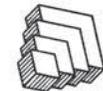


# MOTOR MPO SH 191 Corridor Study/Management Plan Final Report



SCHRADER & CLINE, LLC



TOWNSCAPE, INC.

July 9, 2012

# MOTOR MPO SH 191 Corridor Study/Management Plan

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# MOTOR MPO SH 191 Corridor Study/Management Plan

## Executive Summary

State Highway 191 serves as a vital connection between the cities of Midland and Odessa. This 14-mile corridor not only provides a linkage between these two employment centers, but also provides accessibility to vast areas of vacant land that is now bustling with activity due to the resurgence of the oil and gas industry in the region. The Midland-Odessa Transportation Organization (MOTOR), as the MPO for the region, determined that a corridor planning approach for the SH 191 Corridor was needed in order to help define, protect and coordinate development in the most opportunistic area for growth in the Midland-Odessa region.



The SH 191 corridor management plan has built upon strategies and vision defined and established in the 2010-2035 Metropolitan Transportation Plan and built upon the following tenants; two cities functioning as complementary urban centers, a diversified economy attracting regional investment, high quality communities

supporting multi-generational neighborhoods with transportation and

housing choices, and access to a range of recreational and cultural activities.

- Strategies within this SH 191 Corridor Management Plan are focused on several different areas. The ultimate recommendations of this plan are to:
- Identify a set of strategies to maintain and enhance access, mobility, safety, aesthetics, economic development and environmental quality along the SH 191 corridor;
- Provide land use and zoning recommendations to local officials to manage growth and development in the corridor and minimize the overwhelming impacts of the oilfield operations;
- Foster intergovernmental cooperation between the cities and counties by addressing common planning and development issues;
- Identify existing historic and natural assets, including the corridor view sheds;
- Address transportation issues that may arise from changes in land use and design concepts for future development of the corridor;
- Build further consensus on a vision for land use and design concepts for future development;



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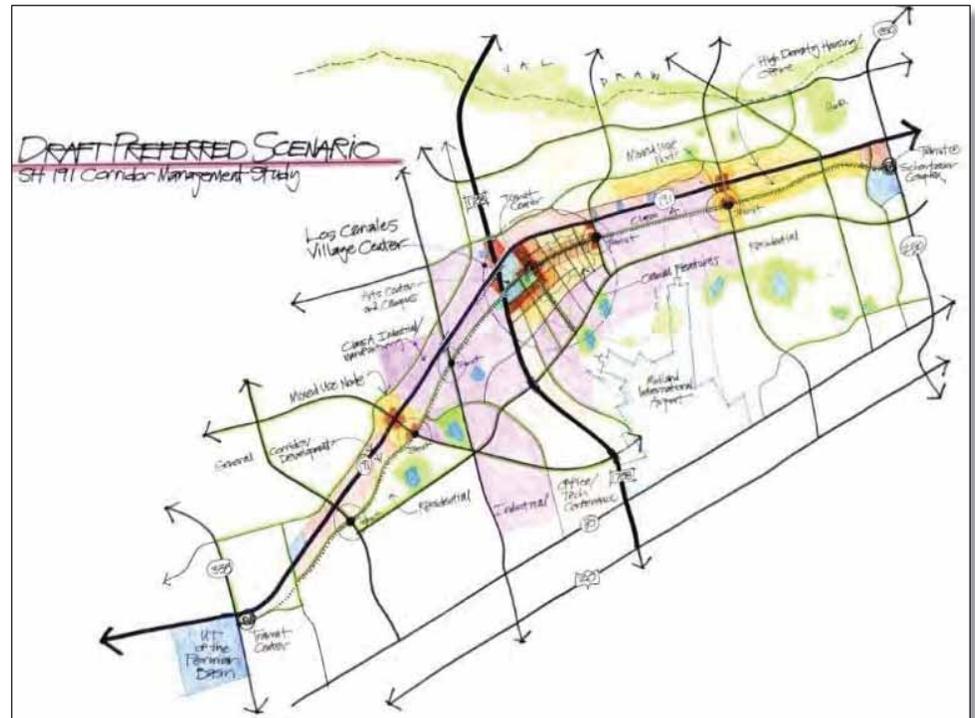


- Identify specific issues and opportunities related to improving transit, access management and bicycle and pedestrian use as well as consider transportation options unique to West Texas, such as equestrian trails and linkages.
- Identify linkages/access to intercity transit and identify linkages/access to regional transit projects or other recreational or tourism-related resources.
- Identify areas where interagency and/or inter-municipal partnerships are necessary to implement the plan.
- Identify areas where aesthetics can help create a stronger sense of place, boost civic pride and promote neighborhood vitality.

This plan will serve as a guide for decision makers and stakeholders in the two city/two county Midland and Odessa Region as future development occurs. This SH 191 Corridor Plan will guide and depict an ultimate scenario for development with transportation options coordinated with the ultimate land use scenario.

The SH 191 Corridor Plan:

- Focuses on the corridor along SH 191 and resulted from three-day “Charrette” and public workshop with leaders and stakeholders from each jurisdiction.
- Features mixed-use developments situated along the corridor utilizing transit and pedestrian oriented activities and including university, retail, hotel, office and various types of residential uses including multi-family, townhomes and smaller lots clustered around common open space and amenities.
- Developed a unique “backage” road concept to support SH 191 and provide two way access to properties along the frontage roads. The south backage road provides a “multi-modal corridor” with separate bicycle, pedestrian and equestrian facilities to support proposed mixed-use centers of development, that will connect existing development nodes



## MOTOR MPO SH 191 Corridor Study/Management Plan

such as The University of Texas Permian Basin in Odessa, the UTPB and CEED Campus at FM 1788 and the Scharbauer Sports Complex in Midland. Finally, it provides a “transit ready” corridor including the necessary right-of-way for an optional fixed transit facility between the two cities in the future. A series of eight transit stops with more intensive development along the south backage road will create the transit corridor. A centrally located transit center would help anchor the FM 1788 node with built-in density to support ridership (see below).

- Utilizes the Wagner Noël Performing Arts Center and UTPB CEED Campus as a focus for the most intense node of mixed use development at the south-east corner of SH 191 and FM1788.
- Provides additional grade separations at designated locations across SH 191 to support development on both sides of the corridor and provide connectivity to the subarea thoroughfare network.
- Considers and includes existing and planned development activity along the corridor and encourages quality development through a higher level of standards.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Chapter 1 Introduction

The Midland-Odessa Transportation Organization, as the MPO for the region, is responsible for long-range transportation planning. The MOTOR MPO determined that a corridor planning approach for the SH 191 Corridor was needed in order to help define, protect and coordinate development in the most opportunistic area for growth in the Midland-Odessa region. The SH 191 corridor has long served as a vital connection between the cities of Midland and Odessa. With the renewed investment and opportunity in oil, the Midland-Odessa economy is once again bustling with activity. Nowhere is this more evident than along the SH 191 corridor where once forgotten spaces are now experiencing new growth and development. As growth continues to occur along the corridor, it will be necessary to ensure that development be coordinated, compatible and ultimately in the best interest of all parties, including residents, future residents, commercial interests, developers and land owners. This is best achieved by creating a land use and access management plan.



It was determined that the planning process should consider multiple forms of transportation, adjacent land uses and the connecting street network and should ultimately respect and enhance the natural and human environments. Key objectives within the study include goals and objectives, current and future land uses along the corridor and adjacent areas, and

identifying strategies to maintain and enhance access, mobility, safety, aesthetics, economic development and environmental quality along the SH 191 Corridor.

This corridor management plan has built upon the strategies and vision defined and established in the 2010-2035 Metropolitan Transportation Plan that was finalized and submitted to the Transportation Planning and Programming Division in Austin in December, 2010. Highlights of the community vision for future development are as follows:



- **Two Cities, One Community**—Our two cities will function as complementary urban centers within a single metropolitan region.
- **A Place to Work**—Our economy will grow and diversify, attracting regionally significant employers.
- **A Place to Live**—Our communities will feature high quality, multi-generational neighborhoods with a variety of transportation and housing choices.
- **A Place to Play**—Our residents and visitors will have access to a broad spectrum of recreational and cultural activities.

## MOTOR MPO SH 191 Corridor Study/Management Plan

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Strategies within this SH 191 Corridor Management Plan are focused on several different areas. The ultimate recommendations of this plan, however, include the following:

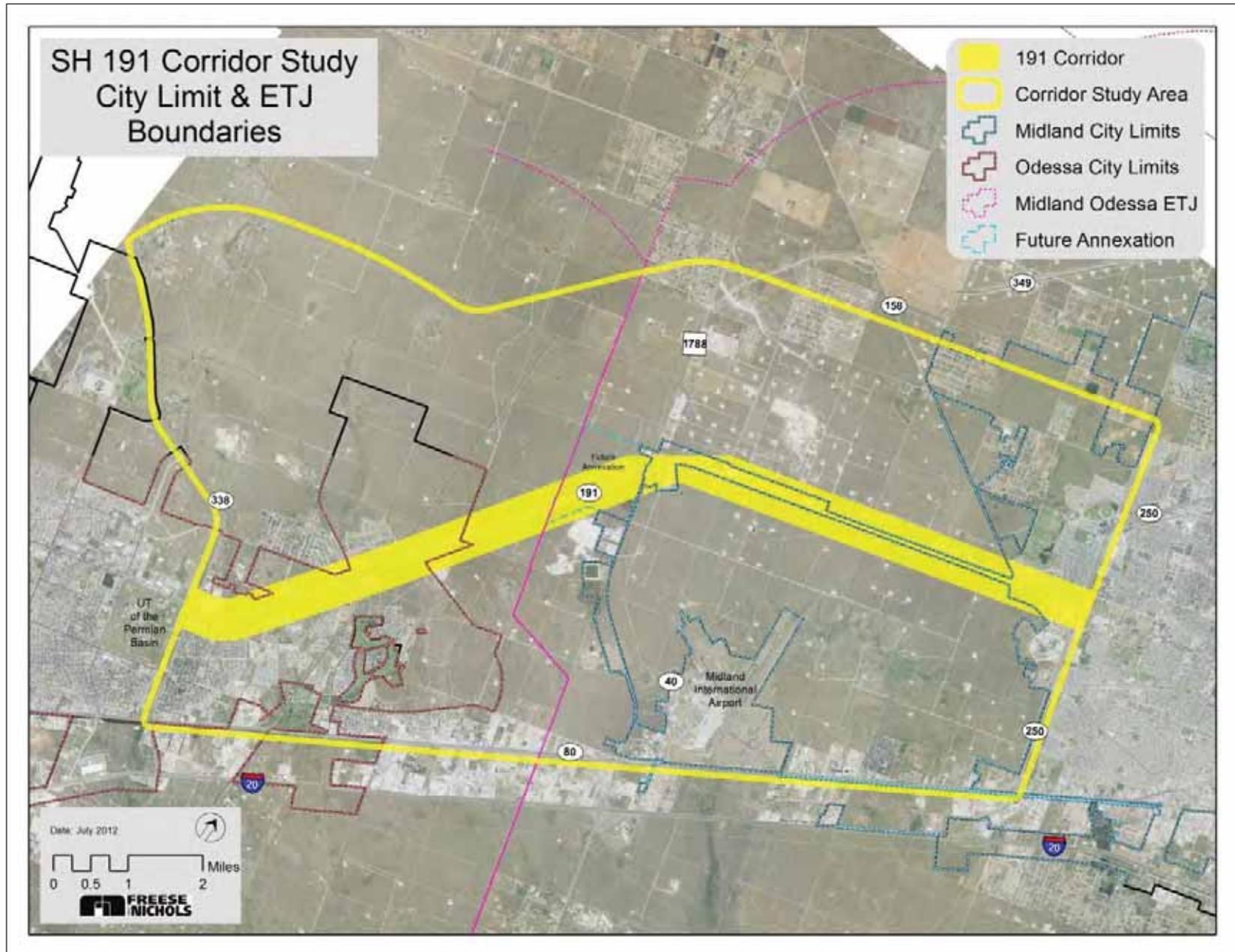
- Identifying a set of strategies to maintain and enhance access, mobility, safety, aesthetics, economic development and environmental quality along the SH 191 corridor;
- Provide land use and zoning recommendations to local officials to manage growth and development along the corridor;
- Foster intergovernmental cooperation between the cities and counties by bringing them together to address common planning and development issues;
- Identifying existing historic and natural assets, including the corridor view sheds;
- Address transportation issues that may arise from changes in land use and design concepts for future development of the corridor;
- Build further consensus on a vision for land use and design concepts for future development;
- Identify specific multi-modal considerations and opportunities related to improving transit, pedestrian and bicycle access;

- Identify linkages/access to intercity transit and identify linkages/access to regional transit projects or other recreational or tourism-related resources;
- Identify areas where interagency and/or inter-municipal partnerships are necessary to implement the plan; and
- Identify areas where aesthetics can help to create a stronger sense of place, boost civic pride and promote neighborhood vitality.

Ultimately, a coordinated plan that seeks the above objectives will help to ensure that development along the corridor is coordinated and compatible and that the best interests of both the cities of Midland and Odessa are achieved. Having a plan for transportation and development will ultimately protect property rights, increase property values and create a safe and aesthetically pleasing corridor.

It is important to note that this plan is not a mandate. This plan will serve as a guide for decision makers in Midland and Odessa as future development occurs. This SH 191 Corridor Management Plan will be a flexible guide that depicts an ultimate scenario for development and contains transportation options that are coordinated with the ultimate land use scenario.

# MOTOR MPO SH 191 Corridor Study/Management Plan



# MOTOR MPO SH 191 Corridor Study/Management Plan

## 1.1 Study Area

The SH 191 study corridor is a 14-mile segment of highway bound by Loop 338 in Odessa and Loop 250 in Midland. SH 191 is an access controlled highway with frontage roads and currently contains seven grade separated interchanges. Project planning conducted as part of this study suggests the potential for three additional interchanges.

The initial area of study encompassed 1,000 feet to either side of the frontage roads for evaluation of the corridor. After examining a range of issues including; transportation connectivity and future road requirements, land use potential and associated development impacts, infrastructure needs, and timing of capital projects, it was determined that planning for a 14-mile corridor would require a larger area in order to properly consider area-wide issues and needs. After discussions with the MOTOR MPO, City and County Staffs, it was concluded that a larger area of study was in order.

Depicted at left is the SH 191 study corridor and the derived sub-area of study. The corridor sub-area encompasses 54,201 acres or slightly over 84.7 square miles. A break out of area within each jurisdiction is detailed.

Also depicted are current jurisdictional boundaries and the negotiated Extraterritorial Jurisdiction (ETJ) boundary between the cities of Midland and Odessa. This boundary represents the limits to which either city may annex land area. Chapter 5.6 later in this study provides further discussion of ETJ's.

Within the larger Corridor Sub Area, the corridor planning process examined existing land use, existing zoning, approved and planned development proposals, and finally thoroughfare and highway plans provided by TxDOT, Midland and Ector Counties and the cities of Midland and Odessa. Various environmental constraints were also analyzed, different land use and thoroughfare scenarios were developed and a recommended land use scenarios strategy for both the corridor and subarea was prepared. Recommended land uses for the Sub Area were generalized in nature and will therefore require additional studies in the future. Within the corridor, more detailed planning and programming of land use and transportation were conducted but may require additional detail as development occurs.

<i>Initial Area of Study - 2000 Foot Corridor</i>	
<i>Entity</i>	<i>Acreage</i>
Midland	884 acres
Midland Co	1,352 acres
Odessa	1,089 acres
Ector Co	434 acres
<i>Total Acreage</i>	<i>3759 acres</i>

<i>SH 191 Corridor Study Sub-Area</i>	
<i>Entity</i>	<i>Acreage</i>
Midland	7,302 acres
Midland Co	6,131 acres
Odessa	30,720 acres
Ector Co	17,350 acres
<i>Total Acreage</i>	<i>54,201 acres</i>

## Chapter 2 Visioning

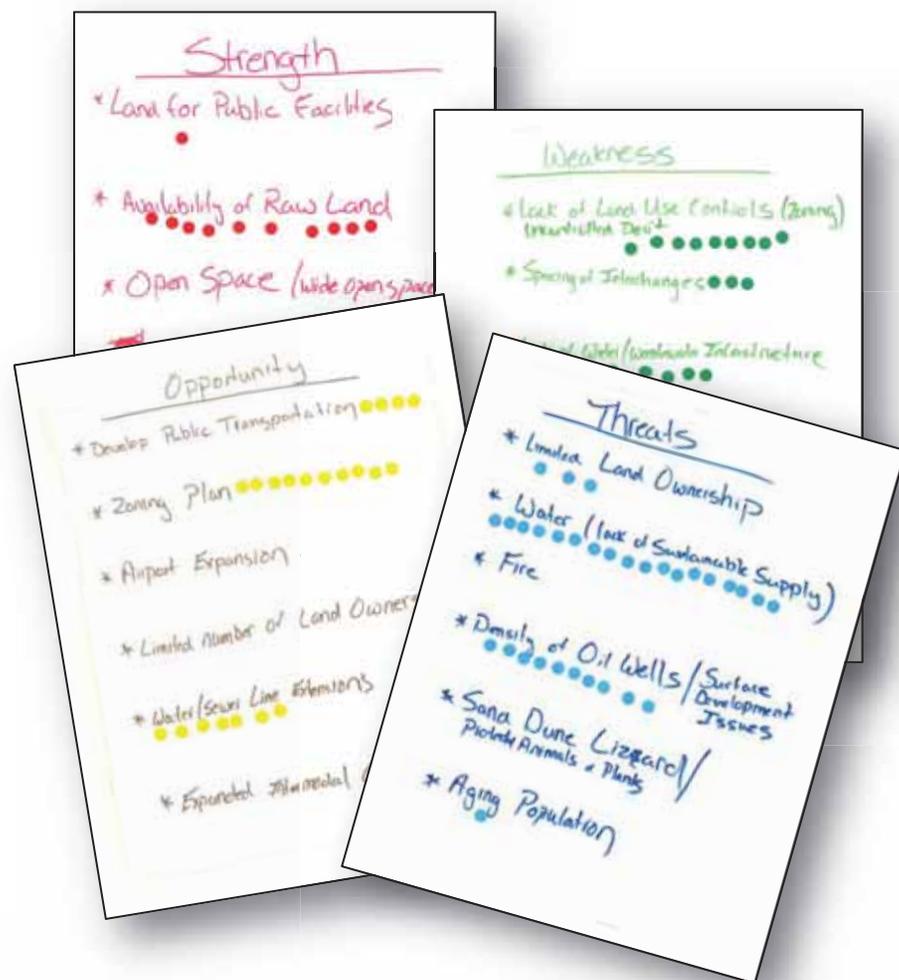
### 2.1 S.W.O.T. Analysis

A strengths, weaknesses, opportunities and threats (SWOT) analysis was conducted during the public meeting held on August 4, 2011. The SWOT analysis is commonly used as a means of evaluating internal and external factors affecting a city or entity. Strengths and weaknesses are seen to be internal—existing assets or downfalls. Opportunities and threats, on the other hand, are seen to be external—potential or future assets or downfalls. The purpose of the SWOT Analysis exercise is to utilize current strengths, address current weaknesses, utilize future opportunities and mitigate future threats. Although not scientific in nature, the SWOT helps to process, understand and put the full planning context into perspective.

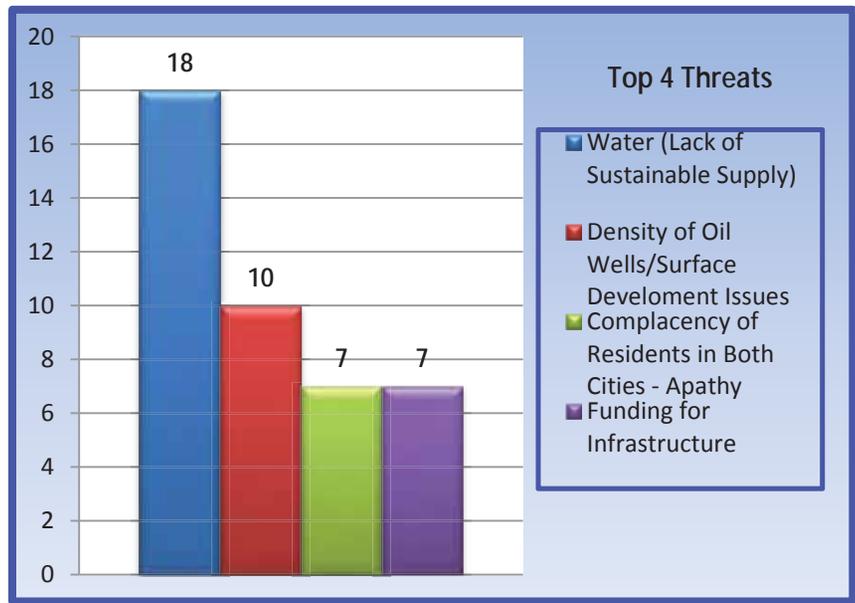
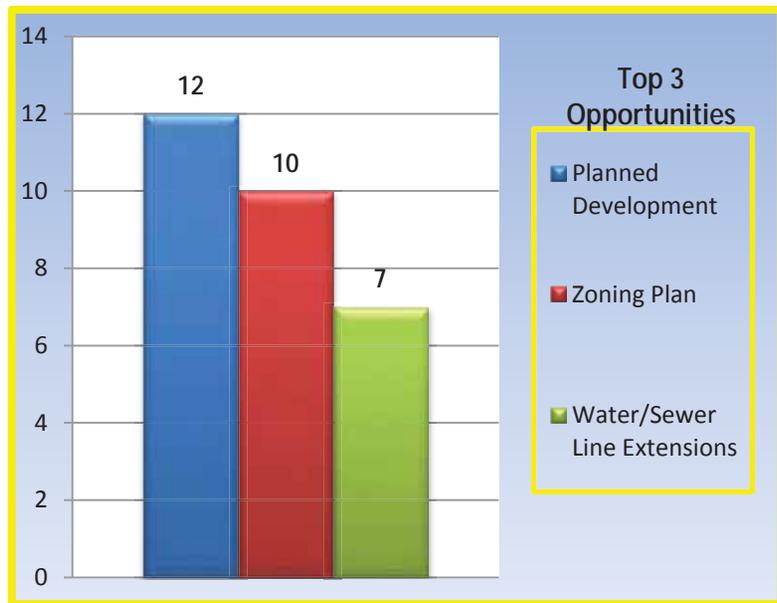
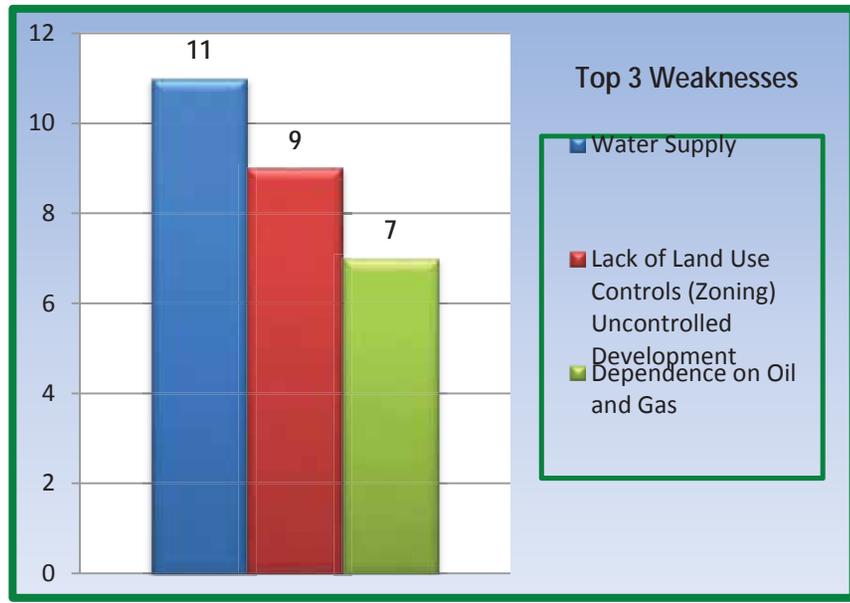
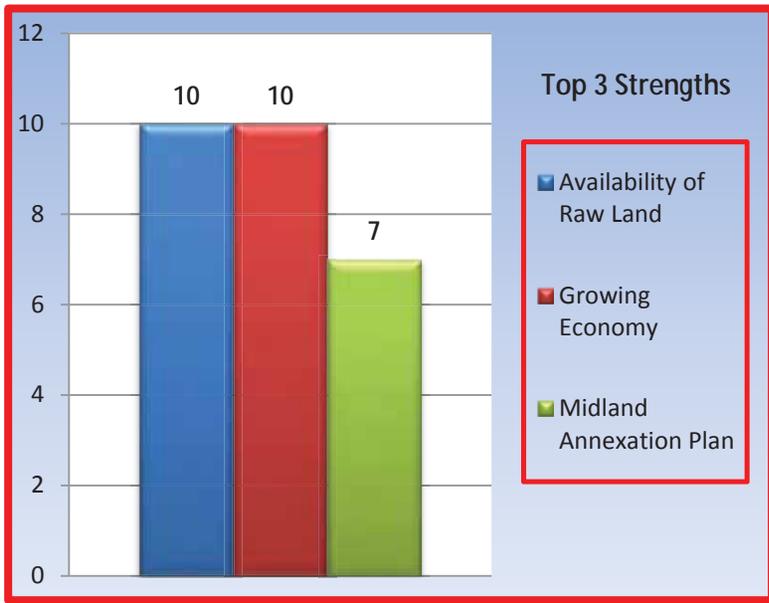
During the August 4<sup>th</sup> public meeting, participants were divided into three equal groups and asked to list strengths, weaknesses, opportunities and threats in the SH 191 corridor. Using small groups made sure that all viewpoints were documented. Results from each group were compiled and aggregated into one SWOT analysis. Respondents were then asked to rank and prioritize what they perceived to be the top issues. The results of the SWOT analysis are listed below:

- Sustainable Water Supply (T)
- Planned Development (O)
- Water Supply (W)
- Availability of Raw Land (S)
- Growing Economy (S)
- Zoning Plan for Corridor (O)
- Density of Oil Wells (W)
- Uncontrolled Development (W)
- Midland Annexation Plan (S)
- Economy dependent on Oil and Gas (W)

(S)- Strength    (W)-Weakness    (O)-Opportunity    (T) Threat



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## 2.2 Visual Character Survey

A Visual Character Survey (VCS) is a technique in which respondents are asked to score a series of photographs based on what they find to be visually preferable for their city, corridor or study area. These images used are selected in order to illustrate different aesthetic, architectural and visual elements within any particular built environment and are used in order to quantify exactly what types of developments are desired and appropriate for the SH 191 Corridor. Although the VCS is not necessarily scientific in nature, it is an effective method of receiving attitudinal, aesthetic-based input. This is possible because the survey allows the participants to view and rate real-life examples of developed areas and elements.

The VCS developed for the SH 191 corridor was a result of various issues which were identified through discussions with various corridor stakeholders. For each category, a range of images were shown allowing survey participants to rate the images based upon their perceived appropriateness within the specific category. The SH 191 Visual Character Survey was divided into seven categories:

- Mixed-Use
- Non-Residential
- Industrial
- Residential Mix
- SH 191
- Streets and Signage
- Public Space

Respondents were shown 100 images and rated the images on a scale of 1 to 5, ranging from Very Inappropriate to Very Appropriate.



Very Inappropriate                      Neutral                      Very Appropriate

The following pages contain the results of the SH 191 Visual Character Survey and show the highest and lowest rated images per category.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Mixed-Use

A mixed-use category was included within the VCS in order to gauge attitudes on the types, density and general characteristics of mixed-use developments. Mixed-use town centers are growing in popularity nationwide and are seen as viable and economically sustainable alternatives to strip center development. Within the SH 191 corridor, it is believed that nodes of activity may develop. One such activity node may take place at SH 191 and Highway 349. Mixed-use development may be one development tool used to create quality nodal development along the SH 191 corridor in appropriate locations.

Most mixed-use photos received favorable responses. Every image within this category had over a 50 percent favorable response indicating that mixed-use development is seen as a favorable development option within the SH 191 Corridor.



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## Non-Residential

The non-residential category included a variety of images that are more commercial, retail and service in nature. Images within this category included business parks, restaurants, strip center retail, outside storage, office developments and big-box retailers, among others. As the SH 191 corridor grows, much of the development directly adjacent to SH 191 will likely take the form of non-residential development and therefore it is important to determine what types of non-residential development is believed to be most appropriate.

Images rated the most favorably within this category included restaurants, shopping and service uses projecting a higher level of aesthetics and design. Big-box retailers were also felt to be appropriate along with quality business parks. Images receiving the lowest responses within this category included metal buildings with little or no landscaping, outside storage that is not screened from adjacent roadways and more intense commercial/industrial uses, such as a permanent concrete batching plant.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Industrial Uses

Industrial uses currently constitute one of the most significant land uses within the SH 191 corridor study area. The presence of the oil and gas industry, as well as the convergence of several major highways and the Midland International Airport, has made the corridor an attractive location for industrial uses. Going forward, industrial uses will continue to serve an important and viable role within the corridor. In addition to location, it will be important to determine the appropriate types and desired aesthetics of industrial development.

Images depicting industrial warehouse facilities or office showrooms were rated the most favorably within this category. Images depicting higher levels of landscaping were also rated more favorably. Higher intensity industrial uses and industrial uses with very little screening were rated the least favorably within this category. It is important to note that other oil and gas images were rated favorably by respondents when such facilities included screening from the roadway.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Residential Mix

One of the primary land use components that will define the future of the SH 191 corridor area are its neighborhoods. The vast expanses of open space within the study area can make it hard to visualize the future neighborhoods that may one day cover a significant portion of the landscape. As the cities of Midland and Odessa continue to grow towards each other, it will be important to determine the types of housing that should be considered..

Similar to the Mixed-Use category, many of the housing images received favorable responses. Images of large-lot homes, single-family homes, apartments, townhomes, duplexes and mobile homes were shown within this category. The highest rated images, however, included high-quality apartments and a development trend known as traditional neighborhood design (TND). This type of development is similar to The Vintage Township in Lubbock. The lowest rated images in this section were mobile homes. While a great deal of consistency was apparent with the other housing types, respondents very clearly indicated that mobile homes were not appropriate for the corridor.



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## SH 191 Design

This category focused primarily on the design and appearance of the SH 191 roadway including signage, bridge design, landscaping and general corridor appearance.

Unlike many of the other categories, there were very distinct differences between images that scored favorably and unfavorably. Images depicting quality landscaping, unique bridge design and other such enhancements were generally viewed more favorably than bridges with little or no architectural design or landscape enhancements. Images rated the least favorably included images cluttered by billboards and other visual obstructions.



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## Streets and Signage

In addition to SH 191, other corridors exist within the study area. As existing roads are upgraded and as new roadways are constructed, it will be important to consider the character and design of corridors within the study area. From a visual standpoint, roadways can have a significant impact on image for roadways and right-of-way constitutes the largest amount of public space.

The highest rated images within this category include roadways with medians, landscaping and access management. The lowest rated images within this category included images of unpaved roadways, corridors with significant visual clutter and roadways with very little access management.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Public Space

Public space has the ability to provide many tangible and intangible benefits. Public space provides places for residents to congregate, relax, play and socialize. As the SH 191 corridor grows and develops, it will be important to define what types of public space should be included and planned. This will become significantly more important as residential development increases within the corridor.

Within this category, all public space images received greater than 50 percent favorability indicating that a wide array of public and open spaces are desired within the corridor study area. A range of images including manicured parks, playgrounds, public amphitheaters, open spaces and playa lake parks were shown. While all images were favored, the highest rated images included the amphitheater, a public park with water feature and a park with a playground. The lowest rated images depicted playa lakes with little or no landscaping.



## 2.3 Land use and Annexation

Much of the land within the SH 191 study sub-area currently lies outside the city limits of both Midland and Odessa. While outside each municipal boundaries, all of the land lies within the extraterritorial jurisdictions of each community. An extraterritorial jurisdiction (ETJ) is the area outside of a city's limits where the city is authorized by state statute to exert some regulatory control, particularly enforcement of the subdivision ordinance. The purpose for this authority is to ensure that cities have the ability to manage the development of surrounding or adjacent land so that substandard development with inadequate rights-of-ways, utilities or roads are not built in areas that will ultimately become part of the city. The cost of annexing areas with substandard development can potentially cost taxpayers millions in remedial efforts and therefore enforcing subdivision requirements within the ETJ is strategically beneficial for cities, especially if such land may be annexed in the future.

While subdivision regulations, such as platting and infrastructure requirements, are enforceable within the ETJ, land use zoning and development standards are not. Therefore, the development that actually occurs within a community's ETJ typically does not meet the same development criteria as what would be required if that development was located within the city limits. Many communities utilize proactive annexation to protect the view along major entry corridors in order to ensure that development that occurs within highly visible areas not only meets the city's subdivision and platting requirements, but also meets the city's development criteria, such as masonry requirements, landscaping enhancements and signage controls.

The City of Midland currently has ETJ authority extending five miles from its city limits. The City of Odessa currently has ETJ authority extending three and one-half miles from its city limits. Due to the close proximity of Midland and Odessa and overlapping ETJ boundaries, the

cities reached inter-local agreement establishing an ETJ boundary directly between the two communities. The negotiated boundary generally lies approximately one mile west of SH 349 within the study area.

The City of Midland has recently annexed land directly along the SH 191 corridor in order to ensure that new development along the corridor meets the City's development regulations. While only a small portion of the SH 191 corridor remains outside of the city limits of Midland and Odessa, the nature of development throughout the study area may have long-term and direct impacts upon SH 191. It will be important for both Midland and Odessa to continue to prioritize areas where proactive annexation strategies may be utilized to promote desired development patterns, protect the visual integrity of highly visible areas along the corridor, and mitigate substandard development.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## 2.4 Corridor Vision

The preparation of the plan was based on input obtained through an open and engaged process that included input from a variety of resources including:

- MPO Technical Advisory Committee
- MPO Policy Advisory Committee
- Stakeholder Interviews
- Public Input Meetings
- Design Charrette and Workshop
- Coordination with Affected Agencies

Review of other studies, development controls and ordinances affecting the corridor and sub-area was also coordinated to capture previously derived issues, local needs and priorities and key land-use/transportation information. Studies reviewed included:

- Midland and Odessa Comp Plan
- Zoning and Subdivision Regulations – Cities and Counties
- Motor 2010-2035 Metropolitan Transportation Plan
- Thoroughfare Plan and Design Standards
- City, County and TxDOT Access Management Standards
- Private Sector Development Plans
- TxDOT Highway Plans
- Midland Odessa Urban Transit District (MOUTD)
- City Parks and Open Space Plans
- Texas Railroad Commission Oil and Gas Well Records

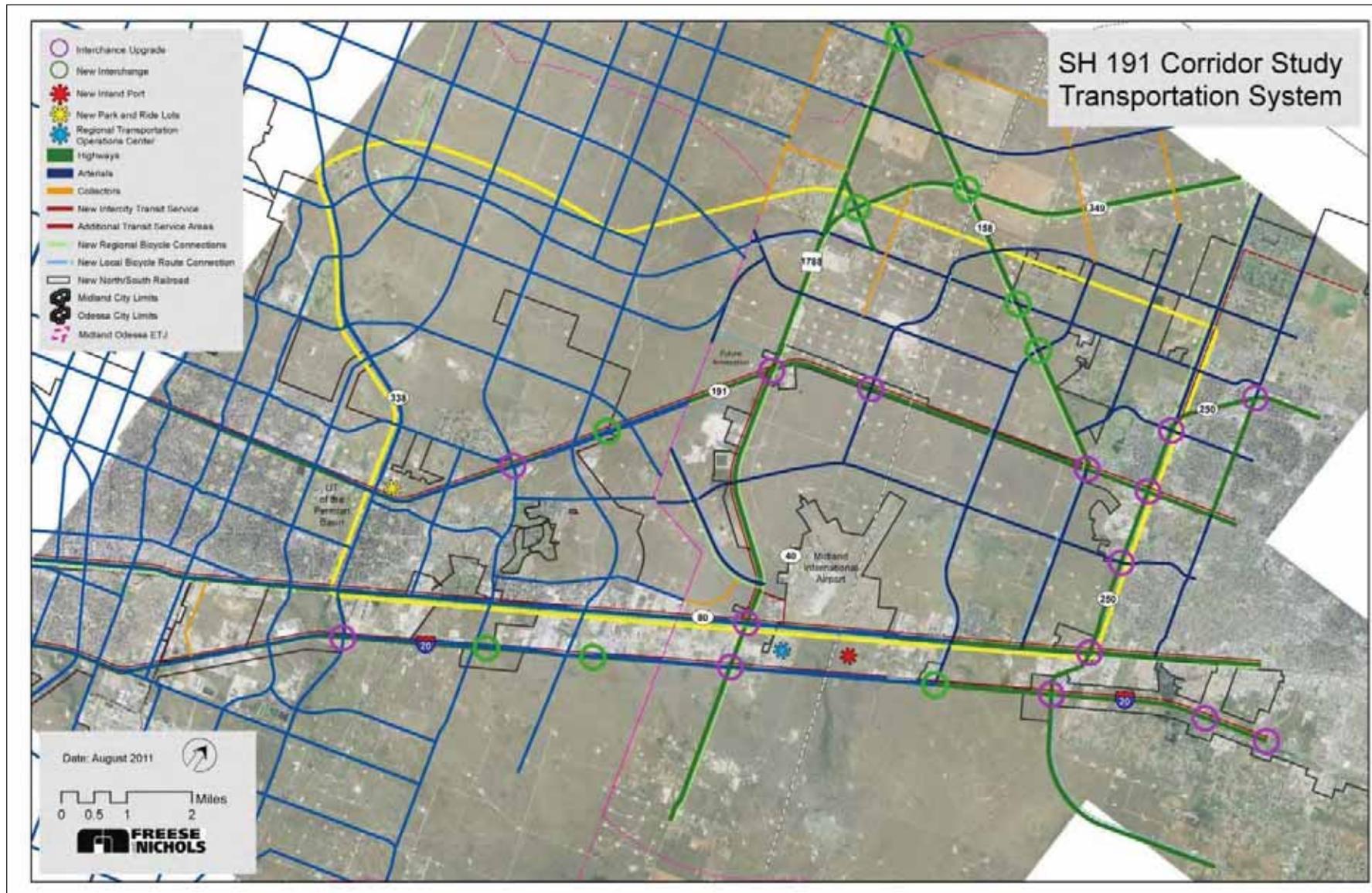
Based on information collected from the data collection process, guiding principles for the conduct of study were established in order

develop a plan that would create *enduring value* for both the corridor and sub-area. These include:

- Land use planning/Integrated mix
- Coordinated area transportation system
- Creating transit, bike and pedestrian connections
- Managed accessibility / mobility
- Creating an identity/Sense of place
- Safety for traveling public
- Environmental stewardship
- Creating parks and open space amenity
- Economic benefit/Capturing SH 191 prosperity
- Fiscal responsibility
- Develop Guidelines and regulations



# MOTOR MPO SH 191 Corridor Study/Management Plan



## Chapter 3 Sub Area Profile

A detailed assessment of the study area was conducted to gain a full understanding of the issues and needs of the SH 191 corridor and planning. Items evaluated included; current factors affecting corridor development, existing land use, current zoning regulations, influences on future development, private development initiatives, current traffic conditions, current access management practices, best practices in corridor management and an assessment of current multi-modal transportation systems.

