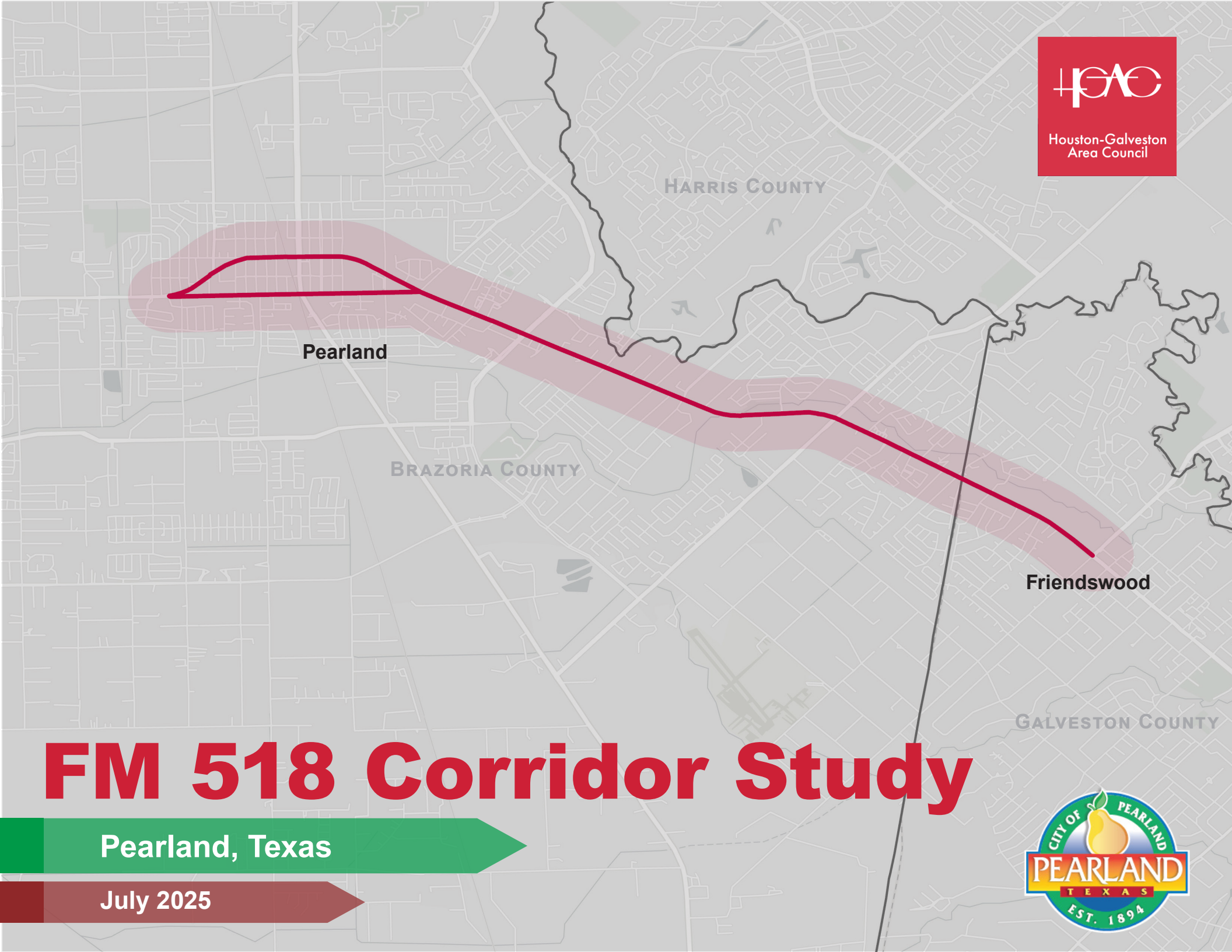

FM 518 Corridor Study

Pearland, Texas

July 2025

Acknowledgments

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Contents

Executive Summary

Purpose and Need

The Houston-Galveston Area Council (H-GAC), in partnership with the City of Pearland, produced this study to develop short-, medium-, and long-term recommendations to improve safety and mitigate congestion on FM 518 (Broadway Street) from McLean Road in Pearland to E. Edgewood Drive in Friendswood. This study is an opportunity to coordinate corridor improvements with nearby TxDOT projects and the H-GAC Pearland Mobility Plan. In addition, this study is consistent with past transportation planning efforts to develop a network that adequately addresses the needs of residents, visitors, and businesses.

