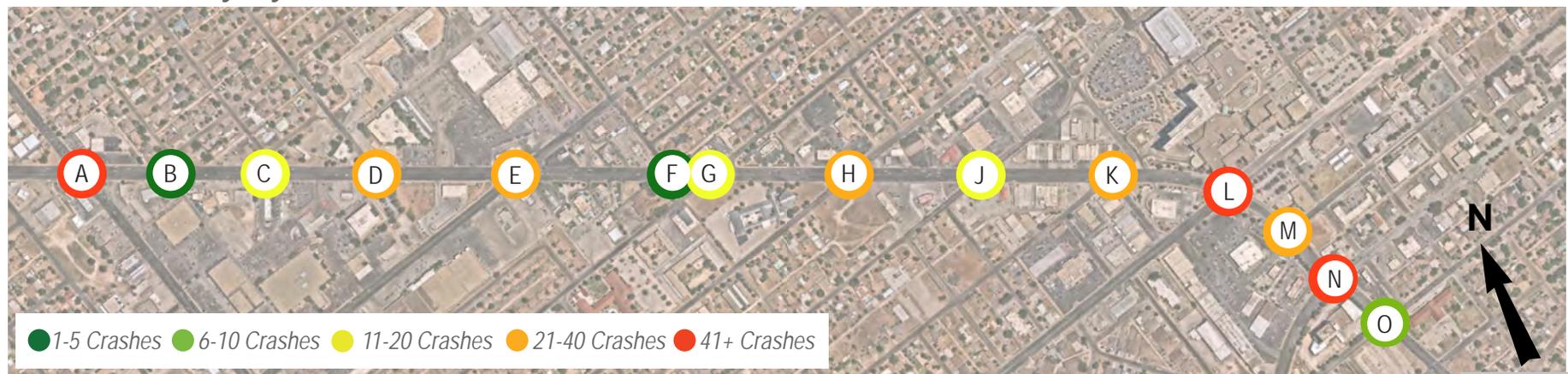
7 LANE UNDIVIDED SECTION



Top Crash Attributes

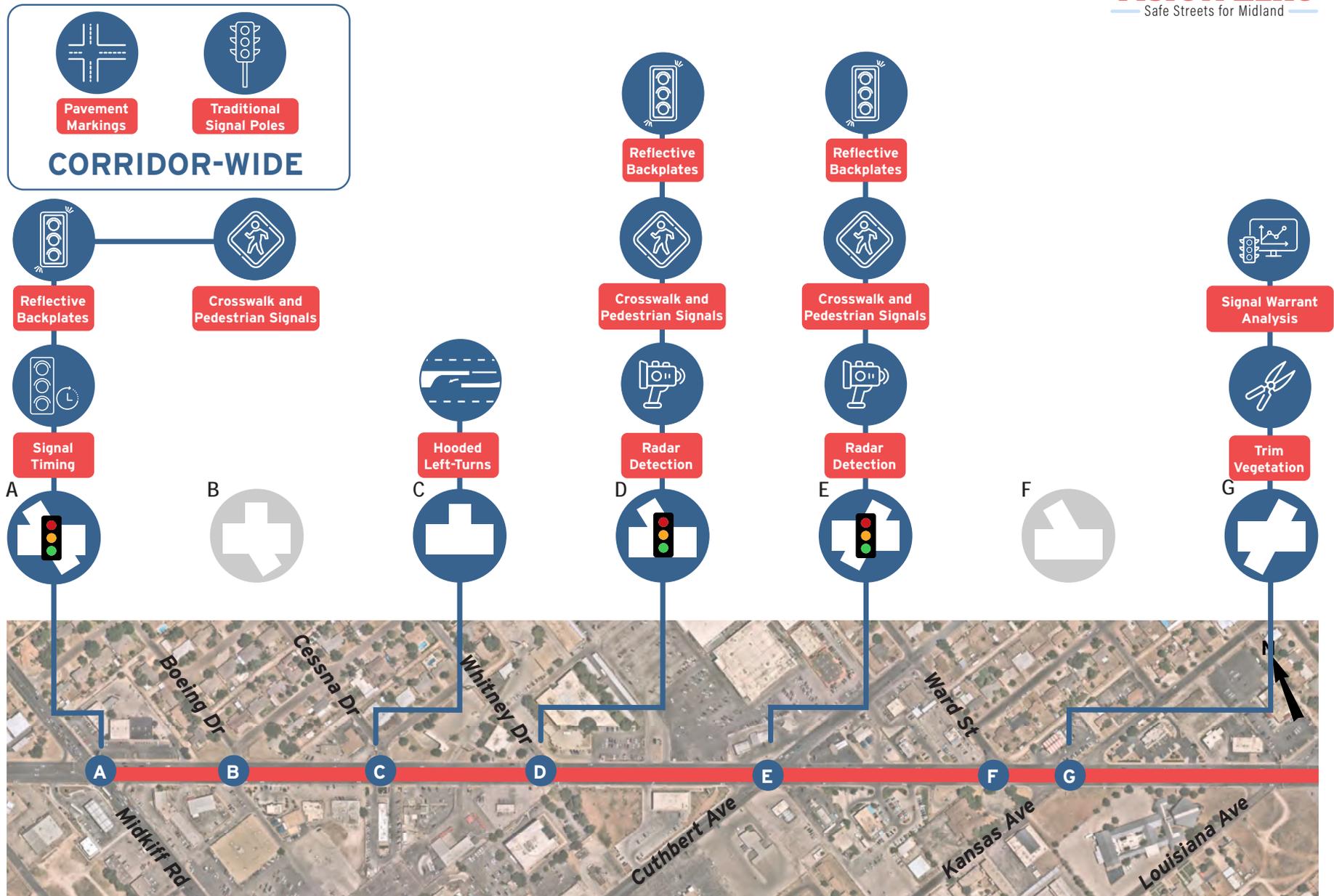
| | | | | |
|--|--|--|--|---|
| <p>Intersection-Related</p> <p>364 Crashes (56%) 8 KAs (89%)</p> | <p>Vulnerable Road Users</p> <p>4 Crashes (1%) 1 KA (11%)</p> | <p>Nighttime Crashes</p> <p>134 Crashes (21%) 6 KAs (66%)</p> | | |
| <p>Same Direction - One Straight - One Stopped</p> <p>146 Crashes (22%) 0 KAs (0%)</p> | <p>Opposite Direction - One Straight - One Left Turn</p> <p>97 Crashes (15%) 2 KAs (22%)</p> | <p>Angle - Both Going Straight</p> <p>96 Crashes (15%) 2 KAs (22%)</p> | <p>Failed to Control Speed</p> <p>110 Crashes (17%) 0 KAs (0%)</p> | <p>Failed to Yield ROW - Turning Left</p> <p>85 Crashes (13%) 2 KAs (22%)</p> |

Crash Density by Intersection



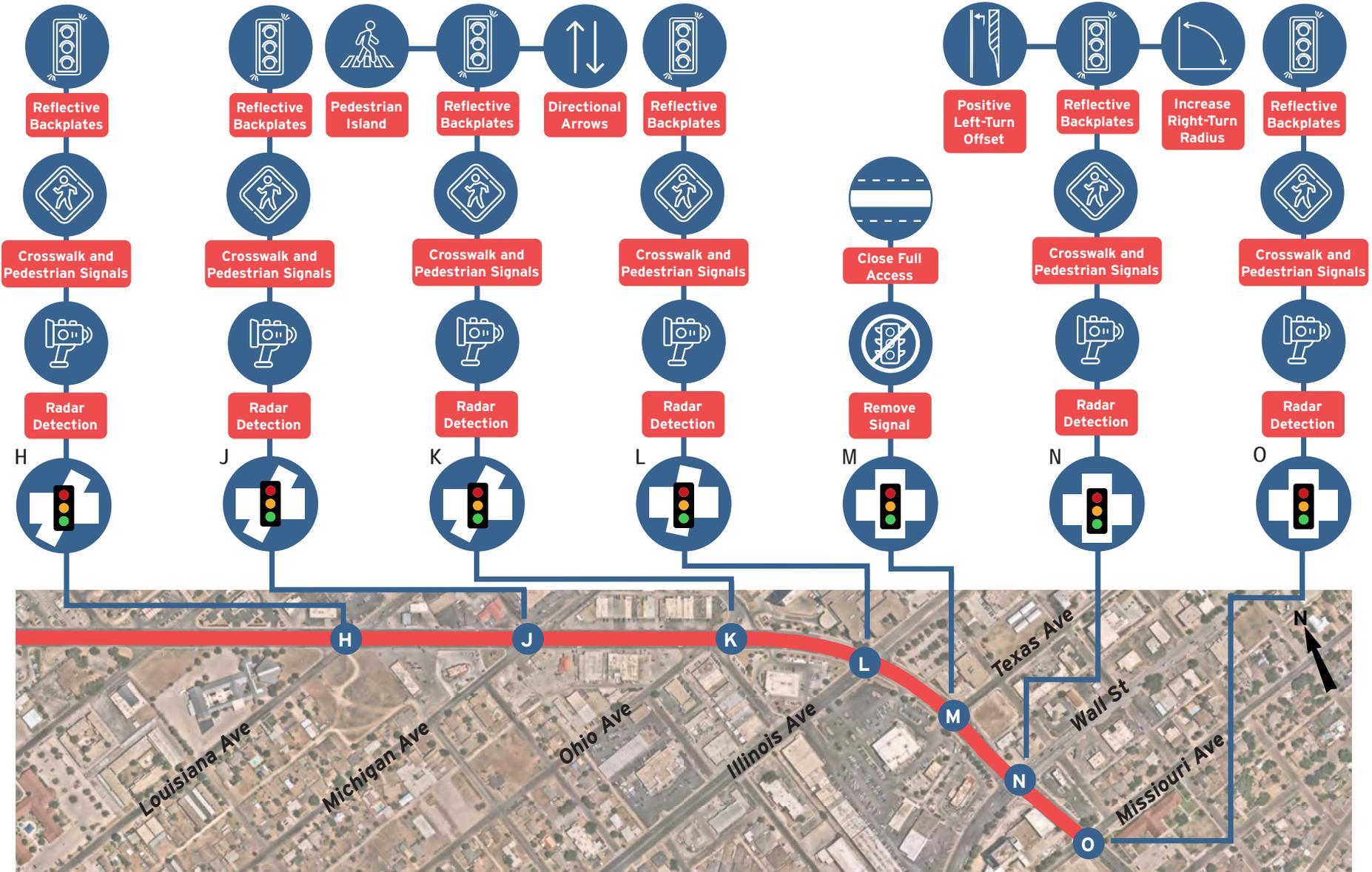
CORRIDOR 3: ANDREWS HWY RECOMMENDATIONS (1)

From Midkiff Rd to Missouri Ave

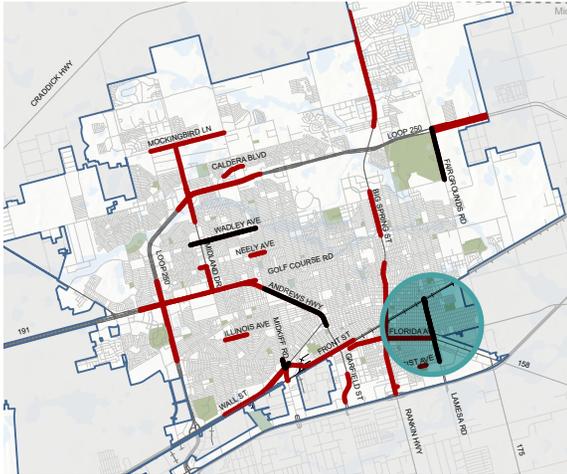


CORRIDOR 3: ANDREWS HWY RECOMMENDATIONS (2)

From Midkiff Rd to Missouri Ave



4 Corridor 4: Lamesa Road, From BUS 20 to Gist Avenue



Context

This section of Lamesa Road is 1.40 miles in length (0.11% of the City's total roadway network) and is in southeast Midland. The area adjacent to the study corridor is a mixture of industrial land uses and transitions to residential areas to the south. It has a posted speed limit of 30-40 mph and has a traffic volume of 12,800 vehicles per day. Lamesa Road is a five-lane undivided roadway with a center turn lane.

Crash History

There were 97 total crashes on this section of Lamesa Road between 2018-2022. Of these total crashes, 10 were B's, 4 were A's, and 2 were K's. Key takeaways for crash trends along this section of Lamesa Road were the following:

93

of the 97 total crashes were **intersection-related** (96%), which included 6 of the 6 KA crashes (100%)

29

of the 97 total crashes were **rear-end crashes** (30%)

18

of the 97 total crashes were **'Failed to yield ROW at a stop sign'** (19%)

A full summary of crash history at Lamesa Road is found in **Exhibit 15** on page 64.

Corridor Recommendations

To reduce turning movement conflict it is recommended to provide access management along this corridor with center-running illumination and pedestrian refuge islands where applicable. With the updated access management, it is recommended to keep full access at the following intersections along Lamesa Road:

- Front Street
- Wall Street
- New York Avenue
- Illinois Avenue
- Kentucky Avenue
- Florida Avenue



It is also recommended to reconstruct a sidewalk with a buffer to Lamesa Road and fill all sidewalk gaps on the corridor. As part of the reconstruction and completion of a buffered sidewalk, it is recommended to relocate all obstructions from sidewalks, i.e., dumpsters, mailboxes, utility boxes, and utility poles.

Intersection Recommendations

It is recommended at all signalized intersections along the corridor to install or update to high-visibility pedestrian crosswalks. In addition, it is recommended to install pedestrian signal heads, crossing signs, and push buttons for all users to cross at signalized intersections.

Visibility and detection at signalized intersection are recommended to be improved by installing retroreflective backplates on signal heads and updating vehicle detection to radar detection.

Front Street

It is recommended to add crosswalks and pedestrian signals at the intersection. In addition, signal timing coordination and rail detection is needed to coordinate the freight and pedestrian signal timings.

Kentucky Avenue

It is recommended to evaluate the most appropriate pedestrian crossing treatment at the intersection in order to provide a pedestrian crossing between the closest signalized intersections of Front Street and Florida Avenue.

Cloverdale Road

As part of providing access management along Lamesa, it is recommended to construct hooded left-turn lanes to allow for left-turns to and from Cloverdale Road and to prohibit left-turns to and from California Avenue. This allows for vehicles travelling along Lamesa Road to enter Cloverdale Road from the north and south and allows for vehicles travelling along Cloverdale Road to enter Lamesa Road to the north and south. The west leg of California Avenue is recommended to be right-in/right-out only.

Florida Avenue

It is recommended to stripe an edge line along the south leg of the intersection to improve driver compliance with travel lanes. Additionally, it is recommended to install illumination at the intersection to improve driving conditions during dark lighting conditions.

Gist Avenue

The design of a traffic signal has been complete, and it is recommended to complete the construction of the traffic signal with pedestrian crosswalks, signal heads, and pedestrian push buttons .

Exhibit 16 on page 65 summarizes all recommendations and countermeasures along Lamesa Road. **Table 12** summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for Lamesa Road

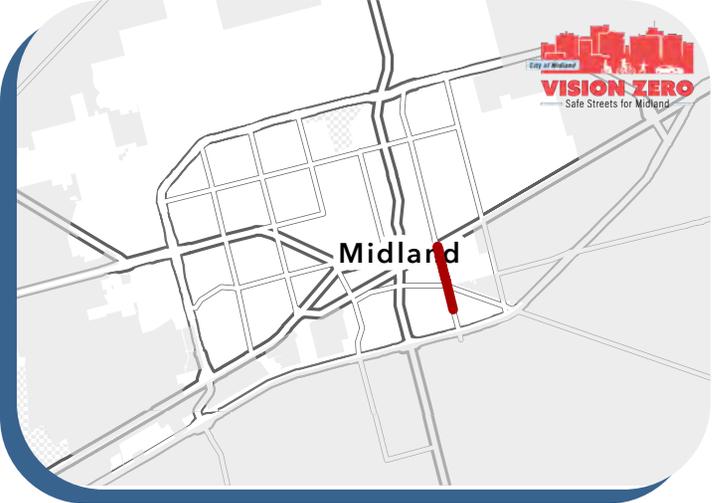
Table 12: Countermeasure Application Results for Lamesa Road

| ID | Location | Recommendation | Countermeasure | CMF | Crash Type | Total Crashes Reduced over 20-Year Period |
|-------|--------------------------|---|--|-------|-----------------|---|
| C.1.4 | Signalized Intersections | Install or update pedestrian crosswalks | Implement Systemic Signage and Visibility Improvements at Signalized Intersections | 0.732 | All | 74 |
| C.2.4 | Signalized Intersections | Install pedestrian signal heads, crossing signs, and push buttons | | | | |
| C.3.4 | Signalized Intersections | Update vehicle detection to radar detection | Improve Signal Timing | 0.85 | All | 42 |
| C.4.4 | Signalized Intersections | Install reflective backplates at signal heads | Add 3-Inch Yellow Reflective Sheeting to Signal Backplates | 0.85 | All | 42 |
| 4.1 | Corridor | Install median | Install Raised Median | 0.29 | All | 259 |
| 4.2 | Corridor | Add illumination in median | Install Lighting | 0.68 | All | 117 |
| 4.3 | Corridor | Reconstruct sidewalk with buffer and fill gaps | Install Sidewalk | 0.598 | Vehicle/ Ped | 4 |
| 4.4 | Corridor | Relocate obstructions from sidewalks | Remove or Relocate Fixed Objects Outside of Clear Zone | 0.62 | All | 139 |
| 4.C.1 | Kentucky Avenue | Evaluate for most appropriate pedestrian crossing treatment | Install High Visibility Crosswalk | 0.6 | Vehicle/ Ped | 2 |
| 4.G.1 | Florida Avenue | Stripe edge line of south leg | Place Standard Edge Line Marking | 0.97 | All | 1 |
| 4.G.2 | Florida Avenue | Add illumination | Install Intersection Lighting | 0.881 | Nighttime | 1 |

CORRIDOR 4: LAMESA RD CRASH HISTORY

From BUS 20 to Gist Ave

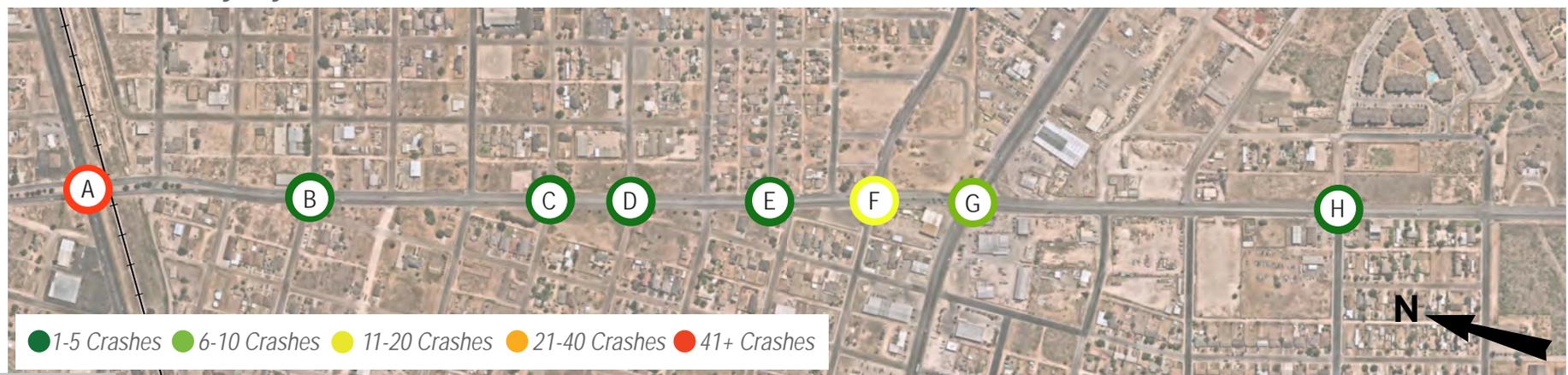
| | | |
|--------------------------------|---------------------------------|---------------------------|
| 97 CRASHES 6 KAs | 30-40 MPH | 12,800 VEH PER DAY |
| PRINCIPAL ARTERIAL | 5 LANE UNDIVIDED SECTION | |



Top Crash Attributes

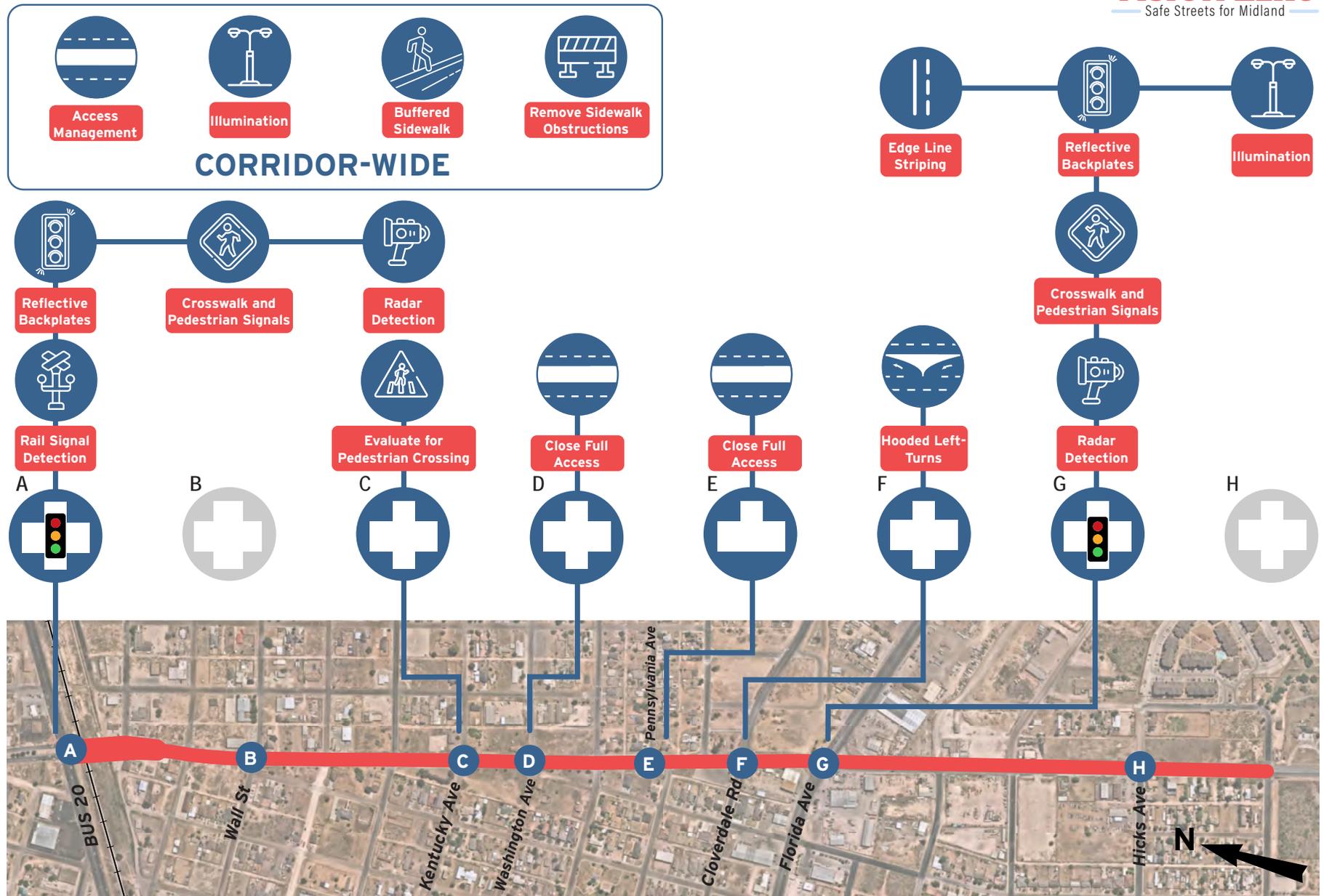
| | | | | |
|---|--|--|--|--|
| <p>Intersection-Related</p> <p>93 Crashes (96%) 6 KAs (100%)</p> | <p>Vulnerable Road Users</p> <p>1 Crash (1%) 1 KA (17%)</p> | <p>Nighttime Crashes</p> <p>37 Crashes (38%) 4 KAs (66%)</p> | | |
| <p>Angle - Both Going Straight</p> <p>29 Crashes (30%) 3 KAs (50%)</p> | <p>Same Direction - One Straight - One Stopped</p> <p>21 Crashes (22%) 0 KAs (0%)</p> | <p>Opposite Direction - One Straight - One Left Turn</p> <p>13 Crashes (14%) 1 KA (17%)</p> | <p>Failed to Yield ROW - Stop Sign</p> <p>18 Crashes (19%) 1 KA (17%)</p> | <p>Failed to Control Speed</p> <p>16 Crashes (16%) 0 KAs (0%)</p> |

Crash Density by Intersection

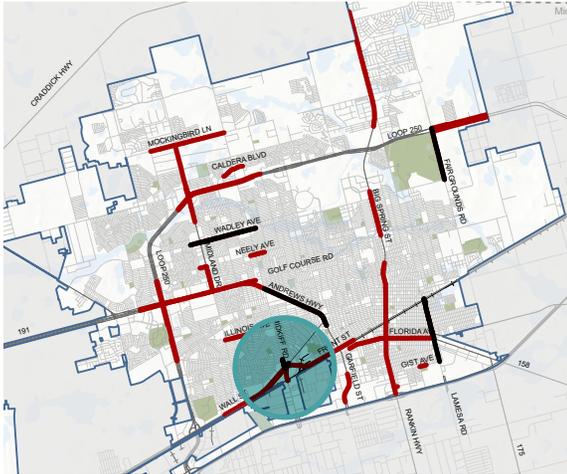


CORRIDOR 4: LAMESA RD RECOMMENDATIONS

From BUS 20 to Gist Ave



5 Corridor 5: Midkiff Road / Wall Street, From Williams Street to Front Street



Context

This section of Midkiff Road / Wall Street is 0.30 miles in length (0.023% of the City's total roadway network) and is in south central Midland. It is the section of Midkiff Road, from Williams Street to Wall Street and the section of Wall Street, from Midkiff Road to Front Street. The area adjacent to the study corridor is primarily commercial land uses. It has a posted speed limit of 35-45 mph and has a traffic volume of 32,500 vehicles per day. Midkiff Road and Wall Street are five-lane undivided roadways with a center turn lane at each.

Crash History

There were 194 total crashes on this section of Midkiff Road / Wall Street between 2018-2022. Of these total crashes, 18 were B's, 4 were A's, and 2 were K's. Key takeaways for crash trends along this section of Lamesa Road were the following:

139

of the 194 total crashes were **intersection-related** (72%), which included 3 of the 5 KA crashes (60%)

56

of the 194 total crashes were **rear-end crashes** (29%)

28

of the 194 total crashes were **'Failed to yield ROW at a stop sign'** (12%)

A full summary of crash history at Lamesa Road is found **Exhibit 17** on page 68.



Corridor Recommendations

To reduce turning movement conflicts at various commercial site driveways, it is recommended to use access management measures along Wall Street, between Front Street and Midkiff Road.

Additional access management measures should be used along Midkiff Road, between Williams Street and Wall Street, is recommended to be installed. With providing access management, it is recommended to close full access at Travis Avenue and with a hooded left-turn lane into Franklin Avenue and into the Jumburrito site drive.

Finally, it is recommended to repave or reconstruct the north sidewalk along Wall Street to improve pavement conditions for vulnerable road users, especially near the existing transit stop.

Intersection Recommendations

It is recommended at all signalized intersections along the corridor to install or update to high-visibility pedestrian crosswalks. In addition, it is recommended to install pedestrian signal head, crossing signs, and push buttons for all users to cross at signalized intersections.

Visibility and detection at signalized intersection are recommended to be improved by installing retroreflective backplates on signal heads and updating vehicle detection to radar detection.

Midkiff Road & Wall Street

In order to clear unnecessary site drives, it is recommended to close the two driveways within the westbound channelized right-turn lane that provide access to the gas station on the northwest corner of the intersection. Additionally, to reduce travel speeds at the same right-turn and protect pedestrians crossing, it is recommended to install a westbound right-turn deceleration lane. At the approach, it is also recommended to install a “stop for pedestrian” sign to warn vehicles of crossing pedestrians before entering the channelized right-turn.

There is a high volume of left-turning vehicles at the intersection, and it is recommended to reevaluate the signal timing for protected left-turn phasing from permitted left-turns in existing conditions. Additionally, it is recommended to implement “no right-turn on red” signs to protect right-turning vehicles from frequent U-turns. Finally, it is recommended to install additional lighting at the intersection and install a lane assignment sign at each approach.

Table 13 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for Midkiff Road / Wall Street. **Exhibit 18** on page 69 summarizes all recommendations and countermeasures along Midkiff Road / Wall Street.

