

Metropolitan Transportation Plan

Public Review Draft
September 2024



History of the MTP and MTP Amendments

The MPO Policy Board approved the Forward50 MTP on [insert date].

Forward50 MTP Amendments

Information to be added as amendments are approved.

Title VI Policy Statement

The Permian Basin MPO assures that no person shall, on the grounds of race, color, national origin, sex, age, disability or income status, as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987 (P.L. 100.259), and other related federal orders, directives, and guidelines, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination or retaliation under any program or activity. Additionally, per Executive Order 12898 (Environmental Justice) and subsequent United States Department of Transportation, Federal Highway Administration, and Federal Transit Administration directives, the Permian Basin MPO shall make every effort to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of the Permian Basin Metropolitan Planning Organization’s programs, policies, and activities on Title VI/Environmental Justice protected populations. Furthermore, the Permian Basin MPO assures that every effort will be made to ensure nondiscrimination in all its programs and activities, whether those programs or activities are federally funded or not. In the event that the Permian Basin MPO distributes federal aid funds to another entity, the MPO will include Title VI language in all written agreements. The Title VI Coordinator, Akyra Hamilton, is responsible for carrying out the activities documented in the Permian Basin MPO’s Title VI/Environmental Justice Program.

Acknowledgements

The Permian Basin MPO thanks the many participants who offered their time and input in the development of the **Forward50 Metropolitan Transportation Plan (MTP)**. The Forward50 MTP reflects the collaborative efforts of the public, stakeholders, local staff and officials, the Texas Department of Transportation, and the Federal Highway Administration (FHWA). The efforts of everyone are greatly appreciated. The Forward50 MTP was developed in collaboration with the following entities:

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- Project Score Card (coming soon)

ES

Executive Summary



FORWARD **50**

METROPOLITAN TRANSPORTATION PLAN

Introduction

Transportation planning is a cooperative process designed to foster involvement by all users of the system. Businesses, community groups, environmental organizations, the traveling public, and freight operators, all benefit through a proactive public participation process.

In [urbanized areas](#), the transportation planning process is conducted by a Metropolitan Planning Organization in cooperation with the State Department of Transportation and transit providers. In [rural areas](#), transportation planning processes are carried out by the state in cooperation with local officials in non-metropolitan areas and transit providers. FTA and FHWA jointly administer the federally required transportation planning processes in metropolitan areas, as set forth in 49 U.S.C. 5303 and 23 U.S.C. 134.

The Permian Basin Metropolitan Planning Organization (PBMPO) was formed in early 1965 as approved by the Governor of Texas. Over the decades the boundary has changed but the membership of the agency has largely remained the same. In 2015 a portion of Martin County was added with a voting representative, and the Midland Odessa Urban Transit District (MOUSD) became a voting member in late 2014. Currently there are seven member agencies representing the cities of Midland and Odessa, Martin, Ector and Midland counties, the Texas Department of Transportation, and the MOUSD.

The Forward50 MTP

The Permian Basin MPO is pleased to deliver the Forward50 Metropolitan Transportation Plan (MTP), a regional transportation plan covering the period 2025-2050. This plan will update and replace the *Forward 45* MTP. The plan is mandated under federal law to be updated every five years; this has been accomplished.

What has changed since the preparation of the original plan through the year 2045? To answer that question, one must start by stating that a new federal transportation bill was approved in November 2021, about mid-way between the preparation of the older 2045 plan and the new plan for 2050. This landmark bill, known as the Investment in Infrastructure and Jobs Act (IIJA), includes unprecedented financial commitment to many efforts that will directly affect the PBMPO:

- Funding to repair and rebuild the nation's roads and bridges with a focus on climate change mitigation, resilience, equity, and safety for all users.
- Improved transportation options for millions of Americans and reduced greenhouse emissions through the largest investment in public transit in U.S. history.
- Upgraded airports and ports to strengthen our supply chains and prevent disruptions that have caused inflation. This will improve U.S. competitiveness, create more and better jobs at these hubs, and reduce emissions.

Funding from the passage of IIJA is currently being realized in the PBMPO region and the future funding scenario is included within this plan and is in part tied to the bill.

Participation in Planning Studies

The PBMPO has participated in numerous studies led by TxDOT. These included the following:

- Texas Legislature mandated Ports-to-Plains corridor study resulting in the future alignment of I-27
- TxDOT Freight Plan
- I-20 Corridor Study
- Loop 338 Study
- Truck Parking study for West Texas

The MPO has performed a lead role in the following studies:

- Wildcatter Trail bicycle and pedestrian corridor
- Resilience Improvement Plan
- Planning & Environmental Linkage study for an Outer Loop

PBMPO staff have also participated in numerous committees as follows:

- Border Trade Advisory Committee
- Association of Texas MPOs
- Texas Public Health Association mobile workshop
- Governor's appointed Advance Air Mobility Advisory Committee
- Texas Statewide Multimodal Transit Plan

Planning Emphasis Areas

Within the Forward50 MTP, a total of seven chapters covers the history of the region, it's demographic make-up, the importance of freight movement, highway and non-highway transportation modes, project selection and scoring, financial planning, challenges and threats to the region's transportation system.

It is important to note that the MPO has considered the USDOT's Planning Emphasis Areas that were delivered in a letter December 30, 2021. The emphasis areas that should be considered in metropolitan and statewide planning include the following.

Tacking the Climate Crisis

The PBMPO has programmed Category 10 funds from federal sources in FY 2025 to provide a four-unit electric vehicle charging station near I-20 in Odessa.

Equity and Justice⁴⁰ in Transportation Planning

The PBMPO has supported planning efforts by Ector, Midland, and Martin Counties; the Cities of Midland and Odessa; and the Midland Odessa Urban Transit District (MOUTD) to improve infrastructure for non-motorized travel, reduce public transit fares where applicable, and complete Comprehensive Safety Action Plans that affect all agency members of the MPO and the public. The implementation phase of the Action Plans may result in successful grant applications to expedite priority projects in the region.

Complete Streets

The PBMPO has continued to support the construction of the Wildcatter Trail, which is a proposed 19-mile corridor connecting Midland to Odessa on land mostly absent automobiles. The City of Midland received a TxDOT Category 9 Transportation Set-Aside Program grant for the construction of a portion of the trail. The MPO is prepared to support similar efforts when funding opportunities arise.

Strategic Highway Network (STRAHNET)

PBMPO has worked with the TxDOT Odessa District as well as the cities of Midland and Odessa and both affected counties to plan for the construction of I-27 and I-14. I-14 is known as the Forts-to-Ports corridor since it connects major military facilities stretching from Fort Stewart in Savannah, Georgia to Fort Bliss in El Paso.

Public Involvement

The PBMPO has utilized its consulting assistance firms to assist with public involvement during the Wildcatter Trail plan development, the PEL study to outline the potential location of an outer loop, the MPO’s web page to share TxDOT and other agency media information, and to allow for remote involvement pursuant to the Texas Governor’s directive experienced during the covid-19 lockdown period and afterward.



Federal Land Management Agency Coordination

No tribal lands exist in the PBMPO boundary or the outlying region. The closest tribal government is in El Paso. The state of Texas has three federally recognized tribes: Alabama-Coushatta in Polk County, Kickapoo Traditional in Maverick County, and Ysleta Del Sur Pueblo in El Paso County.

Planning and Environmental Linkages (PEL)

The PBMPO has a long record of preparing PEL studies. The first such study was completed in 2014 and resulted in the acquisition of right-of-way and subsequent construction of a 2-lane road by Midland to connect Loop 250 W to SH 158 on the southeast side of the MAB. This corridor relieves traffic on I-20 and provides a safe and convenient route for SE/NW travel in Midland County. A second PEL was completed in early 2024 for the potential outer loop construction.

Data in Transportation Planning

The PBMPO has welcomed data sharing to improve policy and decision making. Recent additions to the data sets used by the MPO include the COMPAT tool developed by the Texas A&M Transportation Institute. It is used for congestion analysis and management since the shared data ties directly to PM3, system reliability. The PBMPO also relies on the TxDOT Crash Records Information System for data related to safety on all surface modes of transportation.

Final Analysis

Finally, the PBMPO exists by federal mandate to move people and goods in the safest and most efficient manner. Decisions made by the MPO Policy Board have historically overlapped with federal and state directives and policies. The MPO has a long-standing record of addressing the needs of the traveling public in and throughout the region. Mandates and laws have changed over the years but the basic tasks of providing a continuous, comprehensive and cooperative planning process have continued since 1965.

With the Forward50 MTP in place, the PBMPO stands ready to plan for two new interstate systems, expand the transit fleet, give greater focus on non-motorized travel and complete streets, and increase participation by stakeholders to ensure that the region's quality of life is improved through transportation planning and implementation.

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Vision and Planning Principles



FORWARD 50

METROPOLITAN TRANSPORTATION PLAN

The Forward50 MTP

The Forward50 Metropolitan Transportation Plan (MTP) is a long-range transportation plan tailored to the unique needs of the Permian Basin MPO region in Texas. With a strong emphasis on the energy sector, this plan addresses current and future transportation needs while recognizing the vital role transportation plays in daily life. The Forward50 MTP also acknowledges transportation's influence on the social and built environment of the region.

In the Permian Basin, transportation is more than simply getting from point A to point B. It's about giving people access to employment opportunities, community resources, and everyday goods. The Forward50 MTP goes beyond traditional transportation options and proposes innovative solutions that prioritize efficiency and effectiveness. And, it ensures that people, goods, and services can move seamlessly throughout the region in ways that bolster the regional economy and supports its growth.

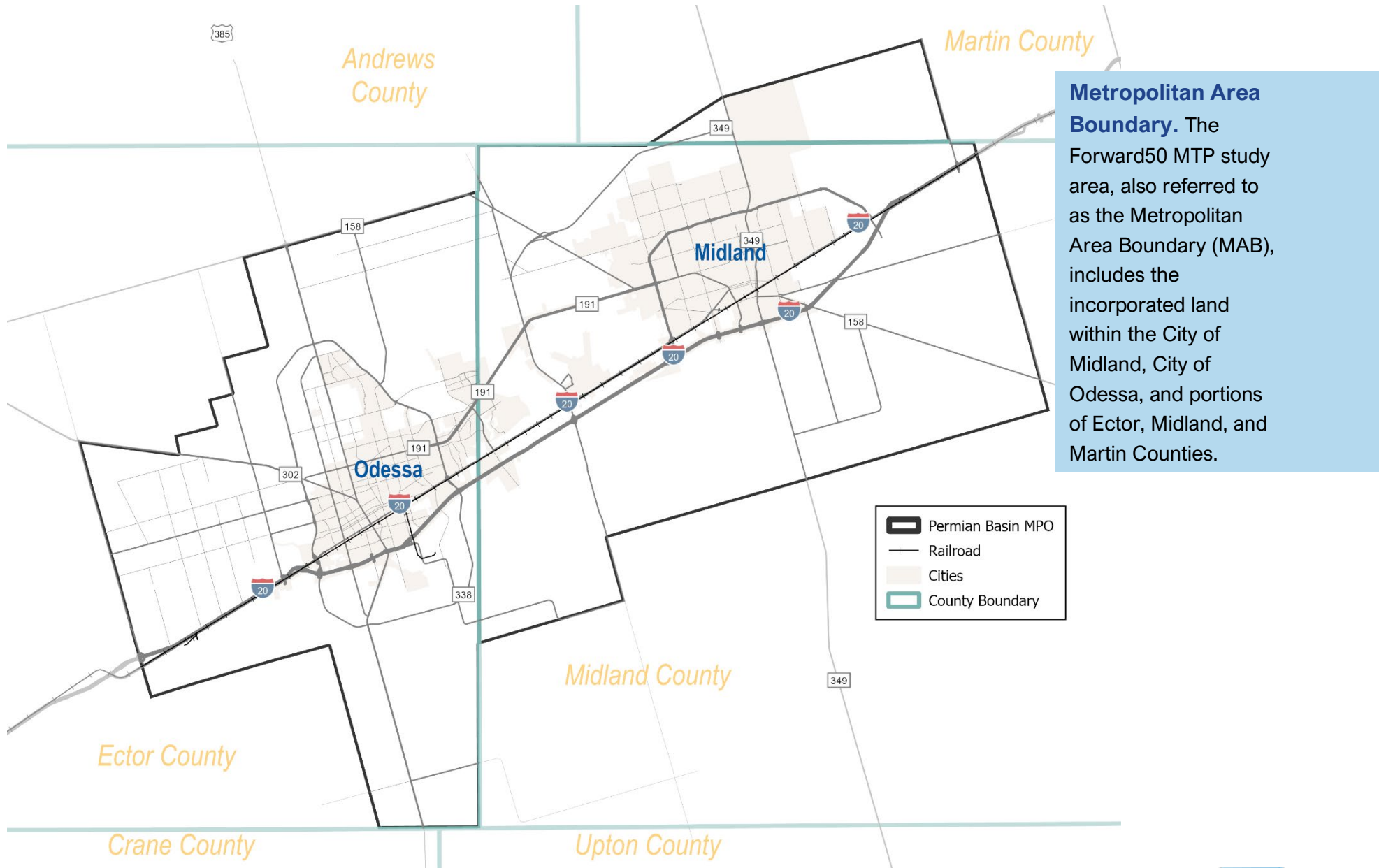
Addressing the challenge of planning, designing, and constructing transportation projects requires foresight and the ability to apply available funding to priority improvements. Making it safer and easier to travel in the Permian Basin region begins by understanding potential future growth and development, determining current and future transportation needs, and aligning recommendations with community priorities.

From MTP to Funded Project. The PBMPO has the responsibility of preparing and ensuring that the MTP considers the built and natural environment in the region as it sets the long-term transportation vision for the area. The Forward50 MTP serves as the guiding framework for transportation investments, directing funding from local, state, and federal sources toward projects that enhance regional connectivity and address community needs. It is crucial to note that projects must be included in the MTP to be eligible for federal funding.

The Permian Basin MPO

A Metropolitan Planning Organization (MPO) is a federally mandated regional agency charged with carrying out a region's transportation planning processes. MPOs are required in all urbanized areas with populations over 50,000. The Permian Basin MPO (PBMPO) was established in 1965 to ensure federal transportation dollars are spent based on a continuing, comprehensive, and cooperative process. The City of Odessa serves as the administrative and financial agent for the PBMPO under a three-party agreement with the Texas Department of Transportation (TxDOT). The MPO consists of seven member agencies including Midland, Ector, and Martin Counties, the City of Odessa, the City of Midland, the TxDOT Odessa District, and Midland Odessa Urban Transportation District (MOUSD).

Figure 1.1 – PBMPPO Metropolitan Area Boundary



The Metropolitan Planning Process

The Forward50 MTP is the product of a coordinated planning effort to establish and fulfill the region's transportation vision. The planning process required a collaborative effort between stakeholders, municipalities, and MPO staff to create a plan that reflects the values and needs of the region. The process also educated the public about the MTP and other MPO processes while listening to participants as they identified issues and opportunities. The result is an MTP that emphasizes engagement as an important tenet of a performance-based planning process.



Using the MTP

The MTP report communicates the process and outcomes of the Forward50 MTP through the presentation of seven chapters.

- **Chapter 1 (Vision and Planning Principles)** outlines the background of the plan and introduces the planning process.
- **Chapter 2 (Area Snapshot)** presents an overview of the existing conditions including demographic trends, existing transportation assets.
- **Chapter 3 (Public Participation Process)** provides key highlights from the public engagement process.
- **Chapter 4 (Roadway Projects and Priorities)** outlines the roadway projects, describes the results of the prioritization process, and summarizes the MTP's effect on transportation disadvantaged communities.
- **Chapter 5 (Multimodal Recommendations)** highlights ways to foster a safe, efficient, and sustainable transportation system that supports multimodal travel, energy, freight, and security goals. It also discusses advancements and trends in transportation technology.
- **Chapter 6 (Financial Plan)** documents funding mechanisms at the local, state, and federal levels as a strategy to implement priority projects.
- **Chapter 7 (Performance-Based Planning)** highlights the role of performance-based planning.

Federal Transportation Legislation

The Forward50 MTP is governed by the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL). This federal transportation legislation carries forward the federal planning factors established in previous legislation referred to as the Fixing America's Surface Transportation Act or FAST Act and previous transportation bills:

Support the economic vitality of the metropolitan area

Increase the safety of the transportation system for motorized and non-motorized users

Increase the security of the transportation system for motorized and non-motorized users

Increase the accessibility and mobility of people and freight

Protect and enhance the environment

Enhance the integration and connectivity of the transportation system

Promote efficient system management and operation

Emphasize the preservation of the existing system

Improve the resiliency and reliability of the transportation system

Enhance travel and tourism

In addition, the IIJA introduced new or reinforced areas of focus for consideration within the metropolitan transportation plan:

- Improve the environmental resiliency of the transportation system
- Reduce carbon emissions by developing a Carbon Reduction Strategy
- Progress equity in the transportation planning process by not disproportionately burdening historically marginalized groups and communities
- Consider the link between the role of transportation and housing
- Promote transportation technology in metropolitan planning

Updating the MTP

The Permian Basin MPO's MTP is required to be updated every five years. However, amendments during the interim years help ensure the MTP contains relevant information in response to changing conditions. Amendments to the MTP often result from project and/or funding allocation changes (such as following the adoption of a new UTP). MTP amendments require public outreach and demonstration of fiscal constraint and must also be approved by the MPO's Policy Board.



Existing Plan Review

The Forward50 MTP builds upon the area's many plans and policies that have guided decision-makers over the years. The following section provides a concise overview of several relevant planning documents and highlights notable recommendations.

2025-2028 Transportation Improvement Program (TIP)

The Permian Basin MPO's TIP outlines the planning, funding, and development of a safe, efficient, and sustainable multimodal transportation system. It details project selection criteria, funding categories, performance measures, and compliance with federal regulations, focusing on highway safety, pavement and bridge conditions, and overall system performance. The program emphasizes performance-based planning and public participation to meet current and future transportation needs.

Limited English Proficiency Plan, 2024

The Permian Basin MPO's Limited English Proficiency (LEP) Plan includes strategic measures to enable individuals with limited English skills to engage in the transportation planning process. This involves language assistance services such as translating key documents, providing interpretation at public meetings, and distributing critical information in languages commonly spoken in the community. The LEP Plan operates alongside the Public Participation Plan (PPP), a separate document established in 2013 and amended in 2018, outlining broader public involvement strategies. Additionally, the LEP Plan aligns with the Title VI program, ensuring non-discrimination in access and participation based on race, color, or national origin.

Congestion Management Process, 2024 Update

The Congestion Management Process (CMP) for the Permian Basin MPO focuses on managing congestion within the Transportation Management Area (TMA) by using a structured approach that includes eight steps:

1. Develop congestion management objectives
2. Define a congestion monitoring network
3. Develop multimodal performance measures
4. Collect data and monitor system performance
5. Analyze congestion problems and needs
6. Identify and assess congestion management strategies
7. Program and implement congestion management strategies
8. Evaluate strategy effectiveness

This process ensures that congestion management is tailored to the specific needs of the TMA, addressing unique mobility challenges and guiding investment decisions to improve the performance and safety of the multimodal transportation system.

Unified Planning Work Program, 2024 and 2025 and FY 2025

The FY 2024 Unified Planning Work Program (UPWP) for the Permian Basin MPO outlines key transportation planning activities for the Midland-Odessa area, following federal guidelines under the IIJA, FAST Act, and MAP-21. It includes projects funded by federal, state, and local sources, focusing on detailed corridor-level planning and ensuring public involvement.

Title VI/Environmental Justice Plan, 2024

A Title VI & Environmental Justice Plan is a comprehensive document that outlines strategies and guidelines to ensure that PBMPPO complies with Title VI of the Civil Rights Act and addresses environmental justice concerns. The plan aims to promote fair and equitable distribution of resources and benefits, mitigate any adverse impacts on vulnerable and marginalized communities, and promote meaningful participation and engagement of all stakeholders in the decision-making process. It includes measures to assess the potential impacts of projects on low-income communities and communities of color, develop strategies to avoid or minimize these impacts and provide opportunities for public input and involvement.

Interregional “Outer Loop” Planning-Environmental Linkages (PEL) Study, 2024

A PEL (Preliminary Engineering and Environmental) study is a comprehensive evaluation conducted at the early stages of a transportation project to assess its feasibility, and potential impacts, and identify any regulatory requirements. This study worked towards establishing a common vision for an interregional transportation facility that would:

- Enhance safety and mobility
- Enable better movement of goods and services
- Provide a higher functional classification for a more comprehensive service

The study included an analysis of the project's purpose and need, alternative solutions, environmental impacts, community and

stakeholder input, and cost estimation. The findings of the PEL help inform decision-makers and project planners in determining the next steps for the Outer Loop and ensure compliance with applicable laws and regulations.

Permian Basin Resiliency Study, 2023

The Permian Basin Resiliency Study aims to assess the transportation system within the PBMPPO MAB and analyze on-state system roads outside of the MAB. The study includes identifying historical disruptions to the transportation system, vulnerable routes, and viable relief routes and mitigation options. It also investigates freight issues that may affect resiliency and conducts Title VI/EJ investigations. The study involves coordinating with emergency management entities, identifying potential alert and messaging systems, obtaining stakeholder input, developing a resiliency project scoring element, and evaluating general and relative project/solution costs and implementation times, as well as coordinating with TxDOT and other agencies on related efforts.

EZ-Rider Transit Asset Management Plan, 2022-2026

The EZ-Rider Transit Asset Management (TAM) Plan outlines the strategies and goals for maintaining and improving the transit assets of the Midland-Odessa Urban Transit District. Covering the agency's six fixed routes in Midland, six in Odessa, and a commuter route connecting both cities, the plan provides a framework for achieving a reliable and safe transit service, prioritizing actions and resource allocations to ensure the system's long-term sustainability and efficiency.

Odessa Parks Master Plan, 2022

The Odessa Parks Master Plan assesses the built environment's character and offers recommendations for enhancing community identity through targeted improvements. The plan identifies needs by analyzing community preferences, parkland distribution, facility conditions, and program participation. It proposes strategic actions to enhance parks, recreation programs, trails, and urban landscapes for a diverse and accessible recreational system.

Downtown Odessa Master Plan, 2022

The Downtown Odessa Master Plan is a strategic guide for transforming Downtown Odessa into a major destination. Developed from an Implementation Workshop, the plan outlines multiple interconnected strategies for long-term success. Each strategy is detailed with specific actions, contributing to a cohesive effort. The plan includes concise overviews of each strategy, key components, and actionable steps for implementation.

Permian Basin Multi-Use Corridor Study, 2022

The Connecting Midland and Odessa Multi-Use Trail Corridor Study, led by the Permian Basin MPO, explores the feasibility of a multi-purpose trail between Midland and Odessa. Funded by TxDOT and MPO resources, the study aligns with local master plans and aims to provide safe, non-motorized travel options. It reviews existing corridor conditions, identifies potential routes, engages the public, and provides cost estimates for implementation. The study seeks to integrate a multi-use path that enhances connectivity, considering the region's distinctive environmental and industrial context within the Permian Basin.

Permian Basin Freight and Energy Sector Transportation Plan, 2020

The Permian Basin Freight and Energy Sector Transportation Plan targets an optimized regional transportation network to support the region's extensive oil and gas production activities. It prioritizes integrating localized freight data with state and national datasets to accurately capture the region's freight dynamics, particularly those associated with the energy sector. The plan outlines a strategic framework to enhance multimodal connectivity and system performance. It includes targeted infrastructure improvements, policy recommendations, and data analytics to guide investment and decision-making.

Midland Parks Master Plan, 2020

The Parks and Trails Master Plan outlines future needs, goals, and improvements for Midland's parks and trails, including a conceptual design for a town-wide trail system. Developed through site assessments and community engagement, the plan provides a 20-year roadmap to enhance parks and trails with prioritized and budgeted recommendations for phased implementation.

EZ-Rider Public Transportation Agency Safety Plan, 2020

The EZ-Rider Public Transportation Agency Safety Plan (PTASP), developed with the Texas Department of Transportation, outlines steps to improve safety across all Midland-Odessa Urban Transit District (MOUTD) levels. Following federal rules from MAP-21 and the FAST Act, the plan uses Safety Management Systems (SMS) to guide actions like creating a Safety Management Policy, managing safety risks, and ensuring safety performance.

Odessa Transportation Master Plan, 2019

The Transportation Master Plan (TMP) is a strategic guide for Odessa's future roadway network and infrastructure investments. It updates the Master Thoroughfare Plan (MTP) by assessing current conditions, identifying constrained facilities, and prioritizing projects to develop a targeted Capital Improvements Plan (CIP). The TMP also includes studies on downtown parking, a corridor analysis of Grant Avenue, and a citywide evaluation of pavement conditions and maintenance.

Three County Thoroughfare Map, 2018

The Three-County Thoroughfare Plan by the Permian Basin MPO guides transportation planning for Midland, Ector, and Martin counties. It highlights Interstate 20 as a key east-west route and includes proposals for new expressways, arterials, and collectors to improve connectivity and traffic flow.

Envision Odessa Comprehensive Master Plan, 2016

Envision Odessa is the City's Comprehensive Plan, serving as a strategic guide for future development and investment. It includes essential elements like the Future Land Use and Thoroughfare Plans, ensuring that infrastructure, development, and zoning decisions align with the community's vision. The plan outlines key infrastructure, housing, quality of life, and downtown revitalization strategies. The Action Plan within Envision Odessa provides a framework for implementation, guiding leaders in making informed growth, development, and reinvestment decisions.

Northeast Midland Feasibility Study, 2016

The Northeast Midland Feasibility Study, led by the City of Midland and Permian Basin MPO, assesses transportation needs in a 52.6 square-mile area, including Midland's ETJ and parts of Midland and Martin Counties. The study uses a collaborative planning approach to integrate local and regional mobility demands with environmental considerations, aligning with community and economic goals. It identifies existing conditions, land use scenarios, and environmental constraints, providing a future transportation network development framework. The study emphasizes inter-agency coordination and stakeholder engagement to enhance public support and address the anticipated growth of regional economic activity, particularly in the oil and gas sectors.

Tall City Tomorrow: Midland Comprehensive Plan, 2016

The Tall City Tomorrow Plan is Midland's strategic framework for future growth, informed by comprehensive community input. It thoroughly analyzes population, land use, and infrastructure trends to establish a robust foundation for development. The plan articulates a unified vision, emphasizing land use planning, housing diversification, transportation systems, downtown revitalization, and infrastructure enhancement, with targeted strategies to elevate the city's character and overall quality of life.

Connecting Midland: Hike and Bike Trails Master Plan, 2015

The Hike and Bike Trails Master Plan for Midland envisions a comprehensive trail system connecting the entire city. It is designed to be flexible and periodically updated through 2024. The plan aims to guide trail development, enhance mobility, and improve access to grant opportunities by aligning with Texas Parks and Wildlife Department guidelines.

Midessa Land Use Transportation Study, 2014

The Midessa Land Use and Transportation Study updates the SH 191 Corridor Management Plan to address rapid growth and evolving conditions along the SH 191 corridor between Midland and Odessa. Based on updated data and stakeholder input, it refines the strategic approach to land use, transportation, and infrastructure planning. The study focuses on enhancing access, mobility, and safety while managing development impacts and coordinating intergovernmental efforts across an 84.7-square-mile study area.

South Midland Mobility Planning and Environmental Linkage (PEL) Study, 2014


The South Midland Mobility Planning and Environmental Linkage (PEL) Study integrates transportation planning with environmental considerations in alignment with federal acts like SAFETEA-LU and MAP-21. These acts mandate the inclusion of environmental mitigation and multi-agency collaboration in transportation projects. The study spans a 99-square-mile area in South Midland, encompassing both urban and rural landscapes. The study is driven by anticipated growth due to significant oil and gas activities. It addresses existing and forecasted mobility and safety challenges by proposing a potential mobility corridor that balances roadway expansion, multimodal transport options, and land use planning.


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Guiding Principles, Goals, and Objectives


The six guiding principles identified in the Forward50 MTP reflect the regional vision for the transportation system and address the federal planning factors. Throughout the planning process, the guiding principles influenced the development of the recommendations, prioritization of projects, and application of financial constraint. The principles are presented in alphabetical order and are supported by identified goals and objectives.

 Cohesive/Cooperative	
Goal 1	Increase collaboration with member entities to provide continuous, cooperative, and comprehensive transportation planning.
Objectives	<ul style="list-style-type: none"> Attend planning meetings, workshops, and public hearings to gather information and provide input on regional transportation projects and issues.
Goal 2	Increase outreach efforts to further educate the general public and Title VI/Environmental Justice communities of how the transportation planning process impacts them.
Objectives	<ul style="list-style-type: none"> Inform the public of the MPO’s role regarding current and future transportation decision-making efforts. Increase participation from the public throughout the transportation planning process.

 Congestion/Mobility	
Goal 3	Reduce congestion and decrease time delays on the transportation system.
Objectives	<ul style="list-style-type: none"> Implement and maintain the Congestion Management Process as a tool to analyze and identify congestion problems and needs. Encourage ride-sharing and alternative working hours to alleviate congestion
Goal 4	Promote awareness of alternative transportation modes.
Objectives	<ul style="list-style-type: none"> Encourage increased participation in transit, cycling, and walking for purposes beyond recreation.

 Connectivity/System Continuity	
Goal 5	Connect infrastructure and services by reducing gaps and conflicts in the multimodal transportation system.
Objectives	<ul style="list-style-type: none"> Utilize Planning and Environmental Linkage studies and other tools for developing new infrastructure prior to considering significant investment.
Goal 6	Ensure that freight is moved safely, efficiently, and seamlessly throughout the region.
Objectives	<ul style="list-style-type: none"> Coordinate efforts with partner entities and stakeholders to improve the movement of freight.

	Efficient Use of Funding
Goal 7	Identify critical system issues and areas as identified through the Congestion Management Process.
Objectives	<ul style="list-style-type: none"> • Employ tools such as Intelligent Transportation Systems and enhanced technology to maximize system efficiency.
Goal 8	Identify non-traditional funding sources or apply for resources beyond what is allocated.
Objectives	<ul style="list-style-type: none"> • Increase available funding sources to complete more projects on the transportation system.







	Safety
Goal 9	Incorporate best practices related to safety during the planning process.
Objectives	<ul style="list-style-type: none"> • Reduce crashes resulting in fatalities, injuries, and property damage within the region. • Promote regional efforts to maintain the existing system to keep it in optimal condition
Goal 10	Assist with educational efforts to bring awareness to users of the transportation system.
Objectives	<ul style="list-style-type: none"> • Provide and promote opportunities to educate the public on transportation safety.

	Livability
Goal 11	Improve the overall quality of life for the traveling public.
Objectives	<ul style="list-style-type: none"> • Work with partner entities and stakeholders to address livability issues and local policies affecting transportation, neighborhoods, and safety.
Goal 12	Incorporate multiple modes of transportation in the planning process
Objectives	<ul style="list-style-type: none"> • Facilitate discussions with the member agencies, the public, and transit providers related to transit service • Partner with public agencies and private companies to increase bicycle and pedestrian
Goal 13	Address transportation needs in unincorporated communities.
Objectives	<ul style="list-style-type: none"> • Work with community groups in unincorporated areas to improve public transportation accessibility.

Federal Planning Factors

To ensure compliance with federal requirements, Forward 2050 must establish a clear connection between its guiding principles and the federal planning factors. The accompanying table demonstrates how each guiding principle addresses one or more of the federal planning factors established in the FAST Act and carried forward in the IIJA.

Table 1.1: Federal Planning Factors

		PERMIAN BASIN PRINCIPLES					
							
FEDERAL PLANNING FACTORS	Support the economic vitality of the metropolitan area	✓	✓	✓	✓		✓
	Increase the safety of the transportation system for motorized and non-motorized users			✓		✓	✓
	Increase the security of the transportation system for motorized and non-motorized users			✓		✓	✓
	Increase the accessibility and mobility of people and freight		✓	✓			✓
	Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation		✓	✓	✓		✓
	Enhance the integration and connectivity of the transportation system		✓	✓		✓	✓
	Promote efficient system management and operation	✓		✓	✓	✓	
	Emphasize the preservation of the existing transportation system			✓		✓	✓
	Improve the resiliency and reliability of the transportation system		✓	✓	✓	✓	✓
	Enhance travel and tourism		✓	✓	✓		✓

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2 Area Snapshot



FORWARD 50

METROPOLITAN TRANSPORTATION PLAN

Introduction

The Forward50 MTP defines the strategy for creating a regional transportation system that accommodates current mobility needs and looks to the future to anticipate where new needs may arise. This chapter briefly summarizes the people, places, and mobility trends that must be understood to identify multimodal projects that address present and future needs.

History

The western expansion of the United States and the discovery of oil played major roles in the history of the Midland-Odessa region.

- **Western Expansion.** Seeking a route around the Rocky Mountains, settlers found Texas to be an ideal location for transportation routes. The arrival of the Texas and Pacific Railroad in the late 1880s established Midland and Odessa as midway points between Dallas and El Paso.
- **Oil.** The discovery of oil in the mid-1920s transformed the two communities. In the decades since, the petroleum industry has shaped the people, culture, and economy of the Permian Basin, with Ector and Midland Counties becoming the epicenter of the nation's oil and gas industry. The growth of this industry has attracted people and diversified the regional economy.