The vision for the FM 518 (Broadway Street) Corridor Study is to create a safe, sustainable, and accessible multimodal corridor that prioritizes the needs of all users while improving traffic flow.

Goals for the FM 518 (Broadway Street) Corridor

The study has two primary goals, which are assessed using Measures of Effectiveness (MOEs) to evaluate potential alternatives.

Move people and goods efficiently through optimizing the multimodal transportation network by reducing conflict points, controlling access, enhancing connectivity, improving traffic flow, and providing safe and convenient infrastructure.
MOE: Intersection Level of Service (LOS)

Improve safety by reducing the number of crashes along the corridor by implementing traffic calming measures, improving pedestrian and bicycle infrastructure, and enhancing visibility at intersections.
MOE: Anticipated reduction in crashes

The corridor is expected to experience growth in traffic volume, which will cause traffic to significantly worsen over time. With adjacent roadways and portions of FM 518 (Broadway Street) beyond the study limits being widened in the near future, it is necessary to study future alternatives for improving the corridor.

Approach

The study reviewed existing conditions along the corridor, including demographic patterns, roadway and environmental characteristics, and previously completed plans and studies.

Analysis of alternatives and improvement concepts were modeled using PTV Vissim simulation software. Traffic data from nine annual count stations over a period of 20 years (2003-2023) was used to project anticipated traffic growth over time. Per TxDOT Corridor Analysis Standard Operating Procedures guidance and corridor traffic data, a growth rate of 2% was used to estimate future traffic volumes for the corridor.

The corridor safety analysis was conducted using benefit-cost analyses (BCA),[1] Safety Performance Functions (SPFs), and Crash Modification Factors (CMFs) to determine the potential impact of implementing safety countermeasures.

Public Engagement

Development of the FM 518 (Broadway Street) Corridor Study involved gathering input from stakeholders and the public. A Steering Committee comprised of non-elected local governmental and non-governmental representatives also provided guidance and feedback throughout the study.

Methods to promote and conduct public engagement included flyers, in-person events, online surveys, social media posts, public meetings, and yard signs. Public input provided insight into the priorities of the community and revealed preferences for potential alternatives.

[1] USDOT BCA guidelines

Executive Summary

Future Conditions

Future conditions were modeled for 2045 to illustrate how the corridor might operate if no additional improvements are done besides those currently in the City of Pearland's Capital Improvement Plan (CIP) and the FM 518 TxDOT project from FM 865 to west of Mykawa Road. The 2045 No Build scenario results show that all but two of the signalized intersections along the corridor can be expected to operate at a LOS level of D (significant congestion), E (severe congestion), or F (stop-and-go traffic) in the PM peak period.

The considerable change in LOS from the existing conditions demonstrates that if no additional improvements are made to the corridor, severe congestion and stop-and-go traffic will be a major issue, especially in the afternoons and evenings.

Alternatives

Short- and Medium-Term

The study describes short- to medium-term improvements or alternatives which can be implemented relatively quickly - within five years or up to ten years if ROW acquisition is required.

Intersection Improvements

Intersection improvements along the corridor were identified and analyzed. These include the addition of turn lane(s), modification of signal operations, or both.

Figure 2 shows the location of intersection improvements by type. Safety countermeasures were also identified for intersections with high crash rates. Detailed information including cost for these improvements can be found starting on page 38 in the document.

Walnut Street Closure Alternative

A medium-term alternative to remove the signal at Walnut Street and McLean Road was also studied, but ultimately determined by the Steering Committee to be unsatisfactory due to the potential restriction of emergency services. Figure 1 illustrates the Walnut Street Closure.