Table 13: Countermeasure Application Results for Midkiff Rd – Wall St

| ID | Location | Recommendation | Countermeasure | CMF | Crash Type | Total Crashes Reduced over 20-year Period |
|-------|--------------------------|---|--|-------|--------------|---|
| C.1.5 | Signalized Intersections | Install or update pedestrian crosswalks | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | 151 |
| C.2.5 | Signalized Intersections | Install pedestrian signal heads, crossing signs, and push buttons | | | | |
| C.3.5 | Signalized Intersections | Update vehicle detection to radar detection | Improve Signal Timing | 0.85 | All | 84 |
| C.4.5 | Signalized Intersections | Install reflective backplates at signal heads | Add 3-Inch Yellow Reflective Sheeting to Signal Backplates | 0.85 | All | 84 |
| 5.1 | Corridor | Install median on Midkiff Road | Install Raised Median | 0.29 | All | 6 |
| 5.2 | Corridor | Install median on Wall Street | Install Raised Median | 0.29 | All | 3 |
| 5.3 | Corridor | Reconstruct sidewalks and add missing connections | Install Sidewalk | 0.598 | Vehicle/ Ped | 5 |
| 5.C.1 | Midkiff Road | Close driveways | Closure or Complete Relocation of Driveway from Function Area of Intersection | 0.93 | All | 4 |
| 5.C.2 | Midkiff Road | Install dedicated right-turn lane | Install Right-Turn Lane | 0.80 | All | 84 |
| 5.C.3 | Midkiff Road | Install stop for pedestrian sign | Install Advances Yield or Stop Marketings and Signs | 0.75 | Vehicle/ Ped | 3 |
| 5.C.4 | Midkiff Road | Add illumination | Install Intersection Lighting | 0.881 | Nighttime | 19 |
| 5.C.5 | Midkiff Road | Install lane assignment sign | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.955 | All | 19 |
| 5.C.6 | Midkiff Road | Update signal timing with protected left-turn phasing | Change Permissive Left-Turn Phasing to Protected Only | 0.45 | All | 229 |

CORRIDOR 5: MIDKIFF RD/WALL ST CRASH HISTORY

From Williams St to Front St

194 CRASHES **5** KAs

35-45 MPH

32,454 VEH PER DAY

PRINCIPAL ARTERIAL

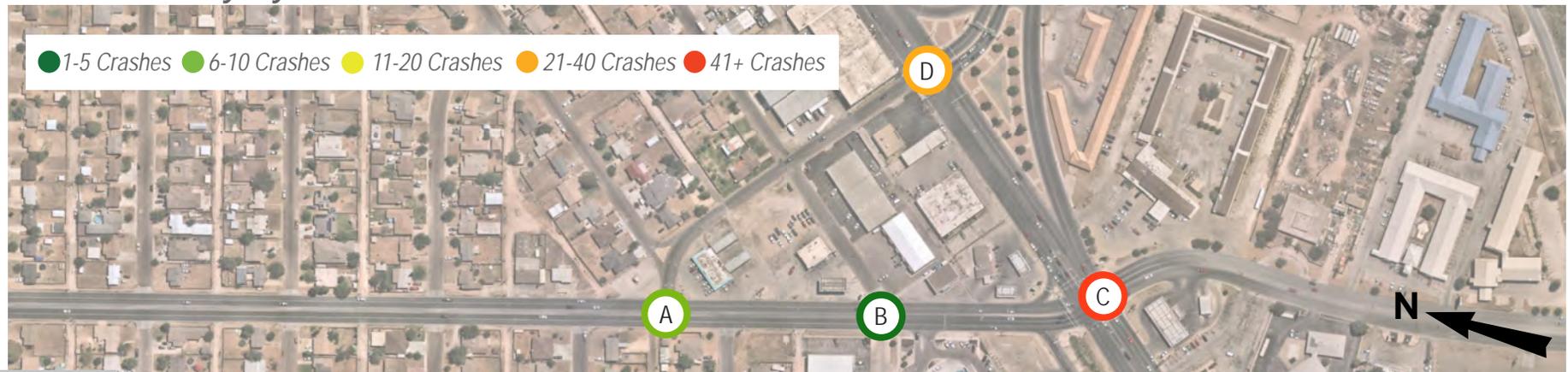
5 LANE UNDIVIDED SECTION



Top Crash Attributes

| | | | | |
|---|---|---|---|--|
| <p>Intersection-Related 139 Crashes (72%) 3 KAs (60%)</p> | <p>Vulnerable Road Users 2 Crashes (1%) 2 KAs (40%)</p> | <p>Nighttime Crashes 58 Crashes (30%) 5 KAs (100%)</p> | | |
| <p>Angle - Both Going Straight 56 Crashes (29%) 0 KAs (0%)</p> | <p>Same Direction - One Straight - One Stopped 30 Crashes (15%) 1 KA (20%)</p> | <p>Opposite Direction - One Straight - One Left Turn 24 Crashes (12%) 0 KAs (0%)</p> | <p>Failed to Yield ROW - Stop Sign 23 Crashes (12%) 0 KAs (0%)</p> | <p>Failed to Yield ROW - Turning Left 22 Crashes (11%) 0 KAs (0%)</p> |

Crash Density by Intersection



CORRIDOR 5: MIDKIFF RD/WALL ST RECOMMENDATIONS

From Williams St to Front St



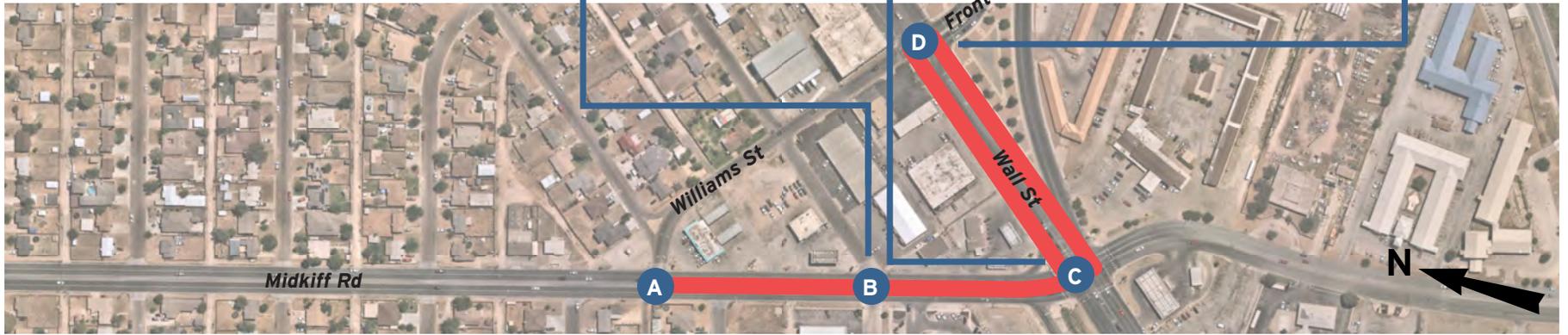
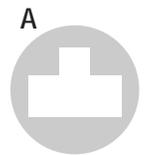
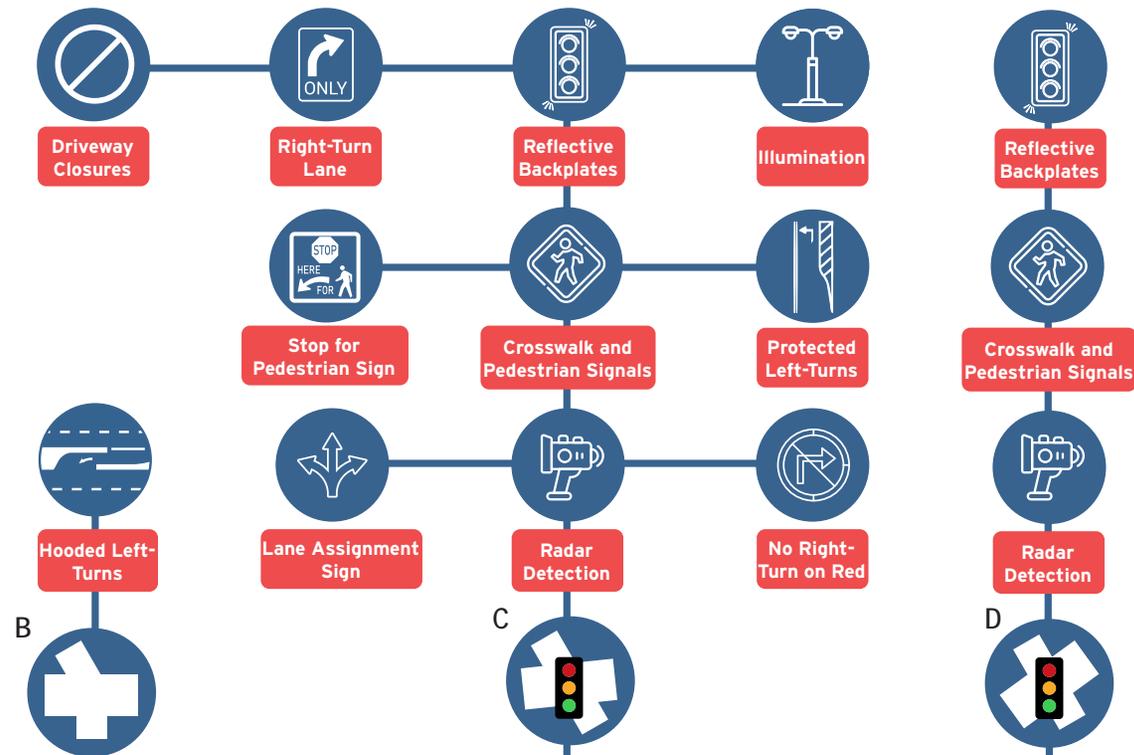


Access Management



Buffered Sidewalk

CORRIDOR-WIDE



Systemic Countermeasure Toolbox

A countermeasure toolbox is a comprehensive collection of strategies and interventions designed to address specific traffic safety issues and challenges. It provides transportation professionals with a range of options and resources to effectively mitigate risks, improve safety, and enhance the overall performance of roadways and transportation systems.

The following details systemic countermeasures that can be implemented in all areas of the City to improve safety, not limited to previous recommendations and study corridors. The City of Midland's systemic countermeasure toolbox is provided with each categorized by safety emphasis area in **Table 14**. Priority should be given to roads along the HIN and in areas of disadvantaged populations to lessen severity among crashes.

Table 14: Systemic Countermeasure Toolbox

| Safety Emphasis Areas | Raised Median | Lane Designation Markings & Signs | High Contrast Lane Markings | Wide Edge Lines | Speed Feedback Signs | Roundabouts | Bike Lanes | Retroreflective Backplates | Corridor Access Management | Rectangular Rapid Flashing Beacon | Improve Signaling and Visibility at Signals | Pedestrian Hybrid Beacon | Sidewalks | Roadway Reconfiguration |
|---------------------------|---------------|-----------------------------------|-----------------------------|-----------------|----------------------|-------------|------------|----------------------------|----------------------------|-----------------------------------|---|--------------------------|-----------|-------------------------|
| CMF | 0.29 | 0.75 | 0.75 | 0.97 | 0.95 | 0.59 | 0.435 | 0.85 | 0.93 | 0.31 | 0.732 | 0.883 | 0.598 | 0.53 |
| Roadway & Lane Departures | ● | ● | ● | ● | | | | | | | | | | ● |
| Speed-Related | ● | | | | ● | ● | ● | | | | | | | ● |
| Intersection-Related | | ● | | | | ● | | ● | ● | ● | ● | | | |
| Vulnerable Road Users | ● | | | | | | ● | | | ● | ● | ● | ● | ● |
| Distracted Driving | | ● | ● | ● | | | ● | ● | | | ● | | | |
| Impaired Driving | ● | ● | ● | ● | | | ● | ● | | | ● | | | |
| Unrestrained Persons | ● | | | | ● | ● | ● | | | | | | | ● |



Figure 13: Raised Median Example



Source: FHWA, City of Charlotte, NC

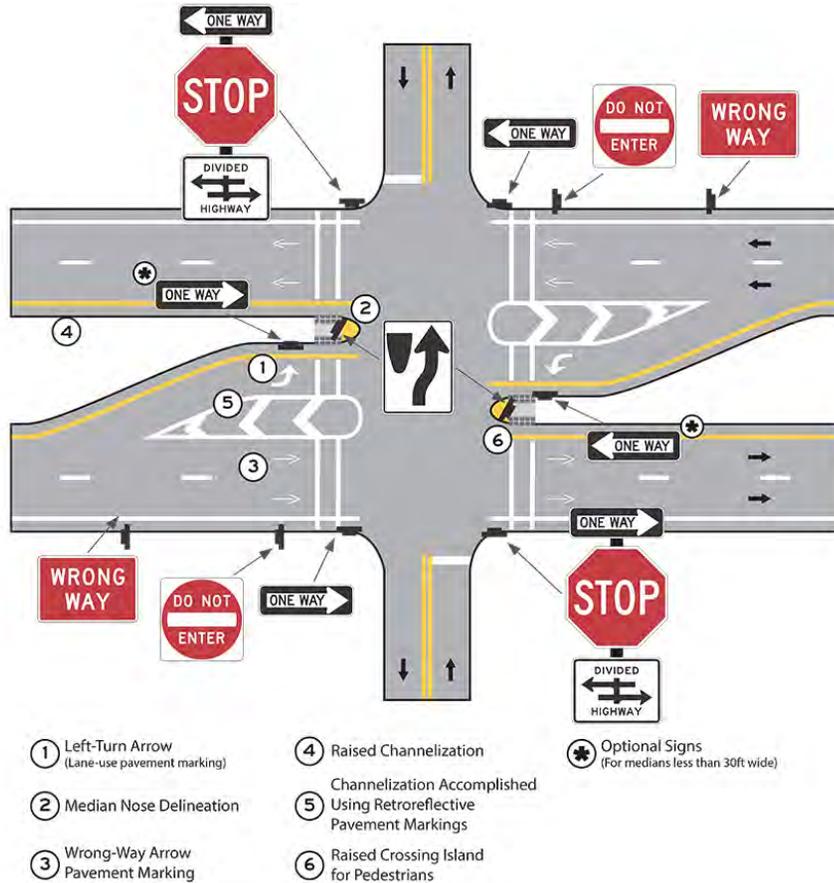
Raised Median

A raised median is a physical barrier or divider that separates opposing lanes of traffic on a roadway. It is most commonly used in urban and suburban areas to enhance safety and traffic flow by preventing vehicles from crossing over into opposing lanes or making certain left-turn movements. Installing a raised median has a CMF of 0.29 for all crash types and severities (CMF ID: 2219). **Figure 13** provides an example of a raised median.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Speed-Related
- Vulnerable Road Users
- Impaired Driving
- Unrestrained Persons

Figure 14: Lane Designation Markings Example



Source: FHWA

Lane Designation Markings and Signs

Pavement markings are painted or applied symbols, lines, and patterns on road surfaces to convey traffic regulations, guidance, and warnings to drivers. They enhance safety by providing clear visual cues for lane delineation, intersection control, and other traffic management purposes. Pavement markings help reduce confusion, improve traffic flow, and minimize the risk of crashes by assisting drivers in navigating roadways effectively and safely. Upgrading pavement markings has a CMF of 0.75 for all crash types and severities (CMF ID: NS01). **Figure 14** provides an example of pavement markings for lane designation.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Distracted Driving
- Vulnerable Road Users
- Impaired Driving



Figure 15: High Contrast Lane Markings Example



Source: FHWA

High Contrast Lane Markings

High contrast lane markings refer to road markings that are designed to be easily distinguishable from the surrounding pavement, typically through the use of contrasting colors or materials. These markings are intended to enhance visibility and clarity for drivers, especially in challenging conditions such as low light, inclement weather, or areas with poor visibility. This has a CMF of 0.75 for all crash types and severities (CMF ID: NS01). **Figure 15** provides an example of high contrast lane markings.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Distracted Driving
- Intersection-Related
- Impaired Driving

Figure 16: Wide Edge Line Example



Source: FHWA, Texas Transportation Institute

Wide Edge Lines

Edge lines are the pavement markings at the edge of travel lanes and are designed to help drivers clearly identify the road alignment ahead. Edge lines are considered “wider” when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal width of 6 inches. Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. This has a CMF of 0.97 for all crash types and for A, B, or C crash severities (CMF ID: 83).

Figure 16 provides an example of a wide edge line.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Impaired Driving
- Distracted Driving



Figure 17: Speed Feedback Sign Example



Source: FHWA

Speed Feedback Signs

Speed feedback signs are traffic control devices designed to alert drivers of their current vehicle speed and encourage compliance with posted speed limits. These signs typically consist of a display panel, often featuring LED or digital readouts, which visually indicates the speed of approaching vehicles as they pass by.

The primary purpose of speed feedback signs is to increase driver awareness of their speed and encourage voluntary speed reductions, ultimately promoting safer driving behaviors and reducing the risk of crashes. These signs are commonly deployed in school zones, residential areas, work zones, and other locations where speeding may pose a safety hazard. Installing speed feedback signs has a CMF of 0.95 for all crash types and severities (CMF ID: 6885). **Figure 17** provides an example of a speed feedback sign.

Applicable Safety Emphasis Areas:

- Speed-Related
- Unrestrained Persons

Figure 18: Roundabout Example



Source: FHWA

Roundabouts

A roundabout is a type of circular intersection where traffic flows continuously around a central island. Vehicles entering a roundabout must yield to traffic already circulating within it, promoting a smooth and efficient flow of traffic with reduced conflict points compared to traditional intersections. Roundabouts are designed to improve safety, reduce congestion, and enhance traffic flow. The CMF for installing a roundabout is 0.59 for all crash types and severities (CMF ID: 10434). **Figure 18** provides an example of a roundabout.

Applicable Safety Emphasis Areas:

- Speed-Related
- Unrestrained Persons
- Intersection-Related



Figure 19: Bike Lane Example



Source: pedbikeimages.org/ Dan Burden

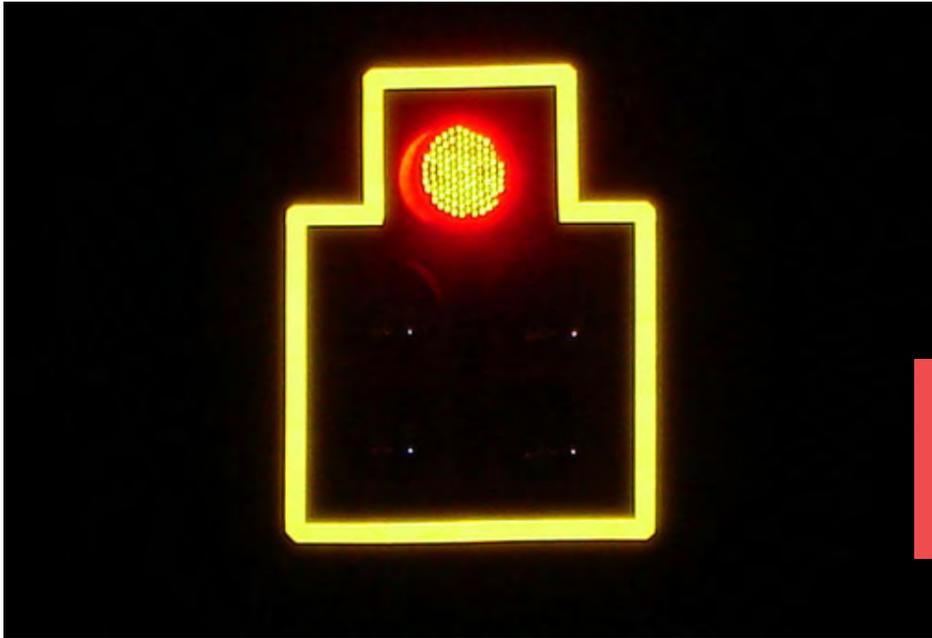
Bike Lanes

A bike lane is a designated area of a roadway that is reserved for bicycles, typically marked with pavement markings and signage. Bike lanes provide cyclists with a dedicated space to ride, improving safety by reducing conflicts with motor vehicles, and encouraging more people to choose bicycling as a mode of transportation. The CMF for bike lanes is 0.435 for vehicle and bicycle crashes and all crash severities (CMF ID: 10737). **Figure 19** provides an example of a bike lane.

Applicable Safety Emphasis Areas:

- Speed-Related
- Distracted Driving
- Vulnerable Road Users
- Impaired Driving

Figure 20: Retroreflective Backplate Example



Source: FHWA

Retroreflective Backplates

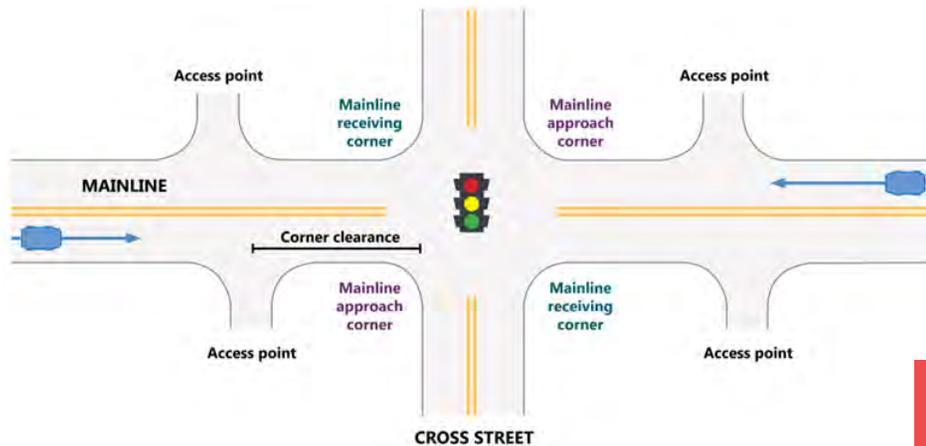
A retroreflective backplate is a backplate made by framing a signal head with a 1-to-3-inch yellow retroreflective border. They improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. They are also more visible and conspicuous in both daytime and nighttime conditions. Installing retroreflective backplates has a CMF of 0.85 for all crash types and severities (CMF ID: 1410). **Figure 20** provides an example of a retroreflective backplate installed on a signal head.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Impaired Driving
- Distracted Driving



Figure 21: Corridor Access Management Example



Source: FHWA

Corridor Access Management

Access management pertains to the planning, implementation, and regulation of entry and exit locations along a road, encompassing intersections with other roads and driveways serving nearby properties. Thoughtful management of access along a corridor can improve safety for all transportation modes, promote walking and cycling, and alleviate traffic congestion and delays. Closure or relocation of driveways from functional area of intersection has a CMF of 0.93 for all crash types and severities (CMF ID: 442). **Figure 21** provides an example of corridor access management elements and example.

Applicable Safety Emphasis Areas:

- Intersection-Related

Figure 22: RRFB Example



Source: pedbikeimages.org/ Toole Design Group

Rectangular Rapid Flashing Beacon (RRFB)

A rectangular rapid flashing beacon (RRFB) is a pedestrian-activated safety device installed at crosswalks to enhance visibility and alert drivers to the presence of pedestrians. When activated, the RRFB emits a rapid, alternating pattern of flashing lights to prompt drivers to yield to pedestrians crossing the street.

According to FHWA, RRFBs can result in motorist yielding rates as high as 98 percent at marked crosswalks with varied speed limit, crossing distance, and number of travel lanes. A CMF of 0.31 applies for all vehicle and pedestrian crashes and all crash severities (CMF ID: 11158). **Figure 22** provides an example of an RRFB for a pedestrian crossing.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Vulnerable Road Users



Figure 23: Crosswalk and Pedestrian Crossing Example



Source: pedbikeimages.org/ Gary Thomas

Improve Signing and Visibility at Signal

The minimum improvements to the equipment and facilities at signalized intersections should include high contrast crosswalks, pedestrian signal heads and push buttons, ADA compliant curb ramps. When constructed, pedestrians and other vulnerable road users are provided adequate facilities to make safe crossings and motorists are alerted of dedicated crossing areas.

Installing a high-visibility crosswalk and pedestrian signals has a CMF of 0.732 for vehicle and pedestrians crashes for all severities (CMF ID: 8967). **Figure 23** provides an example high contrast crosswalks with pedestrian signal head and push buttons.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Distracted Driving
- Vulnerable Road Users
- Impaired Driving

Figure 24: PHB Example



Source: pedbikeimages.org/ Mike Cynecki

Pedestrian Hybrid Beacon

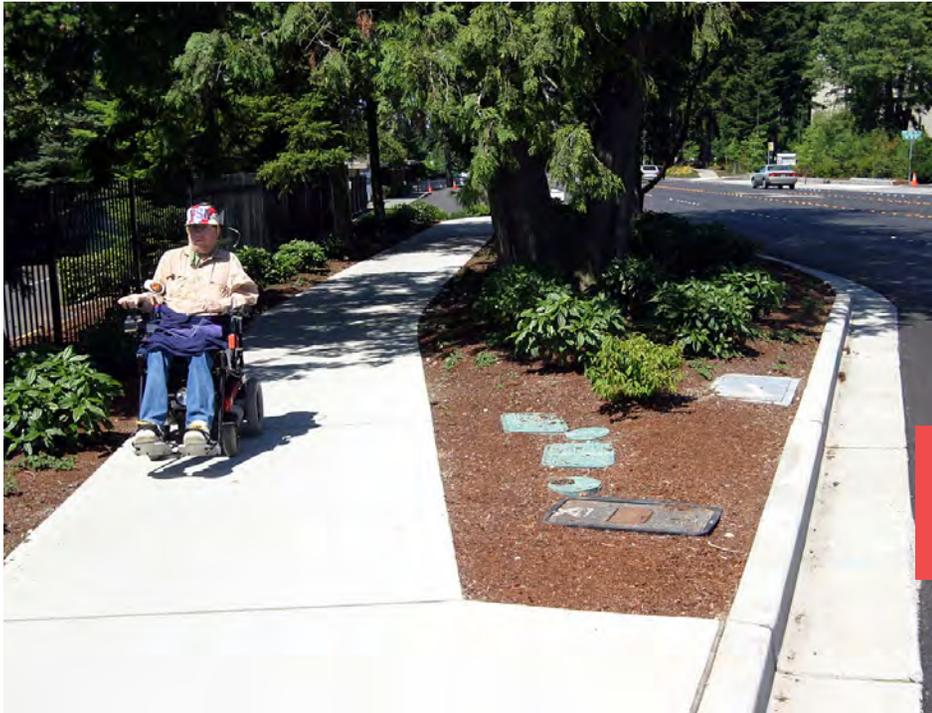
The pedestrian hybrid beacon (PHB) is a traffic control device designed to help pedestrians safely cross higher-speed roadways at midblock crossings and uncontrolled intersections. PHBs are typically effective at locations where three or more lanes will be crossed, or traffic volumes are above 9,000 annual average daily traffic. If PHBs are not familiar to a community, agencies and other governmental departments should provide appropriate education campaigns. PHBs have a CMF of 0.883 for all crash types and severities, primarily on minor roads (CMF ID: 10585). **Figure 24** provides an example of a pedestrian hybrid beacon for a pedestrian crossing.

Applicable Safety Emphasis Areas:

- Vulnerable Road Users



Figure 25: Buffered Sidewalk Example



Source: pedbikeimages.org/ Dan Burden

Sidewalks

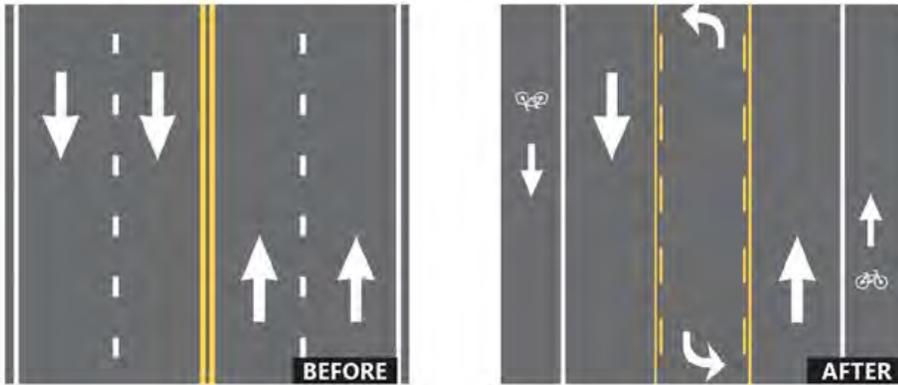
A sidewalk is a designated pathway alongside a road or street intended for pedestrian use. It provides a safe and separate space for pedestrians to walk, away from vehicular traffic. Sidewalks enhance pedestrian safety by reducing the risk of collisions with vehicles, promoting walking as a mode of transportation, and providing accessible routes for people of all ages and abilities.

Installing a sidewalk has a CMF of 0.598 of vehicle and pedestrian crashes of all types and severities (CMF ID: 11246). **Figure 25** provides an example of a buffered sidewalk.

Applicable Safety Emphasis Areas:

- Vulnerable Road Users

Figure 26: Roadway Reconfiguration



Source: FHWA

Roadway Reconfiguration

A roadway reconfiguration usually involves converting an existing four-lane roadway into a three-lane roadway. Implementing a roadway reconfiguration can improve safety, calm traffic, provide better mobility and access for all users, and enhance the quality of life in a community. Roadway reconfigurations can provide an opportunity to improve mobility by making space for the addition of bike lanes.

Completing a roadway reconfiguration from four to three lanes has a CMF of 0.53 for all crash types and severities (CMF ID: 2841). **Figure 26** Provides an example of what a roadway reconfiguration can look like.

Applicable Safety Emphasis Areas:

- Roadway and Lane Departures
- Speed Related
- Vulnerable Road Users
- Unrestrained Persons



...with each **emphasis area having overarching goals** that focuses on **eliminating deaths on Midland roads** through the building **complete streets, engaging the community, and finding innovative solutions** to protect all road users.

Chapter 6. Policies and Programs

This chapter outlines the recommended policies and program that would help create solutions for the systemic problems found in the transportation system. The policies and programs are organized by the eight safety emphasis areas discussed previously; with each emphasis area having overarching goals that focuses on eliminating deaths on Midland roads through the building complete streets, engaging the community, and finding innovative solutions to protect all road users. To make the mission achievable, each emphasis area has strategies and actions that should be taken to implement the strategy.

Figure 27: Example Action Item Policy Hierarchy



Roadway & Lane Departures

Roadway and lane departure crashes are the most common contributing factor in fatal and severe crashes in Midland; approximately 46% of KA crashes in Midland are roadway or lane departure related. Some common situations that can lead to roadway and lane departure crashes include the environment (light conditions or weather), human factors (drowsiness or inattention), and design factors. With the aim to decrease the number of roadway and lane departure crashes in Midland, the following strategies in **Table 15** seek to remind drivers of alternate choices to driving drowsy and using design as a tool to prevent these crashes or minimize their severity.

Table 15: Summary of Roadway & Lane Departure (LD) Strategies and Actions

| Action # | Description |
|---|---|
| Strategy LD1. Partner with TXDOT to identify and promote awareness of public rest stops in Midland. | |
| Action LD1.1. | Evaluate the locations of existing and future rest stops. |
| Action LD1.2. | Develop wayfinding material meant to show where rest stop exists. |
| Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes. | |
| Action LD2.1. | Conduct a study on roadway/lane departure crash locations. |
| Action LD2.2. | Prioritize fixing the common design deficiencies discovered. |



LD1. Partner with TXDOT to identify and promote awareness of public rest stops in Midland.

Given that one of the most frequent contributing factors to roadway and lane departure crashes is drowsy driving, awareness to rest stops near Midland need to be advertised to remind drivers there are alternatives to driving while drowsy. With the help of TXDOT, the City of Midland could evaluate the availability of rest stops in the area and determine if there would be benefits to the addition of any. **Figure 28** shows a new rest stop in Ward County approximately 81 miles away. This is to decrease the number of roadway and lane departure crashes by creating alternatives to drowsy or inattentive driving and reminding drivers of those options.

LD1.1. Evaluate the locations of existing and future rest stops.

Through a partnership with TXDOT an evaluation should be done to identify where existing rest stops are near Midland, and if there are none, the City should consider constructing them. Evaluation should compare the locations of the rest stops to where the greatest number of roadway and lane departure related crashes occur; these findings could also be used to identify the best locations for new rest stops. The following is the key action that would need to be taken:

LD1.2. Develop wayfinding material meant to show where rest stops exist.

In order to make drivers aware that they have the option to use a rest stop instead of driving drowsy, it is important to develop wayfinding material for the existing or new rest stops. The wayfinding materials should then be deployed Citywide through roadside signage or in paper format. If people are aware of the locations of the rest stops, it would increase the usage of the facilities thereby preventing drowsy driving.

Figure 28: Existing Rest Stop in Ward County



Source: Texas Department of Transportation (TXDOT)

LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes.

A study is recommended to evaluate the most common locations where roadway and lane departures occur to identify common local design features that may contribute to these types of crashes. Based on the results of the study, updates to the design standards in place should occur and include any countermeasures suggested through this action plan. Aside from fixing any design deficiencies that could be contributing to these crashes, the addition of countermeasures that minimize the consequences if cars do attempt to leave the road. This strategy attempts to use design as a tool to help reduce the number of these crashes occurring.

LD2.1. Conduct a study on roadway/lane departure crash locations.

A Citywide engineering study needs to be completed on roadway locations that experience the largest number of roadway and lane departure crashes to determine if there are common features that may contribute to these crashes. From the results of the study, it should be determined what design features should be implemented Citywide that would mitigate roadway and lane departure crashes and become part of City design standards.

LD2.2. Prioritize fixing the common design deficiencies.

Based on the results of the study, the most common design deficiencies should be a priority for the City to fix. The projects used to fix the existing deficiencies should be included in the City's Capital Improvement Plan.

Speed-Related

It is well documented that speeding increases both crash frequency and severity, but it is still the norm among drivers. Although Midland is under the state average regarding number of speed-related crashes, 32% of KA crashes in Midland involve speeding. Unsafe speeding behaviors are especially harmful to vulnerable roadway users. To promote safer speeds on Midland's roads, a combination of targeted educational campaigns, updated roadway designs, and increased community engagement strategies will be used as summarized in **Table 16**.



Table 16: Summary of Speed-Related Strategies and Actions

| Action # | Description |
|---|--|
| Strategy SP1. Ensure pending projects meet safety needs and opportunities. | |
| Action SP1.1. | Evaluate all pending and future construction projects. |
| Strategy SP2. Implement a campaign encouraging safe driving behaviors. | |
| Action SP2.1. | Develop a partnership with TXDOT. |
| Action SP2.2. | Determine a campaign strategy for deploying materials locally. |
| Strategy SP3. Establish a neighborhood traffic calming program. | |
| Action SP3.1. | Determine a funding source for the program. |
| Action SP3.2. | Acquire a radar speed trailer to aid with reducing speeds. |
| Action SP3.3. | Create a traffic calming toolbox for speed management. |
| Action SP3.4. | Pass policy that would implement the program. |
| Strategy SP4. Support senate bill SB1663. | |
| Action SP4.1. | Garner local political support for this bill. |

SP1. Ensure pending projects meet safety needs and opportunities.