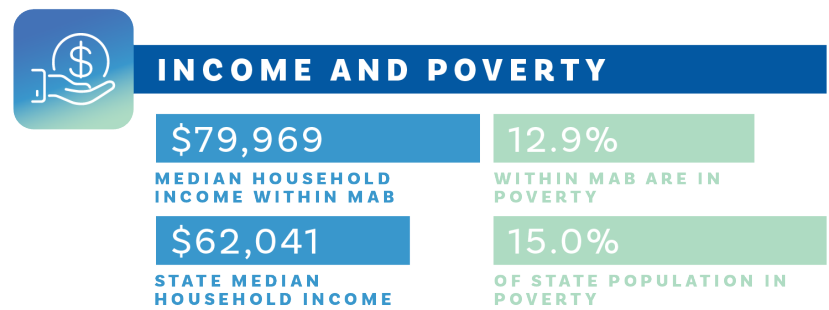
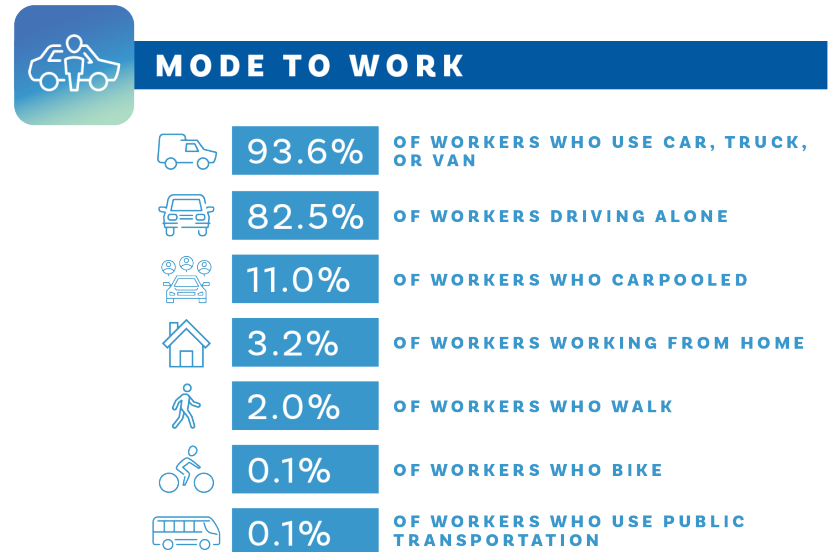
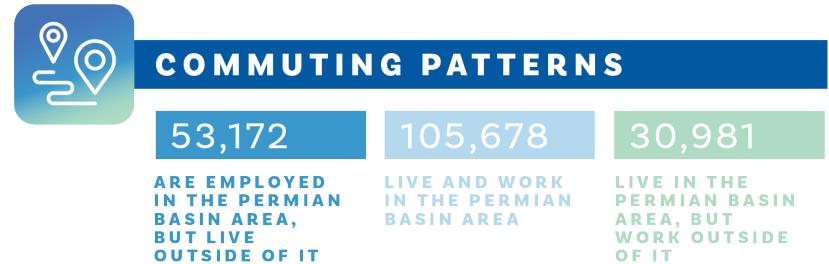
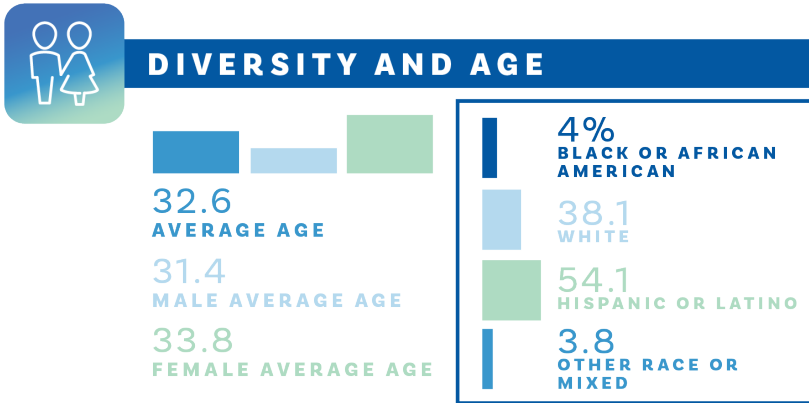
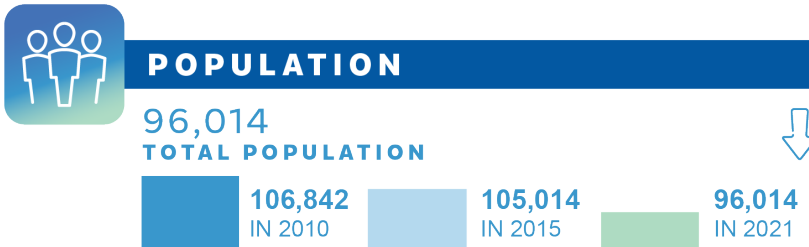
Midland and Odessa are the only urbanized areas in the Permian Basin and continue to grow closer together. The cities have capitalized on the economics of the petroleum industry, with major petroleum companies relocating or expanding their presence in the region over the last two decades. The region benefits from its location along I-20 and other important highways, as well as rail and air transportation services. The movement of people and goods in the region is crucial due to its dominance as a center of oil and gas production.

Area Snapshot | People

The Permian Basin MPO has analyzed the region's population and economic growth trends. This analysis aims to develop and implement projects that address travel patterns and transportation requirements within the Permian Basin MAB.

Demographic Trends and Projections

The advancements in hydraulic fracturing and horizontal drilling have led to a significant increase in oil and gas production. Consequently, this growth has attracted workers from across the United States to west Texas, particularly the cities of Midland and Odessa. As a result, it is important to address the potential strain on the transportation system and other infrastructure, as outlined in the Forward50 MTP.



Source: 2022 Census: American Community Survey (ACS) 2018-2022 5-Year Estimates



Population Density

As shown in Figure 2.1, the highest population density is in the cities of Midland and Odessa, which have population densities of over 2,400 people per square mile. Approximately 60% of residents live outside of the city limits of Midland and Odessa, however, future development is somewhat restricted by the oil wells and pipelines that exist in these areas. Areas outside of the two urban areas are largely rural and have low-to medium-density.

Figure 2.1 – Population Density

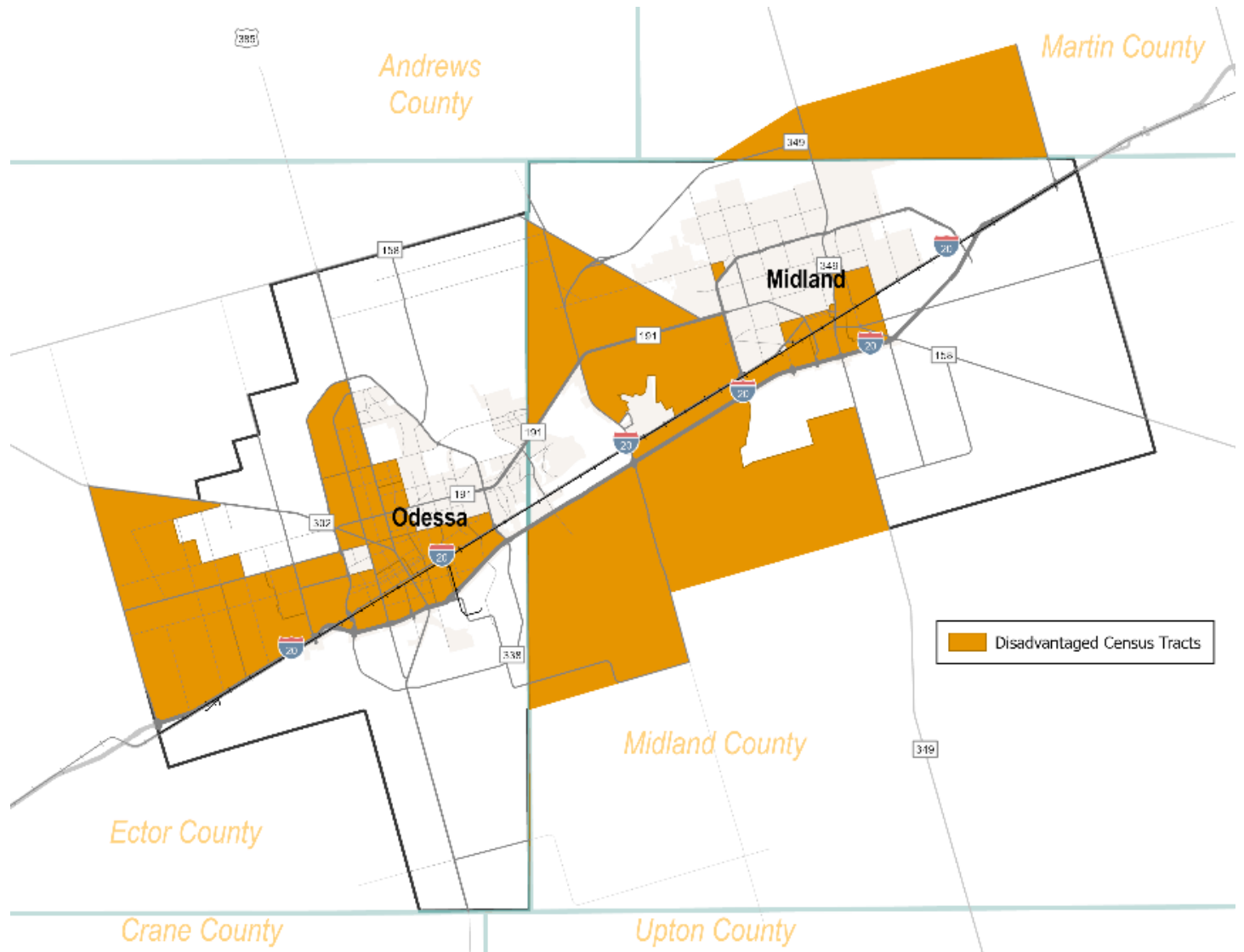


Source: 2022 ACS 5-year Estimates

Equitable Transportation Community Index

As part of the Justice40 initiative, the United States Department of Transportation (USDOT) created the Equitable Transportation Community Index. This index includes five components: Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability. This index was created to help the US DOT understand how investments in transportation were addressing or impacting these disadvantages. As shown in Figure 2.2, 29 census tracts within the Permian Basin MAB are identified as disadvantaged. See Appendix A for more information.

Figure 2.2 – Disadvantaged Census Tracts



Source: US Department of Transportation, 2024

Household Income and Poverty

The Permian Basin MPO has a lower household poverty rate than the Texas average, with 12.9% of households in poverty compared to Texas’s 15% and a median income of \$85,473 (almost \$8,000 more than the state median). As shown in Figure 2.3, the highest concentration of households in poverty is in the Westover Acres neighborhood west of Odessa and the neighborhoods of Moody, Greenwood, and Nueva La Jolla in eastern Midland.

Figure 2.3 – Household Poverty



Source: 2022 ACS 5-year Estimates

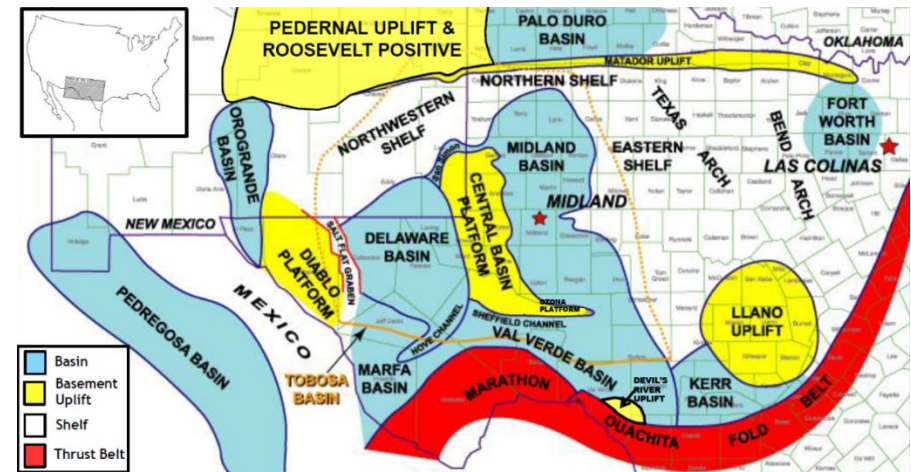
Area Snapshot | Places

Environmental and Historic Features

The larger Permian Basin region (which includes areas beyond the Permian Basin MAB) is a vast and diverse region located in west Texas and southeastern New Mexico. The region is renowned for its rich environmental and historic features that have shaped the area over millions of years. From a geological perspective, the Permian Basin is a sedimentary basin that is estimated to have formed around 300 million years ago during the Permian Period. It is home to a variety of unique rock formations, which provide valuable insights into the Earth's ancient history. Figure 2.4 shows the geological formations for the region and beyond.

Figure 2.5 highlights the environmental and historical features of the Permian Basin MAB. In terms of environmental significance, the Permian Basin is known for its diverse and fragile ecosystem. It is home to a variety of plant and animal species, including cacti, mesquite trees, jackrabbits, and roadrunners. The region also supports a significant bird population, with many migratory birds making their way through the area. The Permian Basin is intersected by several rivers, including the Pecos River. These natural features provide water resources for both wildlife and human populations. However, the growth of the oil and gas industry in the region has posed significant challenges to the environmental balance, with issues such as water contamination and habitat destruction being of concern.

Figure 2.4 – Geological Formations

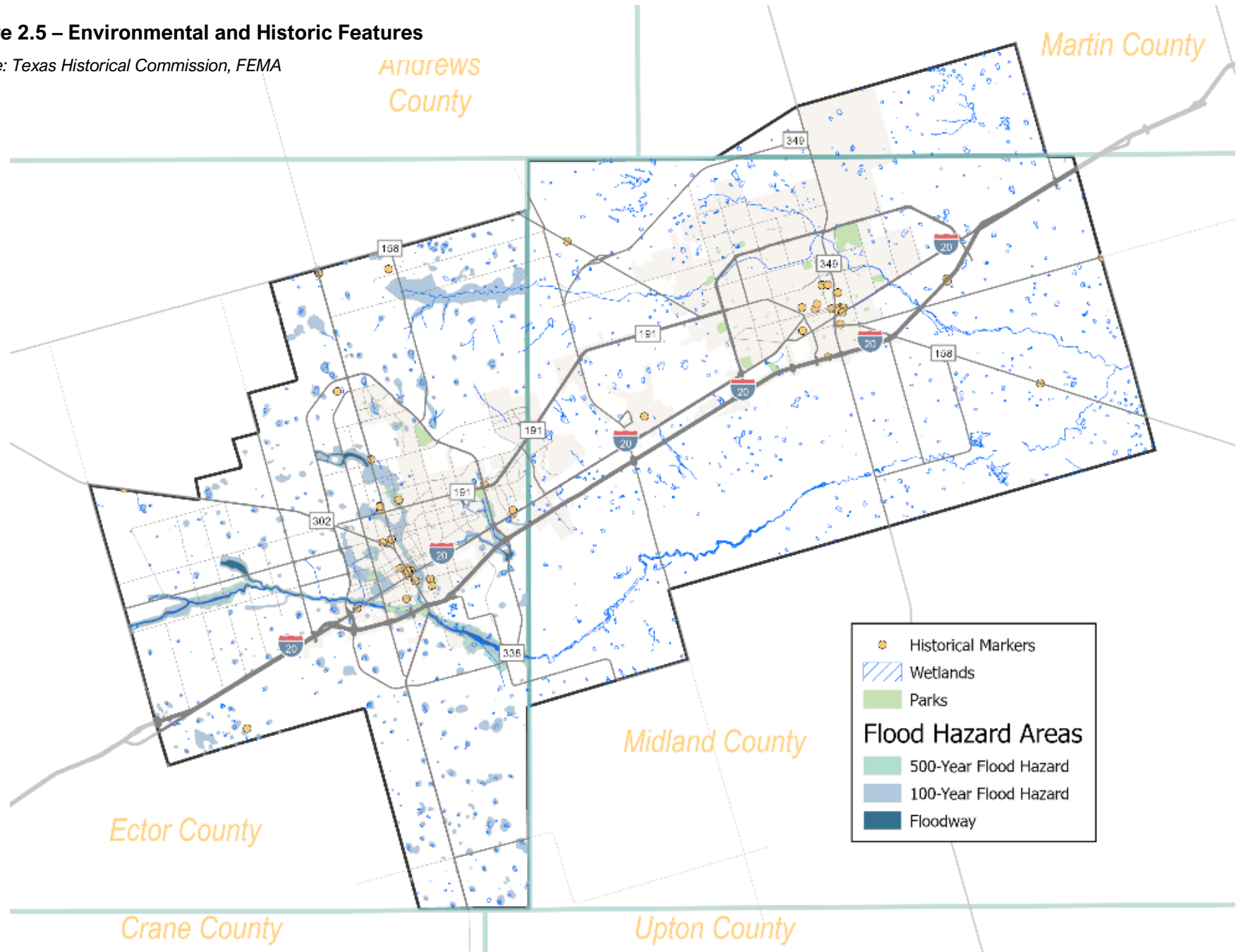


Source: Pioneer Natural Resources

The Permian Basin also holds a wealth of cultural and archaeological significance. The area has been inhabited by various Native American tribes for thousands of years, leaving behind traces of their presence in the form of rock art and artifacts. The region also played a significant role in the history of the American West, with the establishment of cattle ranches and the growth of towns and cities that sprung up around the oil industry. The Permian Basin is also home to several historic sites, such as the Vaughn Building, George W. Bush Childhood Home, and the Permian Basin Petroleum Museum, which offer a glimpse into the region's past.

Figure 2.5 – Environmental and Historic Features

Source: Texas Historical Commission, FEMA



Key Destinations and Activity Centers

Downtown Midland

In downtown Midland, visitors can explore the Midland Center, a multi-purpose venue that hosts concerts, trade shows, and community events. The Permian Basin Petroleum Museum, another popular attraction, provides a comprehensive look into the region's rich oil and gas heritage. Additionally, downtown Midland offers a unique blend of shopping and dining experiences with numerous art galleries, boutique shops, and the Yucca Theatre.

Downtown Odessa

Downtown Odessa boasts several attractions that highlight the city's history and culture. The Ellen Noel Art Museum showcases a wide range of art exhibits, including works by local, national, and international artists. The Presidential Museum and Leadership Library offers a fascinating glimpse into the lives of U.S. presidents and provides insight into the nation's political history. Downtown Odessa also features the Ector Theatre, a historic venue that hosts live performances and cultural events.

Public Facilities

Government buildings such as city halls, post offices, and courthouses are popular destinations. Also, major event venues, such as the Scharbauer Sports Complex, Momentum Bank Ballpark, Midland County Horseshoe Arena, Ector County Coliseum, Ratliff Stadium, and the Wagner Noël Performing Arts Center, generate substantial traffic as crowds gather for athletic games, musical concerts, and other regional events.

Education Facilities

Several independent school districts, charter schools, and a STEM Academy are in the Permian Basin MAB. In addition, the area is home to four higher education institutions: the University of Texas Permian Basin, Midland College, Odessa College, and Texas Tech University Health Sciences Center of the Permian Basin.

Retail

Two large regional shopping malls and several retail centers and chain grocery stores provide residents and visitors with shopping opportunities. Major shopping centers include Music City Mall, Midland Park Mall, the Colonnade Shopping Center, Westgate Plaza, Walmart, and H-E-B. Nationally known chains and local restaurants, hotels, and theaters also serve the region.

Medical

The region's major medical facilities include Medical Center Hospital, Odessa Regional Medical Center, Midland Memorial Hospital, and the newly constructed Veteran's Affairs Clinic. These facilities are located adjacent to major roadways and corridors.

Other Destinations

The region's collection of local and regional destinations includes:

- Ellen Noel Art Museum, Permian Basin Petroleum Museum, Museum of the Southwest, George Bush Childhood Home and Museum, and Sibley Nature Center
- Wagner Noël Performing Arts Center, Jackalopes ice hockey, Rockhound's baseball, and local football leagues
- Golf and country clubs
- Community learning centers and libraries



Area Snapshot | Mobility

Functional Classification

The functional classification system designates characteristics of roadways into general hierarchies that describe the relationship between mobility and accessibility. Understanding the various roles that roadways play is crucial when considering how to improve the movement of people and goods within and through the Permian Basin MAB. The types of classifications include:

Principal Arterials provide the highest level of mobility among the functional classification categories. These roadways are divided into three sub-categories.

- Interstates, the highest classification of Arterials, are defined as continuous, limited-access routes that have trip lengths and volumes indicative of substantial statewide or interstate travel. *Examples include I-20.*
- Other Freeways and Expressways must be divided with limited access and egress points that are typically grade-separated. They primarily serve through traffic and major circulation movements. *Examples include SH 191 (Midland/Ector County) and Loop 250 (I-20 to Fairgrounds Road, Midland).*
- Other Principal Arterials provide long-distance connections but do not fit the two categories above. Other Principal Arterials are not access-controlled, so abutting land uses can have direct access. *Examples include SH 158 (Midland), SH 349 (Midland), SH 338 (Odessa) and U.S. Highway 385 (Odessa).*

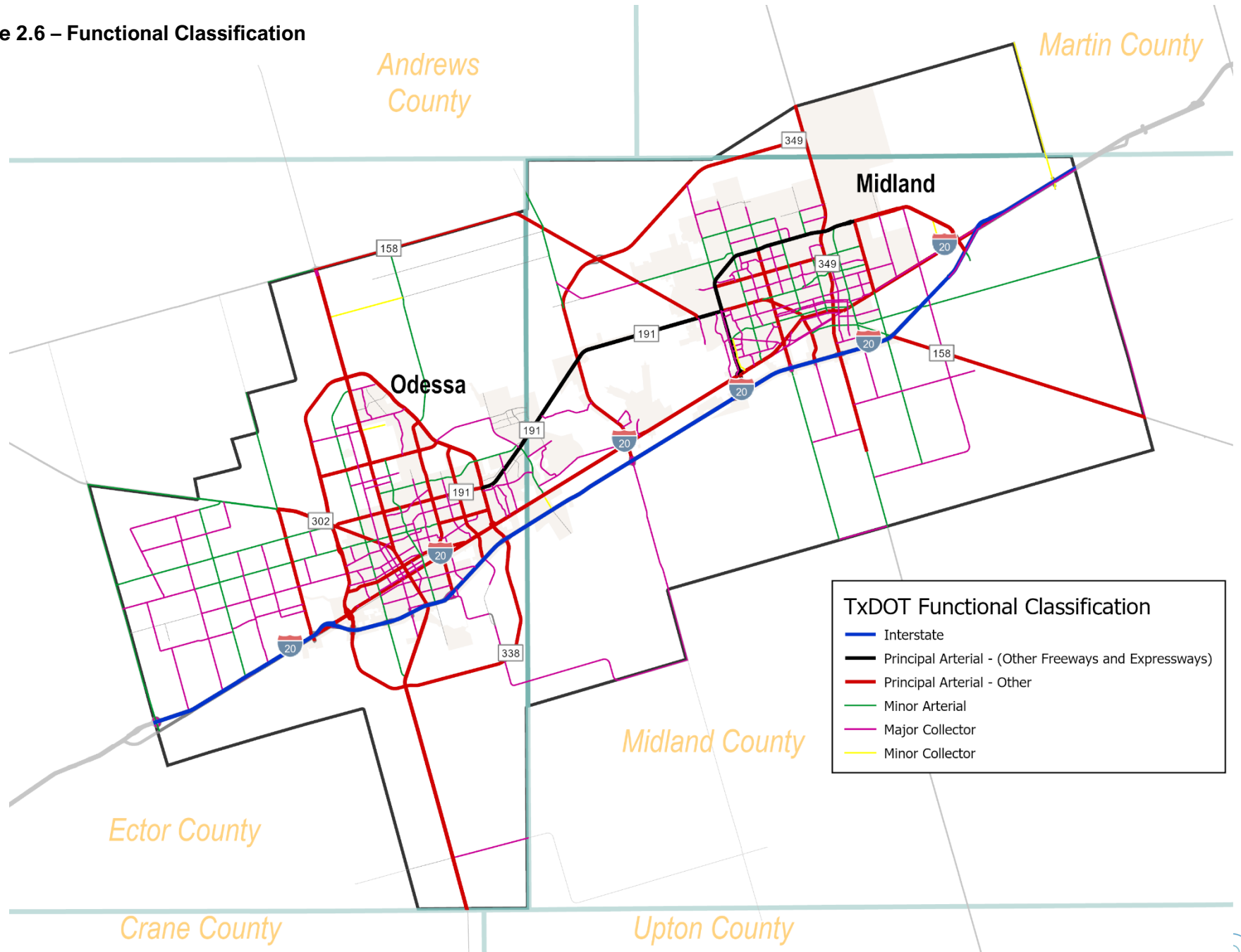
Minor Arterials serve trips of moderate length and provide for relatively high overall travel speeds with minimum interference to through movement. *Examples include SH 302 (Odessa), North County Road West (Odessa), Midland Drive (Midland) and Lamesa Road (Midland).*

Collectors gather traffic from local roads and direct it to arterials. In rural areas, they serve intra-county travel (Midland – Ector – Martin), with distances shorter than Arterials. In urban areas, they provide both land access and traffic circulation within residential neighborhoods and commercial and industrial areas. Collectors are divided into two sub-categories with subtle differences:

- Major Collectors are typically longer in length than Minor Collectors, with fewer access points, higher speed limits, higher traffic volumes and more travel lanes. *Examples include Dawn St (Odessa), Illinois (Midland), and many others.*
- Minor Collectors are typically shorter in length, with more access points, lower speeds, lower volumes and fewer travel lanes. Examples include CR 1140 (Midland), Beal Pkwy (Midland), and E Cottonwood Rd. (Odessa)

Local Roads provide access to adjacent private property or low-volume public facilities. Travel distance on local roads is relatively short when compared to the higher classifications. This classification accounts for the largest percentage of all roadways in terms of mileage.

Figure 2.6 – Functional Classification

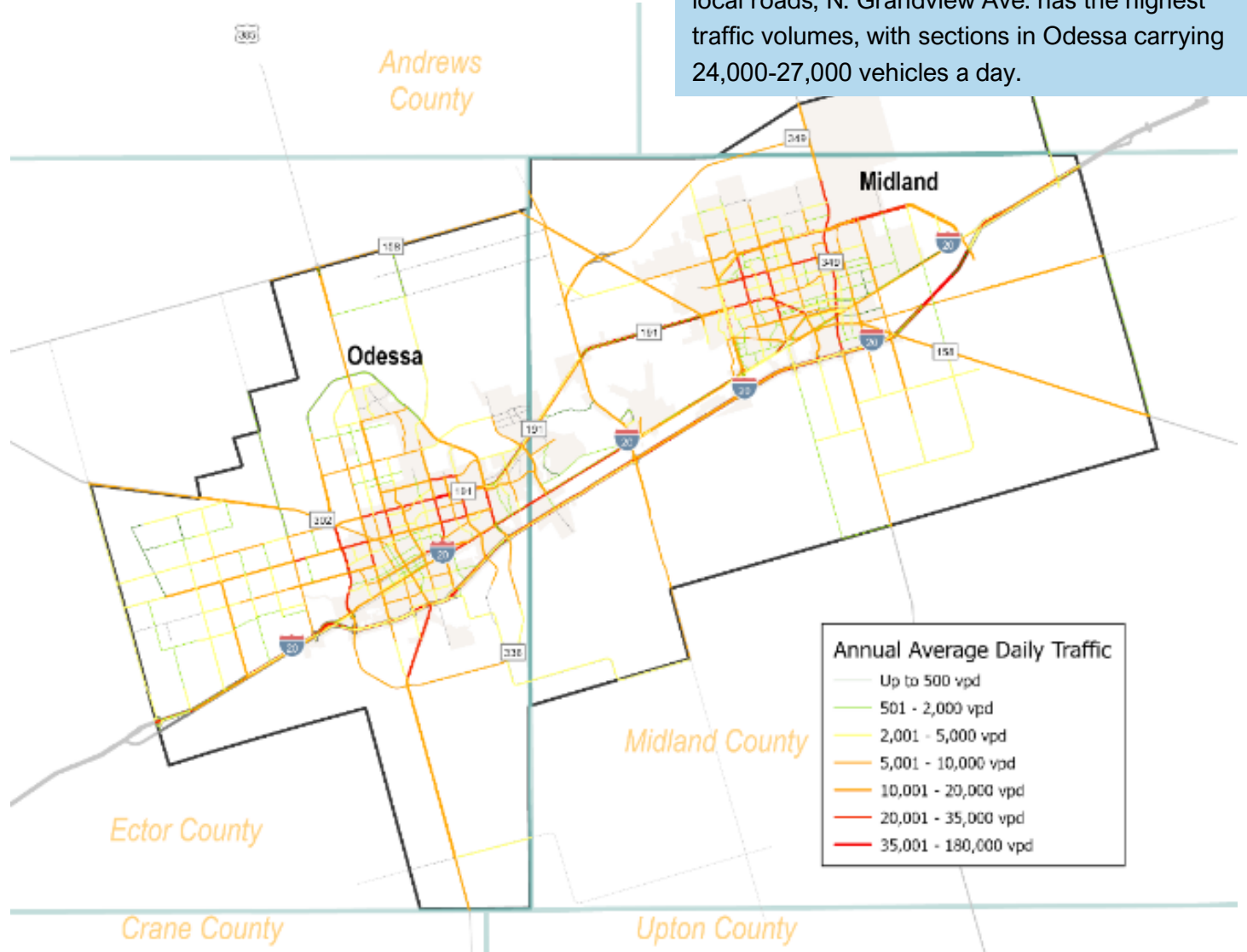


Average Annual Daily Traffic (AADT)

Annual Average Daily Traffic (AADT) is a metric used to determine the average number of vehicles that pass through a specific location on a road each day. The volume of traffic typically depends on factors such as the purpose, design, and location of the road. Major highways catering to long-distance travel tend to have higher traffic volumes.

AADT volumes are useful in identifying areas with high travel demand, such as commercial centers, educational institutions, and medical facilities. Additionally, AADT volumes can indicate roadways that may experience a significant amount of through traffic.

Figure 2.7 – Annual Average Daily Traffic, 2023



As shown in Figure 2.7, Loop 250, I-20, and SH 191 have the highest traffic volumes. Among local roads, N. Grandview Ave. has the highest traffic volumes, with sections in Odessa carrying 24,000-27,000 vehicles a day.

Source: TxDOT

Roadway Congestion

Transportation system analysis and travel forecasting are critical components in the regional transportation planning process. They lay the foundation for identifying future transportation solutions, evaluating alternatives, and making investment decisions. At the time of this MTP preparation the PBMPO Travel Demand Model (TDM) for 2050 was not completed. It is currently underway and will likely be available in the spring of 2025. Once the TDM is received from TxDOT the MPO will begin utilizing it for future project selection; this may occur as early as the first amendment to the plan.

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Crashes

TxDOT and the Permian Basin MPO continue to lead efforts to address travel safety and adhere to federal transportation legislation. From 2019 to 2023, 42,829 crashes were reported in the Permian Basin MAB.

- **Location of crashes.** Crashes were distributed somewhat evenly between the cities and unincorporated areas: Midland (36%), Odessa (37%), and unincorporated areas (27%).
- **On-system roadways.** Roadways designated on the State Highway System and maintained by TxDOT with the highest numbers of crashes included: I-20 (6,267), SH 191 (2,947), and US 385 (1,849).
- **Off-system roadways.** Roadways not designated on the State Highway System and not maintained by TxDOT (i.e. city street, county road) with the highest number of crashes included: N Grandview Ave, N Midkiff Rd, W Wadley Ave, and E University Blvd, each of which recorded more than 500 crashes.
- **Severity.** Approximately 25% of crashes resulted in some type of injury. A total of 383 crashes (0.9%) resulted in a fatality.
- **Causation.** The most frequent contributing factor was failing to control speed (8,012), followed by failing to yield the right of way at a stop sign (3,693) and failing to yield the right of way while turning left (2,814).

- **Bicyclists and Pedestrians.** A total of 371 (0.87%) crashes involved a cyclist or pedestrian, with N Grandview Ave, W Wadley Ave, and E University Blvd having the largest concentration for on-system roadways and SH 191, FM 2020, and SH 349 having the largest concentration for off-system roadways. SH 191 accounted for the most crashes out of all roadways (20 crashes).
- **Intersections.** Approximately 35% of crashes occurred at an intersection. Many of these intersections were focused around the downtown areas and high-volume intersections such as SH 191 and Loop 250.
- **Railroads.** A total of 36 crashes involved the UP railroad.

Highway Safety Improvement Program (HSIP). The Highway Safety Improvement Program (HSIP) is a Federal-aid program tasked with reducing traffic fatalities and serious injuries on all public roads, non-State-owned roads, and roads on tribal land. The HSIP takes a data-driven, strategic approach to improving highway safety on all public roads. Cities and counties apply for HSIP funding when project calls are issued, and HSIP funding can be applied to installing traffic safety measures such as rumble strips, widening of shoulders, permissive left turn signals, and enhanced signage. The Permian Basin MPO member agencies have completed numerous projects through the HSIP since SAFETEA-LU established the HSIP as a core federal-aid program in 2005.