Figure 1: Walnut Closure Alternative

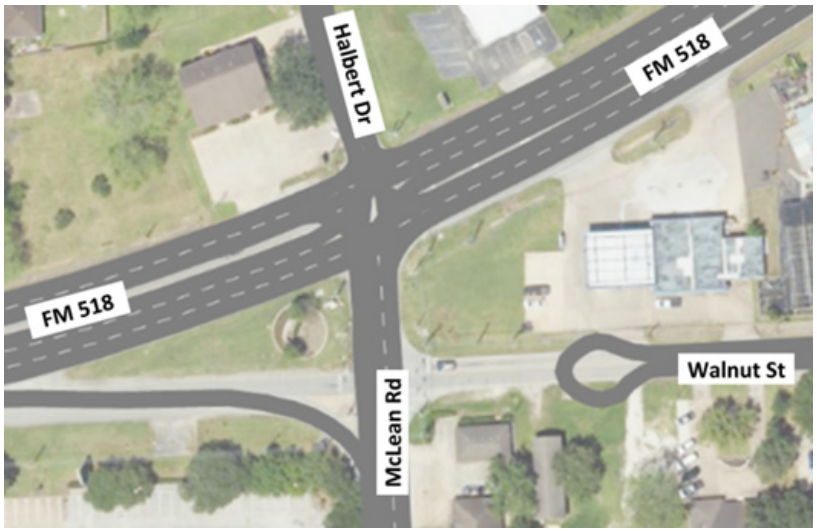
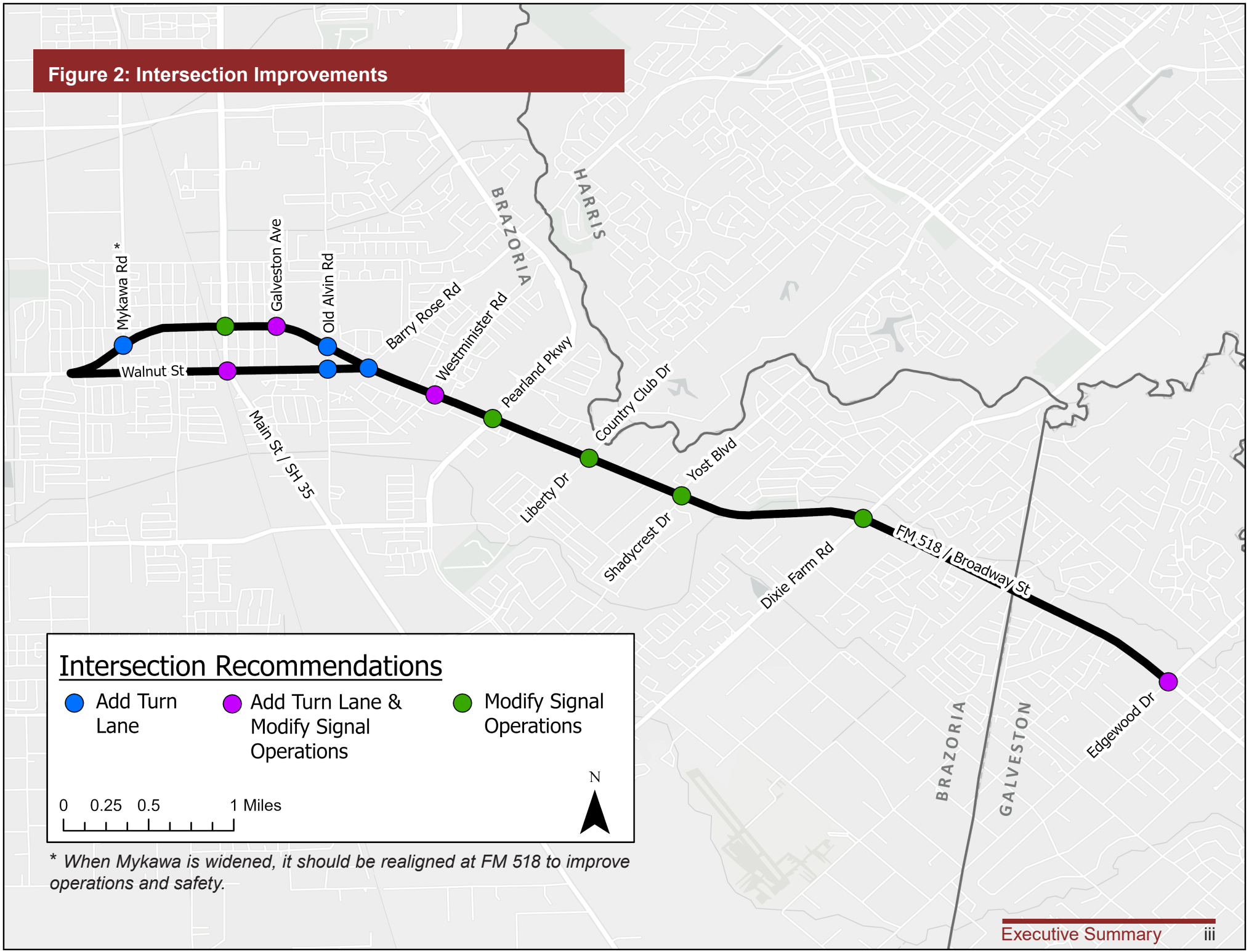