The framework for development of the study area is established through the transportation system and policies contained as part of each City's Thoroughfare Plans. Both Odessa and Midland have a thoroughfare network of arterial and collector class facilities spanning the study area. Depicted to the left is the current transportation system plans for the study area. While there appears to be sufficient roadway coverage, there are some disconnects between the plans in the ETJ areas. MPO planning initiatives including transit, bicycle and rail are also depicted.

### 3.1 Current Corridor Conditions and Influences

A range of external factors exist that stand to influence development along the SH 191 corridor. While many of these factors are outside the immediate confines of the corridor, they impact the way development can occur within the area, and because of potential connection with SH 191, have an impact on the type development desired for corridor itself. Some of these influences/issues include:

- Height limitations/noise constraints of the Midland International Airport.
- Environmental stewardship in dealing with adjacent playas/open space, vistas and drainage ways.

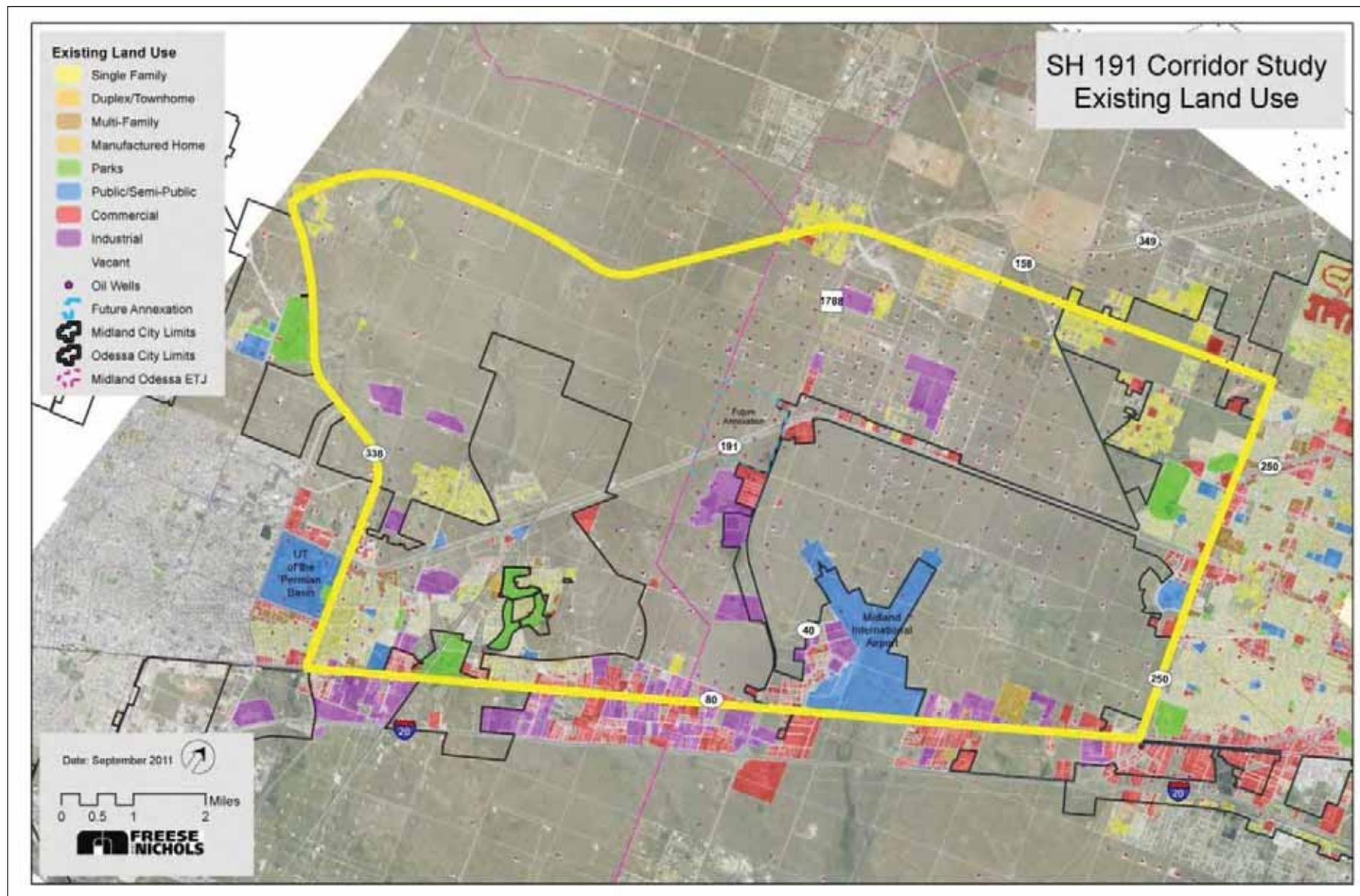
- Oil drilling/ operations and their impact on land use planning.
- Utility and pipeline easements both public and oilfield related; land not used for oil wells is still impacted by collection lines, tank batteries and injection wells, all of which impact future development.



- Developments that preclude the extension of existing or alignment of proposed thoroughfares including; the airport, SH 349/CR 60 interchange, private property holdings, floodplains, playas, and quarry operations.
- Water storage facilities to the west of 1788 and other municipal facilities in the area.
- Future plans for the widening of FM 1788/ SH 349 and potential grade separated interchanges.
- The rapidly changing ability to implement the current adopted thoroughfare plans for both the SH 191 Corridor and the subarea (ETJ) as a whole. This is the result of the cities scrambling to amend their thoroughfare plans to reflect the rapidly changing development previously mentioned.

Two final factors include community growth into the study area/ETJ and the potential effects that the La Entrada Corridor.

# MOTOR MPO SH 191 Corridor Study/Management Plan



## MOTOR MPO SH 191 Corridor Study/Management Plan

### 3.2 Existing Land Use, Population and Employment

The study area is divided between the City of Midland and the City of Odessa. As of the date of this study, approximately 7,300 acres of the study area are located within the City of Midland, and 6,100 acres are located within the City of Odessa. The extraterritorial jurisdiction (ETJ) of each community expands over a much larger area. When the ETJ is combined with the respective city limit boundary, the planning area for each community is established. When ETJ is considered, the cities of Midland and Odessa have approximately 30,700 acres and 23,500 acres respectively within the SH 191 planning area.

The vast majority of land within the SH 191 planning area is currently vacant. Of the total 54,201 acres, approximately 40,000 acres, or 73 percent, is vacant. The highest developed land use within the corridor is currently industrial land use comprising 2,893 acres, or 5 percent of the total land use acreage. The second highest developed land use within the corridor is single-family residential comprising 2,137 acres or 4 percent of the total land area.

Land Use Type	Midland			Odessa		
	Midland	Midland ETJ	Total	Odessa	Odessa ETJ	Total
Commercial	685	806	1,491	152	744	896
Industrial	297	1,260	1,558	158	1,076	1,235
Retail	0	0	0	0	0	0
Parks & Open Space	1,344	0	1,345	42	386	429
Public/Semi Public	1,344	131	1,475	128	0	128
Right of Way	1,021	1,057	2,079	858	709	1,567
Single-Family	744	201	945	710	482	1,192
Multi-Family	0	14	14	82	0	82
Duplex	0	0	0	43	0	43
Mobile Home	0	0	0	0	43	43
Vacant	1,865	19,949	21,814	3,957	13,909	17,867
Total	7,302	23,418	30,720	6,131	17,350	23,481

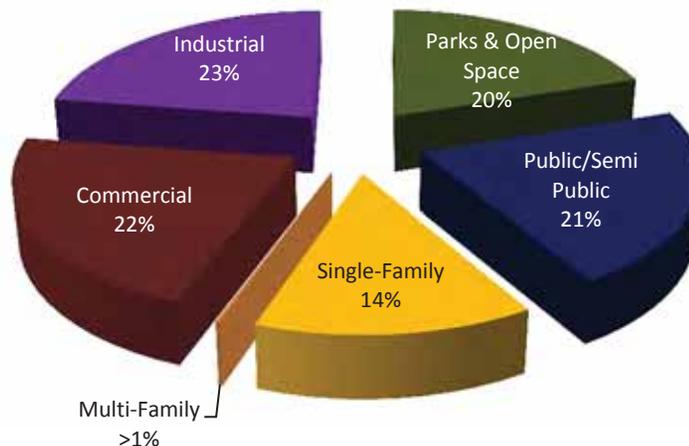
# MOTOR MPO SH 191 Corridor Study/Management Plan

Within the City of Midland planning area, the largest existing land use is industrial at 23 percent of the developed land use. This is closely followed by commercial, public/semi-public, parks and open space, and single-family uses. Multi-family uses constitute the smallest portion of developed land and comprise less than 1 percent of the total developed land use. Vacant acreages and right-of-way were not included in order to assess only physical existing development.

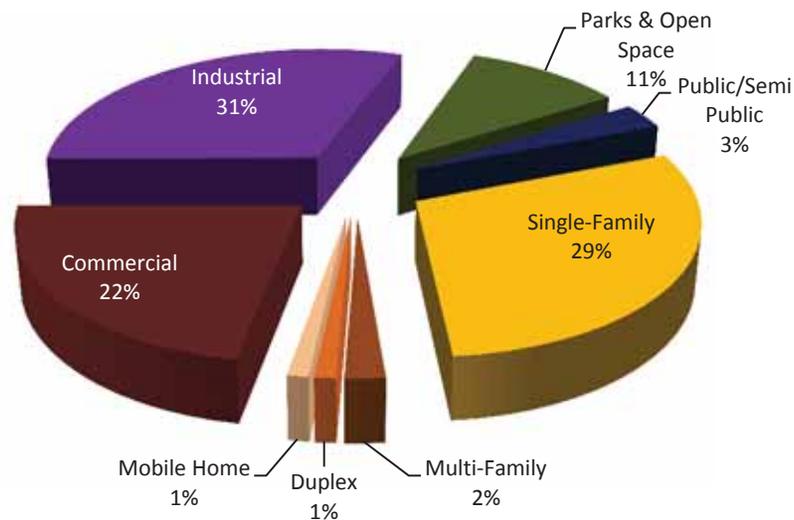
Single-family residential is comprised mostly low to medium density development. Within rural areas, some large lot residential exists. The high amount of public/semi-public use is attributed to the Midland International Airport.

The largest existing land use categories within the Odessa planning area included Industrial development, single-family development and commercial development. Other land use categories accounted for much smaller proportions of existing land use. It is interesting to note the Odessa side of the planning area, while slightly smaller, had a significantly higher percentage of industrial and single-family land uses than the Midland side of the planning area. Additionally, multi-family comprised roughly 2 percent of the total developed area, indicative of the newer apartment complexes on Faudree Road.

City of Midland Planning Area Developed Land Use



City of Odessa Planning Area Developed Land Use



## MOTOR MPO SH 191 Corridor Study/Management Plan

The population of the subarea is estimated to be 19,129 persons. The figure was derived using a combination of; existing land use, parcel data, recent aerial imagery, and 2010 Census data of persons per dwelling unit. Separate dwelling unit factors for single and multi-family residential units were used. Census data of residential vacancies was also applied to derived dwelling unit counts.

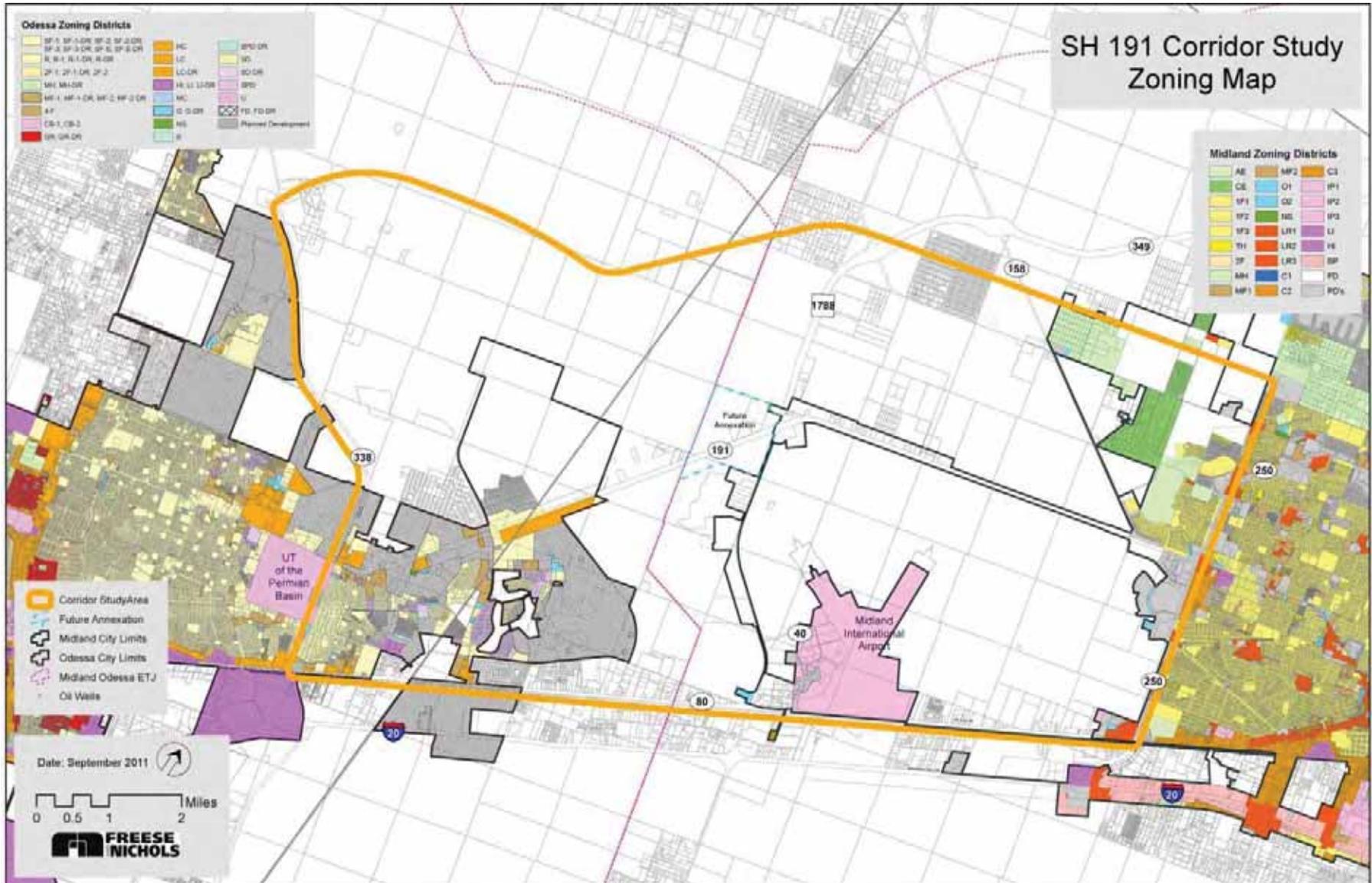
The estimated population is 4,119 persons within the SH 191 study corridor. This figure is based on the number of units located within 1,800 feet to either side of the frontage roads. Within the study area, 63% of the population is located within multi-family residential units. The opposite exists within the subarea where 67% of the population resides in single-family residences. A break out residential population within each city and ETJ area is also listed.

The identification of employment within the corridor was not possible due to rapidly changing landscape of the area as well as, the “transitory” nature of labor involved in the oil drilling industry. In the absence of employment figures, a quantification of the number of businesses within the corridor was conducted. The assessment revealed 60 “permanent” businesses currently located in the SH 191 corridor. This figure does not include activity associated with oil drilling activities. From the land use inventory, slightly over 300 wells exist today within the study subarea.

The normal methods of analyzing and projecting population and employment in this subarea is virtually impossible due to the volatility of the oil production in the area and its influence on development and future land use. For this reason the MOTOR Technical Advisory Committee (TAC) agreed to forego trying to analyze and project existing and future employment.

SH 191 Corridor and Sub-Area Population and Employment			
	Residential Units		Estimated Population**
	Single-Family	Multi-Family	
Population			
Within SH 191 Corridor*			
Midland City Limits	347	0	852
Odessa City Limits	246	1,050	3,183
Midland ETJ	4	0	10
Odessa ETJ	30	0	74
			4,119
Within Sub-Area Study			
Midland City Limits	1,549	96	4,038
Odessa City Limits	2,346	2,504	11,914
Midland ETJ	687	0	1,687
Odessa ETJ	607	0	1,491
			19,129
Employment (Number of Businesses)			
Within SH 191 Corridor (1800')			60
* 1,800 feet from frontage road to each side.			
** Estimate as of January 2012			

# MOTOR MPO SH 191 Corridor Study/Management Plan



### 3.3 Existing Zoning

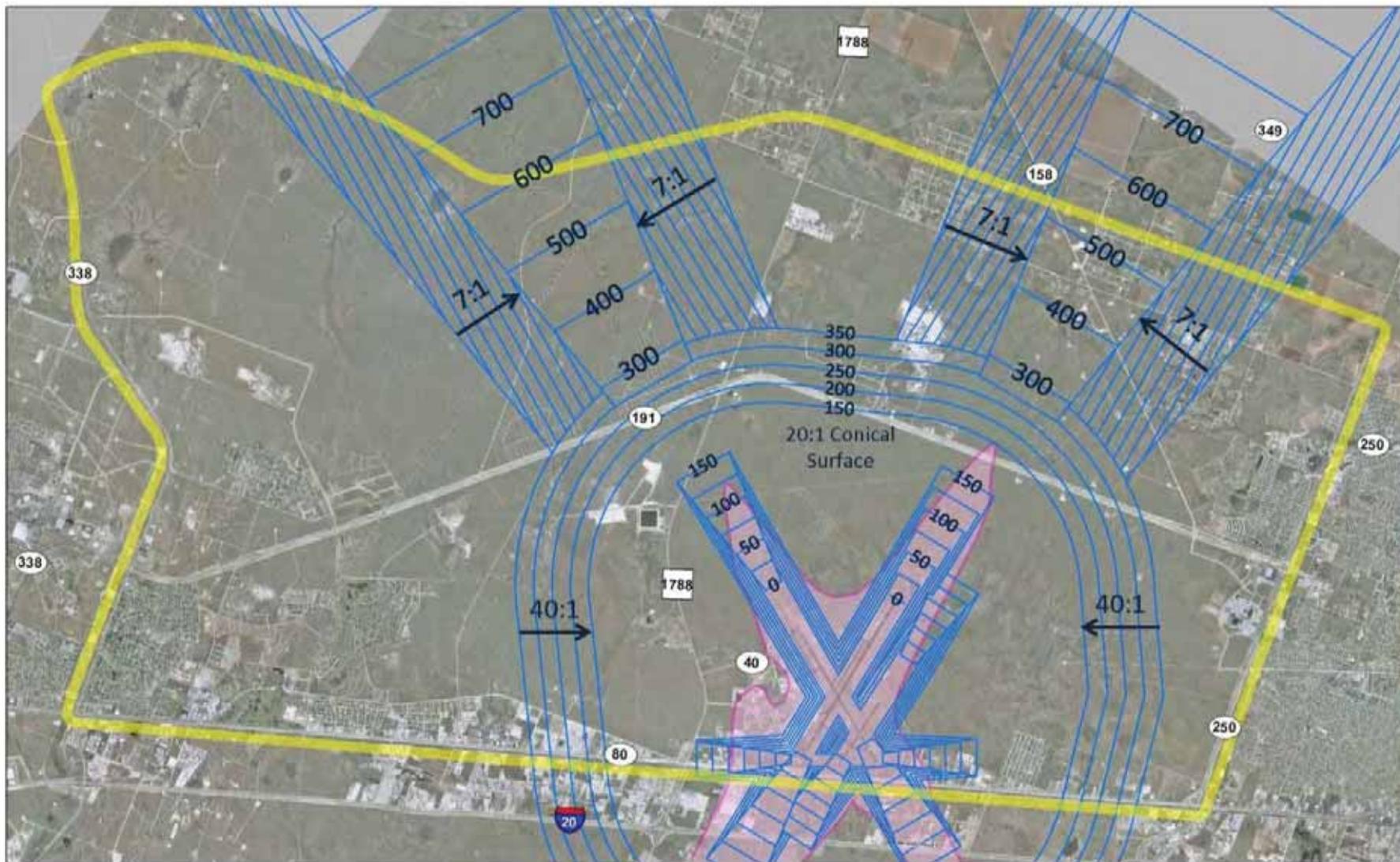
At the current time, zoning within the study area is minimal. The vast majority of land within the study area is currently located within the extraterritorial jurisdictions (ETJ) of Midland and Odessa. While each city has the ability to exercise certain rights within their ETJ, such as platting, each city does not have the authority to regulate land use within the ETJ. Land use and zoning may only be applied to areas that are within the city limits of Midland and Odessa.

Within the City of Odessa, the majority of land within the study area is planned development. Various development agreements have been reached between the City and developers and the planned development districts contain their own set of standards for development and aesthetics. In addition to planned developments, the majority of zoned land within the Odessa side of the planning area is single-family residential, however areas of commercial also exist.

On the Midland side of the planning area, the majority of zoned land is single-family residential and residential estate. A planned development consumes a significant portion of land at the intersection of Loop 250 and SH 191. Midland International Airport is also located within city limits. Areas around the airport are primarily zoned for light industrial. Land has recently been annexed into the City of Midland along the North side of the corridor and just to the West of FM 1788. In its efforts to gain more control of this land for future development, the city has zoned the land along SH 191 in the newly annexed areas for retail uses.

As annexation occurs, both cities will gain the ability to regulate land use decisions within the study area. The future land use scenario developed by this plan may help to facilitate discussion of exactly what types of land use such areas may be once annexed and included within the regulatory control of each community.

# MOTOR MPO SH 191 Corridor Study/Management Plan



## 3.4 Development Influences

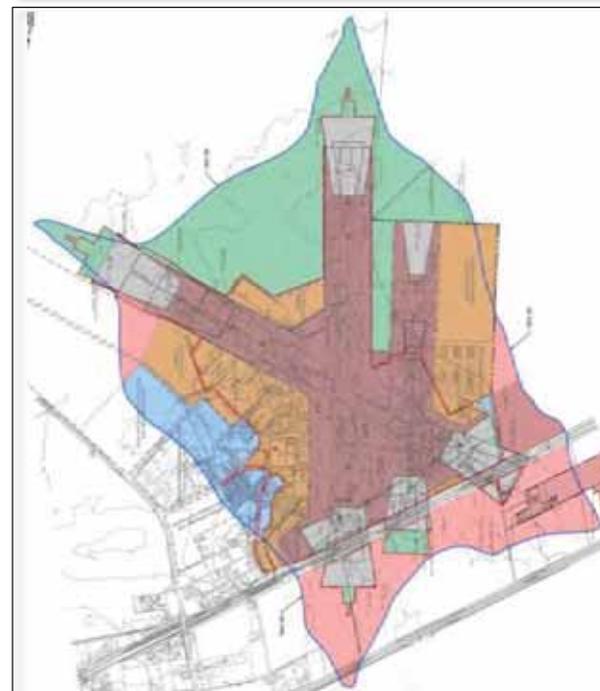
### Midland International Airport

The Midland International Airport is located between SH 191 and Interstate 20, east of FM 1788. The airport is owned by the City of Midland. The airport has four runways and is currently serviced by three airlines – American Eagle, Southwest, and United.

The airport is a significant amenity for the region; however, it does create several constraints for nearby development. The two primary concerns include building height along flight path approaches and the noise created by air traffic.

The height of structures near the runways must be regulated to ensure that flight paths are not obstructed. Data from Midland International Airport’s Hazard Zoning Map indicates a 40:1 approach surface with 7:1 side slopes along flight paths. As shown in the illustration, this affects development along a portion of the SH 191 corridor. The height along SH 191 varies from 150 to 250 feet from approach paths. The performing arts center should be considered the maximum height for structures in this area.

Another issue is the level of noise generated by the airport, which is indicated by noise contour lines in the illustration. A sound level of zero (0) decibels is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. For comparison, normal speech has a sound level of approximately 60 decibels, and a vacuum cleaner approximately 70 decibels. Future land uses should be planned accordingly based on these noise contours, limiting development within the 65+ decibel contours to industrial and/or agricultural uses. This guideline is consistent with the recommended land uses map, showing primarily open space/agricultural and industrial uses near the airport.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Performing Arts Center

In October 2011, The Wagner Noël Performing Arts Center opened after two and one-half years of construction. This facility is a performing arts facility that is part of an arts, convocation and classroom building for The University of Texas of the Permian Basin (UTPB). The venue location is adjacent to the UTPB Center for Energy and Economic



Diversification (CEED) midway between Midland and Odessa at the intersection of State Highway 191 and FM 1788, and north of the Midland International Airport.

Special features of the center include:

- Performance Hall—1,800-seat theater offering excellent acoustics, a stage extension, two balconies, and parterre orchestra seating for extraordinary sight lines, comfort, and convenience. The eight-story structure will include state-of-the-art sound, lighting, and theatrical features which accompany stage and back-of-house areas.
- The Rea-Greathouse Recital Hall—200-seat, acoustically-treated venue designed to host recitals, lectures, and



receptions with retractable seating allowing meal functions with a separate catering kitchen.

- Grand Lobby—a vast open area rising three stories and containing a grand staircase, elevators, fixed and movable concessions, ticket windows and coat check area.

According to UTPB President David Watts, "It's a one-of-a-kind facility. There's really nothing like it anywhere. It's a beauty." Wagner Noël Performing Arts Center Executive Director Carol Roberts-Spence stated, "It's the shining star of the universe," adding performing arts colleagues from around the country have been keeping up with the building's progress.

The \$81 million Wagner Noël Performing Arts Center is a landmark for the entire region, and it has become the venue of choice for a wide range of activities from community and regional events to Broadway and other theater, to symphony, ballet, opera, and traveling commercial entertainment. The 108,000 square foot facility will also provide the region with the ability to improve and enhance educational opportunities. It will serve the performing arts needs of Midland and Odessa and functions as a performance, convocation and education venue for the University of Texas of the Permian Basin.



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## Center for Energy and Economic Diversification (CEED)

The Center for Energy and Economic Diversification is located in a 30,000-square-foot building along the State Highway 191 between Odessa and Midland. The Small Business Development Center (SBDC), the Economic Development Administration University Center (EDA), and the Petroleum Industry Alliance (PIA) are also housed in the facility. These entities are working together to help the people and economy of the Permian Basin through a transition from an oil-dominated economy to a more diversified economy.



The Texas Higher Education Coordinating Board (THECB) stated in a report that "The Center has a positive influence on the economic development of the Permian Basin. The Small Business Development Center and the Economic Development Administration University Center fulfill critical roles in the region, although they are not doing research in the traditional sense. The Petroleum Industry Alliance is playing an important role in linking petroleum companies and in providing technology transfer assistance. It may, in the future, be able



to expand its research contribution. In an area that has a great need for economic assistance, this Center has a significant potential to be a catalyst for a number of helpful efforts."

Efforts are aimed at providing assistance to the petroleum industry through the PIA in order to assure that it remains a viable part of the economy well into the twenty-first century. At the same time CEED works through the SBDC and EDA to assist individuals and communities in efforts to diversify the economy as the petroleum sector in the Permian Basin declines.

CEED is quickly becoming the gathering place of choice in the Permian Basin. Its location in the geographic center of the Permian Basin, midway between the two metropolitan areas, and near the International Airport provides an ideal spot for holding a meeting or conference. A variety of meeting rooms provides an excellent environment for groups of all sizes. The facilities are available for rent days and evenings, seven days a week. CEED's friendly staff has hosted government meetings, chamber of commerce events, corporate meetings and training sessions, professional conferences, club meetings, dinner parties, news conferences, and even weddings.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Oil Wells

The resurgence of the oil industry in the Permian Basin of West Texas, and in particular the SH 191 corridor sub-area, is having a huge impact on land use, transportation and the environment. In order to plan for the corridor and the sub-areas as a whole, the dynamics of oil exploration and production in the sub-areas needs to be understood. In the year 2000, the Permian Basin oil fields had been so heavily drilled that oil reserves within the area was considered to be exhausted. The oil being recovered was minimal compared to the 1940's and 1950's when the region had the richest oil fields in the world. Much of the allied efforts during World War II received their fuel from these fields. Wells during those days started out at 600 or more barrels a day of production before leveling off to just 100 to 200 barrels a day. Tired wells in the 1990's were only producing five to 15 barrels a day. Almost all of these wells were drilled in what is known as the "Spraberry Trend," a 1.7 million acre layer of silt and sandstone about a one and a half miles underground.

The new boom had its new beginnings in 1995 when Atlanta Richfield Oil Company decided to experiment with different kinds of "fracking" in a new layer of rock below the Spraberry Trend called the "Wolfcamp" ARCO was using a rig that drilled wells 10,000 feet deep into the limestone layer of the Wolfcamp. "Fracking" is a technique that pumps a jel-like fluid filled with sand down a well pipe. Oil that has been trapped in the rock then flows out of the fractures into the well and is piped in the pipe to the earth's surface. "Slick-water" frac followed where the high pressure water has added a friction reducer that allows it to be pumped at even higher pressures. Once it was fracked, the test well started producing 300 barrels a day of Wolfcamp oil.

In 2003, a small oil company named Henry Petroleum began drilling a few test wells using "slick rock fracking" with huge results. As word got out, new oil companies were moving in rigs as fast as they could find them to drill new wells. By 2010 there were 73 companies drilling

"Wolfberry wells" using more than 230 drilling rigs. By 2010, it was estimated that the oil companies had spent more than seven billion dollars drilling the new "Wolfberry" wells, so called because they pumped oil out of the "Wolfcamp" and the "Sprayberry."<sup>1</sup>



The proliferation of oil drilling wells, pump jacks and other production facilities along with the related traffic has had a huge impact on the SH 191 corridor. Currently the Texas Railroad Commission will only allow the drilling of one oil well in every forty acre block. In order to achieve that spacing, oil wells are being drilled immediately adjacent to the access road (see photo) and ultimately there will be pump jacks along the frontage road.

As the attached oil well location map indicates, the forty acre grid spacing of the oil wells has significantly impacted a large portion of the sub-area in the SH 191 corridor. One question that might be asked is why do the wells have to drilled in a grid pattern and can't they be drilled closer together or "clustered" to reduce their impact? In order to get the oil production they need to be drilled in a fairly uniform pattern over a large area. Wells could also be drilled at somewhat of a slant but it is more expensive than a well that is perfectly vertical, due to the wear of continuous motion of thousands of pounds of pipe being on an angle to the 10,000 foot depth.

<sup>1</sup>TxDOT Access Management Manual, pg 1-5

## MOTOR MPO SH 191 Corridor Study/Management Plan

One might also ask why the property owners don't limit the number of oil wells on their property. In order to understand the issues, there needs to be discussion of the players involved in drilling an oil well.

There are actually three parties involved in the land where oil wells are drilled. The surface owner owns the rights to the surface. A second party is what in Texas is known as the "mineral rights owner" who legally owns, separate and apart from the surface rights, the right to any minerals underground. Sometimes the person that owns the surface rights also owns the mineral rights and anyone interested in the oil must purchase the rights to that oil from the surface/mineral rights owner. However, in most cases, the mineral rights are owned separate from the surface rights and an oil company interested in the oil underneath the ground would actually purchase the mineral rights from that owner. In this scenario, the oil company would not have to pay the property owner that has the surface rights any money. The mineral rights owner has certain legal rights to utilize the surface property to access their minerals (oil) so while the surface rights owner can require certain easements for the construction of gathering lines and tank batteries, they must still allow the mineral rights owner access to the oil below. The picture showing the pump jack adjacent to the new Performing Arts Center is an indication of how little control there is by the owner of the surface rights over the location of the wells.



from the ground. So there is a complicated system of purchasing and/

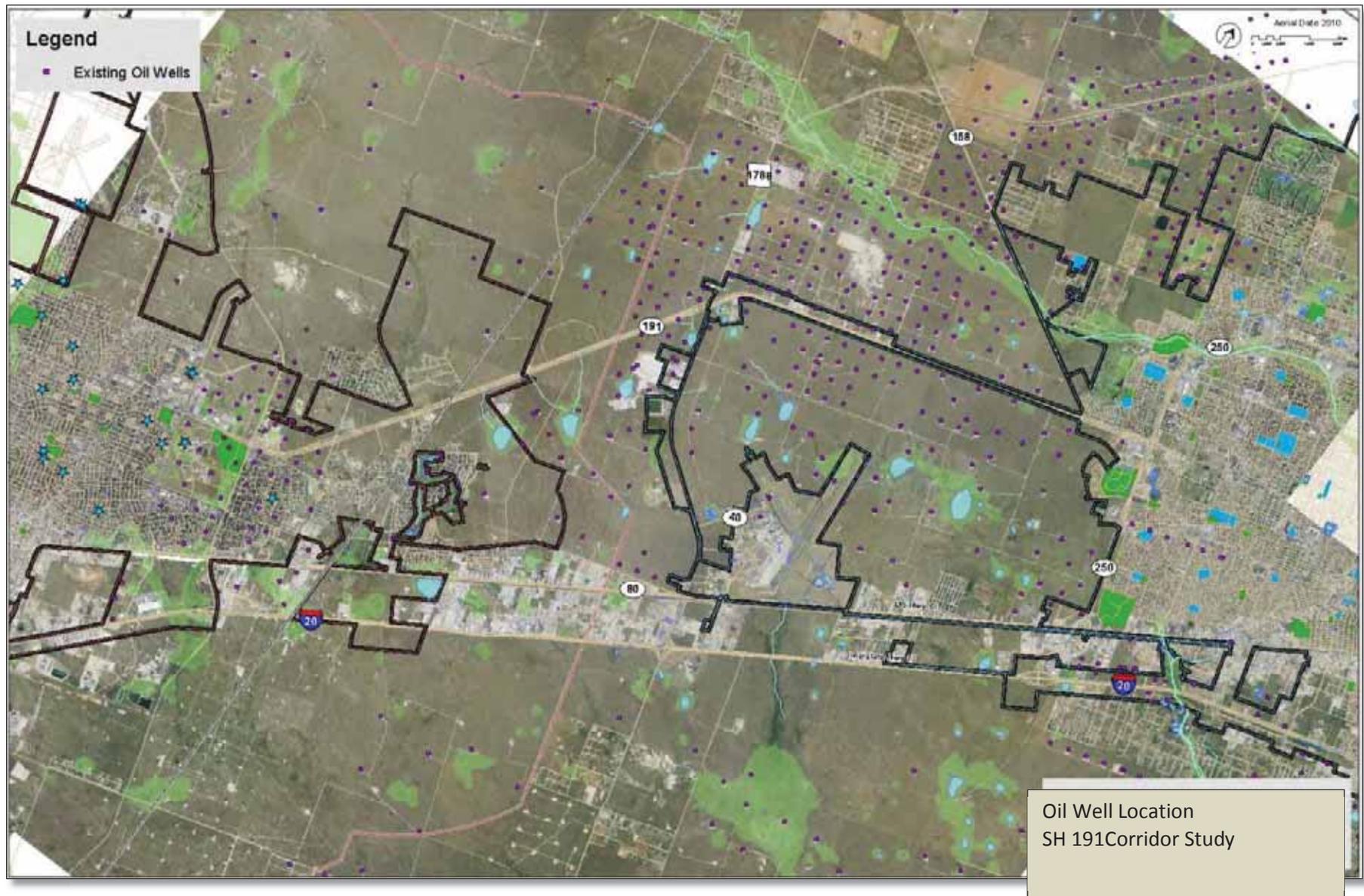
To complicate matters further, there is a third party involved in the production of oil. The owner of the mineral rights is not necessarily the oil company that drills the well. A third party known as an "operator" negotiates with the mineral rights owner to purchase the oil and the rights to remove the oil

or leasing rights to the oil in the ground and there are up to three separate parties involved in that process. The operator in their efforts to drill a well and remove oil from the ground quite often negotiate with the surface rights owner to gain access to their well sights, and with the mineral rights owner to gain access to the oil for removal. Quite often, the "operator," is only interested in removing the oil and is not as concerned with how the surface property is used either today or perhaps in the future, other than to make sure that it does not limit their ability to remove the oil from the ground. Not only do the surface rights owners have very little ability to restrict the location of well heads and pump jacks, but the City and the County also have limited jurisdiction over the actual well sight.