Figure 2.8 – All Crashes, Bicycle and Pedestrian Crashes, 2019 to 2023

Source: TxDOT Crash Records Information System

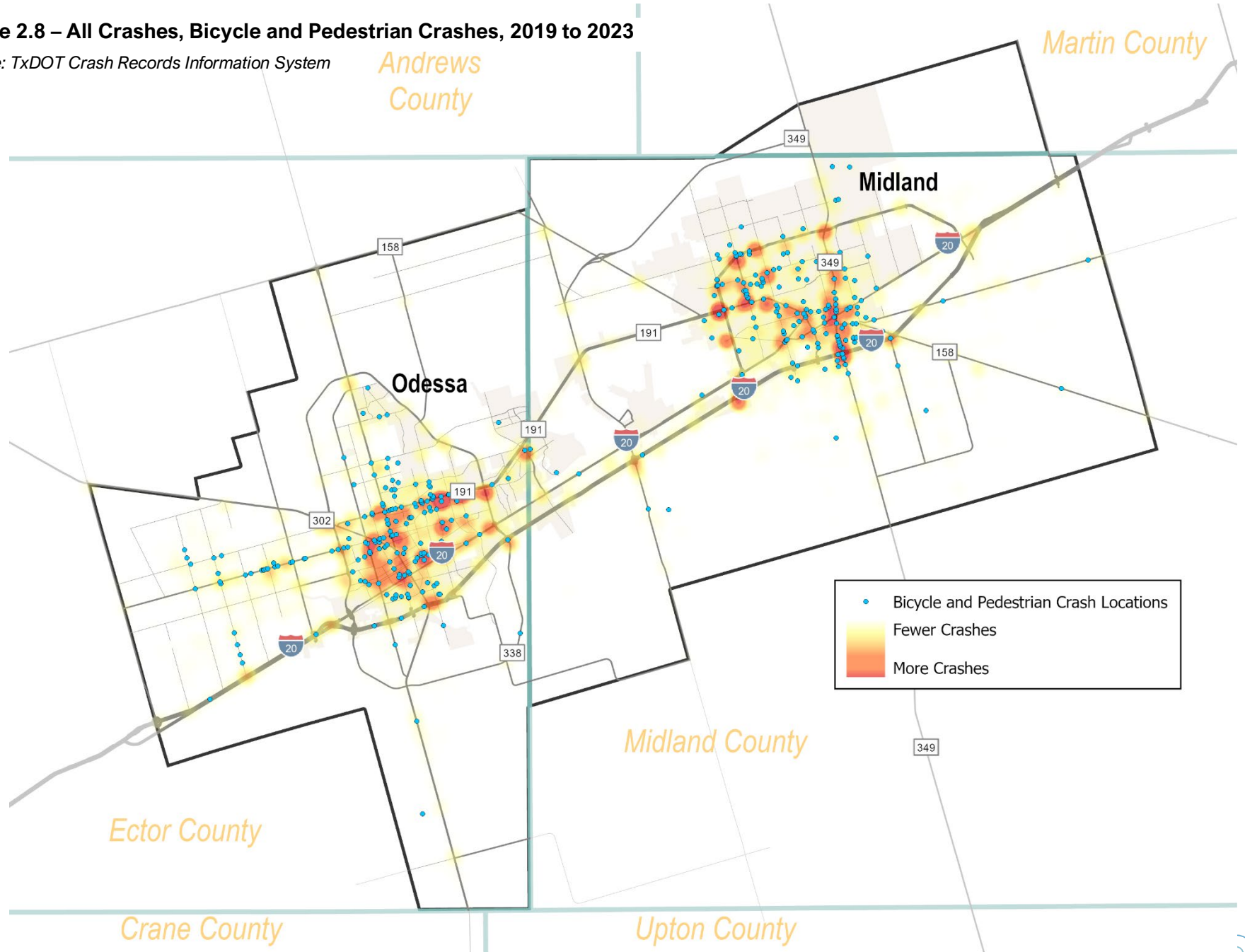


Figure 2.9 – Fatal Crashes, 2019 to 2023

Source: TxDOT Crash Records Information System

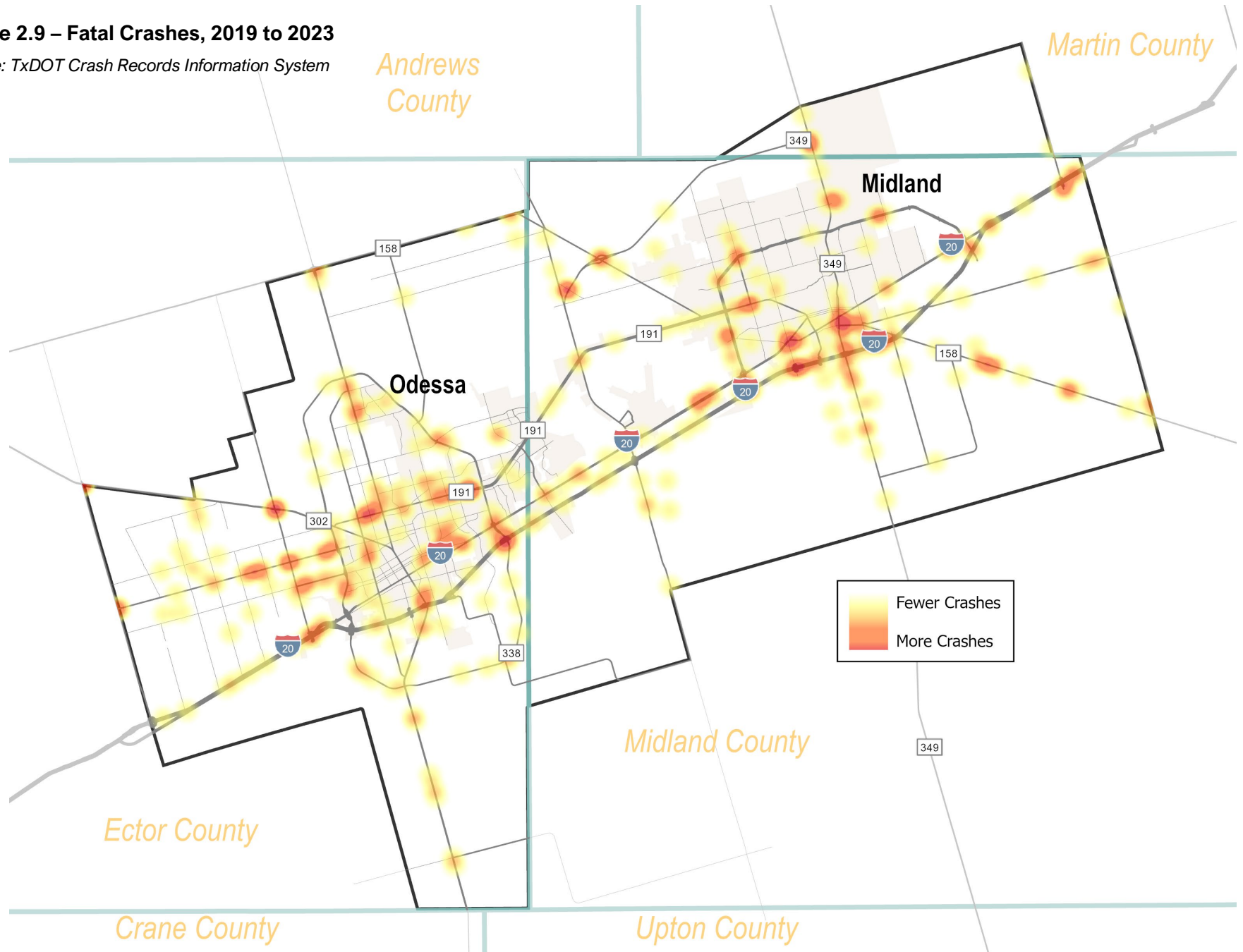
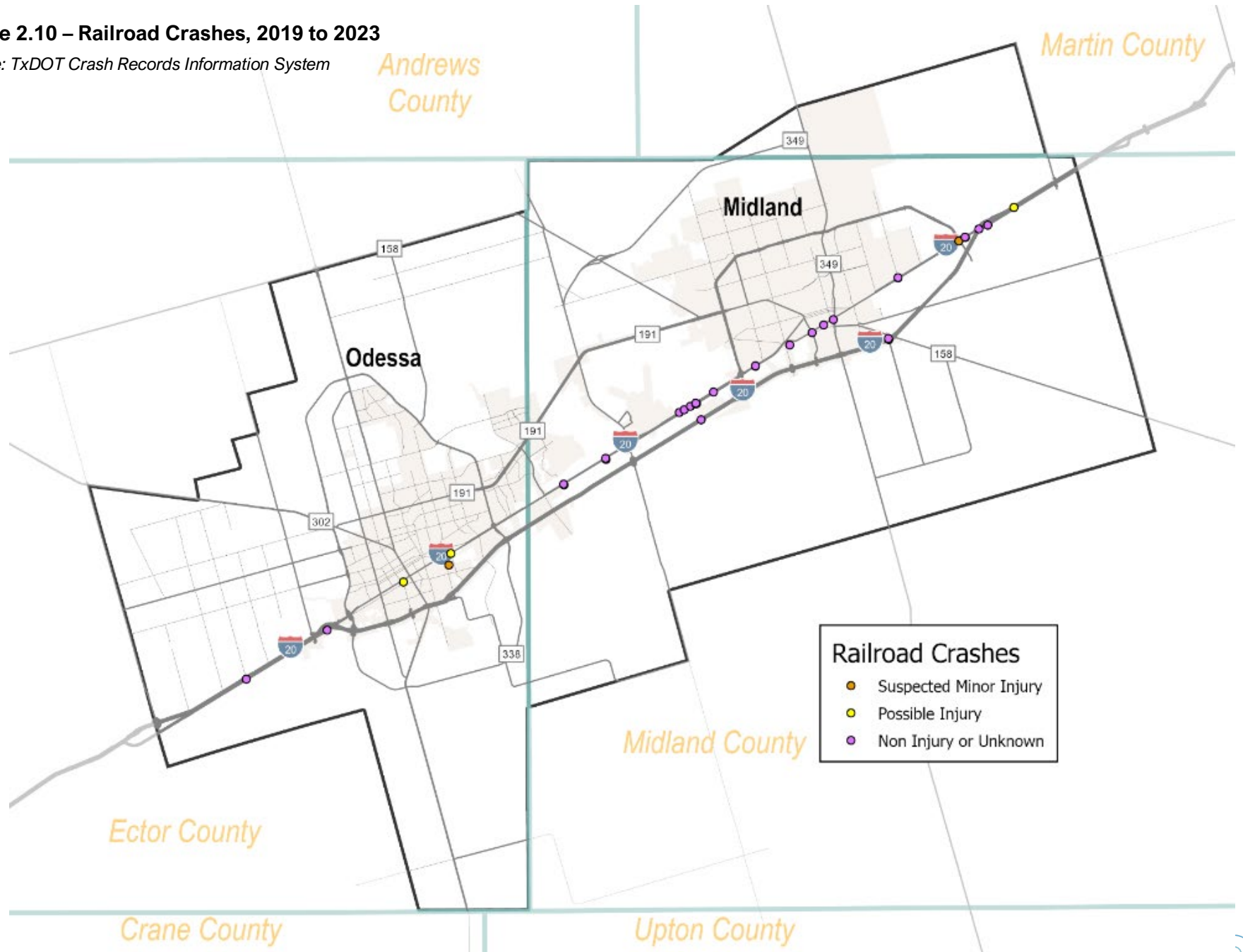


Figure 2.10 – Railroad Crashes, 2019 to 2023

Source: TxDOT Crash Records Information System



Bike and Pedestrian Infrastructure

The Permian Basin MAB has historically seen more roadway and transit investments compared to active transportation. To narrow the gap, the Permian Basin MPO established a Bicycle and Pedestrian Advisory Committee in 2017 and conducted a study in 2019 to promote a regional trail between Midland and Odessa.

Midland and Odessa have made progress in developing their active transportation networks and recognize the need for additional pedestrian access. Pedestrian facilities vary, with many areas having incomplete networks. The cities are working to fill these gaps by requiring sidewalks for new development and including upgrades as part of roadway reconstruction. Priority is given to areas with high pedestrian traffic, such as schools, parks, and business districts.

The region also has various off-system recreational trails, including those at the UTPB campus, the I-20 Wildlife Preserve, Comanche Trail Park, and the Odessa Mountain Bike Park. Figure 2.11 shows the City of Midland Hike Bike Route. Figure 2.12 shows the region’s existing bicycle and pedestrian infrastructure.

Figure 2.11 – City of Midland Hike Bike Route, 2024

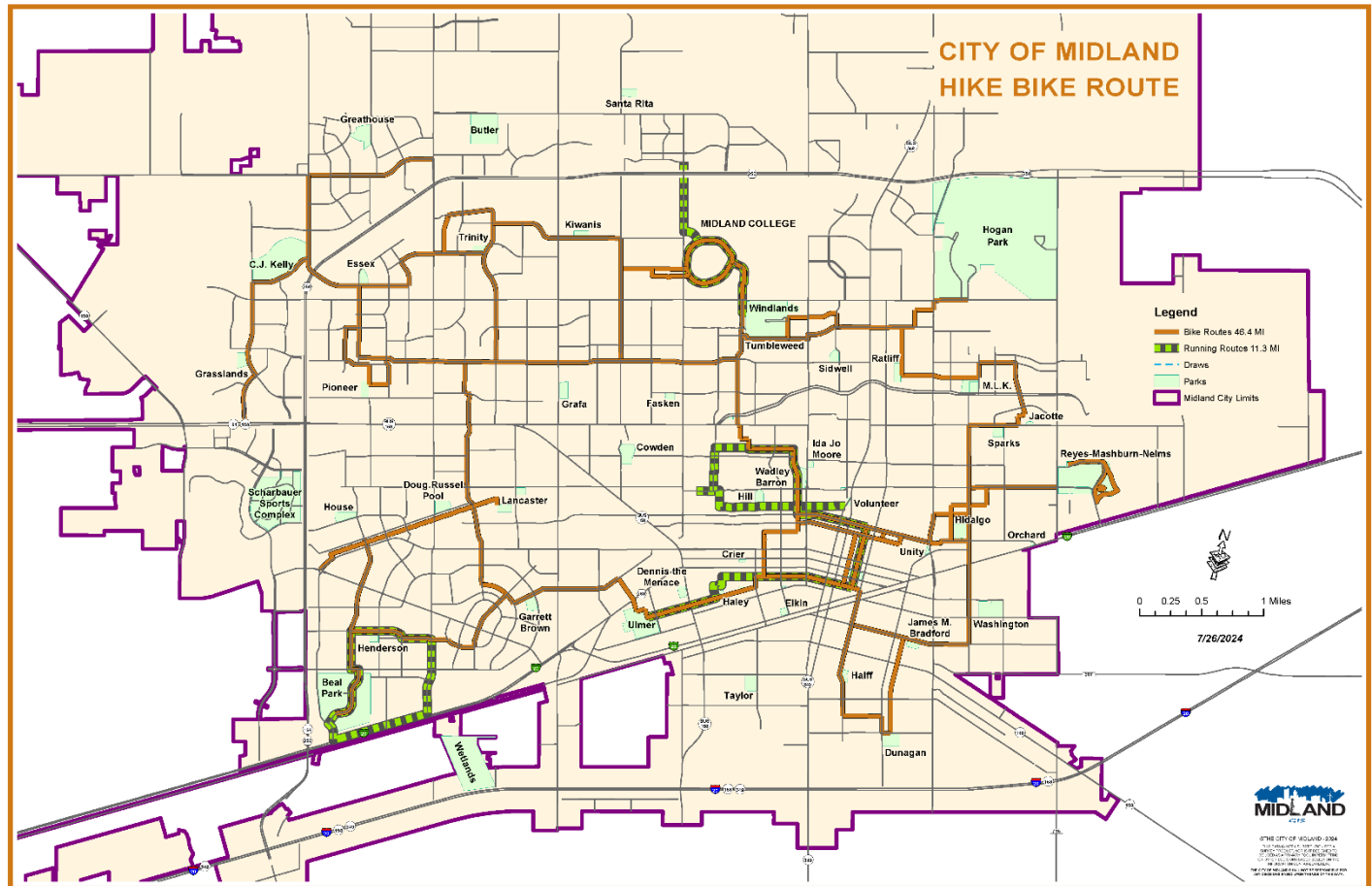
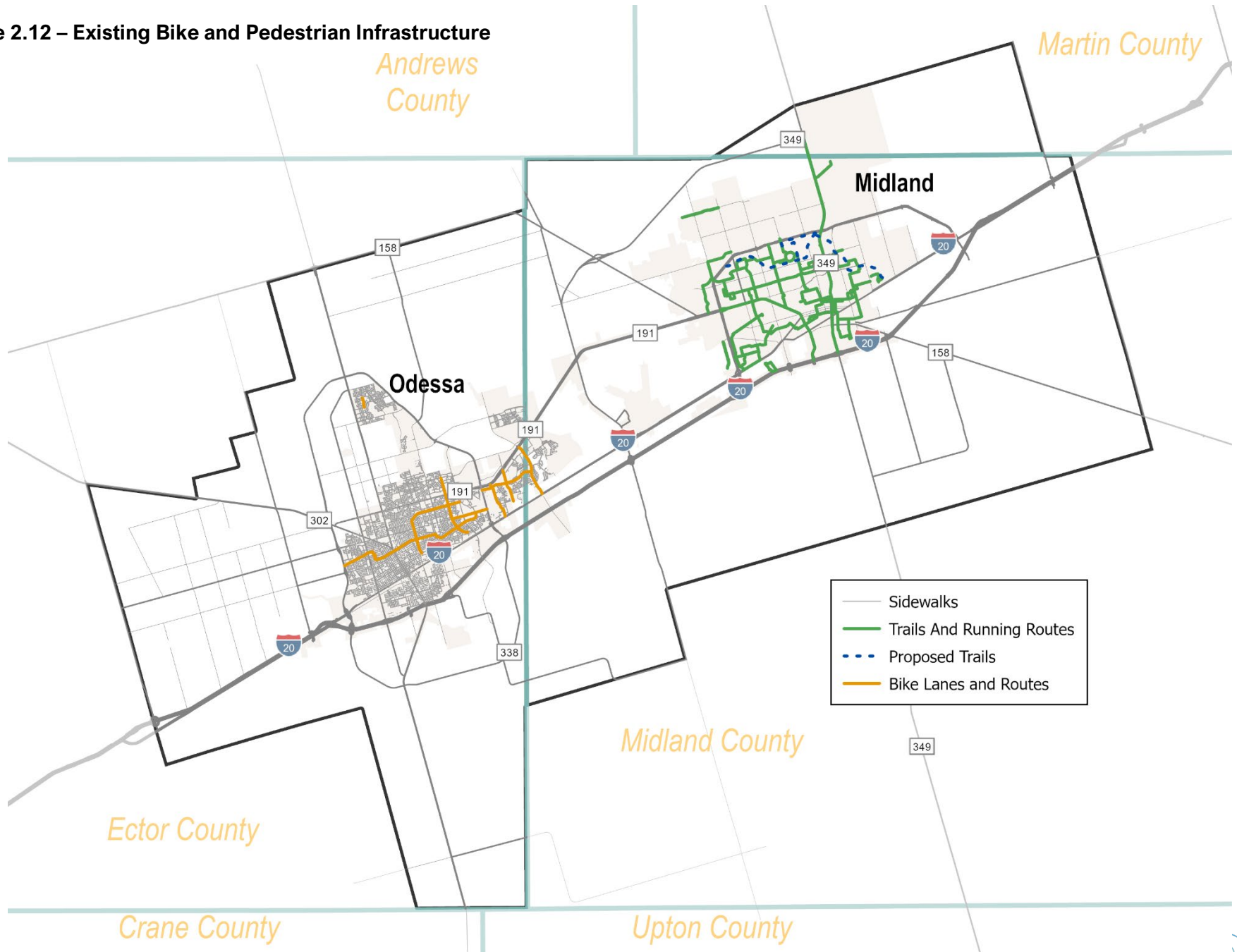


Figure 2.12 – Existing Bike and Pedestrian Infrastructure



Transit

EZ-Rider operates the transit system for Midland and Odessa under the direction of the Midland-Odessa Urban Transit District (MOUTD). The transit system operates 12 fixed routes (six each within Midland and Odessa), paratransit, and an inter-city connectivity route between Midland and Odessa.

For persons living outside the EZ-Rider service area, West Texas Opportunities (WTO) provides demand response transportation service including the unincorporated areas of Ector, Midland, and Martin Counties, and the surrounding 15 counties.

Table 2.1 – Transit Annual Ridership, Revenue Miles, and Revenue Hours, 2018 to 2022

		2018	2019	2020	2021	2022
Demand Response	Ridership	43,246	44,641	28,449	19,128	27,946
	Revenue Miles	200,375	216,732	145,578	112,057	152,764
	Revenue Hours	18,737	19,673	14,121	10,785	14,111
	Fare Revenue	\$24,070	\$27,592	\$20,067	\$16,309	\$28,738
Commuter Bus	Ridership	12,615	15,158	17,449	9,554	10,309
	Revenue Miles	107,256	140,701	204,902	197,556	187,235
	Revenue Hours	3,301	4,739	7,187	6,974	6,149
	Fare Revenue	\$823	\$17,819	\$24,340	\$10,246	\$12,238
Bus	Ridership	312,673	268,658	208,610	155,302	177,305
	Revenue Miles	644,989	644,109	655,228	642,597	658,517
	Revenue Hours	41,336	40,676	41,745	40,874	42,016
	Fare Revenue	\$157,791	\$224,554	\$155,023	\$143,660	\$174,120

Figure 2.13 – Transit Routes

Source: EZ-Rider



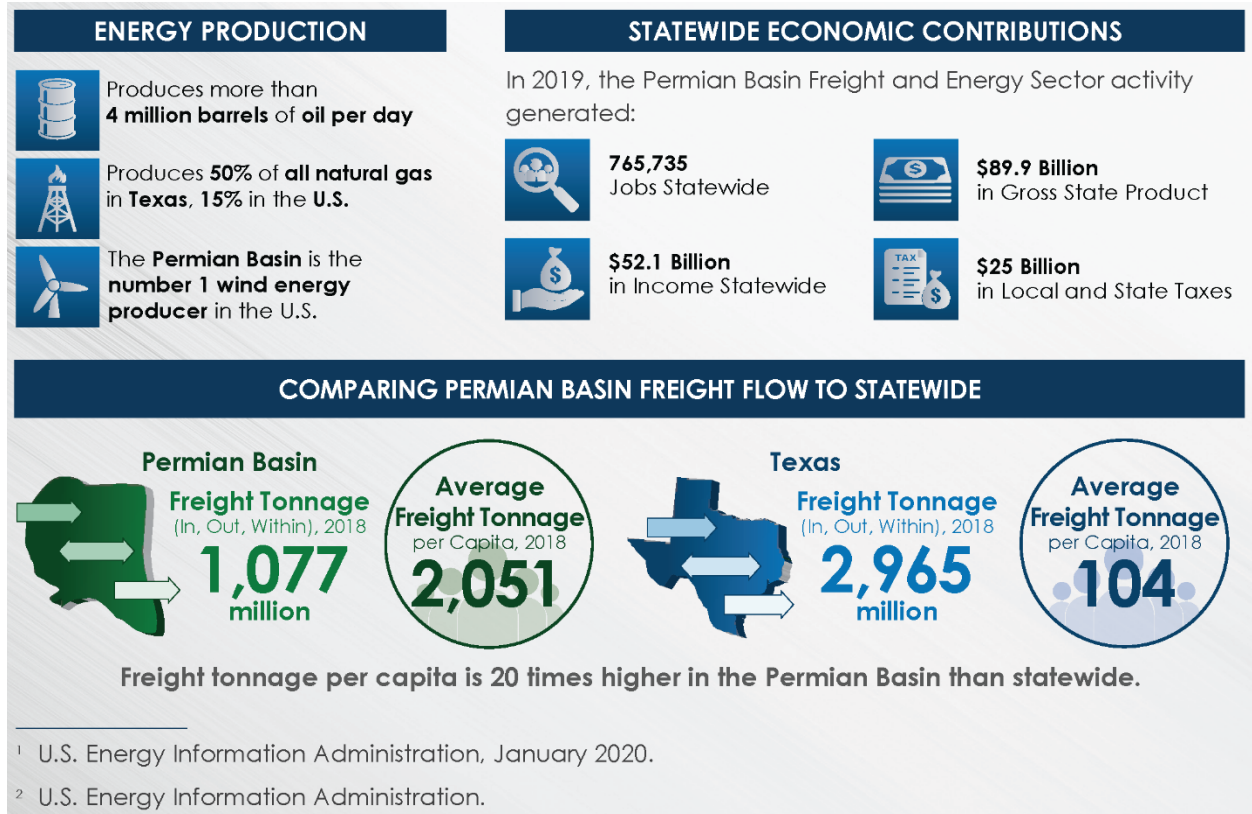
Freight, Rail, and Aviation

The Permian Basin Freight and Energy Sector Transportation Plan (November 2020) describes the freight and energy sector’s critical importance locally and beyond:

The growth in energy sector activity is driving rapid economic and population growth. The energy sector activity and the energy and non-energy-related freight movements in the region have impacts that extend far beyond the Permian Basin. Businesses and residents in the region rely upon raw materials, supplies, and consumer goods from all over the world to keep businesses operating and residents fed and clothed. Businesses also depend on access to global markets to export the oil, gas, and other products produced in the region.

- Permian Basin Freight and Energy Sector Transportation Plan

The Freight and Energy Sector Transportation Plan’s study area covers approximately 75,000 square miles and extends well outside the Permian Basin MAB to include 24 counties in West Texas and southeastern New Mexico. This area’s role in the state economy and contribution to freight traffic is significant.



Source: TxDOT

Figure 2.14 shows the freight, rail, and aviation network for the Permian Basin MAB.

Freight. State truck freight routes include I-20, SH 158, SH 349, W. Industrial Ave., FM 1788, FM 1882, FM 3503, Garden City Hwy / W. Florida Ave., SH 191, SH 250, Loop 268 / W. Wall St., SH 338, Kermit Hwy / State Spur 450, and US 385. I-20 contributes to the National Freight Network.

Rail. Union Pacific owns and operates railways in the region. Most rail crossings are at grade, with grade-separated crossings at I-20, SH 302, FM 1882, S Grant Ave, S John Ben Shepperd Pkwy, Loop 338, SH 349, SH 158, Rankin Hwy, SH 250, and FM 1208.

Aviation. One primary commercial service airport and two general aviation airports serve the area, including the Midland International Air and Space Port where space flights are permitted (see Table 2.2 for enplanements since 2019).

Figure 2.14 – Existing Freight, Rail, and Airport Facilities

Source: TxDOT

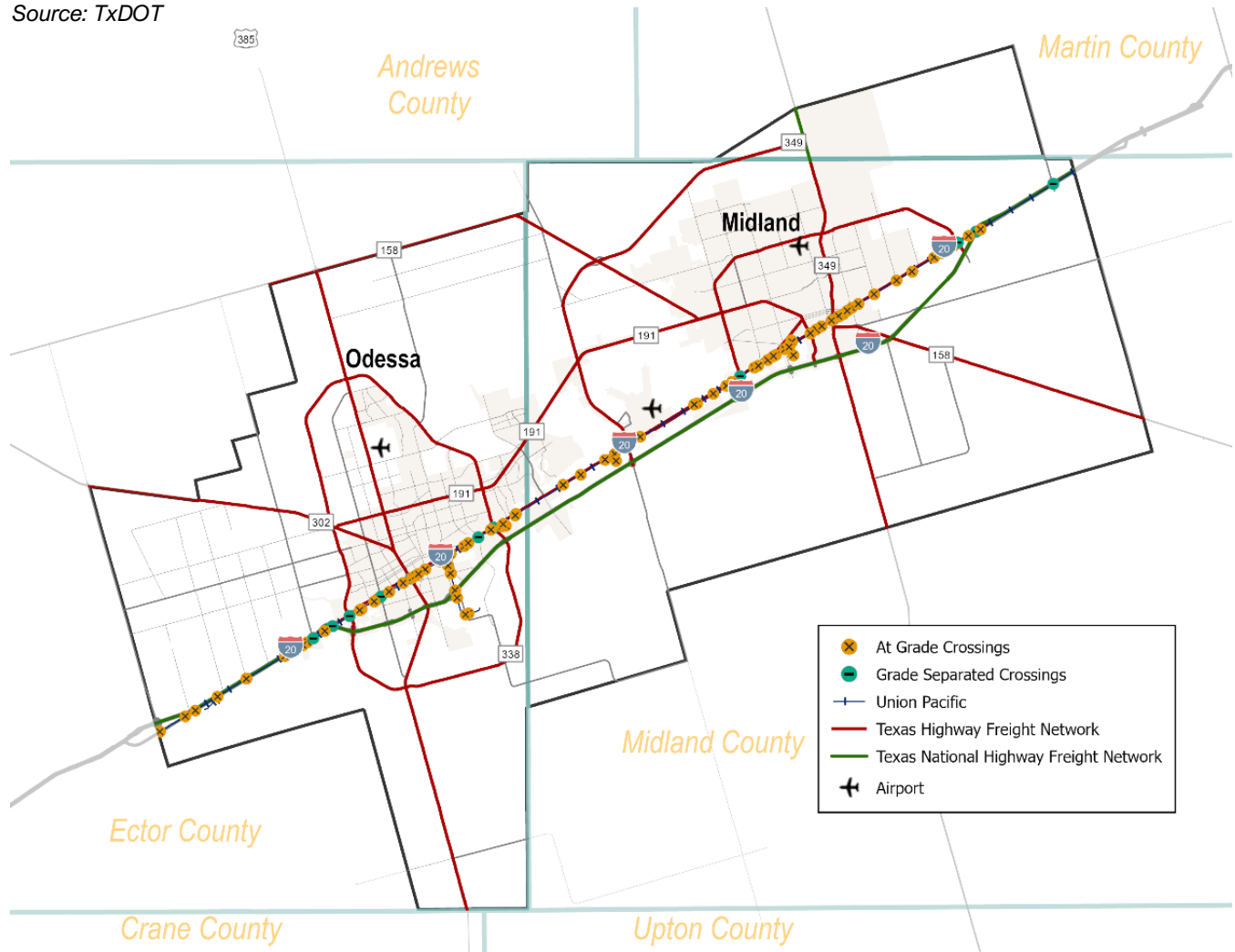


Table 2.2 – Midland International Air and Space Port Enplanements, 2019 to 2023

	2019	2020	2021	2022	2023	% Change
Enplanements	672,382	319,570	504,264	633,964	684,416	1.79%

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3 Public Participation Process



FORWARD **50**

METROPOLITAN TRANSPORTATION PLAN

Introduction

Public participation serves an important and necessary role in transportation planning. Effective engagement identifies a variety of community members and leaders to provide meaningful input at key points throughout the planning process. This chapter provides an overview of the public participation process, including the activities and outcomes that informed the development of the Forward50 MTP.

Public Participation and the Permian Basin MPO

The MPO's Public Participation Plan (PPP) is a Policy Board approved document that sets the guidelines used for ongoing public involvement for the transportation planning process in the Permian Basin MPO. The PPP emphasizes the importance of early, on-going public involvement in the transportation planning process. Early public involvement enables the MPO to make more informed decisions, improve quality through collaborative efforts, and build mutual understanding and trust between the MPO and the public.

The Forward50 MTP adheres to the public involvement techniques and timeframes recommended as part of the PPP for each of the MPO's planning activities.

Engagement Strategy

A collaborative approach to developing the Forward50 MTP helped to ensure a fuller understanding of a community's desires in developing a vision for the Permian Basin area.

Objectives

Public participation for the Forward50 MTP centered on three objectives:

1 | Educate and Empower

- Increase familiarity with the MPO process, including the MTP
- Provide the opportunity for people to identify issues and needs, express their vision and goals, and weigh in on recommendations and priorities

2 | Participate and Collaborate

- Interact with and gather input and options from those who live, work, play, study, invest, and worship in the Permian Basin area
- Engage the MPO's Technical Advisory Committee to help broaden the perspectives drawn into the process

3 | Monitor and Communicate

- Track whether feedback received during engagement is representative of the Permian Basin area
- Communicate to participants how their input is incorporated and the influence this input will have on decision making



Participants

The engagement process included outreach to residents and stakeholders to untap specialized knowledge and experiences from the Permian Basin area. Key participants invited to outreach activities included the following:

- General public
- Policy Board members
- Technical Advisory Committee member
- Community, civic, and business groups
- Major employers
- Public transportation employees and users
- Pedestrians and bicyclists
- Regional, state, and federal agencies/organizations

Activities

The community offered input at key points during the Forward50 MTP process. Engagement activities included the following:

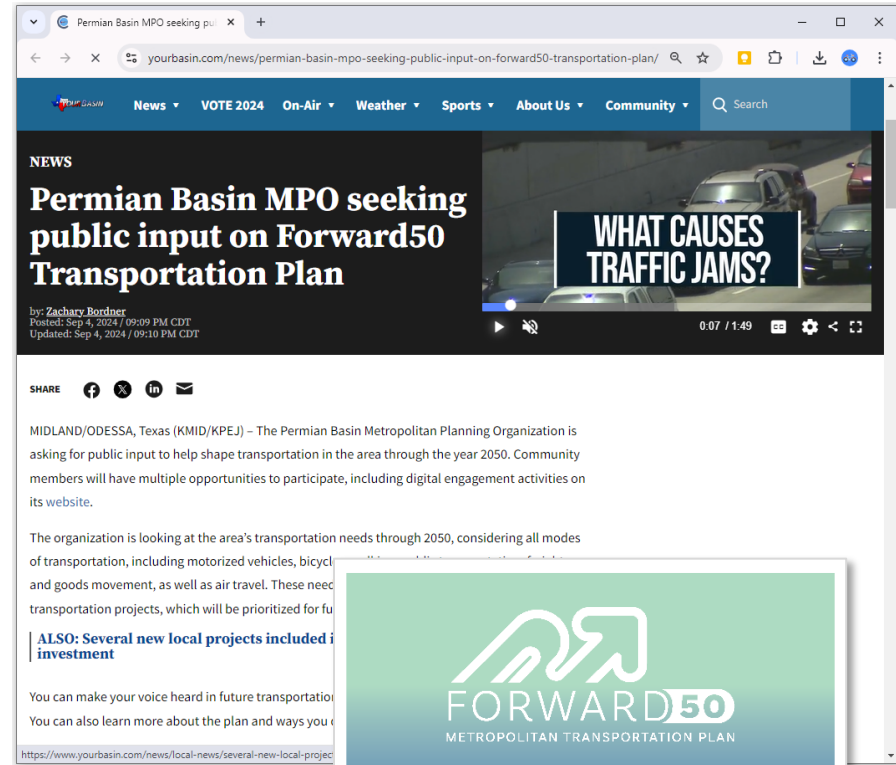
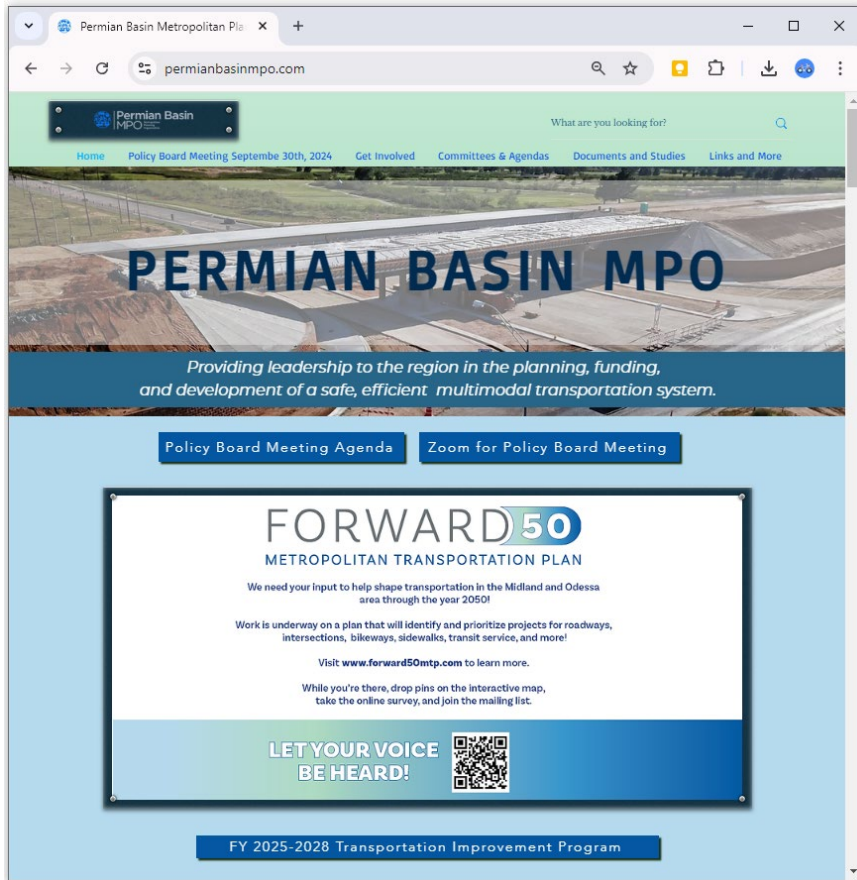
- Project website
- Online surveys
- Meetings and pop-up events
- Technical Advisory Committee and Policy Board meetings

This chapter describes these activities in more detail.