To ensure pending and future projects are being designed to support the Vision Zero efforts proposed in this plan, there needs to be an effort to evaluate all projects at the design stage. This will give an opportunity to the City to determine if the proposed design meets multimodal safety needs, or if there are opportunities to use countermeasures that would enhance safety. Roadway design and other infrastructure factors play large roles in managing speeds and can stop unsafe speeding behaviors for happening in the first place.

SP1.1 Evaluate all pending and future construction projects.

A systematic evaluation approach should be created to evaluate all proposed roadway construction projects for Midland. It is recommended to create a process for the way evaluations will be conducted and criteria design will need to meet. Priority for evaluations should be given to existing projects that are nearing the end of their design phase, so construction timelines are not greatly impacted. It is important for this evaluation effort be ongoing so it can guarantee that future projects are designed to deter excessive speeding and other unsafe driving behaviors.

SP2. Implement a campaign encouraging safe driving behaviors.

A targeted speed-related campaign is recommended for Midland with the aim to urge drivers to slow down and practice safe driving behaviors to help reduce crashes. Although roadway design and infrastructure play a significant role in reducing speeds, a targeted education campaign will help educate drivers as to why enforcing safe speeds is important in keep them and other road users safe.

SP2.1. Develop a partnership with TXDOT.

A partnership between the City of Midland and TXDOT is recommended to implement a campaign. TXDOT has an existing campaign that involves safe speeds education, the “Be safe. Drive Smart. Drive a Safe Speed” campaign. This campaign urges drivers to slow down and provides driving tips regarding speeding. Existing campaign materials include video public service announcements (PSA), radio PSAs, and other print materials. An existing campaign billboard is shown in **Figure 29**. Through this partnership, the implementation of this campaign could be fast tracked.

SP2.2. Determine a campaign strategy for deploying materials locally.

Since TXDOT has existing video, radio, and print materials associated with the campaign, it is important to determine how the City can leverage these materials. A partnership with Midland’s communications office would be beneficial in determining the through what avenues and where campaign materials, such as billboards or message boards, should be placed.

Figure 29. “Slow down or pay up.” Billboard



Source: TXDOT



Figure 30: Radar Speed Trailer



Figure 31: Examples of Traffic Calming Measures



A. Median Island | Source: FHWA



B. Curb Extensions | Source: City of Fairfax

SP3. Establish a neighborhood traffic calming program.

A neighborhood traffic calming program should be established in the City of Midland to help reduce speeds in residential and commercial areas. Neighborhood traffic calming programs use roadway design and other physical countermeasures improve speed compliance, provide room for pedestrians and bicyclists, and reduce traffic crashes.

SP3.1. Determine a funding source for the program.

A source of funding needs to be acquired to implement countermeasures in the neighborhood traffic calming program. Potential funding sources for the traffic calming program could come from grants or reallocated City funds that help support roadway and community safety efforts. A partnership with the Grants Department would be beneficial when identifying potential funding sources and with help during the applications process.

SP3.2. Acquire a radar speed trailer to aid with reducing speeds

To further aid in reducing speeds in residential and commercial areas, a dynamic speed feedback sign, such as a radar speed trailer (Figure 30), should be acquired for the City to use. These signs alert drivers of their speed and could encourage some to slow down by suggesting to drivers that enforcement is nearby. Furthermore, since the trailer is portable, the device could be placed at target location.

SP3.3. Create a traffic calming toolbox for speed management.

It is recommended that a traffic calming toolbox for speed management be developed for the program. The toolbox would have countermeasures, such as ones shown in Figure 31, proven to help reduce speeds and contain information on general design considerations, approximate costs, and their specific benefits. The countermeasures should also be widely applicable. Developing a toolbox would help increase the predictability of the environment and streamline the implementation of traffic calming efforts since there would exist a list of vetted countermeasures.

SP3.4. Pass policy that would implement the program.

In order for the traffic calming program can be initiated, City Council needs to pass policy that would allow its initiation. This strategy includes any actions that must be taken to propose this program to the City council and create policy surrounding the program. Having this policy pass could requires community support, therefore, it is important educate community members about the program and engage them in conversations about traffic safety challenges and potential solutions for their communities.

SP4. Support senate bill SB1663.

Midland should support bill SB1663 in the Texas House of Representatives which allows for residential speed limits to be set as low as 20 MPH by municipalities without having to perform an engineering or traffic investigation. It is proven that a vulnerable user involved crash at speeds higher at 20 MPH increases the possibility of a fatality or serious injury. By being able to lower residential speed limits in neighborhoods that support it, the City could help improve the safety and comfort for vulnerable roadway users.

SP4.1. Garner local political support for this bill.

Garnering community support of this bill could be pivotal for this bill to pass. Community engagement efforts would need to be made to bring awareness to the bill and educate community members as to why lowering speed limits is beneficial. A community wide push for this bill would show the communities commitment to creating a safer and more comfortable roadway environment for all users.

Intersection-Related

Intersection related crashes are the second most common type of crash to occur for fatal or severe crashes in Midland. Compared to the overall state of Texas, Midland has an issue with intersection-related crashes: 42% of crashes in Midland are intersection-related compared to 32% of crashes in Texas. Additionally, Midland has a unique issue with drivers disregarding signals and stop signs. Approximately 34% of crashes in Midland involve red light or stop sign running while only 12% of Texas crashes involve this contributing factor. The following strategies in **Table 17** have been developed that use educational, engineering, and enforcement strategies that aim to reduce the number of intersection-related crashes in Midland.

Table 17: Summary of Intersection-Related Strategies and Actions

| Action # | Description |
|--|---|
| Strategy IN1. Update intersection design standards and access management policies. | |
| Action IN1.1. | Develop new intersection design standards. |
| Action IN1.2. | Develop new access management policies. |
| Action IN 1.3. | Integrate the systemic countermeasures recommended. |
| Strategy IN2. Develop a campaign strategy to remind drivers to use safe driving behaviors at intersections. | |
| Action IN2.1. | Create educational campaign materials and strategies for implementation. |
| Strategy IN3. Establish a targeted enforcement program for red light and stop sign running. | |
| Action IN3.1. | Develop a plan for the targeted enforcement efforts. |
| Strategy IN4. Update Citywide signal timing. | |
| Action IN4.1. | Update the current signal timing plan citywide. |
| Action IN4.2. | Create policy that would require an evaluation on signals timing plan every five years. |
| Strategy IN5. Implement the use of ITS technologies. | |
| Action IN5.1. | Utilize existing ITS technologies to monitor red light running. |
| Action IN5.2. | Upgrade the existing traffic signal infrastructure to include red light indicator lights. |



IN1. Update intersection design standards and access management policies.

The existing design and policy standards regarding intersections and access management need to be updated so they better support the Vision Zero safety goals being pursued. These updates will serve as a systemic solution to the design deficiencies that may be contributing to intersection-related crashes. The new design standards will be used as tools to support and enforce safe driving behaviors at intersections.

IN1.1. Develop new intersection design standards.

Updating the existing design standards would aid in fixing any common intersection design features that may contribute to the number of intersection-related crashes. Proactively designing an intersection to meet safety goals means designing in a way that anticipates human error and reduces the risk of severe injury or death due to a crash. The new standards should include design strategies that minimize conflict points, reduce speeds, improve visibility, and provide protection to pedestrians and bicyclists. To identify the most common design deficiencies an engineering study is recommended to evaluate the existing intersections.

IN1.2. Develop new access management policies.

It is recommended to develop new access management policies that would incorporate countermeasures that reduce the number of intersection-related crashes. Before changes are made, it is recommended to evaluate the existing access management policies to determine which policies do not align with the new Vision Zero goals. Appropriate access management can lead to a safer and more inclusive roadway by enhancing safety for all modes, lessen turning conflicts, and reduce trip delay and congestion.

Figure 32. Example of Intersection with Safety Measures Implemented



Source: National Association of City Transportation Officials (NACTO)

64% of respondents support “funding for educational programs for driver safety and enhanced enforcement.”

IN1.3. Integrate the systemic countermeasures recommended.

To improve the safety at intersections for all users, the countermeasures recommended in the “Systemic Countermeasures Toolbox” (Chapter 5) should be used in any future designs where it is deemed appropriate. These countermeasures would help achieve a safe system intersection that enhances intersection safety for all users. This action would also involve implementing any changes to the design standards in place to allow for the toolbox tools to be used in new design and construction projects

IN2. Develop a campaign strategy to remind drivers to use safe driving behaviors at intersections.

Developing a campaign aiming to remind drivers to use safe driving behaviors at intersection would help create safer roads for all users. While there are little to no intersection specific safety campaigns, TXDOT’s “Be Safe. Drive Smart.” campaign aims to remind drivers about safe driving tips for several topics. Utilizing TXDOT campaign as a resource, Midland could develop its own intersection safety campaign with help from the communications office and other local organizations.

IN2.1. Create educational campaign materials and strategies for implementation.

Utilizing TXDOT campaign resources as a guide, it is recommended to create new campaign materials that would best fulfill the goals of the campaign. Some of safe driving behaviors or habits that should be included in the campaign are remembering to look in all directions before proceeding through the intersection, stopping for all stop signs and red lights, all intersections are crosswalk, and plan for delayed commute times. With the help from the Strategic Communications Office, a strategy for dissemination can be created. The material could be disseminated through audio PSA’s, video PSA’s, posters, or brochures.



IN3. Establish a targeted enforcement program for red light and stop sign running.

To decrease the number of red light/stop sign running related crashes, it is recommended that a targeted enforcement program be established. The increased police presence at intersections would encourage drivers to practice safe driving behaviors, such as always stopping at red lights and stop signs or be given a citation.

IN3.1. Develop a plan for the targeted enforcement efforts.

The development of a targeted enforcement plan should have data driven approach to ensure efficient enforcement. This would involve evaluating intersection locations Citywide to determine which intersections are priority locations; priority being determined by crash rate, people being affected by the unsafe environment, and whether it is on the HIN. Furthermore, a funding source should be identified to cover the cost of this targeted enforcement plan with the help from the Grants Department.

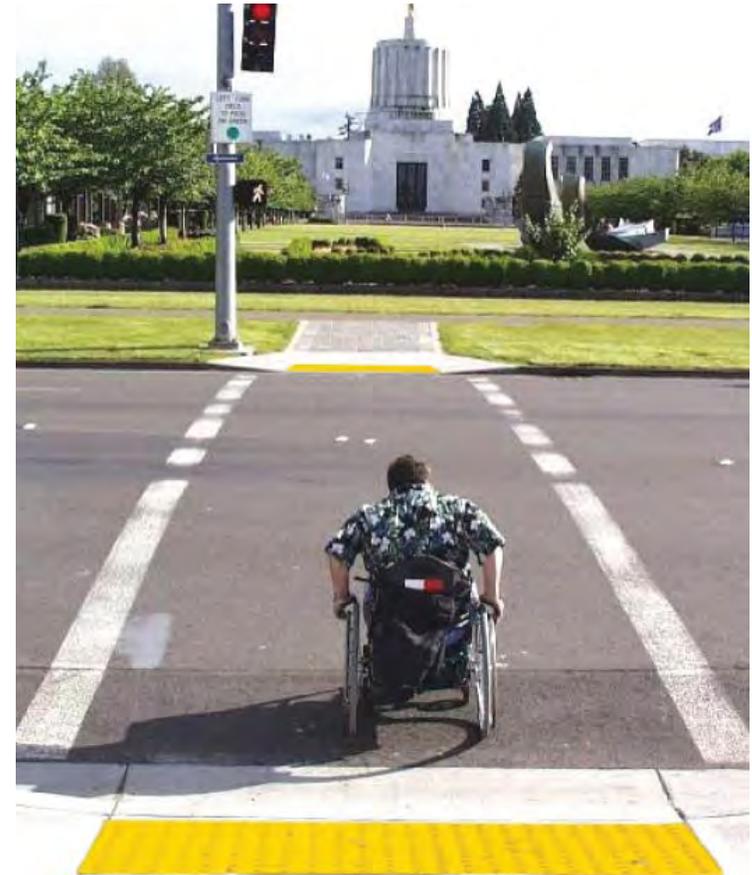
IN4. Update Citywide signal timing.

Safer signal timing practices should be implemented Citywide to help decrease crashes by creating a safer road for all users. While traffic signals are often chosen to improve vehicle throughput, in some cases there can be trade-off when it comes to other users' safety. Recommended countermeasures that are proven to increase safety for all users at intersection include leading pedestrian intervals and improved yellow intervals.

IN4.1. Update the current signal timing plan Citywide.

An evaluation on the current signal timing plan should be conducted to inform what re-timing updates should be completed to create safer intersections. Included in the re-timing, it is recommended to pay special attention to the yellow change interval and add a leading pedestrian interval. Adding a leading pedestrian interval gives pedestrians and bicyclists extra time to enter a crosswalk at an intersection before vehicles are given a green light (**Figure 33**). This provides enhanced safety for non-vehicle users by increasing pedestrian visibility and an increased likelihood of vehicle yielding to pedestrians. The final signal timing plan should then be implemented.

Figure 33: Vulnerable road user benefitting from a leading pedestrian interval

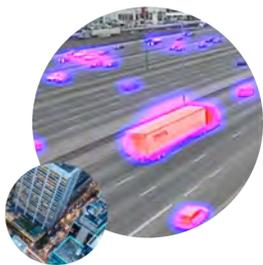


Source: FHWA

Figure 34: Traffic detection camera and its detection capabilities



A. Traffic Detection Camera | Source: Adobe Stock



B. Visual Detection from Camera | Source: Miovision

Figure 35: Red-light Indicator Light



Source: Josh Spreiter (wowt.com)

IN4.2. Create policy that would require an evaluation on signals timing plan every five years.

Reviewing the timing plan of traffic signals every five years or if there is a significant change in traffic volume or roadway conditions should be written into policy for the City. It is recommended by the FHWA that traffic signals have their timing plans reviewed every three to five years unless there are special circumstances. These special circumstances could be increased pedestrian volumes, a significant change to turn movements, or there is a change in land use.

IN5. Implement the use of ITS technologies.

While the use of cameras to give citations in Texas is illegal, the traffic sensor cameras in place in Midland should be considered as a tool to gather data on red light running behaviors. The traffic detection cameras would be utilized to gather high level data that would help identify when and why drivers are running red lights. This data would be pivotal in reducing the number of intersection-related crashes because it would help solve the issue of red light running.

IN5.1. Utilize existing ITS technologies to monitor red light running.

The existing traffic sensor camera infrastructure in place should be utilized by the City as an innovative way to gather much needed red light running data. As stated by the City of Midland, the traffic detection cameras, such as the ones pictured in Figure 34, are not used for any enforcement purposes and that is not the aim of this strategy.

This action aims to use these cameras as a tool collect traffic data specifically pertaining to red light running incidents, such as what times a day are driver most running the red lights or if there is any indication as to why.

IN5.2. Upgrade the existing traffic signal infrastructure to include red-light indicator lights.

Red-light indicator lights, also known as tattletale lights (Figure 35), activate when the traffic signal is red and allows law enforcement officers to more easily identify whether a driver has run the red light from downstream of the intersection. The use of these lights intends to reduce the frequency of red-light running crashes by helping create a safer and more efficient way for police to enforce signal laws. This technology is also less invasive than traditional photo enforcement.



Distracted Driving

Driver inattention was one of the top contributing factors for the fatal and severe crashes occurring in Midland. Dangerous driving behaviors, such as distracted driving, can play a large role in fatalities and serious injuries during a crash therefore the following goals aim to increase education on safe driving behaviors, but also using design as a tool to support and enforce those safe driving behaviors.

The following strategies and actions in **Table 18** recommended to help decrease the number of distracted driving related crashes.

Table 18: Summary of Distracted Driving Strategies and Actions

| Action # | Description |
|--|---|
| Strategy DD1. Develop a campaign that discourages cell phone use when driving. | |
| Action DD1.1. | Create education materials and programs targeted at young drivers. |
| Action DD1.2. | Bring awareness to the dangers of texting and driving to all drivers. |
| Strategy DD2. Develop enforcement strategies to mitigate for cell phone use when driving. | |
| Action DD2.1. | Create a targeted enforcement plan for school zones. |
| Action DD2.2. | Create a targeted enforcement plan for work zones. |
| Strategy DD3. Implement streetscaping techniques to reduce distracted driving. | |
| Action DD4.1. | Update streetscaping design standards. |
| Action DD4.2. | Implement the use of demonstration projects to determine beneficial permanent projects. |

DD1. Develop a campaign that discourages cell phone use when driving.

A centralized campaign should be developed that discourages cell phone use when driving. Creating a centralized campaign with either existing material, such as TxDOT's "Talk. Text. Crash." campaign can help bring awareness to unsafe driving behaviors and discourage cell phone use while encouraging the use of hands-free technology when driving with the end goal of reducing distracted driving crashes

DD1.1. Create education materials and programs targeted at young drivers.

Create educational materials and programs that are designed for young drivers for dissemination through high schools that teach students about safe driving habits as they begin learning to drive. A partnership should be created with the Midland Independent School District to identify the best way to disseminate the educational materials to students at high schools.

DD1.2. Bring awareness to the dangers of texting and driving to all drivers.

Utilize TXDOT's campaign, "Talk. Text. Crash", which educates drivers on the dangers and risks of distracted driving while also bringing awareness to state laws regarding distracted driving, to help educate residents. A partnership with TXDOT and local organizations that could help support the dissemination of campaign materials to engage all members of the community. The materials could be disseminated through video, radio, social media accounts, local news channels, billboards, and roadway message boards, such as the one shown **Figure 36**.

DD2. Develop enforcement strategies to mitigate cell phone use when driving.

A targeted enforcement program could serve as a deterrent for cell phone related distracted driving due to citations given to drivers. While serving as a deterrent, the citations given could also serve as a reminder of existing laws, such as the use of any handheld device in a school zone is illegal or any drivers under the age of 18 are prohibited from using handheld devices. While educating the public through campaigns about the dangers of distracted driving is one step towards creating safer roadways, the enforcement of existing laws will serve as support in this effort to ensure that safe behaviors are being used.

DD2.1. Create a targeted enforcement plan for school zones.

Having increased police presence in school zones would deter cell phone use through the added risk of citations being given, and it would serve to remind drivers of existing Texas laws regarding cell phone use in school zones. This will also help ensure the safety of one of the most vulnerable populations since motor vehicle crashes is one of the leading

Figure 36. Example of a Roadside Message Board



Source: TXDOT



causes of death in children and young adults between the ages of 8 – 24 according to the US Center for Disease Control and Prevention (CDC). The following supplemental actions should be taken:

- Evaluate school zone locations that have the highest number of distracted driving related crashes.
- Place police officers at the chosen sites after the evaluation to monitor and enforce the behavior of drivers.

DD2.2. Create a targeted enforcement plan for work zones.

Create a targeted enforcement plan that would increase police presence at work zones to monitor texting while driving behaviors. Since work zones present different and sometimes challenging environments for drivers, it is important for drivers to always focus on the road especially since driver inattention is one of the leading causes of work zone crashes. It is illegal to read, write, or send texts in Texas. Additionally, drivers that receive a citation in a work zone are penalized with double the fine as a way to encourage attention and safer driving. The following supplemental actions should be taken:

- Identify where current and future work zone locations are
- Evaluate whether the locations of current and future work zones have an increased number of distracted driving related crashes and choose locations of with the highest number of crashes
- Place police at the locations that were chosen through the evaluation and have them monitor and enforce cell phone use while driving behavior

Figure 37. Work Zone Safety Campaign from TXDOT



Source: TXDOT

DD3. Implement streetscaping techniques to reduce distracted driving.

Implement streetscaping techniques to redirect driver attention from any in-vehicle distractions to the roadway. Utilizing temporary or permanent features such as painted curb extensions or crosswalk art would bring drivers attention toward the roadway due to the different streetscaping that would be created. The use of innovative streetscaping techniques would use design as a tool to bring drivers' attention back to the roadway therefore reducing inattentive driving while creating interesting and safe facilities for pedestrians and bicyclists to use. Through the accomplishment of this strategy, Midland could decrease the number of crashes while working towards creating a system that values the safety of all users and simultaneously encourages the use of alternate transportation modes by creating a more complete street.

DD3.1. Update streetscaping design standards.

Develop and implement new street design standards that would guide the use of new streetscaping techniques that are aimed at decreasing distracted driving behaviors in priority areas. The following supplemental actions that should be taken:

- Identify priority areas which are areas that exhibit standard streetscaping features that could be contributing to an unsafe roadway environment for all users
- Evaluate the current streetscaping features implemented at the identified priority areas and determine new streetscaping features that could mitigate the existing issues.
- Develop new design standards based on the evaluation previously performed to work towards creating a system of complete streets

DD3.2. Implement the use of demonstration projects to determine beneficial permanent projects.

Integrate the use of demonstration projects, which is the practice of creating temporary streetscaping features that reclaim areas for people to use for walking/biking/ or other types of community use, to help investigate how new streetscaping techniques could affect the issues seen in priority areas and whether to make them a permanent feature on the roadway. The following supplemental actions that should be taken:

- Identify locations where new streetscaping features could help in the effort to decrease the number of distracted driving related crashes.
- Apply for grants to fund art that could be used in the innovative streetscaping efforts (Bloomberg Philanthropies Asphalt Art Grant, SS4A Demonstration grant)
- Install the temporary features and monitor its intended effect on the safety issues the features were meant to fix



CASE STUDY

Enhancing Intersection Improvements in Houston, TX

In 2022, the City of Houston, TX applied for a grant through Bloomberg Philanthropies to fund the use of public art to enhance their intersection improvements at Highstar Road and Westward Road. This intersection was known to be challenging for pedestrians and bikers to navigate therefore intersection safety improvements were made to improve overall roadway safety. The public art was meant to function as visual intervention at this intersection to increase driver attention and decrease vehicle speeds.

After the installation of the art at the intersection, the average speed of vehicles in the area decreases from 30 MPH to 18 MPH. This project showed that the use of art as a method of visual intervention can help foster a safer roadway environment.

Figure 38. Crosswalk Art at Intersection



Impaired Driving

Impaired driving is one of the safety emphasis areas that Midland exceeds the state of Texas, with 23% of KA crashes in Midland being impaired driving related versus Texas’s 18%. This suggests that there are specific issues present in Midland that could be contributing to its high rate of impaired driving crashes. Through community input and research into Midland’s crash history it is recommended to mitigate these behaviors by offering education on the consequences of impaired driving to addressing the issue at the root. The strategies developed to mitigate the number of impaired driving related crashes in Midland will focus on creating an environment within the City that is dedicated to ending impaired driving crashes through proactive programs, campaigns, and enforcement efforts.

The following table is a brief summary of the recommended strategies and actions to create safer roads in Midland by decreasing the number of impaired driving crashes (**Table 19**).

Table 19: Summary of Impaired Driving Strategies and Actions

| Action # | Description |
|---|---|
| Strategy ID1. Spread awareness about the consequences of impaired driving. | |
| Action ID1.1. | Providing access to a drunk driving simulator. |
| Action ID 1.2. | Expand on the NHTSA and TxDOT Campaigns to better fit Midland’s needs and create an educational campaign for young drivers. |
| Action ID 1.3. | Develop an impaired driving awareness pop-up event kit. |
| Strategy ID2. Encourage businesses and special event holders to provide mobility alternatives for patrons. | |
| Action ID2.1. | Create a new requirement for the obtainment of a Special Event Permit. |
| Action ID2.2. | Develop incentives for businesses to promote sober ride materials. |
| Strategy ID3. Acquire substance abuse and mental health help resources for the community. | |
| Action ID3.1. | Develop a partnership with organizations that supports these efforts. |
| Action ID3.2. | Obtain grants to fund the needed resources. |
| Strategy ID4. Develop an understanding of impaired driving citation patterns. | |
| Action ID4.1. | Perform a study reviewing citation patterns for impaired driving incidents. |



ID1. Spread awareness about the consequences of impaired driving.

By bringing awareness to the dangers of impaired driving, drivers can be reminded that impaired driving can have physical, emotional, and financial consequences for all those involved. While the issue of impaired driving can seem too big to solve, creating a community that is dedicated to educating all members on the consequences of impaired driving is one step closer to eliminating all deaths on Midland's roads. To create more awareness in the community there are a variety of educational programs and campaigns that should be developed and disseminated that are designed to foster community engagement.

ID1.1. Providing access to a drunk driving simulator.

While there are programs that exist in schools that highlight the effects that substances have on a person and the consequences of driving when impaired, most of these programs are only targeted at young drivers in schools. To make this type of educational experience accessible to people of all ages and backgrounds the installation of a drunk driving simulator should be placed in Midland. The simulator would help educate the public that no matter how little or how much you drink, your driving can become impaired; similarly to how TXDOT used it for an outreach event (**Figure 39**). Based on the identified needs, different simulation options should be researched and a location for the simulator to be located should be determined.

Figure 39. Impaired driving simulator at a TXDOT exhibit



Source: TXDOT

Figure 40. Billboard for the “Faces of Drunk Driving” Campaign



Source: TXDOT

Figure 41. Fatal Vision kit



Source: SB Scientific

ID1.2. Expand on the NHTSA and TxDOT Campaigns to better fit Midland’s needs and create an educational campaign for young drivers.

A tailored impaired driving campaign needs to be developed and run Citywide. Since NHTSA and TxDOT already have existing impaired driving campaigns, Midland can use those available resources to construct a campaign that best suits Midland’s needs. NHTSA’s campaigns, such as “Buzzed Driving is Drunk Driving”, could be used to educate drivers on unsafe driving behaviors associate with impaired driving, and TxDOT’s campaigns, “Faces of Drunk Driving” (**Figure 40**), could be used to humanize the issue of impaired driving. This campaign strategy would work towards engaging the community so as to work towards safer roads in Midland. The following supplemental actions that should be taken:

- Partner with MISD and Mothers Against Drunk Driving (MADD) to identify the best ways to relay this campaign; whether that be through advertising material or a program that would require student participation
- Partner with City to spread awareness of future sober ride campaign

ID1.3. Develop an impaired driving awareness pop-up event kit.

Through the creation of a pop-up event kit, the ability to bring awareness and educate the public on this issue could become streamlined and consistent. This would make it possible for any community member or organization to bring awareness to this issue with material that is already designed and approved by the City therefore making it easier for the community to get involved. A mobile-friendly kit of impaired driving simulation activities could include Fatal Vision goggles for drunk and drowsy conditions, educational pamphlets, and prizes to people who complete the activity (**Figure 41**). A method for requesting and distributing the kits also needs to be developed.



ID2. Encourage businesses and special event holders to provide mobility alternatives for patrons.

To work towards decreasing the number of impaired driving related crashes occurring in Midland, businesses and event holders should be encouraged to provide mobility options besides driving themselves home if they have consumed alcohol.

ID2.1. Create a new requirement for the obtainment of a Special Event Permit.

It is recommended for the City to add a new section to the special event permit that would require information about alternate options to driving, if the event will serve alcohol. While this new permitting requirement would not include businesses, it would ensure that any events that occur in Midland, if serving alcohol, would need to ensure the safety of its attendees by providing them with alternate transportation options. To create this new requirement the requirements for this new section would need to be determined and then presented to the City Council so they are aware of the new requirements.

ID2.2. Develop incentives for businesses to promote sober ride materials.

An incentive should be created to encourage businesses to take part in advertising sober ride options for patrons. Additionally, there could be an effort to provide ride-share trips at a discounted rate in Midland through help by the Midland Chamber of Commerce. There will need to be a discussion among the local Chamber of Commerce organizations to determine which incentives are feasible and rewarding for business owners to participate in, and how to implement and fund the discounted rides. Furthermore, the usage of the incentives should be monitored and re-evaluated periodically. Engaging local businesses and event holders in Midland to adopt the practice of creating mobility plans for their patrons or attendees supports the idea that making Midland roads safe is a community effort (Figure 42).

Figure 42. Sober Ride material example

Source: Capital District Safe Ride Program

ID3. Acquire substance abuse and mental health help resources for the community.

A proactive step towards creating safer roads is to support efforts to acquire substance abuse and mental health help resources for any community members affected. By supporting the obtainment of these resources, there is an effort to solve the root of impaired driving related crashes, the irresponsible use of substances.

ID3.1. Develop a partnership with organizations that supports these efforts.

To ensure that those affected by substance abuse or mental health issues are provided the appropriate resources, there should be partnerships with local and outside organizations that have a good understanding of what resources should be provided. These organizations include Midland Health, PermianCare, or United Way. The help provided by these organizations could help aid in grant applications, garnering community support, and the development of any local programs.

ID3.2. Obtain grants to fund the needed resources.

With the help of the partners gathered, there will be a need to obtain grants to pay for the help resources that are needed. It is recommended that the grants office in Midland also be partnered with, so they can help with looking for grants and writing any applications.

Figure 43. Midland Health



Source: midlandhealth.org



ID4. Develop an understanding of impaired driving citation patterns.

An understanding on impaired driving citation patterns needs to be developed to create a holistic view of where and when impaired driving traffic stops most occur. Studying the citation patterns will yield information that would show what areas of Midland have the highest rates of impaired driving, but could also lead to better police presence strategies; such placing police where they may not have been before but needed. This effort could also yield further information into what locations of Midland would benefit most from targeted educational and awareness campaigns regarding impaired driving. Although the education and prevention plans related to impaired driving aim to create safe driving habits, this enforcement strategy helps support the use of those taught behaviors.

ID4.1. Perform a study reviewing citation patterns for impaired driving incidents.

This strategy will require collecting citation history for the City and conducting an analysis to find any pattern in the citation history. The patterns that should be researched are where impaired driving traffic stops are most common, common time of days they happen, and historically high citation days. This strategy is a data-driven effort to continue the practice of strategic enforcement practices in Midland that work towards creating safer roads.

Unrestrained Persons

Research from NHTSA shows that correctly using the correct child restraints and seat belts is the most effective way to prevent fatalities and reduce injuries in crashes therefore the strategies for this emphasis area are education focused as summarized in **Table 20**. The use of campaign and advertisement materials are meant to bring awareness to why all drivers and passengers should always use a seatbelt and to educate the public on how to choose appropriate child restraints.

Table 20: Summary of Unrestrained Persons Strategies and Actions

| Action # | Description |
|--|---|
| Strategy UP1. Develop a seatbelt usage campaign. | |
| Action UP1.1 | Create a partnership with TXDOT to develop campaign strategies. |
| Strategy UP2. Gather more participation in the Midland Fire and Police Departments' Car Seat Information Program. | |
| Action UP2.1. | Develop an advertisement strategy for the program. |

UP1. Develop a seatbelt usage campaign.

Through a partnership with TXDOT, a plan should be developed to encourage seatbelt usage campaigns in Midland. According to TXDOT, one of the biggest challenges in the unrestrained person emphasis area is convincing drivers and passenger to use seatbelts therefore the campaigns should serve as reminders as to what the consequences are when not wearing safety restraints. TXDOT has several campaigns that could be implemented in Midland such as the common “Click It or Ticket” campaign or more targeted campaigns like the “Teen Click It or Ticket” campaign (Figure 44).

UP1.1. Create a partnership with TXDOT to develop campaign strategies.

Since TXDOT has a large number of existing campaign materials regarding the use of safety restraints, it would be beneficial to develop a partnership with them. Once the partnership is established, a meeting schedule could be established, so both teams could discuss which campaigns and materials would be most beneficial to run in the Citywide campaign.

Figure 44. Billboard for the “Teen Click It or Ticket” Campaign



Source: TXDOT



UP2. Gather more participation in the Midland Fire Department's Car Seat Information Program.

To ensure the safety of a vulnerable population, there should be an effort to garner more participation in the Midland Fire Department's Car Seat Information Program. This program aims to educate the public on how to choose the right car seat and how to install the seat. While many adults believe they have chosen the correct car seat, the National Highway Administration states that 46% of car seats are misused therefore this existing program could help ensure the safety of children through the education it provides.