Once an oil well is drilled down to the oil producing strata, a separate piece of equipment, commonly known as a "pump jack" is used to actually pump the oil out of the ground. The oil rig is disassembled and any related storage ponds for fracking fluids are removed. The typical resulting pump jack is shown in the adjacent photo with a screening/security fence around it. The pump jack will pump the oil out of the ground and then force it through collection lines to storage tanks known as "tank batteries." Usually these pump jacks have electric motors so there are typically overhead electric lines to the pump jacks at every wellhead shown on the adjacent map. The pump jacks work continuously twenty four hours a day and as long as they are producing enough oil, they are left on. Every one to two years, what is known as a "rework" rig is brought in to rework the well site which will maintain the output of the pump jack. The rework rig is much smaller than a drilling rig and the rework operation can be performed with most of the pump jack left in place. The screening fence is removed and the rework

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rig is stabilized by four permanent attachment points where they are guyed out with cables. While the photo shows a pump jack with an area generally 100'x100' inside the screened area, the reworking rig requires a temporary area of approximately 300'x300'. The typical drill site is slightly over three acres in size.

Other issues/constraints on the use of the surface property are the collection lines, tank batteries, and injection wells. As the photo shows, typically collection lines are flexible plastic piping is left on the surface of the ground and runs from each well head to the tank battery where it is collected. Sometimes tank batteries are emptied through the use of pipelines, but more typically because of their remoteness, trucks routinely and daily move in and out to remove the crude oil from the tanks. So it is not only the drilling activities, but the collection and maintenance activities that cause the oil field traffic. In addition, the various fluids used in fracking are removed from the well are collected



and trucked to sites where there are injection wells that put the non-oil fluids back into the ground. The photo on the left shows a typical injection well facility and the related trucks waiting to offload immediately adjacent to the south access road of SH 191. The tank batteries and injection wells are located close

to the roadway and are very visible to SH 191 because the frontage roads provide paved access.

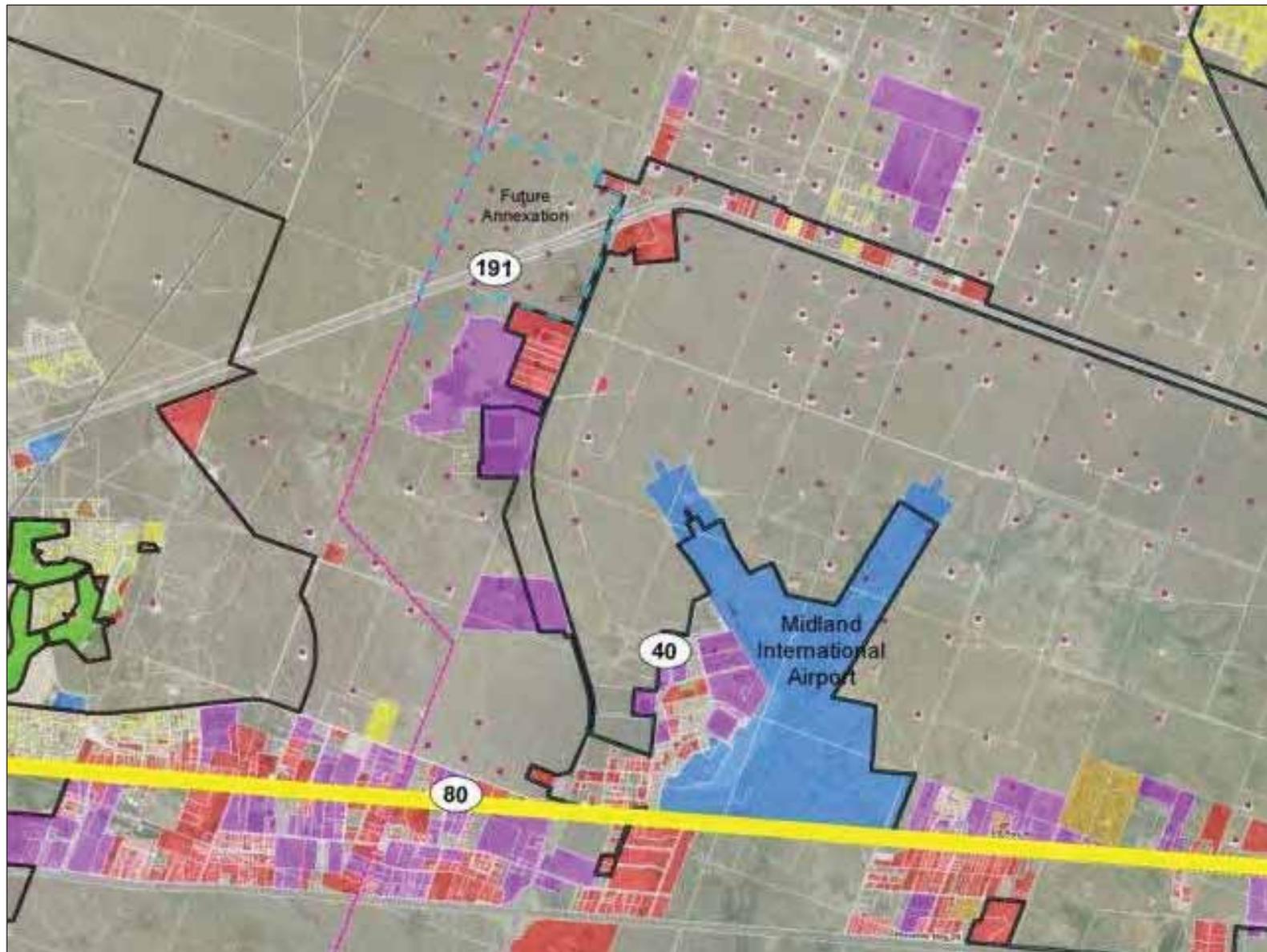
The heavy truck traffic to the well sites, pump jacks, tank batteries, and injection wells cause numerous problems for the SH 191 corridor. Heavy equipment using dirt roads creates a lot of wear and tear on the roadway system and impromptu access points cause access management problems for the corridor.

As this section points out, the production of oil in this booming corridor has caused numerous land use, transportation, environmental, and aesthetic issues. However there are ways that the cities of Midland and Odessa, and cities in other oil producing parts of the country have ameliorated these impacts.



The photograph shows a screened well site in an existing urban area of Odessa. The gazebo and screening fence are located immediately adjacent to an existing well head site with houses fronting the site on both sides. So while cities cannot regulate the exact location of a well head except in relation to existing residences, they do have the right to require certain screening of well heads, and underground collection lines. They can regulate the location of the tank batteries and injection wells and the screening of these facilities. The adjacent figure from the proposed Faskin development shows how a well site can be incorporated into a residential development. In Section 5.1, "The Short and Long Term Land Use Strategies" section, three cross-sections demonstrate the recommendations of this study in trying to integrate the oil field production facilities into a viable SH 191 Land Use and Access Management Plan. Oil production is critical to the economies of Midland, Odessa, and West Texas so no one is proposing, even if it was possible, to restrict or reduce the drilling operations for oil. However, this study is proposing some strategies to reduce their impact on the SH 191 corridor and to make it safer for the motoring public.





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## Development Activity

While most of the terrain covered by the highway is relatively sparsely populated, there are pockets of established residential and commercial development that exist along the corridor. In Odessa, larger existing development areas include; UTPB, Parks Legado, Mission Dorado, Shiloh Estates and Mission Estates and the emerging Chimney Rock Center. Large-scale Midland developments include; Scharbauer Sports Complex, Tradewinds Boulevard commercial area, Grassland Estates, UTPB Center for Energy and Economic Diversification Complex and the new Wagner Noël Performing Arts Center.

Development activity is occurring within the corridor. Since the outset of study, over ten individual commercial and industrial sites broke ground and have been completed in the western sector of the study area.



Within the direct influence of the SH 191 corridor, several other larger-scale developments have been planned and include:

- Parks Bell Ranch North – a mixed-use residential development with retail, light commercial, office and parks/open space located east of Faudree on Yukon Road to the north of SH 191.
- Mission Estates/Mission Dorado – continued phased development of this residential and commercial/retail master plan located east of Faudree along Dorado Drive to the south of SH 191.
- Parks Ranch – varying residential types with retail, light commercial, office, neighborhood service and assisted housing located between Billy Hext and Faudree south of SH 191. The

Town Center at Parks Legado located adjacent to SH 191 is part of this planned development.

- Bushman Property – a large ownership extending from SH 191 to CR 122 to the west of FM1788 and consisting of mostly industrial type uses with some residential can commercial uses near SH 191.
- Crossroads Fellowship – residential, retail, mixed office and assisted living situated around a school site and located east of Billy Hext and 56<sup>th</sup> Street.
- UTPB CEED Campus – future engineering building with student housing and performing arts center
- West Grassland Estates – continued phased residential development located east of SH 158.
- Westridge Park/Tradewinds Boulevard Corridor – this area offers a variety of commercial, office, restaurant, entertainment and residential uses. With significant area for future development, a variety of additional residential, office and commercial uses is envisioned. An initial phase of the recently completed Betenbough residential development is located at Tradewinds and Champion Drive.
- Midland International Airport Master Plan – currently consisting of aviation related uses, office and industrial uses, this land use plan consists of a range of aviation/non-aviation related development, industrial and agricultural/range type uses.

Other development activity in and adjacent to the study area includes:

- Ratliff Ranch– residential, commercial and retail development located at Yukon and Grandview Avenue.
- Houston Endowment-McKnight – located to the west of Loop 338 between 56<sup>th</sup> and Yukon Road with mixed density residential development supported with neighborhood retail, and commercial uses at key roadway intersections.

# MOTOR MPO SH 191 Corridor Study/Management Plan

- Fasken Land & Mineral – single-family residential development with neighborhood retail services located west of Holiday Hills at Sherwood Drive.

A range of commercial, industrial and institutional uses currently exist along SH 191. Recent development has seen a range of commercial and industrial activity. New commercial activity including hotel, restaurants and retail has occurred between Faudree and Billy Hext Road and site clearing is underway for other retail, bank and restaurant uses. Several new light industrial sites have also recently been built to the west of FM 1788. In addition, many oil well sites are and have recently been installed.



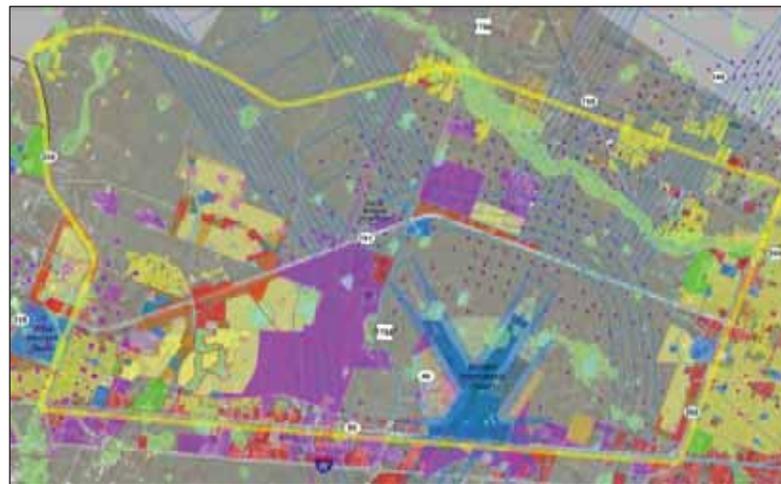
## Summary of Development Expectations

The planned development activity by private developers and the existing land uses create a multitude of overlap activity along the SH 191 corridor. Planning considerations within the study area should include:

- Existing development

- Agriculture/rural
- Opens Space, Playas and Floodplain
- Residential and Institutional Uses
- Commercial/Retail Uses
- Planned development interest
- Oil production/mining activity and space needs
- Institutional Investments
  - CEED
  - Performing Arts Center
- Midland International Airport with associated height/noise requirements and potential aviation/non-aviation land use development
- Transit and multi-modal operations and service
- Planning activity as part of this corridor planning effort

When combined, there is a significant amount of development activity occurring within the SH 191 study area.



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## 3.5 Current Traffic Conditions and Influences

An assessment of existing traffic conditions was conducted to serve as a basis for the establishment of mobility strategies for long-term development within the corridor. As part of this task, an analysis of the physical characteristics, planned improvements, and development influences of the corridor was conducted.

### Regional Connectivity

SH 191 serves as a critical linkage between Midland and Odessa. In addition to supporting east-west mobility demands of IH20 and Business 20, SH 191 provides centralized access to each city center, connection to Loop 338 and Loop 250, FM 1788/SH 349, SH 158, and extended connectivity to US Highway 385 and Business State Highway 349-C.

### Roadway Characteristics

SH 191 is an access controlled rural highway consisting of four main lanes and two-lane frontage roads. All major intersections within the study area of SH 191 are grade separated and include; Loop 338 (Headlee Street), Billy Hext Road, Faudree Road (Spur 588), FM1788/SH 349 (Tom Craddick Highway), CR 1275, SH 158 (Andrews Highway), and Loop 250.

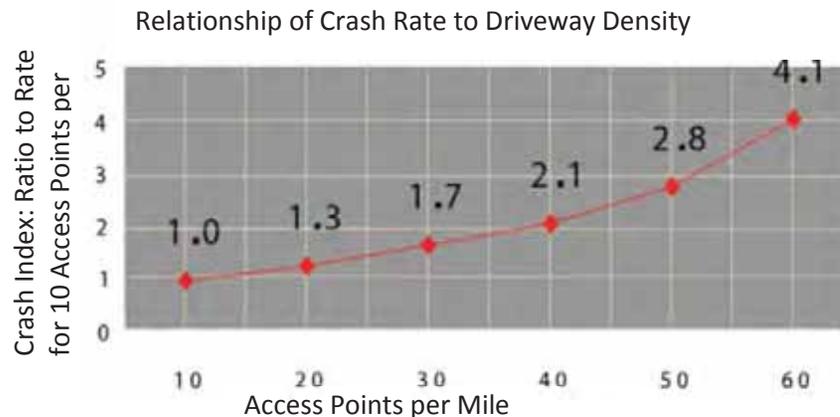
Traffic control of intersecting streets with the SH 191 frontage roads are stop controlled with the exception of Loop 338 and Loop 250, which are signalized. Roadway configurations for most intersections contain separate channelized turn lanes, except for CR 1275 which contains only a two-lane cross-section. U-turns exist within the interior of most interchanges, with the exception of the east side of Faudree, CR 1275 and the west side of SH 250. The design of bridge crossings contain additional area between supports and abutments that will enable the implementation of U-turns where they currently do not exist. At SH 250, the SH 191 main lanes are depressed below the SH 250 frontage roads (three level interchange) and would require a separate bridge structure. As demands warrant, long-term installation of a U-turn at

this location would enhance peak hour operations of this box diamond interchange.

Access to/from SH 191 main lanes are configured in a “diamond” format to grade separated intersections. Approach distances from exit ramp gores to intersecting streets range from 600-1,400 feet, with the exception of FM 1788 which is 2,800 feet due to the curvature of the highway at that location. Departure distances from intersecting streets to entry ramps range from 800-1,800 feet. Minimum distances to/from site driveways from the painted ramp gores appear to meet minimum distances for posted speeds.

### Driveways and Access

Currently, there are approximately 64 driveways providing access to businesses between Loop 338 and Loop 250, averaging approximately 2.5 driveways per mile each direction. While tentatively light for the expanse of corridor under evaluation, the rapid subdivision of property and development of parcels along SH 191 poses the potential for a significant number of access points along the frontage roads. Research by the National Cooperative Highway Research Program has shown a direct relationship between the number of driveways per mile and the propensity for crashes along the roadway.



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Distances between site access drives along the frontage road appears, for the most part, in conformance with TxDOT standards. In areas where small parcels have recently developed near FM 1788, it appears minimum distances have not meet due to the fact that individualized properties have/are being developed. This is also the situation in few areas where a pre-existing condition was present. Site drive widths range from 24-35 feet and appear to be relatively uniform throughout the corridor. In some cases, because of the flat terrain and non-paved drive areas, very wide driveways have emerged as a result of truck traffic and their large turning radii.

The distances of intersecting streets with major roads that cross SH 191 range from 600-1000 feet, with the average being between 700-800 feet. These streets include Arroyo Road, 56<sup>th</sup> Street, Brownstone Road, Dr. Emmitt Headlee Road, CR 1275, Deauville Boulevard. In many cases, these existing streets formed the basis for the backage road system to be discussed later.

Both the Midland and Odessa Thoroughfare Plans identify SH 199 as a “highway” class facility within 300 foot right-of-way. Intersecting streets with SH 191 are identified on both city Thoroughfare Plans as arterial class facilities. In Midland, the “Major Arterial-Type A” is a six-lane roadway within 120’ right-of-way. In Odessa, the “Major Thoroughfare – Type B-2” is a seven-lane (six-lanes with a two-way continuous left turn lane) within 130’ right-of-way.

## Travel Characteristics

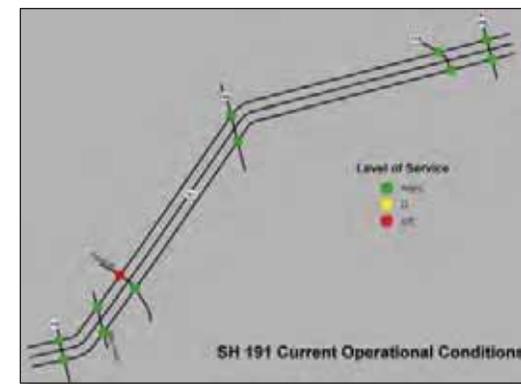
The average annual daily traffic volumes along SH 191 ranged between 25,000-30,000 in 2010. At FM 1788, daily volumes were 23,000. Traffic count data collected in November 2011 at this same location revealed a daily volume of 26,755.

Average daily traffic in 2010 at SH 338 was 7,300 and 14,700 vehicles to the north and south of SH 191, respectively. At SH 250, traffic volumes were 39,000 and 44,000 vehicles daily. At SH 349, daily traffic ranged from 4,700 to 7,700 north and south of SH 191.



An analysis of existing traffic on the frontage roads was conducted to assess current operational level of service. PM peak hour volume and turn movement data was collected in Fall 2011 and a capacity analysis was performed. The analysis revealed all intersections to operate between level-of-service “A-C” with the exception of Faudree Road.

At this location, the north side of the interchange operated at LOS “F” and was a result of heavy left-turn movement from westbound to



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southbound Faudree. The installation of a traffic signal at this location would enhance operational conditions to LOS “A/B”. Long-term, the installation of an additional left-turn lane should alleviate this demand.

Travel forecasts for year 2035 were obtained to evaluate long-term corridor implications of SH 191. Forecasts prepared by TxDOT, and used by MOTOR in the preparation of the Metropolitan Transportation Plan, project daily volumes to double by 2035. Forecasted daily traffic ranges from 61,500 at Loop 338 to 60,400 at SH250. In the central portion of the corridor, traffic is forecasted to range between 56,000 and 48,000 vehicles. Directional volumes are forecasted to be general evenly split, with a slightly higher inbound percentage of traffic moving away from the center of the corridor towards each respective city. A link level analysis of projected 2035 volumes indicates that SH 191 will have sufficient capacity to accommodate daily traffic. No data was available for peak hour analyses, but it is anticipated that main lane capacity will accommodate projected traffic through this time frame.



In order to maximize the carrying capacity of the corridor, as well as the efficiency of the frontage roads, it will be important to coordinate driveway locations/spacing, cross-access, etc. between adjacent area properties. This challenge will fall on *both* the coordinating agency and development interests.

## Corridor Accidents

The latest available crash data for the three-year period from 2009 through 2011 for the study corridor was obtained from the Texas Department of Transportation (TxDOT). A total of 241 crashes were reported during the three year period. The locational distribution of the crashes, differentiated by non-injury, injury, multiple injury and death occurrence, varied within the corridor.

Based on the TxDOT crash data, the SH191 study corridor average crash rate per year was calculated as 0.72 crashes per million vehicle miles of travel (MVMT). The statewide average for a similar roadway (State Highway roadways in an urban setting) according to TxDOT is 1.69 crashes per MVMT. The portion of the corridor west of FM 1788 experiences higher than average crash rates for this type of facility, with an average of 0.98 crashes per MVMT. The portion of FM1788 experiences an average of 0.47 crashes per MVMT .

## Public Cost of Motor Vehicle Crashes

National statistics maintained by the Federal Highway Administration indicate an approximate social value to the various types of crashes. In 2009 dollars, these factors are approximately \$4 million per fatality, \$200,000 for incapacitating injuries, \$37,000 for non-incapacitating and possible injury values, and \$7,400 for non-injury crashes. Applying these rates to the crashes identified as occurring on the study section of SH 191 and inclusive of the frontage roads, the 2009 social cost of the three years of accidents from 2009 through 2011 is estimated at approximately \$10.0 million per year.

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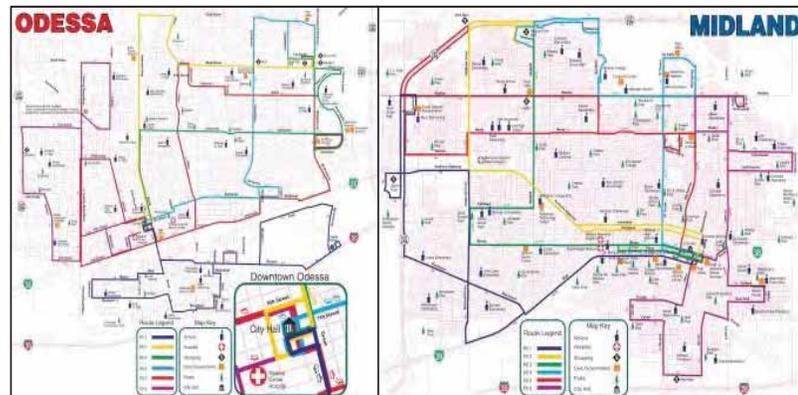
## Biking Accidents

The SH 191 frontage road between Midland and Odessa is a popular course for avid cyclists. The flat terrain, a 25-mile loop with options for a shorter circuit (via underpasses), and relatively low adjacent traffic volume is attractive to cyclists from both cities. Unfortunately, sparse development has created opportunity for increased speeds and driver inattentiveness and has resulted in several bicyclist fatalities since 1985. The most recent accident, in 2009, was located east of FM 1788. TxDOT has erected motorist signage advising of bicyclists with placards reading “Share the Road” within the corridor. As development continues within the corridor, additional care will be needed to observe other users of the roadway.

## Transit Service

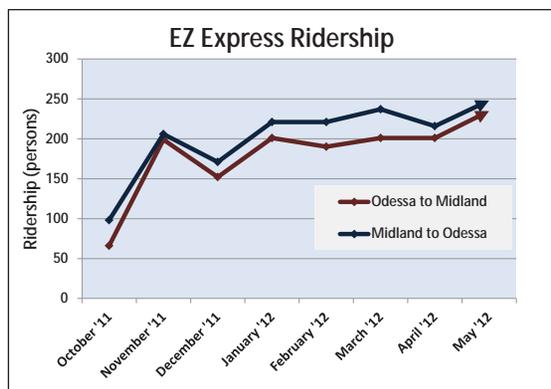
The Midland Odessa Urban Transit District provides oversight of the transit system operating in Midland and Odessa. Two lines of service are provided and include EZ Rider and EZ Express. The EZ Rider

provides scheduled service extending from the Downtown Transfer Plazas in each respective city. Within the study area, only the Midland Route 1 loops through the Westridge Park area via Tradewinds and Deauville Boulevards.



The EZ Express offers intercity service between Midland and Odessa and runs along SH 191 with dedicated Park & Ride locations in each city and drop points at the Downtown Transfer Plazas. Dedicated Park & Ride stations are located at UTPB, UTPB Bus Stop, Midland College, and the Citibank Ballpark. This new service, which is operated through a private vendor, operates during the weekday with three runs in the morning (6:15a/7:15a/8:15a) and afternoon (3:15p/4:15p/5:15p).

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Data of service ridership indicate an increasing trend in usage since operations began in October 2011. Overall average monthly ridership since service began is 383 persons however, since January 2012 monthly ridership has

increased to an average of 434 persons. In terms of location of boarding/alighting, the heaviest demands are at each of the Downtown Transfer Plazas. In May 2012, over 160 persons boarded at each of the downtown stations. The heaviest demand at Park & Ride lots was at Midland College in May 2012.

EZ Express FY 2011/2012 Ridership Report			
Month	Route 1	Route 2	Total Ridership
	Odessa to Midland	Midland to	
October '11	66	98	164
November '11	199	206	405
December '11	152	171	323
January '12	201	221	422
February '12	190	221	411
March '12	201	237	438
April '12	201	216	417
May '12	235	248	483
<b>Total Ridership</b>	<b>1,445</b>	<b>1,618</b>	<b>3,063</b>

Currently, there are no plans for expansion of EZ Rider or EZ Express within the study area but will be determined on a future demand basis.

CEED is considering a shuttle program for service to the Engineering School and the Performing Arts Center but nothing has been finalized. Other long-term planning includes possible service to the Medical Center Hospital Center for Health and Wellness located at Faudree Road in Odessa.

EZ Rider is currently building a multi-modal center west of the airport aimed at serving as a regional hub for transit providers and maintenance operations. Completion of the whole multimodal facility, which will include administrative offices, conference area and service amenities for transit provider drivers is slated for December 2012. Funding for the initial phase of the \$4 million multi-modal facility came through federal transportation funds and a match by TxDOT. By 2015, the facility is envisioned to serve as a stop for several carriers, such as EZ Rider and Greyhound.

## Planned Improvements

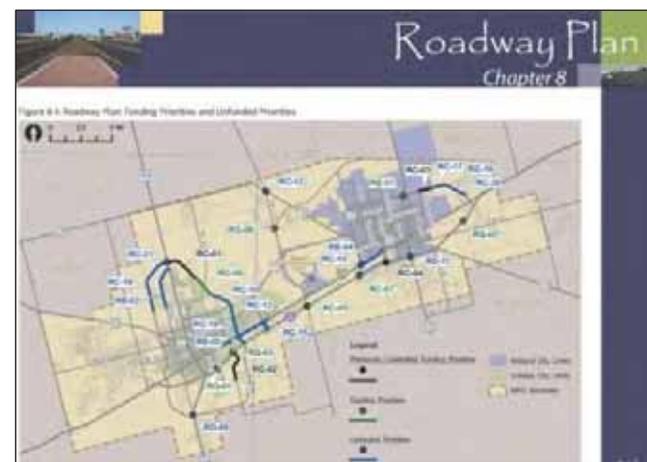
### Roadway

The MOTOR 2010-2035 Metropolitan Transportation Plan has identified a range of projects within the planning area. Project prioritization was categorized in the following categories;

- Previously Committed Funding Priorities - short range projects stemming from the 2008-2011 TIP.
- Funded Priorities – once previously committed projects priorities are addressed, these projects are next in line and reflect the MPO’s long-term priorities.
- Unfunded Priorities – high priority projects but without an identified funding source. If funding is found these projects can be developed and advanced.
- Other Unfunded Needs – other worthwhile projects outside the financial constraint of the MTP.

The following summarizes the projects listed as part of the 2010-2035 MTP.

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Project ID	Name	Limits	Improvement	Funded	Project Cost	Let Date
Carryover Projects from FY 2010						
CSJ 0380-18-006	SH 349/SH 158	Interchange	Construct interchange	Yes	\$6,100,000	Jan 2010
CSJ 1718-07-035	SH 349	FM 1788 to CR 60	Construct new location non-freeway	Yes	\$2,359,293	May 2010
Funding Priorities						
RC-06	Loop 338	87 <sup>th</sup> St (east jct) to Yukon Rd (east jct)	Upgrade to freeway	No	\$37,570,855	N/A
RC-08	SH 349 at FM 1788/CR 60	Interchange	Construct interchange	No	\$10,687,820	N/A
Unfunded Priorities						
RC-10	Loop 338	Yukon Rd (east jct) to 52 <sup>nd</sup> St	Upgrade to freeway, including interchanges at Yukon Rd and JBS Pkwy	No	\$47,406,295	N/A
RC-13	Loop 338	52 <sup>nd</sup> St to SH 191 (east jct)	Upgrade to freeway, including interchanges at 52 <sup>nd</sup> St	No	\$19,467,331	N/A
RC-14	Loop 250 at BI 20 (west junction)	Interchange	Reconstruct and upgrade interchange	No	\$10,687,820	N/A
RC-18	Loop 338	SH 191 (east jct) to IH 20 (east jct)	Upgrade to freeway, including SH 191 interchange & interchange at University Blvd	No	\$54,186,120	N/A
RE-03	BI 20	8 <sup>th</sup> St to 0.5 mi east of Faudree Rd	Improve intersections and other capacity enhancements	No	\$32,619,066	N/A

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## Transit

As discussed earlier, EZ Rider/EZ Express do not have plans for transit system expansion within the study area, other than the current service. Potential partnering to serve the CEED and/or MCH Center for Health and Wellness through others is an opportunity for further investigation. Additionally, it is envisioned that the Wagner Noël Performing Arts Center could possibly serve as Park & Ride location. The 2010-2035 MTP identifies “new intercity transit service” along the SH 919 corridor,



which has been achieved through implementation of the EZ Express. Stakeholder interviews revealed a need for long-term planning between the SH 191 corridor and the airport and

the need for modal integration and connectivity. It was generally acknowledged by many that development of the SH 191/FM1788 area was the next likely area of development. As such, there should be long-term consideration for connectivity between this development area and the airport. Additionally, by providing transportation options and choice, there is a better chance for integrated development opportunity resulting in better fiscal use of resources. As will be discussed, transit considerations were included as part of the corridor and sub-area planning process.

## Bikepath Improvements

Both Midland and Odessa have a bikepath project cited as part of the 2010-2035 MTP that extends into the SH 191 study sub area. In Midland, the West Midland Bikepath is an 8.4 mile path extending along Holiday Hill, League, Crowley, Herford, SH191 frontage road, Deauville, Tradewinds, and Thomason streets and connecting a series of

park, schools and the Scharbauer Sports Complex. This project is estimated to cost \$1.5 million with the anticipated year of expenditure at 2015.

In Odessa, the East Odessa Greenway/Bikepath is a 4.8 mile pathway extending from Loop 338 along 42<sup>nd</sup> Street, JB Sheppard, traversing an easement to Grandview to Loop 338. This path connects UTPB, Memorial Garden Park and Ratliff Stadium. This \$1.0 million project is slated for completion in 2017. The Odessa Parks Plan identified the development of a 90-acre Metropolitan Park located on the southeast quadrant of Billy Hext and 191. This \$3.5 million unfunded project includes development of trails, nature facilities, picnic and pavilion facilities and possible small bodies of water.

Stakeholder input identified a desire to promote and invest in more bicycle/pedestrian facilities within the communities. Comprehensive Plans from each of the cities identified parks and open space as key amenities for community livability. The 2010-2035 MTP identified many key corridors serving the study area to contain adjacent bikeway paths for area-wide connectivity. Bikeway and pedestrian connections will be also included in development phase of the plan.

## Freight Rail/Goods Movement

Input from the stakeholder interview process revealed a desire for freight rail/goods movement as a tool to support land planning considerations for La Entrada type development, the potential to reduce truck traffic from SH 349, an investment to spur industrial growth in the southern sector (FM 1788, Interstate 20, and Business Interstate 20 area) of the study area, and enhancement of the regional competitiveness of the Midland-Odessa area. The 2010-2035 MTP identified a north-south railroad and inland port located along the eastern side of the airport to facilitate and leverage this economic potential.

## 3.6 Existing Access Management Practices and Issues

SH 191 is a controlled access highways with access regulated per the TxDOT Access Management Manual. Spacing and distance between access points is controlled by the posted speed of the frontage road and minimum distances upstream or downstream of main lane exit and entry (measured from the painted gore) ramps. With the corridor frontage roads posted predominantly at 55mph, the minimum distance between drives is 425 feet. It is anticipated that as the corridor becomes more urbanized, posted speeds will drop and hence the minimum spacing requirements will drop accordingly. Listed below are TxDOT’s spacing requirement for highways and frontage roads.

### TxDOT Driveway Spacing

Posted Speed (mph)	Minimum Distance (feet)		
	Existing State Highways (excluding freeways and frontage roads)	Frontage Roads	
		1-way	2-way
≤ 30	200	200	200
35	250	250	300
40	305	305	360
45	360	360	435
≥ 50	425	425	510

Access requirements for local streets are regulated by standards from each respective city. Among the standards, key items for corridor planning are intersection location, driveway distance and spacing, and distance for median openings. Both Midland and Odessa have detailed standards driveway access and intersections. Other general information on street layout and roadway section are contained in the thoroughfare plan component of each City Comprehensive Plan. With regard to medians, only Midland’s Thoroughfare Plan identifies arterial and collector class streets with options for raised medians. Few, if any,

currently exist on major streets within either city. Key street and driveway parameters are listed below.

	Arterial	Collector	Local
Street Spacing	0.5 - 1 mi	0.25 - 0.5 mi	125'
Distance from Intersection			
Midland <sup>1</sup>	100'/130' <sup>2</sup>	60'/60'	45'
Odessa <sup>3</sup>	77 - 80'	75 - 80'	24'
Distance between Drives (along curb)			
Midland <sup>4</sup>	40'	40'	10'
Odessa <sup>4</sup>	23-27'	23-27'	13'
Minimum Distance from Median Opening			
Midland	N/A	N/A	-
Odessa	-	-	-

1. Distance from property corner to drive center line
2. Upstream/downstream distance for Hwy/Primary Arterial or Primary Art/Art; minimum upstream for right-in/right-out is 85 ft.
3. Distance from property corner to driveway point of curvature is 40'
4. Minimum distance of stand-up curb (between drive curb returns)

Within each city’s driveway standards, variations exist based on roadway functional classification. For example, Midland details drive spacing for primary or secondary arterials, as well as combinations with other class facilities. Distances for driveways from a primary and secondary arterial intersection are 100'/60' (upstream/downstream) and 60'/130, respectively.

Distances between driveways also vary. Cited only is the distance of “standing curb” and not inclusive of curb radius returns or drive width. Actual distances from center-to-center of driveway range between 104-140’ in Midland, and 95-200’ in Odessa. Odessa further regulates the number of drive per lot dependent upon lot length. Driveway allowances range from one driveway for lots less than 99 feet, to 3 for

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lots between 300-600' in length. Additional requirements are given for lots greater than 600 feet.

### Corridor Issues

Key issues affecting SH 191 include illegal maneuvering and parcelization of property along frontage roads. Field reconnaissance of the corridor revealed several areas where illegal maneuvers were occurring and related to ingress/egress across medians and two-way operations of traffic on the outside edge of right-of-way. This is primarily a result of lack of supporting area circulation (backage roads) for developing properties. Observations included trucking short-cutting across vacant properties to desired locations, and lack of desire for development related traffic to travel to grade separated crossing for turn-around.

Disjointed and isolated strip type development and parcelization into small lots (5 acres) is creating driveway demands that will negatively affect the carrying capacity of the frontage road. Poor planning and the lack of cross access easements are creating this issue. The implementation of a backage roads system with supporting street connections and cross-access/shared drives will reduce deterioration of site related traffic demands on the frontage roads.



## 3.7 Access Management Issues and Needs

### Corridor Management

Corridor management refers to the coordination “of land development and the transportation facilities within an existing corridor to ensure development in accordance with adopted land use plans, roadway improvement plans, access management provisions, future ROW needs, or any specially adopted plans or objectives for the corridor.”<sup>2</sup> In this approach, infrastructure investments are viewed as a system of improvements rather than a fragmentary approach, in which a corridor develops and enhances adjunct properties. Corridor management promotes long-range planning for future growth and development. In a coordinated approach, corridor management can become a continual process and a metric for conducting business.

Corridor management involves long-range transportation planning and involvement/coordination of both local and regional agencies in order to maximize investment in transportation facilities. Within the SH 191 corridor, a general sense of corridor management has occurred in that long-range grade-separated crossings have been identified, accepted access management standards are being employed and, both the Cities of Midland and Odessa have initiated measures, such as segments of a backage road system. Backage roads have been employed in several newer developments including the Scharbauer Complex/Tradewinds Boulevard corridor, Sewell/Mission Dorado area, and at the northeast quadrant of SH191/SH338.

### Corridor Management Planning

The Texas Transportation Institute publication *Guidelines on Corridor Management and Preservation in Texas* defines the objective of

corridor management as; to protect roadway capacity, enhance mobility, and safety of a transportation facility such that it will retain its intended function as adjacent area development and redevelopment occurs over time. From an economic development standpoint, CM increases property values and creates aesthetically pleasing corridors that businesses and retailers seek. The long-term objective for CM is to create mutually sustainable land development and transportation facilities that remain viable and functional long into the future.