Figure 2: Intersection Improvements



** When Mykawa is widened, it should be realigned at FM 518 to improve operations and safety.*

Executive Summary

Long-Term

Long-term improvements analyzed as part of this study include one-way pair conversion, access management, and adding additional throughput capacity by adding additional lanes. These alternatives are would take greater than ten years to implement. Detailed information for long-term improvements can be found starting on page 45 in the document. Direct comparisons, including cost estimates, are provided on page 58.

Alternative 1: One-Way Pair

The One-Way Pair Alternative would convert FM 518 to one-way west bound and Walnut Street to one-way east bound from McLean Road to Barry Rose Road (Figure 5). It includes three travel lanes in each direction on each of the aforementioned roadways.

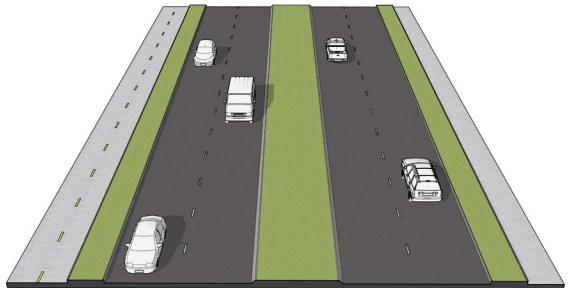
Two different One-Way Pair Alternatives were established:

- **Scenario A** with FM 518/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 4-lane from Barry Rose Road to E. Edgewood Drive.
- **Scenario B** with FM 518/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 6-lane from Barry Rose Road to E. Edgewood Drive with a raised median.

Alternative 2: Access Management (4-lanes)

The Access Management Alternative includes the addition of raised medians from McLean Road to the Friendswood City Limits, where raised medians currently exist (see). Walnut Street would remain a 2-lane facility. Figure 3 below illustrates a cross section of the corridor with a raised median, and Figure 6 is a map of the alternative.

Figure 3: Alternative 2 Cross Section



FM 518 (Broadway Street) From McLean Road to Friendswood City Limits with four lanes and a raised median

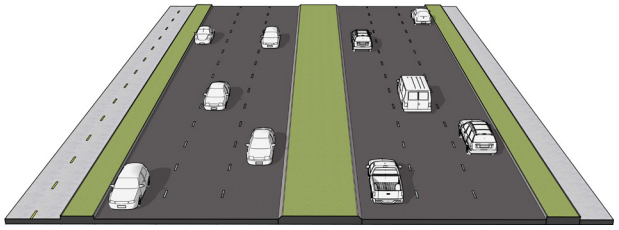
Alternative 3: Six-Lane Capacity Improvement (with raised medians)

The Six-Lane Capacity Improvement Alternative includes adding an additional lane in each direction and installing a raised median from Barry Rose Road to E. Edgewood Drive. Walnut Street would remain a 2-lane facility, as it is today.

According to TxDOT, adding a lane to FM 518 (Broadway Street) in each direction from McLean Road to Barry Rose Road would not be feasible due to the presence of historical properties.

Figure 4 below illustrates a cross section for alternative 3, and Figure 7 shows the location for the six-lane capacity Improvement with raised medians.

Figure 4: Alternative 3 Cross Section



FM 518 (Broadway Street) From Barry Rose Road to E. Edgewood Drive with six lanes and a raised median