Promotion

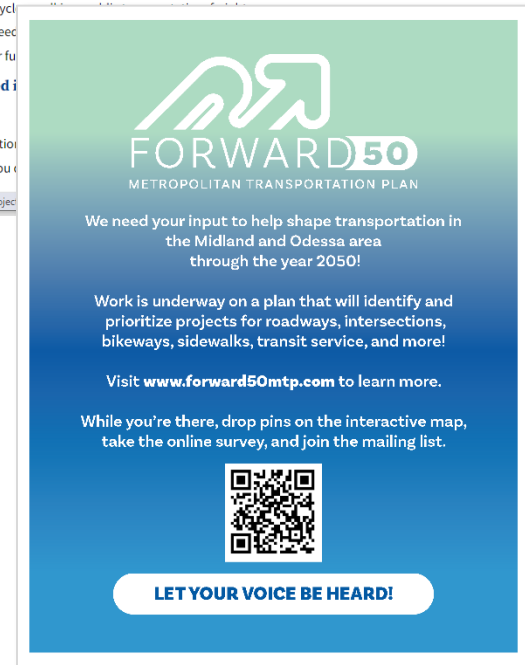
Promoting the Forward50 MTP occurred through traditional outreach channels from the Permian Basin MPO, the Cities of Midland and Odessa, and local media. Engagement activities were promoted during standing meetings, through email correspondence, via social media, and printed flyers.

Permian Basin MPO Website

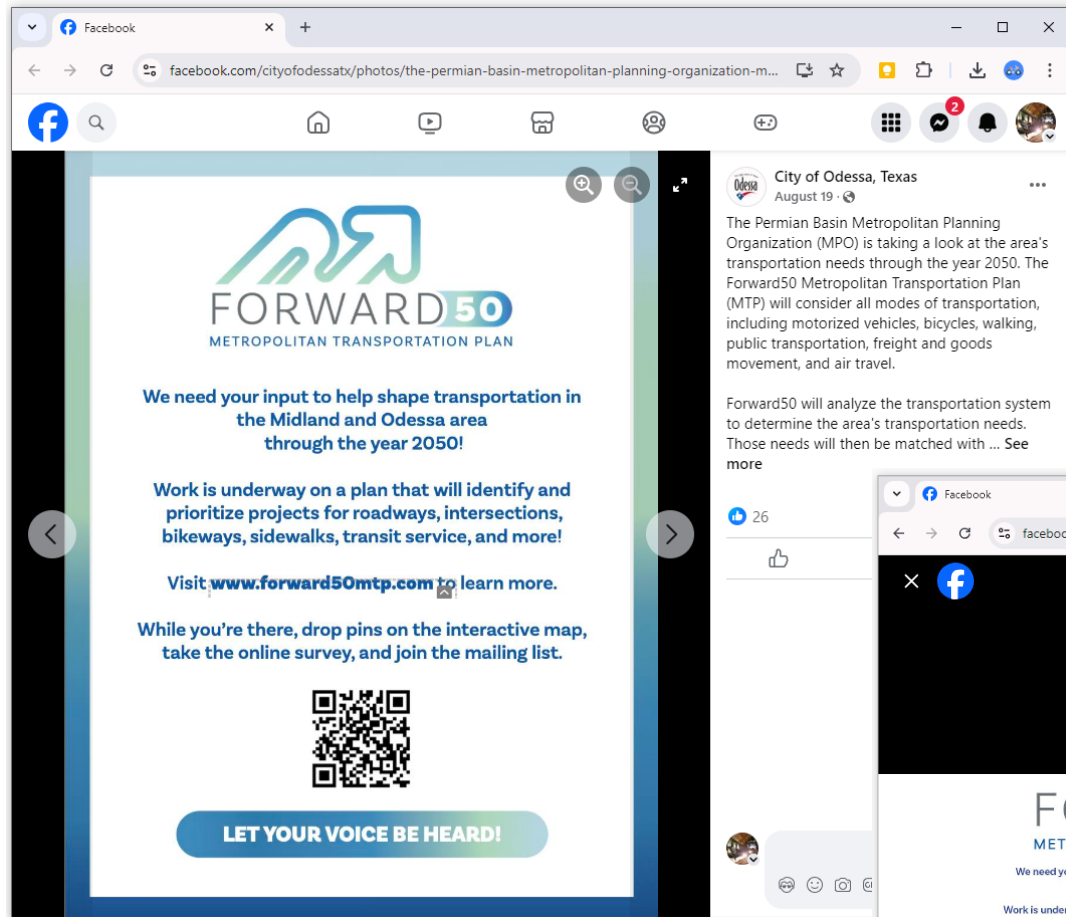


Local Media New Article

Printed Flyer

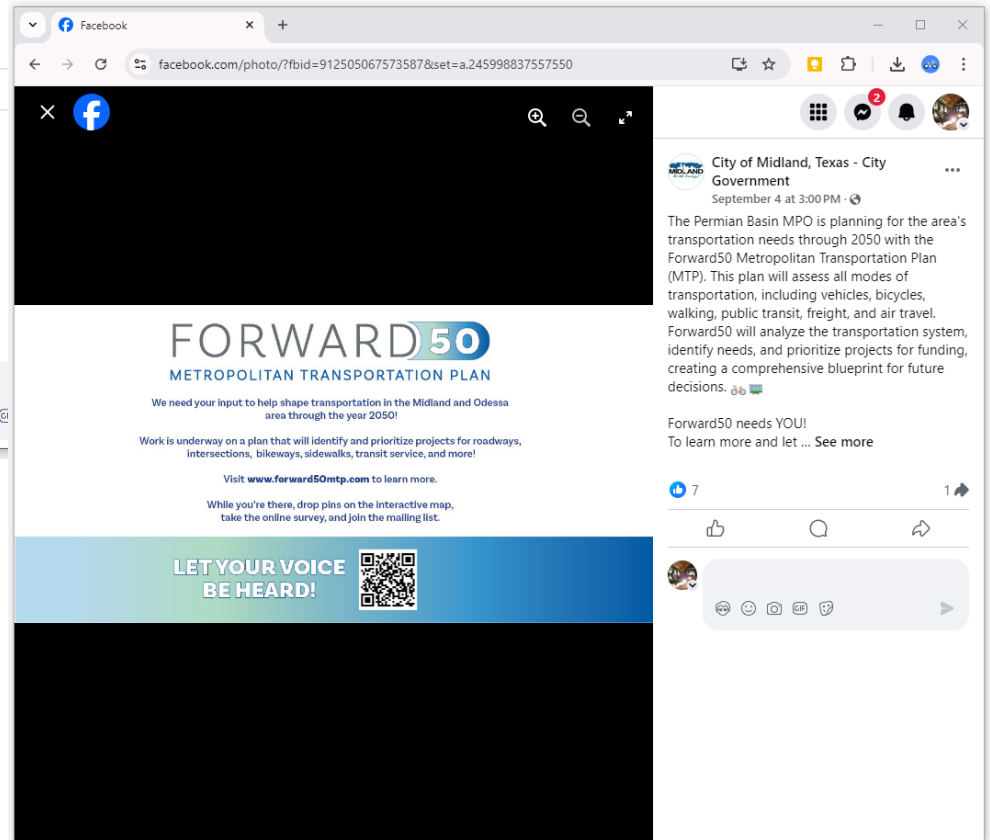


PUBLIC PARTICIPATION PROCESS



← City of Odessa Facebook Post

City of Midland Facebook Post
↓



Engagement Activities

Project Website

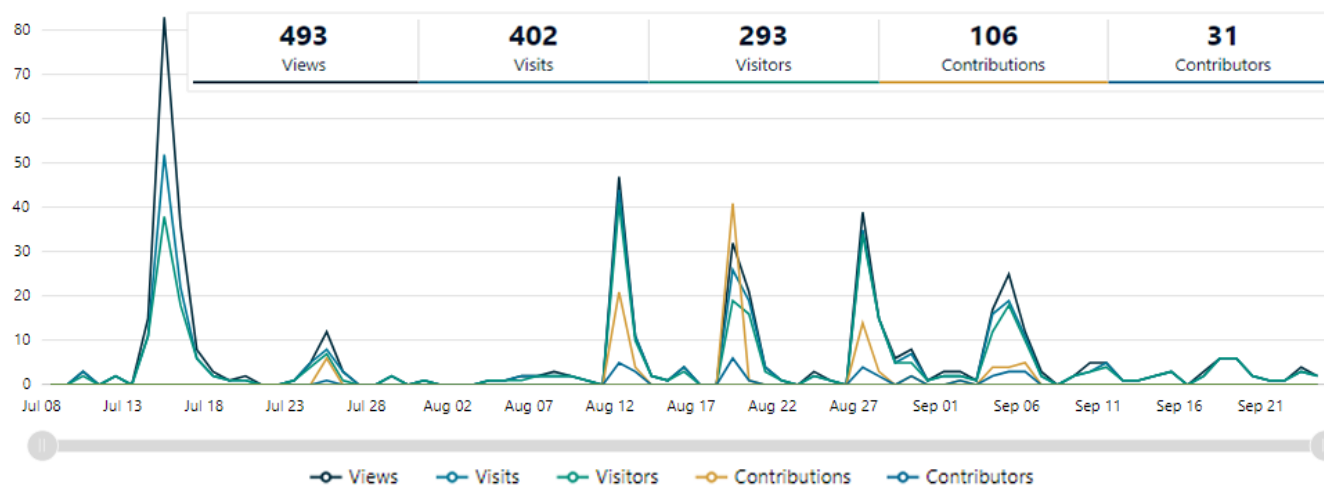
A project website was maintained throughout the planning process. The website, built on the Social Pinpoint platform, served as a one-stop digital engagement hub with an overview of the planning process, FAQs, MTP resources, and an up-to-date project status. The website was used to promote outreach events and to launch digital engagement tools such as surveys, interactive maps, and digital comment forms.

Project Website – Mobile Device Version



Project Website – Desktop Version

Website Performance Statistics



Online Survey

An online survey was made available on the project website from July 8, 2024 to September 16, 2024 to engage the public to uncover specific areas of concern within the transportation network in their community. The survey received 16 responses.

In one word, describe traveling in the study area TODAY.

Congested (x4)	Unpractical	Watch out
Scary (x3)	Terrible	Life-altering
Dangerous (x2)	Stressful	Tense

In one word, describe your vision for traveling in the study area IN THE FUTURE.

Safe (7)	Calm	Expanded
Efficient	Variety	Big city
Pleasant	Easy	Smooth

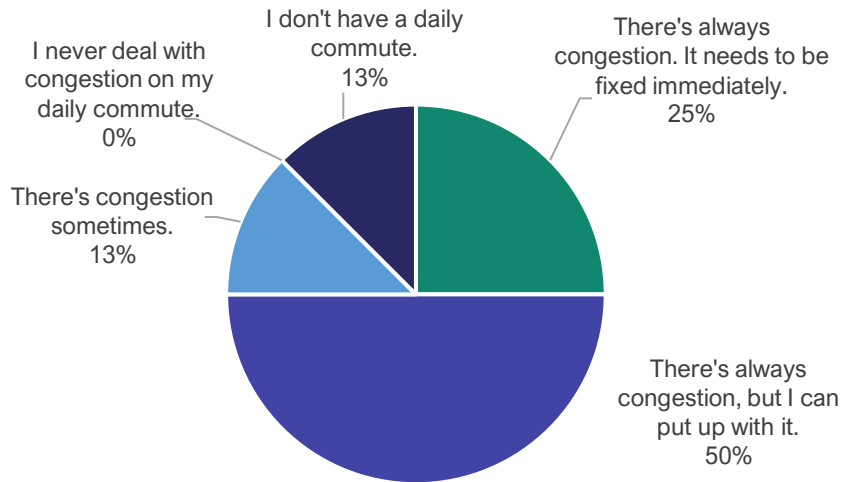
Over the past five years, has traveling in the study area worsened, stayed the same, or improved?



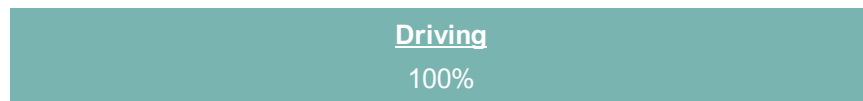
Tell us why you answered that way.

- *I know there's been some improvements made by city of Midland, such as some bike lanes. I wish the bike lanes would be extended further. The traffic lights are antiquated and sometimes don't change for 10+ minutes late at night*
- *A lot more traffic for the roads.*
- *The roads cannot handle the amount of traffic.*
- *I see more and more wrecks every day. Fatalities are at an all-time high.*
- *It has gotten worse—reckless drivers, too many drivers in a small space, too much construction all at one time.*
- *The road infrastructure and transportation system have not kept pace with the growth of the metro area. We all rely on our cars and are driving on roads made to handle maybe half of what they do now and are surprised when we have deadly accidents.*
- *Much more traffic on roughly the same roads. Secondary forms (buses, bikes, walking, etc.) are difficult and usually much more dangerous.*
- *Gotten more congested and not keeping up with demand*
- *There is road construction everywhere*
- *I feel like traveling in the region has stayed relatively the same. Although improvements have helped conditions from getting worse, we need to be more proactive.*
- *More cars, increased population and many people who don't obey laws.*
- *The way people drive is crazy*
- *Big spring has continued to grow busier; as has Downtown. The number of pedestrians is increasing during all hours of the day, not just between 8-5.*
- *The increase in population growth and vehicle traffic has outpaced the infrastructure demands to keep up.*
- *Several roadway projects are happening at one time*

How would you describe congestion on your daily commute?



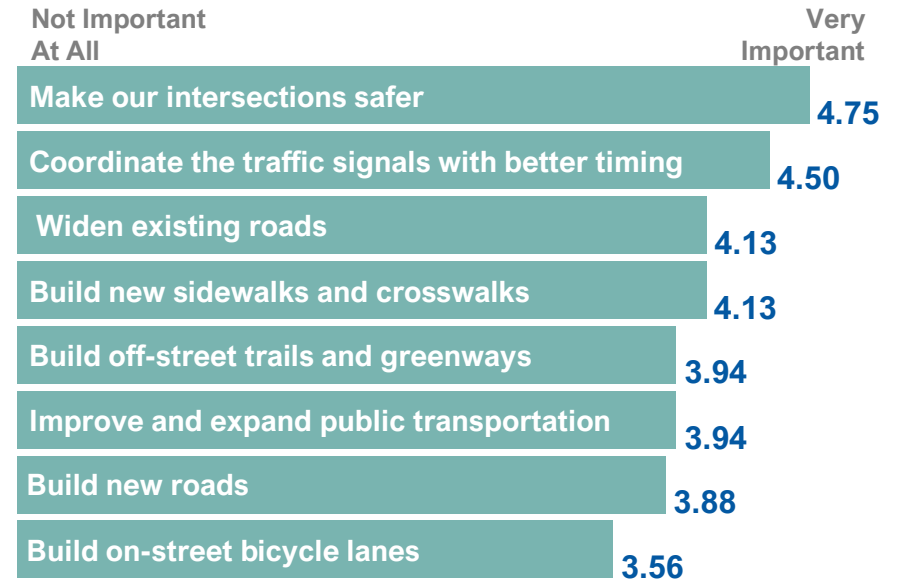
Most of the time, I travel by...



I would prefer to travel more often by...



On a scale of 1 (not important at all) to 5 (very important), rate each of the following transportation priorities.



How would you rank the priorities in order of importance?

Priority	Average Ranking	Times Ranked in Top 3
Build new roads	4.25	43.8%
Widen existing roads	3.81	56.3%
Make our intersections and interchanges safer	2.25	87.5%
Coordinate the traffic signals with better timing	4.50	31.3%
Build new sidewalks and crosswalks	4.75	12.5%
Build on-street bicycle lanes	6.38	6.3%
Build off-street trails and greenways	4.81	37.5%
Improve and expand public transportation	5.25	25.0%

Online Vision Board

From July 8, 2024, to September 16, 2024, visitors to the project website were given the opportunity to place digital sticky notes to indicate the most important transportation project that needs to be completed. Participants placed their comment in one of three categories: **Roadway**, **Bicycle/Pedestrian**, or **Transit**. Visitors could also upvote comments previously submitted. The comments received are featured on this page.



Create direct flyover bridges at both loop 250 and 338 at Hwy 191 intersections and the interstate. Make both loops full freeway status.

accidents involving pedestrians are getting pretty bad - I'd like to see more emphasis applied to installing sidewalks and multi-use roads



Loop 338 and Loop 250 need to be finished



Flyover from 250 north to 191 west and from 191 east to 250 north (eliminate left turns at the traffic lights)



Remove as many points of impact as possible without adding roundabouts. Roundabouts can be safer, but not with untrained people. (sandtrucks)



Continued communication on what are the City's responsibilities and TxDOT responsibilities.



I believe Loop 338 north of I-20 needs to be converted into a freeway! Freeway interchanges like cloverleaves are needed on I-20 desperately!



New East-West corridor through Midland north of Loop 250 (Mockingbird or Occidental perhaps)

Larger more adequate buses and covered bus stops at every corner

Safety and infrastructure

Adding traffic control lights



Safer roads, intersections.

Public transit north of the loop, off 349....as of now, there are no options for people out here. We pay taxes too!

More N/S thoroughfares or completion of the loop to avoid Big Spring. We need an expressway from north to south in Midland that isn't big.

Improved public transportation



Interactive Online Map

From July 8, 2024, to September 16, 2024, an interactive online map collected comments on transportation issues and ideas. Respondents then categorized their comments as Roadway, Bike/Pedestrian, Transit, or Other.

Figure 3.1 displays where participants dropped pins to indicate an issue or idea. By category, 96% of the comments were identified by participants as a Roadway comment, 3% as Bike/Pedestrian, and 1% as Other. In general, more comments were left on the Odessa side of the MAB.

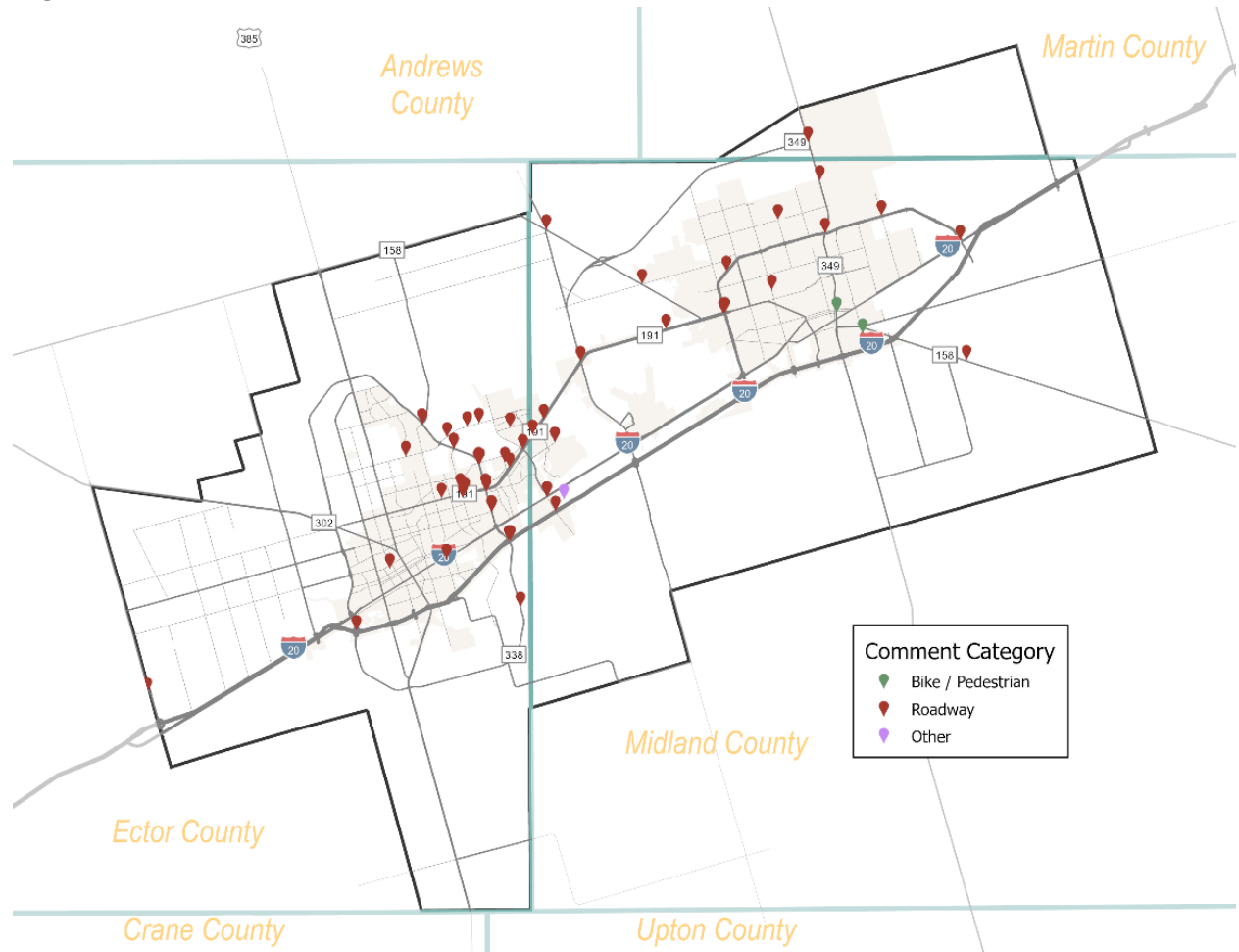
Most (~60%) of roadway pins comments related to flyover lanes, interchanges, overpasses, or bridges.

Other popular roadway pin related to widening existing roadways or creating new extensions.

Remaining roadway pins focused on intersection improvements, access management, alternative routes, and traffic operations.

Bike/Pedestrian pins focused on accessibility and safety.

Figure 3.1 – Interactive Online Map Comments



Policy Board

The Policy Board is the governing body for the MPO and makes all decisions regarding transportation policies and adopts all plans and programs developed by the MPO. The Board meets monthly, and its meetings are open to the public. All MPO Policy Board meetings were announced in accordance with the MPO's Public Participation Plan and were compliant with the Texas Open Meetings Act.

The Policy Board provided regular and continuing general policy guidance during the development of the Forward50 MTP beginning with an introductory presentation by the project team on July 15, 2024.



Technical Advisory Committee

In support of all MPO functions, a Technical Advisory Committee (TAC) meets monthly to review and prioritize transportation planning needs and provide recommendations to the Policy Board. The TAC consists of representatives from member jurisdictions and transportation agencies as well as non-voting members with specialties related to long range planning such as GIS, traffic management, engineering, and construction.

- Cities of Midland and Odessa
- Ector, Midland, and Martin Counties
- MOUTD (EZ-Rider)
- TxDOT – Odessa District
- Federal Highway Administration – Texas Division

Specific to the Forward50 MTP, the TAC played several important roles, which included:

- Providing local context and expertise on transportation needs and areas of potential improvement
- Evaluating and recommending candidate projects for inclusion in the MTP
- Reviewing the project scoring system required under federal and state laws
- Establishing the financial plan in accordance with federal requirements (CFR 450.324(11)(v) that state the MTP must be fiscally constrained for the first ten years
- Reviewing the MTP's final content and providing input where necessary

Public Comment Period

The Permian Basin MPO's Public Participation Plan requires at least one public meeting to present a new or amended MTP that is scheduled at least 30 days prior to adoption. As a new MTP, a 30-day public comment period also is required. The public review period for the Forward50 MTP occurred from [insert date] to [insert date].

Copies of the draft Forward50 MTP were placed at the Ector and Midland County Libraries, the City Secretaries' Offices of the Cities of Odessa and Midland, Martin County Courthouse, and TxDOT Odessa District office. The draft MTP was also made available during regular business hours at the Permian Basin MPO office. Finally, the plan was made available on the Permian Basin MPO website (www.permianbasinmpo.com) and the project website during the 30-day public review period.

Comments received during the public comment period included:

[Comments to be inserted following completion of the public comment period.]

4 Roadway Projects and Priorities



FORWARD **50**

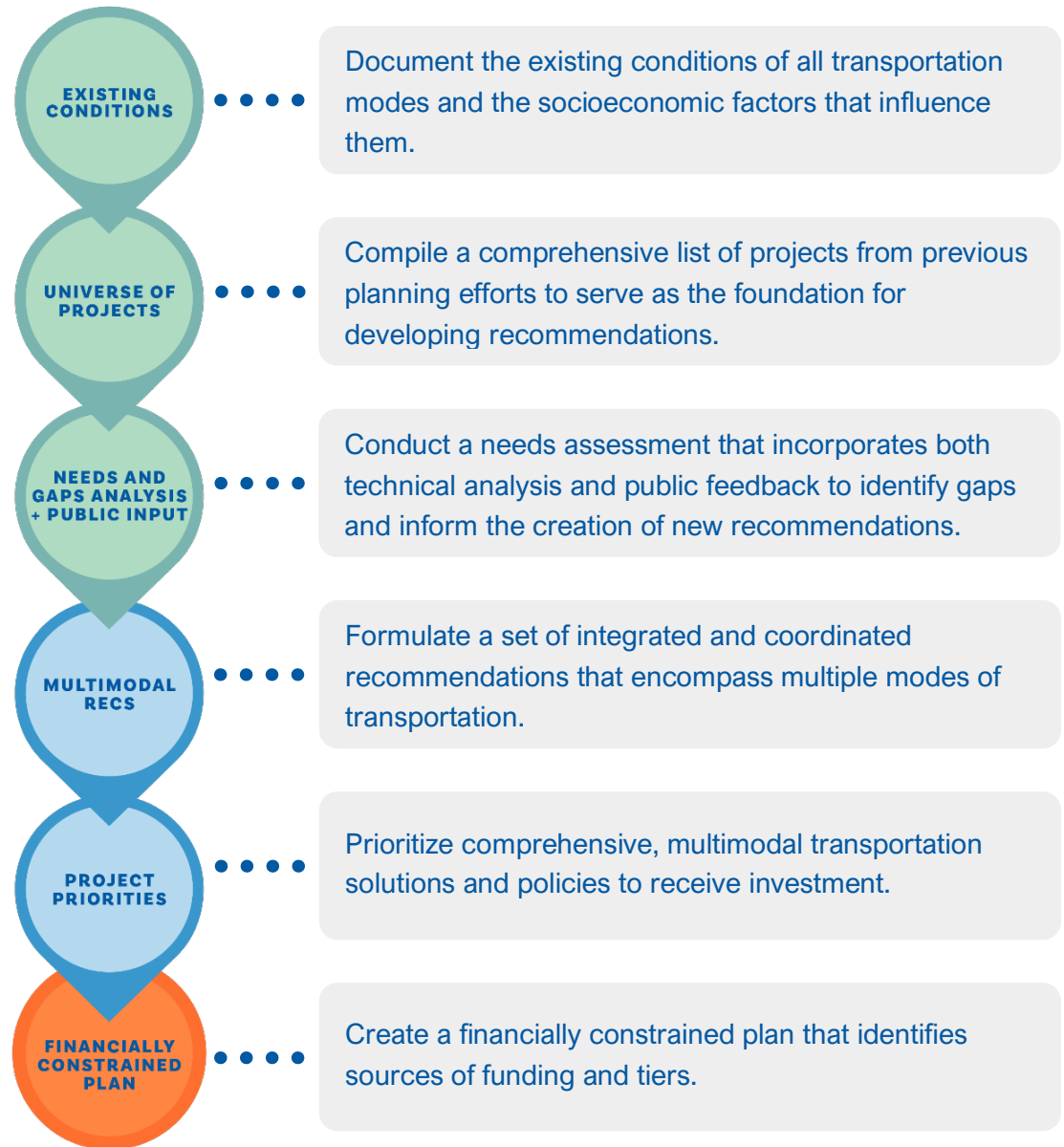
METROPOLITAN TRANSPORTATION PLAN

Transportation Strategy

An integrated and practical transportation system is a crucial component of any community. A well-designed system connects individuals to various amenities such as stores, job opportunities, and recreational activities, while also addressing traffic congestion and promoting healthy lifestyles. The transportation strategy discussed in the Forward50 MTP was developed to align with and support the principles outlined in Chapter 1. The Forward50 MTP transportation strategy builds upon the broader regional initiatives outlined in the plan's guiding principles, with a specific focus on economic vitality, mobility, accommodating multiple modes of transportation, and ensuring safety.

Transportation Planning Process

An effective long-range transportation plan must communicate its vision, process, recommendations, and outcomes. In the development of the Forward50 MTP, the guiding principles and key outcomes of the existing conditions were integrated into the recommendations. The creation of balanced recommendations typically follows an iterative process as described here.



System Recommendations

Regional decisions have the potential to improve safety and mobility for all users of different modes of transportation, and the Forward50 MTP acknowledges this. The process of developing system-level recommendations began with a review of previous planning efforts to establish a framework for the region. This was followed by reviewing existing conditions and focused discussions with the Technical Advisory Committee (TAC), stakeholders, members of the public, local agencies, and public officials.

Outcomes from data analysis and preliminary public engagement indicated a clear need to provide the community with more options for transportation. Throughout the development of the recommendations, the underlying concepts of enhanced mobility, accessibility, and connectivity were consistently emphasized.

The transportation network plays a vital role in shaping the vibrancy of a community. In the case of the Permian Basin MPO, the region already benefits from a diverse range of transportation connections that make it an attractive place to live, work, and engage in recreational activities. Infrastructure such as the Midland International Air and Space Port and the Union Pacific Rail Line contribute to the region's economic growth, which is driven by industries like energy, health, education, and agriculture. Midland and Odessa both benefit from their locations on Interstate Highway 20, a major east-west corridor that is the only federally designated Primary Freight Corridor in the region. Through engagement activities, the community has expressed a collective understanding of the importance of having a comprehensive and multifaceted transportation system.

In the first phase of public outreach, participants believe the transportation recommendations should:

- Address existing safety and congestion issues
- Expand and enhance existing public transportation service
- Provide safe and accessible ways to move around the region for all modes of transportation

The input gathered throughout the planning process has been integrated with previous planning efforts to formulate a comprehensive set of transportation recommendations. These recommendations, which consist of a unique blend of projects, serve as the guiding blueprint for the Permian Basin MPO's future transportation planning for the next 25 years. To ensure alignment with the region's overarching vision, the coordinated recommendations are presented through a series of visuals and maps for each mode of transportation. Although presented as individual maps, careful consideration has been given to ensure that the recommendations collectively contribute to the greater vision of the region.

Project Prioritization

Project prioritization is a critical component of the metropolitan planning process and the preparation of the Forward50 MTP.

First, to spend federal dollars on local transportation projects and programs, a metropolitan area must have an adopted Metropolitan Transportation Plan (MTP) and a Transportation Improvement Program (TIP). Federal regulations require both documents to be performance-based and fiscally constrained.

Fiscal constraint has been a key component of transportation planning and program development since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and reinforced with every subsequent transportation bill. Fiscal constraint means that the cost of those projects selected for inclusion in the MTP's planning horizon reasonably matches the expected funding levels for that time period. The TIP must indicate that the cost of projects does not exceed projected available funding during the four-year period.

Second, because of the limited resources available, a process was followed to score and rank projects for consideration and inclusion in the MTP list of fiscally constrained priority projects contained in this chapter. The scoring criteria used are based on the Federal Planning Factors from the FAST Act and IIJA Act, the requirements outlined in House Bill 20, and the Permian Basin MPO's mission statement, goals, and objectives. It is important to note that the MTP and TIP must reflect the same scope and projected cost prior to approval to commence project letting.

Project Prioritization Process

The MPO's initial step in the project prioritization process was to publish a call for projects. Stakeholders and the community at large were invited to submit projects for consideration across all modes. A 30-day "Call for Projects" was published in September 2023. One letter of response was received from the Midland Odessa Transportation Alliance (Motran). Projects already listed in the 2045 MTP, including subsequent amendments, were assumed to be eligible for consideration into the Forward50 MTP.