*In a challenging fiscal climate and with increasing demands on the City and State roadway system, it is prudent to plan ahead and coordinate land access in order to maximize the use of the existing facility, reduce conflict points and promote safety. It also furthers the collaborative goal of providing efficient transportation system while preserving*

General goals of corridor management include:

- Providing a safe roadway and transportation environment for roadway users and adjacent properties/land use
- Using transportation service and facilities to foster, support and enhance community land use and development strategies
  - Providing meaningful alternative means of transportation
- Balancing growth and economic development with environmental protection and community preservation
- Designing transportation facilities to complement the areas in which they are located (context sensitivity)
- Providing for effective long-term fiscal management of transportation improvements within the corridor
- Reflecting existing policy documents such as local comprehensive plans, regional MPO planning initiatives, and statewide transportation plans

<sup>2</sup> Corridor Management and Preservation in Texas (TTI, 2010 Workshop)

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- Incorporating and reflect current public input about how local residents view their communities and the transportation corridor
- Establishing a unified vision across jurisdictional boundaries

As part of a comprehensive planning process, corridor management creates a sustainable environment for the long term growth and viability of a corridor.

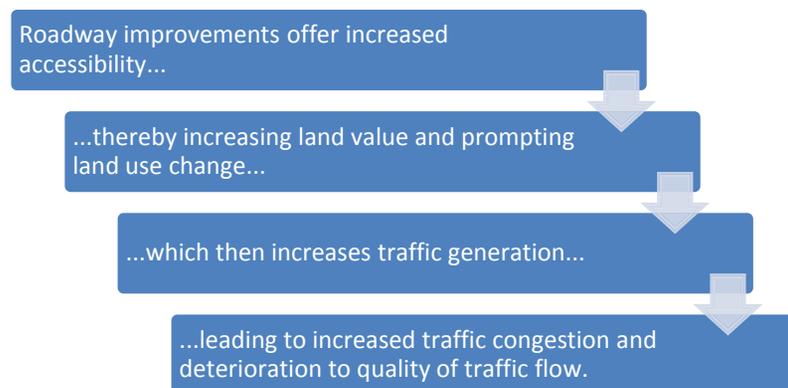
### The Need for Corridor Management

In today's economic downturn, corridor management considers the maximized use of public rights-of-way in terms of offering transportation alternatives to the traveling population. Providing mobility options for vehicular, transit and/or non-motorized travel enhances not only the carrying capacity of a corridor, but also creates opportunity for "place-making" with adjacent land development. Improved mobility, enhanced safety and transportation choice can be attained by various individuals in the following ways:

- **Motorists** face fewer decision points and traffic conflicts which simplifies driving and increases safety.
- **Cyclists** can choose alternative travel routes as supporting roadway systems are developed and face fewer conflicts with motorists, which increases safety.
- **Pedestrians** face fewer and less frequent access points where motorists enter and exit the roadway making it safer to walk along major roadways.
- **Transit riders** experience reduced delays and travel times and more convenient access to transit stops as connectivity is improved.
- **Business persons** experience a more predictable development environment served by a more efficient roadway system that captures a broader market area.

- **Communities** have a safer transportation system with less need for road widening thereby avoiding displacement of existing businesses and residences.

Corridor management also assists in avoiding the "typical cycle" of transportation facilities where:



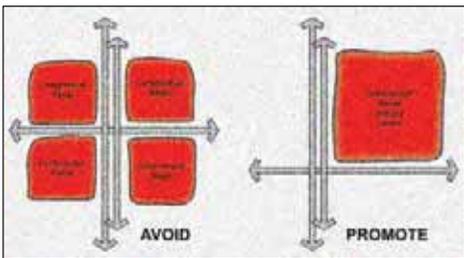
The cycle is then repeated by furthering corridor improvements. By implementing corridor management, both money and time can be saved by maximizing the efficiency of existing as well as future facilities.

Finally, from an economic development perspective, corridor planning and management reduces potential negative business impacts that may result from any corridor reconstruction to correct traffic congestion. Impacts could include losses from realignments, intersection improvements or channelization, driveway consolidation, and overall project cost as a result of relocations or right-of-way needs.

## 3.8 Best Practices in Corridor Management

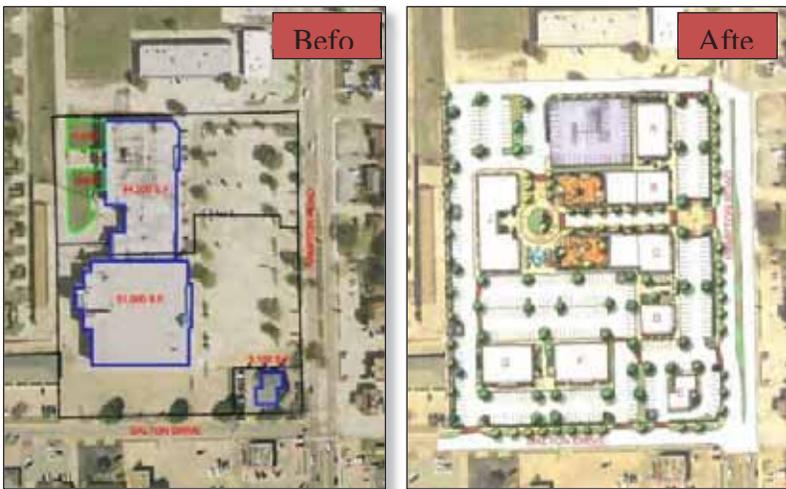
### Development Policies

A high priority in development policies is to encourage activity centers instead of strip development. Activity centers allow for internal circulation among businesses and increase the available capacity of the corridor, while strip development needs more access points along the roadway, decreasing safety and capacity. Activity centers can be

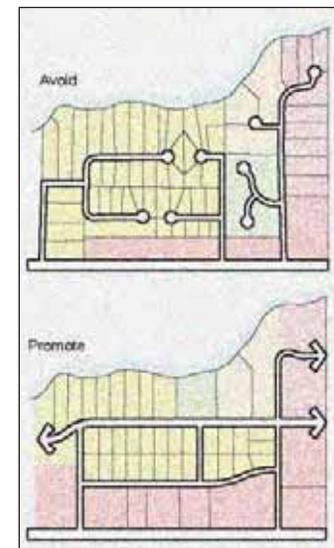


promoted by requiring greater lot depths and frontage amounts for commercial zones. Also, improving site circulation reduces the likelihood of strip development and “parceled” access points.

Supporting roads, such as backage roads or internal circulator streets also help promote activity centers. The image below depicts traditional development across lots. By promoting internal circulation and creative land use patterns, a range of mixed-uses can evolve utilizing shared drives/parking.



Neighborhood connectivity is important to creating easily navigable, successful areas. By connecting neighborhoods which emphasize internal and connectivity with local streets, a supporting road network can be formed. Select streets should then be planned for connections to key corridors to avoid excessive intersection locations. As short local trips are removed from the corridor, corridor demands are also reduced.



Planning within a community’s extraterritorial jurisdiction (ETJ) also plays a vital role in the growth and expansion of the corridor. The timing and extension of infrastructure should be carefully considered in order to avoid land use patterns or intensities that may not be in accordance with the development policies of the city. These include transportation, water and drainage plans, subdivision requirements, access ordinances, and development agreements.

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Types of Corridor Management and Improvement Strategies	
Strategy Type	Examples
Minor Roadway and Operational Improvements	<ul style="list-style-type: none"> <li>• Improved signage and markings</li> <li>• Signals and other intersection controls</li> <li>• Bulb-outs and pedestrian signals</li> <li>• Off-road safety improvements (e.g., guardrails, vegetation clearance)</li> <li>• Drainage systems and maintenance practices to reduce environmental impacts, improve water quality, etc.</li> <li>• On-street parking restrictions</li> <li>• Designated truck routes</li> <li>• Intelligent transportation systems (ITS) strategies such as traveler information and incident response</li> <li>• Seasonal and special event controls (e.g., traffic officer)</li> </ul>
Major Roadway Improvements	<ul style="list-style-type: none"> <li>• Lane additions at intersections</li> <li>• Roundabouts</li> <li>• Medians and channelization</li> <li>• Shoulder widening</li> <li>• Horizontal and vertical curve realignment</li> <li>• Climbing lanes</li> <li>• Passing lanes</li> <li>• New general-purpose lanes</li> </ul>
Zoning and Land Use	<ul style="list-style-type: none"> <li>• Land use and zoning provisions to encourage concentrated development</li> <li>• Designation of specific planning areas within town plans with guidelines for development, resource protection, and access management</li> <li>• Designation of scenic view corridor</li> <li>• Site plan review requirements for developments along the corridor</li> <li>• Subdivision regulations that encourage pedestrian connectivity and internal street connections to reduce traffic volumes on main roads</li> <li>• Provisions to allow for shared parking among adjacent uses</li> <li>• Growth management tools, such as development phasing and infrastructure concurrency requirements</li> <li>• Overlay districts to protect critical resources</li> <li>• Performance standards for new developments</li> </ul>
Access Management	<ul style="list-style-type: none"> <li>• Driveway consolidation</li> <li>• Turn restrictions and medians</li> <li>• Intersection spacing</li> <li>• Local street infrastructure</li> </ul>
New Facilities	<ul style="list-style-type: none"> <li>• New/expanded interchanges</li> <li>• Bypasses</li> <li>• Intermodal facilities</li> </ul>
Alternative Mode Improvements and Travel Demand Management	<ul style="list-style-type: none"> <li>• Signs and markings (pedestrian crossings, bicycle lanes)</li> <li>• Sidewalk improvements</li> <li>• Off-road bicycle/pedestrian paths</li> <li>• Transit service improvements</li> <li>• Travel demand management programs, such as rideshare programs and employer transit subsidies</li> </ul>

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	<ul style="list-style-type: none"><li>• Rail capacity and service improvements</li><li>• Intermodal facility and access improvements (passenger, freight)</li></ul>
Modal Connectivity Improvements	<ul style="list-style-type: none"><li>• Park-and-ride lots</li><li>• Bike racks on buses</li><li>• Shuttle services</li></ul>

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## Access Coordination

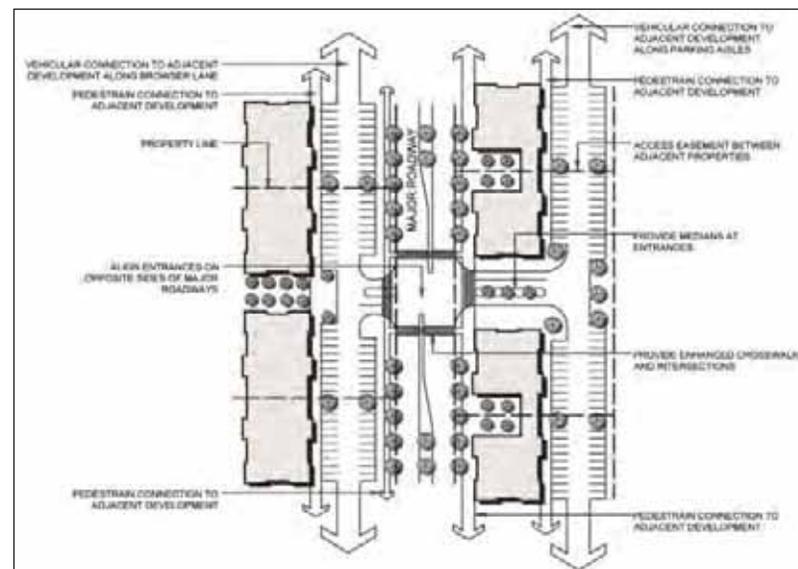
Flow of traffic is typically a major concern for most communities. The ability to move traffic efficiently along a corridor with minimal interference from traffic turning off and onto intersecting driveways/streets is a major benefit to motorists. Ideally, traffic should be able to avoid unnecessary “stop-and-go” traffic due to the abundance of intersecting driveways/streets. While the implementation of deceleration lanes for streets and driveways on major and minor thoroughfares enhances capacity and accessibility, coordination of access offers added benefits for the following reasons:

- Reduces the number of ingress and egress points improving vehicular flow and reducing collisions;
- Permits more landscaping frontage thereby enhancing roadway aesthetics; and
- Enhances the pedestrian experience by reducing pedestrian contact with turning traffic.

Along key corridors, the concept of access coordination can be extended from individual sites to address corridor-wide segments. Shared access between properties enables:

- Allows for flexible and special area consideration to adjacent site development, special access and utilities coordination, and limits unnecessary connection points;
- Aesthetics and amenity considerations;
- Promotes activity-based development centers, not strip retail; and,
- Coordination of transportation and land use planning/decision making.

## Shared Access and Cross Access



Reducing the number of driveways enhances corridor landscaping and aesthetics



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Driveway Spacing

Placing a minimum separation requirement on the distance between driveways, the total number of driveways is limited and the likelihood of shared or cross access in developments is increased. TxDOT standards for driveway spacing on state highway and frontage roads are detailed below. Consideration should be given to extending drive spacing on the frontage road to 400-500' as part of the corridor management plan for SH 191.

TxDOT Driveway Spacing

Posted Speed (mph)	Minimum Distance (feet)		
	Existing State Highways (excluding freeways and frontage roads)	Frontage Roads	
		1-way	2-way
≤ 30	200	200	200
35	250	250	300
40	305	305	360
45	360	360	435
≥ 50	425	425	510

Recommended commercial driveway spacing for supporting roadways/backage roads to SH 191 is listed below.

## Local Driveway Location Considerations

Characteristic	Arterial	Collector	Local
Drive Spacing	200-400'	100-300'	-
Min. Distance to Intersection	75-100'	50'	-
Divided Street Median opening*	500-600'	500	-
*Nose to nose length			

## Corner Clearance

Near the functional area of intersections, driveways and other conflicts should be minimized in order to improve safety and capacity of the intersection. This can be accomplished through local provisions, such as requiring shared/cross access easements for all corners, no full movement driveways in functional areas, minimum lot size for corners, and that outparcels obtain access from within.

## Signalized Intersection Location and Spacing

When signalized intersections are used, long uniform spacing is needed between the intersections. This must be considered in local street planning, driveway permitting, and when locating median openings. Adopting a corridor management plan ensures proper signal spacing. It is difficult to uphold signal spacing guidelines without a corridor management plan since new signal locations are determined by development. Intersection spacing for arterial streets should be at least one mile. For Collector streets, about on-half mile.

## Non-Traversable Medians

Since improving safety and progression are key factors in the development of a corridor, the considerations of medians are essential. "Roadways with a non-traversable (raised) median have an average crash rate about 30 percent less than roadways with a [two way left turn lane or] TWLTL."<sup>3</sup> These medians should be included in local arterial design standards and installed ahead of development. Limited access medians should be used in lieu of full openings since there are fewer conflict points.

## Arterial Frontage and Backage Roads

Arterial frontage and backage roads prevent driveways and direct access to the corridor, while still providing good visibility for the businesses. By consolidating access, signal spacing and access criteria can be met.

<sup>3</sup> TxDOT Access Management Manual, pg 1-5

# MOTOR MPO SH 191 Corridor Study/Management Plan

Adequate separation between backage roads and arterials at connector intersections is crucial as well.

## Zoning and Site Considerations

Corridor zoning overlay districts are supplemental regulations to the base zoning districts. Existing requirements of the base zoning district of each parcel is retained, but additional measures can be put in place. This allows for a 'corridor-wide' approach instead of by site. Key items that can be used in overlays include:

- Access plan, future access points
- Increased driveway throats
- Internal connections between parcels
- No direct access to outparcels
- Increased setbacks
- Land use prohibitions, intensity regulations
- Utility placement
- Aesthetics

## Platting Considerations

Future ROW designation on a plat prevents development and improvements in this area. ROW reservation does not transfer ownership of property, but conveys that ROW will be purchased in the future. Reservation may be negotiated or a compromise option to dedication. This method helps reduce cost for future ROW acquisition. Access easements on plats are the most important tool to ensure driveway spacing criteria. Property being subdivided into frontage amounts that cannot meet spacing requirements can benefit from the use of shared, cross, or blanket easements during the platting process.



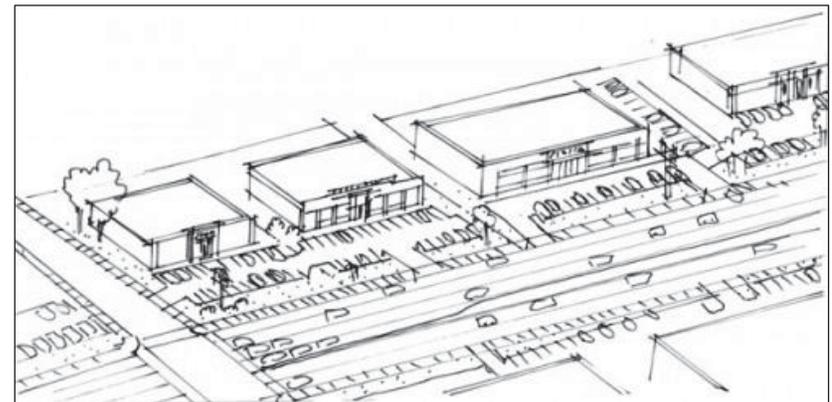
Acquisition of access rights should be considered early and is commonly done during ROW acquisition. This is acquired, purchased or condemned and prevents future takings claims. Acquisition of access rights allows for permanent access control. It is used primarily for new highways via 'access control lines', but can also be used to control access and sight distance at intersections, preclude future access in the area of ramps and intersections, or a case-by-case basis for safety and design considerations.

## 3.9 Other Design Considerations

### Multi-Way Boulevards

Customary strip retail on major roadways is situated in the following format: adjacent street with sidewalks on the right-of-way edge, parking lot, smaller sidewalk, and then the storefront. While parking may be connected between the stores, the sidewalks at the storefronts are usually disjointed. This method of development leads to an unfriendly environment for pedestrians, since there is little protection between the roadway and sidewalk and there is no connection at the storefront level.

### Customary Strip Development

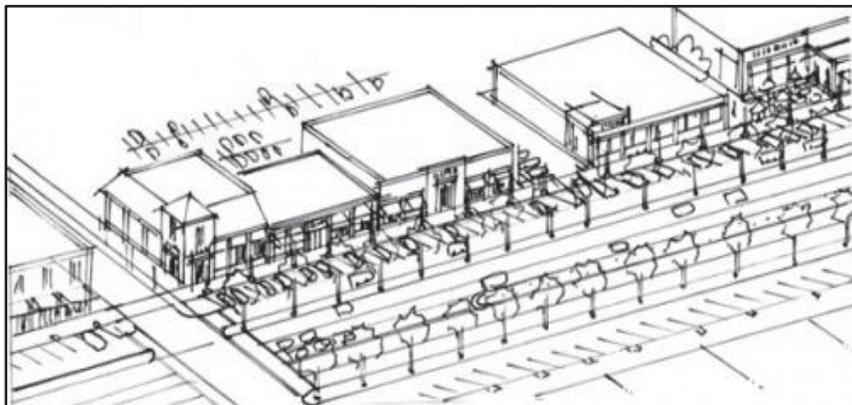


Source: The Strip Mall vs. the Multi-Way Boulevard

## MOTOR MPO SH 191 Corridor Study/Management Plan

An alternative development pattern would be the multi-way boulevard. This method maintains the main lanes for adjacent street traffic, but is then divided from a parking access lane by a landscaped median. This parking lane acts like a one way street and stretches from one block to the next, eliminating unnecessary driveways along the street. Along this access lane, parallel or angled parking is provided, with additional parking located behind the stores. For pedestrians, a wide continuous sidewalk is provided along the length of the block, with the protection of parking and landscaping from the high speed traffic.

### Multi-Way Boulevard



Source: The Strip Mall vs. the Multi-Way Boulevard

By implementing multi-way boulevards effectively, a mixed land use and pedestrian friendly environment is produced that encourages walking and reduces vehicle trips. Additionally, fewer access points leads to improved capacity along the adjacent roadway. Multi-way boulevards allow for efficient movement of higher speed traffic, but with an aesthetically pleasing and multimodal approach with many existing successful applications across the nation today.

Source: The Strip Mall vs. the Multi-Way Boulevard: In Consideration of Subtle Differences

Table 3.8 lists in order of importance short and long-term strategies related to the subarea Thoroughfare Plan and corridor access management. This action list is based on the analysis and planning conducted throughout the study effort. Strategies prioritization was based on input obtained from the Public Meeting held on May 17, 2012.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

Table 3.8 Access Management and Implementation Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Implement recommendations of the proposed Sub-area Thoroughfare Plan to provide accessibility to adjacent SH 191 corridor properties through backage roads, intersection enhancements, and access controlled frontage roads. *(8)	X		X	Midland and Odessa, TXDOT, Counties of Ector and Midland	Adoption of Thoroughfare Plan and roadway standards
# 2: At time of platting, require all properties along SH191 to contain allowance for cross access easements and/or connection to shared driveways. *(8)	X	X	X	Cities of Midland and Odessa, Counties of Ector and Midland	Through standard development processes
# 3: Identify and implement minimum driveway spacing and shared drives to minimize SH191 frontage road conflicts with existing and future developments. Adopt 400'-500' spacing between driveways. *(5)	X			Cities of Midland and Odessa, Counties of Ector and Midland, MPO and TxDOT	Implement through corridor overlay district
#4: Provide/require connecting roads from frontage to backage road on 1,200 to 1,500 spacing. *(4)	X	X	X	Cities of Midland and Odessa, MPO and TxDOT	At the time of development and/or through the platting process
# 5: Control/remove illegal off-ramps and two-way access roads (off frontage on road shoulders) and unauthorized driveways from SH191. *(3)	X		X	TxDOT, Cities of Midland and Odessa	Enforcement of TxDOT standards
# 6: Develop corridor-wide access management standards detailing; intersection spacing, driveway locations and throat length, and median type/opening location. *(1)	X			Midland, Odessa, TXDOT, Counties of Midland, Ector	Implement through corridor overlay district
# 7: Develop implementation/phasing program supporting development of backage road system and improvements to frontage road intersections. Consideration for prioritization include; operational LOS, development of activity centers and associated roadway improvements, coordination with funding opportunities and/or public-private partnership. *(1)	X			Cities of Midland and Odessa, Counties of Ector and Midland, MPO and TxDOT	Corridor CIP programming
# 8: Require, where appropriate, upstream deceleration lanes on SH 191 for developments with high volume driveways. Utilize TxDOT standards for threshold triggers.	X	X	X	Cities of Midland and Odessa, Counties of Ector and Midland, and TxDOT	At the time of development by Cities and by TxDOT Standards
# 9: Maintain adequate operational level-of-service at key interchange/intersections along SH191 frontage roads. Example: EB to WB U-turn at SH250, signalization at Faudree Rd. etc.			X	TxDOT; Coordination with Cities	Example: Lane additions, signal improvements, Texas U-Turn, etc.
* Indicates number of votes for this Strategy					

### 3.10 Multi-Modal Transportation System Assessment

With a majority of the study corridor and sub-area relatively undeveloped, the predominant mode of travel is vehicular oriented. New development, area biking activity, recent transit improvements, and continued planning for multi-modal components illustrate the possibilities for integrated transportation systems in the area. The following is an overview of transportation systems and planning affecting the study area.

#### Vehicular

As identified in the Planned Improvements section discussed earlier (Section 3.7), a range of planning initiatives have been prioritized and involve Loop 338, SH 349, Loop 250 and Business 20. TxDOT has also conducted cursory planning on identifying needs for SH 349 through the study area. Items envisioned include upgrade to freeway, frontage roads, and a three-level interchange at SH 191 (SH 349 depressed under SH 191). Upgrade of this corridor will enhance opportunities associated with the La Entrada trade Corridor as well as, create a measurable increase in truck traffic safety that is currently an issue.

The City of Midland is examining the Tradewinds Boulevard corridor to determine roadway sizing and needs for a range of development potential between Deauville and Business 20.

#### Transit

The implementation of the EZ Express and supporting Park & Ride locations has begun to satisfy a mobility need between Odessa and Midland. Potential partnership with the UTPB CEED for a shuttle/park-and-ride lot is beginning to formalize the SH 191/FM 1788 area as a key node of development in the future.

As the SH 191/FM 1788 node continues to develop, it will be important to program transit connectivity throughout the SH 191 corridor.

The construction of the intermodal facility west of the airport provides hub opportunity for both local and regional transit. Locally, this hub could be used to link bus transit routes from both Odessa and Midland. Likewise, as a regional transit hub, other private operating systems could provide connecting service. Finally, its proximity to the airport and the SH 191 corridor enhances transit opportunity and connectivity for future sub-area development.

#### Bike/Pedestrian Systems

The increasing popularity of the SH 191 frontage roads as a cycling loop between Odessa and Midland illustrates the need to incorporate a bike path system as part of the sub-area plan. The 8.4 mile West midland Bikepath and the 3.4 mile East Odessa Greenway/Bikepath could serve as connection points between the sub-area and the communities. Inherent as part of this bikeway is pedestrian connectivity for linking parks, schools, retail, and entertainment areas.

#### Bike/Pedestrian Systems

The Midland International Airport provides key connectivity with the state and nation. Vehicular and transit connectivity to the airport from both Midland and Odessa is critical to ensure the continued economic success of the region. The Airport Land Use Plan identifies aviation, non-aviation and industrial uses to support the airport as well as from a possible intermodal/logistics hub perspective. Potential freight rail connection in the vicinity of the airport could further solidify the development of an inland port in the southern sector of the sub-area.

## Chapter 4 Sub-Area Planning

### 4.1 Future Land Use Planning

The right for municipalities to coordinate growth is rooted in the need to protect the health, welfare and safety of its residents. An important part of establishing the guidelines for such responsibility is the Future Land Use Plan, which establishes the overall framework for the preferred pattern of development.

The Future Land Use Plan developed for the SH 191 corridor is intended to function as a high-level guide allowing staff and decision-makers from Midland, Odessa, Midland County, Ector County and MOTOR to make infrastructure and transportation decisions that are coordinated with long-term potential land use decisions. The Future Land Use Plan is intended to serve as a flexible guide that outlines the long-term vision of the study area to citizens, stakeholders and potential investors.

While the main emphasis of the study was to develop a strategy for the SH191 corridor, a much larger area was ultimately considered. Land use decisions surrounding the SH 191 corridor ultimately impact the corridor itself and therefore a comprehensive strategy for the area surrounding the corridor was developed to ensure coordinated transportation, infrastructure and land use decisions.

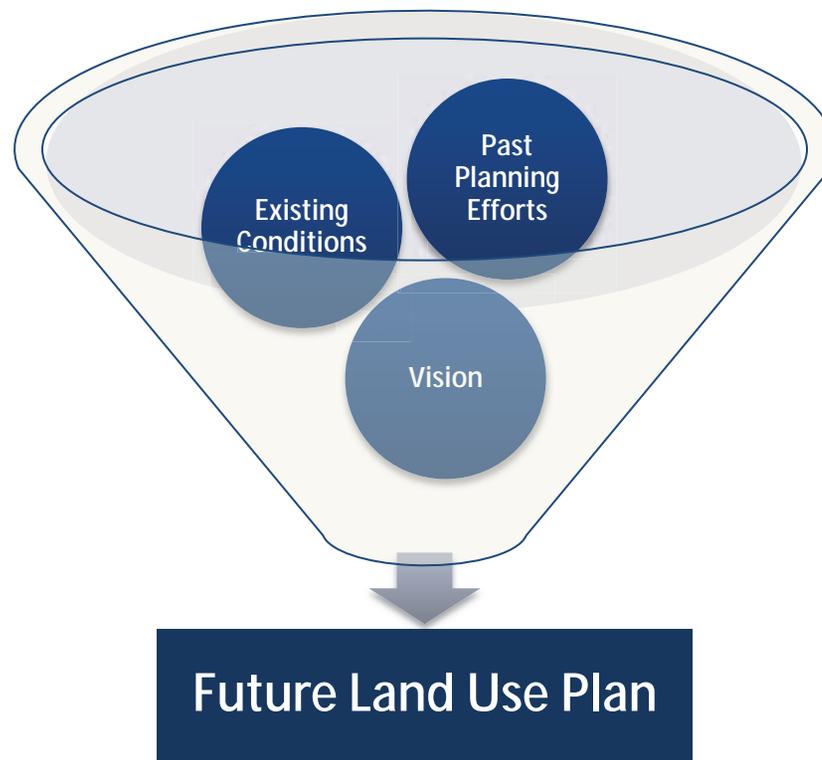
In order to create the Future Land Use Plan, a variety of different factors were considered:

- **Existing conditions:** including existing land uses, the existing transportation network, environmental conditions and physical constraints.
- **Past planning efforts:** including the comprehensive plans for both Midland and Odessa, the zoning ordinances for both communities, planned transportation trade corridors such as La

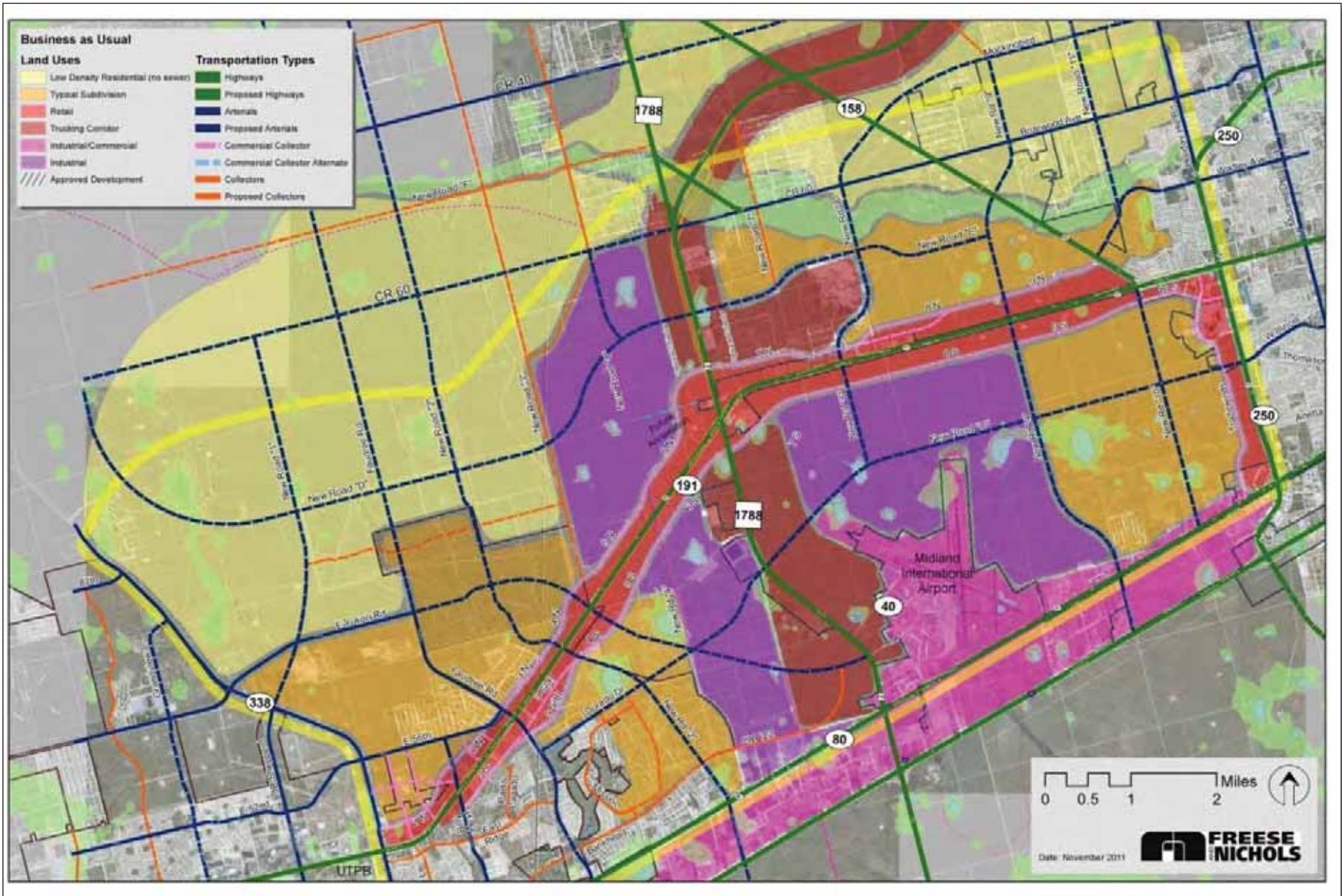
Entrada, planned and potential development projects and past planning studies.

- **A visioning process:** including stakeholder and public input meetings, issue identification exercises and a visual character survey to understand the ultimate vision for the study area.

Based upon these factors, two different land use scenarios were developed. The first was a “Business as Usual” scenario, the second being a “Preferred Scenario.” Details pertaining to these two scenarios are described in more detail to follow.



# MOTOR MPO SH 191 Corridor Study/Management Plan



### 4.2 Sub-Area Business as Usual Scenario

A “Business as Usual” scenario was prepared to demonstrate the potential issues that could come up and also to be sure to address those issues in the preferred scenario.

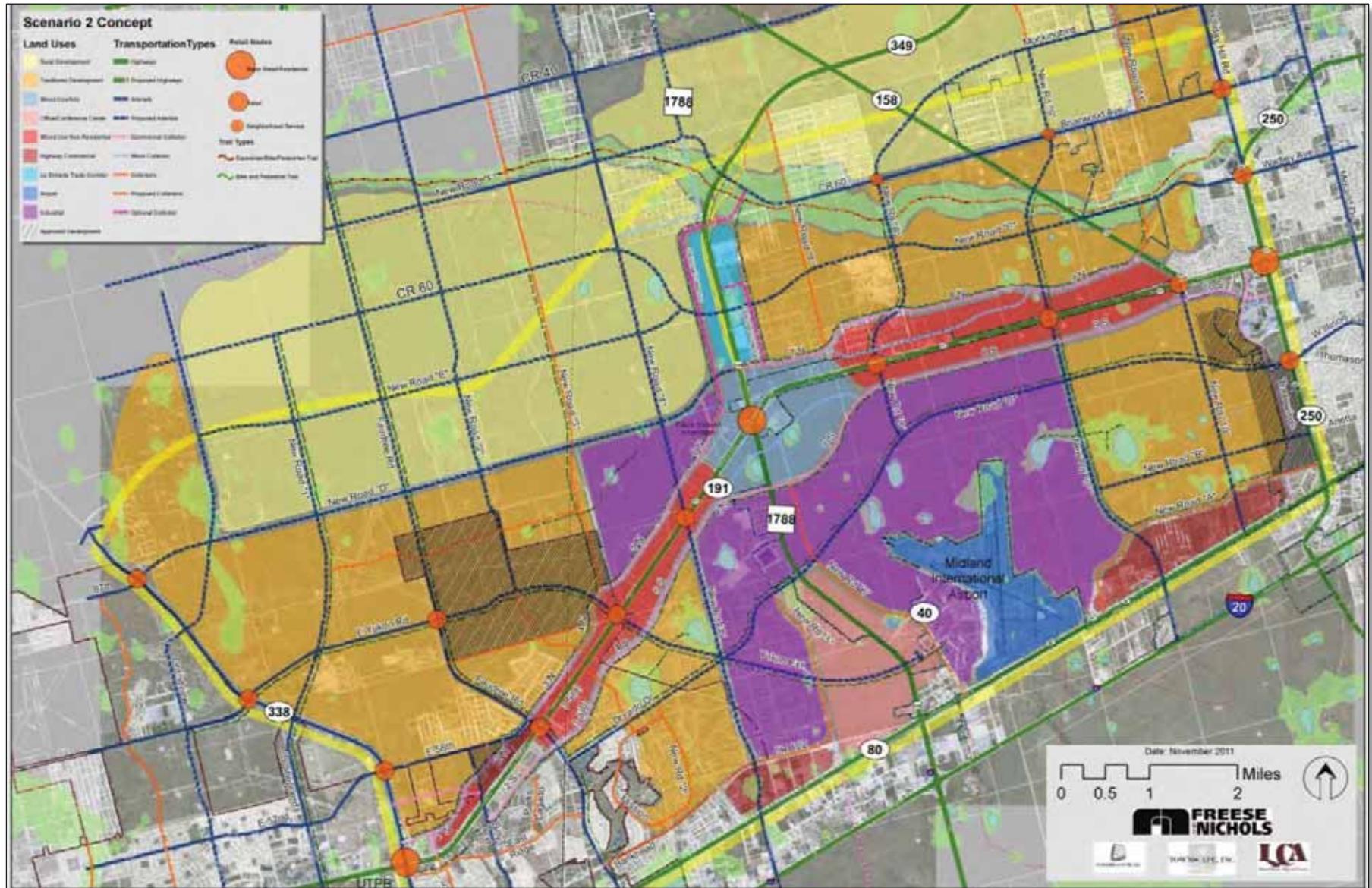
Features/issues of the Business as Usual scenario are as follows:

- A large portion of the northern area of the sub-area in yellow would develop, if unregulated, with unimproved dirt streets, no fire protection, and wells and septic tanks on the same properties. The quality of the development will tend to be less than other areas of both cities. Also, the long term issues for the county to support these residential areas outside the city limits will add additional burdens to Midland and Ector counties.
- There will be limited two way access along the frontages of SH 191 and eventually FM 1788/SH 349. Individual property owners will attempt to provide such access but it will take place in an uncoordinated manner and be intermittent along both facilities, thereby adding to the burden of the frontage road with truck turning movements and higher traffic volumes.
- SH 191 will strip out on both sides with a mixture of different types of development but primarily oilfield related. The lack of backage roads mentioned previously with one way access off a frontage road will make these properties less desirable for other uses.
- If business as usual is pursued and the areas along SH 349/Craddick Highway are left outside the city limits, then there is a high probability that it will develop similar to those sections on the north side of SH 191. There is a concern that type of development is undesirable along SH 191 and the northern tier of Midland; however, without annexation and development regulations, there is a high probability that it will occur.