Figure 5: Alternative 1

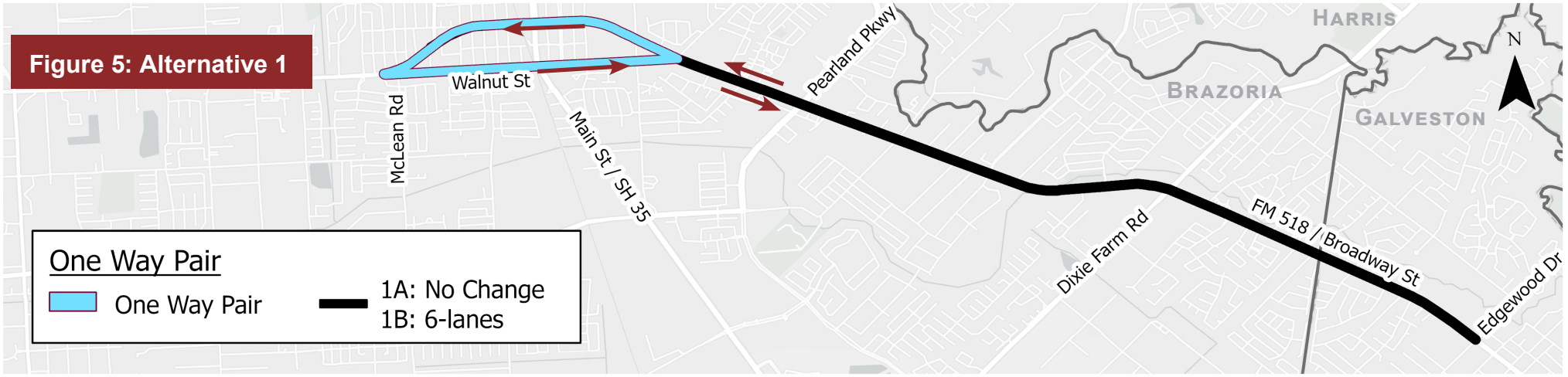


Figure 6: Alternative 2

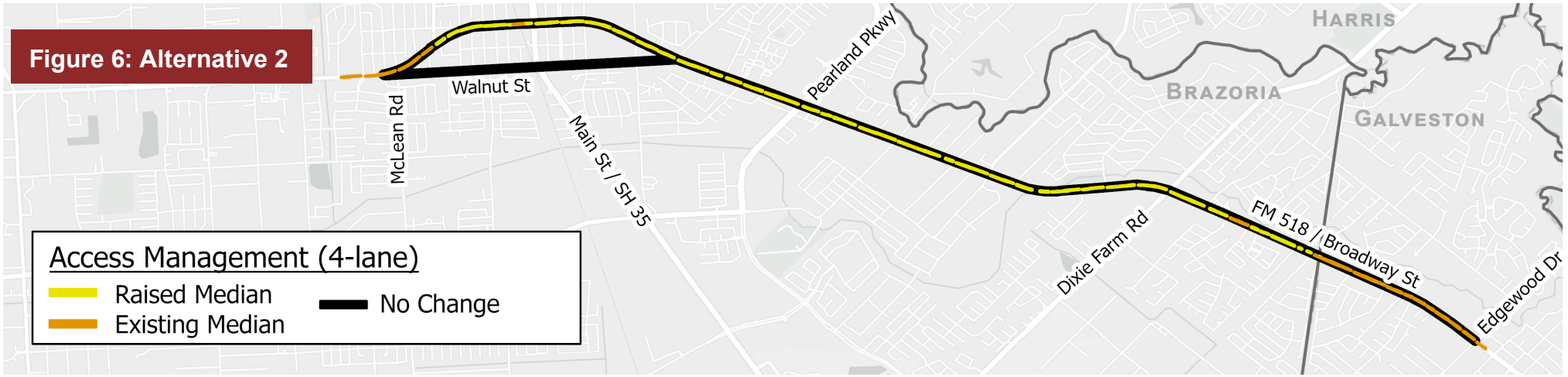
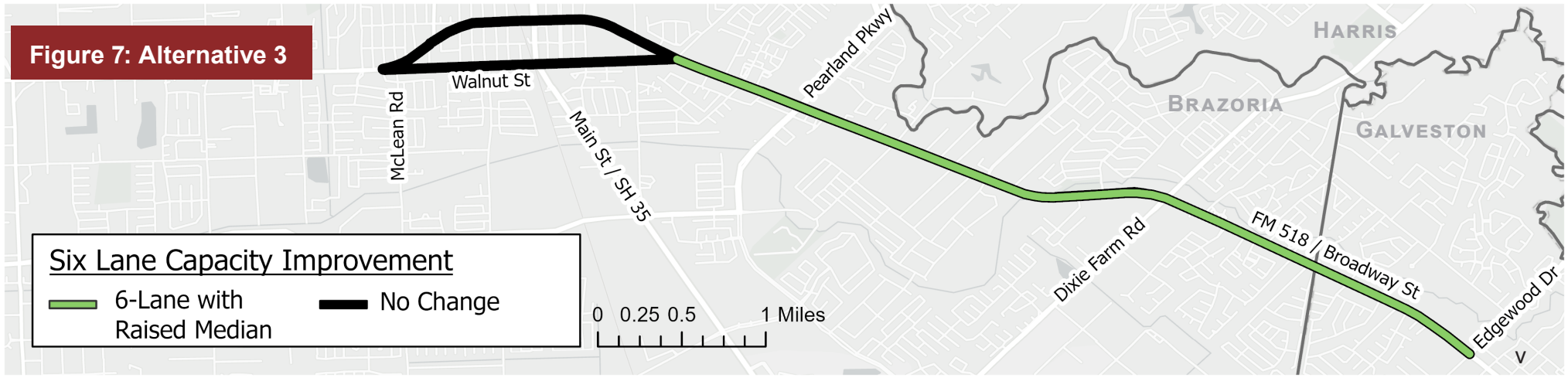