UP2.1. Develop an advertisement strategy for the program.

Developing an advertisement strategy for this existing program would help create safer roads for children. A partnership between the Midland Fire Department and the City's Communications Office will be an integral in developing an advertisement strategy for the program. An example of an existing advertisement is shown in **Figure 45**.

Figure 45. Midland Fire Department advertisement for the Car Seat Information Program



Source: Midland, TX Fire Department-Facebook Page

Vulnerable Road Users

Fatal and severe vulnerable road user crashes are more common in Midland than in the overall state of Texas (13% in the State vs 16% in Midland). The following strategies aim at creating a road environment that is safe and accessible for all road users whether they drive, walk, bike, or roll. These strategies involve redefining how road efficiency is determined and creating better facilities for all roadway users as summarized in **Table 21**.

Table 21: Summary of Vulnerable Road Users Strategies and Actions

| Action # | Description |
|---|---|
| Strategy VRU1. Prioritize the implementation of safer pedestrian and bicycle facilities. | |
| Action VRU1.1. | Update the existing Hike and Bike Master Plan. |
| Action VRU1.2. | Implement the projects and policies from the updated master plan. |
| Strategy VRU2. Create a Safe Routes to School Partnership Program. | |
| Action VRU2.1. | Develop local partnerships to help with the implementation of the program. |
| Action VRU2.2. | Evaluate school sites to identify specific improvements around schools with the highest need. |
| Action VRU2.3. | Acquire grants to fund the recommended improvements. |
| Action VRU2.4. | Conduct school-based bicycle and pedestrian related activities. |
| Strategy VRU3. Develop a citywide ADA Transition Plan. | |
| Action VRU3.1. | Apply for Grants to fund the ADA Transition Plan. |
| Action VRU3.2. | Complete and implement the ADA Transition Plan. |
| Strategy VRU4. Spread Awareness on safe practices for bicyclists and pedestrians | |
| Action VRU4.1. | Advertise Midland Police Department's Free Bicycle Helmet Program |



VRU1. Prioritize the implementation of safer pedestrian and bicycle facilities

New pedestrian and bicyclist facilities that better protect users are needed in Midland to increase accessibility and separation from vehicles. If safer and more comfortable facilities are implemented in Midland, the decision to walk or bike could be made easier and encourage the use of other transportation modes.

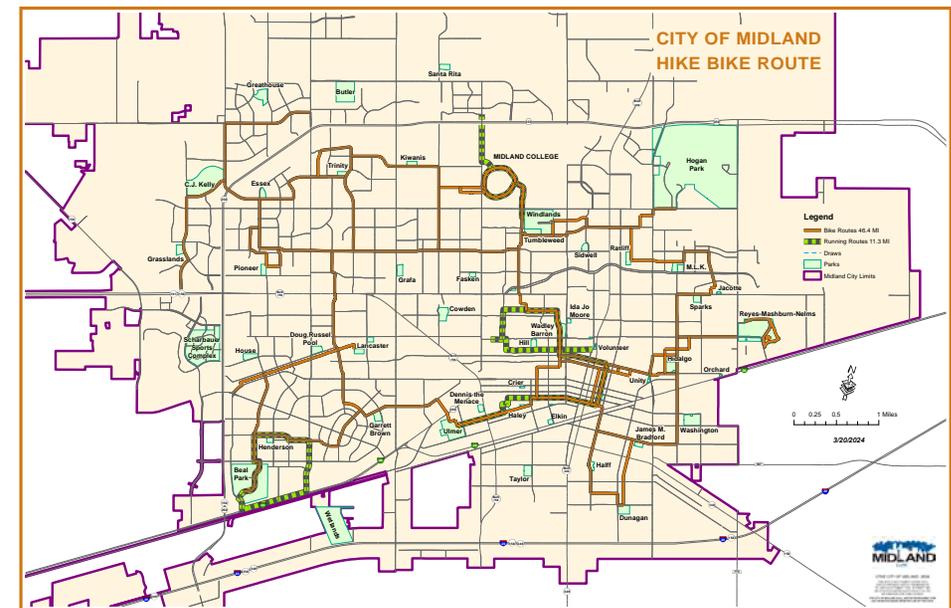
VRU1.1. Update the existing Hike and Bike Master Plan

Since a Hike and Bike Master Plan already exists for the City of Midland, it should be reviewed and updated to ensure it reflects the new vision zero goals and efforts. The Hike and Bike Master Plan was created in 2015 therefore there is value in reviewing the plans and policies set then and determine how many were implemented and if there are any policies that should be updated. **Figure 46** shows the bicycle and walking trails developed in 2015.

VRU1.2. Implement the projects and policies from the updated master plan.

After the Hike and Bike Master Plan has been updated, the new plans and policies should be implemented. Implementing the new plans and policies will help build more complete streets in Midland so as to provide access to safer pedestrian and bicyclist facilities. These efforts would help construct more complete streets with the goal of eliminating crashes involving vulnerable road users.

Figure 46. Hike/Bike Routes from the 2015 Hike and Bike Master Plan



Source: midlandtexas.gov

VRU2. Create a Safe Routes to School Partnership Program.

In a proactive effort to better walking and biking access for school-aged children, a Safe Routes to School Partnership Program should be created in Midland. This partnership program would make it safer for students to bike or walk to school by helping remove the barrier of unsafe or inaccessible bicycle and pedestrian facilities. Safe Routes to School Programs provide benefits aside from increased walking and biking; other benefits include reduced vulnerable user involved crashes, reduced vehicle congestion near schools, health benefits from the increased physical activity, and increased academic performance. To create a successful program such as the ones suggested, there are various actions that will need support from various community members and organizations.

VRU2.1. Develop local partnerships to help with the implementation of the program.

Finding local partners should be the priority to ensure community engagement in this effort since the implementation of this program is dependent on community support. The partnerships developed would help choose what school sites should receive priority and develop goals and strategies for this program. Some potential partners for this program could be the Midland Independent School District, Midland Health, and any other local organizations.

VRU2.2. Evaluate school sites to identify specific improvements around schools with the highest need.

An analysis needs to be conducted on pedestrian and bicyclist comfort and safety in the identified buffer area for each school that will be involved in the program. These analyses will identify if there is existing infrastructure for the students to use and if it safe and accessible to all of them. From the results of the analyses, specific enhancements to the bicycle and pedestrian facilities will be recommended. There should be priority given to schools with the highest need; need could be determined by the number of crashes involving vulnerable road users in the area, equity needs on the families surrounding and lack of pedestrian or biking facilities.

VRU2.3. Acquire grants to fund the recommended improvements.

To provide funding for this program, there should be a partnership formed with the Grants Office in Midland. Through the national and state SRTS program there are two types of funding opportunities available for the program, infrastructure projects and non-infrastructure activities. The Grants Office would be helpful in not only helping in the application process, but also finding what grants this program would be eligible to receive.

VRU2.4. Conduct school-based bicycle and pedestrian related activities.

Although ensuring that there exists safe pedestrian and bicycle facilities for students to use on their way to school, it is important to hold public activities that teach safe driving, walking, and biking behaviors. Educating parents and kids on the benefits of walking and biking and how to be safe while doing the activity will be instrumental in creating a program that works to create a safer road environment for all users. Some activities that could be used for this action could be Bike Rodeos, an activity that teaches safe biking behaviors and bike inspection, or Walk and Rolls, a program that encourages more walking and biking by teaching safe behaviors.



CASE STUDY

Harris Elementary's Safe Route to School Plan in Houston, TX

Harris Elementary is part of the Aldine Independent School District (AISD) in Houston, TX. The half-mile area around the school had five crashes involving bicyclists and three crashes involving pedestrians between 2016 and 2021. Of these eight crashes, there was one fatal crash, two suspected serious injuries, and 5 minor injuries. From an infrastructure assessment analysis, it was also determined that 86% of areas around the school were not safe and accessible due to the lack of sidewalks and bike lane, and half of the study area was rated as uncomfortable to walk in because of speeding traffic.

To address these infrastructure and safety issues, Harris Elementary was proposed as one of the schools to receive a Safe Route to School Program. This program aimed to create a roadway environment that better aligns with the City of Houston's Vision Zero goals and encourage more students to walk and bike to school. Further actions to be planned for this program involved:

- Engaging students and parents in the program through activities held during national calendar events, such as a Walk to School Month in October.
- Encouraging students to walk or bike to school through a Walking School Bus Program with assistance from parents and volunteers.
- Educating students about safe walking and biking behaviors by having safety education and practice skills taught in PE class.
- Improving sidewalk connectivity and existing infrastructure to make them safer and more accessible.

Figure 47. Students participating in a School Bus Rodeo



VRU3. Develop a Citywide ADA Transition Plan.

A Citywide ADA Transition Plan needs to be created to ensure system connectivity and accessibility. Through an evaluation on all of Midland's policies, program, and infrastructure it will be determined to what extent people with disabilities lack safe access to transportation resources and infrastructure. The ADA Transition Plan will take the results of the evaluation and outline Midland's plan to create policies, programs, and projects that fix the deficiencies that contribute to an unsafe and inaccessible transportation system for people with disabilities.

VRU3.1. Apply for grants to fund the ADA transition plan.

Funding for the ADA Transition Plan should be gathered through grants available for transportation safety improvement. A grant that could fund the creation of the plan is a SS4A Supplemental Planning grant.

VRU3.2. Complete and implement the ADA Transition Plan.

After funding is acquired for the ADA Transition Plan, the necessary studies towards completing the plan should be done. These steps and studies could include finding a partner that coordinates the creation of the plan with an outside company, complete a self-evaluation, determine the current state of compliance, develop new design standards, and many more. From the final ADA Transition Plan, the recommended projects and plans should be implemented to create a safer and more accessible transportation network for all users. Since the ADA Transition Plan will have many recommendations, it is recommended that the implementation of the projects and policies be completed based on priority.

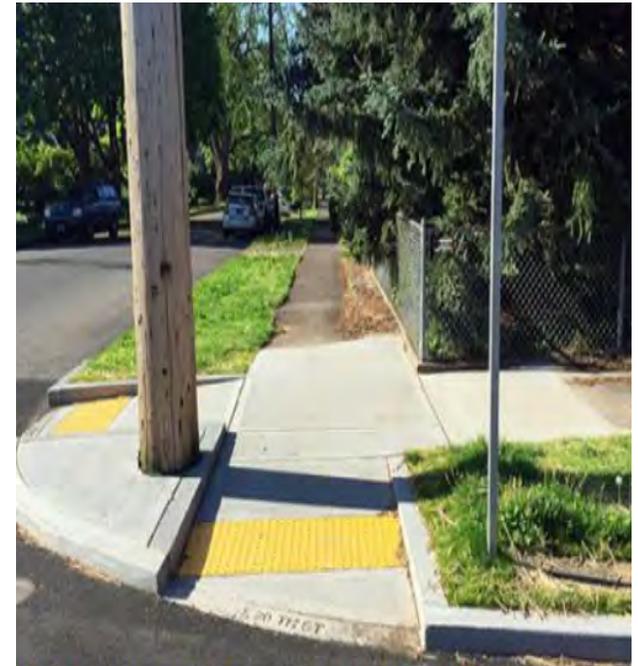
VRU4. Spread awareness on safe practices for bicyclists and pedestrians.

When a crash occurs between a vehicle and a vulnerable road user, such as a pedestrian or bicyclists, it's the bicyclist or pedestrian most likely to be injured. Although there are many measures and policies aimed at creating a safer road environment, there are laws and practices bicyclists and pedestrians should be aware of and doing to ensure their own safety. Crash frequency and severity can be reduced if both drivers and vulnerable road users do their part in practicing safe behaviors on the road.

VRU4.1. Continue Midland Police Department's Free Bicycle Helmet Program.

In 2018, the Midland Police Department partnered with local organizations to provide free bicycle helmets to children and create a bicycle obstacle course to teach children about best riding practices. Continuing this program will help in educating the public on safe bicycling practices while making safe bicycling more accessible. Helmet use is essential in keeping bicyclists safe therefore this program would help make safer bicycling more accessible. To continue this program, it is recommended to partner with the Grants Office and other local organizations to acquire funding for the free helmets.

Figure 48. Directional ramps like this should be implemented after the ADA transition plan.



Source: coppelltx.gov



Post Crash Care

Post crash care is not a data driven emphasis area, however, it is vital in preventing crashes from turning to fatal events with quick response time. Common countermeasures implemented to improve post crash care are shown in **Figure 49**. The following strategies summarized in **Table 22** on page 116 aim at creating a more efficient system of response times and building a toolbox for creative solutions for quick clearance of crash scenes.

PC1. Leverage technology, policies, and existing personnel to conduct more efficient investigations and reporting of crashes, facilitating swift clearance of crash scenes.

Understanding and utilizing open-source data, new technologies, and other advancements in safety data can act as an improvement in efficient crash scene clearance. Clearing crash scenes effectively can improve traffic operations and reduce economic impact.

PC1.1 Recognize and deploy impactful technologies aimed at capturing report data and expediting the clearing of crash scenes with greater efficiency.

After understanding and leveraging technology, they should be implemented into improving report data. Improved report data will help facilitate discussions on crash scenes and can improve the information relayed to emergency responders.

Figure 49. Countermeasures suggested by USDOT to improve Post Crash Care



Source: USDOT

Table 22: Summary of Post Crash Care Strategies and Actions

| Action # | Description |
|---|---|
| Strategy PC1. Leverage technology, policies, and existing personnel to conduct more efficient investigations and reporting of crashes, facilitating swift clearance of crash scenes. | |
| Action PC1.1. | Recognize and deploy impactful technologies aimed at capturing report data and expediting the clearing of crash scenes with greater efficiency. |
| Action PC1.2. | Support and Open Roads Policy statewide supporting quick clearance strategies. |
| Action PC1.3. | Develop crash investigation training materials for delivery to law enforcement liaisons and safety specialists to deliver trainings, especially in rural areas. |
| Strategy PC2. Identify and implement solutions where possible to reduce response times. | |
| Action PC2.1. | Identify and catalog engineering techniques affecting timely response to crashes. |
| Action PC2.2. | Reach out to adjacent Cities, Counties, MPOs, and TxDOT with information on solutions that decrease response times. |

PC1.2 Support an Open Roads Policy statewide supporting quick clearance strategies.

Open Roads Policy aims to improve trade and transportation by facilitating the movement of goods and people across borders with reduced restriction and regulations. Supporting Open Roads policy for quick crash clearances is crucial for ensuring efficient traffic flow, minimizing disruptions, and enhancing overall road safety. By swiftly clearing crash scenes, authorities can reduce congestion and the likelihood of secondary crashes, improving emergency response times and minimizing the impact on commuters (**Figure 50**). Additionally, efficient crash clearance supports economic productivity by reducing delays and facilitating the smooth movement of goods and services along the road network.

PC1.3 Develop crash investigation training materials for delivery to law enforcement liaisons and safety specialists to deliver trainings.

Developing crash investigation training materials for delivery to law enforcement liaisons and safety specialists is essential for ensuring consistent and effective crash analysis procedures. These efforts not only empower law enforcement and safety personnel with necessary skills but also contribute to reducing the severity and frequency of crashes in underserved regions.



Figure 50. First responders clearing the scene of a crash



Source: Adobe Stock

PC2. Identify and implement solutions where possible to reduce response times.

A City-specific toolbox of engineering solutions to help reduce response times at crash scenes can guide future designs and improve overall safety. Creating this solutions database or collection of ideas is designed to be implemented into roadway and intersection designs.

PC2.1 Identify and catalog engineering techniques affecting timely response to crashes.

The first step is identifying these engineering solutions that can include: traffic signal timing and preemption, emergency lanes, traffic management systems, and enhanced communication.

PC2.2 Reach out to adjacent Cities, Counties, MPOs, and TxDOT with information on engineering solutions that decrease response times.

Collaboration with City engineering staff and adjacent municipal groups is key to develop a well-rounded toolbox of engineering solutions. For example, the City should reach out to TxDOT, and request information on their Highway Emergency Response Operator (HERO) Program. This program, located around 3 cities in Texas, aims to improve safety and keep traffic flowing on heavily traveled roads by responding and clearing incidents as quickly as possible. The City of Midland has unique challenges, but overall ideas and improvements can be shared between adjacent groups to meet the goal of vision zero and reducing crash response times. Potential people or agencies that could be used as resources are:

- Permian Basin Metropolitan Planning Organization (MPO)
- Midland County Engineers
- City of Odessa Engineers
- Texas Department of Transportation

A strong **implementation plan** not only identifies “what” and “why” actions need to be done to improve road safety, but also “who,” “when,” and “how” by identifying **partners, timeframe, and funding sources.**

Chapter 7. Implementation Plan

This chapter reviews the full list of recommended projects, strategies, and actions and provides additional supporting details to implement the Safety Action Plan in Midland. A strong implementation plan not only identifies “what” and “why” actions need to be done to improve road safety, but also “who,” “when,” and “how” by identifying partners, timeframe, and funding sources. The entirety of this plan’s recommendations for projects, policies, and programs is summarized in the Implementation Matrix beginning on page 137.

Additionally, to ensure that the plan continues through the implementation phase and remains relevant, this chapter sets forth annual reporting and update procedures for the Task Force.

Vision Zero Implementation Matrix

How to Read the Implementation Matrix

Implementation Partners

These departments and organizations have been identified as having an important role to play in the implementation of the Safety Action Plan. In the Implementation Matrix under the column “Responsible Parties” includes all partners that should be consulted during the implementation of the corresponding action. Partners listed first and bolded are expected to be the lead implementer and should report to the Task Force on the progress of the action item. Below lists a key for the partners identified in Implementation Matrix tables:

- City Mayor/City Manager’s Office (MCM)
- City Engineering Department (CED)
- City Developmental Services (CDS)
- City Planning Department (CPD)
- Grants Office (GO)
- Strategic Communications (SC)
- Midland Police Department (MPD)
- Midland Fire Department (MFD)
- Midland Chamber of Commerce (MCC)
- Midland Hispanic Chamber of Commerce (MHCC)
- Texas Department of Transportation (TXDOT)
- Midland Independent School District (MISD)
- Midland Health (MH)
- PermianCare (PC)
- United Way of Midland (UW)



Timeframes for Implementation

For every strategy, each action provides an estimated timeframe for implementation. The estimate timeframe for implementation allows for better decision making and allocation of funding to complete the action plan strategies and actions in a timely manner. This is broken out between the following:

- Short (<2 years): This action is a top priority and can be a “quick win” for Vision Zero.
- Medium (2-5 years): This action may take more time but can be accomplished before the next CSAP update.
- Long (>5 years): This action will require many years but will have significant impact when complete.

Funding Sources

Funding and its source is an important step in implementing the action plan. The matrix also provides the information if the action can be accomplished through three different funding sources:

- Existing Funds
- Reallocation of Funds
- Grant Acquisition

Countermeasure Recommendations (Chapter 5)

Table 23: Countermeasure Recommendations Summary

| Action # | Description | Which of the six "E"s |
|----------------------|---|--------------------------------|
| Strategy CM1. | Construct recommended countermeasures on the corridors identified in Chapter 5 | Engineering |
| Action CM1.1 | Prioritize existing recommendations by areas of the highest need for grant funding applications | Evaluation; Equity |
| Action CM1.2 | Obtain funding and construct the targeted countermeasures | Engineering |
| Strategy CM2. | Study the remaining HIN segments identified in Chapter 4 for targeted countermeasure application | Evaluation, Engineering |
| Action CM2.1 | Prioritize remaining segments by areas of the highest need for study priority. | Evaluation; Equity |
| Strategy CM3. | Implement the systemic countermeasures in design standards or other engineering resources to increase their usage Citywide | Engineering |
| Action CM3.1 | Update Citywide intersection, access management, traffic calming, and bicycle/pedestrian design standards to include the use of each of the systemic countermeasures. | Engineering |



| Responsible Party | Timeframe | Funding |
|----------------------------|----------------------------|--------------------------|
| CED, GO, TXDOT | Long (>5 years) | Grant Acquisition |
| CED; GO; TXDOT | Short (<2 years) | Grant Acquisition |
| CED; GO; TXDOT | Medium (2-5 years) | Grant Acquisition |
| CPD; CED; GO; TXDOT | Short (<2 years) | Grant Acquisition |
| CPD; CED; GO; TXDOT | Short (<2 years) | Grant Acquisition |
| CED; CPD | Medium (2-5 years) | Reallocation |
| CED; CPD | Medium (2-5 years) | Reallocation |

Roadway and Lane Departure Recommendations (Chapter 6)

Table 24: Goals and Strategies for Roadway and Lane Departure Emphasis Area

| Action # | Description | Performance Metric |
|---|---|--|
| Strategy LD1. Partner with TXDOT to identify and promote awareness of public rest stops in Midland. | | |
| Action LD1.1 | Evaluate the locations of existing rest stops. | Number of rest stops within Midland City limits |
| Action LD1.2. | Develop wayfinding material meant to show where rest stop exists. | |
| Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes. | | |
| Action LD2.1. | Conduct a study on roadway/lane departure crash locations. | <ul style="list-style-type: none"> • Number of projects in design for lane departure issues • Number of projects in construction for lane departure issues |
| Action LD2.2. | Prioritize fixing the issues discovered. | |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-------------------------|---------------------|----------------------|--|---|---|
| Encouragement | TXDOT, MCM | Short (<2 years) | N | Y | Y |
| Encouragement | TXDOT, MCM, SC | Medium (2 – 5 years) | N | Y | Y |
| Engineering; Evaluation | CED, CDS | Short (<2 years) | N | Y | Y |
| Engineering; Evaluation | CED, CDS | Long (> 5 years) | N | N | Y |

Speed-Related Recommendations (Chapter 6)

Table 25: Goals and Strategies for the Speed-Related Emphasis Area

| Action # | Description | Performance Metric |
|---|--|---|
| Strategy SP1. Ensure pending projects meet safety needs and opportunities. | | |
| Action SP1.1. | Evaluate all pending and future construction projects. | Make the evaluation standards public for designer to be able to use |
| Strategy SP2. Implement a campaign encouraging safe driving behaviors. | | |
| Action SP2.1. | Develop a partnership with TXDOT. | Number of campaign billboards and message boards in use |
| Action SP2.2. | Determine a campaign strategy. | |
| Strategy SP3. Establish a neighborhood traffic calming program. | | |
| Action SP3.1. | Determine a funding source for the program. | Number of traffic calming locations addressed |
| Action SP3.2. | Acquire a radar speed trailer to aid with reducing speeds. | |
| Action SP3.3. | Pass policy that would allow the creation of the program. | |
| Action SP3.4. | Create a traffic calming toolbox for speed management. | |
| Strategy SP4. Support senate bill SB1663. | | |
| Action SP4.1. | Garner local political support for this bill. | Have bill SB1663 passed |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-------------|---------------------|--------------------|--|---|---|
| Engineering | CED | Medium (2-5 years) | Y | Y | N |
| Education | TXDOT, SC | Short (<2 years) | N | Y | N |
| Education | TXDOT, SC | Short (<2 years) | N | Y | Y |
| Engagement | CDS, GO, CED | Short (<2 years) | N | N | Y |
| Enforcement | MPD, GO | Short (<2 years) | N | N | Y |
| Engagement | CDS, CED | Medium (2-5 years) | N | N | Y |
| Engineering | CED | Medium (2-5 years) | N | Y | Y |
| Engagement | MCM | Short (<2 years) | N | Y | N |

Intersection-Related Recommendations (Chapter 6)

Table 26: Goals and Strategies for the Intersection-Related Emphasis Area

| Action # | Description | Performance Metric |
|--|---|---|
| Strategy IN1. Update intersection design standards and access management policies. | | |
| Action IN1.1. | Develop new intersection design standards. | Completion and adoption of updated intersection and access management standards |
| Action IN1.2. | Develop new access management policies. | |
| Action IN1.3. | Integrate the systemic countermeasures recommended. | |
| Strategy IN2. Develop a campaign strategy to remind drivers to use safe driving behaviors at intersections. | | |
| Action IN2.1. | Create educational campaign materials and strategies for implementation. | The educational materials are completed |
| Strategy IN3. Establish a targeted enforcement program for red light and stop sign running. | | |
| Action IN3.1. | Develop a plan for the targeted enforcement efforts. | Hours spent by officers in targeted intersection enforcement areas |
| Strategy IN4. Update Citywide signal timing. | | |
| Action IN4.1. | Update the current signal timing plan Citywide. | Citywide traffic signal timings are updated |
| Action IN4.2. | Create policy that would require an evaluation on signals timing plan every five years. | |
| Strategy IN5. Implement the use of ITS technologies. | | |
| Action IN5.1. | Utilize existing ITS technologies to monitor red light running. | Existing traffic detection cameras are used for data collection |
| Action IN5.2. | Upgrade the existing traffic signal infrastructure to include red light indicator lights. | Red light indicator lights are installed |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-------------------------|---------------------|--------------------|--|---|---|
| Engineering | CED | Medium (2-5 years) | N | Y | Y |
| Engineering | CED | Medium (2-5 years) | N | Y | Y |
| Engineering | CED, CDS | Long (>5 years) | N | Y | Y |
| Education | SC, CDS, GO | Short (<2 years) | N | N | Y |
| Enforcement | MPD, GO, CDS | Short (<2 years) | N | N | Y |
| Engineering; Evaluation | CED | Medium (2-5 years) | N | Y | Y |
| Engineering | CED | Long (>5 years) | N | Y | Y |
| Evaluation | CED, CDS | Medium (2-5 years) | Y | Y | Y |
| Enforcement | MPD, GO, CED | Medium (2-5 years) | N | Y | Y |

Distracted Driving Recommendations (Chapter 6)

Table 27: Goals and Strategies for the Distracted Driving Emphasis Area

| Action # | Description | Performance Metric |
|--|---|--|
| Strategy DD1. Develop a campaign that discourages cell phone use when driving. | | |
| Action DD1.1. | Create education materials and programs targeted at young drivers. | <ul style="list-style-type: none"> • Number of schools participating in the educational program • Number of billboards and message boards with campaign materials in place |
| Action DD1.2. | Bring awareness to the dangers of texting and driving to all drivers. | |
| Strategy DD2. Develop enforcement strategies to mitigate for cell phone use when driving. | | |
| Action DD2.1. | Create a targeted enforcement plan for school zones. | Number of crashes in school and work zones |
| Action DD2.2. | Create a targeted enforcement plan for work zones. | |
| Strategy DD3. Implement streetscaping techniques to reduce distracted driving. | | |
| Action DD4.1. | Update streetscaping design standards. | <ul style="list-style-type: none"> • New streetscaping standards are accepted • Number of demonstration projects completed |
| Action DD4.2. | Implement the use of demonstration projects to determine beneficial permanent projects. | |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-------------|----------------------|--------------------|--|---|---|
| Education | TXDOT, SC, MISD, MPD | Short (<2 years) | N | Y | Y |
| Education | TXDOT, SC, MPD | Short (<2 years) | N | Y | Y |
| Enforcement | MPD | Medium (2-5 years) | N | Y | Y |
| Enforcement | MPD | Medium (2-5 years) | N | Y | Y |
| Engineering | SC, CDS | Short (<2 years) | N | N | Y |
| Engineering | SC, CDS, GO | Medium (2-5 years) | N | N | Y |

Impaired Driving Recommendations (Chapter 6)

Table 28: Strategies and Actions for the Impaired Driving Emphasis Area

| Action # | Description | Performance Metric |
|---|---|---|
| Strategy ID1. Spread awareness about the consequences of impaired driving. | | |
| Action ID1.1. | Provide access to a drunk driving simulator. | <ul style="list-style-type: none"> ▪ Impaired driving simulator is funded ▪ Number of kits used during the year |
| Action ID 1.2. | Expand on the NHTSA and TxDOT Campaigns to better fit Midland’s needs and create an educational campaign for young drivers. | |
| Action ID 1.3. | Develop an impaired driving awareness pop-up event kit. | |
| Strategy ID2. Encourage businesses and special event holders to provide mobility alternatives for patrons. | | |
| Action ID2.1. | Create a new requirement for the obtainment of a Special Event Permit. | <ul style="list-style-type: none"> ▪ New requirement for receiving a special even permit is accepted ▪ Number of participating businesses |
| Action ID2.2. | Develop incentives for businesses to promote sober ride materials. | |
| Strategy ID3. Acquire substance abuse and mental health help resources for the community. | | |
| Action ID3.1. | Develop a partnership with organizations that supports these efforts. | Funding for substance abuse and mental health resources is acquired |
| Action ID3.2. | Obtain grants to fund the needed resources. | |
| Strategy ID4. Develop an understanding of impaired driving citation patterns. | | |
| Action ID4.1. | Perform a study reviewing citation patterns for impaired driving incidents. | Results of the study should be made public on the City website |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-----------------------|---------------------|--------------------|--|---|---|
| Education | MCM, GO, CDS | Medium (2-5 years) | N | N | Y |
| Education | SC, MISD, MPD | Short (<2 years) | N | N | Y |
| Education | TXDOT, SC | Medium (2-5 years) | N | Y | Y |
| Encouragement | MCC, MHCC, CDS, MCM | Short (<2 years) | Y | Y | N |
| Encouragement | MCC, MHCC | Short (<2 years) | Y | Y | N |
| Equity; Encouragement | GO, MH, PC, UW | Medium (2-5 years) | Y | Y | Y |
| Equity; Encouragement | GO, MH, PC, UW | Long (>5 years) | N | N | Y |
| Enforcement | MPD, CED | Short (<2 years) | Y | Y | Y |

Unrestrained Persons Recommendations

Table 29: Strategies and Actions for the Unrestrained Persons Emphasis Area

| Action # | Description | Performance Metric |
|---|---|--|
| Strategy UP1. Develop a seatbelt usage campaign. | | |
| Action UP1.1 | Create a partnership with TXDOT to develop campaign strategies. | Seatbelt campaign is implemented |
| Strategy UP2. Gather more participation in the Midland Fire Department’s Car Seat Information Program. | | |
| Action UP2.1. | Develop an advertisement strategy for the program. | Number of appointments filled for the Car Seat Information Program |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-----------------------|---------------------|------------------|--|---|---|
| | | | | | |
| Education | TXDOT, SC | Short (<2 years) | N | Y | Y |
| | | | | | |
| Education; Engagement | SC, MFD | Short (<2 years) | Y | Y | Y |

Vulnerable Road User Recommendations (Chapter 6)

Table 30: Strategies and Actions for the Vulnerable Road Users Emphasis Area

| Action # | Description | Performance Metric |
|---|---|--|
| Strategy VRU1. Prioritize the implementation of safer pedestrian and bicycle facilities. | | |
| Action VRU1.1. | Update the existing Hike and Bike Master Plan. | The Hike and Bike Master Plan is updated |
| Action VRU1.2. | Implement the projects and policies from the updated master plan. | |
| Strategy VRU3. Create a Safe Routes to School Partnership Program. | | |
| Action VRU2.1. | Develop local partnerships to help with the implementation of the program. | <ul style="list-style-type: none"> • Number of schools participating in the Safe Routes to School Program • Number of schools with safe routes |
| Action VRU2.2. | Evaluate school sites to identify specific improvements around schools with the highest need. | |
| Action VRU2.3. | Acquire grants to fund the recommended improvements. | |
| Action VRU2.4. | Conduct school-based bicycle and pedestrian related activities. | |
| Strategy VRU3. Develop a Citywide ADA Transition Plan. | | |
| Action ID3.1. | Apply for grants to fund the ADA Transition Plan. | ADA transition plan is completed |
| Action ID3.2. | Complete and implement the ADA Transition Plan. | |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|---------------------|---------------------|--------------------|--|---|---|
| Engineering | CED, GO, CPD | Medium (2-5 years) | Y | Y | Y |
| Engineering | CED, CPD | Long (>5 years) | N | Y | N |
| Engagement; Equity | MISD, CED, MH, GO | Short (<2 years) | Y | N | N |
| Engineering; Equity | CED, MISD, MH | Medium (2-5 years) | N | N | Y |
| Equity | GO, MISD, CED, MCM | Medium (2-5 years) | N | N | Y |
| Education; Equity | SC, MPD, MISD, MFD | Medium (2-5 years) | N | Y | Y |
| Equity | GO, CED, CPD | Short (<2 years) | N | N | Y |
| Engineering; Equity | CED, CPD | Medium (2-5 years) | N | N | Y |

Post Crash Care Recommendations (Chapter 6)

Table 31: Strategies and Actions for the Post Crash Care Emphasis Area

| Action # | Description | Performance Metric |
|--|---|---|
| <p>Strategy PC1. Leverage technology, policies, and existing personnel to conduct more efficient investigations and reporting of crashes, facilitating swift clearance of crash scenes.</p> | | |
| Action PC1.1. | Recognize and deploy impactful technologies aimed at capturing report data and expediting the clearing of crash scenes with greater efficiency | <ul style="list-style-type: none"> ▪ Open Roads Policy is accepted and put into practice ▪ Number of first responders with crash investigation training |
| Action PC1.2. | Support and Open Roads Policy statewide supporting quick clearance strategies | |
| Action PC1.3. | Develop crash investigation training materials for delivery to law enforcement liaisons and safety specialists to deliver trainings, especially in rural areas. | |
| <p>Strategy PC2. Identify and implement engineering solutions where possible to reduce response times.</p> | | |
| Action PC2.1. | Identify and catalog engineering techniques affecting timely response to crashes | <p>The City-specific database of engineering solutions is created</p> |
| Action PC2.2. | Reach out to adjacent Cities, Counties, MPOs, and TxDOT with information on engineering solutions that decrease response times | |



| Which E | Responsible Parties | Timeframe | Can be accomplished through existing funds | Can be accomplished through reallocation of funds | Can be accomplished through grant acquisition |
|-------------|---------------------|--------------------|--|---|---|
| Engineering | CED, CDS | Medium (2-5 years) | N | N | Y |
| Engineering | MCM | Medium (2-5 years) | N | Y | N |
| Enforcement | MPD | Medium (2-5 years) | N | N | Y |
| | | | | | |
| Engineering | CED | Short (<2 years) | N | Y | Y |
| Education | MCM, CED, CDS | Short (<2 years) | Y | N | N |



Annual Reporting & Transparency

The Vision Zero Task Force is responsible for implementing the actions recommended in this plan with special consideration for maintaining transparency through the production of an annual Vision Zero Progress Report. Annual progress reporting procedures are established in the Vision Zero Resolution passed by City Council on April 9, 2024. Table 32 below details the procedures by how often each task is expected to be completed by the Task Force.