- The areas around the airport and west of FM 1788 and south of SH 191 will probably continue to develop with industrial parcels and metal buildings similar to those that have already been constructed.
- The lack of access and increased heavy oilfield activity will likely result in development of a lesser quality than was indicated as desirable in the preliminary public forums held in this SH 191 corridor planning process. The Performing Arts Center and CEED Complex will be isolated with one way access and with industrial activities around it.
- Finally, the lower quality industrial type development that would take place would limit the expansion and opportunities of the quality development areas on the west side of Midland and the east side of Odessa. Such industrial development may also limit the ability to have higher quality industrial parks in the areas around the airport.

It was for these reasons at the second public forum on November 15, 2011 that it was decided a different form of development needed to take place in this area and that the cities and counties, TxDOT, and MOTOR MPO should be more actively involved in planning the development of the area.

# MOTOR MPO SH 191 Corridor Study/Management Plan



# MOTOR MPO SH 191 Corridor Study/Management Plan

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## 4.3 Sub-Area Preferred Scenario

The “Preferred Scenario” for the sub-area as a whole was reviewed and approved at the public forum on November 15, 2011.

Features of the Preferred Sub-Area Scenario include the following:

- A continuation of the existing development patterns on the east side of Odessa and the west side of Midland in the lighter brown color on the map. (Labeled “Traditional Development”)
- Recognizing the existing development patterns and demand, the light yellow areas along the northern side of the sub-area are recommended to develop as less intensive, large lot single family with paved rural road sections, water, municipal fire protection, and septic tanks. (Labeled “Rural Development”)
- The light blue are along SH 349 and FM 1788, north of SH 191 could be the “La Entranda” Trade Corridor gateway with upscale warehousing and trucking operations.
- It is recommended that both sides of SH 349 be annexed to protect the roadway facility and to avoid the type of lower quality intense development that is currently being developed along the north side of SH 191 and west of FM 1788.
- The purple areas around the airport are recommended to be industrial due to airport influences such as noise and height limits and also to reflect the oil activity taking place. There is a need to upgrade the standards for industrial in the area around the airport.
- The magenta area at the intersection of FM 1788 and Business 80 is recommended to be the better quality office/warehouse flex space and conferencing related to the airport.
- The Scenario refines the backage road concept along both SH 191 and FM 1788/SH 349. (See thoroughfare plan for more detail) The backage roads have been adjusted to provide cross overs of the new SH 191/FM 1788 depressed interchange. The

existing development on the north side of SH 191 is recognized in the preferred scenario and provided for.

- The SH 191 corridor is further refined in the corridor “Preferred Scenario.”

However upgraded subdivision and development standards are encouraged to obtain better quality development including landscaping, screening of outside storage, paved parking, access management and other items that are identified later in this document.

Table 4.1 lists short and long-range strategies for the Preferred Land Use Scenario” and development controls for the study area. Strategies were developed based on input developed throughout the planning process and have been prioritized based on input from the Public Meeting held on May 17, 2012.

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## MOTOR MPO SH 191 Cost Corridor Study Strategic and Action Plan

Table 4.1 SH 191 Sub-area Land Use and Annexation Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Develop common platting ordinance for both counties and cities requiring and coordinating similar standards for similar areas. *(7)	X			Midland and Odessa, Midland and Ector Counties	Fund and develop a subdivision ordinance by all four entities
# 2: Annex or use developer agreements to control frontages of SH 349/FM 1788. *(6)	X			City of Midland	Initiate annexation process
# 3: Require all development in the Sub-area to have paved streets and fire protection. *(2)	X			Midland and Odessa, Midland and Ector Counties	Amend ordinances to require
# 4: Continue the existing development patterns on east and west sides of Sub-area			X	Midland and Odessa, Midland and Ector Counties	Amend and follow comprehensive plans
# 5: Implement lower intensity "rural" type development in northern Sub-area	X		X	Midland and Odessa, Midland and Ector Counties	Amend zoning and platting to provide common rural standards
# 6: Refine industrial master plan around airport, including La Entrada gateway on SH 349, possible multi-modal center, airport office/flex space/conferencing	X		X	Cities of Midland and Odessa	Fund industrial master plans, studies
# 7: Annex or use developer agreement to require urban Sub-area development, including industrial properties, to meet standards utilized in rest of Cities	X		X	Midland and Odessa, Midland and Ector Counties	Study and annex prior to development. Monitor land sales
# 8: Use exemptions to 3 year Municipal Annexation Plan requirement to expedite annexations			X	Cities of Midland and Odessa	Use voluntary consent or annex fewer than 100 parcels with homes
# 9: Leave vacant property not in process of developing outside city but negotiate agreements so upon parcel sales or development, annexation becomes voluntary			X	Cities of Midland and Odessa	Negotiate developer agreements with large property owners
# 10: Enhance benefits of urban type development being in City			X	Cities of Midland and Odessa	Do not provide water, streets, fire, police protection, etc. outside city
* Indicates number of votes for this Strategy					

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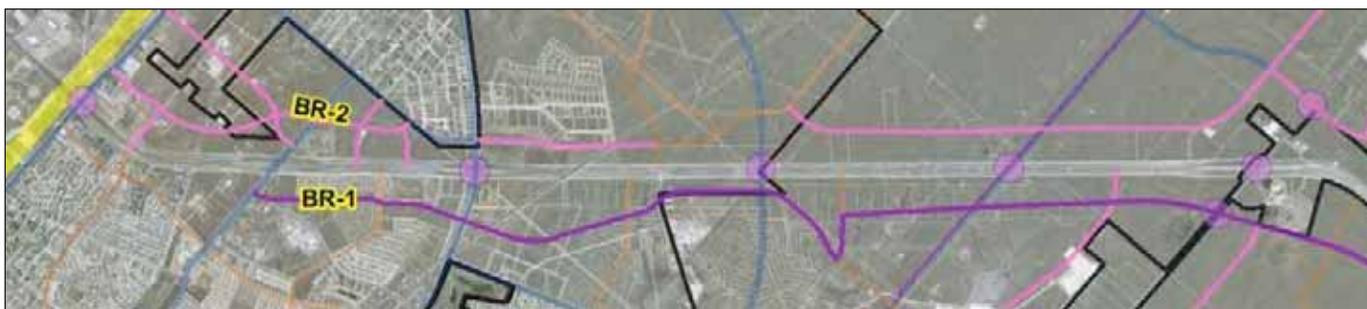
# MOTOR MPO SH 191 Corridor Study/Management Plan

## Sub-Area Thoroughfare Plan

As part of the sub-area planning process, an Interim Thoroughfare Plan was prepared to support long-range land use programming and connectivity within the study area and between Midland, Odessa and Midland and Ector Counties. The planning process included development and discussion of a range of planning concepts and was coordinated through the direction of the MOTOR Metropolitan Planning Organization, the affected jurisdictions, and TxDOT. Additional effort was expended in the development of the thoroughfare network to ensure consideration of area conditions, existing and planned development activity, desired land use patterns, and oil/mineral activity and extraction.

The Interim Thoroughfare Plan features the following:

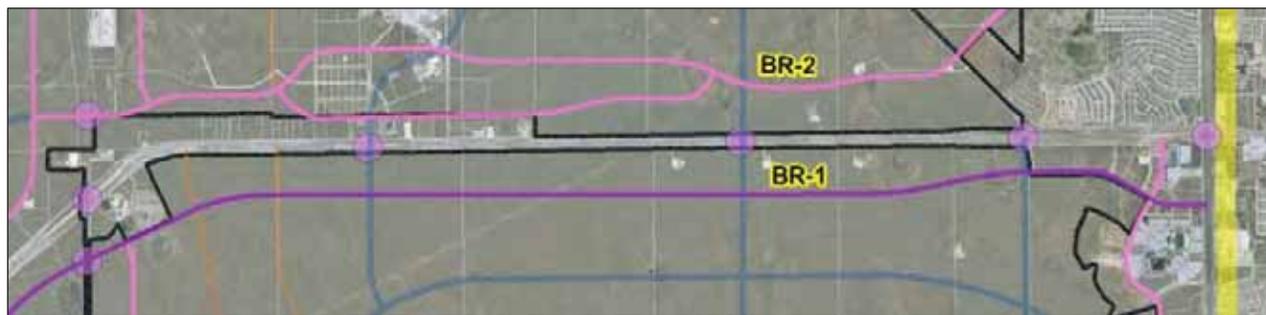
- A backage road system paralleling SH 191. This is recommended to support and enhance economic benefit opportunity to the corridor, provide additional access/circulation to adjacent area properties and offer added corridor carrying capacity. Where possible, the backage roads take advantage of existing streets and/or approved proposed connections per City Thoroughfare Plans. The backage road also aligns at varying distances from SH191 based upon critical distances needed for intersecting roadways with SH 191. Two types of backage roads are proposed: a varying lane type road within 80' of right-of-way on the north, and a "transit ready corridor" within 120' of right-of-way on the south. The potential for transit would support development of nodal centers of activity envisioned along SH 191.
- A backage road system paralleling FM 1788/SH 349. This would support long-term expansion of the corridor (anticipated with frontage roads) and maximize development opportunity of the La Entrada Corridor. Conceptual planning for reconstruction of the SH 191/FM 1788 interchange depresses the main lanes of FM 1788 (under SH 191) creating intersecting frontage roads in a manner similar to the box-diamond currently at SH 250/SH 191. The close proximity of the backage road to SH 191 may only allow for a grade separated crossing with direct access provided at further up or downstream locations to SH 349.
- Supporting east-west capacity and connectivity to developing areas within the SH 191 sub-area via a network of arterial roads including: Yukon Road (extending to the Midland International Airport), Road "C" (connecting Thomason Drive/SH250 across FM 1788 Dorado Drive), Road "E" (connecting Wadley Road across SH 349 with CR60 to SH 338), Road "D" (connecting SH 349 and 87<sup>th</sup> Street), and other supporting linkages (56<sup>th</sup> Street, Briarwood, and Road "F").
- Supporting north-south arterial facilities to provide area-wide network support and accessibility including; Grandview/FM 554, Road "1"/JB



## MOTOR MPO SH 191 Corridor Study/Management Plan

Sheppard, Faudree Road, Roads “2”, “4”, “8”, “9” and “10”/SH 158.

- Grade separated crossings with SH 191 at: SH 338, Billy Hext Road, Faudree Road, Yukon Extension, Road “4”, FM 1788, Road “8”/CR 1275, Road “9”, SH 158 and SH 250.
- A collector street network supporting the recommended arterial grid system and providing accessibility to developing areas of the study area.
- Retention of Yukon Road Extension as key entry point to the Midland International Airport from Odessa. A realignment of Yukon Road Extension further to the west along SH 191 is recommended to take advantage of roadway dedications through the Parks Bell development. The previous location for Yukon Extension (at SH 191) is inhibited due to development activity that has occurred outside Odessa and could be costly from a right-of-way acquisition perspective.
- The definition of a key north-south arterial (Road “4”), which parallels FM 1788 one mile to the west, providing key area support with: connectivity throughout the study area and at Business 20, connection point at SH191, and offering an alternative for local traffic to heavy travel demands anticipated in the FM 1788 corridor. Its central location within the SH 191 corridor is key as it will be one of few corridors (within seven miles between Faudree and new Road “9”) offering true direct local north-south accessibility within the study area. This arterial road is envisioned to follow the negotiated extraterritorial jurisdiction between the two cities and offer access to SH 191 between FM 1788 and the proposed Yukon interchange.
- Realignment of Briarwood and Mockingbird Streets to leverage system connectivity east of SH 349. Briarwood Avenue would be realigned to connect with (current) FM 1788 and Road “F” to not only reflect the new FM 1788/SH 249 interchange, but provide continuation of the arterial grid network west of FM 1788. Mockingbird Street would be realigned to the south to connect with Road “8” (extension of CR 1275) at SH 158 and in essence, providing a parallel arterial street to the east of SH 349.
- Arterial connectivity with existing major thoroughfares at SH 338 and SH 250.
- Preservation playas and other environmentally sensitive areas such as watersheds and floodplain areas. Realignment of Road “8” (CR 1275) to avoid existing quarrying operations.



# MOTOR MPO SH 191 Corridor Study/Management Plan

- An interconnected series of trails for bike and pedestrian facilities adjacent/along the key roadways and connecting to potential open space areas associated with existing playas. An equestrian trail situated along the Jal Draw and extending from Holiday Hills Road in Midland to the west along northern sector of the study area.

It is recommended that the Interim Thoroughfare Plan be implemented as quickly as possible to enable the preservation of right-of-way within the sub-area for the recommended roadway network. Adoption of the plan would also trigger platting requirements for areas within the city’s ETJ. While participation by property owners and the paving costs will help expedite the construction of these facilities, currently the more critical issue is the protection of right-of-way to ensure the facilitation of thoroughfare network in the future.



The backage road for SH 191 corridor employs two basic schemes. A “transit ready” corridor situated within a 120’ right-of-way enables consideration of potential long-term transit opportunity. Implemented initially as a divided roadway, the central median can be used initially for bike/pedestrian or landscaped amenities. As the corridor develops and transit is warranted, the center median would be converted for use by bus or fixed service. The transit ready corridor is envisioned along the southern side of SH191 and several nodal centers of activity.

To provide connectivity between SH 191 and the airport, a transit ready backage road is also envisioned along the eastern side of SH 349. This connection could also provide linkage with the new EZ Rider Multi-Modal Center currently under construction on Younger Road at the airport.

Along the north, a two-to-four lane backage road (varying 32-50’ pavement) within an 80’ right-of-way is envisioned. A range of sections were developed because of the greater range of development activity ranging from residential, to mixed-use, to industrial uses. In less intense areas, a two-lane section – divided or undivided- would offer additional area for landscaping, drainage and/or bike lanes. An undivided four-lane section could offer additional lanes at critical intersections for turn-movements. Similarly, a wide two-lane section (16’ lanes) could offer additional maneuverability for larger sized vehicles.

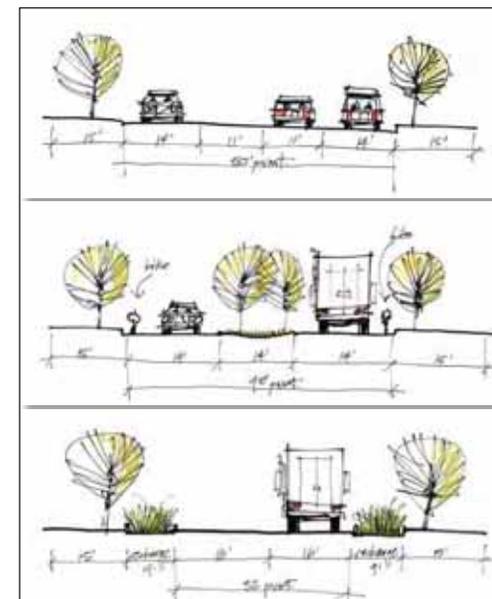


Table 4.2 lists Short and Long Term Priorities for implementation of the sub-area Thoroughfare Plan.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

Table 4.2 Sub-area Thoroughfare Plan Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Sub-area Thoroughfare Plan - Adopt. *(8)	X			Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Amend thoroughfare plans, use revised cross sections in SH 191 Corridor
# 2: Backage roads for SH 191, SH 349 and FM 1788 - Protect. *(7)	X		X	Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW by negotiating with property owners
# 3: Yukon, north/south of SH 191, and related grade separated interchange - Construct. *(7)		X	X	Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW for entire road, design/obtain financing for interchange
# 4: Road 4 - a north-south arterial one mile west of and paralleling FM 1788. *(7)		X	X	Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW, work with property owners to construct
# 5: SH191/SH349/FM1788 Interchange - Construct. *(5)		X		TXDOT, MOTOR	Plan, design and construct the 3 levels
# 6: Metropolitan Thoroughfare Plan (MTP) - Revise. *(2)	X			MOTOR	Incorporate adopted thoroughfare plan revisions into 2035 MTP
# 7: Los Canales Village Center (UTPB) - Road Support System (Roads "C", "P", "O" and related Backage Roads). *(1)	X			Midland, TXDOT, MOTOR, Midland County	Plan and obtain ROW, work with property owners to construct
# 8: CR 1275 north of SH 191 - Construct. *(1)	X			Midland, TXDOT, MOTOR, Midland County	Plan, realign and obtain ROW around the mining operation,
# 9: SH 349/FM 1788 Interchange, Realignment of CR 60, (Briarwood), Wadley (Road E)		X	X	Midland, TXDOT, MOTOR, Midland County	Plan, design and construct the grade separated interchange
# 10: Road 4 interchange with SH 191 - Construct		X		TXDOT, MOTOR	Plan, design and construct the grade separated interchange
* Indicates number of votes for this Strategy					

# MOTOR MPO SH 191 Corridor Study/Management Plan

## 4.5 Urban Design Charrette

### Process

The Consulting Team conducted a four-day Charrette to review the site, interview stakeholders and explore alternative development patterns and issues. It was an iterative process in which each day included a Staff technical review and an Advisory Committee review. Day One, the Charrette Team drove around the site and both Midland and Odessa to better understand development patterns and issues. Day Two, three concepts were explored and presented to the Advisory Committee, where they were discussed and direction given for refinements on Day Three. On Day Four, a recommended scenario was prepared and presented along with the “business as usual” scenario to Staff, the Advisory Committee and, in the evening, to the general public.

### Guiding Principles

An overarching goal in preparing the Preferred Concept is to help ensure that the resulting development will have *enduring value* – that people will want to stay and reinvest in residential and commercial properties. Much, though certainly not all, of the Midland-Odessa area has been developed with projects with a limited economic life-span, and can become functionally obsolete and worn out within its 20 to 30 year depreciation period.

Building “enduring value” includes addressing the following factors:

- Changing Demographics
- Changing Preferences
- Types of Value (Long-term vs. short-term implications)
- Proximity Premiums
- Traditional Neighborhood Plans

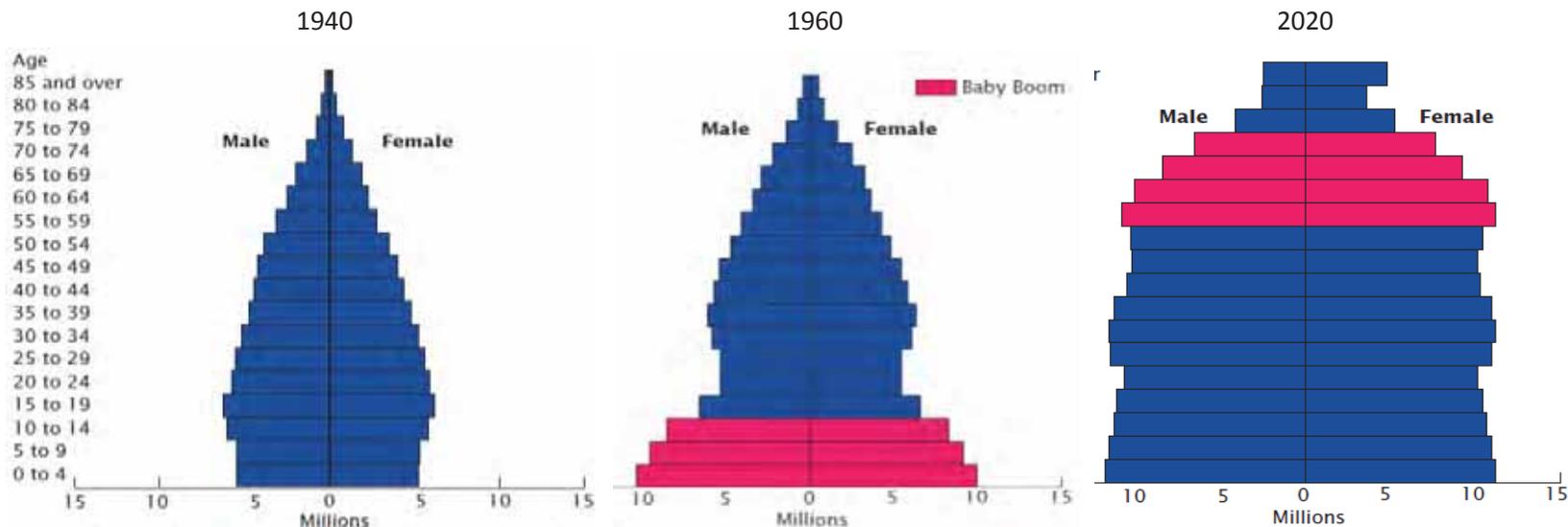


# MOTOR MPO SH 191 Corridor Study/Management Plan

## Changing Demographics

The Baby Boomers along with significant advances in healthcare have created a shift in household size and type. Currently, less than one-third of households have children while over 26% are single-person households. Though Midland-Odessa is certainly a unique community, it is not immune to these far reaching changes.

Fewer Traditional Households			
Household	1960	2000	2030
With Children	48%	33%	28%
Without Children	52%	67%	72%
Single	13%	26%	28%



## Changing Preferences

The change in age and household type is yielding very different preferences in terms of lifestyle:

- Affluent elderly are wanting urbane opportunities (AARP)
- 71% of elderly want transit options (AARP)
- 50% of public want expanded transit investment, but only 25% want new roads (NAR)
- Young Professionals are delaying child-rearing
- Even families with children are increasingly looking for pedestrian-oriented communities

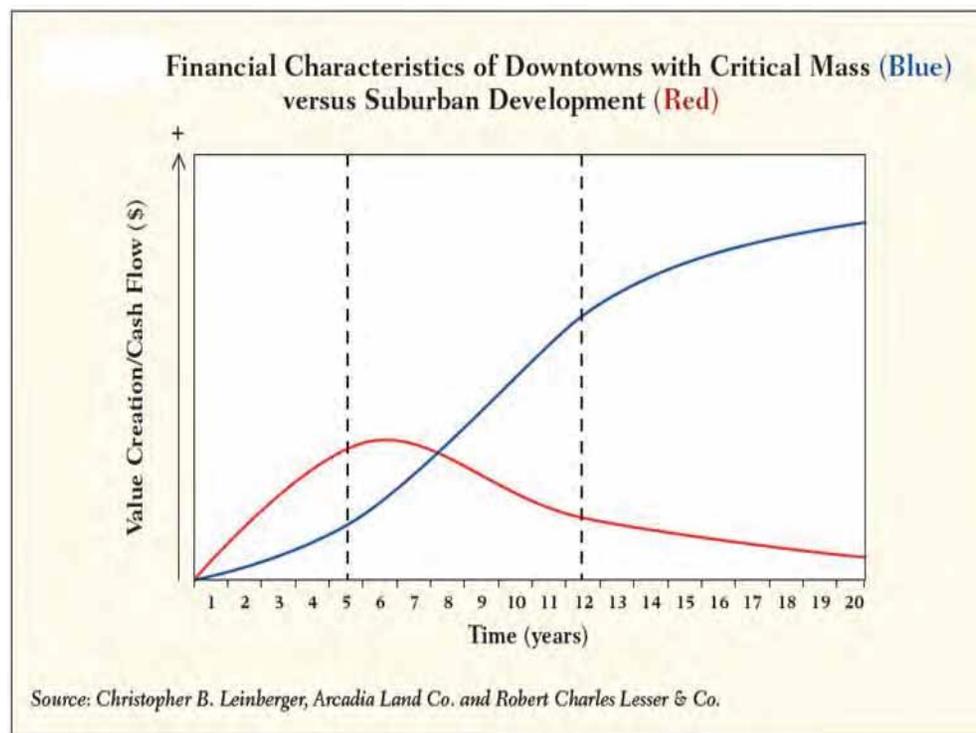


## MOTOR MPO SH 191 Corridor Study/Management Plan

### Types of Value

There are two types of value: initial and long term. Initial value reflects the immediate market need in terms of buildings (often single-purpose buildings) and services. Its value is largely because of its newness, and will likely decline over time. The development industry is very effective at creating this type of development, whether it is single family tract homes or pad site retail development. Chain restaurants and retail stores are good examples of this. They are viewed as a vehicle to take advantage of a market, and when the building ages or owners determine that the market is not as strong as they would like, the building is often abandoned and another one built in another location. To large chain store companies, this is simply the cost of doing business. There is no consideration for the impact of the outmoded building on the community or the tax base of the city.

On the other hand, long term value attracts reinvestment and infill over time because the infrastructure of buildings creates a “sense of place” and is capable of being upgraded and reused by subsequent owners and tenants. This contributes to a sustained and increasing value to the owners and to the community. This type of development helps to reduce sprawl and run-down inner city areas.



The study by Leinberger and Lesser compared typical suburban development with higher density, pedestrian oriented development across the country

# MOTOR MPO SH 191 Corridor Study/Management Plan

Building design and materials, site layout and public infrastructure improvements (streets, streetscaping, drainage, etc.) largely determine longer term reinvestment potential.

Retail and commercial development benefit from locations with easy access, a high level of identity and proximity to its market place or employee base.

## Why is Creating Long Term Value Important?



Short Term Value  
single-purpose building



Long Term Value building capable of re-use and reinvestment over time

## Proximity Premiums

There are “proximity premiums” for residential developments which are near open space, trails, retail services, schools, transit and walkable or cycle-able development. For example, there is a proximity premium of 23% for properties within 100 feet of a public open space and value premium extends for properties within one quarter of a mile of such open space<sup>4</sup>. Similarly, transit availability for fixed rail systems can yield 20-25% in value.<sup>5</sup>



<sup>4</sup> *Valuing Open Space: Land Economics and Neighborhood Parks*, Massachusetts Institute of Technology Center For Real Estate, and School Of Architecture. Based on MLS Data for 3,400 Home Re-sales Near 15 Neighborhood Parks Across DFW

<sup>5</sup> UNT Center for Economic Development and Research, DART Light Rail’s Effect on Taxable Property Valuations and Transit-Oriented Development, January 2003

## MOTOR MPO SH 191 Corridor Study/Management Plan

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### Traditional Neighborhoods

Traditionally, pre-1950, neighborhoods often contained different housing types and sizes (single family, townhouse and flats) along with some locally serving retail. This allowed a person to be born, grow up and retire in the same neighborhood surrounded by life-long friends and family. Because of the variety of the size and types of housing, each residence was unique and was valued at a premium because they were different and each one had a different set of amenities – proximity to retail and shopping, public parks, trails and transportation. Those neighborhoods endure today as some of the most valuable property in communities across the country, such as University Park in Dallas and Lake Park outside of Chicago.



Lake Park, IL

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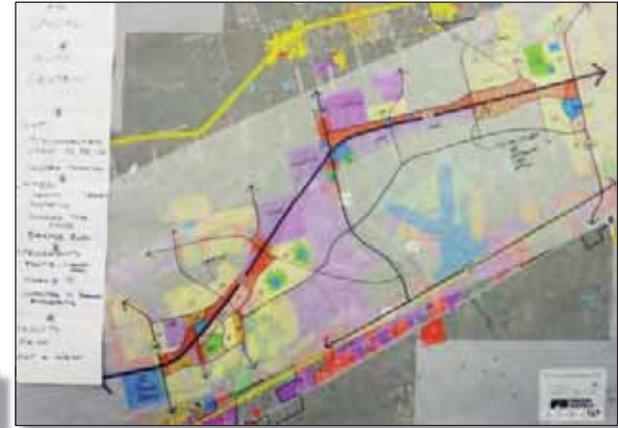
## 4.5.1 Alternatives

Three initial concepts were developed:

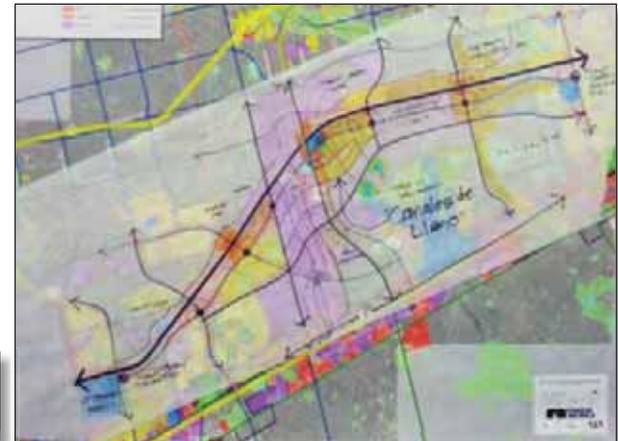
1. *Business as Usual*, where existing policies and standards are continued without change.
2. *Mixed Use Walkable Transit Centers*, where Village and Neighborhood type centers would be created to provide identity and image for the area without relying on individual projects to create a positive impact.
3. *Fiscally Responsible/Energy Efficient*, where development would take advantage of special accessible locations in the corridor and minimize travel distance between home and retail/restaurant activities and where water and energy resources are minimized.

The *Mixed Use/Walkable* and the *Fiscally Responsible* concepts were refined and merged to yield the Preferred Development Concept that was presented to the public for comment on the evening of Day Four.

*Business as Usual*



*Mixed Use Walkable  
Transit Centers*



*Fiscally Responsible/  
Energy Efficient*

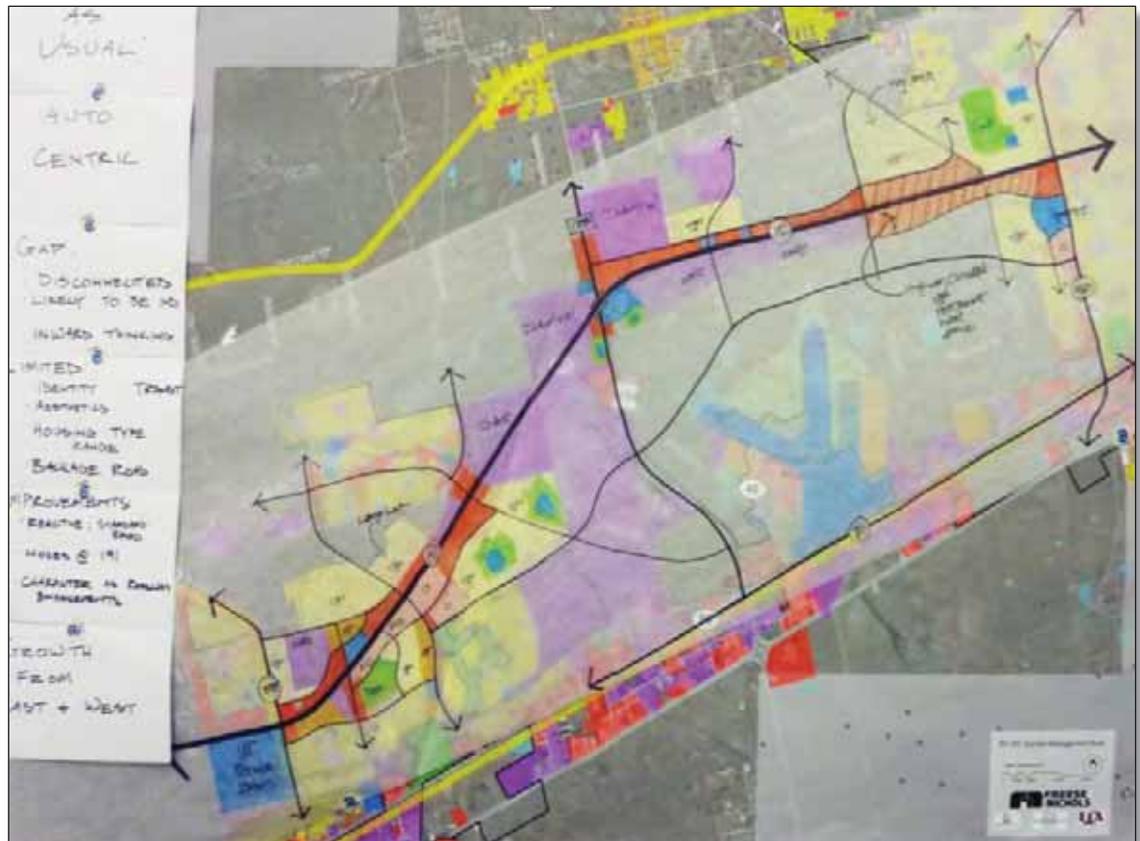


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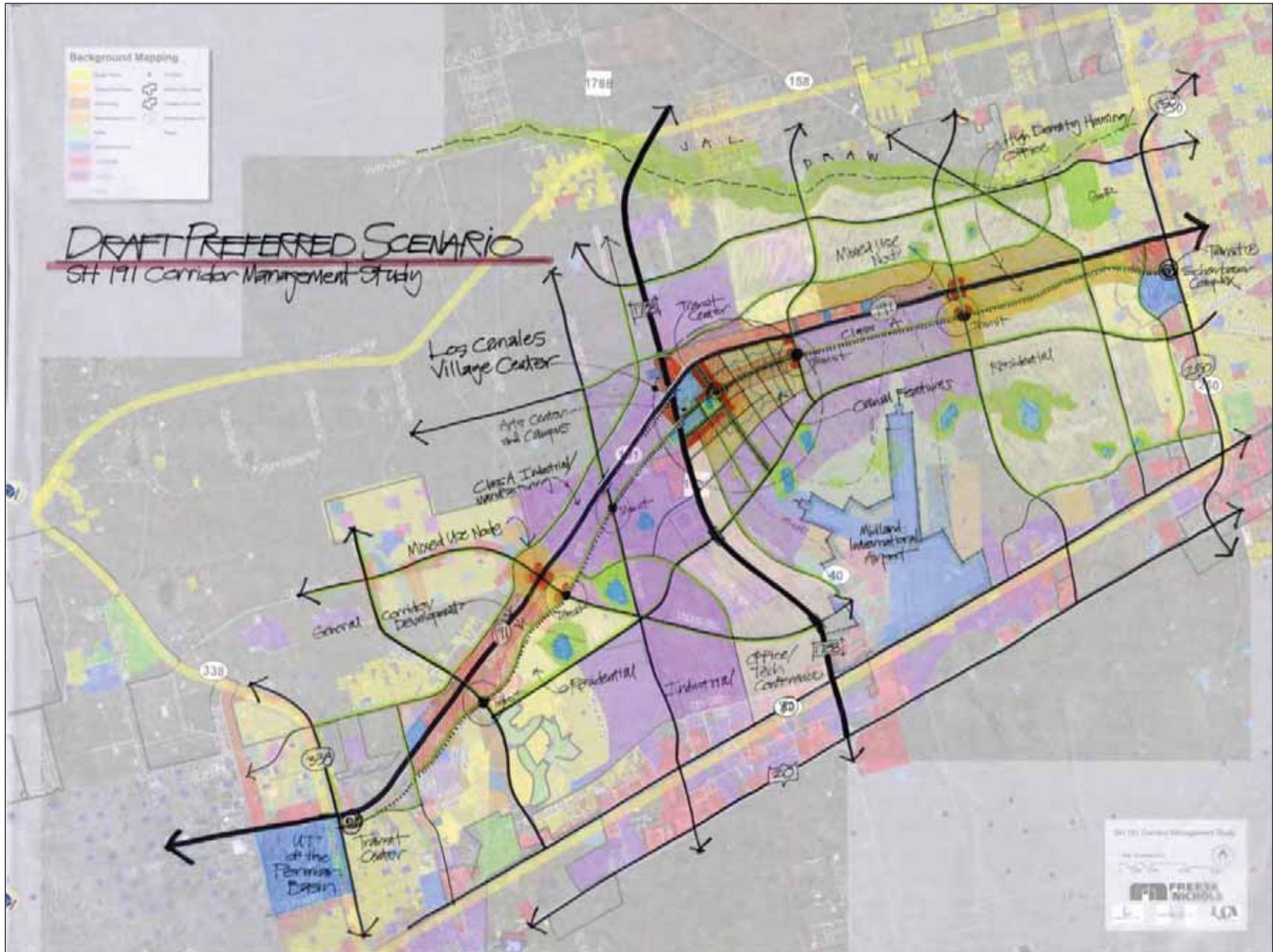
## 4.5.2 Business As Usual Concept

The *Business as Usual* Concept reflects the continuation of several current practices that will have a long term impact of the region as both a place to do business as well as a place to live. It is characterized by:

1. Stripping out development of industrial and retail uses. This includes pad site development with no shared access.
2. The inability to provide good circulation access to land not fronting directly on the highway by precluding the creation of “backage” roads that allow reverse circulation for properties facing the one-way service roads.
3. The continuation of minimal development standards including unpaved streets and a lack of building and sign standards in portions of the western half of the corridor.
4. The lack of ability to preserve a transportation corridor right-of-way for future transit use.
5. Lack of a strategy to work with the needs of pump jacks and services to accommodate long term development.
6. Lack of a strategy to deal with storm water drainage in a way that creates amenity for development.



# MOTOR MPO SH 191 Corridor Study/Management Plan



# MOTOR MPO SH 191 Corridor Study/Management Plan

## 4.5.3 Preferred Development Concept

### Midland-Odessa, the Next 100 Years

Midland-Odessa is 100 years old. Considering the development pattern and standards for their implications over the next 100 years is the theme for the Highway 191 Corridor. It is well connected to both cities and the Airport, and provides the region’s greatest opportunity to provide quality growth for decades. It provides a major opportunity to improve the region as a place to live and work, and to drive economic development to the benefit of all residents and businesses.

Though there are several examples of good development that has occurred, the corridor has issues that must be addressed. It is being developed for land uses in a haphazard way that is far from the highest and best uses for this location in the region. The pattern of subdivision and development will not easily be able to change as the region matures.

In addition, it is also rapidly being subdivided into 40-acre drilling leases and serviced by collection pipes and battery tanks that limit its ability to accommodate surface development. However, there are excellent examples in the region where long term extraction and residential and commercial development can coincide.

### Preferred Scenario

The Preferred Scenario on the next page which was prepared in conjunction with input from staff, property owners, mineral rights owners, drilling operators and the general public. It presents a framework of roads, amenities and land uses that provides flexibility for growth and reinvestment over time.