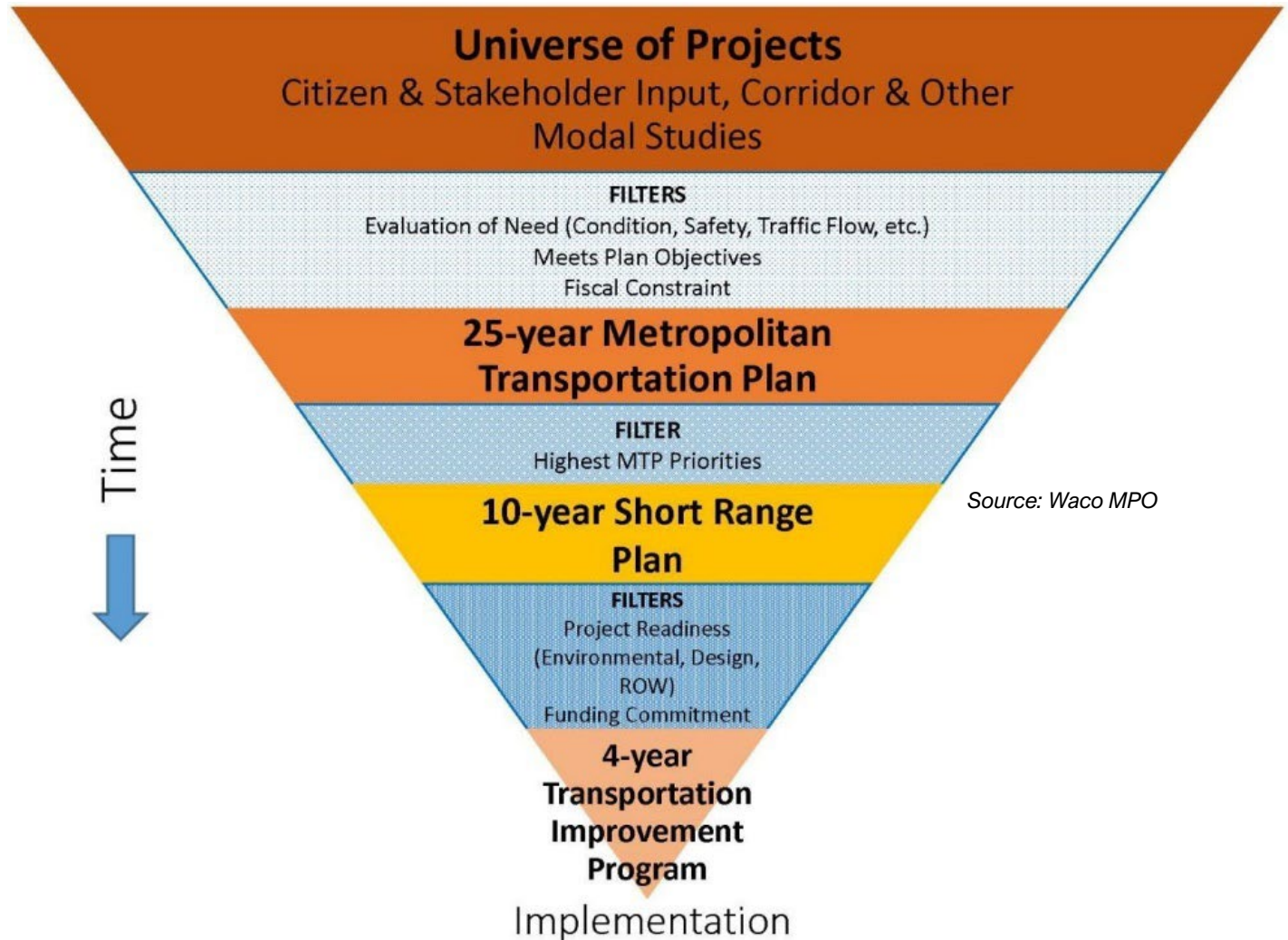
A scoring sheet and general definition of scoring criteria is included in the Appendix. It was drafted on multiple occasions by the Permian Basin MPO staff with assistance from the TAC during special called meetings to gain a complete understanding of how the scoring process would work in the project selection process. As it was an extensive project list, the TAC collaboratively ranked each of the listed projects. The scoring criteria and weighting balance reflect federal and state goals as well as local needs.

Once the top priority projects were identified according to the procedures described above, they were placed into the financially constrained component of the MTP based on the projected funding levels for the MTP planning horizon, project score, and project implementation timeline. Once fiscal constraint for the MTP planning horizon was reached, projects were placed into the "illustrative" priority table. Projects in the fiscally constrained list will be eligible to be moved to the TIP once it is determined by TxDOT that funding becomes available.

The process of moving a project forward into the TIP is a cooperative process between Permian Basin MPO and the TxDOT Odessa District. During TIP updates and amendments, projects will be moved from the financially constrained component of the MTP to the TIP as shown in the image to the right.

As the MTP planning horizon is revised or when new information or new funds become available, a reevaluation of the MTP project list may be required.

Currently funded projects in the *Vision 2045 Plan* are identified along with their funding source. Regionally significant projects potentially funded through outside sources are included in the project listings as well.



Roadway Recommendations

A well-rounded and efficient transportation network requires blending connectivity and access with mobility. This delicate balance is evident in the proposed roadway recommendations. The Forward50 MTP recommendations serve as a foundation for promoting complete street concepts by integrating enhancements for pedestrians, cyclists, and public transportation. While only a portion of these needs can be funded within the scope of this plan, the vision projects can be considered in future iterations of the plan. The findings from the project prioritization process are detailed later in this chapter.

Two new interstate corridors will benefit the Permian Basin MPO—I-14 and I-27 by offering economic growth, additional public safety, and reduced congestion over time. Stakeholders understand that projects such as these interstates will take decades to complete. The MPO’s initial action is to place fiscally constrained projects into the Forward50 MTP. The MPO relied on recent TxDOT studies of both corridors. This was especially valuable since the final version of the reports indicated specific projects and anticipated cost estimates. The documents were both approved in 2024 and thus, the cost estimates are current.

The majority of the projected funding over the life of the fiscally constrained plan will be used to construct these interstates and other freeways as shown in Table 4.1. Projects and estimates in the planning studies are shown in Tables 4.2 and 4.3. Due to their characteristic as interstate highways, they are inherently costly.

Table 4.1 – Percentage of Funding

		*Total Estimated Future Construction		
		2025 UTP Total	\$1,786,315,375	
		2035-2050 Total	\$1,711,912,000	
		Grand Total	\$3,498,227,375	
		<i>*Some projects are duplicated for I-27 and I-20 due to it being on the same roadway</i>		
*2025 UTP				
Roadway	Interstates and Freeways	Percentage		
I-27	\$231,538,626	13%		
I-14	\$35,000,000	2%		
SL 338	\$106,236,056	6%		
SL 250	\$30,969,208	2%		
I-20	\$1,449,070,014	81%		
Other**	\$156,040,097	9%		
<i>*2025 UTP (2025-2034) - Uses the 2025 UTP Total from Total Estimated Future Construction Costs</i>				
*2035-2050				
Roadway	Interstates and Freeways - Existing	Interstate and Freeway Projects - Proposed	Total	Percentage
I-27	\$15,000,000	\$313,500,000	\$328,500,000	19%
I-14	\$0	\$315,000,000	\$315,000,000	18%
SL 338	\$105,000,000	\$571,642,000	\$676,642,000	40%
SL 250	\$79,000,000	\$120,000,000	\$199,000,000	12%
I-20	\$10,000,000	\$0	\$10,000,000	1%
Other**	\$28,400,000	\$173,000,000	\$201,400,000	12%
<i>*2035-2050 - Uses the 2035-2050 Total from Total Estimated Future Construction Costs</i>				
*25 Year Total				
Roadway	Total	Percentage		
I-27	\$560,038,626	16%		
I-14	\$350,000,000	10%		
SL 338	\$782,878,056	22%		
SL 250	\$229,969,208	7%		
I-20	\$1,459,070,014	42%		
Other**	\$184,440,097	5%		
<i>*25 Year Total - Uses the Grand Total from Total Estimated Future Costs</i>				
<i>**Non-Freeway Corridors</i>				

Interstate and Freeway Projects

I-20 Improvements

The study of I-20 within the Permian Basin MPO boundary was undertaken in fall 2015 due to the importance of the interstate as a travel and trade corridor. The aging interstate system, population growth, and increased economic activity also contributed to the decision to evaluate and modernize the corridor. Stakeholder engagement and public input were sought to assess safety and transportation concerns, and consultants evaluated different roadway configurations, needs assessments, and traffic data. Based on initial findings and recommendations, TxDOT dedicated funds to develop design schematics for a 36-mile stretch of the study corridor instead of the originally planned 12-mile portion. The TxDOT Odessa District and the Permian Basin MPO collaborated to secure funding and resources for Phase I of the Permian Basin I-20 Corridor Study.

In the initial ten-year window of the MTP, the fiscally constrained I-20 projects and their status are shown in Table 4.5 later in this chapter. The coordinated effort between TxDOT and the Permian Basin MPO has prioritized the modernization of this important interstate, taking into account stakeholder input and the region's transportation needs. However, specific details regarding the projects and their current status are not provided in the given text.

Future I-14

The Fixing America's Surface Transportation (FAST) Act of 2015 authorized several roadways to be upgraded nationally to interstate standards and ultimately designated as part of the I-14 corridor in Texas, Louisiana, Mississippi, Alabama and Georgia. This new interstate system will enhance connectivity in the southern United States and improve mobility between urban and rural population centers, military installations, maritime ports, and economic sectors including energy, freight, timber and agriculture. See Figure 4.1 and Table 4.2.

Future I-27

The I-27 Numbering Act of 2023 (S. 992), signed into law on March 22, 2024, designates the Texas and New Mexico portions of the future I-27 corridor, also called the Port-to-Plains Corridor. See Figure 4.2 and Table 4.3.

Other Freeways

Stakeholders and the Technical Advisory Committee identified ways to build out the regional freeway system. Two corridors identified for freeway conversion are Loop 338 in Odessa and Ector County and FM 866 in Ector County. The MPO's project list for the previous five years has shown "Upgrade to Freeway" section for many portions along Loop 338. This road is a complete loop facility around Odessa. TxDOT's study of the corridor divided it into six segments. Two of the segments have been listed in the Forward50 MTP illustrative list and are not required to be fiscally constrained. The other freeways are shown in Figure 4.3 and Table 4.4 See Figure 4.7 and Table 4.8 for the complete list of illustrative projects.

Figure 4.1 – Future I-14

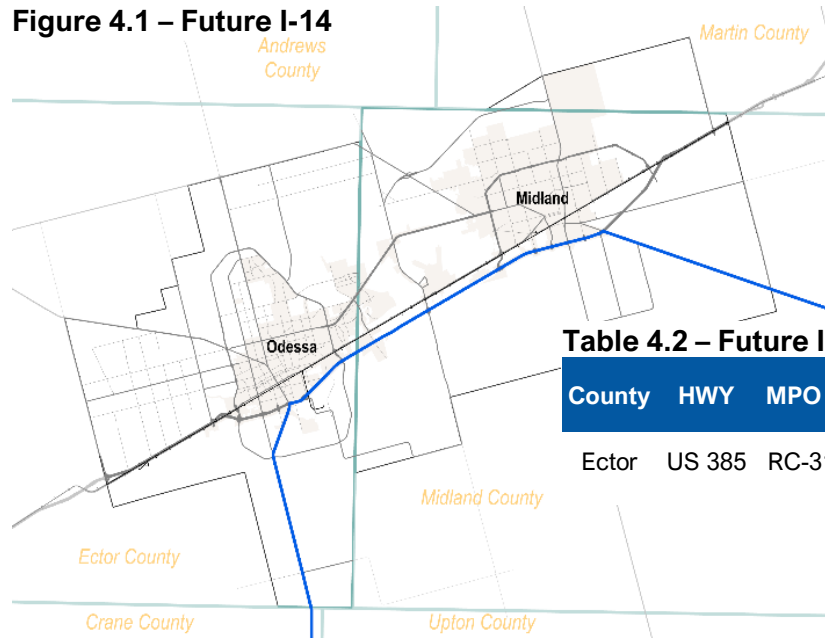


Table 4.2 – Future I-14

County	HWY	MPO ID	CSJ	From	To	Project Description	Estimated Let Range	Cost Estimate
Ector	US 385	RC-317		Crane CL	LP 338	Upgrade to Interstate Standards	2035-2050	\$315,000,000

Figure 4.2 – Future I-27

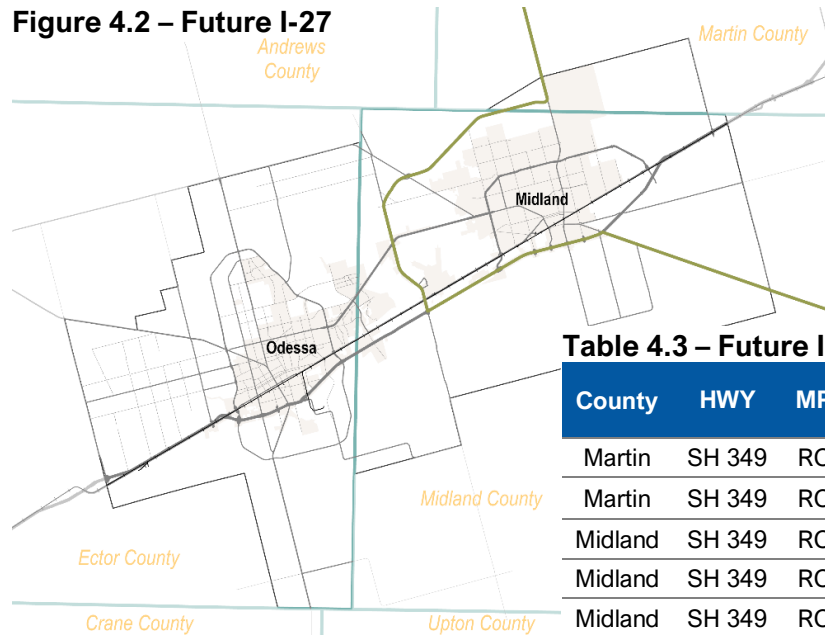


Table 4.3 – Future I-27

County	HWY	MPO ID	CSJ	From	To	Project Description	Estimated Let Range	Cost Estimate
Martin	SH 349	RC-305	0380-08-030	MAB	SH 349-C	Convert Non-Freeway to Freeway	2035-2050	\$20,000,000
Martin	SH 349	RC-306	038-17-009	SH 349-C	Midland CL			\$27,400,000
Midland	SH 349	RC-307	038-18-011	Martin CL	FM 1788			\$97,200,000
Midland	SH 349	RC-308	1718-07-049	FM 1788	0.5 mi S of BI-20			\$62,100,000
Midland	SH 349	RC-309	1718-01-039	BI-20	I-20			\$6,800,000
Midland	SH 349	RC-310	0463-03-057	I-20	I-20 to FM 1379			\$100,000,000

Figure 4.3 – Other Freeways

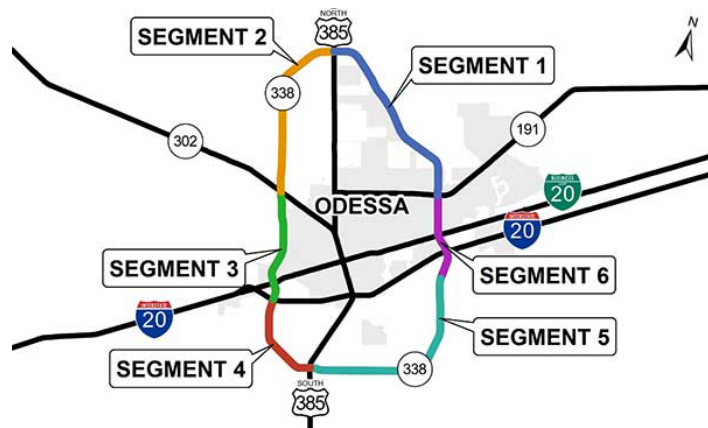


Table 4.4 – Loop 338

Length	County	HWY	Segment	From	To	Project Description	Cost Estimate
7.6	Ector	LP 338	1	East SH 191	N US 385	consists of a four-lane highway with new overpasses under construction at the intersections of North US 385 and Yukon Road.	\$138,259,000
4.4	Ector	LP 338	3	SH302	W I-20	consists of a four-lane highway, with overpasses located at the intersections of University Boulevard (FM 2020), West 16th Street (FM3472), West BI-20, and West I-20	\$122,755,000
3.7	Ector	LP 338	4	W I-20	S US 385	consists of a two-lane highway	\$190,628,000
8.1	Ector	LP 338	5	S US 385	0.8 m S of E I-20	consists of a two-lane highway	
3.4	Ector	LP 338	6	0.8 m S of E I-20	E SH 191	consists of a four-lane highway with an overpass at East BI-20 and signalized intersections at East I-20 and East SH 191.	\$367,511,000
6.8	Ector	LP 338	2	North US 385	SH 302	consists of a two-lane highway from west of US 385 to West Yukon Road, and a four-lane highway from West Yukon Road to SH 302, with an overpass at the intersection of SH 302	\$110,491,000
Total:							\$929,644,000

Figure 4.4 – 2025 UTP Foward50 MTP Years 2025-2034

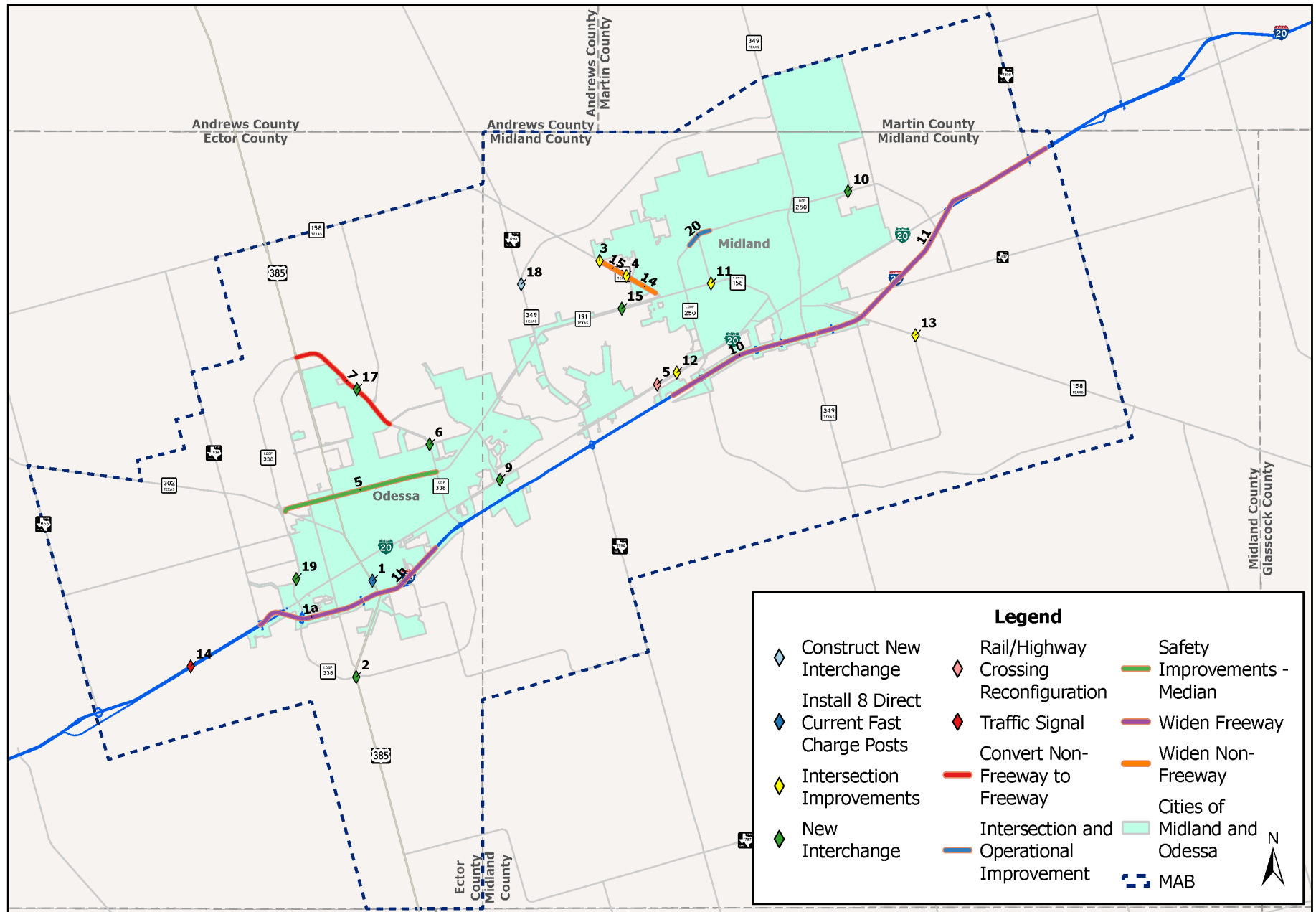


Table 4.5 - 2025 UTP Foward50 MTP Years 2025-2034

Color Scheme:			I-27	I-14	LP 338	FY 2025-2028 TIP																			
UTP MAP ID	COUNTY	HWY	MPO ID	CSJ	FROM	TO	Project Description	ESTIMATED LET RANGE	COST ESTIMATE	Total Authorized	CAT 1	CAT 2	CAT 3	CAT 4	CAT 5	CAT 6	CAT 7	CAT 8	CAT 9	CAT 10	CAT 11	CAT 12 S	CAT 12 P		
3	Ector	US 385	RC-09	0229-01-042	@ South SL 338	-	New Interchange	2025-2028	\$35,000,000	\$35,000,000		\$28,000,000	\$2,000,000	-						\$5,000,000	-	-	-		
12	Midland	SH 158	RC-236	0463-02-079	@ CR 60/ Briarwood	-	Intersection Improvements	2025-2028	\$3,600,001	\$3,600,000		\$3,600,000	-	-						-	-	-	-		
13	Midland	SH 158	RC-234	0463-02-080	@ Wadley Ave	-	Intersection Improvements	2025-2028	\$3,600,001	\$3,600,000		\$3,600,000	-	-						-	-	-	-		
21	Midland	BI-20 E	RC-137	0005-02-112	@ CR 1250	-	Rail/Highway Crossing	2025-2025	\$6,600,000	\$6,600,000		\$6,000,000	-	-					\$600,000	-	-	-	-		
10	Midland	IH 20	RC-259	0005-14-092	East of CR 1250	East of SH 349	Widen Freeway	2026	\$222,538,626	\$222,538,626		\$12,340,792	-	-						-	-	\$179,148,763	\$31,049,071		
-	Ector	US 385	RC-303	5000-00-206	@1201 S. Grant Ave	-	Install 8 Direct Current Fast Charge ports within one mile of the Electric Alternative Fuel Corridors (IH 20)	2025-2028	\$1,740,095	\$1,740,095		-	-	-						-	\$1,740,095	-	-	-	
TOTALS:									\$273,078,723	\$273,078,721		\$53,540,792	\$2,000,000							\$6,740,095	\$179,148,763	\$31,049,071			
Remaining UTP Years 2029-2034																									
UTP MAP ID	COUNTY	HWY	MPO ID	CSJ	FROM	TO	Project Description	ESTIMATED LET RANGE	COST ESTIMATE	Total Authorized	CAT 1	CAT 2	CAT 3	CAT 4	CAT 5	CAT 6	CAT 7	CAT 8	CAT 9	CAT 10	CAT 11	CAT 12 S	CAT 12 P		
6	Ector	SL 338	RC-13* int b	2224-01-116	@ 52nd/58th	-	New Interchange	2029-2034	\$35,000,000	\$28,500,000		\$5,500,000	\$500,000	-						-	-	\$22,500,000	-		
4	Ector	SH 302	RC-131	224-01-110	@ West 8th Street	-	New Interchange	2029-2034	\$28,000,000	\$28,000,000		\$26,000,000	\$2,000,000	-						-	-	-	-		
7	Ector	SL 338	RC-134	2224-01-117	Yukon Rd E	US 385 N	Upgrade to Freeway	2029-2034	\$36,236,056	\$36,236,056		\$32,236,056	-	-						-	-	\$4,000,000	-		
22	Midland	BI-20 E	RC-15a*	0005-02-119	@ Faudree	-	New Interchange	2029-2034	\$50,000,000	\$27,920,000		\$15,170,000	\$2,000,000	\$10,750,000						-	-	-	-		
19	Midland	SL 250	RC-17	1188-02-111	@ Todd Rd	-	New Interchange	2029-2034	\$25,969,208	\$25,969,208		\$25,969,208	-	-						-	-	-	-		
24	Midland	BS 158B	RC-232	0463-02-081	@ FM 868	-	Intersection Improvements	2029-2034	\$5,600,000	\$5,600,000		\$5,600,000	-	-						-	-	-	-		
23	Midland	BI-20E	RC-235	0005-02-125	@ Avalon Dr	-	Intersection Improvements	2029-2034	\$4,400,000	\$4,400,000		\$4,400,000	-	-						-	-	-	-		
20	Midland	SL 250	RC-243	1188-02-123	Midland Dr	W of Midkiff Road	Intersection and Operational Improvement	2029-2034	\$5,000,000	\$5,000,000		\$5,000,000	-	-						-	-	-	-		
16	Midland	SH158	RC-251	0463-03-053	@ CR 120	-	Intersection Improvements	2029-2034	\$4,000,000	\$4,000,000		\$4,000,000	-	-						-	-	-	-		
11	Midland	IH 20	RC-260	0005-15-093	East of SH 349	East of FM 1208	Widen Freeway	2029-2034	\$577,934,843	\$72,000,000		-	-	-						-	-	\$13,750,000	\$58,250,000		
5	Ector	SH 191	RC-261	2296-01-058	Loop 338 E	Loop 338 West	Safety Improvements	2029-2034	\$6,000,000	\$6,000,000		\$6,000,000	-	-						-	-	-	-		
2	Ector	IH 20	RC-265	0004-07-137	N IH 20 service Road/Murphy Street	IH 20/Moss Ave	Traffic Signal	2029-2034	\$750,000	\$750,000		\$750,000	-	-						-	-	-	-		
1a	Ector	IH 20	RC-27	0004-07-135	West of FM 1936	Monahans Draw	Widen Freeway	2029-2034	\$378,877,502	\$316,742,536		-	-	\$30,855,424						-	-	\$194,837,112	\$91,050,000		
17	Midland	SH 349	RC-275	1718-07-047	@ FM 1788	-	Intersection & Operational Improvements	2029-2034	\$5,000,000	\$5,000,000		\$5,000,000	-	-						-	-	-	-		
18	Midland	SH 191	RC-276	2296-02-033	@ CR 1250	-	New Interchange	2029-2034	\$35,000,000	\$16,000,000		\$16,000,000	-	-						-	-	-	-		
1b	Ector	IH 20	RC-28	0005-13-063	Monahans Draw	East of JBS Parkway	Widen Freeway	2029-2034	\$288,969,043	\$249,501,256		-	-	\$30,855,424						-	-	\$174,445,832	\$44,200,000		
15	Midland	SH 158	RC-300	0463-02-094	Wadley Ave	Briarwood Ave	Widen Non-Freeway	2029-2034	\$6,500,000	\$6,500,000		\$6,500,000	-	-						-	-	-	-		
8	Ector	SL 338	RC-77	2224-01-131	@ 87TH STREET	-	New Interchange	2029-2034	\$35,000,000	\$35,000,000		\$35,000,000	-	-						-	-	-	-		
14	Midland	SH 158	RC-93a	0463-02-089	Wadley Ave	Sinclair Ave	Widen Non-Freeway	2029-2034	\$5,000,000	\$5,000,000		\$5,000,000	-	-						-	-	-	-		
TOTALS:									\$1,513,236,652	\$878,119,056		\$198,125,264	\$4,500,000	\$72,460,848							\$409,532,944	\$193,500,000			
10 Year Total:									\$1,786,315,375	\$1,151,197,777		\$251,666,056	\$6,500,000	\$72,460,848								\$6,740,095	\$588,681,707	\$224,549,071	

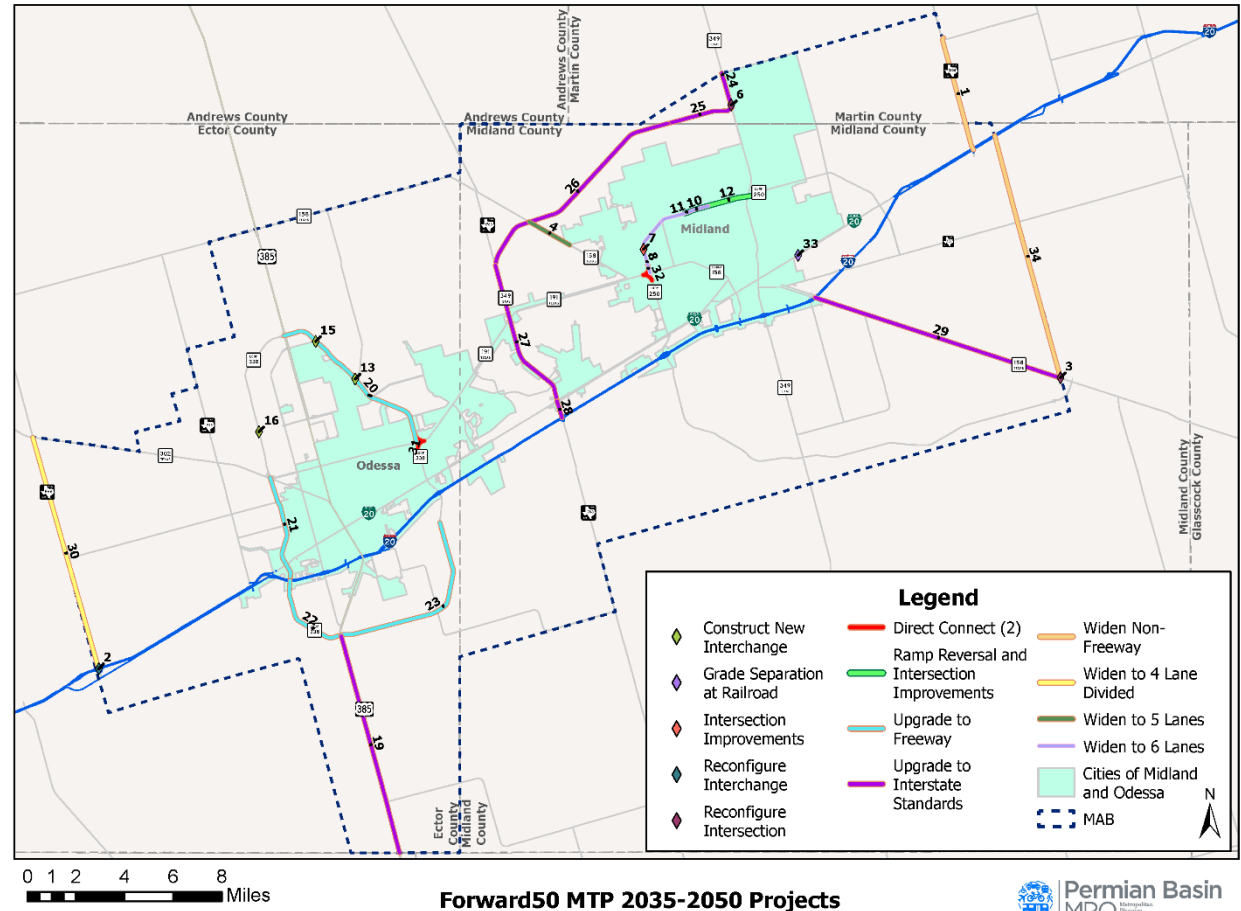
Other Corridor & Intersection Recommendations

The remainder of the projects on the 25-year list include State highway and Loop projects within both communities, as well as a railroad grade separation. These projects are focused on intersection improvements and interchanges to address connectivity, congestion, as well as safety. Direct connect facilities are proposed on both Loop 338 and Loop 250. The region experiences a high percentage of commuter traffic between the two cities on the SH 191 corridor.

Intersection improvements help create a more comprehensive transportation network. During the MTP process, safety and mobility concerns were raised at numerous intersections for pedestrians, cyclists, transit users, and drivers. Improving intersections can be a cost-effective way to minimize conflicts between different travel modes. As shown in Figure 4.5, these recommendations address safety and traffic flow issues as well as identify electric vehicle charging locations.

The projects were evaluated within the prioritization process to identify preferred intersection projects for funding through 2050.

Figure 4.5 – Forward50 MTP 2035-2050 Projects



This map was developed by Permian Basin MPO for the purpose of aiding in regional transportation planning decisions and is not warranted for any other use. No warranty is made by Permian Basin MPO regarding its accuracy or completeness.