Table 32: Plan Updates and Timeframe

| Plan Update Level | Recommended Frequency | Approval By |
|--|-----------------------|------------------------|
| Minor Revision – text or wording changes, not affecting the recommendations | As needed | Vision Zero Task Force |
| Major Revision – any change that substantively changes a recommendation | As needed | Vision Zero Task Force |
| Vision Zero Implementation Progress Report | Annual | City Council |
| Full Plan Update | Every five years | City Council |

Overall, the annual reporting of Vision Zero efforts plays a crucial role in ensuring transparency, accountability, and effectiveness in the use of public resources allocated for community safety and improvement initiatives. In addition to the online publication of this plan, a dashboard is in development to also host on the City of Midland’s website to make crash data and progress on projects publicly available.



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Appendix





A



A. Vision Zero Resolution

RESOLUTION NO. 2024-067

**RESOLUTION AUTHORIZING THE ADOPTION OF
THE CITY OF MIDLAND'S VISION ZERO POLICY**

WHEREAS, the life and health of all persons living and traveling within the City of Midland are our utmost priority, and no one should die or be seriously injured while traveling on our city streets; and

WHEREAS, Vision Zero is the concept that traffic deaths and serious injuries on our roadways are unacceptable; and

WHEREAS, streets and transportation systems have traditionally been designed primarily to move cars efficiently, and Vision Zero supports a paradigm shift by designing streets and transportation systems to move all people safely, including people of all ages and abilities, pedestrians, bicyclists, public transit users, scooter riders, and motorcyclists, as well as drivers and passengers of motor vehicles; and

WHEREAS, Vision Zero recognizes that people will sometimes make mistakes, so the road system and related policies should be designed to ensure that those inevitable mistakes do not result in severe injuries or fatalities; therefore, transportation planners and engineers and policymakers are expected to improve the roadway environment, policies, and other related systems to lessen the severity of crashes; and

WHEREAS, 87 people in the City lost their lives to traffic deaths in 2018-2022 and traffic crashes are among the leading cause of deaths in the United States; and

WHEREAS, the City's transportation infrastructure serves an increasing number of vulnerable road users such as pedestrians and bicyclists; and

WHEREAS, according to the TxDOT Crash Records Information System, pedestrians and bicyclists are involved in 1.3 percent of collisions and account for 24 percent of traffic deaths in the City; and

WHEREAS, the injury rate for pedestrians involved in collisions is approximately 76 percent, and the injury rate for bicyclists involved in collisions is approximately 66

percent; and

WHEREAS, speed is recognized as a major determining factor of survival in a crash;

and

WHEREAS, the City will work toward reducing vehicle speeds because the likelihood of a pedestrian surviving a crash is 10 percent if hit by a vehicle moving 40 mph;

and

WHEREAS, children, older adults, people of color, people with disabilities, people who are unhoused, and people with low income face a significantly disproportionate risk of traffic injuries and fatalities; and

WHEREAS, people of color are disproportionately affected by racial profiling and inequitable enforcement of traffic violations; and

WHEREAS, making streets safer for all people using all modes of transportation will encourage people to travel on foot, by bicycle, and by public transit, which supports a healthier, more active lifestyle and reduces environmental pollution; and

WHEREAS, successful Vision Zero programs are a result of both a complete government approach (i.e., interdepartmental, coordinated initiatives) and community support of Vision Zero objectives and action plans; and

WHEREAS, Vision Zero resolutions have been adopted by many jurisdictions across the United States;

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

SECTION ONE. That the City adopts the goal of zero traffic deaths and serious injuries, stating that no loss of life or serious injury is acceptable on our streets.

SECTION TWO. That the City adopts the goal of eliminating traffic deaths and serious injuries by 2050 and endorses Vision Zero as a comprehensive and holistic approach to achieving this goal.

SECTION THREE. That the City adopts the goal of promoting fair and equitable enforcement of traffic violations.

SECTION FOUR. That the City adopts the Vision Zero policy attached hereto as Exhibit A and makes it part of this Resolution, effective immediately.

SECTION FIVE. That the City Secretary shall certify the adoption of this Resolution, effective immediately, by the City Council.

On motion of Council member Norman, seconded by Council member Ladd, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the 9th day of April, A.D., 2024, by the following vote:

Council members voting "AYE": Stretcher Burkes, Blong, Ladd, Norman

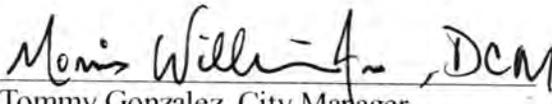
Council members voting "NAY": None


Lori Merritt Blong, Mayor

ATTEST:


Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:


Tommy Gonzalez, City Manager

RESOLUTION NO. 2024-076

**RESOLUTION ADOPTING THE CITY OF MIDLAND
VISION ZERO ACTION PLAN**

WHEREAS, Resolution No. 2024-067 approved the adoption of the City of Midland Vision Zero Policy as a comprehensive and data-driven approach to achieving the goal of zero traffic deaths and serious injuries by the year 2050, consistent with the Texas Department of Transportation's adopted goal for same; and

WHEREAS, the City of Midland's Vision Zero Task Force was directed to finalize and present a Vision Zero Action Plan to the City Council; and

WHEREAS, the City of Midland is committed to following recommendations from the Vision Zero Action Plan in order to enhance roadways and reduce high-injury networks in the City of Midland; and

WHEREAS, City of Midland departments will continually utilize the Vision Zero Action Plan to ensure alignment with the Vision Zero Policy when planning and designing projects to reach the goal of zero traffic deaths and serious injuries by the year 2050;

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

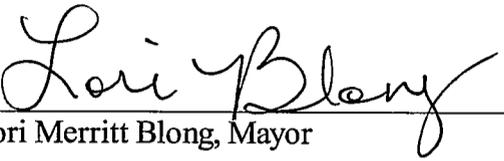
SECTION ONE. That the City of Midland hereby approves and adopts the Vision Zero Action Plan attached hereto as Exhibit A, which is incorporated herein for all purposes.

SECTION TWO. That the City Secretary is hereby authorized and directed to certify the adoption of this Resolution by the City Council, effective immediately.

On motion of Council member Ladd, seconded by Council member Norman, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the 23rd day of April, A.D., 2024, by the following vote:

Council members voting "AYE": Stretcher Burkes, Poole, Blong, Dufford, Ladd, Norman

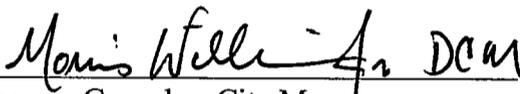
Council members voting "NAY": None


Lori Merritt Blong, Mayor

ATTEST:


Marcia Bentley-German, City Secretary

RECOMMENDED AND APPROVED:


Tommy Gonzalez, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:


Lindsey Adams, Intergovernmental Relations Officer

APPROVED AS TO FORM ONLY:


John Ohnemiller, City Attorney



B. Social Pinpoint - Public Engagement Results

| Created on | Type | Comment | Up Votes | Down Votes | Latitude | Longitude |
|------------------|--|---|----------|------------|-----------|-------------|
| 10/27/2023 6:35 | Bicyclist Safety Issue | No shoulder or lane to protect cyclist | 4 | 0 | 32.029944 | -102.163839 |
| 11/2/2023 10:33 | Bicyclist Safety Issue | Bike lane ends with no safe method of continuing through the busy Scharbauer intersection. | 4 | 1 | 32.018742 | -102.08896 |
| 11/2/2023 10:52 | Bicyclist Safety Issue | Difficult intersection to navigate on a bike, but typically the safest place to get across Andrews Highway. Not sure if the light is on a timer or if a vehicle should trigger it, but I typically have to cross against the light when biking. | 4 | 0 | 32.004284 | -102.125934 |
| 11/2/2023 19:56 | Bicyclist Safety Issue | Dedicated bike lane to safely cross the loop. | 4 | 0 | 32.011783 | -102.158368 |
| 11/10/2023 13:19 | Bicyclist Safety Issue | Bicyclists regularly ignore traffic controls on Golden Gate Mockingbird to County Road 50 | 0 | 0 | 32.034528 | -102.187829 |
| 11/18/2023 10:30 | Bicyclist Safety Issue | Distracted drivers and trash in the bike lane so it's not always usable. | 1 | 0 | 32.023359 | -102.174397 |
| 11/18/2023 10:34 | Bicyclist Safety Issue | 40mph in this neighborhood so drivers get right behind me and then blow by as close as possible when they pass. One day, my 12 year old and I were just about to turn left into the school parking lot. Even though we were both clearly signaling a left turn, a large truck zoomed by us on our left blocking our ability to turn. I had to yell at my son to go straight otherwise, he would have been killed. | 3 | 0 | 32.028089 | -102.181349 |
| 11/18/2023 10:37 | Bicyclist Safety Issue | Bike lane to cross the loop. It should last long enough to get to a neighborhood or shopping parking lot. | 1 | 0 | 32.028817 | -102.145557 |
| 11/18/2023 10:38 | Bicyclist Safety Issue | Bike lane to cross the loop. It should extend far enough north and south to get to a neighborhood or shopping parking lot. | 1 | 0 | 32.037694 | -102.11277 |
| 11/18/2023 10:39 | Bicyclist Safety Issue | Bike lane to cross the loop. It should extend far enough north and south to get to a neighborhood or shopping parking lot. | 1 | 0 | 32.043405 | -102.085176 |
| 11/27/2023 9:59 | Bicyclist Safety Issue | IMO, this is a more common and safer bicycle crossing area for the loop. While actual loop crossing is relatively easy, once we reach the League Dr intersection, it feels very unsafe to either make the west bound turn or continue north on Holiday Hill. I would love to see more signage or even a dedicated bicycle lane. | 1 | 0 | 32.016009 | -102.159328 |
| 12/27/2023 20:43 | Bicyclist Safety Issue | Our residents on bikes need a bike lane. At full capacity we will have 100 homes and a lot of folks on bikes. | 0 | 0 | 31.939116 | -102.154559 |
| 10/27/2023 6:29 | Intersection Crossing/ Crosswalk Issue | Needs a traffic light to stop the flow of traffic so that residents and businesses can exit from driveways onto 158. Also it's just a dangerous intersection with to many roads crossing and not signal to control the flow of traffic | 3 | 0 | 31.972588 | -102.003593 |
| 10/31/2023 17:30 | Intersection Crossing/ Crosswalk Issue | Very dangerous intersection. Speed limit should not be 45 until after Bluebird. | 1 | 0 | 32.037294 | -102.130581 |
| 10/31/2023 18:39 | Intersection Crossing/ Crosswalk Issue | Vehicles exiting HEB back-up at this spot and/or vehicles enter the driving lanes in unsafe ways because many drivers insist on trying to turn left onto Midkiff even though traffic patterns don't allow for it. In addition, the left turn lane is almost non-functional with vehicles trying to turn into the Whataburger lot. | 8 | 0 | 32.018743 | -102.124733 |
| 11/3/2023 13:58 | Intersection Crossing/ Crosswalk Issue | Very busy intersection during work traffic. Many car make unsafe turns because traffic backs up at stop signs and constant stream of vehicles make it impossible to turn onto the road. Suggest 4 way stop or traffic light. | 6 | 0 | 31.991416 | -102.16871 |
| 11/3/2023 14:20 | Intersection Crossing/ Crosswalk Issue | School youth use this intersection during lunch and before/after school. There are not crossing markings or a way for them to cross in an organized manner leading to many of the younger drivers speeding through or not following 4-way stop rules to try and avoid sitting at the stop sign. | 1 | 0 | 32.015686 | -102.127994 |
| 11/3/2023 14:22 | Intersection Crossing/ Crosswalk Issue | Difficulty turning north (right) from Wall St. onto Andrews Hwy. No matter what everyone always takes a wide turn because the angle makes it difficult to turn correctly/safely. Striping/marking is also difficult to see north of the intersection. | 3 | 0 | 31.993414 | -102.09864 |
| 11/10/2023 13:12 | Intersection Crossing/ Crosswalk Issue | West bound traffic in the right turn only lane continues going straight causing a hazard for traffic entering Briarwood from Avalon. | 2 | 0 | 32.022049 | -102.179332 |
| 11/16/2023 12:52 | Intersection Crossing/ Crosswalk Issue | Drivers often confused and yield inappropriately | 6 | 0 | 32.010742 | -102.099077 |
| 11/17/2023 9:50 | Intersection Crossing/ Crosswalk Issue | This incredibly wide four-way stop just doesn't work most days. | 6 | 0 | 31.991912 | -102.157563 |

| | | | | | | |
|------------------|--|--|---|---|-----------|-------------|
| 11/17/2023 13:16 | Intersection Crossing/ Crosswalk Issue | Traffic signals are needed here badly along with a reduced speed limit. Traffic on Briarwood backs up and creates congestion and impatience. Traffic on 158 turning onto Briarwood makes this more dangerous. This intersection needs more turn lanes, better lighting, and signaling. | 7 | 0 | 32.014699 | -102.210231 |
| 11/18/2023 7:32 | Intersection Crossing/ Crosswalk Issue | Needs to go back to two lanes to turn north on A street. This backs up close to the loop off ramp with people trying to access the neighborhoods north of the loop off of A street. | 6 | 0 | 32.041578 | -102.096212 |
| 11/18/2023 7:55 | Intersection Crossing/ Crosswalk Issue | A light is needed here for safety. | 3 | 0 | 32.014481 | -102.209759 |
| 11/18/2023 21:14 | Intersection Crossing/ Crosswalk Issue | Extremely unsafe intersection. There is limited visibility from all sides. There's a great need for a traffic light, better and longer turn lanes, and controlling the traffic backup that happens. | 3 | 0 | 32.014794 | -102.210067 |
| 11/18/2023 21:21 | Intersection Crossing/ Crosswalk Issue | Dangerous intersection. Need a light as well as a turn-left lane for those going west-bound turning into the neighborhood. | 1 | 0 | 32.060866 | -102.077699 |
| 11/27/2023 7:55 | Intersection Crossing/ Crosswalk Issue | People on the right lane are not allowing oncoming vehicles to safely enter from the ramp. Either the right lane should have an area marked to merge left before the ramp to allow for oncoming traffic, or the loop should be extended there as it is on other intersections. Side note: The terms and conditions for this submission are not showing up (image attached). | 0 | 0 | 32.043093 | -102.089687 |
| 12/14/2023 20:07 | Intersection Crossing/ Crosswalk Issue | Intersection was safer before it was reconfigured. Now more difficult to see southbound traffic. | 1 | 0 | 31.985187 | -102.077872 |
| 12/15/2023 4:26 | Intersection Crossing/ Crosswalk Issue | Would like to see a bus lane installed down 307. School busses stopping traffic on 307 at rush hour times both in the morning and afternoon create dangerous situations. | 0 | 0 | 32.010902 | -101.967406 |
| 12/15/2023 4:33 | Intersection Crossing/ Crosswalk Issue | This intersection needs to be completely re-built. 5 points is the most dangerous intersections in the county | 0 | 0 | 31.972811 | -102.003409 |
| 12/15/2023 4:35 | Intersection Crossing/ Crosswalk Issue | Right and left turn lanes installed on 1379 at this intersection. | 0 | 0 | 31.999561 | -101.886694 |
| 12/15/2023 12:36 | Intersection Crossing/ Crosswalk Issue | We desperately need either an overpass or an underpass at Garfield and Front and Industrial. Someone will die on the way to the hospital from south of the tracks. Right now all traffic that needs to avoid dealing with two roads and a railroad track are forced to go through downtown Midland which is already strangled with traffic at all hours. Will it take the death of someone "important" to get this done? | 2 | 0 | 31.98558 | -102.093527 |
| 12/26/2023 17:04 | Intersection Crossing/ Crosswalk Issue | Traffic always backs up during rushes because of the intersection between I-20 & 1788. The exit ramp off of the interstate should be pushed back to help. The interchange could be rebuilt, and a diverging diamond interchange might work. | 0 | 0 | 31.911136 | -102.215887 |
| 12/26/2023 17:12 | Intersection Crossing/ Crosswalk Issue | It would be funny if one of these streets had a bridge. 158 makes the most sense, but 120 seems to be a better option. | 0 | 0 | 31.972509 | -102.003061 |
| 12/27/2023 20:35 | Intersection Crossing/ Crosswalk Issue | This intersection needs a light badly. It is nearly impossible to turn north on Antelope from eastbound Cholla. | 0 | 0 | 31.907126 | -102.214072 |
| 12/27/2023 20:39 | Intersection Crossing/ Crosswalk Issue | This intersection desperately needs a light. It's nearly impossible to turn left onto Antelope from either direction on cholla. I accidentally made this comment on the wrong intersection but couldn't delete it. | 0 | 0 | 31.945899 | -102.141405 |
| 12/27/2023 21:02 | Intersection Crossing/ Crosswalk Issue | There needs to be a 4 way stop installed here to slow/deter the flow of traffic through this neighborhood. | 1 | 0 | 32.011692 | -102.114546 |
| 12/28/2023 8:15 | Intersection Crossing/ Crosswalk Issue | Vehicles consistently go into the crosswalk or drive through the light. There have been multiple accidents involving children crossing the street in this area. A pedestrian bridge could alleviate some of the issues. | 0 | 0 | 32.017855 | -102.133093 |
| 12/29/2023 4:54 | Intersection Crossing/ Crosswalk Issue | Most dangerous intersection needs to be addressed sooner than what's indicated on xdot plans | 0 | 0 | 31.944499 | -102.172747 |
| 12/30/2023 8:12 | Intersection Crossing/ Crosswalk Issue | Very difficult to turn left off of Avalon onto Briarwood. Would like to see decreased speed during school pick up and drop off hours. | 1 | 0 | 32.022095 | -102.179224 |

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| 12/31/2023 12:57 | Intersection Crossing/ Crosswalk Issue | The turn-off for westbound Loop 250 Frontage traffic onto North 349 should be much longer, allowing more vehicles to queue. Those vehicles block through traffic. | 1 | 0 | 32.044137 | -102.084765 |
| 1/1/2024 9:15 | Intersection Crossing/ Crosswalk Issue | Too many serious accidents at this intersection. Need a traffic light, or overpass and ramps for this intersection. | 0 | 0 | 31.939376 | -101.883865 |
| 11/1/2023 10:06 | Lighting Issue | Lighting in the AM for school bus pick up is very bad. I have seen several near misses here with the bus and traffic. Its mainly the high school bus stop. Speeding is also bad here due to increase in houses built. | 0 | 0 | 32.060582 | -102.079639 |
| 11/1/2023 21:24 | Lighting Issue | lighting at night for all streets and entire street not good or non-existent | 0 | 0 | 32.021033 | -102.138686 |
| 11/2/2023 11:13 | Lighting Issue | Pioneer Park has insufficient lighting. | 0 | 0 | 32.003727 | -102.147137 |
| 11/18/2023 12:31 | Lighting Issue | There are more street lights on Main Street and residential side streets in this area needed because the streets are dark at night and drivers are not able to see well enough to see pedestrians or other objects in streets. We also need a signal light at the intersection of Main & Scarbruier street. | 0 | 0 | 32.024591 | -102.079685 |
| 11/30/2023 15:10 | Lighting Issue | The north-directed light at this intersection is tilted downward and you can't see the color until you're right under it. Also, it doesn't seem to align with the light by DK, as the marked intersection light will be red while the light by DK is green or yellow. | 0 | 0 | 32.017691 | -102.088558 |
| 12/13/2023 23:13 | Lighting Issue | More lighting is needed on these long blocks just West of Midland Dr. (Stanolind, Gulf, Humble) | 0 | 0 | 32.006793 | -102.140279 |
| 12/15/2023 1:21 | Lighting Issue | Street lighting is inadequate on this particular stretch of Industrial Ave. A fatality was reported in a single vehicle crash in May of 2022. | 0 | 0 | 31.98829 | -102.087791 |
| 12/15/2023 7:49 | Lighting Issue | There is no lighting on the stretch of 1130. | 0 | 0 | 32.009686 | -101.979325 |
| 12/18/2023 10:13 | Lighting Issue | Too dark at night and everyone drives with brights, making it harder to see the road. Need street lights. | 0 | 0 | 32.073207 | -102.070531 |
| 12/27/2023 23:41 | Lighting Issue | Add more lights | 0 | 0 | 31.999028 | -102.048837 |
| 12/29/2023 22:59 | Lighting Issue | Turn signal is not visible unless you are directly under it and in the intersection. | 0 | 0 | 32.02032 | -102.080633 |
| 10/31/2023 18:22 | Other Traffic Safety Concern | Some cars on West Golf Course don't want to wait at the stoplight, so they turn into the church's parking lot and speed through it to the far entrance (far West side) to turn onto Andrews Highway. They pay no attention to other traffic or pedestrians on the lot. | 2 | 0 | 32.004844 | -102.124806 |
| 11/1/2023 9:25 | Other Traffic Safety Concern | Traffic backing up onto Loop 250 | 5 | 0 | 32.03084 | -102.141384 |
| 11/1/2023 10:04 | Other Traffic Safety Concern | Need to have 4 way stop or Light here to control traffic trying go across Mockingbird very soon you will have a bad wreck here. In the morning and 5 pm very dangerous. | 2 | 0 | 32.060801 | -102.077644 |
| 11/1/2023 21:27 | Other Traffic Safety Concern | many common drives behind houses deteriorated greatly and need repaving. Several streets in area could use repaving as well. | 0 | 0 | 32.020887 | -102.138659 |
| 11/2/2023 9:29 | Other Traffic Safety Concern | Constant U-Turns here cause major concern for those trying to turn right out of the neighborhood on Heritage Oaks Drive to Briarwood. Not sure what the solution is for those leaving the apartment complex (on the north side of Briarwood) that need to go east since there is a median in the way and they can't turn left without doing a u-turn, but there is entirely too much high-speed traffic on Briarwood for people pulling out in front of others while doing a u-turn. | 3 | 0 | 32.022813 | -102.176381 |
| 11/2/2023 10:50 | Other Traffic Safety Concern | I've had drivers pass me on the left in this school zone for no apparent reason. People park all along the neighboring streets for school pickup. Drivers frequently seen with cell phones in hand rolling through the stop signs. | 0 | 0 | 31.995952 | -102.129475 |
| 11/2/2023 10:55 | Other Traffic Safety Concern | Although there are signs telling drivers to not form a line in the road for the Starbucks, there is still a line in the road nearly daily. Further, drivers turning from Midland drive or funneling from the Loop exits do not yield correctly in order to get to the turn for the Starbucks and strip mall. | 7 | 0 | 32.029064 | -102.144404 |
| 11/3/2023 13:56 | Other Traffic Safety Concern | This road has a lot of traffic and is a poorly maintained road - lots of pothole on top of potholes, slow traffic turning into fast traffic, and non existent road markings. | 2 | 0 | 32.020484 | -102.185555 |
| 11/3/2023 14:01 | Other Traffic Safety Concern | Many cars making right turn here drive on uneven shoulder to get out of fast moving traffic. Safer to have a dedicated turn lane here or slower speed limit. | 3 | 0 | 32.00551 | -102.191219 |
| 11/3/2023 14:29 | Other Traffic Safety Concern | Always congested on Big Spring from about Stokes to I-20. This causes cars to block intersections (especially the one at Longview and Big Spring!) and commercial entry/exits when they try to make the light. | 1 | 0 | 31.97358 | -102.074296 |

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| 11/10/2023 13:15 | Other Traffic Safety Concern | There is no shoulder on the southbound lane with a dangerous drop-off. Lanes are narrow and traffic exceeds speed limits. | 1 | 0 | 32.032437 | -102.182658 |
| 11/16/2023 12:48 | Other Traffic Safety Concern | traffic light is desperately needed at 349 and Occidental, very dangerous intersection, many accidents here | 5 | 0 | 32.08032 | -102.090883 |
| 11/16/2023 12:53 | Other Traffic Safety Concern | County road 140 is in bad condition. Too many potholes makes it dangerous to drive. It is all the way from 349 to the intersection of 1160. | 1 | 0 | 31.931459 | -102.049899 |
| 11/17/2023 8:40 | Other Traffic Safety Concern | Better design exiting ramp and extend light timing during peak times. A better exit ramp would help a lot. | 4 | 0 | 32.030628 | -102.142348 |
| 11/17/2023 9:38 | Other Traffic Safety Concern | Road conditions are poor, and only getting worse. Heavy traffic at all hours of the day, and avoiding potholes within two lanes sometimes seems like a hazard in itself. | 1 | 0 | 32.018128 | -102.195768 |
| 11/17/2023 9:43 | Other Traffic Safety Concern | Roads are in worse condition every time I need to head this way, and the volume of entrances makes it a bit of a crapshoot as to what's going to happen. | 4 | 0 | 32.031823 | -102.127608 |
| 11/17/2023 10:05 | Other Traffic Safety Concern | People will use the Bowlero parking lot to cut past the intersection, even speeding through/ underneath the awning at the front entrance. I've seen people almost ran over at the front doors due to this. | 3 | 0 | 32.016917 | -102.15811 |
| 11/17/2023 13:07 | Other Traffic Safety Concern | finish this project!!! | 7 | 1 | 32.009436 | -102.103758 |
| 11/18/2023 7:54 | Other Traffic Safety Concern | Speed limit too high all along 158, from 191 to 1788. There is too much traffic for the 2 lanes. | 1 | 0 | 32.000652 | -102.182465 |
| 11/18/2023 8:05 | Other Traffic Safety Concern | This exit ramp has been a problem for AT LEAST more than a decade. During rush hour it backs up onto the loop and drivers coming off the loop don't have time to slow down from 60mph to stop. This happens at other exits too. All the loop exits need to be flipped the way the exits and entrances from the Loop to 191 were recently switched. | 5 | 0 | 32.030818 | -102.14088 |
| 11/18/2023 10:07 | Other Traffic Safety Concern | Need light | 3 | 0 | 32.074484 | -102.089113 |
| 11/18/2023 10:07 | Other Traffic Safety Concern | Need light | 0 | 0 | 32.083002 | -102.091774 |
| 11/18/2023 10:09 | Other Traffic Safety Concern | Finish road | 3 | 0 | 32.063274 | -102.066894 |
| 11/18/2023 10:20 | Other Traffic Safety Concern | There needs to be an additional outlet to Loop 250. Mockingbird, Magellan, Stonebridge, Lamesa access to 349 and Loop 250 is not enough. | 3 | 0 | 32.063087 | -102.067371 |
| 11/18/2023 20:59 | Other Traffic Safety Concern | There is a pot hole forming | 1 | 0 | 32.080747 | -102.091064 |
| 11/18/2023 21:18 | Other Traffic Safety Concern | There is no set turn-left lane for those coming southbound trying to turn into LST. This is unsafe and is dangerous for those leaving the neighborhood. | 3 | 0 | 32.074497 | -102.089202 |
| 11/18/2023 21:24 | Other Traffic Safety Concern | Unusual traffic pattern with an unregulated turn. Should be a traffic light. | 0 | 0 | 32.03464 | -102.094093 |
| 11/20/2023 15:31 | Other Traffic Safety Concern | This light turns red when no traffic is present on the cross streets. It backs up traffic. It is also a very short light and causes traffic to back up for half a mile. | 1 | 0 | 32.0316 | -102.128729 |
| 11/29/2023 9:09 | Other Traffic Safety Concern | Long lines to turn left at light. The right lane could be used for left turns also. | 0 | 0 | 32.048079 | -102.063053 |
| 12/2/2023 14:07 | Other Traffic Safety Concern | Road needed to connect with the loop 250 | 1 | 0 | 32.063151 | -102.066818 |
| 12/2/2023 14:14 | Other Traffic Safety Concern | Enable the right line to turn left when the light is green, So both lines can turn left to the 349. | 0 | 0 | 32.059441 | -102.084038 |
| 12/2/2023 14:17 | Other Traffic Safety Concern | Add a new line or exit to turn right. | 2 | 0 | 32.080934 | -102.090996 |
| 12/2/2023 14:34 | Other Traffic Safety Concern | Road needed to connect the loop 250 with the Fairgrounds Rd, there are new home constructions and a future school on the area, Mockingbird Ln is not going to be enough to handle all the traffic. | 1 | 0 | 32.05048 | -102.063611 |
| 12/2/2023 14:36 | Other Traffic Safety Concern | Road needed to connect the the Fairgrounds Rd with the loop 250, there are new home constructions and a future school on the area, Mockingbird Ln is not going to be enough to handle all the traffic. | 1 | 0 | 32.063328 | -102.066872 |
| 12/13/2023 14:45 | Other Traffic Safety Concern | This new intersection has a "right-turn-only" lane where the "go straight lane" should be. This causes the left-turn and straight lanes under the bridge to be out of alignment, confusingly requiring drivers to shift lanes mid-intersection. Just remove the right-turn-only signage and allow the right lane to go straight or turn right, or add a true right-turn lane. | 0 | 0 | 31.93481 | -102.169075 |
| 12/13/2023 14:51 | Other Traffic Safety Concern | This intersection needs either an all-way stop or the right lane of Northbound Tradewinds to be required to turn right at Thomason. The traffic on Thomason backs up all the way to Loop 250 in the afternoon and before sporting events because it is difficult to make the right turn with light but steady traffic coming up Tradewinds. | 1 | 0 | 31.975836 | -102.151002 |