Figure 7: Alternative 3



Recommendations

General Recommendations

Safety Countermeasures

- Regular maintenance of pavement and striping
- Install intersection and street lighting
- Installation of retroreflective backplates
- Adjust clearance intervals as needed
- Implement leading pedestrian intervals
- Update for ADA accessibility

Multimodal Recommendations

- Pedestrian Signal Head with push button
- High Visibility Crosswalks
- ADA accessible ramps with tactile warning surfaces

All long term improvement alternatives include:

- Sidewalks: Six-foot in width, with a six-foot buffer, on the south side of the roadway.
- Side paths: Ten-foot in width, six-foot buffer, on the north side of the roadway

Intersection Recommendations

If the City of Pearland and TxDOT move forward with implementing the short- and medium-term intersection improvements, it is advisable that ROW be acquired and preserved where necessary to develop the additional turn lanes. Since each intersection improvement impacts the level of service at surrounding intersections, it is suggested to implement them all to fully realize the benefits.

Long-Term Recommendations

When comparing the results of the analysis, Alternative 1B, or the one-way pair of FM 518 (Broadway Street)/Walnut Street from McLean Road to Barry Rose Road and 6-lanes with a raised median on FM 518 (Broadway Street) from Barry Rose Road to E. Edgewood Drive, demonstrated the best results.

Table 1: Alternative Evaluation at A Glance

Alternative		Improvement in Safety	Improvement in Operation
1A	One Way Pair Scenario A	Yes	No
1B	One Way Pair Scenario B	Yes	Yes
2	Access Management (4-lanes)	Yes	Neutral
3	Six-Lane Capacity Improvement (with raised median)	Yes	Yes
-	No Build	No	No

Alternative 1B is recommended for long-term implementation out of the alternatives presented in this study. However, there are many other factors that influence the suitability of the alternative, and there are other potential improvements that can be analyzed for comparison to Alternative 1B.

Next Steps

The City of Pearland, along with TxDOT, will determine the appropriate course of action to pursue for the future of the corridor. This will require coordination, potential ROW acquisition, funding allocation and advancement in project delivery processes, whether for one of the alternatives presented in this study or studies to follow.

1

Introduction

FM 518 Corridor Study

Introduction

The Houston-Galveston Area Council (H-GAC), in partnership with the City of Pearland, produced this study to consider potential future improvements for FM 518 (Broadway Street). This study developed and analyzed alternative improvements to the FM 518 (Broadway Street) corridor from McLean Road in Pearland to E. Edgewood Drive in Friendswood and evaluated a one-way pair for FM 518 (Broadway Street) and Walnut Drive from McLean Road to Barry Rose Road. With TxDOT currently in the process of widening FM 518 from SH 288 to McLean Road, this study is an opportunity to coordinate corridor improvements with the ongoing TxDOT project, as well as the H-GAC Pearland Mobility Plan. In addition, this study continues past and ongoing transportation planning efforts by working toward the following vision:

The vision for the FM 518 (Broadway Street) Corridor Study is to create a safe, sustainable, and accessible multimodal corridor that prioritizes the needs of all users while improving traffic flow.