Table 4.6 – 2035 to 2045 Project List

Color Scheme:		I-27	I-14	LP 338	DRAFT				
Projects Remaining in 2035-2045 (From Forward45 MTP)									
MTP MAP ID	Estimated Year	HWY	Limits From	Limits To	Description	L	County	MPO ID	Cost Estimate
1	2035-2050	FM 1208 - Non-Freeway Widening	FM 1208	IH 20 to FM 1212	Widen non-freeway	4.6	Martin/Midland	RC-248	\$18,400,000
2	2035-2050	IH 20 at FM 866	IH 20	FM 866	Reconfigure Interchange	1	Ector	RC-277	\$10,000,000
3	2035-2050	SH 158 at FM 1379/CR 1232	SH 158	FM 1379/CR 1232	Reconfigure Intersection	1	Midland	RC-274	\$5,000,000
4	2035-2050	SH 158 Briarwood to 349	SH 158	Briarwood to 349	Widen to 5 lanes	1.5	Midland	RC-301	\$10,000,000
6	2035-2050	SH 349 - BS 349 Interchange	SH 349	At BS 349	Reconfigure Intersection	1	Martin	RC-126	\$10,000,000
7	2035-2050	SL 250 at Wadley	SL 250	SL 250 Wadley	Intersection Improvement	1	Midland	RC-271	\$5,000,000
8	2035-2050	SL 250 from SH158 - Midland Dr	SL 250	SH 158 - FM 868	Widen to 6 lanes	3	Midland	RC-272	\$30,000,000
10	2035-2050	SL 250 at Garfield	SL 250	Midkiff Rd to Garfield St	Ramp Reversal, Intersection Improvement	1	Midland	RC-270	\$12,000,000
11	2035-2050	SL 250 from Midland Dr - Garfield St	SL 250	FM 868 - Garfield St	Widen to 6 lanes	2	Midland	RC-273	\$20,000,000
12	2035-2050	SL 250 - BS 349 Intersection Improvements	SL 250	Garfield St to Big Springs St	Ramp Reversal, Traffic Signal Upgrades	2	Midland	RC-240	\$12,000,000
13	2035-2050	SL 338 - Grandview Interchange	SL 338	At Grandview/FM 544	Construct new Interchange	1	Odessa	RC-78	\$35,000,000
15	2035-2050	SL 338 - 100th St. Interchange	SL 338 NE	At 100th St.	Construct new Interchange	1	Ector	RC-76	\$35,000,000
16	2035-2050	SL 338 W - W Yukon Road Interchange	SL 338 W	At. W Yukon Rd	Construct new interchange	1	Ector	RC-40a int	\$35,000,000
Color Scheme:		I-27	I-14	LP 338					\$237,400,000

Figure 4.6 – Forward50 MTP 2035-2050 Proposed Projects

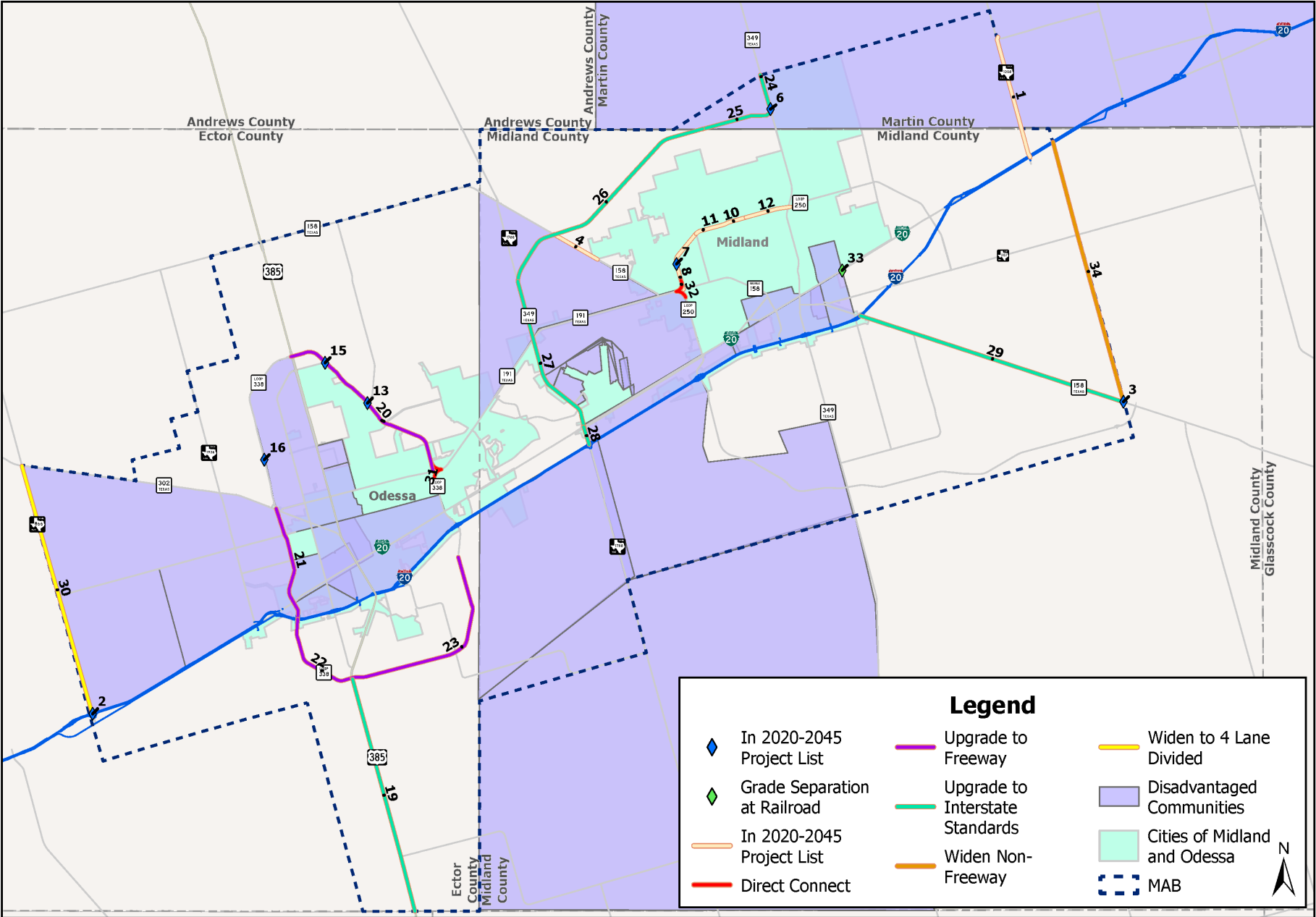
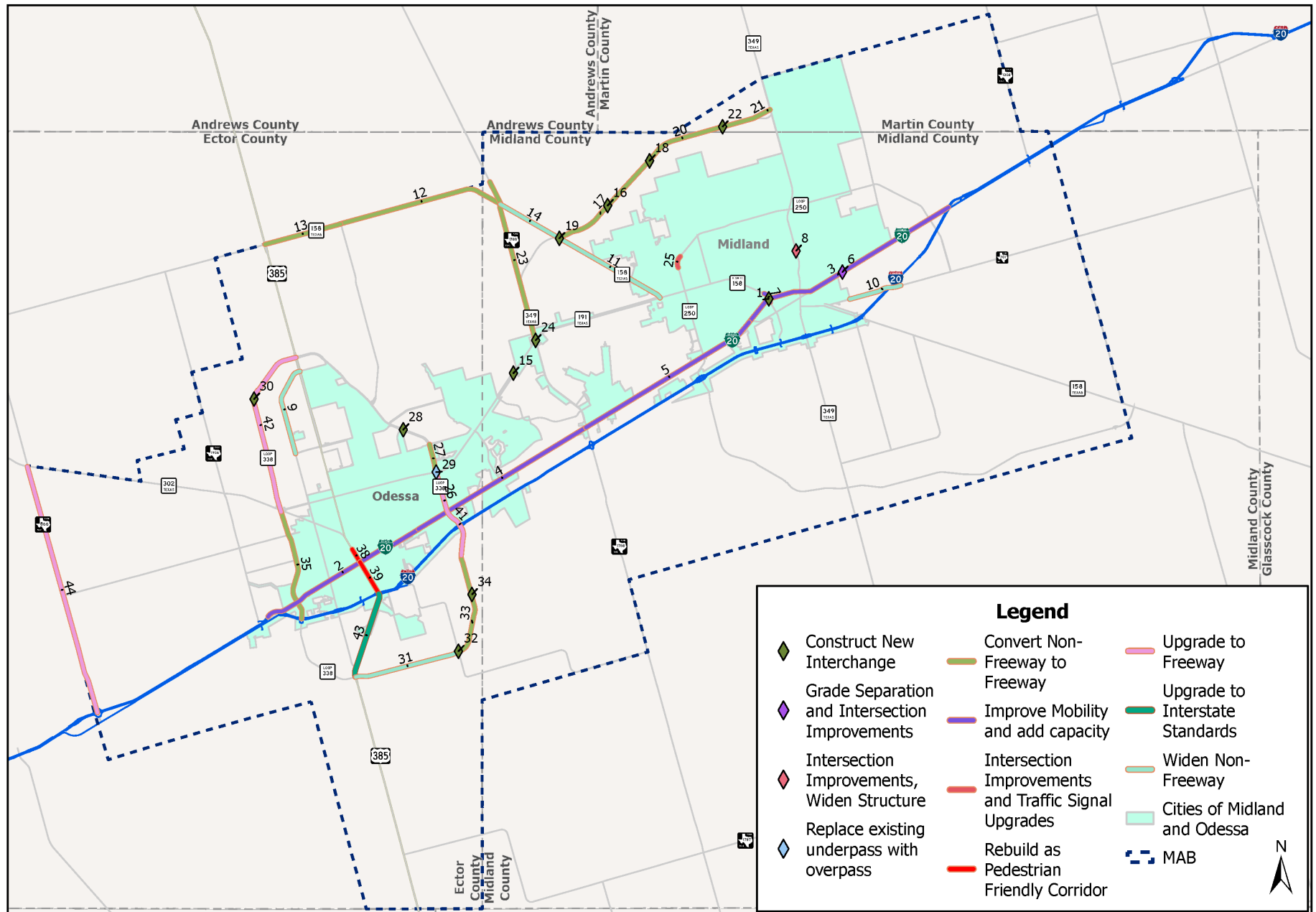


Table 4.7 – Forward50 MTP 2035-2050 Proposed Projects

Future I-14								
MTP Map ID	MPO ID	CSJ	County	Length	Road Name	Limit	Description	Estimated Cost*
19	RC-317		Ector	11	US 385 (Future I-14)	Crane CL to LP 338	Upgrade to Interstate Standards	\$315,000,000
<i>Estimated Cost retrieved from TxDOT Study*</i>								
State Loop 338								
MTP Map ID	MPO ID	CSJ	County	Length	Road Name	Limit	Description	Estimated Cost*
20	RC-311		Ector	8	SL 338 - Segment 1	SH 191- US 385	Upgrade to Freeway	\$138,259,000
21	RC-312		Ector	5	SL 338 - Segment 3	SH 302 - I-20	Upgrade to Freeway	\$122,755,000
22	RC-313		Ector	3.5	SL 338 - Segment 4	I-20 - US 385 S	Upgrade to Freeway	\$190,628,000
23	RC-314		Ector	7	SL 338 - Segment 5	US 385 S - unnamed road S of I-20		
<i>Estimated Cost retrieved from TxDOT Study*</i>							SL 338 Total:	\$451,642,000
Future I-27								
MTP Map ID	MPO ID	CSJ	County	Length	Road Name	Limit	Description	Estimated Cost*
24	RC-305	0380-08-030	Martin	1.76	Future I-27 - Portion of Section 12	MAB to SH 349-C	Convert Non-Freeway to Freeway	\$20,000,000
25	RC-306	0380-17-009	Midland	3	Future I-27 - Section 13	SH 349-C to Midland CL	Convert Non-Freeway to Freeway	\$27,400,000
26	RC-307	0380-18-011	Midland	10.8	Future I-27 - Section 14	Martin CL to FM 1788	Convert Non-Freeway to Freeway	\$97,200,000
27	RC-308	1718-07-049	Midland	7.2	Future I-27 - Section 15	FM 1788 TO 0.5 MI S of BI 20	Convert Non-Freeway to Freeway	\$62,100,000
28	RC-309	1718-01-039	Midland	1	Future I-27 - Section 16	BI 20 TO I-20	Convert Non-Freeway to Freeway	\$6,800,000
29	RC-310	0463-03-057	Midland	12.62	Future I-27 - Section 17	I-20 to FM 1379	Convert Non-Freeway to Freeway	\$100,000,000
<i>Estimated Cost retrieved from TxDOT Study*</i>							Future I-27 Total:	\$313,500,000
							Interstates and Loop 338 Total:	\$1,080,142,000
Direct Connects and Other Projects								
MTP Map ID	MPO ID	CSJ	County	Length	Road Name	Limit	Description	Estimated Cost
30	RC-303		Ector	11	FM 866	I-20 - SH 302	Widen to 4 lane divided	\$88,000,000
31	RC-318		Ector	1	SH 191	at LP 338	Direct Connect	\$120,000,000
32	RC-319		Midland	1	SH 191	at LP 250	Direct Connect	\$120,000,000
33	RC-302		Midland	1	BI-20	at Fairgrounds RD	Grade Separation at Railroad	\$35,000,000
34	RC-320		Midland	10	FM 1379	From SH 158 to I-20	Widen Non-Freeway	\$50,000,000
								\$413,000,000
							Grand Total:	\$1,493,142,000
							Projects in Years 2035-2045 of the MTP:	\$237,400,000
<i>Draft Sept 19 2024</i>							Grand Total of Later Years + Proposed Projects	\$1,730,542,000

Figure 4.7 – Forward50 MTP Illustrative Projects



ROADWAY PROJECTS AND PRIORITIES

Table 4.8 – Forward50 MTP Illustrative Projects

DRAFT

Color Scheme:	I-27	I-14	LP 338				
MTP Map ID	Project ID	County	Length	Road Name	Limit	Description	Estimated Cost
1	RC-157	Midland	1	BI 20	At Hwy 158 (Garfield St.)	Construct new interchange	\$35,000,000
2	RE-03b	Ector	8	BI 20	IH 20 to 8th St.	Improve mobility and add capacity	\$40,536,000
3	RE-04b	Midland	10.5	BI 20	Front St. to IH 20	Improve mobility and add capacity	\$67,560,000
4	RE-03a	Ector	9	BI 20	8th St. to FM 1788	Improve mobility and add capacity	\$42,788,000
5	RE-04a	Midland	9	BI 20	FM 1788 to Wall/Front St.	Improve mobility and add capacity	\$38,284,000
6	RC-238	Midland	0.5	BI-20 (Front St)	At Fairgrounds Rd	Grade Separation, Intersection Improvements	\$25,000,000
7	RC-159	Midland	0.5	BS 158 (Andrews Hwy)	At FM SL 268 (Wall St), including Ohio Ave to Indiana Ave	Improve mobility and add capacity	\$5,500,000
8	RC-239	Midland	1	BS 349 (Big Spring St)	At Scharbauer Dr	Intersection Improvements, Widen Structure	\$4,000,000
9	RE-02	Ector	4	FM 1882	US 385 northern jct. to Yukon Rd	Widen non-freeway	\$16,000,000
10	RE-10a	Midland	2.4	FM 307	Fairgrounds Rd to CR 1150	Widen non-freeway	\$9,600,000
11	RC-93	Midland	5	SH 158	SH 191 to SH 349	Widen non-freeway	\$20,000,000
12	RC-70	Ector	7	SH 158	FM 1788 to Grandview	Convert to freeway	\$56,000,000
13	RC-71	Ector	3.6	SH 158	Grandview to US 385	Convert to freeway	\$28,800,000
14	RC-94	Midland	3	SH 158	SH 349 to FM 1788	Widen non-freeway	\$24,000,000
15	RC-118	Midland	1	SH 191	At Unnamed Rd West of FM 1788	Construct new interchange	\$35,000,000
16	RC-49a int	Midland	1	SH 349	At CR 1250	Construct new interchange	\$35,000,000
17	RC-103	Midland	5	SH 349	SH 158 to Holiday Hill Rd	Convert non-freeway to freeway	\$40,000,000
18	RC-107	Midland	1	SH 349	At Holiday Hill	Construct new interchange	\$35,000,000
19	RC-106	Midland	1	SH 349	At SH 158	Construct new interchange	\$35,000,000
20	RC-104	Midland	3	SH 349	Holiday Hill Rd to Garfield Rd	Convert non-freeway to freeway	\$24,000,000
21	RC-105	Martin	2	SH 349	Garfield Rd to BS 349	Convert non-freeway to freeway	\$16,000,000
22	RC-108	Martin	1	SH 349	At Garfield Rd	Construct new interchange	\$35,000,000
23	RC-69	Midland	7.5	SH 349 (FM 1788)	SH 191 to 1 mi north of SH 158	Convert non-freeway to freeway	\$60,000,000
24	RC-100	Midland	1	SH 349/FM 1788	At SH 191	Construct new interchange	\$35,000,000
25	RC-244	Midland	1	SL 250	Wadley Ave/Holiday Hill Rd/Tremont Ave	Intersection Improvements, Traffic Signal Upgrades	\$7,500,000
26	RC-18*	Ector	2.6	SL 338	SH 191 eastern jct. to IH 20 eastern jct.	Convert non-freeway to freeway	\$20,800,000
27	RC-13	Ector	1.3	SL 338	52nd St. to SH 191	Convert non-freeway to freeway	\$10,400,000
28	RC-128	Ector	1	SL 338	At JBS Parkway	Construct new interchange	\$35,000,000
29	RC-135	Ector	1	SL 338 E	At SH 191	Replace existing underpass with overpass	\$65,000,000
30	RC-117	Ector	1	SL 338 N	At Wireline Rd. (CR 1157)	Construct new interchange	\$35,000,000
31	RC-72	Ector	5	SL 338 S	US 385 to FM 3503	Widen non-freeway	\$20,000,000
32	RC-73	Ector	1	SL 338 S	At FM 3503	Construct new interchange	\$35,000,000
33	RC-141	Ector	6	SL 338 SE	FM 3503 to IH 20 Eastern Jct.	Convert non-freeway to freeway	\$48,000,000
34	RC-249	Ector	1	SL 338 SE	At Bates Field Rd.	Construct New Interchange	\$35,000,000
35	RC-39a	Ector	5	SL 338 W	IH 20 to SH 302	Convert non-freeway to freeway	\$40,000,000
38	RC-129	Ector	1	US 385 (Grant Ave.)	2nd St. to 10th St.	Rebuild as a Pedestrian Friendly Corridor	\$8,000,000
39	RC-130	Ector	1.6	US 385 (Grant Ave.)	2nd St. to IH 20	Streetscape and Pedestrian Improvements	\$6,250,000
40	RC-304	Ector	5	FM 866	SH 302 - SH 158	Convert Non-Freeway to Freeway	\$40,000,000
41	RC-315	Ector	6	LP 338	.8 m S of E I-20 to E SH 191	Upgrade to Freeway	\$367,511,000
42	RC-316	Ector	2	LP 338	North US 385 to SH 302	Upgrade to Freeway	\$110,491,000
43	RC-321	Ector	3.5	US 385	S LP 338 to I-20	Upgrade to Interstate Standards	\$113,000,000
44	RC-322	Ector	11	FM 866	I-20 to SH 302	Upgrade to Freeway	\$132,000,000
Illustrative Grand Total							\$1,892,020,000



Title VI / EJ Analysis and Aiding Underserved Populations

The purpose of an environmental justice (EJ) review is to ascertain that federally funded transportation projects do not adversely impact underserved populations. Federal Highway Administration states that “disproportionately high and adverse effects, not size, are the bases for EJ. A very small, protected population in the project, study, or planning area does not eliminate the possibility of a disproportionately high and adverse effect on these populations.” The Permian Basin MPO is responsible for ensuring and documenting that these populations are not adversely affected. Figure 4.8 shows 2035-2050 projects from the Forward50 MTP within disadvantaged communities. The location of the underserved populations was extrapolated from the Screening Tool for Equity Analysis of Projects (STEAP) which is a public tool produced by FHWA using data from the American Community Survey. Table 4.9 shows the percentage of funding that is allocated to disadvantaged areas.

Table 4.9 – Funding in Disadvantaged Areas

	Total Estimated Future Construction Cost	Funding in Disadvantaged Areas	Percentage of Funding in Disadvantaged Areas
2025 UTP	\$1,786,315,375	\$976,575,268	55%
2035 to 2050 MTP	\$1,730,542,000	\$847,574,000	49%
Total 25-Year Period	\$3,516,857,375	\$1,824,149,268	52%

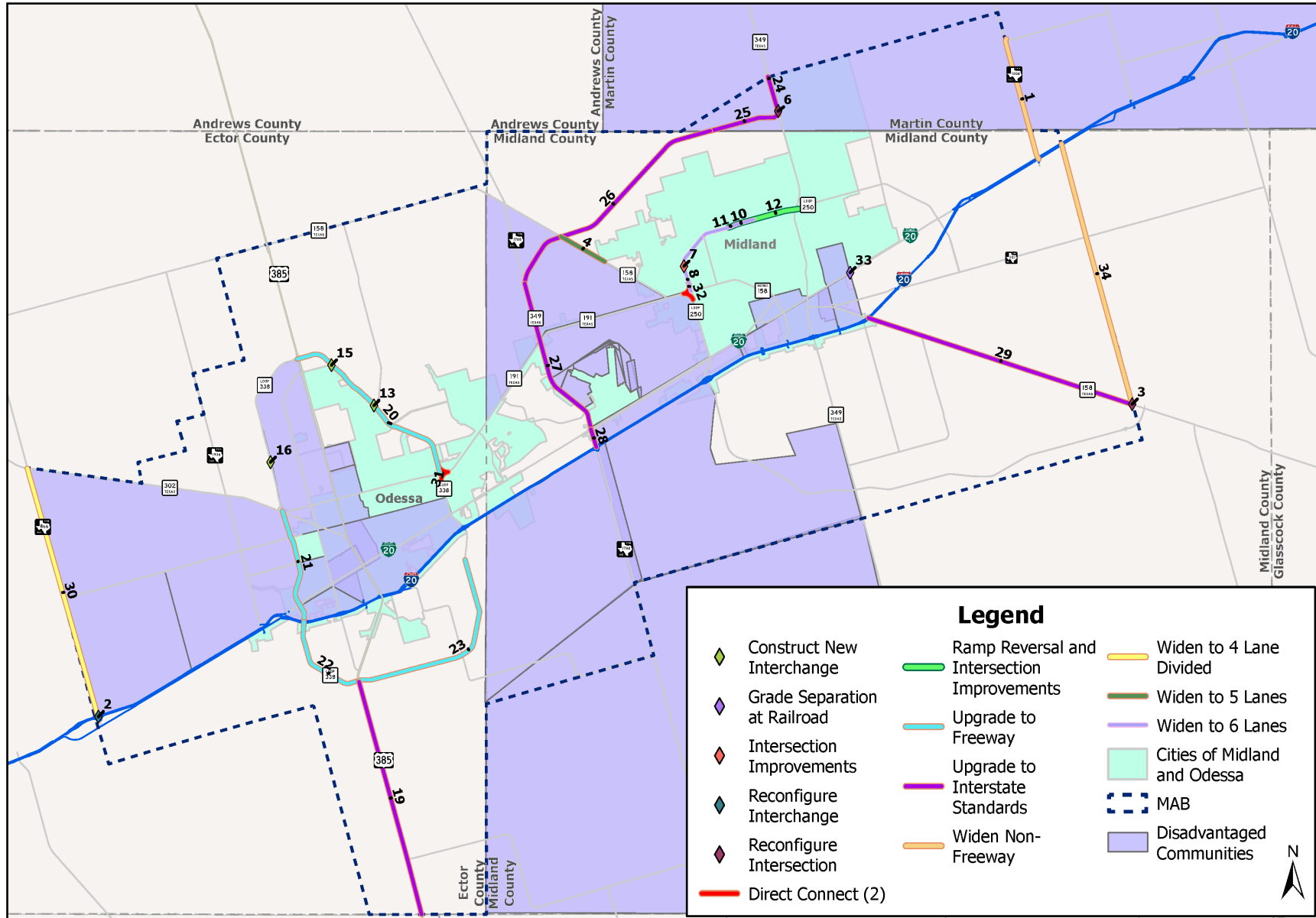
Justice40

The Justice40 initiative is a federal goal outlined in Executive Order 14008 to confront and address underinvestment in disadvantaged communities. The initiative brings resources to communities most impacted by climate change, pollution, and environmental hazards. It provides an opportunity to address gaps in transportation infrastructure and public services by working toward a goal of at least 40% of the benefits from grants, programs, and initiatives flow to disadvantaged communities.

Justice40 is not a one-time investment nor a single pot of money. It is a government-wide initiative that makes a series of changes to ensure benefits reach communities most in need. Through Justice40, USDOT is working to increase affordable transportation options that connect Americans to good-paying jobs, fight climate change, and improve access to resources and quality of life in communities throughout the country.

The initiative allows USDOT to identify and prioritize projects that benefit rural, suburban, tribal, and urban communities facing barriers to affordable, equitable, reliable, and safe transportation. Disadvantaged populations within the Permian Basin MAB were identified during the 2020 US Census.

Figure 4.8 – Forward50 MTP 2035-2050 Projects within Disadvantaged Communities



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5 Multimodal Framework



FORWARD **50**

METROPOLITAN TRANSPORTATION PLAN

Introduction

Creating system-level recommendations started with a review of previous planning efforts to establish a framework for the region. This was then accompanied by an existing conditions report, as well as discussions with the Technical Advisory Committee, stakeholders, members of the public, local agencies, and public officials. One outcome of this effort was the desire to provide the Permian Basin community with greater mode choice. The underlying concepts of enhanced mobility, accessibility, and connectivity were consistent themes in the development of the recommendations.

The vibrancy of a community is heavily dependent on the transportation network. The Permian Basin MAB already has existing connections by various modes of transportation that make it a desirable place to live, work, and recreate. Further emphasized in engagement activities, the community recognizes the importance of a multifaceted transportation system. In the first phase of public outreach, participants believe the transportation recommendations should:

- Provide safe ways to travel regardless of mode
- Expand and enhance existing public transportation service
- Build new sidewalks and crosswalks

The input collected throughout the planning process was incorporated with previous planning efforts to form a set of transportation recommendations. This unique blend of projects establishes the blueprint for the PBMPO to plan for the future of transportation through the year 2050.

Multimodal Framework

The multimodal recommendations are presented with narrative, visuals, and maps as available for each mode of transportation. While presented as individual pieces, careful and thoughtful consideration were made to ensure the recommendations aligned with the roadway recommendations introduced in Chapter 4 and support the transportation vision for the region as expressed in Chapter 1.



Bicycle and Pedestrian

To promote active transportation, it is essential to establish a well-integrated bicycle and pedestrian network that provides the necessary infrastructure. When designing a comprehensive bicycle network, it is important to consider the various types of users and facilities required.

Bikeability

Given the many reasons people choose to bike, the bikeability of an area depends on having facilities that cater to different skill levels. A complete network accommodates the needs of all cyclists regardless of skill level or trip purpose.

Skill Level

- **Child Cyclist.** These users typically have little to no experience on the road.
- **Basic Adult Cyclist.** Adult cyclists are typically less secure about riding in traffic without dedicated bicycle facilities.
- **Advanced Cyclist.** This group is typically the most experienced and confident on the road.

Trip Purpose

- **Utilitarian:** Individuals who do not have access to a vehicle or are unable to operate one, and rely on non-negotiable trips for purposes such as work, school, grocery shopping, or returning home.
- **Recreational:** Individuals who seek an active and healthy lifestyle, regardless of their access to a vehicle.

Walkability

Walkability is a crucial aspect of a healthy transportation system. Other modes of transportation such as driving, biking, or public transportation require each trip to begin and end by walking. When a well-developed pedestrian network is in place, walking becomes an affordable and practical transportation choice that benefits both individuals and communities. Several features contribute to making walking a more attractive mode of transportation, including:

- A mix of land uses
- Appropriately sized pedestrian facilities
- Buffers between the sidewalk and moving traffic
- Beautification elements such as native street trees or plants.

Design elements can also enhance pedestrians' comfort and confidence. These elements include the following:

- Narrowing streets to reduce crossing distance
- Implementing traffic calming to slow down vehicles
- Incorporating signage, crosswalks, or other pedestrian infrastructure.

Bicycle and Pedestrian Recommendations

By implementing a variety of tools to enhance bikeability and walkability, communities can create a stronger sense of place and a safer environment for all residents. To address the needs of the region, the following strategies are recommended for consideration:

- Closing gaps in the bicycle and pedestrian network strategically to enhance connectivity within the existing network
- Advocating for bicycle and pedestrian improvements as an integral part of roadway projects to promote the development of complete streets
- Ensuring bicycle, and especially, pedestrian access to and from key destinations, activity centers, and community resources
- Performing routine maintenance on existing bicycle and pedestrian facilities to safeguard infrastructure investments

It is advantageous to implement bicycle and pedestrian recommendations in conjunction with the proposed roadway recommendations, whenever feasible. The PBMPO and local jurisdictions are also encouraged to pursue projects as funding becomes available to address any gaps in the pedestrian network.

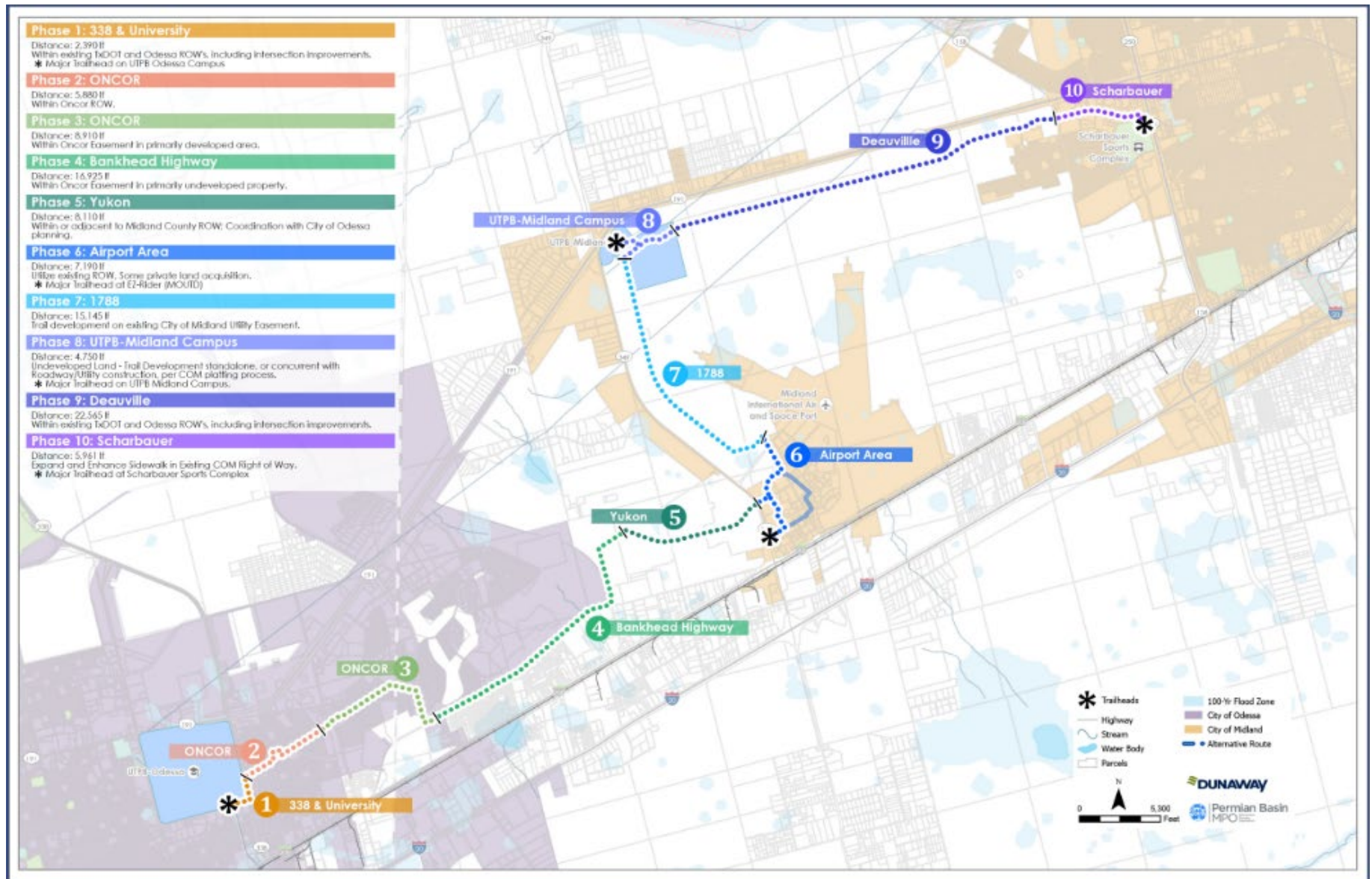
Midland Bicycle Lanes

The City of Midland applied for Transportation Set-Aside Program funding from TxDOT in 2017. The project aimed to enhance pedestrian and bicycle infrastructure in downtown Midland, promoting alternative transportation options for workers and visitors. The approved project included the addition of bicycle lanes on N Lorraine St. and N Main St. The work on this project has been completed.

Wildcatter Trail

In September 2017, the Permian Basin Metropolitan Organization received supplemental funding from TxDOT's State Planning and Research program to evaluate the feasibility of an intercity trail facility. The organization approved additional funding for the study, which outlined preliminary routes for further consideration. In June 2022, the final report was accepted, and the trail was designated as the "Wildcatter Trail." Efforts to develop the trail have been supported by various entities, including Ector and Midland counties, the cities of Midland and Odessa, and the University of Texas Permian Basin. A grant application was successful in 2023, securing funding for the construction of a portion of the non-motorized corridor in Midland and on the UTPB campus. The estimated cost for the entire multi-use trail connecting Midland and Odessa is \$55,000,000, but it is only partially funded. The proposed Wildcatter Trail is shown in Figure 5.1.

Figure 5.1 – Proposed Wildcatter Trail



Transit

Transit Service and Riders

In its optimal state, public transit achieves a balance between maximizing ridership and providing widespread coverage. However, these two objectives often conflict with each other. Typically, a region's population is concentrated in a small area, which means that the service's potential for high ridership is limited to a smaller geographic area compared to the overall service area. This issue is particularly evident in the Midland-Odessa Urban Area, which consists of rural areas outside of the mid-size cities of Midland and Odessa.

The primary focus of transit service should be to provide reliable and convenient transportation that meets the needs and desires of the community. By prioritizing usefulness and convenience, transit can effectively serve all users, including those who rely on transit, those who have the choice to use it, and others.

- **Captive riders** do not have access to or are unable to use a personal vehicle. They are dependent on walking, biking, and the transit system to travel.
- **Choice riders** have the means to drive themselves but choose instead to use transit. Reasons choice riders use transit include saving money, convenience, comfort, or environmental principles.

Transit Projects

The PBMPO is a multimodal planning agency. The portion of this chapter after this paragraph provides a list of transit projects prioritized over the 25-year life of the MTP.

[Section 5310: Enhanced Mobility for Seniors and Individuals with Disabilities](#)

This program provides funds to meet the transportation needs of older adults and persons with disabilities. In the past, EZ-Rider has utilized Section 5310 funds to purchase vehicles for its senior transportation program. Now, Section 5310 funds EZ-Rider's mobility management program to provide travel training and trip planning to area residents.

Table 5.1 – Section 5310 Project List

	2025	2026-2030	2031-2040	2041-2050
Mobility Management	\$250,000	\$500,000	\$525,000	\$600,000

Section 5307: Urbanized Area Formula Funding

This program provides resources for capital, operating, and planning activities by transit agencies in urbanized areas. The funding formula for small urban areas (those with a population of 50,000-199,999) is based on population, low-income population, and population density.