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| 12/13/2023 14:53 | Other Traffic Safety Concern | This intersection needs either an all-way stop or the right lane of Northbound Tradewinds to be required to turn right at Thomason. The traffic on Thomason backs up all the way to Loop 250 in the afternoon and before sporting events because it is difficult to make the right turn with light but steady traffic coming up Tradewinds. | 1 | 0 | 31.979882 | -102.152413 |
| 12/13/2023 14:59 | Other Traffic Safety Concern | Mockingbird needs to be continuous between Garfield and A St. | 2 | 0 | 32.051717 | -102.117019 |
| 12/13/2023 15:07 | Other Traffic Safety Concern | Whitman needs to continue through here. The surrounding neighborhoods have a lot of unnecessary traffic due to drivers needing to navigate around the unfinished section. | 1 | 0 | 32.038071 | -102.121407 |
| 12/13/2023 15:22 | Other Traffic Safety Concern | Foolishly dangerous jog here. Figure out a way to take the jog away from the intersection. Perhaps diverting the West leg southward and the East leg northward so they connect directly at Garfield. | 0 | 0 | 32.002422 | -102.101505 |
| 12/13/2023 23:18 | Other Traffic Safety Concern | This is a dangerous curve with the view blocked by bumper to bumper parking on both sides of the street. At least one side should be no parking in the curves. | 0 | 0 | 32.027643 | -102.148433 |
| 12/13/2023 23:28 | Other Traffic Safety Concern | Contrary to the map, CR 130 does not continue West of Midkiff. It should continue straight through to Antelope Trail and further on to CR 1250. (I realize this is not in the city limits.) | 0 | 0 | 31.935147 | -102.098222 |
| 12/13/2023 23:30 | Other Traffic Safety Concern | CR 120 needs to be continued to CR 1210 (Midkiff) and further on to Antelope Tr. | 0 | 0 | 31.951461 | -102.094209 |
| 12/13/2023 23:33 | Other Traffic Safety Concern | Midland Dr should continue South of I-20 along the survey section line. S CR 1220 should be realigned along this section line and continue south all the way to CR 140. Had this been done before the I-20 work was planned they would undoubtedly have already put a bridge here, helping with our current construction traffic issues. | 0 | 0 | 31.958817 | -102.122962 |
| 12/13/2023 23:36 | Other Traffic Safety Concern | Midland Dr should have been realigned to follow the section line many years ago before all of the businesses were built south of this curve. It should be straightened to align with Midland Dr South of BI-20 and an interchange should be constructed to allow traffic straight across BI-20 and the railroad tracks. | 0 | 0 | 31.97287 | -102.127962 |
| 12/13/2023 23:37 | Other Traffic Safety Concern | Midland Dr should be able to cross the railroad tracks and Wall St at this location. North Midland Dr should be realigned to meet up here. | 0 | 0 | 31.968738 | -102.125967 |
| 12/13/2023 23:42 | Other Traffic Safety Concern | Midkiff South of I-20 should have been widened to 4+1 lanes when the reconstruction was done a couple of years ago. The extra width should continue to County Road 140. | 0 | 0 | 31.962658 | -102.106526 |
| 12/13/2023 23:43 | Other Traffic Safety Concern | Cotton Flat Rd South of I-20 should have been widened to 4+1 lanes when the reconstruction was done a couple of years ago. The extra width should continue to County Road 140. | 0 | 0 | 31.966499 | -102.090089 |
| 12/13/2023 23:46 | Other Traffic Safety Concern | The misalignment of County Road 150 (due to negligence of Midland County government over the years) has resulted in two dangerous jogs: one at CR 1200 and the other at TX 349. The one at CR 1200 could be remediated by obtaining some of the empty property around the house at this corner and installing a curve West of 1200 allowing 150 to continue straight across 1200. | 0 | 0 | 31.91127 | -102.072301 |
| 12/13/2023 23:50 | Other Traffic Safety Concern | The misalignment of 150 causes dangerous and inconvenient intersections at Hwy 349. The county should have obtained the property at this corner years ago when it was vacant. Now it will cost more but should still be done. A curve should be installed West of 349 so that 150 is aligned straight across the highway, eliminating the extra intersection and the head-on traffic that occurs in the left-turn lane on 349. | 0 | 0 | 31.91535 | -102.056143 |
| 12/13/2023 23:53 | Other Traffic Safety Concern | This is an insanely dangerous location where the county chose to match up opposing traffic lanes. I see a near head-on collision at least once a week here. Antelope Tr/1232 needs to be widened all the way to CR 120 to allow the lanes to match up and provide a left turn lane onto 120. | 1 | 0 | 31.944561 | -102.140408 |
| 12/13/2023 23:53 | Other Traffic Safety Concern | There needs to be a left turn lane for southbound traffic at this intersection. The traffic light should be replaced with a 4-way stop. | 0 | 0 | 31.941101 | -102.138047 |
| 12/13/2023 23:56 | Other Traffic Safety Concern | The county needs to obtain the right-of-way to continue CR 120 all the way to CR 1250. If there's no planning of roads we will have a ridiculously dangerous mess that is too expensive to fix. | 0 | 0 | 31.940901 | -102.138798 |
| 12/13/2023 23:59 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR 120 along the proper alignment to and beyond Antelope Tr/CR 1232 and eliminate this jog. Someday this will be a major street with businesses along it and it will be cost-prohibitive to fix it then. | 0 | 0 | 31.941247 | -102.137361 |

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| 12/14/2023 0:01 | Other Traffic Safety Concern | CR 120 should intersect CR 1250 here to alleviate traffic at I-20 and guarantee a safe, straight roadway in the future as businesses continue to go up. It should follow the section line as straight as possible. | 0 | 0 | 31.935529 | -102.1612 |
| 12/14/2023 0:04 | Other Traffic Safety Concern | I guess not much to be done about this unnecessarily dangerously curvy road now that it's built. Millions of taxpayer dollars spend to build a road at the whim of a handful of property owners, instead of using imminent domain to make a straight safe road. Stripes need to be highly reflective and well-maintained and some lighting should be installed at county expense to improve the safety along these curves. | 0 | 0 | 31.919594 | -102.130237 |
| 12/14/2023 0:14 | Other Traffic Safety Concern | The county should obtain right-of-way to continue 150 on a straight path to 1232. | 0 | 0 | 31.907117 | -102.089403 |
| 12/14/2023 0:16 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR 160 West on as straight a path as possible all the way CR 1210. | 0 | 0 | 31.900669 | -102.052538 |
| 12/14/2023 0:19 | Other Traffic Safety Concern | The county foolishly missed an opportunity to construct CR 160 through this area before businesses and oil and gas facilities were placed in the path. They should start the process to obtain right-of-way on as straight a path as possible to continue 160 from 349 all the way to the line where 1230 should fall. Actual construction won't be necessary immediately, but if the land is not obtained we will end up with dangerous jogs in the roads. | 0 | 0 | 31.893382 | -102.084103 |
| 12/14/2023 0:25 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR 140 all the way to FM 1788 along as straight a path as possible, before more businesses and oil and gas facilities make the future roadway dangerously curvy and jogged. This path will also reduce some traffic congestion on 1232 and I-20 as well as the 1788/I-20 intersection. (This will be especially important in around 3 years when TxDOT tears down the 1788 overpass to switch it around.) | 0 | 0 | 31.913274 | -102.12734 |
| 12/14/2023 0:29 | Other Traffic Safety Concern | The county NEEDS to obtain right-of-way to extend CR-130 STRAIGHT through to Antelope/1232. They should also obtain right-of-way to extend it along a straight path all the way to line up with CR-1250, which will provide safe roadway infrastructure through this rapidly building area. | 1 | 0 | 31.927498 | -102.132061 |
| 12/14/2023 0:31 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR-1250 STRAIGHT along the section line to intersect with the CR-140 line. This is a rapidly building area and safe arterial road infrastructure is an important responsibility of the county government. | 0 | 0 | 31.935438 | -102.161114 |
| 12/14/2023 0:33 | Other Traffic Safety Concern | CR 120 should intersect CR 1250 here to alleviate traffic at I-20 and guarantee a safe, straight roadway in the future as businesses continue to go up. It should follow the section line as straight as possible. | 0 | 0 | 31.933924 | -102.168893 |
| 12/14/2023 0:34 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR-1250 STRAIGHT along the section line to intersect with the CR-140 line. This is a rapidly building area and safe arterial road infrastructure is an important responsibility of the county government. | 0 | 0 | 31.931889 | -102.168276 |
| 12/14/2023 0:38 | Other Traffic Safety Concern | Here should be the intersection of S CR-1250 and W CR-140. | 0 | 0 | 31.905651 | -102.159634 |
| 12/14/2023 0:43 | Other Traffic Safety Concern | The county needs to obtain right-of-way to construct County Road 1240 along the appropriate section line before encroaching businesses make a safe, straight road prohibitively expensive to build. It should be continued at least to the CR-130 line, with property acquisition continuing to the CR-140 line for future expansion. | 0 | 0 | 31.942011 | -102.155385 |
| 12/14/2023 0:47 | Other Traffic Safety Concern | The county should obtain right-of-way to continue CR-1200 South all the way to CR-180. This will prevent any future encroachment on the proper straight road alignment by oil and gas and other development. | 0 | 0 | 31.910396 | -102.072022 |
| 12/15/2023 4:24 | Other Traffic Safety Concern | Needs to be 4 lane to clear up those turning left onto the interstate to allow for those needing to go towards Fairgrounds to go around. Turning off of the I-20 service road east on 307 is a blind turn, hard to see cross traffic coming | 0 | 0 | 31.999593 | -102.017853 |
| 12/15/2023 4:29 | Other Traffic Safety Concern | Needs turn lanes installed on 137 for turning right and left onto 307 at this intersection. | 0 | 0 | 32.055136 | -101.779531 |
| 12/15/2023 10:14 | Other Traffic Safety Concern | Dangerous Intersection with high speeds on Frontage Roads not stopping, traffic backing up to the south onto the south Frontage Road. Probably needs a signal, the only Loop 250 interchange without one. | 0 | 0 | 32.042009 | -102.096258 |
| 12/15/2023 10:28 | Other Traffic Safety Concern | Mockingbird Lane needs to be connected here between Holiday Hill Road and Oriole. | 0 | 0 | 32.040476 | -102.165213 |

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| 12/16/2023 18:31 | Other Traffic Safety Concern | It would be beneficial to have an all-way stop at the intersection of Mockingbird and Midland, similar to where Mockingbird crosses Midkiff. I am aware of several accidents that have occurred at this intersection in the last year or two. | 1 | 0 | 32.043855 | -102.150482 |
| 12/26/2023 17:02 | Other Traffic Safety Concern | Later when I-14 replaces 158, flyover ramps will be needed from I-20 to 158. There is 4 gas stations in this area, so the land would be better used for freeway anyway. | 0 | 0 | 31.982497 | -102.039429 |
| 12/27/2023 20:45 | Other Traffic Safety Concern | Rampant illegal dumping all up and down Cholla. We have noticed that there are mobile tire changing services that come out to change the big truck tires and just leave the tires. There are used oil drums, refrigerator boxes, and more. Our Glean Up crew cleans it often but it's hard to keep up and we have no way to handle the tires. | 1 | 0 | 31.941001 | -102.151029 |
| 12/27/2023 20:59 | Other Traffic Safety Concern | Fairgrounds NEEDS to be completed to Loop 250! There are already over 7000 homes that have N Fairgrounds/Mockingbird to 349 as their only way out of the neighborhoods, with another 4000 being built in the Mockingbird Ridge subdivision. The new elementary school will also be built in Lone Star Trails in two years. The traffic is already horrendous and dangerous! | 1 | 0 | 32.063354 | -102.066902 |
| 12/27/2023 21:02 | Other Traffic Safety Concern | The Occidental/349 intersection needs redone. Since Kent Kwik was opened, the traffic here has easily tripled, and Occidental needs dedicated turn lanes to turn both ways onto SH349, along with a light. There are accidents here weekly, and a traffic light would make a world of positive difference in the flow of traffic and the safety of those who use this intersection daily. | 1 | 0 | 32.080817 | -102.091236 |
| 12/27/2023 23:40 | Other Traffic Safety Concern | Horrible Roads (all of Wadley) | 0 | 1 | 32.024316 | -102.10541 |
| 12/28/2023 1:10 | Other Traffic Safety Concern | everyone is worried because it will generate problems in road costs and no one looks at the difficulty and delay that a single access road generates in the area... during school hours it only causes an immense delay for everyone | 0 | 0 | 31.941083 | -102.137382 |
| 12/28/2023 1:12 | Other Traffic Safety Concern | a finished street, recognized by the city and without access to the public... | 0 | 0 | 31.932661 | -102.132854 |
| 12/28/2023 7:38 | Other Traffic Safety Concern | This entire road is too narrow and with the damage that on the narrow road it is hard to drive safely especially when meeting another car and impossible if it is on Wednesdays when there are 30-50 bikers on that road | 0 | 0 | 32.033273 | -102.182781 |
| 12/29/2023 4:48 | Other Traffic Safety Concern | Traffic is allowed to stop on Midkiff for child pick up. I have nearly been hit several times by cars un aware of the traffic obstruction and swerving into the left lane. | 0 | 0 | 31.989031 | -102.115074 |
| 12/29/2023 17:17 | Other Traffic Safety Concern | Merging traffic does not have enough space to merge. Too much traffic for a two lane road. Adding two lane turning helped manage this but two lanes to 3 lanes only aggravates the drivers. | 0 | 0 | 32.030729 | -102.14317 |
| 12/29/2023 17:19 | Other Traffic Safety Concern | Another turning lane like Midland Drive will help this intersection. During Christmas, the traffic was backed up on both the service road and onto the exit ramp to the main lanes. | 0 | 0 | 32.033965 | -102.129052 |
| 12/29/2023 17:25 | Other Traffic Safety Concern | The traffic problem is on the north service road. With a traffic light, the south service road will back up but only during the afternoons. This forecasts the coming additional traffic on A Street North as there is only one way into the neighborhoods north. An east-west throughfare would alleviate this pr | 0 | 0 | 32.04152 | -102.096199 |
| 12/29/2023 17:37 | Other Traffic Safety Concern | Develop an east west thoroughfare to replace the idea of Mockingbird. Extend Telluride from Whitman to A Street. and have it connect south of the development that it currently comes into. This will alleviate the traffic problems at Loop 25 and A Street. | 0 | 0 | 32.055589 | -102.100929 |
| 12/29/2023 17:43 | Other Traffic Safety Concern | The City should extend the reliever route east to connect to Fairgrounds Road. This would relieve the traffic at 349 and Loop 250. It would take the majority of truck traffic east. This would open development north of Oxy and east of Lamesa Road. | 0 | 0 | 32.09663 | -102.095306 |
| 12/29/2023 17:47 | Other Traffic Safety Concern | Accelerate row of way acquisition for Todd Road going north. This could move up completion of Loop 250. Not pursuing this means that when this comes up in 2035 you will hinder letting of the overpass here. | 0 | 0 | 32.053846 | -102.046661 |
| 12/29/2023 17:51 | Other Traffic Safety Concern | Right of way is acquired. Schematics are done; TXDOT is waiting on the City to extend Briarwood. This is one of the intersections that will prove to be regrettable the longer it is postponed. | 0 | 0 | 32.014679 | -102.210469 |
| 12/29/2023 17:58 | Other Traffic Safety Concern | Place this road in the MPO MTP for TXDOT to look into acquiring it. | 0 | 0 | 31.941004 | -102.137967 |

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| 12/29/2023 18:03 | Other Traffic Safety Concern | Extend the road north and connect to Ainsley east. This should increase development. This will add access to the schools that will be built in this area. | 0 | 0 | 31.946986 | -102.173145 |
| 12/29/2023 18:31 | Other Traffic Safety Concern | Extend Stokes from Garfield to Rankin Hwy. Be prepared for work on Rankin Hwy and I-20. Don't create the problem like the extension of Harris between Midkiff and Garfield. I would be interested in the effect of the lack of this road on the Petroleum Museum and the Horseshoe as well as the visitor's center. | 0 | 0 | 31.973534 | -102.090634 |
| 12/29/2023 18:35 | Other Traffic Safety Concern | Close this railroad crossover as there is not enough traffic to make it a viable maintenance project. | 0 | 0 | 31.98995 | -102.085771 |
| 12/29/2023 18:39 | Other Traffic Safety Concern | Can't understand why the Transportation Dept. will not maintain the roads on Airpark. The Airport Department does not have the equipment to fill the potholes. This has been reported and the request closed without action at least 2 times. If you are waiting on a bridge to be built to Airpark there will be progress from multiple potholes to one huge hole. | 0 | 0 | 32.034689 | -102.095927 |
| 12/29/2023 18:46 | Other Traffic Safety Concern | Ever thought about extending a ring road to the north from A Street. If you build a bridge over the draw then change the entry to Airpark as well using this as a time for change. "A" Street could intersect with the South Service road and create another thoroughfare to go south into town. | 0 | 0 | 32.034591 | -102.094177 |
| 12/29/2023 18:50 | Other Traffic Safety Concern | Ever approached TxDoT about a roundabout. | 1 | 0 | 31.97286 | -102.003348 |
| 12/29/2023 18:52 | Other Traffic Safety Concern | Purchase Right of Way here and extend CR 120. | 0 | 0 | 31.952707 | -102.088609 |
| 12/29/2023 18:57 | Other Traffic Safety Concern | Purchase these 5 houses and extend 1130 south. | 0 | 0 | 32.004881 | -101.978056 |
| 12/29/2023 19:00 | Other Traffic Safety Concern | Pave CR 1040 to Martin County Line | 0 | 0 | 32.047421 | -101.830511 |
| 12/29/2023 19:03 | Other Traffic Safety Concern | Create Ranger Avenue to connect Greenwood High School to the new elementary school. | 0 | 0 | 32.007408 | -101.921688 |
| 12/29/2023 23:22 | Other Traffic Safety Concern | Double turn lane (no one uses just one lane) on holiday hill and people running the red light going south on loop access road are very dangerous and have barely avoided several accidents. | 0 | 0 | 32.015745 | -102.158169 |
| 12/30/2023 11:25 | Other Traffic Safety Concern | We need a turning lane | 0 | 0 | 31.93939 | -101.884017 |
| 12/31/2023 12:19 | Other Traffic Safety Concern | Mockingbird needs to be completed between Garfield and A Street, despite Polo Club blocking the direct path. | 1 | 0 | 32.055481 | -102.101279 |
| 12/31/2023 12:23 | Other Traffic Safety Concern | There should be a double left turn from the westbound Loop 250 Frontage road onto southbound Garfield. This would fix the left lane backing up all the way onto the loop off ramp. | 1 | 0 | 32.038348 | -102.11269 |
| 12/31/2023 12:26 | Other Traffic Safety Concern | There should be a double left turn from the westbound Loop 250 Frontage road onto southbound Midland Drive. That would alleviate much of the line of cars that backs up onto the loop exit ramp. | 2 | 0 | 32.029471 | -102.145622 |
| 12/31/2023 12:28 | Other Traffic Safety Concern | There should be a double left turn from the loop frontage road onto eastbound Wadley. Traffic backs up here with people wanting to turn left | 1 | 0 | 32.011904 | -102.158947 |
| 12/31/2023 12:31 | Other Traffic Safety Concern | Vehicles on the westbound Loop 250 Frontage road should not have to yield when turning right to go north on A Street. It is not intuitive, and can allow cars to block the right lane of the westbound Loop 250 Frontage Rd. | 1 | 0 | 32.042246 | -102.09637 |
| 12/31/2023 12:54 | Other Traffic Safety Concern | Allowing HEB to build here would be a complete traffic disaster | 0 | 0 | 32.04185 | -102.087085 |
| 12/31/2023 12:58 | Other Traffic Safety Concern | There should be a double left turn from the westbound Loop 250 frontage onto southbound 349. | 0 | 0 | 32.044023 | -102.084795 |
| 12/31/2023 13:00 | Other Traffic Safety Concern | There should be a dedicated right turn lane here to go north on Midkiff | 0 | 0 | 32.031737 | -102.128568 |
| 10/27/2023 6:37 | Pedestrian Safety Issue | No infrastructure to protect pedestrians or cycling commuters | 4 | 0 | 32.040686 | -102.131717 |
| 11/1/2023 8:52 | Pedestrian Safety Issue | There are tons of dangerous loose dogs in the area including entire packs: given there's a school nearby, it's just a matter of time before something tragic happens. I've seen or been attacked by loose pitbulls and other aggressive dogs while walking down Pleasant, Pasadena, Bentwood, Leisure, Wilshire, Eire, Meadow, Burchill, and Versailles. Dog owners insist the barking, snapping, growling of their unleashed dogs isn't an issue. I stopped walking out of fear and calls to police go unanswered. | 5 | 0 | 31.975928 | -102.136953 |
| 11/1/2023 10:10 | Pedestrian Safety Issue | No cross walk or Pedestrian access across to new subdivision. Need to add this as a cross over. | 2 | 0 | 32.069802 | -102.069726 |

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| 11/1/2023 21:23 | Pedestrian Safety Issue | Sidewalks not clear on all streets forcing people into the road. | 0 | 0 | 32.020732 | -102.138637 |
| 11/2/2023 10:37 | Pedestrian Safety Issue | Sidewalks on Camarie Ave at Ward St terminate with no safe path to continue walking. | 1 | 0 | 32.020869 | -102.116281 |
| 11/2/2023 10:38 | Pedestrian Safety Issue | Sidewalks on W Shandon Ave at Ward St terminate without safe path to continue on Ward St. | 1 | 0 | 32.02004 | -102.115978 |
| 11/2/2023 10:38 | Pedestrian Safety Issue | There are many loose, aggressive dogs in this area. | 1 | 0 | 31.976752 | -102.133209 |
| 11/2/2023 10:39 | Pedestrian Safety Issue | Sidewalks on W Dengar Ave at Ward St terminate with no safe option to continue walking on Ward St. | 1 | 0 | 32.019217 | -102.115718 |
| 11/2/2023 10:41 | Pedestrian Safety Issue | Sidewalks along Cimmaron Ave are disjointed and make pedestrian travel difficult, especially at Ward St where there is no safe opportunity for foot traffic to continue. | 1 | 0 | 32.018476 | -102.115088 |
| 11/2/2023 10:42 | Pedestrian Safety Issue | Sidewalk on Lanham St is missing at the corner of Lanham St and W Shandon Ave. | 0 | 0 | 32.020729 | -102.111999 |
| 11/2/2023 10:43 | Pedestrian Safety Issue | Sidewalk is missing/disjointed on Lanham St at the Cimmaron Ave intersection. | 0 | 0 | 32.019519 | -102.111615 |
| 11/2/2023 10:46 | Pedestrian Safety Issue | Sidewalk on Lanham St is disjointed between Stanolind Ave and Gulf Ave preventing safe pedestrian travel. | 1 | 0 | 32.013558 | -102.109534 |
| 11/2/2023 11:31 | Pedestrian Safety Issue | Sidewalk on Sinclair Ave between Idlewilde Dr and Palo Duro Dr on the North side of Sinclair is missing making pedestrian traffic unsafe. | 0 | 0 | 32.002064 | -102.149946 |
| 11/2/2023 11:52 | Pedestrian Safety Issue | Speeding on W Illinois Ave and W Texas Ave make it very dangerous for the high school students who are walking on the sidewalks. | 2 | 0 | 31.999439 | -102.081467 |
| 11/2/2023 11:52 | Pedestrian Safety Issue | Speeding on W Illinois Ave and W Texas Ave make it very dangerous for the high school students who are walking on the sidewalks. | 3 | 0 | 31.998411 | -102.082169 |
| 11/3/2023 14:31 | Pedestrian Safety Issue | IDEA students are always crossing this road (across Lamesa) to get to their homes at the apartment complexes. No crossing infrastructure at all! Worries me since the speeds are higher, drivers aren't expecting pedestrians, and it's often darker due to lack of lighting, especially in the mornings and evenings. | 1 | 0 | 31.982451 | -102.059512 |
| 11/9/2023 8:31 | Pedestrian Safety Issue | Inattentive drivers do not yield to pedestrians in crosswalk. Similar lights/indicators needed to crosswalks on A street by the high school. | 2 | 0 | 31.997413 | -102.079157 |
| 11/17/2023 13:19 | Pedestrian Safety Issue | There's no sidewalk for pedestrians along Golden Gate. With the coming of the new YMCA, this will become a greater safety issue. | 1 | 0 | 32.025233 | -102.184846 |
| 11/18/2023 21:27 | Pedestrian Safety Issue | There needs to be a pedestrian cross light here for MHS students. It is very scary for them to cross. It leaves the onus on drivers to notice students crossing versus forcing them to stop. | 0 | 0 | 31.997795 | -102.084855 |
| 11/18/2023 21:28 | Pedestrian Safety Issue | There needs to be a pedestrian cross light here for MHS students. It is very scary for them to cross. It leaves the onus on drivers to notice students crossing versus forcing them to stop. | 2 | 0 | 31.996764 | -102.08456 |
| 12/10/2023 11:40 | Pedestrian Safety Issue | 5 loose dogs this morning, called police non emergency and was told that the worthless midland pigs won't do anything even though loose and dangerous dogs fall under title vi police regulations of the city of midland. there are children in the neighborhood and does one need to be mauled before the city does anything? | 1 | 0 | 31.975932 | -102.13294 |
| 12/26/2023 16:58 | Pedestrian Safety Issue | 307 is Greenwoods "Main Street", but there is little to no way to traverse without a car, and the speed limit is 60 all the way. A dedicated side road for the ATV's that people use would be beneficial to the residents of this suburb, and A decent bike/walk path would help some of the kids in the area walk to school, this would alleviate some of the before and after school pick up traffic caused by buses and such. More of a TXDot & GISD problem. | 0 | 0 | 32.027367 | -101.895921 |
| 12/26/2023 17:22 | Pedestrian Safety Issue | There should be a pedestrian bridge over 191. The people of Grasslands would benefit with the easy access to the HEB shopping area. | 1 | 0 | 31.997671 | -102.154391 |
| 12/27/2023 21:17 | Pedestrian Safety Issue | There needs to be speed bumps installed along Hughes St. to slow/deter the flow of traffic, to protect children playing in the neighborhood. | 2 | 1 | 32.012634 | -102.11483 |
| 12/28/2023 8:12 | Pedestrian Safety Issue | Students from the high school cross the road here through traffic creating a danger to themselves and the cars. | 0 | 0 | 32.01863 | -102.124532 |
| 12/28/2023 8:13 | Pedestrian Safety Issue | Sidewalks are inconsistent in this whole area on Wadley. | 0 | 0 | 32.021461 | -102.11807 |
| 12/28/2023 8:57 | Pedestrian Safety Issue | Aggressive drivers make pedestrian crossing at this intersection unsafe. | 1 | 0 | 31.997366 | -102.078088 |

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| 10/31/2023 18:13 | Red Light Running/ Stop Sign Issue | The South-side stop sign at this intersection is incorrectly placed. It confuses the traffic flow because cars leaving the hospital lot are not aligned with the other traffic at this four-way stop. | 0 | 0 | 32.006214 | -102.134005 |
| 10/31/2023 18:17 | Red Light Running/ Stop Sign Issue | Traffic has gotten so heavy on the frontage road that vehicles back up along A Street during afternoon "rush" because vehicles can't cross nor merge onto the frontage road. | 4 | 0 | 32.04197 | -102.09643 |
| 11/1/2023 9:22 | Red Light Running/ Stop Sign Issue | Red light running | 3 | 0 | 32.000113 | -102.111944 |
| 11/1/2023 10:00 | Red Light Running/ Stop Sign Issue | At 0730 it is a big issue speeding and light running also with traffic flow. People go across then U Turn to make a right avoiding light. | 2 | 0 | 32.059364 | -102.084167 |
| 11/1/2023 10:01 | Red Light Running/ Stop Sign Issue | Light needed here to control the traffic out of the new subdivisions people speed out and do not do 45 posted speed. | 3 | 1 | 32.063055 | -102.067666 |
| 11/1/2023 10:17 | Red Light Running/ Stop Sign Issue | This is the area where people U Turn in the mornings to avoid the left turn traffic. | 2 | 0 | 32.059166 | -102.084714 |
| 11/1/2023 10:21 | Red Light Running/ Stop Sign Issue | People making a Left hand turn to avoid the light here. This is very dangerous in the mornings mainly. This intersection already has had a couple of MVA's that I have seen. | 0 | 0 | 32.057402 | -102.083545 |
| 11/1/2023 11:04 | Red Light Running/ Stop Sign Issue | Morning "rush hour" issue. In addition to drivers making a U-turn to avoid waiting in the turn lane, drivers have now started to make a left turn from Mockingbird on the 349 southbound from the middle lane, which is for through traffic only continuing West on Mockingbird. There is not a second turn lane. | 2 | 0 | 32.059564 | -102.08436 |
| 11/2/2023 9:17 | Red Light Running/ Stop Sign Issue | This location after 10 P.M. stop light is out of sync. I will sit in the SB Lane for 10 minutes before the light will turn green for me, meanwhile the light heading NB has turned green to red 3 times over. I've seen many people run that light because of it. | 0 | 0 | 32.001824 | -102.136923 |
| 11/2/2023 10:32 | Red Light Running/ Stop Sign Issue | South and northbound drivers speed through the light after it is red daily. Cars turning left from Illinois to Midland frequently continue turning after the protected turn arrow turns red. | 0 | 0 | 31.987774 | -102.132425 |
| 11/2/2023 10:34 | Red Light Running/ Stop Sign Issue | At Anetta and Eisenhower, vehicles roll through the stop sign, barely slowing down. Henderson Elementary students cross here going to and from school. | 1 | 0 | 31.972549 | -102.13514 |
| 11/2/2023 13:24 | Red Light Running/ Stop Sign Issue | Drivers will not just roll but accelerate through the red lights on Wall Street, sometimes 2-3, well after the light has turned red. Many pedestrians crossing to access parking at Wilco are endangered by this, as well as drivers coming from Marienfeld. | 2 | 0 | 31.997397 | -102.079291 |
| 11/3/2023 14:26 | Red Light Running/ Stop Sign Issue | I take this route everyday to get my son to school and everyday there are multiple cars running the red light at this intersection (mainly on Big Spring). | 1 | 0 | 31.997404 | -102.078009 |
| 11/17/2023 9:41 | Red Light Running/ Stop Sign Issue | These stop signs would be better put to use elsewhere; nobody seems to read them. | 1 | 0 | 32.035824 | -102.160138 |
| 11/18/2023 7:28 | Red Light Running/ Stop Sign Issue | People are going straight through this light and then making u-turns in the apartments, on mockingbird and in the neighborhoods because the left turn lane to go south on Big Spring is so backed up. | 1 | 0 | 32.059307 | -102.085005 |
| 11/18/2023 7:29 | Red Light Running/ Stop Sign Issue | Wrecks here almost daily with people trying to turn left | 0 | 0 | 32.057311 | -102.083816 |
| 11/18/2023 8:01 | Red Light Running/ Stop Sign Issue | Beginning around 5:00 until around 7:00 traffic stays backed up all the way from the Loop to this intersection. Traffic will back up into the intersection because there is no where else to go. | 0 | 0 | 32.031491 | -102.146437 |
| 11/18/2023 10:12 | Red Light Running/ Stop Sign Issue | This light needs to have a turn signal. With the increase in traffic from midland college and hillander it's hard to make left turns coming out of the college. | 0 | 0 | 32.025478 | -102.100507 |
| 11/18/2023 21:22 | Red Light Running/ Stop Sign Issue | Need a traffic light here. Very dangerous. People do not obey stop sign. | 4 | 0 | 32.080244 | -102.072877 |
| 11/19/2023 3:29 | Red Light Running/ Stop Sign Issue | The light is ran all the time, drivers get in the far lane because they think they do not have to stop because Whitney dead ends into Andrews Highway. | 0 | 0 | 32.000893 | -102.114444 |
| 11/29/2023 9:07 | Red Light Running/ Stop Sign Issue | After school traffic can get aggressive here. Please consider making this a four-way stop. | 0 | 0 | 31.997627 | -102.054337 |
| 12/14/2023 18:02 | Red Light Running/ Stop Sign Issue | Needs a light. Trucks speed thru this intersection | 1 | 0 | 32.095906 | -102.096439 |
| 12/15/2023 1:45 | Red Light Running/ Stop Sign Issue | An issue with the traffic light trigger is readily apparent while stopped at the signal in the right-hand lane of the southbound terminus of Godfrey at Andrews Hwy. This occurs when no vehicles are present and stopped in the left-lane of Godfrey. Note: Eastbound traffic onto Andrews Hwy from the intersection of Godfrey include dual left-hand turn lanes. | 0 | 0 | 32.003752 | -102.128821 |
| 12/15/2023 4:38 | Red Light Running/ Stop Sign Issue | Sync this light better with the Wall intersection light. When this light is green, the one at Wall stays red too long causing this intersection to become cluttered | 0 | 0 | 31.992485 | -102.097997 |
| 12/15/2023 4:46 | Red Light Running/ Stop Sign Issue | Consider adding a left turn signal to this light coming off of Marienfeld onto Business 20. | 0 | 0 | 31.993335 | -102.079173 |