### Mixed Use Village Centers

A key structuring element is to identify higher density pedestrian-oriented mixed use centers that have excellent regional roadway access and the ability to be linked by transit in the long term. These centers focus on the southern “backage” road with direct access to Highway 191. They occur at East Yukon, Hwy 1788, New Road “8” and New Road “9”. These centers can provide a different environment for living, working, dining and shopping in the region by making them pedestrian oriented and bicycle friendly. They should be higher density and have abundant shade for the comfort of pedestrian and outside activities.

Buildings would be built close to the sidewalk with windows at grade and street trees to provide an attractive public realm.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Las Canales Village Center

The main Village Center, called the “Las Canales Village Center” in this concept, will truly be a regional resource because of several factors - its location midway between Midland and Odessa, its high level of regional accessibility, and its location near the Airport. It already contains the new Performing Art Center and UT Permian Basin is planning to locate an Engineering Campus there. These cultural landmarks in combination with residential, restaurants and businesses can become a major landmark center.

Las Canales (“the canals” in Spanish) refers to the ability to create surface drainage as a wet/dry landscape amenity which could interconnect the entire development, and to enhance property values at the same time as dealing a major drainage utility. The focus of the entire district could be a major public square between the Performing Arts and the University Campus which could serve as a future transit stop between the two cities.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Land Uses

### Industrial

Industrial and non-noise sensitive uses should be located within the noise contours of the airport. They should also be located along New Road “4” as indicated in the drawing. The area east of New Road “4” and south of the extension of Dorado Dr. could be utilized for intermodal cargo and distribution with its proximity to freight rail lines.

### Office/Technical Conference

The area immediately west of the Airport is an opportunity to attract office, research and technical land uses that would benefit from Airport and University accessibility. This area could include a major conference center. These uses would also be appropriate in the Las Canales Village Center.

### Retail

Retail uses would focus in the various Village Centers, and the bigger box type retail would likely locate along Hwy 191 between Billy Hext and Yukon, and on the north side of Hwy 191 east of Hwy 1788.

### Residential

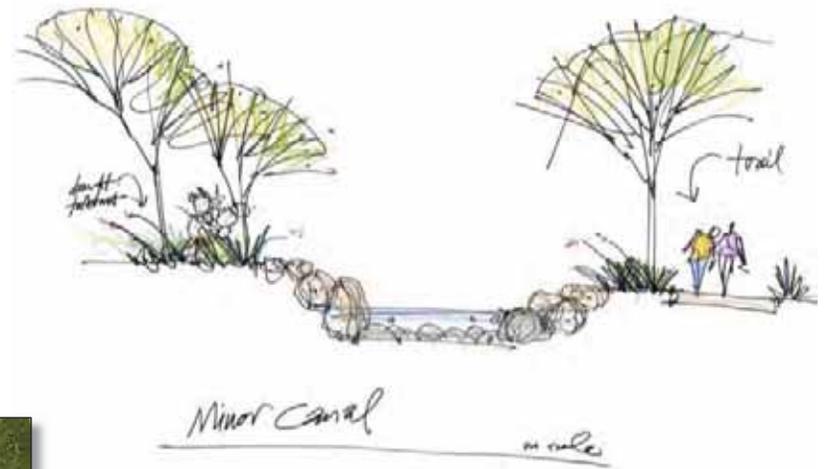
The balance of the area should be a mixture of residential types to complement the existing single family and apartments in the region. Multi-family and townhomes would focus on the Village Centers, while traditional single family and a mixture of large and small lot along with townhome uses would be included in other residential areas. The key here is to ensure that there is a variety of housing types provided to meet the needs of people throughout their life cycle.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## Landscape, Open Space and Drainage

A very important element of the concept is the treatment of the landscape in Midland-Odessa. It is arid with playas and flash flooding. There are other areas in the country that have addressed this type of environment with great success, such as Nevada and Arizona. They provide good examples of how this difficult condition can be made into a unique amenity.

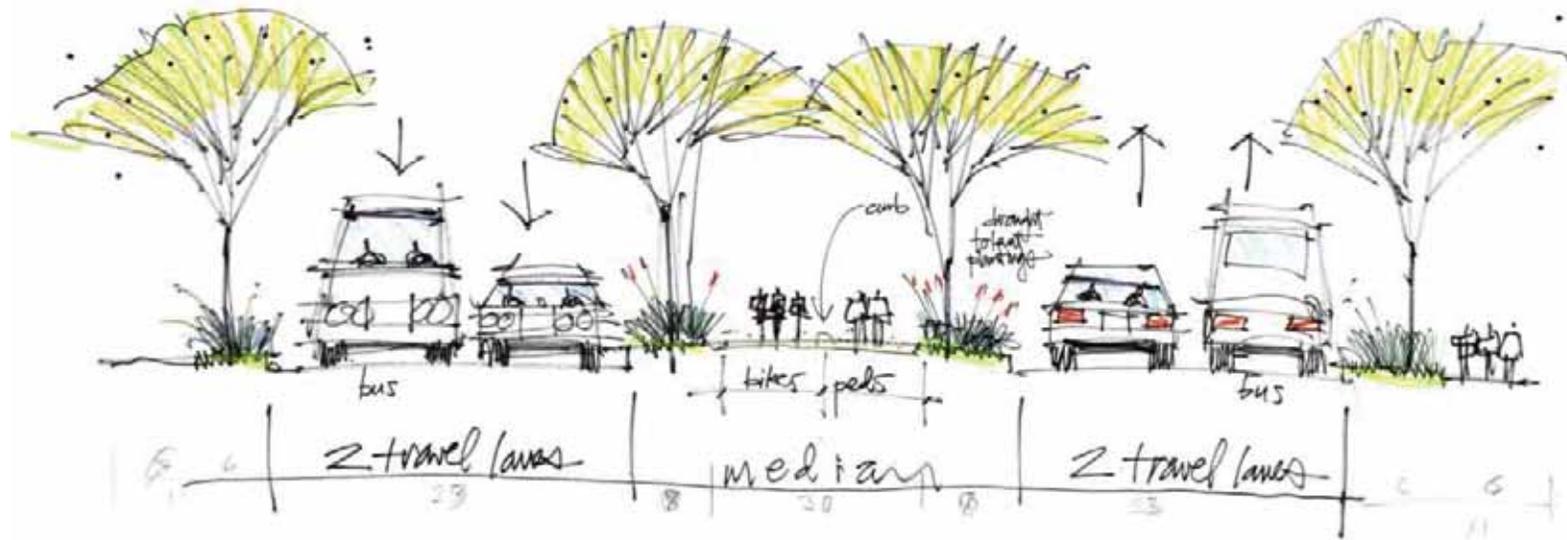


# MOTOR MPO SH 191 Corridor Study/Management Plan



## Transit

Fortunately, this corridor can easily become “transit-ready” in terms of higher density residential and commercial uses, pedestrian-orientation, and connections to educational and cultural facilities. It will be important to design the roadway cross sections so that transit can easily be accommodated in the future.

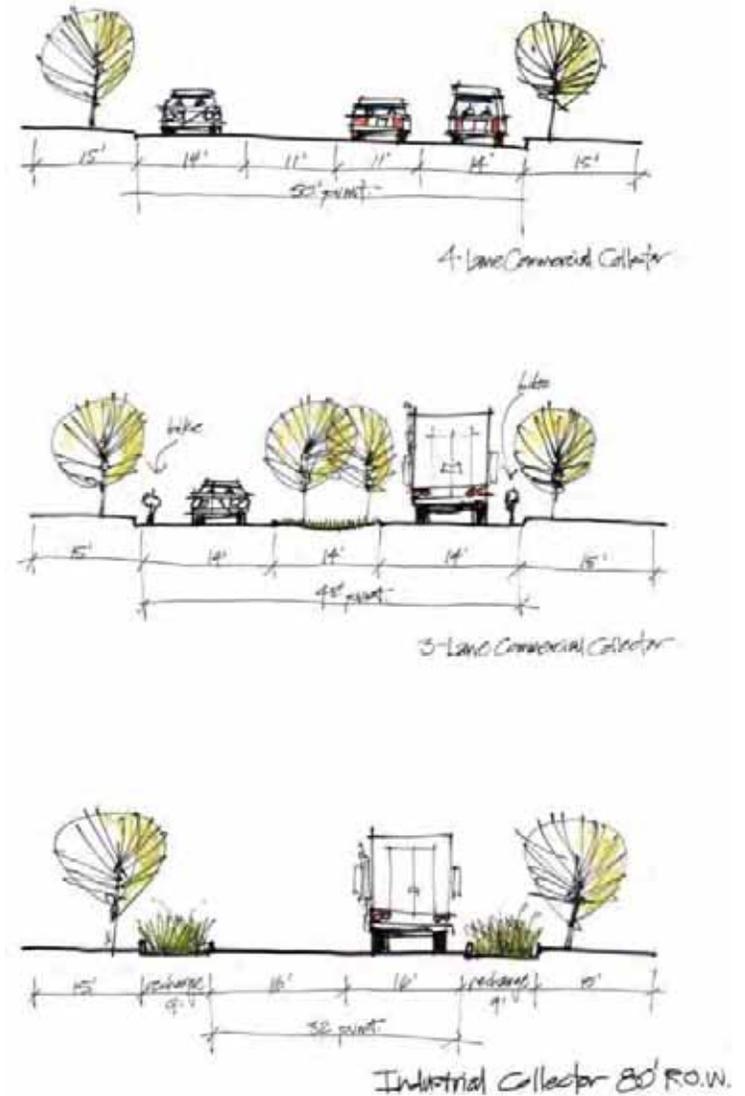


# MOTOR MPO SH 191 Corridor Study/Management Plan

## 4.6 Recommendations

- Create a special intergovernmental corridor zone to apply uniform and consistent standards for development including subdivision, thoroughfare, drainage and flood control, landscape and zoning standards.
  - All agencies adopt a thoroughfare plan for this area that ensures accommodation of autos, pedestrians and bicycles with street cross-sections and streetscaping that is appropriate for the adjacent development type. Narrow travel lanes, allow on-street parking and provide streetscaping to achieve desired drive speeds.
- Adopt a strategy, including standards, to improve playas and drainage corridors as an amenity for development and the community at large.
- Adopt a strategy to encourage joint development with pump jacks.
- Create a form based code for village centers to ensure that every development that is constructed contributes to creating a “great place” to the benefit of all.
- Encourage development that uses less water, provides xeriscape and shade.
- Establish a region-wide interconnecting hike/bike trail Master Plan.

Table 4.6 lists short and long-range strategies based on input and planning from the Urban Design Charrette. Short and long-term strategies for mixed use development opportunity, design standards, and transportation systems connectivity were developed based on planning conducted throughout the course of study. Actions were ranked based on input received from the Public Meeting held on May 17, 2012.



# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

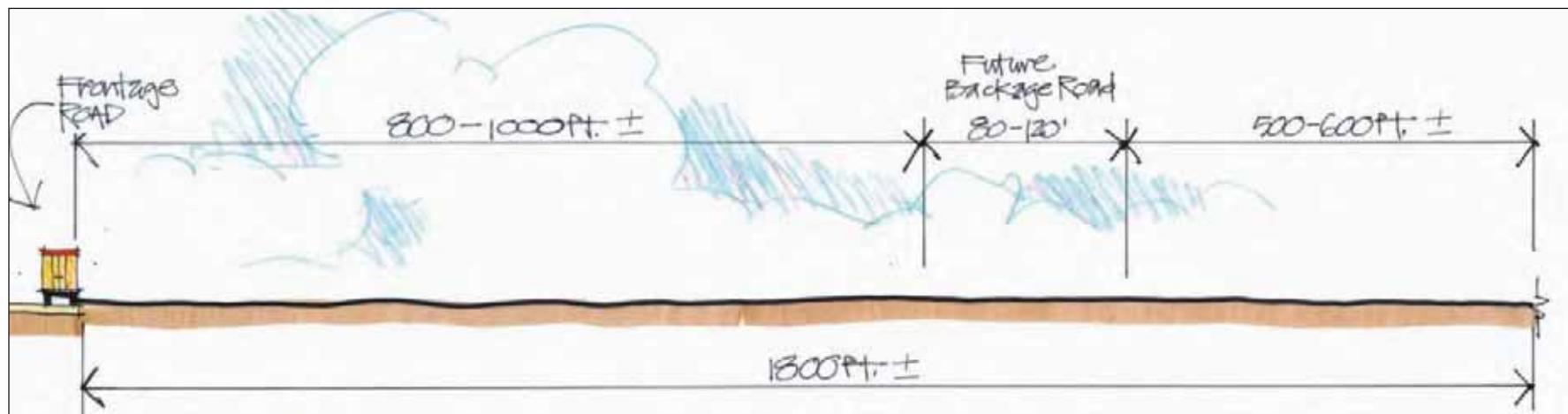
Table 4.6 Urban Design Charrette Recommended Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Develop “pedestrian oriented” village centers/nodes at major interchanges and backage roads as shown, especially around UTPB “Los Canales” Center. *(14)		X		Cities of Midland and Odessa, Property Owners	Work with property owners to develop more detailed plans, concepts, etc.
# 2: Develop standards for and provide generous landscaping (desert tolerant) and trees behind curbs, around buildings, and along drainageways and open space/trails. *(9).	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector, property owners	Develop common tree , landscaping requirements and standards for various roads, centers
# 3: Utilize street trees to shade sidewalks and paving to make walking/biking more comfortable. *(6)			X	Midland, Odessa, TXDOT, Counties of Midland, Ector, property owners	Develop common tree requirements and standards for various roads, centers
# 4: Connect the system to the greater region with hike/bike/equestrian trails to encourage recreation and enhance value creation. (also see Multi-Modal). *(5)		X		Midland, Odessa, TXDOT, Counties of Midland, Ector, owners	Develop hike/bike/equestrian trail plan, amend subdivision ordinance, design standards to require
# 5: Require a mix of uses including different types of residential, office, retail and flex space, especially at the nodes with density/intensity supportive of transit stops. *(4)		X		Cities of Midland and Odessa	Adopt Overlay Zoning District with Form Based Provisions
# 6: Encourage buildings to be close to streets with extra wide sidewalks with parking in block centers in the village centers to give a pedestrian oriented “urban” feel. *(1)	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District with Form Based Provisions
# 7: Preserve playas as open space and drainage system, and use the storm drainage system as an amenity to development, especially within the village centers. *(1)	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector	Revise subdivision ordinance and drainage manuals
# 8: Provide key open spaces/plazas associated with retail, office, residential centers. *(1)		X		Midland, Odessa, Counties of Midland, Ector, owners	Work with property owners to “incentivize” qualified development
# 9: Identify locations for “landmark” buildings, encourage design and construction, especially in the village centers, visible from SH 191 and/or the backage roads. *(1)		X		Midland, Odessa, Counties of Midland, Ector, owners	Work with property owners to “incentivize” qualified development
# 10: Establish rules to require entryway and gateway features, regulate on-site and off-site signage (number, size, location, height).	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
* Indicates number of votes for this Strategy					

## Chapter 5 Corridor Management Master Plan

### 5.1 Short/Long Term Land Use Strategies

#### Short Term Land Use Strategies – Corridor Existing Situation

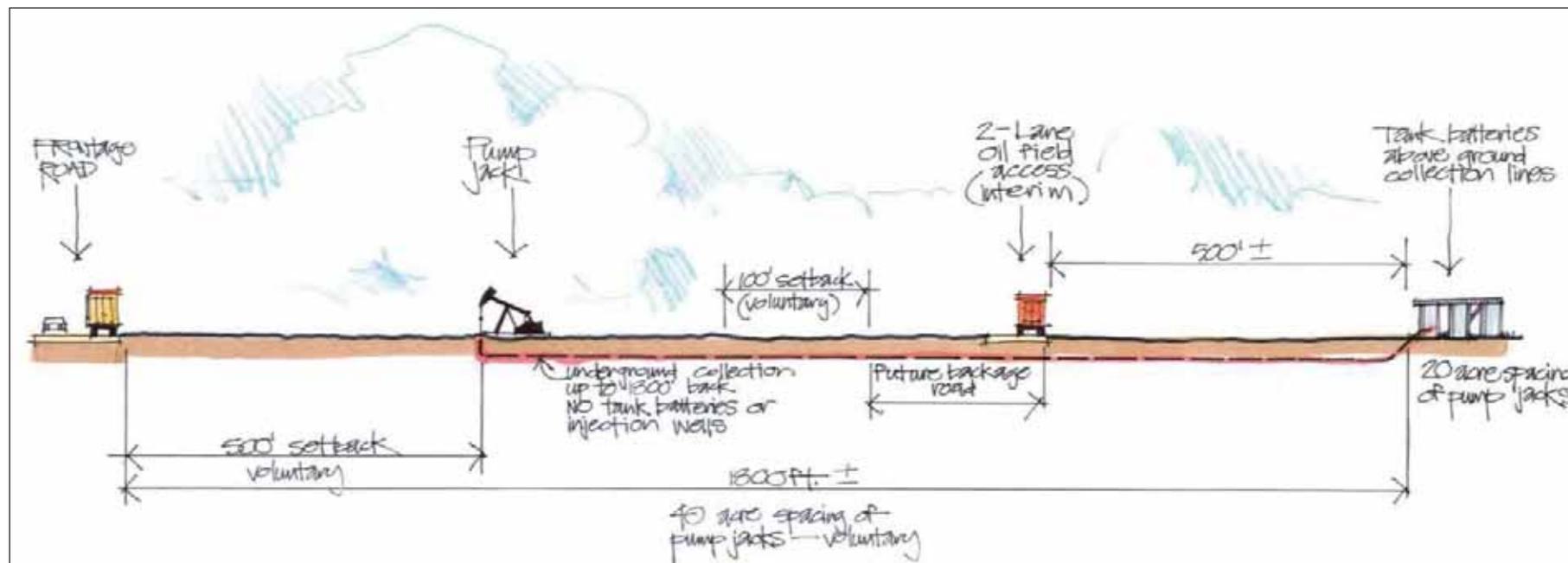


The primary purpose of this Plan is to develop strategies to manage the land use and control the access issues on both sides of the SH 191 Corridor. As documented in the Annexation and Extraterritorial Jurisdiction (ETJ) Strategies, land that is outside the City limits and under County jurisdiction has limited authority for land use control and access management. One of the top priority recommendations of this document is that the Cities of Midland and Odessa annex 1,800 feet back from the access road on both sides of SH 191 so that the entire length is under the authority of a municipality. As shown above, the 1,800 feet not only provides control of the land fronting on the access road but also the development on both sides of the backage road. The 1,800 feet may need to be slightly adjusted to avoid splitting parcels but provides a good, rational standard. The City may want to consider the use of a developer agreement on properties that have significant objection to annexation. The goal is to manage the development process, provide for the backage roads and control haphazard and illegal access to the roadway system. If a property owner and their successors contract to abide by the development rules of a City, then it is an acceptable alternative. Terms of the agreement should be a “voluntary” request for annexation, however, if terms are violated, City should immediately implement the annexation.

There is some ability to regulate the platting of land in the extraterritorial jurisdiction (ETJ) of the two cities. The Cities, in effect, can regulate parcel sizes and frontages, provide for road dedications and construction, and require cross access easements and shared driveways. The number one ranked strategy in Table 3.1 SH 191 Sub-Area Land Use and Annexation Strategies is to develop a common platting ordinance.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## Mid-term Land Use Strategies – Corridor Oil Field Guidelines



As documented in the Section on Oil Wells in Chapter 3.4 “Development Influences” the oil industry and their production facilities has had a huge impact on the SH 191 Corridor in the last five years. It is recommended that within the 1,800 feet on both sides of the corridor under City authority, that a set of oil well drilling and production guidelines and regulations be developed. While drilling and pump jacks probably cannot be prohibited, negotiations with property owners, mineral interest holders and operators should be encouraged/incentivized to not have them within 500 feet of the access road and 100 feet on both sides of the backage road it. The 40 acres spacing should also be maintained. In addition, tank batteries or injection wells should be kept out of the 1800 foot area and all collection lines should ultimately be placed underground. This will protect the view corridor of SH 191 and reserve viable areas for the future development that both Cities, Counties and citizens have indicated they want.

The right-of-way for the backage roads should also be negotiated for or required of developers as quickly as possible to protect their development in the future. There may be some segments that should be constructed immediately to provide access and encourage development. In the interim, a separate road system should use the ROW to provide access to the oil facilities to reduce the access and deterioration issues of the frontage road.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## Long Term Land Use Strategies – Corridor Urban Design Guidelines



The reasons for the Short and Mid-Term Land Use Strategies are demonstrated in the illustration above. By annexing the 1,800 feet, protecting the backage road ROW, and obtaining compliance on the setbacks for oil field equipment, reasonable development opportunities are provided for. Both Cities should implement a “Special Intergovernmental Corridor Zone” to apply agreed upon, uniform and consistent standards for development. It should include zoning, land use, urban design, subdivision, thoroughfare, drainage and flood control, and landscape standards as recommended in Section 3.4 “Recommendations” that resulted from the Urban Design Charrette process.

Among those recommendations where locating the buildings closer to the roadways with both a minimum landscaped setback and a maximum setback with screened storage and additional parking in the rear of the buildings. In addition, pump jacks will be screened and collection lines will be underground. The frontages along SH 191 and the backage road will be visually screened from the oil field equipment, thereby reducing their impact on development. The backage road and the use of cross access easements will provide two way access to the properties and reduce the traffic and conflicts on the access road. Finally, the south backage road will provide a transit-ready corridor within walking distance of nearly all the uses. Included will be the bike and pedestrian-ways.

Table 5.1 lists short and long term land use strategies that will enable upscale development to coexist and integrate with oil industry operations. The Cities and Counties will be required to take a leadership role in facilitating this effort as single properties cannot accomplish it alone. Actions were ranked based on input received from the Public Meeting held on May 17, 2012.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

Table 5.1 Short/Long Term Corridor Land Use Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Annex 1800 feet on both sides of SH 191 along entire 14 mile length of corridor. *(12)	X			Cities of Midland and Odessa	Initiate annexation especially prior to development
# 2: Maintain 40 acre spacing in 1800 foot corridor and keep pump jacks 500 feet back from frontage road, 100 feet from backage road. *(12)	X		X	Cities of Midland and Odessa, Mineral Interests, Operators	Negotiate with operators, mineral interests
# 3: Protect backage roads from oil and development encroachment by immediately acquiring right of way for entire 14 mile length of corridor, especially at nodes or developing areas. *(8).	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector,	Negotiate with property owners, set aside funds, use eminent domain
# 4: In annexed areas, place requirements that tank batteries and injection wells must be at least 1800 feet back from frontage road. *(6)	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
# 5: In annexed areas, require collection lines to ultimately be placed underground within 1800 feet of the SH 191 frontage road. *(5)	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
# 6: Require outside storage to be behind main buildings and screened from major roadways. Wood, metal, chain link fencing to be avoided unless screened with solid vegetation. *(4)	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District
# 7: Require all roads within 1800 feet of frontage road/development nodes to be paved with fire protection and sidewalks close to buildings to encourage pedestrian connectivity. *(1)	X		X	Cities of Midland and Odessa	Revise subdivision ordinance
# 8: On properties disputing annexation within 1800 feet, negotiate developer agreement with same requirements as annexed areas	X			Cities of Midland and Odessa	If disputed, negotiate developer agreement
# 9: Require main buildings to be closer to roadway, with maximum setback of 100 feet with no more than one parking bay with landscaping. Additional parking behind buildings in center of block.		X	X	Cities of Midland and Odessa	Adopt Overlay Zoning District
# 10: Metal building facades visible from freeway, backage road and other ROW shall be prohibited.	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District

\* Indicates number of votes for this Strategy

## 5.2 Multi-modal Transportation Strategies

The Sub-Area Thoroughfare Plan as defined in Section 4.4 establishes a framework for a range of multi-modal system improvements throughout the study area. If implemented, this creates transit, bike and pedestrian connections, serves to inter-connect SH 191 land uses and other key uses within the subarea, and ultimately enhances area-wide mobility. The following highlights some of these strategies detailed in Table 5.2. Strategies were ranked based on input received from the Public Meeting held on May 17, 2012.

### Transit

The backage road system situated along the south side of SH 191 establishes a divided roadway with the median intended for potential long-term transit use. This “transit ready” corridor could be implemented in phases for bus/shuttle operations and serving various nodes of mixed use development along SH 191. Long-term, potential fixed service could be implemented.

The “transit ready” could also be implemented along SH 349 (from the east backage road) between the proposed Los Canales Village Center and the airport/multi-modal transit center to connect with air and regional bus service.

The Wagner Noel Performing Arts Center has been discussed as a possible Park & Ride location to support shuttle service by UTPB for the CEED and Engineering School. Subsequently, this shuttle system could be a potential partner for system connectivity with the broader range of service offered by EZ Rider.

Finally, the backage road system service to link various mixed use nodes together could be the initial and logical expansion of the EZ Express system over the short-term.

### Bike/Pedestrian

The Plan identifies an interconnected series of trails for bike and pedestrian facilities adjacent/along key roadways and provides connectivity with mixed use development nodes envisioned along SH 191. This system could provide connections between schools, retail areas, institutional and open space uses situated around playas and open space areas. Trails are envisioned to be 8-10 feet in width and be a combination of on and off-street trails. The trail system spans roadways throughout the study area.

An equestrian trail is also included and situated along the Jal Draw and extending from Holiday Hills Road in Midland to Odessa along the northern edge of the study area. Other key connections envisioned by these trails are linkage with the proposed West Midland Bikeway and the East Odessa Greenway/Bikepath. These two proposed bikepath facilities extend well into Midland and Odessa offering connections with other trails throughout each city.

### Rail/Freight Rail

While no rail lines were identified on the plan map per se, there was discussion about linking southern sectors properties for a potential inland port or intermodal hub. To create such an opportunity, there would need to be a rail spur from the UP line (running parallel to Bus 20), or a new line traversing the study area. It is envisioned that as the La Entrada Trade Corridor generates economic stimulus, some type of rail connection to/from Lubbock that is a viable option to rail connections via Monahans or Sweet Water.

### Airport

Providing connectivity with the Midland International Airport is crucial for daily business within the region. As mentioned earlier, there is opportunity for transit connection via a transit ready backage road along SH 349.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

Table 5.2 Multi-Modal Transportation Strategies and Recommendations

What	Short Term	Long Term	On Going	Who	How
# 1: Implement “transit ready corridor backage road” for transit service opportunity within SH191 corridor. Additional ROW within center of roadway allows for short and long-term transit between mixed use nodes. *(7).	X	X		Midland and Odessa, Transit Agencies, MPO	Include corridor on Transit System Plans and Metropolitan Transportation Plan
# 2: Develop a detailed system wide bike plan, including connections with SH 191 corridor/Mixed Use Centers (includes north/south facilities across SH 191). *(4)	X			Midland, Odessa, TXDOT	Work with the bicycle interests and other experts to develop a bike system SH 191 Sub-area Plan.
# 3: Designate multi-modal transit hubs at key location areas within the corridor, at UT Permian Basin at SH338, Scharbauer Complex at SH 250, at “Los Canales Village Center” at FM1788, key arterial crossings. *(3).	X			Midland and Odessa, Transit Agencies, MPO	Transit Systems Plan and Metropolitan Transportation Plan
# 4: Coordinate equestrian trail connectivity and system phasing with other bike/pedestrian linkages. *(2).		X		Midland and Odessa	Equestrian trail programming and CIP
# 5: Identify short and long-term transit options for “transit ready corridor” and system phasing/implementation; develop phasing of transit corridor improvements. *(1).	X			Midland and Odessa, Transit Agencies,	Transit programming and CIP
# 6: Identify long-term transit connection from “Los Canales Village Center” with Midland International Airport, other regional significant connection points.	X			Midland and Odessa, Transit Agencies, MPO	Transit Systems Plan and Metropolitan Transportation Plan
# 7: Investigate funding mechanisms for transit system development and implementation including public-private partnerships.	X		X	Midland and Odessa, Transit Agencies, MPO	Utilize various funding mechanisms and strategies
# 8: Coordinate and implement trail linkages with transit station programming.	X			Midland and Odessa, Transit Agencies,	Bike/Pedestrian System integration and programming
# 9: Identify general station area design features, amenities and requirements/needs	X	X		Midland and Odessa, Transit Agencies,	Station area planning
* Indicates number of votes for this Strategy					

## 5.3 Economic Development Strategies

The following development strategies should be employed by the cities as a method of enhancing economic development in the study area.

### Retail Development

Several nodes along SH 191 have been identified as appropriate for retail development. One of the best incentive tools to stimulate retail development is use of a Chapter 380 grant. Utilizing this program, the City would agree to rebate to the developer a portion of the new sales tax the retail development will generate. It is important that the agreement between the City and the developer specify the rebate only applies to new sales tax generated. This is especially important in cases where an existing under-performing retail development is being redeveloped and new retail brought in. The City should determine the existing level of sales tax being generated, and only rebate a portion of the sales tax generated above the existing level. The 380 agreement should also indicate the type of retail desired by the City, not necessarily by name, but by the level of attractiveness to the City and by need. A 380 agreement could also specify rebate of new real property tax either in addition to sales tax or in-lieu-of, although in most cases, property tax rebate is not as attractive as sales tax.

### Residential Development

Although tax rebates through the use of 380 agreements discussed above may be successfully used to stimulate retail development, retail likely won't happen until rooftops are in place to support new retail. There is, therefore, a need to stimulate development of upscale apartments and other residential types between the identified retail nodes. One method to not only stimulate residential development, but to stimulate more upscale residential development, is the creation of a TIRZ. A City may create a TIRZ for residential development over a totally vacant land area, or even if some residential already exists, as long as no more than 30 percent of the property is used for residential purposes, a TIRZ is allowed. Income to the TIRZ fund may be used to incentivize a residential developer to provide a higher level of public

amenities in their development (more landscaping, water features, brick pavers, period street lights, etc.) which in turn should result in a more upscale residential development. Of course, the TIRZ fund also may be used for the more typical streets and utilities, but should only be applied to major streets and trunk utility lines.

One downside to incentivizing a higher level of public amenities in residential developments is the added cost of maintenance of those amenities. Many upscale residential developments will establish Homeowner's Associations which assess each homeowner an amount, in addition to property taxes, to cover the higher maintenance costs. However, there are instances where Homeowner's Associations have trouble collecting assessments and are therefore unable to maintain the amenities. A more preferable method to help ensure on-going maintenance costs is creation of a Public Improvement District (PID). In this case, the developer, before lots are sold, petitions the City to create a PID. The PID is managed by a Board that estimates the service or maintenance costs for the year and projects the assessment rate required to cover service costs and reviews this with the City for approval. The major benefits of the PID are oversight from the City and the ability to place a lien on property (second only to property tax) for collection of the assessment.

### Industrial Development

This study has pointed out the need to upgrade any new industrial development along the corridor, to create an industrial park with railroad spurs on the west side of FM 1788 and airport related industrial around the airport. Again, a number of available tools could be utilized to accomplish these goals, but each development should be evaluated on its own to determine the most appropriate tools. In some cases a TIRZ might be the most appropriate, or tax abatement, or a 380 agreement, or one or more of the tools available from the State, or a combination of these. Again, whatever method is used, it should be

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focused to create industrial development that will elevate the perception of the corridor as the place to be for industrial development of a higher caliber.

### Hotel/Conference Center

Another focus for the area around the airport and Performing Arts Center/CEED is the need for upscale hotels with a conference center capability. Again, there are a number of tools which might be appropriate – 380 agreement, tax rebate (real, business personal property, hotel/motel tax), State tools, incentive related to employment – but each potential development should be evaluated on its own merit.

### Inland Port

Establishment of an inland port is something that could prove beneficial for the corridor. This has been studied in the past and would need more evaluation to determine if an inland port would prove beneficial and should be established. We believe the potential for the corridor is sufficient enough that this possibility should remain in the program and evaluated at some time in the future.

### Roadway System

There is a need in the corridor for a substantial number of new thoroughfares and backage roads. In an effort to fund these roadways, of course all potential federal and state funding should be pursued. Additionally, the use of TIRZ could be a funding source which would use funds created from new development spurred by the construction of new thoroughfares and backage roads. One difference in a TIRZ for this use as opposed to one used to incentivize a proposed development is there could be no immediate indication of new development. In this case, it is likely that any funds for construction of the thoroughfares and backage roads over and above any federal and state funds would have to be provided by the cities and/or EDCs. However the funds provided by the cities and EDCs could be reimbursed by the TIRZ.

Table 5.3 lists short and long-range strategies based on input from stakeholder interviews and public input with regard to economic development and finance strategies. Actions were ranked based on input received from the Public Meeting held on May 17, 2012.

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Table 5.3 Economic Development Strategies

What	Short Term	Long Term	On Going	Who	How
# 1: Strategically incentivize priority areas, especially the SH 191 village centers and the UTPB “Los Canales” center. *(9)				Cities of Midland and Odessa	Make Capital Improvements where development is most desired.
# 2: Create Public Improvement Districts (PID) as needed to pay for maintenance of a higher level of public amenities including landscaping, open space. *(8)	X	X		Midland and Odessa, Midland, Ector County	Petition by property owners, Approved by City Councils
# 3: Create Tax Increment Reinvestment Zones (TIRZ) in corridor to fund public infrastructure, including a higher level of public amenities including landscaping, open space, hike/bike trails. *(4)	X	X		Cities of Midland and Odessa	Approved by City Councils and Commissioners Courts
# 4: Investigate and fund a study for the establishment an Intermodal Facility especially to the west of FM 1788. *(4)		X		Cities of Midland and Odessa, State of Texas, U.S.	Approved by Councils, State and Railroads
# 5: Utilize real property tax abatements in selected areas outside TIRZ to stimulate development, especially in industrial areas for diversified, targeted industries. *(3)	X	X	X	Cities of Midland and Odessa	Approved by City Councils and Commissioners Courts
# 6: Develop standards for “Class A” industrial parks especially highly visible areas along SH 191 corridor and backage road. *(2)	X			Cities of Midland, Odessa	Create Overlays for Industrial Zoning District
# 7: Continue economic development programs in place to incentivize industrial and high employment companies. *(2)			X	Midland DC Odessa ED	Utilize existing policies
# 8: Utilize state and/or federal incentives when appropriate to incentivize development. Research and Development Tax Credit, Texas Enterprise Fund, etc. *(1)		X		Cities and Counties	Approved by Councils, State and U.S.
# 9: Expand use of Chapter 380 Agreements, particularly for incentivizing retail development.	X	X		Cities of Midland and Odessa	Approved by City Councils

\* Indicates number of votes for this Strategy

### 5.4 Financing Strategies

#### 5.4.1 Local Economic Development Funding Tools

The following economic development tools can be utilized by the Cities of Midland and Odessa and the Counties of Midland and Ector to enhance their economic development activities. Care should be used in selecting or using these tools to fully understand them and their potential costs.

##### Tax Increment Reinvestment Zones (TIRZs)

Tax increment Reinvestment Zones or TIRZs, can be described as special districts wherein public improvements are funded with tax revenues resulting from increased property values. The property tax rate paid by property owners is the same as paid in other areas of a city, but the additional tax paid on the increased property value would be allotted to a special fund that would finance improvement projects within a TIRZ. Cities, counties and other taxing jurisdictions (except school districts) can all participate in a TIRZ; that is, a city can establish a TIRZ, but the county's and other jurisdictions' tax revenues are not automatically affected. They must agree to participate.

The first category of incentive could be termed "new" development incentives. These seek to capture the additional tax revenues created by new development and reinvest it within a district. The most common form is the Tax Increment Reinvestment Zone (TIRZ), also known as a Tax Increment Finance (TIF) District. Council essentially votes to create a TIRZ and appoints a board to manage it. Once the district is created, any additional tax values created by new development after the date of creation is called the "increment." The additional taxes (tax increment) created by the additional tax values can be used to pay for improvements within the district.

The major benefit of such a district is other taxing jurisdictions can partner with the City and add some or all of their "increment" to the

pool of funds to leverage the public improvements within the district. While school districts cannot realistically participate in a TIRZ, county, college, and hospital districts and other taxing jurisdictions can potentially double the size of the TIRZ and contributions depending on tax rates and participation. Other benefits include the fact that the developer pays their taxes just as they would without a district but receive the public improvement benefits. Also, personal property and inventory taxes are not part of the district, and those additional tax revenues still go to the taxing jurisdictions. Finally, while the City may actually have to issue the debt, because TIRZ revenues are used to pay the debt, Revenue Bonds can be used rather than General Obligation Bonds.

The disadvantages are that only public improvements as defined in the statute can be paid for by the TIRZ. Also, once the TIRZ debt is paid off, the district is dissolved leaving the improvements to be maintained by the general fund of the City. The biggest disadvantage, however, is that TIRZs rely on large increases in taxable property values to create the revenues needed. They therefore are utilized mainly for either "raw land" developments or large scale redevelopment projects with demolition of "blighted" properties and subsequent large increases in property values. "Creative" TIRZs can take increased tax funds from one developing part of a City and fund improvements in another area within the TIRZ boundary.

It is recommended that Midland and Odessa investigate the feasibility of establishing TIRZs to assist in financing public improvements in specific geographic areas. Midland and Ector Counties and other taxing entities should be approached to participate, but regardless of whether these entities are involved, a TIRZ district or districts should still be investigated. The amount of additional tax revenue from improved property valuations from the City alone will likely be significant enough over the long-term to contribute to physical improvements that visibly enhance a geographic area designated as a TIRZ district.

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## Public or Business Improvement Districts (PIDs/BIDs)

A second category of development incentives are known as Public Improvement Districts (PIDs) or Business Improvement Districts (BIDs) which do not rely on increase in tax revenues but do rely on “assessments” of property owners to pay for installation and/or maintenance of public improvements within the district.