Table 5.2 – Section 5307 Project List

	2025	2026-2030	2031-2040	2041-2050
Route Studies	\$300,000	\$530,000	\$530,000	\$600,000
Add 2 Fixed Routes	\$ -	\$4,473,531	\$9,116,367	\$9,346,857
Add (1) Hour – Fixed	\$ -	\$3,092,426	\$7,867,550	\$8,066,466
(1) MOD Midland	\$ -	\$1,654,594	\$3,371,807	\$3,457,057
(1) MOD Odessa	\$ -	\$1,654,594	\$3,371,807	\$3,457,057
Downtown Operator Facility – Midland	\$350,000	\$ -	\$ -	\$ -
Downtown Operator Facility – Odessa	\$350,000	\$ -	\$ -	\$ -
Increase Frequency on (2) Routes	\$ -	\$667,683	\$6,750,717	\$6,886,953
Fleet Replacement Program	\$1,075,000	\$2,834,900	\$10,397,400	\$10,337,400
Bus stop amenities	\$250,000	\$750,000	\$ -	\$ -

Section 5339: Bus and Bus Facilities

FTA makes additional resources available to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities, through the Section 5339 program. These funds are utilized by EZ-Rider to update its fleet to keep it in a state of good repair.

Table 5.3 – Section 5339 Project List

	2025	2026-2030	2031-2040	2041-2050
Fleet Replacement Program	\$325,000	\$1,675,000	\$3,400,000	\$3,460,000

Combined funding anticipated to address highway and transit projects and programs over the 25-year period is as follows:

- Transit Funding total = \$175,503,899
- Highway Funding total = \$3,498,227,375

The revenues indicated herein are sufficient to cover the projects and programs listed for the multi-modal system. As shown in Chapter 6, the majority of the available funds will be programmed on freeways and interstates.

Freight, Security, and Technology

Freight

In November of 2020, TxDOT published its Freight and Energy Sector Transportation Plan. This plan addresses the specific needs and challenges, identifies key freight corridors, assesses existing infrastructure, and proposes improvements to enhance freight movement efficiency and safety.

Stakeholder Engagement

The PBMPO is actively engaged with various stakeholders, including industry representatives, trucking companies, rail operators, and logistics providers. Collaborating with these entities offers valuable insight into the unique challenges and opportunities associated with freight transportation in the region.

Infrastructure Investment

Given the significant increase in freight movement, it is essential to invest in infrastructure upgrades that can accommodate the growing demand. This may include expanding and improving existing roads, bridges, and rail facilities, as well as considering alternative modes of transportation, such as intermodal terminals, to help alleviate congestion on the road network.

Data Tracking and Monitoring

The PBMPO and its regional partners are working toward implementing policies that encourage and support efficient freight transportation. This includes streamlining promoting the use of advanced technologies for freight tracking and management as well as incentivizing the adoption of sustainable and environmentally friendly freight practices.

Accurate and up-to-date data is crucial for effective freight planning and decision-making. Robust data collection systems and analytical tools should be used to monitor and evaluate freight movements, identify bottlenecks, and measure the impact of proposed improvements. This data-driven approach can help prioritize investments and ensure that resources are allocated effectively.

Investment in the Space Industry

Further Research Needed

Security

Asset Protection

Transportation security is essential for protecting critical assets. The Permian Basin is home to a vast network of highways, pipelines, and rail systems that are vital for the transportation of goods and resources. Any disruption or damage to these assets can have significant consequences, including supply chain disruptions and economic losses. By prioritizing transportation security, the Forward50 MTP can help safeguard these critical assets and ensure the uninterrupted flow of goods and services.

Accident Mitigation

Implementing security measures helps mitigate risks and prevent accidents, ensuring the well-being of those who work in the transportation industry and the public. It is important to prioritize the safety of individuals involved in the transportation system and minimize the potential for accidents, injuries, or loss of life.

Safeguarding the Economy

The region's economy heavily relies on the production and transportation of oil and gas resources. Disruptions or security breaches in the transportation network can have severe consequences for the energy sector, leading to supply chain disruptions, economic losses, and potential impacts on national energy security.

Regulation Compliance

Compliance with security regulations ensures that the transportation infrastructure in the Permian Basin meets the

necessary standards. By prioritizing transportation security in the Forward50 MTP, the region demonstrates a commitment to maintaining a secure and reliable transportation system, which not only helps avoid penalties but also fosters trust and confidence in the industry.

Rail Security

Efforts to ensure railroad security are of utmost importance to Union Pacific. The company operates a robust security program 24/7, covering a vast 32,000-mile outdoor factory. In collaboration with highly trained, commissioned police force, Union Pacific coordinates security efforts with various agencies, including U.S. Customs and Border Protection, U.S. Coast Guard, Federal Bureau of Investigation, Central Intelligence Agency, Department of Homeland Security, and Transportation Security Administration. Union Pacific was the first U.S. railroad to be designated as a partner in the Customs-Trade Partnership Against Terrorism, a program by CBP aimed at enhancing security processes throughout the global supply chain.

To keep trains secure and communities safe, Union Pacific utilizes cutting-edge security technology to detect unauthorized access. The company employs a dynamic enterprise risk management process with continuous monitoring to identify and address potential concerns, adapting to the ever-changing economic, political, and legal environments. Risks are identified, prioritized, and regularly presented to the UP Board of Directors for review and consideration. Union Pacific also employs security-focused technology to monitor key installations and railroad infrastructure conditions.



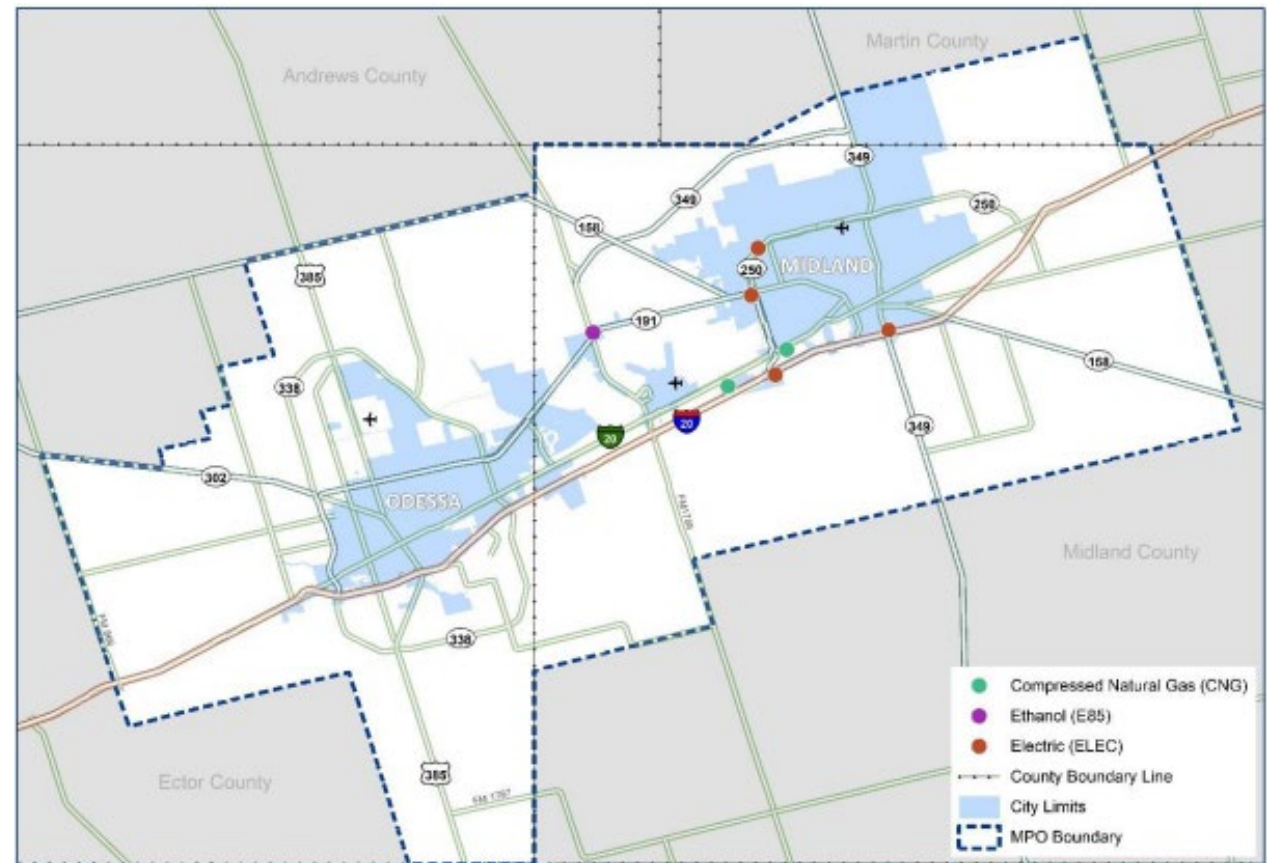
Technology

In recent years, the Permian Basin has witnessed significant technological advancements in transportation. One notable development is the implementation of advanced communication and data systems to improve efficiency and safety. Intelligent Transportation Systems (ITS) have been introduced to facilitate real-time monitoring of traffic conditions, optimize signal timing, and provide accurate travel information to drivers. These systems help reduce congestion, enhance mobility, and improve overall transportation operations in the Permian Basin.

Additionally, there has been a growing focus on alternative transportation modes in the Permian Basin. The region has seen increased investment in infrastructure for electric vehicles (EVs) and the installation of charging stations to support their use. This encourages the adoption of sustainable transportation options and reduces emissions in the area. The location of alternative fueling stations is shown in Figure 5.2.

Furthermore, there have been advancements in ridesharing platforms and autonomous vehicle technology, which have the potential to transform the way people travel in the MAB. These technological advancements aim to enhance transportation options, increase accessibility, and promote a more sustainable and efficient transportation system in the region.

Figure 5.2 – Alternative Fueling Stations



6 Financial Plan



FORWARD **50**

METROPOLITAN TRANSPORTATION PLAN

Overview of the MPO's Financial Picture

Federal regulations under the USDOT require MPOs to include a financial plan as an element of the long-range planning process. The financial plan must demonstrate that proposed investments are reasonable in the context of anticipated future revenues over the life of the plan. Meeting this requirement in the financial planning realm is called “fiscal constraint.”

The Forward50 MTP project list is fiscally constrained based on an in-depth analysis of anticipated revenues and escalated project costs due to inflation. Anticipated revenues include funding from federal, state, and local sources. This Chapter provides detailed assumptions regarding revenue sources, project cost, and future revenue needs used to develop the MTP financial plan.

Unified Transportation Program

Funding for transportation improvements in Texas is driven by the Unified Transportation Program (UTP), which is a ten-year, mid-range planning document used by TxDOT to guide the state's project development. The UTP contains a list of priority investments throughout the state. MPOs are responsible for establishing their own priority projects for consideration and approval by the Texas Transportation Commission (TTC) during each annual UTP renewal.

House Bill 20

In 2015, the Texas Legislature passed House Bill (HB) 20 which requires that TxDOT and all MPOs maintain a ten-year planning and programming cycle that includes the same time frame as the TxDOT UTP, i.e. a ten-year rolling period. HB 20 also requires the UTP to contain funding streams that provide a high degree of confidence to pay for projects in the ten-year window.

[Forward50 MTP](#)

This chapter includes a discussion of roadway and transit funding assumptions, based on the anticipated revenues. The fiscally constrained list of projects in Chapter 4 contains highway transportation and transit improvements as identified by Permian Basin MPO Policy Board, the TAC, staff, stakeholders, and the public who attended hearings and workshops during the development of the MTP.

As stated in previous chapters, numerous opportunities for public and stakeholder input were offered during the preparation of the plan. The transportation improvements recommended in the Forward50 MTP are intended to meet the anticipated needs within the ten-year and 25-year time frames, or other time periods; subject to amendment(s) by the MPO Policy Board.

Cost Estimates and Total Project Cost

During the preparation of the Forward 2045 MTP, the TAC and a working committee met frequently to establish credible cost estimates for the types of projects being considered for inclusion into the MTP. These included projects such as overpasses, road widenings, added capacity projects and non-freeway to freeway conversions including interstate highways along multiple corridors. Part of the staff and TAC responsibilities associated with the preparation of the Forward 45 MTP and subsequent amendments was to generate a new projection of cost for each amendment to the MTP.

Staff and the TAC used a similar process for the Forward50 MTP. The project listing includes a reference to total project cost (TPC) to indicate to stakeholders that the funding made available to the MPO is for construction purpose; other non-construction expenditures are paid for by others.

Total Project Cost

Total Project Cost (TPC) is the total cost of all phases associated with a project including:

- **Preliminary Engineering.** Project development activities during which basic planning objectives are translated into specific, well-defined engineering criteria that transition a project into the final design process
- **ROW Purchase.** Cost of any real property required to construct or implement a project

- **Construction Cost.** Cost of the actual construction (labor and materials)
- **Construction Engineering.** Cost of the interpretation of plans and specifications and formulation of engineering decisions
- **Contingencies.** Estimated amount of any unforeseen costs associated with a project
- **Indirect Cost.** Expenses the provider or contractor incurs for operating its business. Indirect cost rates for providers selected to contract for various work tasks are obtainable from TxDOT's Audit Office.

Awareness of the TPC provides decision makers, stakeholders, and the public with a more accurate picture of the funds that will be necessary to complete a construction project. The construction cost is the only line item in the TPC that is paid for with the MPO's Category 2 funds. All non-construction project costs are paid for with TxDOT funding. Until a project is eligible to be fully funded and placed into the MPO's four-year TIP and the TxDOT STIP the full dollar amount of the TPC is not entirely known; this is especially true for outer year projects. To reflect this in the MTP document it should be stated that 20% of the TPC will be necessary to provide the non-construction funding portions of any project. Because these funds are not coming from the MPO, they are not fiscally constrained.

TPC is frequently updated by TxDOT as a project advances closer to its anticipated inclusion into the statewide TIP. The construction cost and non-construction costs are fully calculated prior to a project's year of expenditure.

Components of a Cost Estimate

Cost estimates include the following components:

- **Base Estimate.** Developed and documented by the districts with engineering judgement applied. Base estimates are developed using the best information known at the time and the phase of the project.
- **Allowances.** Items known to be required on the project but at a particular project development stage are not yet known or quantifiable.
- **Contingencies.** Costs for unknowns and uncertainties should be documented and included in the engineer’s estimate.

Table 6.1 – Cost Estimating Worksheet

Description of Work	\$ Million	Increment
Widen Non-Freeway	4	per mile
Construct Freeway with Frontage Roads	12	per mile
Construct New Interchange	35	unit
Reconstruct Interchange	13	unit
Interchange work involves a linear distance	8.4	per mile

Preventive Maintenance and Operations

A critical part of the overall planning effort is to ensure that investments of public funds are maintained over time. It is also important to ensure operational improvements help to move people and goods and to increase longevity of the completed projects. These are federal, state, and regional priorities.

The integrity of the existing highway system and urban streets should not be allowed to deteriorate. The operation and maintenance projections shown herein in Table 6.X are provided to cover improvements such as traffic signal modernizations, general signal improvements, pavement rehabilitation, seal coating, and overlays. Projecting the TxDOT Odessa District’s maintenance funding over the life of the MTP is difficult, as this funding is spread throughout the district and not just the Metropolitan Area Boundary. This funding is used when needed and where needed at any given time. However, based on history we have projected 25 years of funding based on a 4% increase throughout the plan. A yearly average is then shown to better predict preservation of the systems.

The TxDOT Odessa District invests on an annual basis to ensure that roadways are maintained. These funds are from the District’s available Category 1 (Preventive Maintenance and Rehabilitation funds). Discussions with the TxDOT Odessa District staff indicate that maintenance and operations funding is typical and that the MPO should continue to benefit from approximately \$18.5 million annually. These funds are managed entirely by the TxDOT Odessa District. Sample projects funded by the TxDOT Odessa District Category 1 funds include:

FY 2021

- BI-20 Roadway Rehabilitation from Fairgrounds Rd to IH 20

FY 2022:

- SH 140 Roadway Rehabilitation from BS 349C to IH 20
- BS 158 Roadway Rehabilitation from Wall St to Front St.
- US 385 Roadway Rehabilitation from SH 191 to 8th St.

FY 2023:

- SL 338 Roadway Rehabilitation from US 385N to SH 191
- BS 349C Roadway Rehabilitation from SL 250 to IH 20
- SS 588 Roadway Rehabilitation from Eastridge to BI 20
- BI 20 Roadway Rehabilitation from Faudree to 1 MI E of FM 1788
- BI 20 Roadway Rehabilitation from 8th St to Odessa Country Club

FY 2024:

- FM 3503 Roadway Rehabilitation from IH 20 Exit Ramp to JBS Pkwy
- BI 20 Roadway Rehabilitation from FM 1882 to Hancock
- FM 1882 from BI 20 to US 385S
- SH 349 Intersection Improvement at SH 191
- SL 338 Roadway Rehabilitation from W Yukon Rd to US 385N
- IH 20 Roadway Rehabilitation from Moss Ave to E of FM 1936

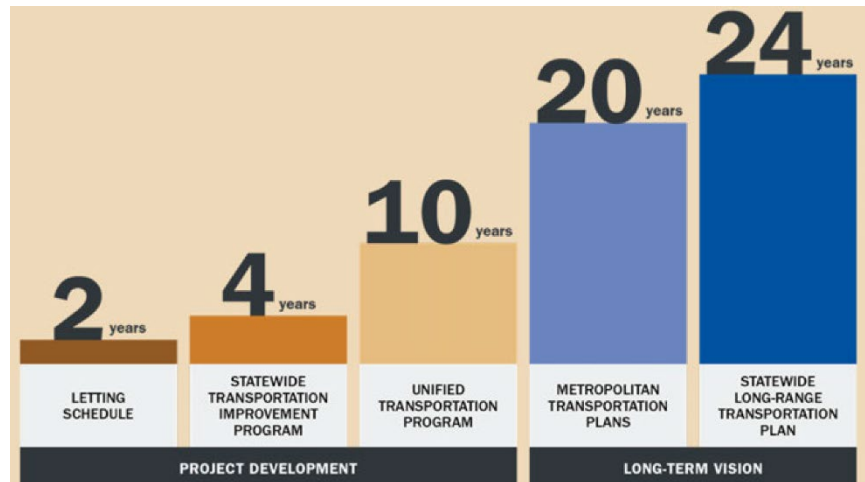
In addition to the TxDOT financial commitment to maintenance and operations, both cities and all three counties provide annual funding to maintain off system roads and bridges to improve safety and system reliability as well as continued economic value. Table 6.2 indicates future revenues as well as maintenance and operations anticipated costs over the 25-year period.

Table 6.2 – Maintenance and Operations Projected Cost by Jurisdiction

Maintenance and Operations Projected Cost by Jurisdiction	Estimated Revenues	Estimated Expenditure
TxDOT – Odessa District	\$465,230,000	\$465,230,000
City of Midland	\$650,000,000	\$650,000,000
City of Odessa	\$410,000,000	\$410,000,000
Ector County		
Midland County	\$400,000,000	\$400,000,000
Martin County		
MOUTD	\$140,409,642	\$140,409,642

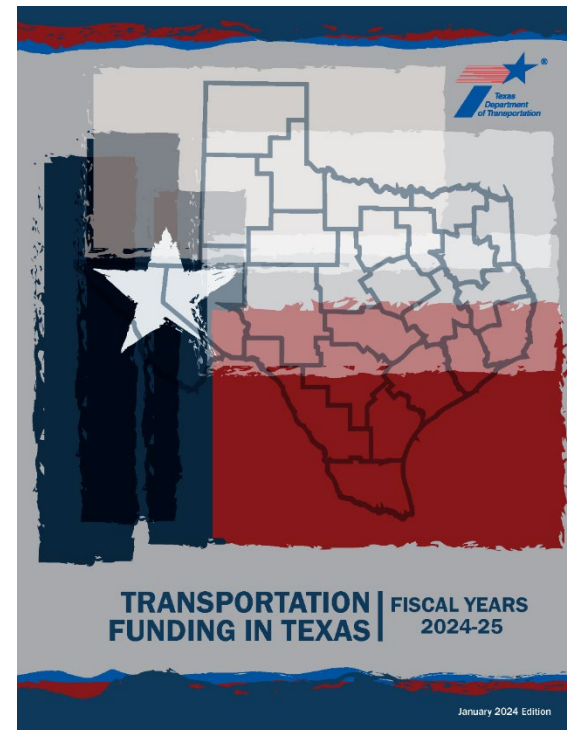
Constrained Funding Scenario

To provide the reader with additional information covering the TxDOT UTP process, the TTC and TxDOT use the UTP as a ten-year plan to guide transportation project development. The UTP is developed annually in accordance with the Texas Administrative Code (TAC §16.105) and is approved by the TTC prior to August 31. The UTP authorizes projects for construction, development and planning activities and includes projects involving highways, aviation, public transportation, freight rail, ports, and state and coastal waterways.



Source: TxDOT “Project Development, Selection, and Delivery (Project Life Cycle)”

The UTP is part of a comprehensive planning and programming process flowing from TxDOT’s agency mission to project-level implementation. That is, the UTP is an intermediate programming document linking the planning activities of the Statewide Long-Range Transportation Plan (SLRTP), the Metropolitan Transportation Plans, and Rural Transportation Plan to the detailed programming activities under the Statewide Transportation Improvement Program (STIP), MPO Transportation Improvement Programs (TIP), and TxDOT’s 24-month (2-year) construction letting schedule.



More, specifically, the UTP is a listing of projects and programs that are planned to be constructed and/or developed within the first ten years of the State’s 24-year SLRTP. Project development includes activities such as preliminary engineering work, environmental analysis, right-of-way acquisition and design. Despite its importance to TxDOT as a planning and programming tool, the UTP is neither a budget nor a guarantee that projects will or can be built. However, it is a critical tool in guiding transportation project development within the long-term planning context. In addition, it serves as a communication tool for stakeholders and the public in understanding the project development commitments TxDOT and its partners are making.

The Permian Basin MPO benefits directly from the inclusion of projects into the State’s UTP. Once a project is listed in the 10-year UTP, the listed activities can begin. Typically, by the time a project is included in the UTP it has been discussed and analyzed on a needs basis among the MPO’s member agencies, interested parties, TxDOT, and the Policy Board.

As part of this exercise in prioritizing projects and indicating fiscal constraint within the MTP, the TAC and Policy Board prepared a list of projects for consideration into the MPO’s priority project list (see Chapter 4). It is from this list that projects are chosen for inclusion into the UTP. The Transportation Commission has the authority to provide funding for projects that may not be listed in the MPO’s project list using funding categories it has available.

The UTP development process includes the steps listed below:

- 1
 - Establish strategic goals, performance measures, and approved targets
- 2
 - Develop the planning cash forecast
- 3
 - Determine the UTP funding distribution strategy
- 4
 - Release the UTP planning targets
- 5
 - Prioritize and select transportation projects locally using an adopted scoring and selection process
- 6
 - Identify funding for the transportation projects
- 7
 - Prioritize and select transportation projects at the state level
- 8
 - Produce the UTP document and project listings
- 9
 - Conduct UTP public meeting and public hearing
- 10
 - Present to Texas Transportation Commission for adoption

Federal Funds

Revenues collected from federal motor fuel taxes are deposited in the federal Highway Trust Fund, appropriated by Congress through the Federal-Aid Highway Programs, and distributed to each state. Most TxDOT projects are funded with both federal and state funds, with the most common share being 80% federal, 20% state. The Federal Highway Administration (FHWA) reimburses TxDOT for qualified project expenditures as they are paid out.

The current federal legislation for transportation and related topics is Public Law No: 117-58 (11/15/2021) known as the Infrastructure Investment and Jobs Act (IIJA), sometimes referred to as the Bipartisan Infrastructure Law (BIL). The law authorized \$1.2 trillion for transportation and infrastructure spending with \$550 billion going toward "new" investments and programs. This bill provides new funding for infrastructure projects, including:

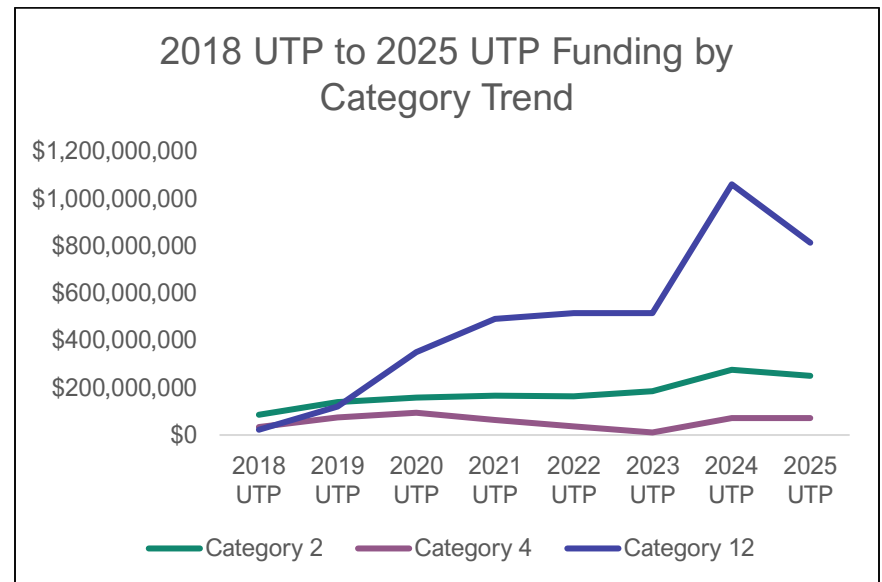
- roads, bridges, and major projects
- passenger and freight rail
- highway and pedestrian safety
- public transit
- broadband
- ports and waterways
- airports
- power and grid reliability and resiliency
- water infrastructure
- resiliency, including funding for coastal resiliency, ecosystem restoration, and weatherization
- clean school buses and ferries
- electric vehicle charging
- addressing legacy pollution by cleaning up Brownfield and Superfund sites and reclaiming abandoned mines

The importance of this bill cannot be overstated. Funding available for projects has increased because of the new law.

State Funds

The State Highway Fund is TxDOT’s principal fund. Most of the taxes and fees deposited in the State Highway Fund are dedicated by the Texas Constitution to support state highways. The primary source of State Highway Fund revenues is the state motor fuel tax, vehicle registration fees, sales taxes (Proposition 7), and the oil and gas production tax (also known as severance tax or Proposition 1).

Category 2 Funds. Revenues from Propositions 1 and 7 are held in special subaccounts of the State Highway Fund. These funds are realized at the MPO level when the distribution of Category 2 (Metropolitan & Urban Area Corridor Projects) funds is made by the Transportation Commission. The main source of funding for the Permian Basin MPO is Category 2. This source has increased at a steady pace over the past ten years as shown below.

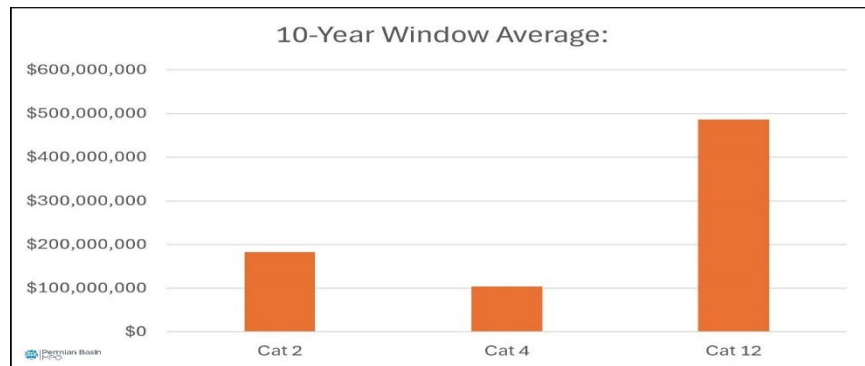


Category 4 Funds. While Category 2 funds are the MPO’s most consistent revenue source, the TxDOT Odessa District has recently coordinated with the MPO to program funding from Category 4 (Statewide Urban Connectivity) to fund on-system projects. Category 4 funds in the 2025 UTP cycle average approximately \$17M per year. To indicate future revenue, this sum will be used on an annual basis.

Category 12 Funds. Furthermore, the TTC has programmed significant Category 12 (Strategic Priority) funds for major projects including I-20, US 385, SL 250, and SL 338. The Category 12 funds provided serve to expedite project implementation. The TTC made these funds available partially due to the MPO leveraging its Category 2 funds as well as funds provided by both the Midland and Odessa Economic Development Corporations.

Category 11 Funds. Additionally, the TxDOT Odessa District typically spends a portion of its annual Category 11 allocation in the MPO boundary as well, these are District Discretionary funds.

TxDOT Category 4 and 12 funds have increased at a faster rate than Category 2 funds in the PBMPO region, as shown in the chart that indicates a ten-year funding allocation average. Categories 3 and 11 are not shown.



Larger MPOs benefit from the remaining TxDOT funding categories that are shown in the image below from the 2025 UTP.

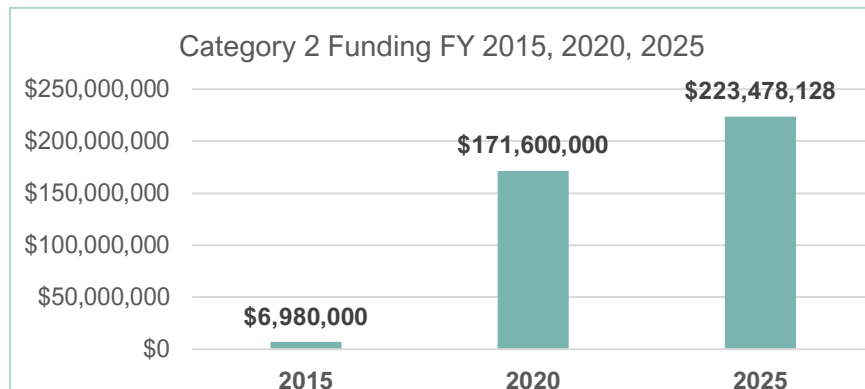


Source: TxDOT 2025 Unified Transportation Program

Funding By Category

Category 2 Funds

For all MPOs, Category 2 funds are distributed based on several factors. The Texas Administrative Code (Title 43, Part 1, Rule 16.154) contains a formula to distribute funds based on population, truck vehicle miles traveled, congestion, number of on-system lane miles, and safety using fatal and serious injury crashes as reported through the TxDOT Crash Record Information System. The Permian Basin MPO is allocated Category 2 funds for each year of the UTP based on these factors. As stated earlier, the UTP is a ten-year planning document and reasonably forecasts funding over the ten-year period so that the MPO can be aware of available funding to plan for mid-term transportation projects in the first ten-years of the 25-year MTP. The chart below shows a comparison of the funding made available through the UTP to the Permian Basin MPO in FY 2015 and FY 2020 and FY 2025. This is shown to indicate that funding around the FY 2015 time was scarce and that within a five-year period it grew substantially. It is extremely important for the MPO to show that these trends exist since they are the basis upon which reasonable assumptions can be made about future funding.



The TxDOT Category 2 funds authorized for programming of the MPO’s projects are utilized to address mobility and added capacity projects on urban corridors to mitigate traffic congestion, as well as traffic safety and roadway maintenance or rehabilitation. Projects must be located on the state highway system.

Non-Traditional Funding

The cities in the Permian Basin MPO region have a history of contributing local funds toward constructing prioritized projects as determined by the Policy Board. In 2005, the Odessa Development Corporation (ODC) contributed \$5 million for the construction of an overpass at John Ben Shepperd Parkway to link the major north-south corridor with an emerging industrial park located south of the Union Pacific Railroad tracks and accessing I-20. At that time, the TxDOT Odessa District was preparing to delay construction until funding became available. The ODC realized construction of the project would require additional funds from local, non-state sources. In 2018 both the ODC and the Midland Development Corporation (MDC) donated \$15 million of locally generated funds to contribute toward important projects including Loop 250 at CR 1150 in Midland, US 385 at N Loop 338 in Odessa, Loop 250 at CR 1140 in Midland, and Loop 250 at SH 158 in Midland. Local funds from the City of Odessa and Ector County were also provided for a traffic signal and grade improvement project at 52nd/56th Streets at Loop 338 in Odessa. It is anticipated that this trend will continue and that this funding source can be reasonably programmed at a rate of \$1 million per year from both entities combined. This type of funding is listed in the TxDOT UTP as Category 3 (Non-Traditional) sources.

In summary, anticipated funding for the MTP planning period comes primarily from five identified sources: Categories 2, 3, 4, 11, and 12 as shown in Table 6.3 The TTC has provided additional Category 12 funding for major improvements on I-20 and at several interchange locations on the Loop roads in both cities. These reasonably expected funding levels from the sources shown in Table 6.3 meet the fiscal constraint requirement under federal legislation.

Table 6.3 – Anticipated Annual Revenue FY 2025-2050

TxDOT Funding Category	Estimated Revenue Per Year
Category 2 – Urban Mobility	\$23,000,000
Category 3 – Non-Traditional	\$1,000,000
Category 4 – Urban Connectivity	\$17,000,000
Category 11 – District Discretionary	\$3,000,000
Category 12 – Strategic Priority	\$46,000,000
Total	\$90,000,000

To provide a conservative assessment of revenue, the MPO estimates that funding will increase at a modest rate of 4.5% per year reflecting the TxDOT UTP historic growth. Thus, at the estimated rate of funding shown in Table 6.3 of \$90.0 million per year, the MPO would benefit from \$3,498,227,375 for highway funding over the planning period. This projection includes all programmed projects in the 2025-2034 UTP in addition to the 15-year period that follows.

Inflation

Guidance from TxDOT suggests that an inflation rate of 4% per year should be applied to projects within the UTP as follows:

- Year 1 – 0
- Year 2 – 4%
- Year 3 – 8%
- Year 4 – 12%
- Years 5-10 (outside STIP) – 12%

The MTP is updated every five years to include updated cost estimates, therefore, so when it comes time to program the latter year projects those estimates will have long since been updated. An estimate of inflation is factored into all projects in the ten-year period.