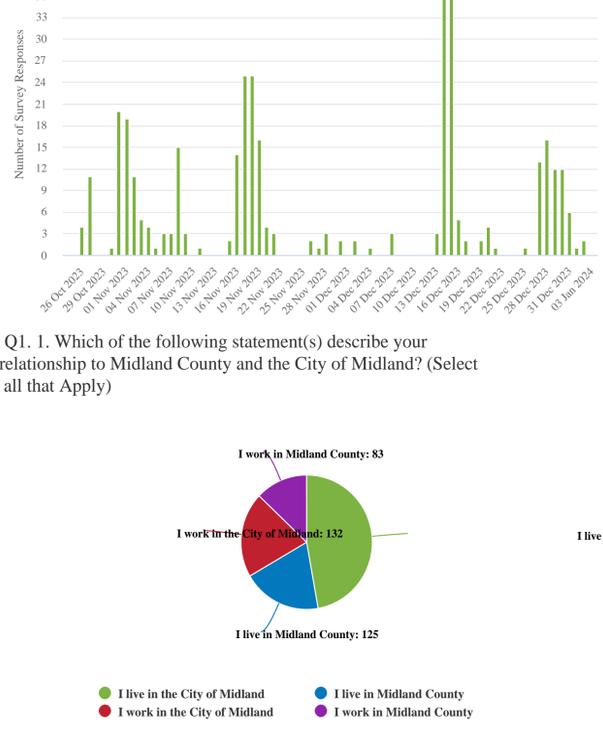
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| 12/15/2023 7:51 | Red Light Running/ Stop Sign Issue | The stop light at this intersection is inadequate for the amount of traffic. Inadequate turn lanes that allows proper flow of traffic. | 0 | 0 | 32.008335 | -101.978703 |
| 12/17/2023 21:27 | Red Light Running/ Stop Sign Issue | The lights and lanes for the North I-20 frontage road and Rankin intersection needs to be recalibrated so traffic doesn't back up on big spring St or up the I-20 exit ramp causing the interstate to back up. | 0 | 0 | 31.972797 | -102.074168 |
| 12/22/2023 21:58 | Red Light Running/ Stop Sign Issue | CR125 has 3 stop signs one after another that most residents and truckers use as a recommendation. For the size and condition of the road, a lower speed limit and getting rid of the stop signs (or 2 of them at least) would make this area more bearable to traverse through. | 0 | 0 | 31.948241 | -102.075379 |
| 1/1/2024 9:21 | Red Light Running/ Stop Sign Issue | Drivers making a left turn from Northbound 158 to Westbound I-20 Service Road run the red light almost every cycle. I see 2, 3 or 4 cars turn after my light (straight through, Southbound 158) has turned green almost every time I use this intersection. People making that same left, from the right lane, is also very common. Increased enforcement at this intersection is requested. | 0 | 0 | 31.982899 | -102.039084 |
| 11/1/2023 10:15 | Signage/ Striping Maintenance | Code Dept. need to Enforce Alley Maintenance by home owners. Many Alley ways are not kept up and overgrown behind various houses in Adobe meadows and surrounding subdivisions with an Alley. | 1 | 0 | 32.062564 | -102.079103 |
| 11/2/2023 11:48 | Signage/ Striping Maintenance | Drivers frequently drive the wrong way down W Texas Ave. We need bigger signage and much greater quantities of signs, perhaps arrows on the road. With speeding traffic on W Texas Ave, this is a recipe for a very dangerous accident. | 5 | 0 | 31.998427 | -102.080007 |
| 11/9/2023 8:27 | Signage/ Striping Maintenance | There isn't a marked turning lane here, but vehicles move to the shoulder to the right of through traffic to turn right onto Wadley. If this is the intention, it needs to be striped so that vehicles are fully in one lane or the other. Turning drivers frequently block the through traffic and vise-versa. | 2 | 0 | 32.015736 | -102.14132 |
| 11/17/2023 15:25 | Signage/ Striping Maintenance | Repaint faded lane and directional pavement markings at W Ohio Ave and Kent St. | 2 | 0 | 31.996556 | -102.101216 |
| 11/17/2023 15:29 | Signage/ Striping Maintenance | Repaint faded lane and directional pavement markings on S. Main St., at intersection of S. Main St. and E. Front St. | 0 | 0 | 31.996021 | -102.074316 |
| 11/18/2023 21:23 | Signage/ Striping Maintenance | The lanes are not marked and lead to accidents due to people not knowing there is a dedicated turn-left lane. | 2 | 0 | 32.080272 | -102.072724 |
| 11/20/2023 15:34 | Signage/ Striping Maintenance | The lane is wide enough for a right turning lane so cars try squeeze by. This area needs to be painted as a turn lane or not. | 1 | 0 | 32.016018 | -102.14159 |
| 11/20/2023 15:38 | Signage/ Striping Maintenance | The turning lanes have two different broken lines to direct the traffic through the intersection. Which line is the intended path of travel? | 0 | 0 | 32.031745 | -102.146609 |
| 11/23/2023 10:04 | Signage/ Striping Maintenance | People are Dumping dog poop in alley ways all up and down this area. This is getting to be a health hazard. | 1 | 0 | 32.063313 | -102.079756 |
| 11/28/2023 19:22 | Signage/ Striping Maintenance | People do not understand double white lines. Needs more signage to show "stop crossing solid white lines". People are impatient and start crossing earlier and earlier as they exit loop 250. Busy traffic in front to the PETSMART | 1 | 0 | 32.030631 | -102.143513 |
| 11/28/2023 19:25 | Signage/ Striping Maintenance | People are crossing the solid white lines as soon as they start exiting the loop in front of Havertys and the Petsmart. Need more signage to not cross solid white lines on the service road. This maybe a TXDOT issue and not the City | 2 | 0 | 32.030754 | -102.142836 |
| 12/15/2023 7:48 | Signage/ Striping Maintenance | 1130 between I20 and 307. Is extremely high volume, very poor conditions, traffic travel at high rates of speed with no lane striping. This needs to be a 4 lane road. Until then the road needs serious repair. | 0 | 0 | 32.010378 | -101.979604 |
| 12/22/2023 22:17 | Signage/ Striping Maintenance | Fairgrounds South of this Golf Course Intersection NEEDS repaving | 0 | 0 | 32.020999 | -102.054169 |
| 12/26/2023 17:15 | Signage/ Striping Maintenance | Putting a "Road may Flood" sign doesn't fix the floods. There is going to be more rain, Midland needs to realize that and fix drainage issues everywhere in the county. | 0 | 0 | 32.000499 | -102.012126 |
| 12/27/2023 10:28 | Signage/ Striping Maintenance | Needs new striping. Can't see any striping at all in this intersection in the turn lane out of Walgreens parking lot. | 0 | 0 | 31.994345 | -102.099292 |
| 12/27/2023 10:32 | Signage/ Striping Maintenance | Huge pot holes here need to be filled in. | 1 | 0 | 32.001846 | -102.114208 |
| 12/28/2023 5:08 | Signage/ Striping Maintenance | The Entire street from Hillander School to HEB needs to be redone, it's as if we are too close to each other and going off roading for the amount of bumps there are | 2 | 0 | 32.022961 | -102.111005 |

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| 1/1/2024 9:10 | Signage/ Striping Maintenance | Trucks Entering/Exiting Highway sign needed. 1 Fatality accident and 1 injury accident happened at this yard in the last year. Both times trucks were making a left turn into the yard and the trailers were struck by northbound vehicles at highway speeds. | 0 | 0 | 31.965721 | -101.977501 |
| 10/27/2023 6:33 | Speeding Issue | Some speed control would be great here in the form of speed bumps or other. This area has grown into a residential community and too many cyclist and pedestrians have to commute next to vehicles traveling 60+ | 6 | 0 | 32.024514 | -102.169032 |
| 10/31/2023 17:32 | Speeding Issue | People DO not drive 40 on this road. | 3 | 0 | 32.029151 | -102.181635 |
| 11/1/2023 10:02 | Speeding Issue | People speed out and down this area from APT's and also from the new subdivisions. Already one fatality from speeding here. | 1 | 0 | 32.061146 | -102.076228 |
| 11/1/2023 10:08 | Speeding Issue | No one coming down this road obeys speed limits. When we walk and try to cross over People are speeding 10 to 15 Mph over the limits. More controls are needed before a pedestrian fatality occurs here also. New Houses will cause a wreck here also. | 3 | 0 | 32.069765 | -102.069554 |
| 11/1/2023 10:19 | Speeding Issue | People speeding down and across the intersection toward A Street from North Big Spring all the way to A Street is very dangerous in the mornings. | 0 | 0 | 32.059116 | -102.085288 |
| 11/2/2023 10:36 | Speeding Issue | In general drivers speed on Beal Parkway from W Wall to Anetta, but on weekends, drivers make laps speeding and driving recklessly. | 1 | 1 | 31.96482 | -102.139828 |
| 11/2/2023 10:45 | Speeding Issue | Lots of speeding in the school zone during school hours. Drivers weave around others and drive erratically. | 0 | 0 | 32.001785 | -102.083716 |
| 11/2/2023 10:48 | Speeding Issue | Speeding on Wadley is generally very prevalent, but from Garfield to Fairgrounds is the worst-- even doing 5-10 over to try to stay with the flow of traffic, drivers are still blowing past at 55-60. | 3 | 1 | 32.026461 | -102.096076 |
| 11/2/2023 11:07 | Speeding Issue | Drivers on Wydeewood Dr are frequently speeding in excess of 15 mph over the posted speed limit of 30 mph. This is a hazard to pedestrians and property owners alike. When Rusk Elementary is dismissed from classes, the problem is especially dangerous for the children walking home from school. | 1 | 0 | 32.011201 | -102.146632 |
| 11/2/2023 11:51 | Speeding Issue | Speeding on W Texas Ave is truly a danger to anyone nearby. The way the MHS students in particular drive on W Texas Ave makes me wish they would take away off campus lunch. | 3 | 0 | 31.998418 | -102.081291 |
| 11/3/2023 14:18 | Speeding Issue | During LHS lunch and afterschool, there is an abundance of drivers speeding down this street. We've called the police before but it's a consistent problem. Even during Halloween with kids walking the neighborhood people were flying down the street! There was an accident a few years back due to speeding in the area and I don't want it to happen again. | 1 | 0 | 32.015158 | -102.130376 |
| 11/10/2023 13:16 | Speeding Issue | Eastbound traffic entering from County Road 50 regularly exceed the speed limit of 30 mph. | 0 | 0 | 32.03522 | -102.187464 |
| 11/17/2023 10:00 | Speeding Issue | School zone speed limits ignored, even more unsafe with cars parked on street most days. | 1 | 0 | 32.030704 | -102.077848 |
| 11/18/2023 7:30 | Speeding Issue | People are constantly speeding down mockingbird. | 0 | 0 | 32.059274 | -102.085186 |
| 11/18/2023 7:48 | Speeding Issue | Speeding well above speed limits all along this road. | 1 | 0 | 32.030235 | -102.186499 |
| 11/18/2023 7:48 | Speeding Issue | Need stop light with heavy traffic it seems very dangerous most mornings | 0 | 0 | 31.999947 | -102.14523 |
| 11/18/2023 7:48 | Speeding Issue | Speeding well above speed limits all along this road. | 1 | 0 | 32.040458 | -102.184997 |
| 11/18/2023 9:07 | Speeding Issue | This is a tough spot to turn out. It's high speed which moves to lower speed area. No one slows down. The apartments are u turning or pulling out and you have heritage oaks people turning out in the same spot. A stop light here would help this intersection. | 1 | 0 | 32.02254 | -102.177347 |
| 11/18/2023 10:47 | Speeding Issue | Drivers speed down this alley. The driveways on one side are blind and there's an elementary school on the other side. | 0 | 0 | 32.023809 | -102.139796 |
| 11/18/2023 21:16 | Speeding Issue | Having a longer turn-right lane would allow vehicles to slow down more efficiently and not have to take fast, sharp turns into the neighborhood. | 1 | 0 | 32.073666 | -102.088799 |
| 11/27/2023 8:06 | Speeding Issue | In addition to a light, please consider reducing the speed limit around this area. Commercial traffic makes it difficult for residents to safely exit the neighborhood. The frustration of waiting for an opportunity to turn left has us making dangerous turns. | 1 | 0 | 32.080716 | -102.091243 |
| 12/14/2023 18:04 | Speeding Issue | Need a light here. Speeding on 349 is a hazard for turning at occidental | 0 | 0 | 32.081487 | -102.090919 |

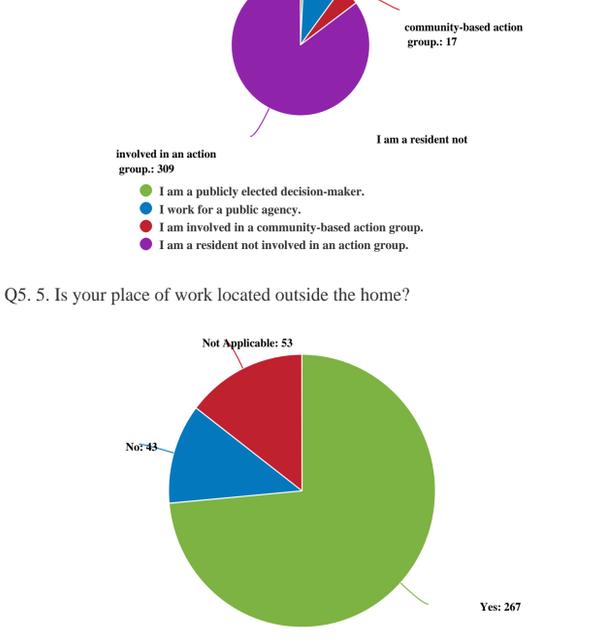
| | | | | | | |
|------------------|---------------------------|--|---|---|-----------|-------------|
| 12/15/2023 4:50 | Speeding Issue | 1788 needs to be 4 lanes for at least a couple of miles south of I20. I have pictures and videos of 18 wheelers passing the traffic jam across the double yellow line in the wrong lane! They are always speeding to try to get to the turning lane, which is very short. I am surprised there have not been more serious accidents but I have seen cars coming from I20 get run off the road. It is a difficult area to patrol and I have seen few sheriff vehicles trying. | 0 | 0 | 31.898437 | -102.211239 |
| 12/15/2023 7:53 | Speeding Issue | Speed limit is 40. Most traffic including the semi trucks run 60-70. On a road that is full of pot holes and bad disrepair. | 0 | 0 | 32.012252 | -101.980119 |
| 12/27/2023 20:39 | Speeding Issue | Drag racing nearly every day | 0 | 0 | 31.938925 | -102.15502 |
| 12/27/2023 20:41 | Speeding Issue | Need bike lane from The Field's Edge to Antelope Trail. When we are at full capacity (100 homes) there will be a lot of bikes. | 0 | 0 | 31.939562 | -102.153668 |
| 12/27/2023 21:04 | Speeding Issue | There is a huge speeding problem here, daily. This needs to be seriously addressed before I child is injured or killed by a speeding vehicle in this neighborhood. Speed bumps would be highly appreciated to slow/deter the flow of traffic traveling along Hughes St. | 0 | 0 | 32.01297 | -102.114948 |
| 12/27/2023 21:12 | Speeding Issue | This intersection is congested with most turns "across traffic". And people approaching have no regard for speed or courtesy. | 0 | 0 | 32.026738 | -102.14494 |
| 12/27/2023 21:16 | Speeding Issue | Speed bumps need to be installed here before a child is injured or killed by speeders from the school. | 1 | 0 | 32.012579 | -102.114959 |
| 12/27/2023 21:53 | Speeding Issue | Major cut through with excessive speeding | 1 | 0 | 32.014753 | -102.097836 |
| 12/28/2023 9:02 | Speeding Issue | Speeding on Tradewinds makes it difficult and dangerous to enter and exit businesses. | 0 | 0 | 31.985388 | -102.157166 |
| 12/29/2023 23:17 | Speeding Issue | Racing or loud mufflers cars running down holiday hill. | 0 | 0 | 32.019393 | -102.160497 |
| 10/31/2023 16:11 | View Blocked When Turning | Can't see when I try to turn left | 0 | 0 | 31.996786 | -102.117359 |
| 10/31/2023 16:13 | View Blocked When Turning | view of on coming traffic is blocked | 0 | 0 | 31.999496 | -102.018566 |
| 10/31/2023 17:28 | View Blocked When Turning | Can't see due to Kent Quik landscape. | 0 | 0 | 32.035429 | -102.130159 |
| 10/31/2023 18:11 | View Blocked When Turning | The yard wall with shrubbery is right up to Godfrey, so a driver heading West on Shell cannot see southbound traffic on Godfrey. | 0 | 0 | 32.006635 | -102.129491 |
| 11/1/2023 8:07 | View Blocked When Turning | The cacti fully block the oncoming W Louisiana Ave traffic when stopped at the San Angelo St stop sign. | 0 | 0 | 32.003422 | -102.083131 |
| 11/1/2023 10:13 | View Blocked When Turning | Multiple vehicles are blocking intersections at various times. Current code is not being enforced as people park too close to intersections which I have seen several near misses here due to trucks obstructing view at stop at corners. People are also not street parking with the flow of traffic. | 0 | 0 | 32.062637 | -102.078266 |
| 11/1/2023 10:16 | View Blocked When Turning | Apartment complex here needs to take down or remove vegetation plants etc. as these obstruct the safe view from the east side of the intersection. | 0 | 0 | 32.060753 | -102.077472 |
| 11/2/2023 9:23 | View Blocked When Turning | These bushes or trees on the corner make it impossible to see traffic coming from the South | 0 | 0 | 32.000664 | -102.136371 |
| 11/2/2023 9:25 | View Blocked When Turning | I believe this location would benefit from a four-way stop. The vehicles parked on the side of the road in either direction of Louisiana makes it extremely difficult to cross through that stop sign sure that we aren't going to get T-boned by a car going 30+ miles an hour (because that is an issue) | 0 | 0 | 31.992643 | -102.124947 |
| 11/2/2023 10:35 | View Blocked When Turning | When South bound on N Pecos St crossing Neely Ave, you cannot see the oncoming West bound traffic on Neely Ave. | 0 | 0 | 32.021582 | -102.085397 |
| 11/2/2023 11:11 | View Blocked When Turning | When North bound on Dentcrest Dr at W Wadley Ave, it is very difficult to see the East bound traffic on W Wadley without pulling into the intersection. | 0 | 0 | 32.014337 | -102.147322 |
| 11/3/2023 14:25 | View Blocked When Turning | Hard to see oncoming traffic when facing south, turning left onto Texas. The curves make it so you can't see if anyone is coming around the bend, and if there are cars in the opposite turn lane it completely blocks your view to safely turn. | 0 | 0 | 31.994497 | -102.099059 |
| 11/17/2023 9:47 | View Blocked When Turning | Fence. | 0 | 0 | 32.04197 | -102.158711 |
| 11/17/2023 10:03 | View Blocked When Turning | Semi-blind turns, made more dangerous by people that won't stop at a crossing. | 0 | 0 | 32.013668 | -102.157263 |
| 12/13/2023 23:15 | View Blocked When Turning | This is a very dangerous curve. Honestly the street should be straightened. But a 'No Parking' zone along the curve would help greatly. | 0 | 0 | 32.004901 | -102.14133 |
| 12/29/2023 4:49 | View Blocked When Turning | Tree obstruction to the left | 0 | 0 | 32.021752 | -102.125651 |

| | | | | | | |
|------------------|---------------------------|--|---|---|-----------|------------|
| 12/31/2023 11:59 | View Blocked When Turning | When turning left from northbound 349 onto westbound Mockingbird, if there are vehicles in the turn lane on the other side of the intersection, it is too difficult to see if oncoming traffic is coming. The vehicles in the opposite turn lane block your view of oncoming traffic, which is often moving very fast. | 0 | 0 | 32.059201 | -102.08421 |
|------------------|---------------------------|--|---|---|-----------|------------|

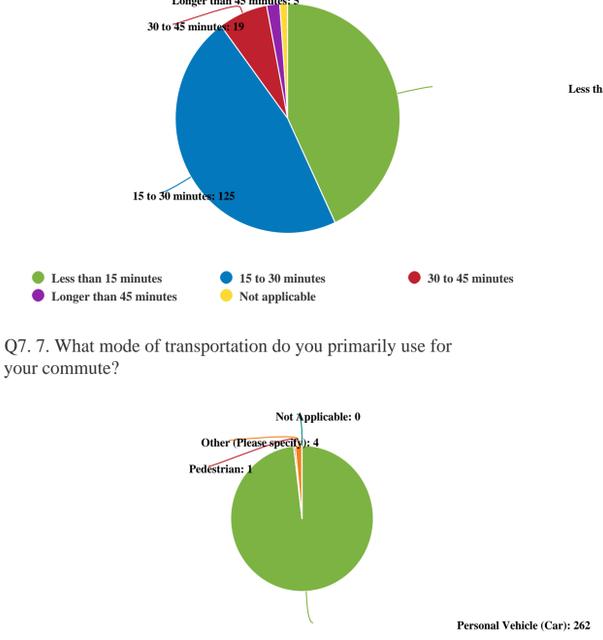
Number of Survey Responses by Day



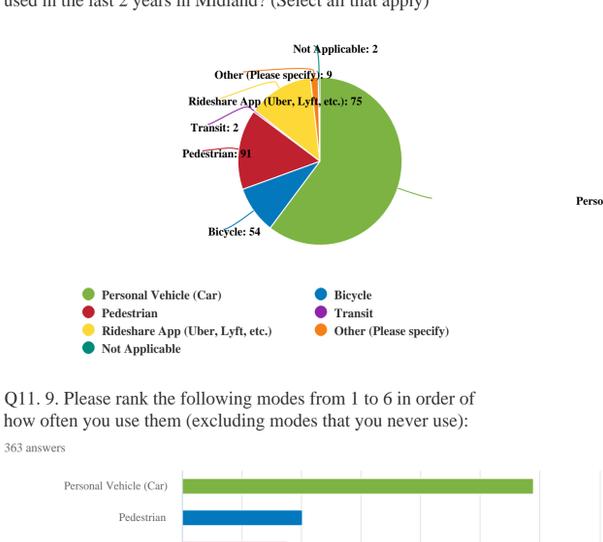
Q1. 1. Which of the following statement(s) describe your relationship to Midland County and the City of Midland? (Select all that Apply)



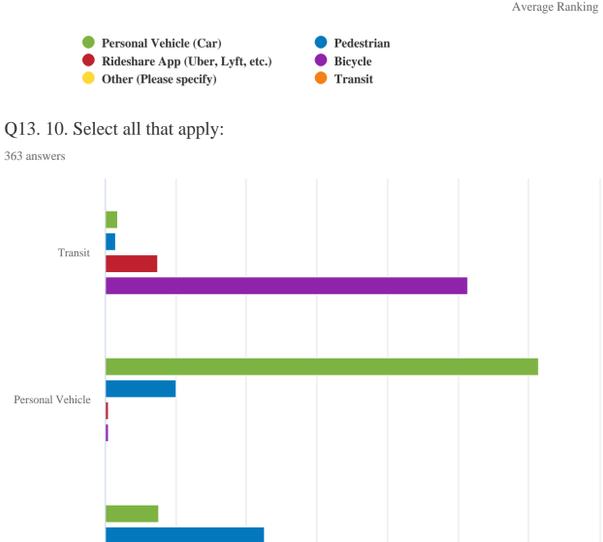
Q4. 4. Which of the following describes your relationship to public decision-making?



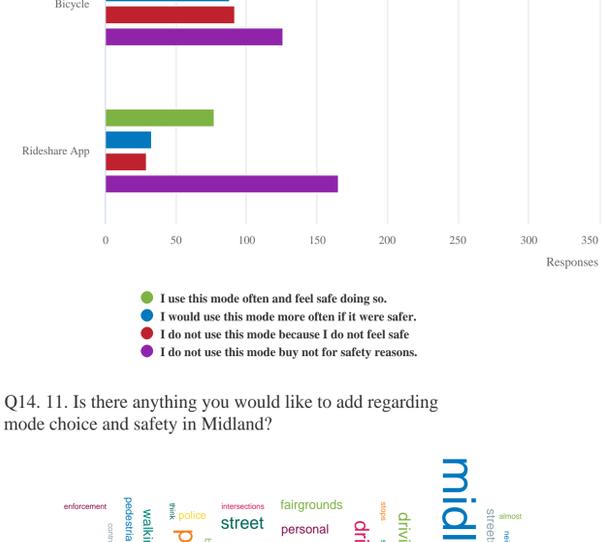
Q5. 5. Is your place of work located outside the home?



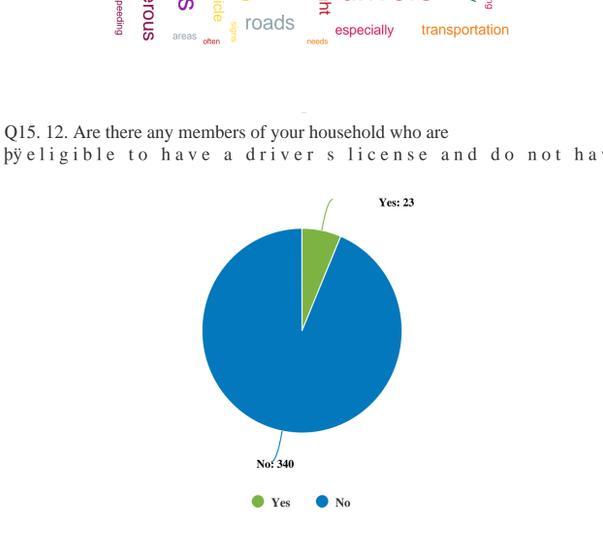
Q6. 6. How long is the commute to your workplace?



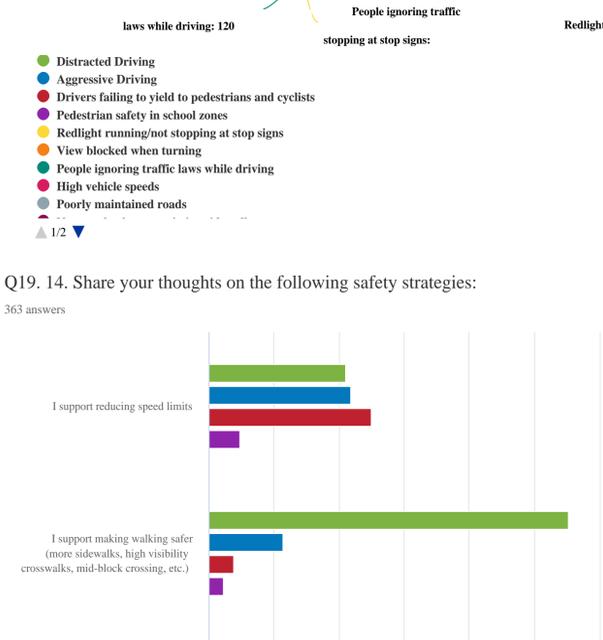
Q7. 7. What mode of transportation do you primarily use for your commute?



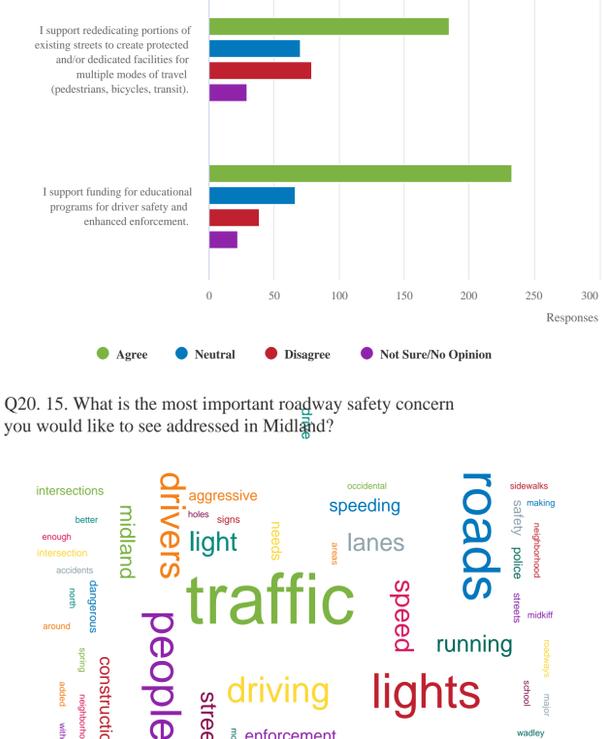
Q9. 8. Which of the following modes of transportation have you used in the last 2 years in Midland? (Select all that apply)



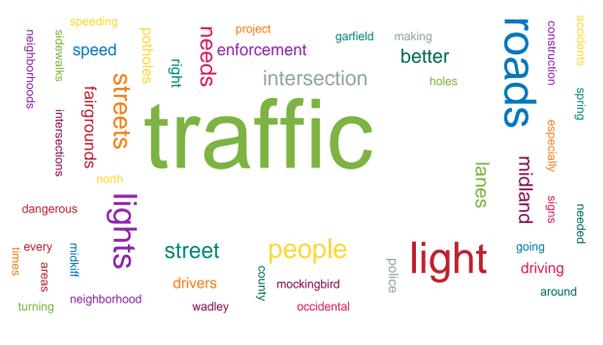
Q11. 9. Please rank the following modes from 1 to 6 in order of how often you use them (excluding modes that you never use):



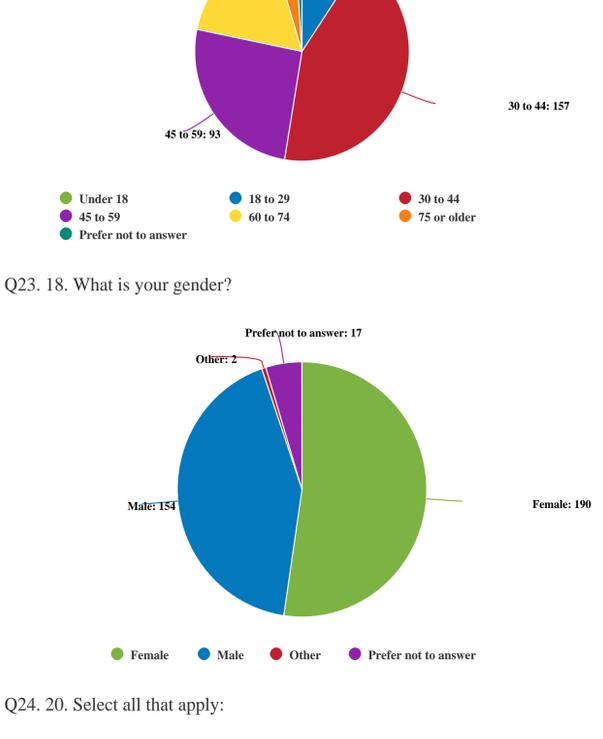
Q13. 10. Select all that apply:



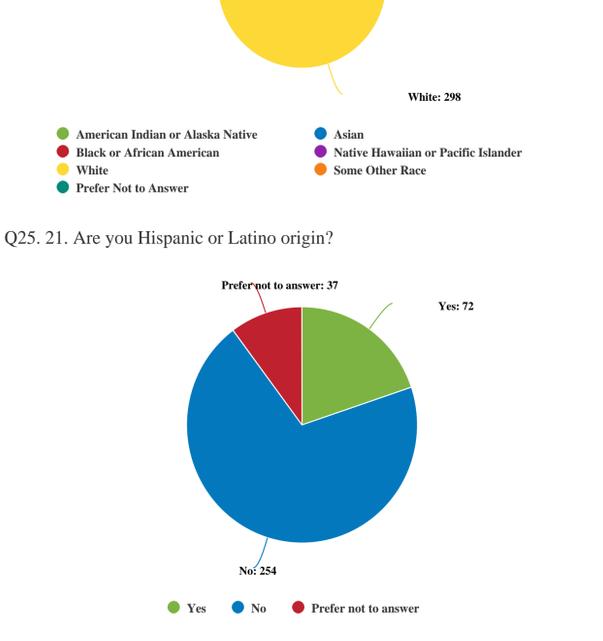
Q15. 12. Are there any members of your household who are eligible to have a driver's license and do not have one?