The FM 518 corridor goes by several different names at different locations: Broadway, East Broadway, and North Friendswood Drive. For the purposes of this study, the name FM 518 (Broadway Street) will be utilized throughout. The 6.2 mile long corridor with a 0.25 mile buffer for the study area is shown in Figure 1.

Goals for the FM 518 (Broadway Street) Corridor Study

The study has two primary goals, which are assessed using Measures of Effectiveness (MOEs) to evaluate potential alternatives.

Move people and goods efficiently through optimizing the multimodal transportation network by reducing conflict points, controlling access, enhancing connectivity, improving traffic flow, and providing safe and convenient infrastructure.

MOE: Intersection Level of Service (LOS)

Improve safety by reducing the number of crashes along the corridor by implementing traffic calming measures, improving pedestrian and bicycle infrastructure, and enhancing visibility at intersections.

MOE: Anticipated reduction in crashes

The following goals are secondary considerations for the corridor:

Achieve and maintain a state of good repair by providing well-maintained, reliable, and safe facilities throughout the FM 518 (Broadway Street) Corridor.

Strengthen regional economic competitiveness by mitigating traffic flow and providing safe, efficient access to adjacent businesses and regional opportunities.

Safeguard natural and cultural resources by prioritizing environmentally sustainable practices and preserving the community's heritage, ensuring the integrity of both ecological and cultural assets while reducing traffic related emissions.