The City Council, upon petition by the property owners, creates an "assessment district" and existing properties are "assessed" based on property values and benefit to the property. It is not a tax because the property owner's petition to be charged (assessed) an annual assessment fee to provide the revenues needed to pay for the public improvements within the district. An "assessment" lien is placed on individual properties and is superior to all but other tax liens. The majority of owners based on number and value of property owned have to agree to the improvement plan and the assessment scheme.

One benefit is that, unlike a TIRZ, increases in values are not needed to fund the district so it is an excellent mechanism for redevelopment projects. A second advantage is that a PID or BID can be created to construct and maintain improvements with no time limit, thereby alleviating the City of the burden. Again, because the debt is paid for by revenues from assessments backed by property liens, revenue bonds can be used to finance improvements. Finally, based on a feasibility analysis, benefits can be assessed at different rates to different classes of properties depending on use and distance or amount of benefit received. For example, retail uses could pay for a major portion of the improvements to the corridor, but adjacent neighborhoods and homes in the area could also pay a minor portion of the district improvements if they receive benefit.

A disadvantage of a PID/BID or other assessment districts is that, unlike TIRZ districts, the property owners pay additional "assessments" on top of their existing property taxes. A second disadvantage is that the

majority of property owners must be convinced of the benefits and agree to the assessments and any property liens resulting from the assessments. Also, there are no other jurisdictions to partner with on a Public or Business Improvement District, although other jurisdictions, including school districts, could agree to be “assessed” to help pay for the improvements. Finally, only public improvements, maintenance, or services can be paid for by the district, depending on the statute authorizing the type of district to be created.

There may be certain areas, where a combination of a TIRZ and an overlaying PID/BID district could be used. The TIRZ could be used to finance and construct the improvements and the PID or BID could be used to maintain them over time. This would keep the long term assessments to a reasonable amount but would enable other jurisdictions to partner on constructing the improvements. The area along SH 191 may be appropriate for such a dual mechanism. Any owners buying land in the district are subject to any assessment districts that are created.

## Municipal Management Districts (MMDs)

A Municipal Management District is a special district that can be set up with some of the attributes of both a TIRZ and a PID. It can use a combination of existing and new taxes and also can use special assessments to construct public improvements within the district. It has a process of being set up either by the City or by special legislation.

## Tax Abatements

Chapter 312 of the Tax Code, "Property Redevelopment and Tax Abatement Act 1987" provides that a City may join with other taxing jurisdictions to "abate" or reduce a portion of real property and business and personal tax on a new or expanding eligible business. Generally, school districts cannot participate after 2001, except that Chapter 313 of the Tax Code, "Texas Economic Development Act of 2001" allows school districts to participate in abatement agreements for certain "eligible manufacturing." The City must designate a

"reinvestment" zone and negotiate a tax abatement agreement. Participating counties must negotiate their own agreement in the designated zone. The City has to establish guidelines and eligibility criteria to grant tax abatements, the adoption of which is good for two years. There is also a requirement for annual reporting to the State Comptroller. Generally, tax abatements are used to assist in the construction of new facilities or structures or in the expansion or modernization of existing facilities. They are most often used for Industrial Development, but some cities have used them for certain types of large retail projects.

### Chapter 380 Incentive Program

Chapter 380 grants and sales tax rebates are direct financial contributions to the developer or new business owner. While care needs to be used in this incentive mechanism, it is effective in attracting underutilized sectors of economic development. For example, new downtown small retail establishments could receive a rebate of their sales taxes. This provides an incentive to their locating in the area based on their performance. The more they sell, the more sales tax rebate they receive, which is a win/win for the City and the business.

### 5.4.2 State and Federal Programs

The following programs are State and/or Federal programs offered for existing and new businesses. This list is representative of current programs, but is not all-inclusive.

#### Research & Development (R&D) Tax Credit

This program was enacted by the 76th Texas Legislature and involves state Franchise Tax Credit for research and development (R&D) expenditures. A qualified business is eligible to receive a credit from the State of Texas for an amount equal to four (4) percent of the business's incremental (as defined by the U.S. IRS). R&D expenditures and a maximum credit of twenty-five (25) percent of their franchise tax liability in the first year of the biennium, increasing to five (5) percent with a fifty (50) percent cap in the second year of the biennium and

thereafter. These benefits apply statewide, with increased credits available for "state strategic investment areas" (as defined by the State), and include federally designated "urban enterprise communities."

#### Small Business Franchise Tax Exemption

This program was enacted by the 76th Texas Legislature (1999) and allows for an exemption from paying the State franchise tax for small businesses. In order to qualify, small businesses must have gross receipts of less than \$150,000 annually.

#### Texas Leverage Fund

The Texas Leverage Fund (TLF) is an "economic development bank" offering an added source of financing to communities that have passed the Economic Development Sales Tax. The Texas Economic Development (TxED) Department may loan funds directly to a local Industrial Development Corporation (IDC) to finance eligible projects. Sales tax revenues pledged by the IDC need only be sufficient to cover projected annual debt service as specified in the TLF Program guidelines. This allows cities to leverage their economic development sales tax and to pursue additional projects.

#### Bond Financing Options Summary

Bonds may be issued by non-profit development corporations or authorities pursuant to the Development Corporation Act of 1979 (the "Act"). The Act allows non-profit corporations to issue bonds on behalf of cities, counties, conservation or reclamation districts for eligible projects. The purpose of bond financing is to promote new and existing businesses, encourage employment in the state, and increase the tax base of the community where the project is located. The following types of bonds are available:

- Tax-Exempt Industrial Revenue Bonds for Manufacturing Projects - Bonds issued to finance land and depreciable property for manufacturing facilities.

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- Exempt-Facility Bonds - Bonds issued to finance certain facilities such as airports, dock and wharf facilities, mass commuting facilities, high-speed inter-city rail facilities, or certain qualified hazardous waste facilities (including certain training and storage facilities).
- Taxable Industrial Revenue Bonds - These bonds typically have higher interest rates than tax exempt issues, these issues do not have restrictions on the use or amount of the issue.
- Sales Tax Bonds (Bonds issued pursuant to Sections 4A and 4B of the Development Corporation Act) - Available only to cities that have passed the local Sales and Use Tax for Economic Development. These can be taxable or tax-exempt bonds, depending on the type of project and business. Issues are primarily for manufacturing or industrial projects, but can also be issued for commercial, recreational, infrastructure, and other types of projects.

### Texas Enterprise Program

The 78th Texas legislature established the Texas Enterprise Zone Fund to provide financial resources to help strengthen the state's economy. The Governor, Lieutenant Governor, and the Speaker of the House must unanimously agree to support the use of the Texas Enterprise Fund for each specific project. Projects that are considered for Enterprise Fund support must demonstrate a project's worthiness, maximize the benefit to the State of Texas and realize a significant rate of return of the public dollars being used for economic development in Texas. Capital investment, job creation, wages generation, financial strength of the government and private sector financial support of a project will all be significant factors in approving the use of the Enterprise Fund. The purpose of the Texas Enterprise Zone Program is to encourage job creation and capital investment in areas of economic distress. Specifically, any block group within the State of Texas that has a poverty rate of at least 20 percent, as determined by the U.S. Census Bureau during each decennial census is a state enterprise zone. The

program provides communities with an economic development tool to offer state and local incentives and program priority to new or expanding business in these designated areas. Local incentives that may be offered to an expanding or locating business vary among enterprise zones. Examples of local incentives that may be offered include tax abatement, a refund of local sales and use taxes, waiver of permitting fees, tax increment financing, transfer of publicly owned buildings at below market cost, and low interest loans.

- State Sales and Use Tax Refunds - An enterprise project is eligible for a maximum of a \$1.25 million (\$250,000 per year over five years) refund for state sales and use taxes paid for building materials and machinery and equipment (including office equipment, computers, desks, etc.). The refund is based on the rate of \$2,000/job. Receipts for purchases of building materials and machinery and equipment and payroll information are required to be retained as part of the audit process.
- Franchise Tax Reductions - Franchise tax reductions are based on either a fifty (50) percent reduction of apportioned taxable capital, or a five (5) percent reduction in an apportioned earned surplus, as calculated on each franchise tax report during the 5-year designation period. For net taxable capital, the tax rate is 0.25 percent, or \$2.50 per \$1,000 of net taxable capital. The tax on earned surplus is 4.5 percent.

### Skills Development Fund

This fund was created to financially assist Texas public communities and technical colleges in customized job training for their local businesses. The Fund is administered by the Texas Workforce Commission. Grants are provided to help companies and labor unions form partnerships with local community colleges and technical schools to provide custom job training. Average training costs are typically \$300 - \$400 per trainee; however, the benefit may vary depending on the proposal.

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## Property Tax Rule 9.105

This is a refund of the state taxes (franchise taxes or sales taxes) paid by companies owning certain abated property. A company that meets the following three conditions may apply for a refund under this tax rule:

- The company has paid property taxes to a school district on property that is located in a reinvestment zone established under Texas law.
- The company is exempt in whole or in part from property tax imposed by a city or county under a tax abatement agreement established under Texas law.
- The company is not in a tax abatement agreement with a school district.

The refund is equal to the amount of property taxes that would have been paid had the company entered into a school district abatement agreement with terms identical to the city or county abatement agreement, not to exceed the net state sales and use taxes and state franchise taxes paid or collected and remitted during that calendar year. The refund amount may also be limited by a statewide appropriation per year for this refund program.

## State Sales and Use Tax Exemptions

- Manufacturing Machinery & Equipment - Applies to leased or purchased machinery, equipment, replacement parts, and accessories that have a useful life of more than six months, and that are used or consumed in the manufacturing, processing, fabricating, or repairing of tangible personal property for ultimate sale, are exempt from state and local sales and use tax. Texas businesses are exempt from paying State sales and use tax on labor for constructing new facilities and the purchase of machinery exclusively used in processing, packing, or marketing agricultural products by the original producer at a location operated by the original producer.

- Natural Gas & Electricity - Texas companies are exempt from paying state sales and use tax on electricity and natural gas used in the manufacturing, processing, or fabricating tangible personal property. The company must complete a "predominant use study" that shows that at least 50 percent of the electricity or natural gas consumed by the business directly causes a physical change to a product.

## Tax Credits

- Worker Opportunity Tax Credit (WOTC) - A federal tax credit given to companies that hire employees from certain target groups. The tax credit is used to reduce a company's federal tax payment in the current tax year, or it can be used retroactively for three years or carried forward for fifteen years. The WOTC provides a tax credit of up to 40 percent to employers who hire certified tax credit eligible employees. The maximum tax credit is \$2,400.
- State of Texas Tax Refund - This tax refund program provides a state tax credit of up to 20 percent of \$10,000 in wages paid during the first year. An employer may qualify for a state tax refund if the employer:
  - Pays certain State of Texas taxes (franchise, state sales and use, inheritance, etc.);
  - Pays wages during the first year of employment to an employee who is a Texas resident and has received certain benefits during the month of hire; and
  - Provides and pays for a part of the cost of qualifying major medical insurance for the employee.

Both the cities of Midland and Odessa are familiar with many of the economic development tools listed and have used a number of them in the past. However, based on this study, it would be helpful to use these incentives in the areas of focus.

## 5.5 Infrastructure Assessment and Capital Improvements Programming

### 5.5.1 Infrastructure Assessment

Planning for and providing infrastructure is one of the most important responsibilities of a city, as water and wastewater services are critical to the overall health, safety and welfare of municipalities and their populations. Citizens should be secure in the knowledge that they can rely on their local government to ensure that there is adequate water and wastewater capacity for the current population, as well as for future growth.

This infrastructure assessment is intended to provide an overview of the existing infrastructure system, opportunities and critical needs of the SH 191 corridor and subarea. It is important to note that this evaluation is intended to be high-level and not an in-depth analysis as typically found in such master planning efforts.

An assessment of existing infrastructure along the Corridor was completed by using maps, master plans from both cities and general knowledge of the area.



TxDOT has had the greatest impact on the Corridor area by obtaining full right-of-way width for a four lane divided highway with grade separations and one way frontage roads, all to

Interstate standards. The major thoroughfare is completed and moves large volume of traffic between Midland and Odessa; however, there are relatively fewer intersections. The additional intersections must be constructed to facilitate growth and development within the Corridor.



TxDOT did not provide any major drainage improvements with the construction of the roadway facilities. The adjacent land owners and developers will be required to make these improvements as development occurs. The use of existing playa lakes for detention basins is a common practice within both cities and will continue within the Corridor region. These playa lakes may be enhanced/enlarged and interconnected as part of a park/open space, as well as, serving as the main stormwater feature.

The water and sewer Capital Improvement Plan for both cities is in a constant state of expansion. Both cities have current projects under design that will enhance development along the Corridor. The City of Midland and Midland Development Corporation are expanding water and sewer service along the north side of S.H. 191 to the intersection of F.M. 1788 and connecting to the water at the University of Texas CEED and Performing Arts Center. Land owners and developers along the area will expand the system to best serve their property through the platting process. The City of Odessa is expanding water and sewer service to the area along S.H. 191 and Faudree Road (Spur 588) on the north side and developers/land owners along with the City of Odessa

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are planning expansion of water and sewer services eastward towards the future Yukon Road intersection. These services will also expand during the platting process. Funding is a major issue within the Corridor area. There are two cities, two counties, TxDOT and the University of Texas of the Permian Basin, that must develop multiple strategies for financing CIP projects. Each community has a development corporation that can play a significant role in enhancing these financing strategies.



## 5.5.2 Capital Improvement Programming

A Capital Improvements Plan (CIP) is a multi-year flexible plan outlining the goals and objectives regarding public facilities for MOTOR, the cities, counties and TXDOT. This plan includes the development, modernization, or replacement of physical infrastructure facilities. For a project to be defined as a capital project it should generally exceed \$50,000 in cost, be nonrecurring, provide at least 5 years of benefit and be an addition to the Corridor’s assets. Examples of capital improvement projects are roads, utilities, drainage structures, parks and other municipal facilities.

### Goal

The goal from the development of a CIP is a plan that outlines the projected infrastructure improvement needs of the SH 191 Corridor to assist in the planning and budgeting process. This plan will include a summary of the improvements, an estimated cost, a schedule for the improvements, and the possible source of funding for the project. The

CIP will prioritize the identified projects into yearly plans based on functional and project categories. Because the area’s goals and resources are constantly changing, this plan is designed to be re-evaluated each year to reaffirm or reprioritize the capital improvement projects.

### Project Types

These types would include Drainage, Emergency Management, Facilities, Parks, Roadway, Wastewater Collection System, Water Pumping and Distribution System.

### Cost

Cost estimates for the various CIP projects were prepared by John Landgraf with the consulting firm of LCA, after consulting with MOTOR, the cities, counties and TXDOT.

### Funding

On an annual basis, funds for CIP projects will be identified by the consultants after coordinating with MOTOR, cities, counties and TXDOT. The projects will also be evaluated based upon any external source(s) of funding available.

### Scheduling of Projects

Project schedules were developed based on the available funding and project ranking by the consultants after coordinating with the relevant jurisdictions. The schedules helped determine where each project fits in the CIP5-yr plan. This will be based on the priority of the project, funding availability and how it correlates with other CIP projects. In any event, the City Council will retain full discretion to determine the final priorities, scheduling and funding of any projects.

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## Prioritization

The prioritization of the eligible projects (Table 5.5) was done through a CIP ranking system. The list of projects were developed by John Landgraf with the engineering firm of LCA and Associates. He visited with each city, each county, TXDOT and Motor to develop the list of projects. Each potential project was then classified as a CIP project according to the definition above. The projects were then reviewed by the consultants and given a preliminary ranking. Utilizing the rankings of the consultant, the draft CIP was presented at the final public forum (#4) and the members of the audience using the dot method of voting to give the projects a final ranking which is reflected on the following two pages.

## Approval of CIP Plan

The final proposed CIP document that is attached should be reviewed and modified by each of the jurisdictions responsible for those individual line items. They should evaluate the CIP ranking, project type ,funding, and schedule. The appropriate City Council or County Commission will have approval authority for their portion of the final CIP document. The CIP should then be re-evaluated at least annually to reflect the growth, needs and budgeting

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Table 5.5 Capital Improvement Programming and Prioritization (Short Term 1-5 Years Long Term greater than 5 years)

What	Cost	Short Term	Long Term	On Going	Who	How
# 1: Develop Interchange @ FM 1788 & SH 191 and Frontage Road Interchange. *(8)	\$ 40 M		X		TxDOT	State & Federal Funding
# 2: Develop Backage Road South of SH 191 from FM 1788 to New Road "8". *(7)	\$ 3 M		X		City of Midland, University of Texas & Private Developers	State & Local Funds & Private Developers
# 3: Develop Interchange at Yukon Road and SH 191. *(6)	\$ 22 M	X			TxDOT & City Of Odessa	State & Local Funding
# 4: Develop Backage Road South of SH 191 from Faudree Road to Yukon. *(6)	\$ 2 M	X		X	City of Odessa, Private Developer & Midland County	City of Odessa & Private Developers
# 5: Develop Interchange at New Road "4" & SH 191. *(5)	\$ 22 M		X		TxDOT, Cities of Odessa & Midland	State & Local Funding
# 6: Develop water & sewer service from Faudree Road to Yukon Road. *(4)	\$ 15 M	X			City of Odessa	City of Odessa & Private Developers
# 7: Develop Backage Road North of SH 191 from Yukon Road to New Road "4". *(4)	\$ 2.5 M	X			City of Odessa, Midland County & Private Developer	Cities of Odessa & Midland & Private Developer
# 8: Develop Backage Road North of SH 191 from FM 1788 to New Road "8". *(4)	\$ 3 M	X		X	City of Midland & Private Developers	City of Midland & Private Developers
# 9: Develop water and sewer service from New Road "4" to FM 1788. *(3)	\$ 6 M		X		City of Midland , City of Odessa & Private Developer	Cities of Odessa & Midland & Private Developer
# 10: Develop Backage Road North of SH 191 from Faudree Road to Yukon Road. *(2)	\$ 2 M	X			City of Odessa & Private Developer	City of Odessa & Private Developers
# 11: Develop Backage Road South of SH 191 from Yukon Road to FM 1788. *(2)	\$ 3 M	X		X	City of Odessa, Private Developer & Midland County	City of Odessa, Midland County & Private Developer
* Indicates number of votes for this Strategy						

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic and Action Plan

Table 5.5 Capital Improvement Programming and Prioritization (Short Term 1-5 Years Long Term greater than 5 years)

What	Cost	Short Term	Long Term	On Going	Who	How
# 12: Develop Backage Road south of SH 191 from New Road "8" to New Road "9". *(2)	\$ 3 M		X		City of Midland & Private Developer	City of Midland & Private Developer
# 13: Develop signalized intersections of SH 191 Frontage Roads & Faudree Road, Yukon Road, New Road "4", New Road "8", New Road "9" and SH 158. *(2)	\$ 1 M	X	X	X	City of Odessa, City of Midland & Private Developer	Cities of Odessa & Midland, Private Developer
# 14: Develop water & sewer service from FM 1788 to New Road" 4". *(1)	\$ 4 M		X		City of Midland	City of Midland & Private Developers
# 15: Develop Interchange at SH 191 and New Road "9". *(1)	\$ 22 M		X		City of Midland & TxDOT	State & Local Funds
# 16: Develop Backage Road South of SH 191 from SH 158 to New Road "9". *(1)	\$ 2 M			X	City of Midland & Private Developers	City of Midland & Private Developers
# 17: Develop bike, pedestrian, equestrian trails, park linkages of Playa/Detention Basins. *(1)	\$ 6.5 M	X	X	X	City of Odessa, City of Midland & Private Developer	Cities of Odessa & Midland, TxDOT, Texas Parks & Wildlife, Private Developer
# 18: Develop water & sewer services from SH 191 to FM 1788	\$ 12 M	X			City of Midland	City of Midland & Midland Development Corporation
# 19: Develop water service from Yukon Road to New Road "4"	\$ 2 M		X		City of Odessa	City of Odessa & Private Developers
# 20: Develop Major Detention Basin at Playa Lakes South of SH 191 West of FM 1788.	\$ 4 M	X	X	X	City of Odessa & Private Developer	City of Odessa & Private Developer
# 21: Develop Major Detention Basin at Playa Lake South of SH 191 & East of FM 1788.	\$ 4 M	X	X	X	City of Midland & Private Developer	City of Midland & Private Developer
# 22: Develop 3 major transit centers and 5 transit stops on SH 191.	\$ 5.8 M		X		City of Odessa, City of Midland, TxDOT, E-Z Rider	Cities of Odessa & Midland, TxDOT, E-Z Rider, Federal Transportation Grants

\* Indicates number of votes for this Strategy

### 5.6 Annexation and Extraterritorial Jurisdiction (ETJ) Strategies

*“Because annexation is so critical to the long-term well being of cities, it needs to be carried out in accordance with established policies and not on an ad hoc basis. A city’s annexation policies should be included in the chapter of the comprehensive plan...”*

Texas APA,

#### Historical Context

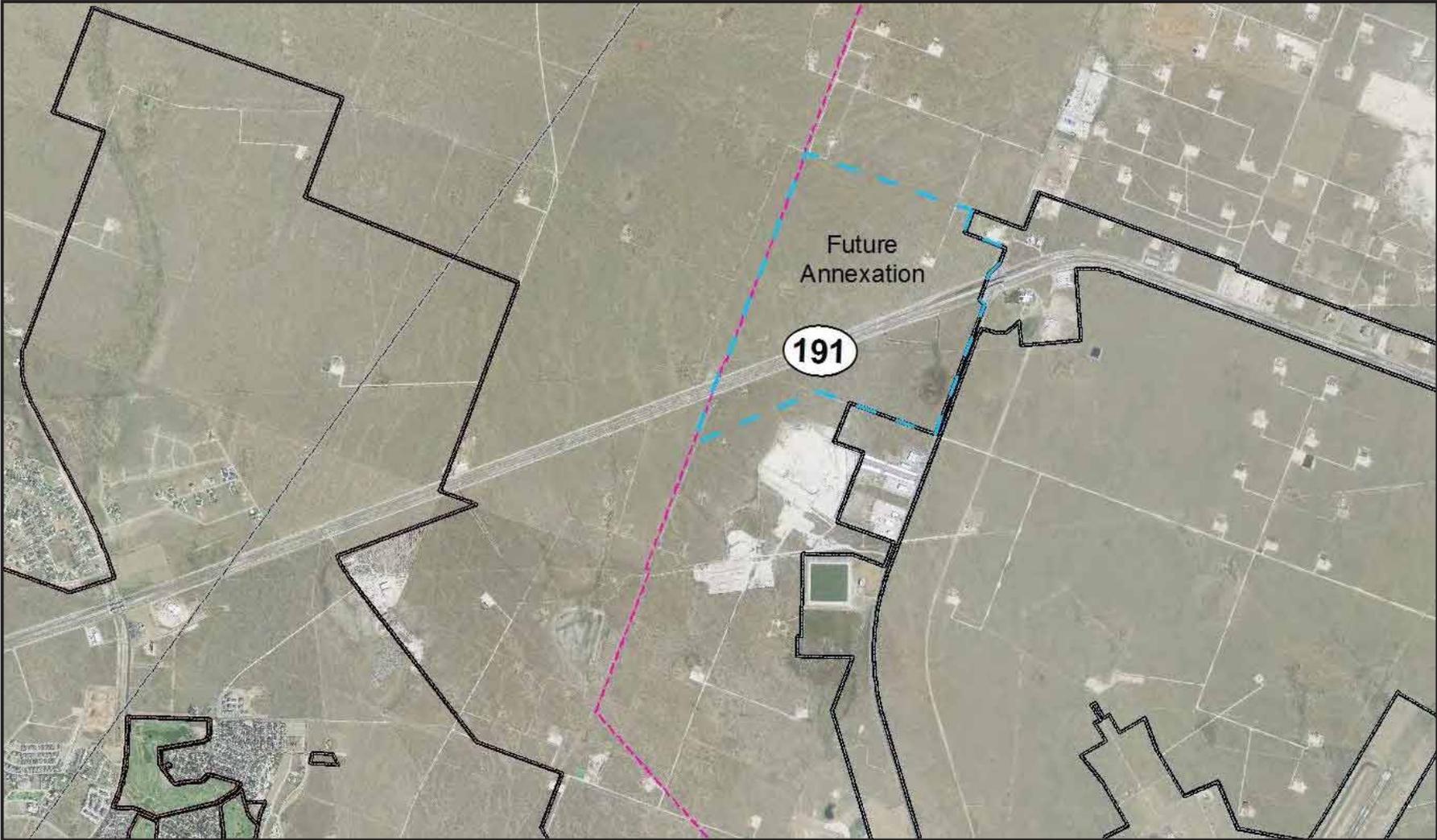
In 1858, the first statute allowing incorporation of a city under the general laws was passed. It became the basis for general law annexation by petition as it is known today.

In 1912, the voters of Texas passed the Home Rule Amendment to the Texas Constitution. This amendment gave cities over 5,000 in population that adopt a home rule charter by election the full power of local self-government, including the ability to unilaterally annex property. Except for the Home Rule Amendment, relatively few changes were made to annexation laws from 1858 through 1963. In 1963, the Legislature enacted the Municipal Annexation Act with procedures for annexation and the concept of extraterritorial jurisdiction (ETJ). From the enactment of the Municipal Annexation Act until the passage of Senate Bill 89 in 1999, the Legislature rarely acted on a broad scale to restrict or modify city annexation authority.

The legislature amended the law in 1987 that, among other things, prohibited strip annexations of less than 1,000 feet (as opposed to the previous standard of 500 feet) and changed the requirement that the construction of capital improvements necessary for providing services to newly annexed areas be initiated within two and one half years to a new

requirement that construction begin within two and one half years and be substantially complete within four and one half years.

In the late 1990s, Houston annexed almost 50,000 residents in an upscale subdivision called Kingwood. The protests of the subdivision residents and others ultimately resulted in the passage of S.B. 89 in 1999. S.B. 89 does not prohibit cities from annexing but makes the process much more difficult, expensive, and time consuming in certain circumstances (See below). The changes made by S.B. 89 do not have much significance for home rule cities that annex smaller, sparsely-occupied areas or only annex by petition. The greatest impact is on cities that wish to exercise unilateral annexation authority to bring in large, existing residential subdivisions.



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According to the Texas Municipal League,

*“while a handful of Texas cities were accused of abusing the power to annex, the vast majority of cities use this power as a tool to manage growth and support infrastructure. Texas cities are some of the fastest growing in the United States. Evidence of the importance of unilateral annexation exists in other states where cities do not have that power. The broad power of Texas home rule cities to annex has permitted cities in Texas to share the benefits of growth in the surrounding areas. According to many national authorities, this annexation power is the primary difference between the flourishing cities of Texas and the declining urban areas in other parts of the nation. If San Antonio, for example, had the same boundaries it had in 1945, it would contain more poverty and unemployment than Newark, New Jersey.”*

### Background

As one of the fastest growing states in the country, Texas cities owe much of their vitality to broad annexation power. Annexation has allowed cities to prosper as surrounding areas are incorporated into the municipal jurisdiction.

When discussing annexation, it is important to note:

- Services provided by cities extend benefits to the region and state.
- Texas is one of only a few states that do not provide cities with state funding.
- As one alternative to state funding, Texas has traditionally allowed cities to annex in order to provide additional tax base.
- Cities would be weakened without either state funding or annexation power.

- Annexation is also a means of ensuring that residents and businesses outside a city's corporate limits who benefit from access to the city's facilities and services share the tax burden associated with constructing and maintaining those facilities and services.

Senate Bill (S.B.) 89 drastically altered Texas annexation law when it took effect in 1999, essentially rewriting the existing statutes. S.B. 89 was passed in an effort to reduce some cities' misuse of annexation power, especially in the Houston and Austin area. The bill mandated that all Texas cities have a three year “rolling plan” or to declare that they will have no plan. The plan process is very explicit and procedural. If an area to be annexed is considered not to be exempt from the requirement to be in an annexation plan, the city must include it in a plan and wait three years to complete the annexation process.

In order to protect residents in unincorporated areas and effectively manage the annexation authority of cities, strict procedural requirements of cities are outlined in the Municipal Annexation Act. The provisions that give a city the power or authority to annex are generally codified in Chapter 43 of the Texas Local Government Code and in the charter of a home rule city. Before an area may be annexed by a city, the city is required to: 1) provide notice to residents, 2) provide at least two public hearing opportunities for residents to be heard, and 3) provide a specific service plan and time line.

Annexation can be divided into three classifications based on characteristics and procedures.

- Voluntary (petitioned) annexation involves an area of land less than one half mile in width, adjacent to the City, and where the landowners have petitioned to be annexed. Areas of voluntary annexation are not required to be in the city's Annexation Plan. This is the fastest, easiest, and least controversial type of

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annexation. Voluntary annexation is commonly completed without public hearings in only the amount of time it takes for a resolution to be prepared and adopted by the Council.

- Involuntary annexation (also referred to as unilateral annexation) of an area with less than 100 parcels with residential structures is also exempt from the Plan requirement. Though the process is longer than that of petitioned annexation, it is much faster than annexations requiring the three-year waiting period. Involuntary annexation can be completed with a minimum of two public hearings by the City Council, with all requirements completed within 90 days after the first reading of the ordinance.
- Involuntary annexation that must be included in a required rolling plan (an area with more than 100 parcels with a residential structure) is subject to a three-year waiting period. The legislative intent of three-year plan requirement is to make it difficult for cities to annex large, already developed single family areas. The three years provides more than adequate notice, plus enables everyone to work out service plans and assumption of debt of municipal utility districts (MUDs) and ambulance districts. This type of unilateral annexation is the least desirable for both cities and residents, as it involves the most controversy, the most procedural requirements, and the longest processing period. In addition to the three-year wait, two public hearings by the Council are also required.

A city may involuntarily annex up to 10 percent of its land area per year, and may accumulate the percentage and annex a maximum of 30 percent. The challenge with an involuntary annexation of this much acreage is that by state law, the City must have a service plan and provide City services to the area. “Soft” services such as police and fire protection and trash pickup must be provided almost immediately and “hard” services such as water transmission mains must be provided

within two and a half years, with some exceptions up to four and a half years.

The other limitation that has placed a burden on cities is the requirement that involuntary annexation be no less than 1,000 feet in width. Previously a city could annex just the right-of-way and reach out to a property that wanted to be annexed for public services. Presently, a 1,000-foot strip must be “involuntarily annexed” against the wishes of the property owners in order to reach a property that wants to be annexed.



### 5.6.2 Substandard Development in the Unincorporated Areas

In addition to annexation rights, cities have certain development regulation rights such as enforcement of platting and subdivision ordinances within the ETJ. The purpose of such statutes is to allow cities to manage the development of surrounding land, so that substandard development with inadequate rights-of-ways, utilities or roads are not created in areas that will ultimately become part of the city. Midland and Ector Counties also have platting and subdivision authority, both within and outside the ETJ.

Within the last twenty years, Midland/Odessa has annexed or been asked to annex several areas with substandard infrastructure (unpaved streets or missing water, wastewater and storm drainage lines). These substandard developments could end up costing the taxpayers millions of dollars in remedial efforts. Inside the cities, developers are required by state statute and City ordinances to pay for infrastructure, to dedicate rights of way, and to make a subdivision of land meet the City's requirements before they are allowed to sell lots.

A common misconception of persons being annexed into a city is that the existing taxpayers pay for street paving, water, wastewater and drainage, so they expect the service at no cost. With the exception of over-sizing arterials or major utility transmission lines, the utility rate payers or taxpayers do not pay for new development or the public improvements it requires.

The developer pays for the subdivision improvements and recoups the cost in the price of each lot sold. In effect, each lot owner, rather than the taxpayers, pays for the improvements they require. In most cases, approximately half the cost of a standard City lot is to pay for the infrastructure. Developers outside a city charge almost as much for a substandard lot and keep the difference or sell for less expecting the



owner to eventually pay for the improvements. The lot owners ultimately look to the County or City to provide the missing improvements at very little cost to them. The more development is allowed in the ETJ that is not standard, the more County and City taxpayers and utility rate payers in the future will be asked to improve those developments, especially upon annexation. It is therefore in the best interest of the financial future of a city to make every effort to ensure areas that will ultimately be annexed for future growth have new development that meets the same standards as inside the city.

### 5.6.3 Managing Growth in the Extraterritorial Jurisdiction

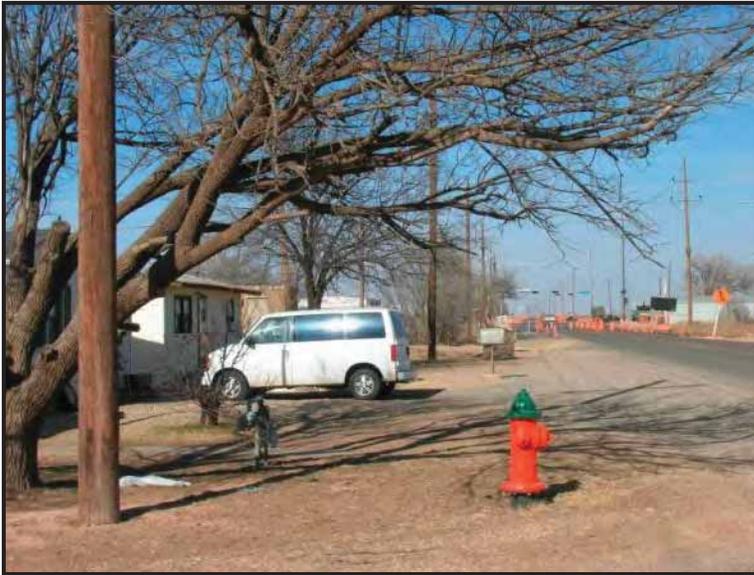
The Cities of Midland and Odessa may not impose restrictions on the use of land (zoning) or building construction, but may enforce its platting and development ordinances within the ETJ. The width and alignment of roads to be dedicated must conform to Midland/Odessa's thoroughfare plans and to the standards contained therein. The City/County can require that the street paving meet the required technical standards including base, thickness, curb and gutter, handicapped ramps, and even sidewalks. In addition, water, including fire hydrants and fire protection, wastewater, and storm drainage could be required, sized, and installed in accordance with the adopted utility plans of the City.

Currently, lesser standards are being required of developers in the County than in the City. The plat (the official surveying document that is recorded in the County Deed records and creates the lots) must be approved by the City in accordance with the platting ordinances. The developer may be required to provide, prior to the filing of the plat, guarantees that the street improvements will be constructed to County and/or City standards.

Midland/Ector County also has jurisdiction over the approval of plats, and currently requires dedication of rights-of-way and sets standards for construction and acceptance of street improvements. State law requires the County and the City to coordinate the requirements and approval of developments within Midland/Odessa's ETJ to avoid redundancy of procedures, requirements and approvals.



Municipal Utility Districts, often used by developers to provide their own utilities in those unincorporated areas, must also be approved by the Cities of Midland/Odessa prior to their creation. If they are approved at all, they normally will be required to meet a city's ordinances for construction standards because the city will ultimately take over their maintenance when the area is annexed.



### Annexation Timing

The timing of the annexation of property into a city is a very sensitive issue. Contrary to popular belief, a city generally does not annex property for the purpose of immediate tax revenue (the exception might be annexation of a major factory or large taxable asset in an unincorporated area). The cost of providing services to rural property or even to residential areas exceeds the taxes generated by those properties. It takes years for the annexed areas to reach a positive “cash flow” condition. A look at a historic annexation map shows that if Midland and Odessa had not annexed substantial areas over the years, they would not be the cities they are today. Cities must annex land to provide future growth areas for their economic viability. There are numerous examples of cities, including Dallas, that did not annex to protect their expansion areas, and now regret it.

Because the cost of serving rural and agricultural acreage is excessive, and cities are required to provide service regardless of need per some of the newest annexation legislation, cities would prefer not annexing that acreage until just prior to development. The agricultural owners would also appreciate not having to pay city property taxes for services not used, although the State of Texas “caps” the collection of taxes on agricultural property at a very low rate. However, once residential developments are created in unincorporated areas, the annexation rules are so burdensome as to make them difficult to annex. In addition, the cost of providing any missing infrastructure is onerous.

One can make an argument that it is unfair to the new property owners who had not counted on paying City taxes. The most appropriate time to annex properties is upon the sale to developers, just before platting and lots being sold for construction. At that time, zoning and platting regulations can be imposed to make sure that the urban development meets City standards and the developer/lot owner pays for the improvements their urban development requires. However tracking the sale of properties to developers prior to development is very time and labor consuming.

Counties are unprepared to provide urban police and fire protection, and the maintenance of local streets and infrastructure, rather than two lane agricultural roads, taxes their capacity. Annexing property just prior to development is a financially responsible way to handle the growth of a city and the unincorporated areas around it and to reduce the tax burden to the existing taxpayers of both the City and County.

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### Developer Agreements in Lieu of Annexation

The 2007 legislative session reinstated the requirement of a mandatory offer of a development agreement in lieu of annexation for agricultural and other rural land. H.B. 1472 applies to land that is either:

- Eligible for a development agreement under Subchapter G of Chapter 212 of the Local Government Code; or
- Appraised as agricultural, wildlife management, or timber land.

The bill provides that:

- A city may not annex an area described above unless:
  - The city offers to make a development agreement with the landowner that would guarantee the continuation of the extraterritorial status of the area and authorize the enforcement of all regulations and planning authority of the city that do not interfere with the use of the area for agriculture, wildlife management, or timber; and
  - The landowner declines to make the agreement;
- An area adjacent or contiguous to an area that is the subject of a development agreement is considered adjacent or contiguous to the city;
- A provision of a development agreement that restricts or otherwise limits the annexation of all or part of the area is void if the landowner files any type of subdivision plat or related development document for the area with a governmental entity that has jurisdiction over the area, regardless of how the area is appraised for ad valorem tax purposes; and
- A development agreement under the bill does not create vested rights.