Forecasted Transit Revenues

Forecasted Revenues to Midland Odessa Urban Transit District (MOUSD)

The MOUSD is the umbrella agency through which EZ-Rider provides urban transit services in the Midland and Odessa urbanized areas. Revenue received by EZ-Rider is through Federal Transit Administration’s (FTA) Urbanized Area Formula Grants (Section 5307). The funds are used for transit capital, operating assistance and for transportation related planning. Also, discretionary grants such as Bus and Bus Facilities (Section 5339) are awarded to EZ-Rider as a form of funding commonly used for additional buses, vehicle replacement and facilities.

Available funding for EZ Rider operating and capital expenses, from 2025 to 2050 are shown in Table 6.4, operating funding for EZ Rider is drawn from Section 5307 sources:

- FTA Section 5307 (Urbanized Area Formula Program)
- State Funds
- Local Funds
- Operating Revenue

Table 6.4 – MOUSD Operating Budget, 2025 to 2050

	2025	2026-2030	2031-2040	2041-2050	TOTAL
Operating	\$3,393,004	\$18,755,063	\$34,832,251	\$35,712,920	\$89,300,234
Maintenance	\$1,960,643	\$10,344,971	\$20,127,772	\$20,636,665	\$51,109,408
ADA	\$918,419	\$4,626,651	\$9,428,401	\$9,666,780	\$23,721,832
Planning	\$440,297	\$2,218,051	\$4,520,046	\$4,634,327	\$11,372,425
				Grand Total	\$175,503,899

7

Performance-Based Planning



FORWARD **50**

METROPOLITAN TRANSPORTATION PLAN

FAST Act and IIJA Performance Measures

A national performance-based planning requirement for federal, state, and regional agencies was established in 2012 with the Moving Ahead for Progress in the 21st Century (MAP-21) legislation, to tie capital investments to transportation system performance. The Fixing America's Surface Transportation (FAST) Act was enacted in 2015 and continued the performance-based planning momentum, and more specifically, performance-based transportation outcomes originally outlined in MAP-21. The Infrastructure Investment and Jobs Act passed in November 2021 continued these requirements. US Department of Transportation (USDOT) is responsible for administering the surface transportation performance-based planning program, with rule-making oversight by the FHWA and FTA. The performance management framework is based upon seven national goals established in MAP-21 and reinforced in the FAST Act and the IIJA Act, which include:

- **Safety.** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads Infrastructure
- **Infrastructure Condition.** To maintain the highway infrastructure asset system in a state of good repair
- **Congestion Reduction.** To achieve a significant reduction in congestion on the National Highway System
- **System Reliability.** To improve the efficiency of the surface transportation system

What are the benefits of performance management?

Two of the benefits associated with performance management include: the MPO using system information (data) to make informed decisions about system investment; the MPO achieving performance goals as written in the CMP, the MTP and other documents that address how performance may be improved.

- **Freight Movement and Economic Vitality.** To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- **Environmental Sustainability.** To enhance the performance of the transportation system while protecting and enhancing the natural environment
- **Reduced Project Delivery Delays.** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion

Federal Performance Measures

Federal performance measures for both the highway and transit system have been established as part of the federal performance management initiative. For each performance measure, the Permian Basin MPO assessed the effective (starting) date of the measure, the recommended data sources, and network applicability (Interstate system, National Highway System, all public roads, etc.). The highway system performance measures are listed in Table 7.1 and apply to all MPOs and State DOTs; however, the Permian Basin MPO is in attainment for air quality therefore the environmental sustainability goal area is not applicable. The highway performance measures align with the seven national goals.

Table 7.1 – FAST Act and IIJA Performance Measure Summary

National Goal Area	Rulemaking Category	Performance Measure
Safety	Safety	Number of Fatalities
		Rate of Fatalities
		Number of Serious Injuries
		Rate of Serious Injuries
		Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries
Infrastructure Condition	Infrastructure	Percentage of Pavements in Good Condition (Interstate)
		Percentage of Pavements in Poor Condition (Interstate)
		Percentage of Pavements in Good Condition (Non-Interstate NHS)
		Percentage of Pavements in Poor Condition (Non-Interstate NHS)
		Percentage of Bridges in Good Condition (NHS)
		Percentage of Bridges in Poor Condition (NHS)
System Reliability	System Performance	Percent of Reliable Person-Miles Traveled (Interstate)
		Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)
Freight Movement & Economic Vitality	System Performance	Truck Travel Time Reliability (TTTR) for the Interstate System
Environmental Sustainability	System Performance	Total Emissions Reduction
Congestion Reduction	System Performance	Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the National Highway System (NHS)
		Percent of Non-Single Occupancy Vehicle (SOV) Travel

Source: Federal Highway Administration

Federal Performance and Target Setting

Although federal performance measures are defined at the federal level, one of the key tasks for MPOs, State DOTs, and transit agencies is to establish performance targets based on the federally defined measures. Guidance is provided by USDOT regarding the development of performance targets, but it is the responsibility of each respective agency to coordinate efforts in order to establish and monitor targets over time.

Highway Targets

Highway safety targets were required for State DOTs first, MPOs were given 180 days after the State’s targets were established to define their own targets. MPOs had the option to establish targets in one of two ways: 1) Agree to contribute toward the accomplishment of the State DOT target, or 2) Develop a quantifiable target for the MPO planning area. At the time this MTP was developed, Safety (PM1), Infrastructure Condition including Transit Asset Management (PM2), and System Reliability (PM3) were all in place as adopted by the MPO Policy Board. The PM2 and PM3 requirements were the most recent and they were adopted in the summer of 2023. TxDOT established its safety targets are highlighted by the following:

- Targets for each performance measure are based on 5-year rolling averages
- Targets are for calendar years
- Targets will be established annually, or otherwise as may be required
- States and MPOs will coordinate to establish targets

PM1 - Safety

Target: Total number of traffic fatalities

	Target or Actual Data
2023 Target To decrease the expected rise of fatalities to not more than a five-year average of 3,682 fatalities in 2023.	
2019	3,619
2020	3,874
2021	4,486
2022	3,272
2023	3,159
<i>2023 Target expressed as 5-year average</i>	<i>3,682</i>

The calendar year target for 2023 would be **3,159 fatalities**.

Target: Total number of serious injuries

	Target or Actual Data
2023 Target To decrease the expected rise of serious injuries to not more than a five-year average of 17,062 serious injuries in 2023.	
2019	15,858
2020	14,659
2021	19,434
2022	17,539
2023	17,819
<i>2023 Target expressed as 5-year average</i>	<i>17,062</i>

The calendar year target for 2023 would be **17,819 serious injuries**.

Target: Fatalities per 100 million vehicle miles traveled

2023 Target | To decrease the expected rise of fatalities per 100 MVMT to not more than a five-year average of 1.38 fatalities per 100 MVMT in 2023.

	Target or Actual Data
2019	1.26
2020	1.49
2021	1.70
2022	1.25
2023	1.20
2023 Target expressed as 5-year average	1.38

The calendar year target for 2023 would be **1.20 fatalities per 100 MVMT**.

Target: Serious Injuries per 100 million vehicle miles traveled

2023 Target | To decrease the serious injuries per 100 MVMT to not more than a five-year average of 6.39 serious injuries per 100 MVMT in 2023.

	Target or Actual Data
2019	5.50
2020	5.63
2021	7.35
2022	6.70
2023	6.77
2023 Target expressed as 5-year average	6.39

The calendar year target for 2023 would be **6.77 serious injuries per 100 MVMT**.

Target: Number of non-motorized fatalities and serious injuries

2023 Target | To decrease the expected rise of non-motorized fatalities and serious injuries to not more than a five year average of 2,357 non-motorized fatalities and serious injuries in 2023.

	Target or Actual Data
2019	2,291
2020	2,206
2021	2,628
2022	2,321
2023	2,340
2023 Target expressed as 5-year average	2,357

The calendar year target for 2023 would be **2,340 non-motorized fatalities and serious injuries**.

The Permian Basin MPO adopted its safety measures and targets through an approved Policy Board resolution on January 16, 2018, and subsequently in 2019, 2020, 2021, 2022, 2023, and 2024 following TxDOT’s release of its updated targets. It is anticipated that the MPO will continue to support TxDOT’s goals to improve traffic safety in the MPO region; the Policy Board will be presented with updated TxDOT targets as they are released.

PM2 – Pavement and Bridge Condition

The PM2 road and bridge condition targets and transit asset management targets adopted by the Policy Board are shown in Table 7.2. Pavement condition for roads on the Interstate system and the Non-Interstate system on roads in the Permian Basin MPO boundary are in better condition than the state, except that Non-Interstate roads are only marginally better. Several maintenance projects completed by the TxDOT Odessa District will result in higher “good condition” ratings when a future analysis of pavement condition is completed.

The Permian Basin MPO coordinated with TxDOT Odessa District, the TAC, and Policy Board and decided to support the road and bridge condition (PM2) targets established by TxDOT (the transit authority adopted standards related to PM2 for its transit fleet independently). The PM3 or system performance targets were established by the MPO based on an analysis of travel time delay using National Performance Management Research Data Set. The MPO adopted a target of 1.50 as a truck travel time reliability index on I-20 and a travel time reliability of 90% as a target for the year 2020; these targets have been updated as shown in Table 7.4. Table 7.8 shows the system reliability measures and targets adopted by TxDOT and the MPO.

Transit Asset Management Targets

1. Reduce Overall Maintenance Costs by 20%
2. Increase Fleet Spare Ratio to at least 20%
3. Reduce Road Calls by 50%
4. Improve Safety and Security of bus stops and address ADA Compliance

Table 7.2 – FAST Act and IIJA Performance Measure Summary

Rulemaking Category	Performance Measure	TxDOT Target Due Date	PBMPO Target Due Date
Infrastructure	Percentage of Pavements Good Condition (Interstate)	May 20, 2018	November 16, 2018
	Percentage of Pavements Poor Condition (Interstate)		
	Percentage of Pavements Good Condition (Non-Interstate)		
	Percentage of Pavements Poor Condition (Non-Interstate)		
	Percentage of Bridges Good Condition (NHS)		
	Percentage of Bridges Poor Condition (NHS)		

Source: TxDOT

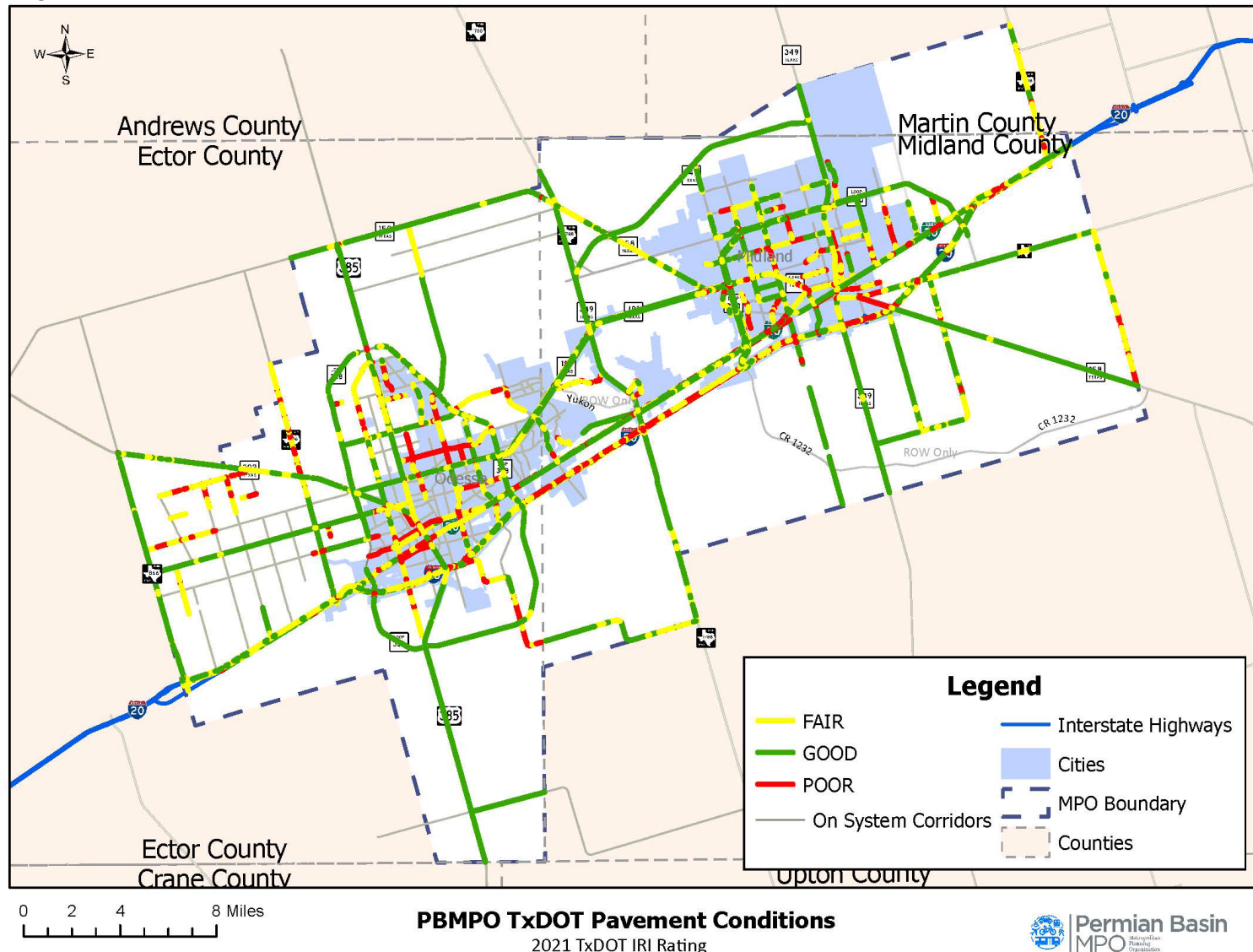
Table 7.3 – TxDOT and PBMPO PM2 Targets – FY2022 and FY2023

Performance Measures	Baseline (2022)	2-Year Target (2024)	4-Year Target (2026)
Pavement on IH			
Percent in 'good' condition	64.5%	63.9%	63.6%
Percent in 'poor' condition	0.1%	0.2%	0.3%
Pavement on non-IH NHS			
Percent in 'good' condition	51.7%	45.5%	46.0%
Percent in 'poor' condition	1.3%	1.5%	1.5%
NHS Bridge Deck Condition			
Percent in 'good' condition	1.1%	1.5%	1.5%
Percent in 'poor' condition	49.2%	48.5%	47.6%

Pavement Condition

The International Roughness Index (IRI) is the indicator used to measure how smooth or rough a pavement surface feels. The lower the calculated IRI, the smoother the pavement will ride. The higher the IRI, the rougher the pavement will ride. Figure 7.1 shows the 2017 IRI MAB pavement conditions.

Figure 7.1 – Permian Basin MPO Pavement Condition



This map was developed by Permian Basin MPO for the purpose of aiding in regional transportation planning decisions and is not warranted for any other use. No warranty is made by Permian Basin MPO regarding its accuracy or completeness.

Bridge Condition

The volume of vehicles, especially freight carriers, on the roads in the Midland Odessa region has also increased wear to the region’s bridges. Maps 7.3 and 7.4 below depict the current federal condition ratings of each bridge within the MPO’s boundary. Table 7.4 describes the federal bridge condition ratings by category.

Nearly half of the region’s bridges (107 out of 246) were built before 1970, and when many of the bridges approach the end of their useful life, they will require rehabilitation or reconstruction. Bridges by decade built are shown in Figures 7.4 and 7.5. In the bridge inventory system, all major structural deficiencies are considered to evaluate bridges and ratings are provided to represent the overall structural condition. This appraisal rating is based on the condition rating of superstructure, substructure, and inventory rating. In the Permian Basin MPO region, among the 246 bridges, 225 bridges (91.5%) scored above a 70% sufficiency rating. Table 7.6 shows the bridge structural condition by county.



Table 7.4 – FHWA Bridge Condition Rating Categories

FHWA Condition Ratings (Deck, Superstructure, Substructure)		
Code	Condition	Description
9	Good	
8	Good	No problems noted
7	Good	Some minor problems
6	Fair	Structure elements show some minor deterioration
5	Fair	Structural elements are sound but may have minor section loss, cracking, spalling or scour
4	Poor	Advance section loss, deterioration, spalling or scour
3	Poor	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.

Source: FHWA

Table 7.5 – Number of Bridges by Condition Ratings

	Good	Fair	Poor	Total
2018	104	137	3	244
2016	117	124	0	241
2014	139	98	0	237

Source: TxDOT

Table 7.6 – Bridge Condition by County

	Total Bridges	Sufficient Bridges >70%
Ector County	127	116
Martin County	0	0
Midland County	119	109
Total	246	225

Source: TxDOT

Figure 7.2 – Ector County Bridge Conditions

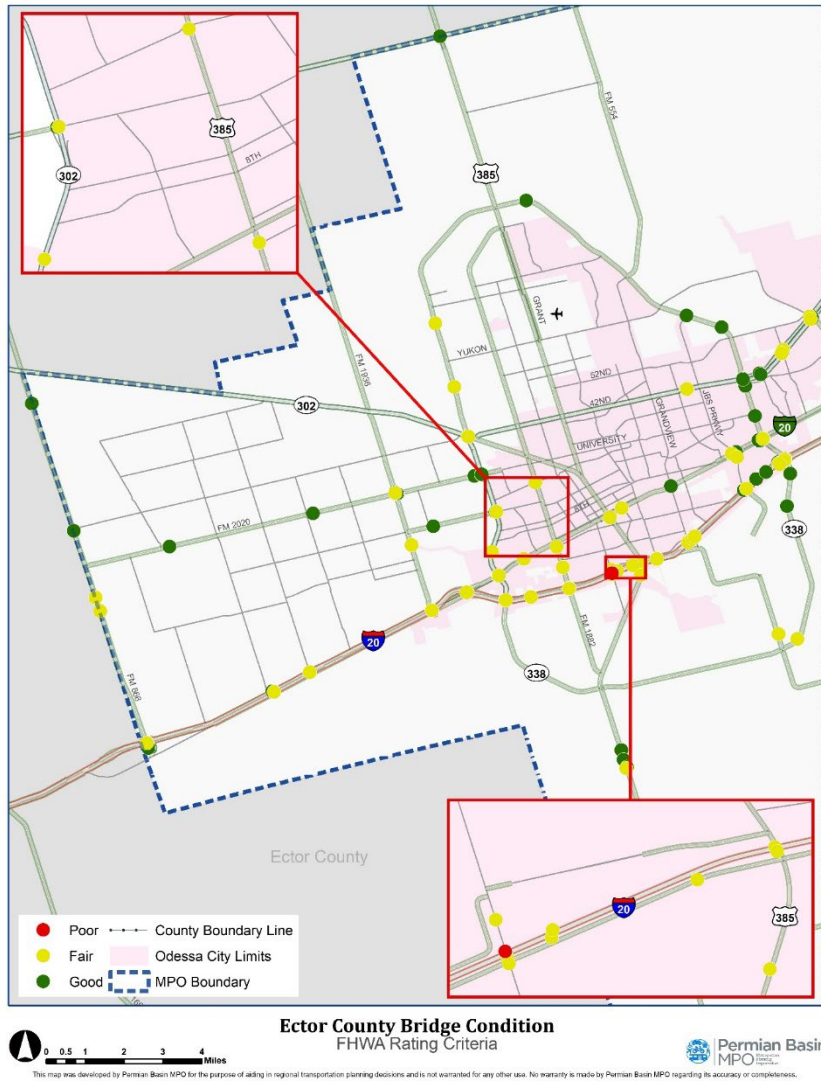


Figure 7.3 – Ector County Bridges Decade Built

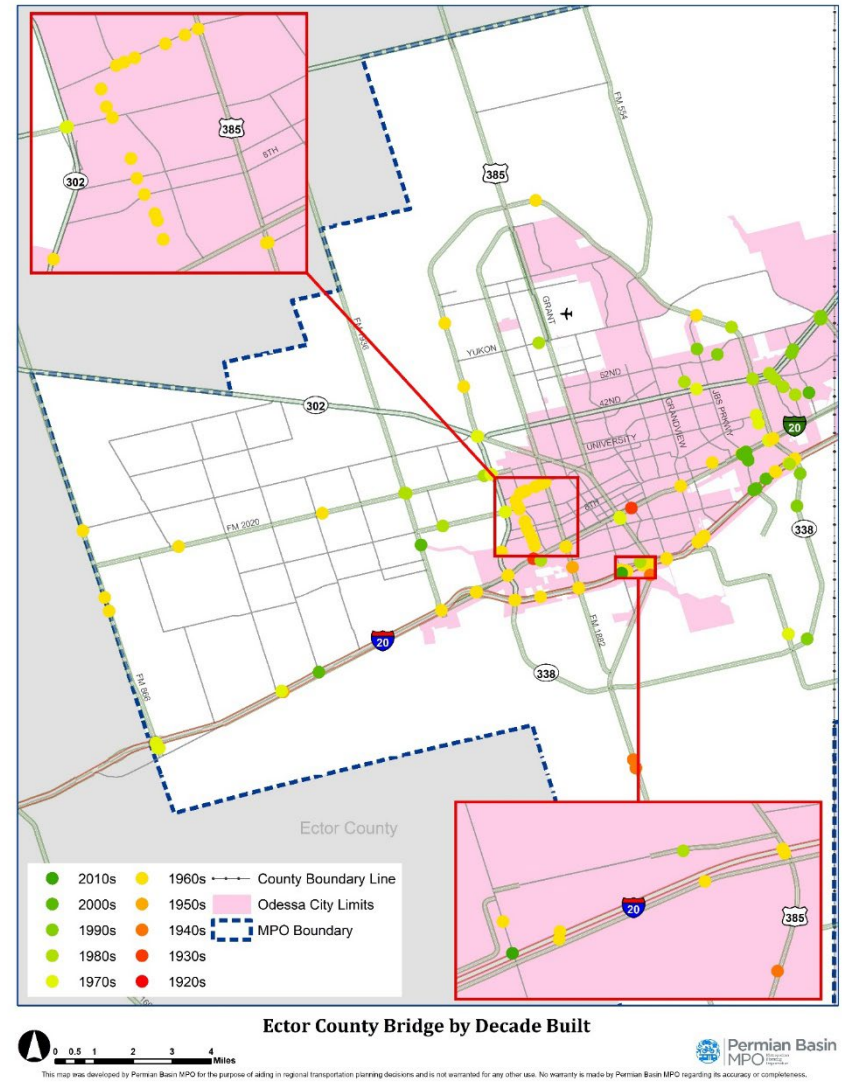
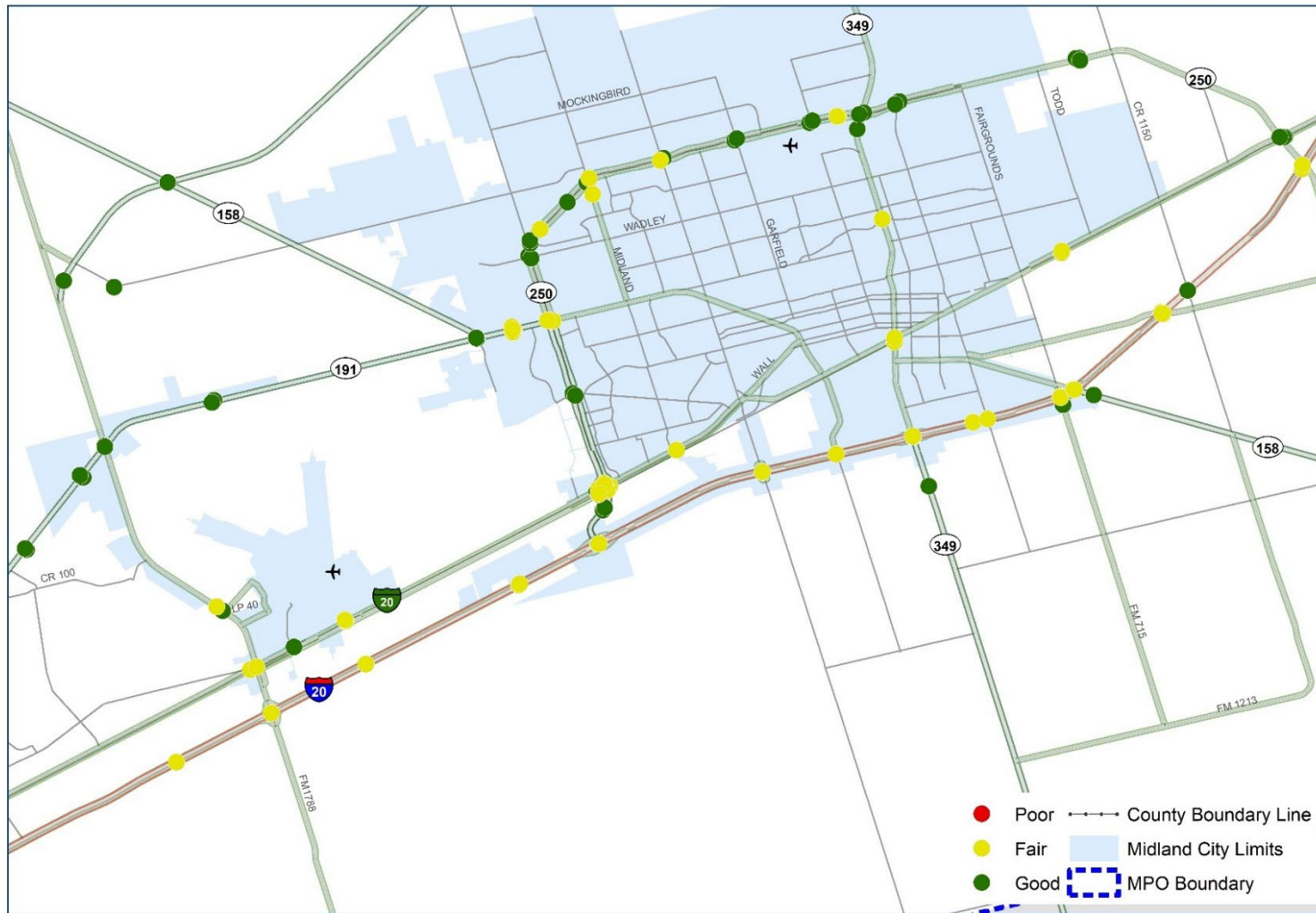


Figure 7.4 – Midland County Bridge Conditions

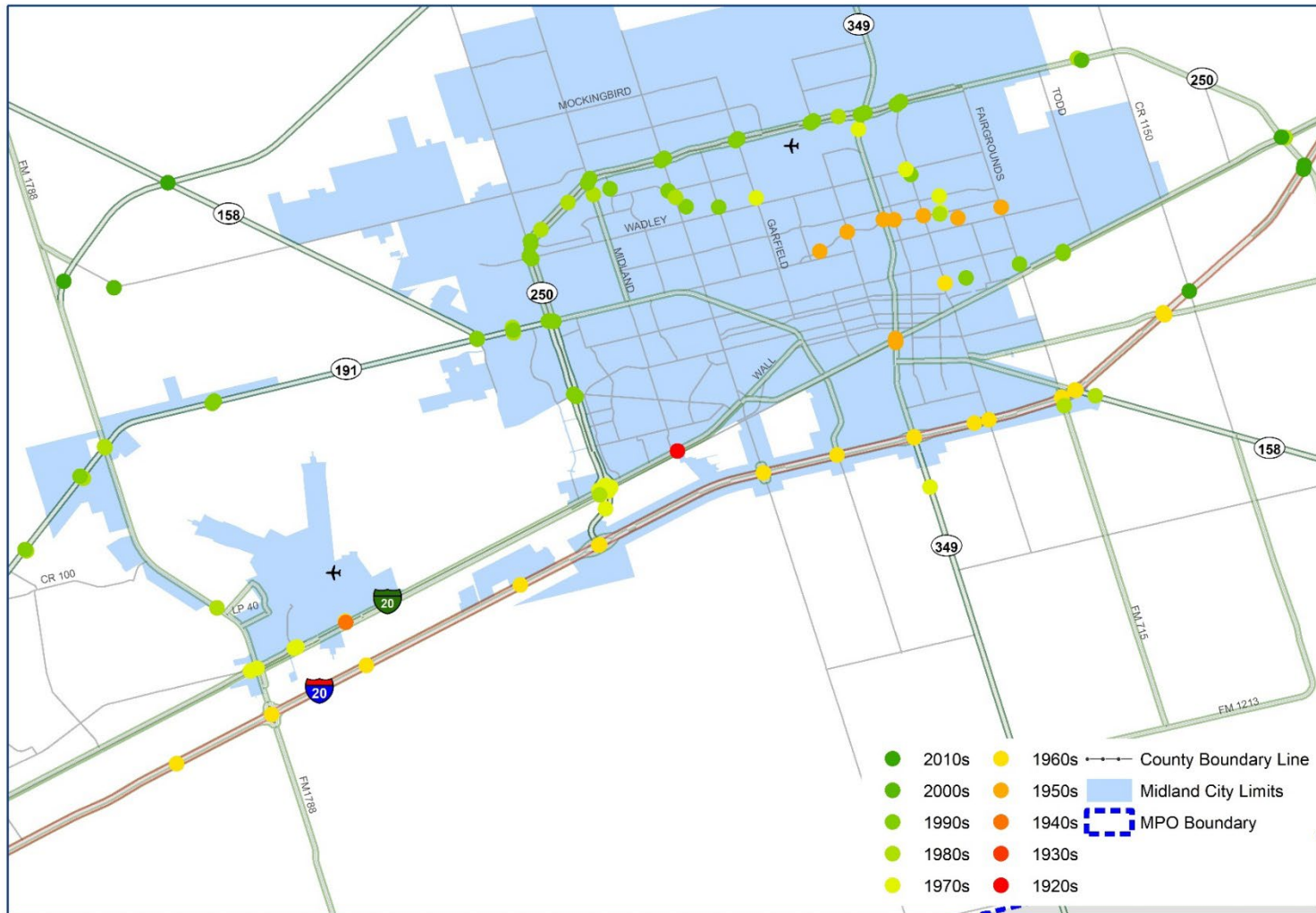


Midland County Bridge Condition
FHW Ratings



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Figure 7.5 – Midland County Bridges Decade Built



Midland County Bridge by Decade Built



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PM3 – System Performance

The MPO’s target for Interstate Highway travel time reliability was set at 90%, while the TxDOT target is 61.2%. For non-Interstate traffic, the travel time reliability factor set by the MPO was 90% in the year 2022; TxDOT’s statewide target for the same time frame is 55.4%. These numbers are shown in Table 7.9. The MPO established a target of 1.50 for overall travel time delay in 2020. The TxDOT target for overall delay is a factor of 1.7. Travel time delay means that a trip that should take 20 minutes under free flow condition when a delay factor of 1.5 takes 30 minutes instead. In addition to the above targets, the Permian Basin MPO already indicated a baseline Truck Travel Time Index of 1.37 along I-20 in 2017 and a target of 1.5 in the year 2020. The MPO’s goal is to maintain a reasonable degree of Truck Travel time delay and person travel time delay even though major growth is occurring in the region with traffic volumes expected to increase and especially truck volumes emanating from the growth of the energy sector. Further reporting on the PM3 requirement is expected in 2020 and 2022. The MPO has the authority to readopt its performance-based planning resolutions to reflect changes in performance targets as the Policy Board determines. It is anticipated that the MPO will consider reducing its established target of 1.5 to ensure that congestion is included in the scoring of more projects.

Table 7.7 – TxDOT and MPO System Performance Measures – Adoption Timeline (to be updated)

Rulemaking Category	Performance Measure	TxDOT Target Due Date	PBMPO Target Due Date
System Performance	Percent of Reliable Person-Miles Traveled (Interstate)		
	Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)	May 20, 2018	November 19, 2018
	Truck Travel Time Reliability (TTTR) for the Interstate System		
	Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the National Highway System (NHS)	May 20, 2018	November 19, 2018
	Percent of Non-Single Occupancy Vehicle (SOV) Travel		

Table 7.8 – TxDOT and PBMPO PM3 Targets – 2023

Performance Measure 3 (National Highway System)	2022 Target (Using Travel Time Index)
Level of Travel Time Reliability – Interstate	TTI 1.5 or greater – project
Level of Travel Time Reliability – Interstate	TTI 1.5 or greater
Non-Interstate Level of Travel Time Reliability	TTI 1.5 or greater

Performance Measures	Baseline (2022)	2-Year Target (2024)	4-Year Target (2026)
NHS Travel Time Reliability			
IH Level of Travel Time Reliability	85%	85%	85%
Non-IH Level of Travel Time Reliability	85%	85%	85%
Truck Travel Time Reliability	1.75	1.75	1.75

Transit Asset Management (TAM) Plan

Under Federal Transit Administration requirements, Tier II transit providers are required to develop a TAM Plan that includes an implementation strategy, key activities, and list of resources, along with an outline of how the provider will monitor, update, and evaluate its TAM Plan. The Permian Basin MPO coordinated with the EZ-Rider Transit provider to develop a TAM Plan with performance measures as shown below. This task was completed in October 2018 and updated in 2022.

Public Transportation Agency Safety Plan

A safety plan is also required by agencies that provide public transportation services. The plan is intended to include methods for identifying and evaluating safety risks, strategies to minimize exposure to hazards and unsafe conditions, as well as a process for conducting an annual review and update of the plan. The EZ-Rider transit service completed and adopted an agency safety plan in 2020.

Table 7.9 – Transit Asset Management Plan Reporting

Measures *Source: FHWA / FTA*

Transit Category	Performance Measure
Transit Asset Management (TAM) and National Transit Database (NTD) Reporting	Equipment – Percent of equipment valued > \$50,000 (support, non-revenue service vehicles) that have met their Useful Life Benchmark (ULB)
	Rolling Stock – Percent of revenue vehicles surpassing their ULB by Asset Class
	Facilities – Percent of facilities with condition rating below 3.0 on FTA Transit Economic Requirements Model (TERM) Scale
	Infrastructure – Percent of guideway directional route miles with performance restrictions by class

FORWARD50 MTP

VISUALIZE, PLAN, IMPLEMENT

PERMIAN BASIN MPO

September 2024