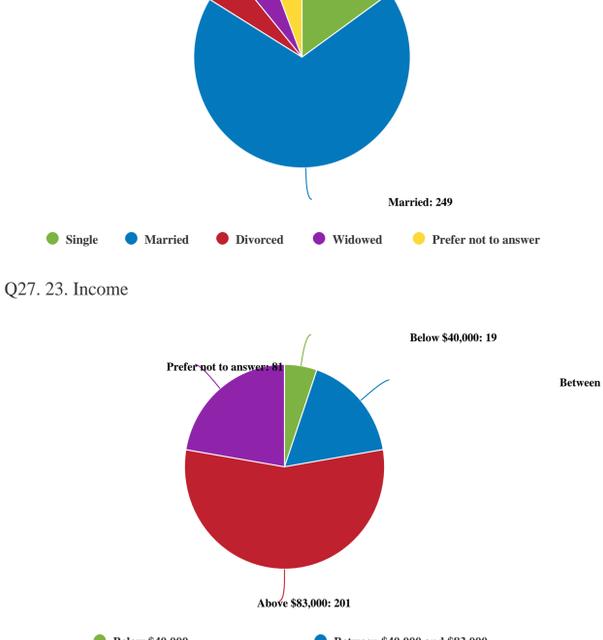
Q18. 13. What are your top (3) traffic safety concerns for Midland? (Choose 3)



Q19. 14. Share your thoughts on the following safety strategies:



Q20. 15. What is the most important roadway safety concern you would like to see addressed in Midland?



Q21. 16. Are there any other specific opportunities to improve roadway safety in the region that you would like to see addressed?

Q22. 17. Please select your age range:

Q23. 18. What is your gender?

Q24. 20. Select all that apply:

Q25. 21. Are you Hispanic or Latino origin?

Q26. 22. Marital Status:

Q27. 23. Income

C. Field Observations Memorandum

MEMORANDUM

To: City of Midland, Texas

From: Monica Powell, AICP
Pete Kelly, P.E.
Mason Shoaf, EIT
Kimley-Horn and Associates, Inc.

Date: March 5, 2024

Subject: Midland City CSAP – Field Observations and Recommendations

OVERVIEW

The following memorandum provides a summary of the field observations and recommendations along each of the five study corridors as part of the Comprehensive Safety Action Plan (CSAP) for the City of Midland. Data collection details and efforts are also summarized.

IN-FIELD DATA COLLECTION

In February 2024, the project team along with City staff conducted in-field observations of the five study corridors to understand existing conditions and crash locations. The in-field observations were obtained by foot and vehicle as needed.

The field visit observation data was collected via mobile phones using the ArcGIS Field Maps app (**Figure 1**). This allowed the team to review crash data and compare to existing conditions while in the field. Field notes and photos were logged in the mobile app to geo-tag the field observations to the correct locations. The observations were grouped into two categories: corridor-wide and intersection-focused for each of the study corridors.

Figure 1. Mobile Crash Data and Notes



CITY-WIDE OBSERVATIONS

The following observations were made at the city-wide level for all study corridors:

Pedestrian Crossings at Signalized Intersections

Crosswalk striping at signalized intersections were often observed to be either missing or fading and hard to differentiate between the existing pavement. It is recommended to restripe or add pedestrian crosswalks at all signalized intersections located within the study corridor limits. Strategic striping at non-signalized intersections will be outlined in the corridor-level observations and recommendations. **Figure 2** shows missing crosswalk striping and pedestrian signals from the west leg of the Wadley Avenue & Godfrey Street intersection and **Figure 3** shows no crosswalk striping at Andrews Highway & Wall Street.

Figure 2. No Crosswalk Striping or Pedestrian Signal



Figure 3. No Crosswalk Striping



Signal Equipment

Observations found that the majority of signal equipment along the study corridors was outdated or even missing. This included pedestrian signal heads, crossing signs, push buttons, radar detection, and reflective backplates at signal heads.

A few intersections had pedestrian signal equipment, but the majority did not have safe crossings for vulnerable road users. Sun glare at various times of day were observed to obstruct view of signal heads clearly and City staff also mentioned this caused issues with typical camera detection. It is recommended to install or upgrade all signalized intersections to include pedestrian signal heads and crossing signs, which are accompanied by push buttons to make safe crossings. It is also recommended to install reflective backplates at each signal head to increase better visibility for drivers. Finally, it is recommended to upgrade vehicle detection to radar detection to better optimize signal operations through each corridor.

1. WADLEY AVENUE

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Wadley Avenue:

Driveway Access and Turning Conflicts

Wadley Avenue is a high-volume roadway with a mixture of commercial, school, and residential land uses. There is a high density of driveways providing access to commercial businesses and residences via the center turn lane. It was also noted that the drainage for Wadley Avenue runs within the center turn lane. It is recommended to perform a roadway reconfiguration to reduce the travel lanes from seven to five. In addition, to install a median to manage access throughout the corridor. It is recommended to keep full access at the following intersections:

- Mark Lane
- Midland Drive
- Nelson Road
- Greenbriar Drive
- Wedgwood Street
- Godfrey Street
- Jordan Avenue
- Tarleton Street
- Maxwell Drive
- Midkiff Road

Strategic hooded left-turns are recommended into Bush's Chicken, Albertson's, Kent Kwik, the Trinity School, and dual hooded left-turns at Providence Drive. The remaining intersections and driveway access points are recommended to right-in and right-out only due to the median.

Sidewalks and Ramps

Ramps at residential driveways along the south side of Wadley Avenue have steep slopes and prevent safe travel for users with mobility impairments (**Figure 4**). The sidewalk is also constructed directly on the back of curb to the travel way of Wadley Avenue. It is recommended to construct a buffer between the back of curb and the sidewalk as part of the roadway reconfiguration.

A utility pole was observed in the travel way and ramp of the sidewalk between Ferncliff Avenue and Greenbriar Road (**Figure 5**). It is recommended to relocate the utility pole to outside the travel way and clear the sidewalk for pedestrians and vulnerable road users.

Figure 4. Steep Ramp Slope at Driveway



Figure 5. Utility Pole Impeding Sidewalk



Pavement Striping

Pavement striping, along the corridor, was observed to be extremely faded which made it difficult to distinguish travel lanes. It is recommended to restripe travel lanes throughout the corridor to improve visibility for all lighting and weather conditions.

Intersection Observations and Recommendations

The following observations were made at the intersection-level along Wadley Avenue:

Midland Drive Intersection

Pavement around the signal cabinet on the southeast corner was observed to be deteriorated and not easily traversable for pedestrians (**Figure 6**). It's recommended to repave the sidewalk and pedestrian area. In addition, it is recommended to reevaluate the signal timing for dilemma zones as left-turning crashes were observed in the data.

Figure 6. Pavement Damage near Ramp



Godfrey Street Intersection

It was observed that a pedestrian push button was not functioning and also missing a push button for crossing both Wadley Avenue and Godfrey Street (**Figure 7**). It is recommended to install and update pedestrian push buttons for all approaches of the intersection.

Figure 7. Faulty Pedestrian Push Button



Midkiff Road Intersection

It was observed that ramps at the intersection were not ADA compliant and it is recommended to upgrade the pedestrian ramps to meet ADA compliance and provide better access for vulnerable users.

2. FAIRGROUNDS ROAD

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Fairgrounds Road:

Illumination

It was observed that illumination was present on the east side of the roadway along Fairgrounds Road; however, was missing from the west side. It is recommended to increase illumination along the study corridor for enhanced visibility. This would increase visibility for the shared use path on the west side of the roadway.

Rumble Strips and Speed Management

Fairgrounds Road is a five-lane undivided roadway with a center turn lane. It is recommended to install longitudinal rumble strips along the center turn lane to assist vehicles in maintaining travel to the main lanes.

The posted speed limit along the corridor is 50 mph, however, the design of the road allows for speeding without restrictions. It is recommended to install speed feedback signs at the midway point between Loop 250 and Wadley Avenue to alert drivers of travelling of the speed limit.

Intersection Observations and Recommendations

The following observations were made at the intersection-level along Fairgrounds Road:

Loop 250 Interchange

Based on input from the City and observations at the Loop 250 interchange, the signal timing favors a long cycle length. This often results in red light running due to long wait times and impatience for drivers. It is recommended to update the signal timing at the interchange to remove minimum recall and providing more green time for approaches.

Wadley Avenue Intersection

Based on information provided by the City, a future high school for the City of Midland will be constructed on the southwest corner of Wadley Avenue and Fairgrounds Road. With increased pedestrian and vehicular activity in the area, it is recommended to refresh the existing crosswalk striping at the intersection. Pedestrian push buttons and crossing signs were observed and function at each leg of the intersection.

3. ANDREWS HIGHWAY

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Andrews Highway:

Pavement Striping

The pavement striping for travel lanes, stop bars, and turn lanes were observed to be very faded throughout the corridor. Sun glare on the pavement often made it difficult to maintain a vehicle within the travel lanes safely. It is recommended to restripe the whole corridor with high contrast pavement striping for better visibility in all lighting and weather conditions.

Signal Poles

Due to the geometry and orientation of Andrews Highway and intersecting grid system roadways, intersections along the corridor often have skewed angles. It was observed that most of the signalized intersections along the study corridor are installed with a single pole with signal heads at skewed angles for the various approaches. It is recommended to replace the existing signal pole and heads and install conventional signal poles with signal heads at a 90-degree angle to the approach for less driver confusion.

Access Management

Based on coordination and input from City staff, the City is proposing to install a median from Illinois Avenue and Missouri Avenue. This would also close full-access to the Texas Avenue and Village Circle intersection and be a right-in/right-out only access, while also removing the existing signal. No dollars have been allocated for this improvement, but we do agree with City staff in installing a median for access management with many commercial and hospital accesses nearby.

Intersection Observations and Recommendations

The following observations were made at the intersection-level along Andrews Highway:

Midkiff Road Intersection

The stop bars at the intersection were observed to be in front of the intended crosswalk path, specifically at the west and north legs. It is recommended to move the stop bars behind the crosswalk and pedestrian path to provide an impeded path for vulnerable road users. The signal is currently under design with the City, which are requesting construction dollars in the next budget cycle.

Cessna Drive Intersection

The intersection is located directly across from the McDonald's site drives. The site drives are currently operating at one entering and one exiting to create a good traffic flow. With frequent access to the development, it is recommended to manage access along Andrews Highway. It is recommended to construct an S-median with a hooded southeast bound left-turn into Cessna Drive and a hooded northwest bound left-turn into the McDonald's entrance. This would make the McDonald's exiting driveway as right-out only.

Kansas Avenue Intersection

The intersection was observed to have limited sight distance for vehicles turning onto Andrews Highway from the southwest, which is caused by the major skewing of Kansas Avenue. Based on high volumes along the Andrews Highway and sight distance issues, it is recommended to conduct a signal warrant analysis at the intersection. City staff also concurred with this recommendation. To increase sight distance, it is recommended to also trim vegetation on the southwest corner.

The stop bar is located approximately 20 feet from the travel lanes and is not in a spot for vehicles to adequately see oncoming traffic before making a left or right-turn. It is recommended to move the stop bar forward while also reconfiguring the pedestrian ramp to be in front of the stop bar.

Ohio Avenue/Dodson Street Intersection

The intersection currently operates as a five-leg intersection with Ohio Avenue and Andrews Highway approaches as signalized. The Dodson Street leg is currently functioning with entering traffic from all other legs and right-out exit only onto Andrews Highway. The “pork chop” pedestrian island at Dodson Street has bulbs and faded striping. It is recommended to install a raised pedestrian island that provides refuge for pedestrians crossing the Dodson Street leg of the intersection with refreshed pavement markings. It is also recommended to stripe directional lane arrow markings along Dodson street to orient entering and exiting traffic to the commercial area to the south.

Wall Street Intersection

Andrews Highway transitions from four-lanes (south of Wall Street) to six-lanes (north of Wall Street). Travelling north, two travel lanes transitions to three travel lanes and it was observed that vehicles in the inside lane can transition to either of the two inside travel lanes on the north side of the intersection. It is recommended to realign the southbound approach to increase the positive left-turn offset, which would also remove one of the through lanes on the north side of the intersection. This allows for the northbound travelling vehicles to have a single lane to cross the intersection.

Based on City staff input, the northeast corner of the intersection has a sharp corner turn and improvements to increase the turn radius is recommended based on property acquisition. The City is also installing an eastbound right-turn lane and relocating the existing bus stop near the southwest corner of the intersection (**Figure 8**). It is also recommended to relocate and existing signal pole off the sidewalk path on the southwest corner of the intersection.

Figure 8. Bus Stop to Relocate



4. LAMESA ROAD

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Lamesa Road:

Access Management/Sidewalk

Lamesa Road, north of Florida Avenue, consists of many residential street intersections located approximately every 400 feet. South of Florida Avenue is a mixture of commercial, industrial, and residential land uses. Sidewalk gaps were observed in various spots throughout the corridor. It is recommended to install a median along the corridor with improved lighting in the median, buffer between edge lines and sidewalk, and also fill in sidewalk gaps on at least one side of the road.

As part of the construction of the median, it is recommended to install median openings at strategic intersections and close full-access at six intersections. It is recommended to close California Avenue, Pennsylvania Avenue, Washington Avenue, Indiana Avenue, Missouri Avenue, and Texas Avenue. All other intersections at the corridor recommended to be installed with median openings.

Sidewalk Obstructions

It was observed that dumpsters were located along sidewalks along the corridor. They were the most prevalent near the southern section of the corridor, near Taylor Avenue and Hicks Avenue (**Figure 9**). It is recommended for the City to relocate dumpsters and trash pickup locations that are the most strategic for trash collection vehicles.

Figure 9. Dumpster on Sidewalk



Intersection Observations and Recommendations

The following observations were made at the intersection-level along Lamesa Road:

Front Street Intersection

As part of the city-wide observation and recommendations to install and upgrade pedestrian facilities at signalized intersections, it is also recommended to coordinate signal timing with the priority signal timing for the railroad crossing south of the intersection. City staff was concerned with the addition of pedestrian crossings and signal heads and how it will coordinate with the railroad priority signal timing. Pedestrian ramps are available at the intersection so pedestrian crossings should be prioritized, even with the railroad near the intersection.

Indiana Avenue Intersection

In the crash history, a fatal pedestrian crash occurred near the intersection. No crosswalks were striped at the intersection, so it is recommended to stripe crosswalks at the existing ramps and install a pedestrian crossing sign along Lamesa Road.

Cloverdale Road/California Avenue Intersection

Cloverdale Road connects out to the eastern limits of the City of Midland, transitioning into FM 307 and into IH-20. Observing high traffic volumes along Lamesa Road and Cloverdale Road being a larger intersection connection, it is recommended to install a traffic signal or roundabout at the intersection. This will allow for exiting vehicles from Cloverdale Road to Lamesa Road to make safe movements into high traffic volumes. If a signal is implemented, due to the spacing to Florida Avenue, it is recommended to coordinate the signal timings.

Florida Avenue Intersection

It was observed that there is a wide outside lane of the southern leg of the intersection, going southbound. It provides approximately 30 ft for vehicles to travel on. It is recommended to stripe out an edge line to guide vehicles in the correct travel lane at the correct lane width.

The eastern leg of the intersection has a “No Pedestrians” sign on the signal pole (**Figure 10**). Pedestrian ramps exist to cross the eastern leg, so it is recommended to reevaluate the pedestrian crossing or remove the ramps. No lighting was observed at the intersection, so it is recommended to install lighting at the existing signal pole on the southeast corner of the intersection (**Figure 11**).

Figure 10. No Pedestrian Crossing



Figure 11. No Intersection Lighting



Missing sidewalk segments and objects in the pedestrian path along sidewalks were observed. A mailbox was observed in the middle of the sidewalk and pedestrian area on the southwest corner of the intersection, and it is recommended to relocate it (Figure 12). A utility pole was also observed in the middle of the sidewalk path, just south of the intersection and it is recommended to relocate (Figure 13).

Figure 12. Mailbox Obstructing Ramp



Figure 13. Utility Pole in Sidewalk Path



On the southwest corner was observed missing sidewalk connection between the curb ramp adjacent to the channelized island and the sidewalk that runs along Lamesa Road and into Florida Avenue (Figure 14). It is recommended to complete that small sidewalk connection for improved pedestrian connectivity. The sidewalk then leads north to Florida Avenue, where there is no where for pedestrians to continue (Figure 15). It is recommended to remove the ramp at Florida Avenue or continue the sidewalk to the east.

Figure 14. Missing Sidewalk Connection



Figure 15. Sidewalk with No Connectivity



Gist Avenue

Based on City staff, the design for a traffic signal at the intersection is complete and the construction will go out for bid in the near future. The City is planning to install crosswalks, pedestrian signal heads and push buttons, and radar detection.

5. MIDKIFF ROAD – WALL STREET

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Midkiff Road – Wall Street:

Access Management

Both Midkiff Road and Wall Street are undivided roadways with a center turn lane for full access through the study corridor. The area is comprised of many commercial businesses and has high pedestrian activity when field observations were completed. It is recommended to install an S-median along Midkiff Road, north of Wall Street and up to Williams Street. As part of this recommendation, we recommend closing full-access to Midkiff Road at the intersection of Travis Avenue, construct a southbound hooded left-turn into Franklin Avenue, and construct a northbound hooded left-turn into the Jumburrito development. It is also recommended to install an S-median along Wall Street, between Midkiff Road and Front Street. The median is recommended to divide the northbound and southbound left-turn lanes and should be striped for proper storage length (**Figure 16**).

Wall Street was observed to have a small access road that runs parallel to it and intersects with Midkiff Road close to the signalized intersection. Vehicles were observed to be queued back, awaiting openings at the storage area of the intersection. It is recommended to close the frontage access of Wall Street at Midkiff Road and redirect traffic to the median opening to the southwest. Small driveway accesses were also observed for the gas station on the northeast corner of the intersection, within the channelized right-turn lane (**Figure 17** and **Figure 18**). It is recommended to close the two driveways, which would still provide two other driveway access points to the gas station.

Figure 16. Install S-Median



Figure 17. Close Driveway Access



Figure 18. Close Driveway Access



Sidewalks and Pedestrian Crossings

Between Midkiff Road and Front Street, the northern section of sidewalk was observed to be indistinguishable to driveway access and pavement is deteriorating (Figure 19). It is recommended to upgrade the sidewalk facilities in this section for safer travel for vulnerable road users. The southern section of sidewalk, near the intersection of Midkiff Road and Wall Street, is missing a sidewalk connection to connect to the pedestrian area at the intersection (Figure 20). It is recommended to construct the missing sidewalk connection for improved pedestrian connectivity.

Figure 19. Poor Sidewalk Conditions



Figure 20. Missing Sidewalk Connection



Intersection Observations and Recommendations

The following observations were made at the intersection-level along Midkiff Road – Wall Street:

Midkiff Road/Wall Street Intersection

Vehicles travelling from Wall Street and turning north on Midkiff Road were observed to speed along the channelized right-turn lane. Based on the crash history, a fatal pedestrian crash occurred at the crosswalk as well. It is recommended to install a right-turn deceleration lane and install a yield to pedestrian sign to warn drivers at the turn.

Intersection illumination was observed at the northwest and northeast corners but not at the southern corners. It is recommended to add intersection lighting on the southern end of the intersection for improved lighting conditions for those approaches. It was also observed that vehicles were often confused travelling northbound through the intersection of lane assignments, especially with dual northbound right turns (Figure 21). It is also recommended to install lane assignment signs throughout the intersection.

Figure 21. No Lane Assignment Sign or Lighting



Observing the signal timing, northbound travelling vehicles are able to make the movement from Midkiff Road to Wall Street while yielding on red. The northbound approach is a left, through/right, and a right-turn lane, so it is recommended to update the signal timing for a no turn on red. The intersection was observed to have high traffic volumes and many making left-turns. It is recommended to update the signal timing to protected left-turn phasing for the east-west directions along Wall Street.

Wall Street/Front Street Intersection

Throughout the observations along the study corridor, many pedestrians were crossing Wall Street to/from the north and south. Many of which used the triangular park inlet on the southwest corner near Front Street to make a crossing. Currently the only existing pedestrian crossing for Wall Street is at Midkiff Road. Crosswalk striping and pedestrian signal heads are not installed at the Front Street intersection, however, ramps do exist (Figure 22).

It is recommended to install crosswalks, pedestrian signal heads, and update signal timing to accommodate for pedestrian crossings. In order to make a pedestrian connection between the north and south areas near the triangular park inlet, it is recommended to install a pedestrian crossing that is activated by push button and has flashing warning lights (Figure 23). Vehicles travel at a high

speed along this channelized right-turn while travelling from Midkiff Road to Front Street, so a pedestrian crossing is needed. Finally, an existing ramp at the southern tip of park inlet is recommended to be removed and relocated to the recommended pedestrian crossing.

Figure 22. Missing Pedestrian Crossings



Figure 23. Install Pedestrian Crossing





D. Study Corridor CMF Calculations

| ID | Study Corridor | Context | Location | Recommendation | CMF ID # | Countermeasure | CMF | CMF Crash Type | CMF Crash Severity | CMF Area Type | CMF Crash Type Count | CMF Crash Type - 20 Years | CMF Reduction - 20 Years |
|-------|----------------------------|-------------------------|----------------|--|----------|--|-------|--------------------|--------------------|--------------------|----------------------|---------------------------|--------------------------|
| 1.1 | Wadley Avenue | Corridor | Corridor | Install median | 2219 | Install Raised Median | 0.29 | All | All | Urban | 310 | 1240 | 881 |
| 1.2 | Wadley Avenue | Corridor | Corridor | Reconstruct sidewalk with buffer | 11246 | Install Sidewalk | 0.598 | Vehicle/pedestrian | All | Urban | 2 | 8 | 4 |
| 1.3 | Wadley Avenue | Corridor | Corridor | Restripe pavement markings | NS01 | Upgrade Intersection Pavement Markings | 0.75 | All | - | - | 310 | 1240 | 310 |
| 2.1 | Fairgrounds Road | Corridor | Corridor | Add illumination | 7776 | Install Lighting | 0.68 | All | All | All | 63 | 252 | 81 |
| 2.2 | Fairgrounds Road | Corridor | Corridor | Install median | 2219 | Install Raised Median | 0.29 | All | All | Urban | 63 | 252 | 179 |
| 2.3 | Fairgrounds Road | Corridor | Corridor | Install speed feedback signs | 8925 | Install Dynamic Speed Feedback Sign | 0.95 | All | All | Rural | 63 | 252 | 13 |
| 3.1 | Andrews Highway | Corridor | Corridor | Restripe pavement markings | NS01 | Upgrade Intersection Pavement Markings | 0.75 | All | - | - | 325 | 1300 | 325 |
| 3.2 | Andrews Highway | Corridor | Corridor | Install median | 2219 | Install Raised Median | 0.29 | All | All | Urban | 425 | 1700 | 1207 |
| 4.1 | Lamesa Road | Corridor | Corridor | Install median | 2219 | Install Raised Median | 0.29 | All | All | Urban | 91 | 364 | 259 |
| 4.2 | Lamesa Road | Corridor | Corridor | Add illumination in median | 7776 | Install Lighting | 0.68 | All | All | All | 91 | 364 | 117 |
| 4.3 | Lamesa Road | Corridor | Corridor | Reconstruct sidewalk with buffer and fill gaps | 11246 | Install Sidewalk | 0.598 | Vehicle/pedestrian | All | Urban | 2 | 8 | 4 |
| 4.4 | Lamesa Road | Corridor | Corridor | Relocate obstructions from sidewalks | 1024 | Remove or Relocate Fixed Objects Outside of Clear Zone | 0.62 | All | All | All | 91 | 364 | 139 |
| 5.1 | Midkiff Road - Wall Street | Corridor | Corridor | Install median on Midkiff Road | 2219 | Install Raised Median | 0.29 | All | All | Urban | 2 | 8 | 6 |
| 5.2 | Midkiff Road - Wall Street | Corridor | Corridor | Install median on Wall Street | 2219 | Install Raised Median | 0.29 | All | All | Urban | 1 | 4 | 3 |
| 5.3 | Midkiff Road - Wall Street | Corridor | Corridor | Reconstruct sidewalk and add missing connections | 11246 | Install Sidewalk | 0.598 | Vehicle/pedestrian | All | Urban | 3 | 12 | 5 |
| 1.8.1 | Wadley Avenue | Intersection | Midland Drive | Re-evaluate signal timing for dilemma zones | 4231 | Increase Yellow Interval and Add All Red Interval | 0.99 | All | All | Urban | 23 | 92 | 1 |
| 1.6.1 | Wadley Avenue | Intersection | Godfrey Street | Install and update pedestrian push buttons | 8922 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.955 | All | All | All | 10 | 40 | 2 |
| 3.C.1 | Andrews Highway | Intersection | Cessna Drive | Install median | 2219 | Install Raised Median | 0.29 | All | All | Urban | 26 | 104 | 74 |
| 3.6.1 | Andrews Highway | Intersection | Kansas Avenue | Conduct signal warrant analysis | 7848 | Install a Traffic Signal | 0.61 | All | All | Urban | 20 | 80 | 32 |
| 3.6.2 | Andrews Highway | Intersection | Kansas Avenue | Trim vegetation | 1024 | Remove or Relocate Fixed Objects Outside of Clear Zone | 0.62 | All | All | All | 20 | 80 | 31 |
| 3.K.1 | Andrews Highway | Intersection | Dodson Street | Install raised pedestrian island "park chop" | 9120 | Median Treatment for Ped/Bike Safety | 0.86 | All | All | Urban | 30 | 120 | 17 |
| 3.K.2 | Andrews Highway | Intersection | Dodson Street | Stripe directional arrow markings | NS01 | Upgrade Intersection Pavement Markings | 0.75 | All | - | - | 30 | 120 | 30 |
| 3.N.1 | Andrews Highway | Intersection | Wall Street | Reconfigure southbound left-turn lane with positive left-turn offset | 276 | Introducing Zero or Positive Offset Left-Turn Lane on Crossing Roadway | 0.74 | Angle | All | Urban | 10 | 40 | 11 |
| 4.C.1 | Lamesa Road | Intersection | Kentucky Ave | Evaluate for most appropriate pedestrian crossing treatment | 4123 | Install High-Visibility Crosswalk | 0.6 | Vehicle/pedestrian | All | Urban | 1 | 4 | 2 |
| 4.G.1 | Lamesa Road | Intersection | Florida Avenue | Stripe edge line of south leg | 82 | Place Standard Edge Line Marking (4-6 in) | 0.97 | All | A, B, C | Rural | 3 | 12 | 1 |
| 4.C.2 | Lamesa Road | Intersection | Florida Avenue | Add illumination | 4462 | Install Intersection Lighting | 0.881 | Nighttime | All | All | 1 | 4 | 1 |
| 5.C.1 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Close driveways | 442 | Closure or Complete Relocation of All Driveways from Function Area of Intersection | 0.93 | All | All | Urban | 11 | 44 | 4 |
| 5.C.2 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Install dedicated right-turn lane | NS17 | Install Right-Turn Lane | 0.8 | All | - | - | 104 | 416 | 84 |
| 5.C.3 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Install stop for pedestrian sign | 9017 | Install Advanced Yield or Stop Markings and Signs | 0.75 | Vehicle/pedestrian | All | Urban and Suburban | 3 | 12 | 3 |
| 5.C.4 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Add illumination | 4462 | Install Intersection Lighting | 0.881 | Nighttime | All | All | 38 | 152 | 19 |
| 5.C.5 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Install lane assignment sign | 8922 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.955 | All | All | All | 104 | 416 | 19 |
| 5.C.6 | Midkiff Road - Wall Street | Intersection | Midkiff Road | Update signal timing with protected left-turn phasing | 4144 | Change Permissive Left-Turn Phasing To Protected Only | 0.45 | All | All | Urban | 104 | 416 | 229 |
| C.1 | All | Signalized Intersection | All | Install/update pedestrian crosswalks | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 886 | 3544 | 950 |
| C.1.1 | Wadley Avenue | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 149 | 596 | 160 |
| C.1.2 | Fairgrounds Road | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 67 | 268 | 72 |
| C.1.3 | Andrews Highway | Signalized Intersection | Corridor | Install/update pedestrian crosswalks | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 352 | 1408 | 378 |
| C.1.4 | Lamesa Road | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 69 | 276 | 74 |
| C.1.5 | Midkiff Road - Wall Street | Signalized Intersection | Corridor | Install/update pedestrian crosswalks | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 140 | 560 | 151 |
| C.2 | All | Signalized Intersection | All | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 886 | 3544 | 950 |
| C.2.1 | Wadley Avenue | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 149 | 596 | 160 |
| C.2.2 | Fairgrounds Road | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 67 | 268 | 72 |
| C.2.3 | Andrews Highway | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 352 | 1408 | 378 |
| C.2.4 | Lamesa Road | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 69 | 276 | 74 |
| C.2.5 | Midkiff Road - Wall Street | Signalized Intersection | Corridor | Install pedestrian signal heads, crossing signs, and push buttons | 8967 | Implement Systemic Signaling and Visibility Improvements at Signalized Intersections | 0.732 | All | All | All | 140 | 560 | 151 |
| C.3 | All | Signalized Intersection | All | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 886 | 3544 | 532 |
| C.3.1 | Wadley Avenue | Signalized Intersection | Corridor | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 149 | 596 | 90 |
| C.3.2 | Fairgrounds Road | Signalized Intersection | Corridor | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 67 | 268 | 41 |
| C.3.3 | Andrews Highway | Signalized Intersection | Corridor | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 352 | 1408 | 212 |
| C.3.4 | Lamesa Road | Signalized Intersection | Corridor | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 69 | 276 | 42 |
| C.3.5 | Midkiff Road - Wall Street | Signalized Intersection | Corridor | Update vehicle detection to radar detection | 503 | Improve Signal Timing | 0.85 | All | - | - | 140 | 560 | 84 |
| C.4 | All | Signalized Intersection | All | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 886 | 3544 | 532 |
| C.4.1 | Wadley Avenue | Signalized Intersection | Corridor | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 149 | 596 | 90 |
| C.4.2 | Fairgrounds Road | Signalized Intersection | Corridor | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 67 | 268 | 41 |
| C.4.3 | Andrews Highway | Signalized Intersection | Corridor | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 352 | 1408 | 212 |
| C.4.4 | Lamesa Road | Signalized Intersection | Corridor | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 69 | 276 | 42 |
| C.4.5 | Midkiff Road - Wall Street | Signalized Intersection | Corridor | Install reflective backplates at signal heads | 1410 | Add 3-Inch Yellow Retroreflective Sheeting to Signal Backplates | 0.85 | All | All | Urban | 140 | 560 | 84 |



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