While many city officials argued that ranching and farming operations already had sufficient protections from city regulations, the Texas Farm Bureau and others strongly supported H.B. 1472. The bill adds an additional layer of bureaucracy to the annexation process, but amendments to the bill throughout the process sought to ensure that it would not limit annexations of land that is truly poised for development, rather than for ranching or farming.

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## 5.6.4 Sub-Area and Corridor Study Goals and Objectives

*GOAL • To annex areas just prior to development to accommodate Midland/Odessa's growth and to protect it from incompatible land uses.*

*OVERVIEW ♦ Even with infill development and redevelopment, additional land is required to accommodate the future growth of Midland and Odessa and to protect existing land uses from incompatible development. Cities rarely annex for immediate tax benefits, but more often for the benefit of zoning and building permits, as well as to ensure that streets, water lines, fire protection, wastewater systems, and storm drainage are adequately sized to serve the new development. History has shown that when those items are missing or substandard, property owners look to the adjacent city to provide them since counties and the State of Texas generally do not. Texas cities that did not annex prior to growth can testify as to the economic and land use disadvantages. Recent legislative changes make it very difficult to annex areas with residential development. There is an advantage to annexing prior to development, but if the legislative formula requires city taxpayers to fund the cost of providing services to raw land, annexing too soon should also be avoided.*



- OBJECTIVES:**
- OBJECTIVE 1 – UTILIZE TIMELY ANNEXATION TO MANAGE GROWTH.**
  - OBJECTIVE 2 – ANNEX AREAS IN ORDER TO PROVIDE MUNICIPAL SERVICES.**
  - OBJECTIVE 3 – USE ANNEXATION TO DISTRIBUTE COSTS TO ALL THAT BENEFIT.**
  - OBJECTIVE 4 – ANNEX TO PROTECT CITIZENS FROM INCOMPATIBLE USES.**
  - OBJECTIVE 5 – REDUCE THE COST ADVANTAGE OF RURAL DEVELOPMENT.**
  - OBJECTIVE 6 – USE DEVELOPER AGREEMENTS TO NOT PENALIZE AGRICULTURE OR RANCHING INTERESTS.**



*Issues*

- Substandard Development*
- Managing Growth*
- Missing Roads and Utilities*
- Cost of Serving Newly Annexed Areas*

*Challenges*

- Public Perception*
- Rural Property Owners*
- Controversial Policies*
- ETJ Development Controls*
- Cost Differential of Rural Development*

*Opportunities*

- Development Desire for City Services*
- County Having Difficulties Serving*
- State Requirement to Amend ETJ Laws*

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## Objective 1 - Utilize timely annexation to manage growth.

*Annexation is an important tool to manage the growth of a city. Timing is everything. Missed annexation opportunities limit the expansion areas and allow substandard or underserved development to impede the future development of Midland and Odessa. It is cost prohibitive to annex areas and provide, after development, increased rights-of-way, paved streets, water and wastewater lines and storm drainage.*

### Policies

- To annex property needed for growth or under pressure to develop in the near future, including vacant land requested for annexation by the owner(s).
- To annex property that is being platted or sold off in the City's extraterritorial jurisdiction prior to the sale of urban sized (less than 10 acres) lots for the construction of homes and/or businesses.
- To try to avoid annexing property that is in no danger of development and is being used primarily for agricultural/ranching uses.

### Strategies

- Developer agreements or some other contractual system needs to be used where large tract rural property owners can agree, in exchange for not being annexed, to a voluntary annexation in the future when sales or subdivision of their property starts taking place.
- The City needs to aggressively monitor the sale of tracts of land without platting and determine which areas are developing piecemeal without dedication of rights-of-ways so they can be annexed.

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## Objective 2 - Provide municipal services and protect roadways.

*Midland and Odessa have a policy of not providing urban services, including police and fire protection, outside the City limits. While rural and agricultural property owners are used to this, the increasing amount of “urban” development in the unincorporated areas of Midland and Ector County includes residents that are demanding urban type services. The County cannot provide police and fire protection, street maintenance, utilities and storm drainage, at the same service level as provided inside the City.*

### Policies

- Extension of municipal facilities outside the city shall be prohibited except in emergencies or when annexation can be completed within 180 days.
- To continue to discourage “urban” development immediately outside the City limits by not providing urban services including fire, police, water and wastewater to non-taxpaying properties.
- Prohibit approval of “MUD” or other utility type districts in the ETJ.
- Location and amounts of land to be annexed should provide maximum efficiencies of municipal services such as police, fire protection, water, sewer, street maintenance, and solid waste collections. Disproportionate costs to existing taxpayers should be discouraged.
- To annex properties in the ETJ at the time of platting urban sized lots to ensure the provision of adequate municipal services.

### Strategies

- The City will continue to plan for the extension and expansion of City services into the ETJ in a timely manner.
- Growth in the ETJ will be monitored to determine the best time to annex areas and construct City infrastructure.

### Objective 3 - Distribute costs to all that benefit.

*One of the cited advantages of living in the unincorporated areas is the lack of City property taxes. Yet, those rural residents may work, go to school or play in the City. They use City streets, libraries and parks, and their goods come into the City on trucks that wear existing streets. In cities where there is substantial development in the unincorporated areas, there is a burden on the City taxpayers to maintain the streets, parks, traffic signal system, and such for those non-taxpaying users.*

### Policies

- Developers and/or landowners requesting annexation should assume their share of the service than rather than the existing taxpayers the major costs of public service facilities.

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### Objective 4 - Protect citizens from incompatible uses.



*Neither the County nor the City has the ability to regulate land use or construction standards and development in the ETJ. County development, even though it may be across the street from standard development in the City, may have incompatible land uses or construction materials. Heavy industrial or commercial uses can locate next to houses, welding shops next to nursing homes, and wrecking yards next to churches. Even though each use is important in its own way and must be accommodated, they should not be located next to each other.*

Midland and Odessa shall exercise protective annexation measures to preclude strips and pockets of urban blight adjacent to the City. Such annexation will avoid enclosure of unincorporated pockets.

#### Strategies

- Annex adjacent properties prior to development to ensure compatibility of land uses with existing neighborhoods through zoning, building and fire codes and code enforcement.
- Annex the frontages of the major arterials that are prime for selling off into commercial developments. Most of the demand is for property fronting on a major street. Upon annexation, the commercial properties will have adequate fire protection, access controls and building codes. By annexing just the frontages, the balance of the property can remain without the tax burden until ready to develop.

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## Objective 5 - Correct cost advantage of rural development.

*Development in the County is not the same as in the City. Developments are often approved without curb, gutter, water, sewer, and storm drainage improvements. Developers in the City are required to provide these improvements, increasing the cost of City lots. This puts builders of standard single-family development at a competitive disadvantage and encourages rural development. The ETJ law allows cities to require the same level of public improvements outside the City limits as within, thereby reducing the taxpayer burden of upgrading infrastructure of land when annexed. Consideration of an amendment of the current subdivision regulations should be considered.*

## Policies

- To continue not to provide City services to property owners outside the City.
- To not approve or encourage development in the ETJ that does not meet the standards required of developers inside the City limits for similar developments.
- To distinguish between rural type low density lots that may be appropriate for County development and standards and more urban type lots that need to meet the standards required of developers inside the City limits for similar developments.

## Strategies

- It is best interests for the City and County taxpayers if standard public improvements are obtained so that the property owners, rather than the taxpayers, pay for required improvements
- The Cities of Midland/Odessa and Midland/Ector County should finalize negotiations and approve an agreement on who enforces and the standards for handling development outside the City limits. It is in the best interests of each entity to obtain standard public improvements.
- A set of rural standards including a minimum lot size of some acreage amount should be agreed to by the City and County, so that property owners will know what is expected of them in developing in the County.
- A set of urban standards, including a lot size threshold, should be agreed upon by the City and County. City standards should be fully enforced upon the development and annexation into the City to ensure that the development meets urban standards with urban services such as police and fire protection provided.
- If properties are to remain in the County, Developer Agreements should be utilized to ensure that agreed upon standards are met in the laying out and development of property.

*“Midland should require annexation prior to any extension or sale of water to new development. Additionally, subdivision standards should be maintained and enforced equally in the City limits and ETJ”*

Midland 2025 Master Plan, adopted 2005

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## Objective 6 - Use developer agreements.

“Residents of unincorporated areas rarely favor being brought into a city involuntarily. Rural landowners have regularly turned to their legislators for relief from city expansions, with the result that bills to curb unilateral annexations have surfaced in every session for the past fifty years.”  
Texas Municipal League

### Policies

- The City will utilize a developer agreement in lieu of annexation for those areas that are in the line of new development but currently are utilized for agriculture and ranching and have a current Agricultural Exemption with no plans for or indications of development or selling off parcels.

### Strategies

- The City would agree in the developer agreement not to annex the property for a set period of years.
- The Owner, their heirs, successors and assigns would agree:
  - Not to use property for other than agriculture, wildlife management, and/or timberland without requesting annexation.
  - To give the City written notice within 14 days of any change in the agricultural exemption status of the property.
  - Not to file a subdivision plat or divide into less than 20 acre parcels without requesting annexation.
  - Not to construct buildings that would require a building permit without requesting annexation and zoning.

- To abide by City rules and regulations pursuant to Sections 43.035(b) (1) (B) of the Texas Local Government Code, the City is authorized to enforce all of the City’s regulations and planning authority that do not materially interfere with the use of the Property for agriculture, wildlife management, or timber, in the same manner the regulations are enforced within the City’s boundaries.
- Prior to a sale or conveyance of a portion or all of the subject property, give written notice of the Developer Agreement to the prospective purchaser or grantee, and written notice of the sale or conveyance to the City.
- A violation of any aspect of the agreement will constitute a request for voluntary annexation subject to the following;
  - Agreement serves as an exception to Local Government Code Section 43.052, requiring a municipality to use certain statutory procedures under an annexation plan.
  - Owner waives any and all vested rights and claims that they may have under Section 43.002(a)(2) and Chapter 245 of the Texas Local Government Code that would otherwise exist by virtue of any actions Owner has taken in violation of agreement.
- Record the Agreement in the real property records of Midland or Ector County, Texas so it shall run with the property.

## Chapter 6 Conclusions and Recommendations

The SH 191 corridor offers tremendous opportunity for development an attractive, integrated corridor offering vitality and value to both the Cities of Midland and Odessa, and Ector and Midland County. This SH 191 Corridor Study and Management Plan is rooted in the tenants established in the 2010-2035 Metropolitan Transportation Plan; two cities functioning as complimentary urban centers aimed at attracting high quality diversified investment and supported with interconnected land use and transportation systems. The Plan is also built upon input received throughout the study process from; community leadership, stakeholder interviews, city and county agencies, and the public.

Today, the SH 191 corridor is changing rapidly with many changes occurring since the outset of this study. In order to implement strategies within this Plan, a coordinated and cooperative atmosphere between the various jurisdictions and agencies is necessary. Strategies addressing the following key areas include:

### Transportation

- The development of corridor and subarea transportation network
- Inclusion of multi-modal considerations for transit, bike, pedestrian connections to and within the study area
  - A “transit-ready” corridor as part of the south side SH 191 backage road to provide for potential short and long-term transit system; potential connection to the airport from Los Canales Village Center along SH 349
  - An interconnected series of bike/pedestrian trail along key roadways to development areas and open space amenities
- Corridor management practices guiding the location and coordination of backage roads, driveways and shared-access

Key Recommendation: Adopt Thoroughfare Plan to establish policy on location of the transportation system. Use established city standards for roadway facilities within the study area. Consider specialized standards for the SH 191 backage road system.

### Land Use and Urban design

- The development and selection of a “Preferred Land Use Scenario” identifying study area land uses, development patterns and intensities, and SH 191 corridor uses and mixed use retail nodes
  - Identification of a range of residential development
  - Identification of mixed use corridor along SH 191
  - Creation of industrial and office districts to support continued development of the airport and potential La Entrada Trade Corridor
  - Preservation of vistas, playas and drainage ways for incorporation into development design as well as open space amenities
- Development of urban design considerations within the SH 191 corridor addressing mixed-uses, design standards, transit and non-motorized connections.

Key Recommendation: Adopt the “Preferred Land Use Scenario” as desired land use plan for the study area. Create overlay zone to apply uniform and consistent standards for development including subdivision, drainage and flood control, landscape, and zoning. Create a form based code for village centers and SH 191 nodal development and adopt strategies, including standards, for building facades, improvement of playas and drainage corridors, and screened incorporation of pump jacks.

# MOTOR MPO SH 191 Corridor Study/Management Plan

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## Development controls and growth strategies

- The development of guidelines defining development setback and location for properties along the SH 191 corridor. Guidelines include considerations for urban design of the corridor, setbacks, landscaping and incorporation of oil wells.
- Adopt overlay district that implements the vision of the urban design charrette and study area Preferred Land Use Scenario
- Adopt common planning ordinance to standardize roadway right-of-way dedications and development standards

Key Recommendation: Annex 1,800 feet on both sides of the SH 191 corridor to manage the development process, apply development standards and provide for backage roads. Develop and implement special corridor zone for application by all intergovernmental agencies, uniform and consistent standards for development. Implement design guidelines for corridor setbacks, urban design considerations and setback/screening of oil wells.

## Economic development and financing

- Identification of potential economic development and finance strategies for public and private improvement/investment within the corridor.

Key Recommendation: Investigate 380 Agreements and a TIRZ or Public Improvement District to help finance infrastructure and incentivize development improvements along the SH 191 corridor.

## Infrastructure programming

- Identification of current and long-term needs for growth and development of the study corridor and sub-area.
- Identification of short and long-term capital improvement considerations within the study area

Short and long-term priorities have been prepared addressing the various components identified above and are listed in Table 6.1.

# MOTOR MPO SH 191 Corridor Study/Management Plan

## MOTOR MPO SH 191 Corridor Study Strategic Action Plan

Table 6.1 Overall Short and Long-Term Priorities

What	Short Term	Long Term	On Going	Who	How
Maintain 40 acre spacing in 1800 foot corridor and keep pump jacks 500 feet back from frontage road, 100 feet from backage road. *(12)	X		X	Cities of Midland and Odessa, Mineral Interests, Operators	Negotiate with operators, mineral interests
Annex 1800 feet on both sides of SH 191 along entire 14 mile length of corridor. *(12)	X			Cities of Midland and Odessa	Initiate annexation especially prior to development
Strategically incentivize priority areas, especially the SH 191 village centers and the UTPB “Los Canales” center. *(9)	X	X		Cities of Midland and Odessa	Make Capital Improvements where development is most desired.
Develop standards for and provide generous landscaping (desert tolerant) and trees behind curbs, around buildings, and along drainageways and openspace/trails. *(9).	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector, property owners	Develop common tree , landscaping requirements and standards for various roads, centers
At time of platting, require all properties along SH191 to contain allowance for cross access easements and/or connection to shared driveways. *(8)	X	X	X	Cities of Midland and Odessa, Counties of Ector and Midland	Through standard development processes
Create Public Improvement Districts (PID) as needed to pay for maintenance of a higher level of public amenities including landscaping, open space. *(8)	X	X		Midland and Odessa, Midland, Ector County	Petition by property owners, Approved by City Councils
Implement recommendations of the proposed Sub-area Thoroughfare Plan to provide accessibility to adjacent SH 191 corridor properties through backage roads, intersection enhancements, and access controlled frontage roads. *(8)	X		X	Midland and Odessa, TXDOT, Counties of Ector and Midland	Adoption of Thoroughfare Plan and roadway standards
Protect backage roads from oil and development encroachment by immediately acquiring right of way for entire 14 mile length of corridor, especially at nodes or developing areas. *(8).	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector,	Negotiate with property owners, set aside funds, use eminent domain
Sub-area Thoroughfare Plan - Adopt. *(8)	X			Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Amend thoroughfare plans, use revised cross sections in SH 191 Corridor
Implement “transit ready corridor backage road” for transit service opportunity within SH191 corridor. Additional ROW within center of roadway allows for short and long-term transit between mixed use nodes. *(7).	X	X		Midland and Odessa, Transit Agencies, MPO	Include corridor on Transit System Plans and Metropolitan Transportation Plan

## MOTOR MPO SH 191 Corridor Study/Management Plan

Backage roads for SH 191, SH 349 and FM 1788 - Protect. *(7)	X		X	Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW by negotiating with property owners
Develop common platting ordinance for both counties and cities requiring and coordinating similar standards for similar areas. *(7)	X			Midland and Odessa, Midland and Ector Counties	Fund and develop a subdivision ordinance by all four entities
Develop Backage Road South of S.H. 191 from Faudree Road to Yukon. *(6)	X		X	City of Odessa, Private Developer & Midland County	City of Odessa & Private Developers
Annex or use developer agreements to control frontages of SH349/FM1788. *(6)	X			City of Midland	Initiate annexation process
Develop Interchange at Yukon Road and S.H. 191. *(6)	X			TxDOT & City Of Odessa	State & Local Funding
In annexed areas, place requirements that tank batteries and injection wells must be at least 1800 feet back from frontage road. *(6)	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
Identify and implement minimum driveway spacing and shared drives to minimize SH191 frontage road conflicts with existing and future developments. Adopt 400'-500' spacing between driveways. *(5)	X			Cities of Midland and Odessa, Counties of Ector and Midland, MPO and TxDOT	Implement through corridor overlay district
In annexed areas, require collection lines to ultimately be placed underground within 1800 feet of the SH 191 frontage road. *(5)	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
Provide/require connecting roads from frontage to backage road on 1,200 to 1,500 spacing. *(4)	X	X	X	Cities of Midland and Odessa, MPO and TxDOT	At the time of development and/or through the platting process
Create Tax Increment Reinvestment Zones (TIRZ) in corridor to fund public infrastructure, including a higher level of public amenities including landscaping, open space, hike/bike trails. *(4)	X	X		Cities of Midland and Odessa	Approved by City Councils and Commissioners Courts
Develop Backage Road North of S.H. 191 from F.M. 1788 to New Road "8". *(4)	X		X	City of Midland & Private Developers	City of Midland & Private Developers
Require outside storage to be behind main buildings and screened from major roadways. Wood, metal, chain link fencing to be avoided unless screened with solid vegetation. *(4)	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District
Develop a detailed system wide bike plan, including connections with SH 191 corridor/Mixed Use Centers (includes north/south facilities across SH 191). *(4)	X			Midland, Odessa, TXDOT	Work with the bicycle interests and other experts to develop a bike system SH 191 Sub-area Plan.
Develop Backage Road North of S.H. 191 from Yukon Road to New Road "4". *(4)	X			City of Odessa, Midland County & Private Developer	Cities of Odessa & Midland & Private Developer
Develop water & sewer service from Faudree Road to Yukon Road. *(4)	X			City of Odessa	City of Odessa & Private Developers
Utilize real property tax abatements in selected areas outside TIRZ to stimulate development, especially in industrial areas for diversified, targeted industries. *(3)	X	X	X	Cities of Midland and Odessa	Approved by City Councils and Commissioners Courts
Control/remove illegal off-ramps and two-way access roads (off frontage on road shoulders) and unauthorized driveways from SH191. *(3)	X		X	TxDOT, Cities of Midland and Odessa	Enforcement of TxDOT standards

## MOTOR MPO SH 191 Corridor Study/Management Plan

Designate multi-modal transit hubs at key location areas within the corridor, at UT Permian Basin at SH338, Scharbauer Complex at SH250, at "Los Canales Village Center" at FM1788, key arterial crossings. *(3).	X			Midland and Odessa, Transit Agencies, MPO	Transit Systems Plan and Metropolitan Transportation Plan
Develop signalized intersections of S.H. 191 Frontage Roads & Faudree Road, Yukon Road, New Road "4", New Road "8", New Road "9" and S.H. 158. *(2)	X	X	X	City of Odessa, City of Midland & Private Developer	Cities of Odessa & Midland, Private Developer
Develop Backage Road South of S.H. 191 from Yukon Road to F.M. 1788. *(2)	X		X	City of Odessa, Private Developer & Midland County	City of Odessa, Midland County & Private Developer
Develop Backage Road North of S.H. 191 from Faudree Road to Yukon Road. *(2)	X			City of Odessa & Private Developer	City of Odessa & Private Developers
Develop standards for "Class A" industrial parks especially highly visible areas along SH 191 corridor and backage road. *(2)	X			Cities of Midland, Odessa	Create Overlays for Industrial Zoning District
Metropolitan Thoroughfare Plan (MTP) - Revise. *(2)	X			MOTOR	Incorporate adopted thoroughfare plan revisions into 2035 MTP
Require all development in the Sub-area to have paved streets and fire protection. *(2)	X			Midland and Odessa, Midland and Ector Counties	Amend ordinances to require
Develop bike, pedestrian, equestrian trails, park linkages of Playa/Detention Basins. *(1)	X	X	X	City of Odessa, City of Midland & Private Developer	Cities of Odessa & Midland, TxDOT, Texas Parks & Wildlife, Private Developer
Encourage buildings to be close to streets with extra wide sidewalks with parking in block centers in the village centers to give a pedestrian oriented "urban" feel. *(1)	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District with Form Based Provisions
Preserve playas as open space and drainage system, and use the storm drainage system as an amenity to development, especially within the village centers. *(1)	X		X	Midland, Odessa, TXDOT, Counties of Midland, Ector	Revise subdivision ordinance and drainage manuals
Require all roads within 1800 feet of frontage road/development nodes to be paved with fire protection and sidewalks close to buildings to encourage pedestrian connectivity. *(1)	X		X	Cities of Midland and Odessa	Revise subdivision ordinance
CR 1275 north of SH 191 - Construct. *(1)	X			Midland, TXDOT, MOTOR, Midland County	Plan, realign and obtain ROW around the mining operation,
Develop corridor-wide access management standards detailing; intersection spacing, driveway locations and throat length, and median type/opening location. *(1)	X			Midland, Odessa, TXDOT, Counties of Midland, Ector	Implement through corridor overlay district
Identify short and long-term transit options for "transit ready corridor" and system phasing/implementation; develop phasing of transit corridor improvements. *(1).	X			Midland and Odessa, Transit Agencies,	Transit programming and CIP
Los Canales Village Center (UTPB) - Road Support System (Roads "C", "P", "O" and related Backage Roads). *(1)	X			Midland, TXDOT, MOTOR, Midland County	Plan and obtain ROW, work with property owners to construct
Metal building facades visible from freeway, backage road and other ROW shall be prohibited.	X		X	Cities of Midland and Odessa	Adopt Overlay Zoning District

## MOTOR MPO SH 191 Corridor Study/Management Plan

Annex or use developer agreement to require urban Sub-area development, including industrial properties, to meet standards utilized in rest of Cities	X		X	Midland and Odessa, Midland and Ector Counties	Study and annex prior to development. Monitor land sales
Develop implementation/phasing program supporting development of backage road system and improvements to frontage road intersections. Consideration for prioritization include; operational LOS, development of activity centers and associated roadway improvements, coordination with funding opportunities and/or public-private partnership. *(1)	X			Cities of Midland and Odessa, Counties of Ector and Midland, MPO and TxDOT	Corridor CIP programming
Implement lower intensity "rural" type development in northern Sub-area	X		X	Midland and Odessa, Midland and Ector Counties	Amend zoning and platting to provide common rural standards
Develop Major Detention Basin at Playa Lake South of S.H. 191 & East of F.M. 1788.	X	X	X	City of Midland & Private Developer	City of Midland & Private Developer
Develop Major Detention Basin at Playa Lakes South of S.H. 191 West of F.M. 1788.	X	X	X	City of Odessa & Private Developer	City of Odessa & Private Developer
Require, where appropriate, upstream deceleration lanes on SH 191 for developments with high volume driveways. Utilize TxDOT standards for threshold triggers.	X	X	X	Cities of Midland and Odessa, Counties of Ector and Midland, and TxDOT	At the time of development by Cities and by TxDOT Standards
Refine industrial master plan around airport, including La Entrada gateway on SH349, possible multi-modal center, airport office/flex space/conferencing	X		X	Cities of Midland and Odessa	Fund industrial master plans, studies
Investigate funding mechanisms for transit system development and implementation including public-private partnerships.	X		X	Midland and Odessa, Transit Agencies, MPO	Utilize various funding mechanisms and strategies
Expand use of Chapter 380 Agreements, particularly for incentivizing retail development.	X	X		Cities of Midland and Odessa	Approved by City Councils
Identify general station area design features, amenities and requirements/needs	X	X		Midland and Odessa, Transit Agencies,	Station area planning
Establish rules to require entryway and gateway features, regulate on-site and off-site signage (number, size, location, height).	X			Cities of Midland and Odessa	Adopt Overlay Zoning District
On properties disputing annexation within 1800 feet, negotiate developer agreement with same requirements as annexed areas	X			Cities of Midland and Odessa	If disputed, negotiate developer agreement
Identify long-term transit connection from "Los Canales Village Center" with Midland International Airport, other regional significant connection points.	X			Midland and Odessa, Transit Agencies, MPO	Transit Systems Plan and Metropolitan Transportation Plan
Coordinate and implement trail linkages with transit station programming.	X			Midland and Odessa, Transit Agencies,	Bike/Pedestrian System integration and programming
Develop water & sewer services from S.H. 191 to F.M. 1788	X			City of Midland	City of Midland & Midland Development Corporation

# MOTOR MPO SH 191 Corridor Study/Management Plan

Develop "pedestrian oriented" village centers/nodes at major interchanges and backage roads as shown, especially around UTPB "Los Canales" Center. *(14)		X		Cities of Midland and Odessa, Property Owners	Work with property owners to develop more detailed plans, concepts, etc.
Develop Interchange @ F.M. 1788 & S.H. 191 and Frontage Road Interchange. *(8)		X		TxDOT	State & Federal Funding
Road 4 - a north-south arterial one mile west of and paralleling FM 1788. *(7)		X	X	Midland/Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW, work with property owners to construct
Yukon, north/south of SH 191, and related grade separated interchange - Construct. *(7)		X	X	Odessa, TXDOT, MOTOR, Midland & Ector Counties	Plan and obtain ROW for entire road, design/obtain financing for interchange
Develop Backage Road South of S.H. 191 from F.M. 1788 to New Road "8". *(7)		X		City of Midland, University of Texas & Private Developers	State & Local Funds & Private Developers
Connect the system to the greater region with hike/bike/equestrian trails to encourage recreation and enhance value creation. (also see Multi-Modal). *(5)		X		Midland, Odessa, TXDOT, Counties of Midland, Ector, owners	Develop hike/bike/equestrian trail plan, amend subdivision ordinance, design standards to require
Develop Interchange at New Road "4" & S.H. 191. *(5)		X		TxDOT, Cities of Odessa & Midland	State & Local Funding
SH191/SH349/FM1788 Interchange - Construct. *(5)		X		TxDOT, MOTOR	Plan, design and construct the 3 levels
Investigate and fund a study for the establishment an Intermodal Facility especially to the west of FM 1788. *(4)		X		Cities of Midland and Odessa, State of Texas, U.S.	Approved by Councils, State and Railroads
Require a mix of uses including different types of residential, office, retail and flex space, especially at the nodes with density/intensity supportive of transit stops. *(4)		X		Cities of Midland and Odessa	Adopt Overlay Zoning District with Form Based Provisions
Develop water and sewer service from New Road "4" to F.M. 1788. *(3)		X		City of Midland , City of Odessa & Private Developer	Cities of Odessa & Midland & Private Developer
Coordinate equestrian trail connectivity and system phasing with other bike/pedestrian linkages. *(2).		X		Midland and Odessa	Equestrian trail programming and CIP
Develop Backage Road south of S.H. 191 from New Road "8" to New Road "9". *(2)		X		City of Midland & Private Developer	City of Midland & Private Developer
Develop water & sewer service from F.M. 1788 to New Road" 4". *(1)		X		City of Midland	City of Midland & Private Developers
Develop Interchange at S.H. 191 and New Road "9". *(1)		X		City of Midland & TxDOT	State & Local Funds
Identify locations for "landmark" buildings, encourage design and construction, especially in the village centers, visible from SH 191 and/or the backage roads. *(1)		X		Midland, Odessa, Counties of Midland, Ector, owners	Work with property owners to "incentivize" qualified development

## MOTOR MPO SH 191 Corridor Study/Management Plan

Provide key open spaces/plazas associated with retail, office, residential centers. *(1)		X		Midland, Odessa, Counties of Midland, Ector, owners	Work with property owners to “incentivize” qualified development
Utilize state and/or federal incentives when appropriate to incentivize development. Research and Development Tax Credit, Texas Enterprise Fund, etc. *(1)		X		Cities and Counties	Approved by Councils, State and U.S.
Require main buildings to be closer to roadway, with maximum setback of 100 feet with no more than one parking bay with landscaping. Additional parking behind buildings in center of block.		X	X	Cities of Midland and Odessa	Adopt Overlay Zoning District
SH 349/FM 1788 Interchange, Realignment of CR 60, (Briarwood), Wadley (Road E)		X	X	Midland, TXDOT, MOTOR, Midland County	Plan, design and construct the grade separated interchange
Develop water service from Yukon Road to New Road “4”		X		City of Odessa	City of Odessa & Private Developers
Road 4 interchange with SH 191 - Construct		X		TXDOT, MOTOR	Plan, design and construct the grade separated interchange
Develop 3 major transit centers and 5 transit stops on S.H. 191.		X		City of Odessa, City of Midland, TxDOT, E-Z Rider	Cities of Odessa & Midland, TxDOT, E-Z Rider, Federal Transportation Grants
Utilize street trees to shade sidewalks and paving to make walking/biking more comfortable. *(6)			X	Midland, Odessa, TXDOT, Counties of Midland, Ector, property owners	Develop common tree requirements and standards for various roads, centers
Continue economic development programs in place to incentivize industrial and high employment companies. *(2)			X	Midland DC	Utilize existing policies
Develop Backage Road South of S.H. 191 from S.H. 158 to New Road “9”. *(1)			X	City of Midland & Private Developers	City of Midland & Private Developers
Maintain adequate operational level-of-service at key interchange/intersections along SH191 frontage roads. Example: EB to WB U-turn at SH250, signalization at Faudree Rd. etc.			X	TxDOT; Coordination with Cities	Example: Lane additions, signal improvements, Texas U-Turn, etc.
Use exemptions to 3 year Municipal Annexation Plan requirement to expedite annexations			X	Cities of Midland and Odessa	Use voluntary consent or annex fewer than 100 parcels with homes
Leave vacant property not in process of developing outside city but negotiate agreements so upon parcel sales or development, annexation becomes voluntary			X	Cities of Midland and Odessa	Negotiate developer agreements with large property owners
Continue the existing development patterns on east and west sides of Sub-area			X	Midland and Odessa, Midland and Ector Counties	Amend and follow comprehensive plans
Enhance benefits of urban type development being in City			X	Cities of Midland and Odessa	Do not provide water, streets, fire, police protection, etc. outside city

## Appendix A Corridor Area Inventory Photos

# MOTOR MPO SH 191 Corridor Study/Management Plan



Photo 1: Need for Turnaround at Loop 250. South bound frontage road for Loop 250



Photo 3: West Bound Frontage Road Down Stream of SH 250. Beginning of corridor at south bound Loop 250, looking West toward Odessa



Photo 2: Need for Turnaround south bound frontage road for Loop 250 – recommending a Texas turn around



Photo 4: West Bound Frontage Road at end of Residential Development (Screening Wall)

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Photo 5: West Bound Frontage Road at end of Residential Development east of 158



Photo 7: West Bound Frontage Road bicycle memorial on fence



Photo 6: West Bound Frontage Road near new Road 9 (typical service road)



Photo 8: West Bound Frontage Road back view of truck using an undesignated exit near SW Baptist Church billboard

# MOTOR MPO SH 191 Corridor Study/Management Plan



Photo 9: West Bound Frontage Road same truck at this driveway



Photo 11: West Bound Frontage Road Driveway at XChemical to Building (wide gravel paved and extends to adjacent county road)



Photo 10: West Bound Frontage Road driveway at new development near Baptist Church



Photo 12: West Bound Frontage Road. Very wide open driveway in excess of 150'

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Photo 13: West Bound Frontage Road illegal off ramp



Photo 15: Backage road next to residential used by trucks to caliche pit



Photo 14: Paved road from westbound service road used by trucks to caliche pit, passes along edge of residential



Photo 16: West Bound Frontage Road looking back at illegal off ramps (before paved ramp exit) to access; Using an illegal access from an access road to the caliche pit

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Photo 17: West Bound Frontage Road (view east) looking east bound at exit ramp at caliche pit accessway



Photo 19: West bound frontage road @ FM 1275 (view looking south @ overpass) – recommend Texas turn arounds each direction



Photo 18: Caliche accessway connecting service road to Backage Road to access entry roadway to caliche pit



Photo 20: West bound frontage road @ FM 1275 (view looking north along FM 1275 showing landscaped median on approach to highway)

## MOTOR MPO SH 191 Corridor Study/Management Plan



Photo 21: La Entrada subdivision billboard at Southeast edge of development (no road along south edge)



Photo 23: "Bootleg: gravel backage road along back road behind subdivision and All State Fence & Supply ties to drill site



Photo 22: Single-family residence with drilling rig in the La Entrada Subdivision



Photo 24: West bound frontage road with multiple driveways, no cross-access

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Photo 25: West Bound Frontage Road illegal entry to entry ramp



Photo 27: West bound frontage road wide driveway before exit ramp to FM 1788 at Office Warehouse; unlimited access without curb and gutters



Photo 26: West Bound Frontage Road storage facility with wide driveway.



Photo 28: backage road for pump access between Fence Supply and FM 1788 (view west)

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Photo 29: backage road for pump access between Fence Supply and FM 1788 (view east)



Photo 31: FM 1788 west of SH 191 near Midland city limits



Photo 30: West bound frontage road (view to east) illegal off ramp 300' past paved off ramp in advance of FM 1788



Photo 32: South bound frontage road of FM 1788 at interchange of 191

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Photo 33: West bound frontage road illegal east bound traffic on makeshift cross access drive backage road



Photo 35: West bound frontage road illegal east bound traffic on makeshift cross access drive backage road – closer view



Photo 34: 2/10 mile West bound 191 frontage road frmom1788 new developments in midland with asphalt drives and gravel access



Photo 36: 3/10 mile west bound from 1788 temporary access to a street to rear of property on 191

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Photo 37: Asphalt drives, with gravel asphalt ignored. Driving over gravel instead. 3/10 west on the frontage road



Photo 39: 5/10 west bound frontage road same as photo 37. Construction of 2 way access road parallel across industrial sights.



Photo 38: Individual businesses may or may not have paved driveways but the impromptu cross access easement will resolve that problem.



Photo 40: Fence being constructed that will cut off cross access easement

## MOTOR MPO SH 191 Corridor Study/Management Plan



Photo 41: Fence being constructed that will cut off cross access easement



Photo 43: Fence being constructed that will cut off cross access easement. Looking east bound along frontage road down asphalt parking drives providing cross access to 1788



Photo 42: New industrial development with cross-access drives



Photo 44: Path of off-road two-way operations west of FM 1788

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Photo 45: Continuation of the illegal 2 way access 1.3 miles west of 1788



Photo 47: Temporary construction. Inadequate driveway asphalt driveway from the frontage road and deterioration



Photo 46: Temporary construction Inadequate driveway asphalt driveway from the frontage road and deterioration



Photo 48: Industrial street with truck driving down it. 1.6 miles west of 1788

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Photo 49: gravel entry way to business west of lacking gate at 1.5 miles west of 1788



Photo 51: Bike sign – 2.1 miles west of 1788



Photo 50: Small location dirt access to dirt street from frontage road with picture of large nightclub in background



Photo 52: Dirt industrial street and access point at the frontage road at 2.5 miles West of 1788. Also showing buildings under construction along road.

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Photo 53: Bike sign – 2.1 miles west of 1788 with ruts of traffic having to go around sign because it is in the way of illegal two way traffic on access road



Photo 55: Billboards adjacent to frontage property line



Photo 54: Unpaved street providing access to adjacent properties



Photo 56: "Keep Off" median sign – has ruts around both sides

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Photo 57: Billboards adjacent to frontage with no setbacks from road



Photo 59: Exit to Faudree Road



Photo 58: "Keep Off" median sign – has ruts around both sides of it. Using as a median break to the drive in 61. 2.8 miles west of 1788



Photo 60: Fence west bound of Parksbell property immediately adjacent to billboards and industrial tract showing restricted access to development

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Photo 61: Exit to Faudree Road



Photo 63: Faudree Road and 56 which functions as a proper backage road



Photo 62: Faudree Road Interchange looking south



Photo 64: Illegal right turn areas at Faudree Road

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Photo 65: Faudree Road interchange



Photo 67: Looking South at the Billy Hext interchange



Photo 66: Looking south to Faudree Road from 56<sup>th</sup> street



Photo 68: Crossroads Church looking east on the frontage road east of Billy Hext Drive

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Photo 69: Proper diverters at driveways located in front of Best Buy



Photo 71: Looking south at Loop 338 interchange



Photo 70: Traffic diverter at westbound frontage road



Photo 72: Split entry of development

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Photo 73: Loop 338 interchange at SH 191



Photo 75: Looking east on Mecca Street from Headlee Road



Photo 74: Looking southbound at Loop 338 intersection with SH 191



Photo 76 Looking north on Headlee Road from Eastridge Road

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Photo 77 North bound on 338 proper distance back from a median.  
I think this is not the same number on the message – Maybe East  
bound backage @ Eastridge Loop 338



Photo 78: West bound backage @ Eastridge Loop 338

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