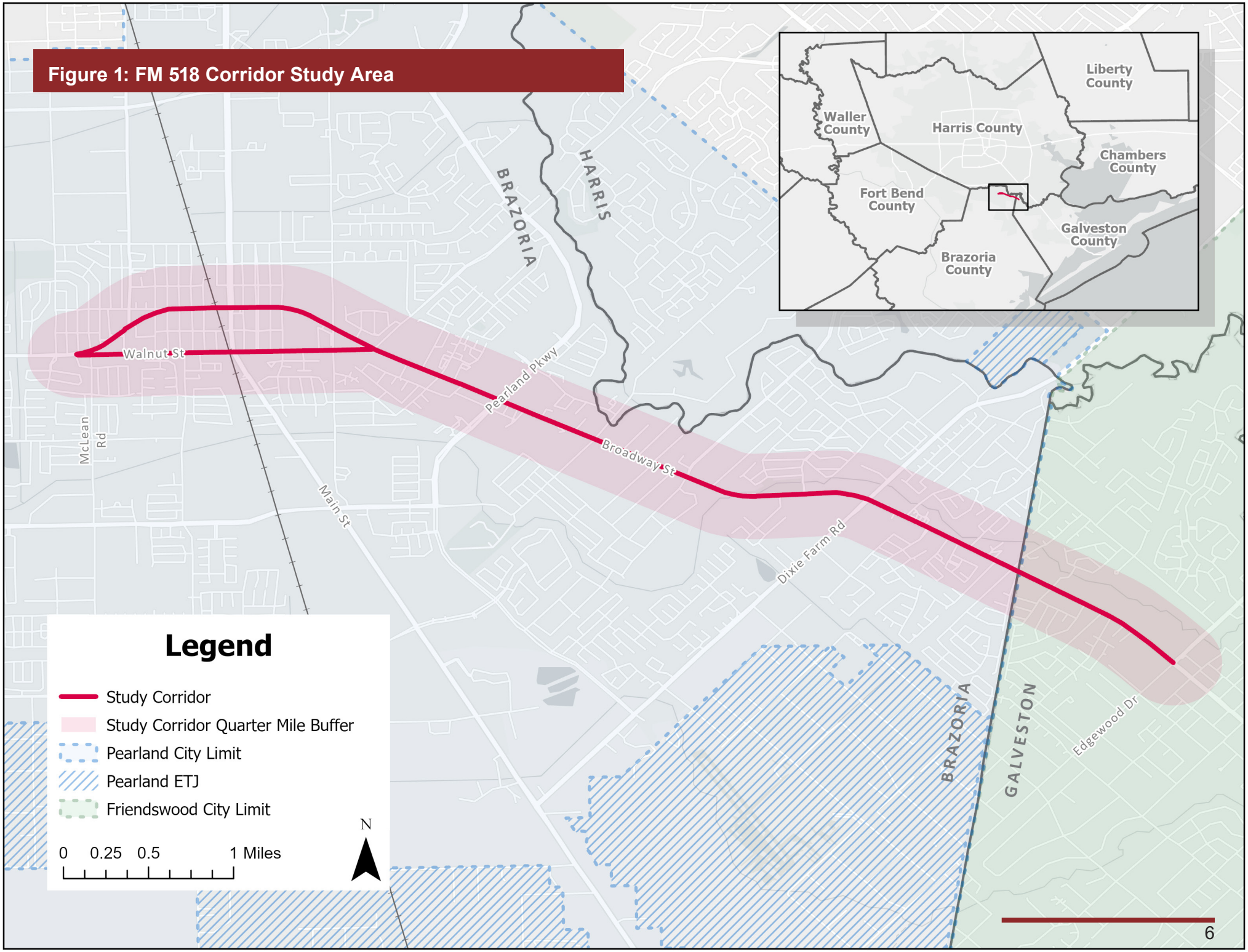


Figure 1: FM 518 Corridor Study Area
Liberty County
Waller County
Harris County
Chambers County
Fort Bend County
Galveston County
Brazoria County
HARRIS
BRAZORIA
Walnut St
Pearland Pkwy
Broadway St
McLean Rd
Main St
Dixie Farm Rd
Edgewood Dr
BRAZORIA
GALVESTON
Legend
Study Corridor
Study Corridor Quarter Mile Buffer
Pearland City Limit
Pearland ETJ
Friendswood City Limit
0 0.25 0.5 1 Miles
N

Plan Review

The FM 518 Corridor has been studied many times as it is the main arterial traversing the City of Pearland. It is the hub of commercial activity as well as the location of many schools, City Hall and other institutional uses, and the historic core of Pearland. To ensure continuity from past goals, planning efforts, and public input, this section provides a review of the relevant planning documents that are listed below.

2004	Corridor Access Management Plan
2015	Pearland 20/20 Community Strategic Plan
2020	Broadway Street Development Plan
	Broadway Corridor Development Corridor Connections
	Final Environmental Assessment for FM 518
2021	Pearland Multi-Modal Master Plan
2022	H-GAC 2023-2026 Transportation Improvement Program
	Pearland Capital Improvement Program (2023-2027)
2023	H-GAC 2045 Regional Transportation Plan Update
2024	Pearland Comprehensive Plan
2025	Pearland Transit Needs Assessment and Feasibility Study

From 2004, when the earliest reviewed plan was developed, to today, there have been several consistent objectives regarding the functionality of the corridor. Safety, mobility, economic development, and traffic operations are some of the key goals in each of the 11 reviewed plans.

The plan review highlighted the corridor as essential to local and regional mobility, and the FM 518 (Broadway Street) Corridor study helps to fulfill some of the recommendations made for further study. Proposed improvements from the plans include active transportation facilities, drainage and sewer projects, and other corridor enhancements. The plan review helped to identify specific planned projects along and near the corridor.

Examples of planned projects impacting the corridor include:

- Shared path with intersection improvements
- Reconstruct and widen FM 518 from SH 288 to FM 865
- Add capacity from FM 270 to SH 146
- Pedestrian enhancements from FM 2351 to Cowards Creek
- Widen FM 518 from FM 865 to SH 35
- Extensions of McHard Road and Smith Ranch Road

2

Existing Conditions

FM 518 Corridor Study

Existing Conditions

This section provides a summary of existing conditions in the corridor to establish a baseline understanding of the needs of the study area. More information on existing conditions can be found in the FM 518 (Broadway Street) Corridor Study Existing Conditions Factbook (Appendix A).

Population

The population around the FM 518 (Broadway Street) corridor from McLean Road to Edgewood Drive is similar to that of the three surrounding counties. There are approximately 14,520 people within 0.3 miles of the corridor study area.[1] The 2023 population of the City of Pearland was around 128,000 and the City of Friendswood was around 41,000.[2]

2020 to 2045
Projected Population Increase

City of Pearland:	City of Friendswood:
+16.3%	**+23.7%**

Source: 2018 H-GAC Regional Growth Forecast

[1] USDOT Screening Tool for Exploration and Analysis of Projects (STEAP), utilizing American Community Survey Data from 2017-2021.
[2] US Census Bureau Quick Facts

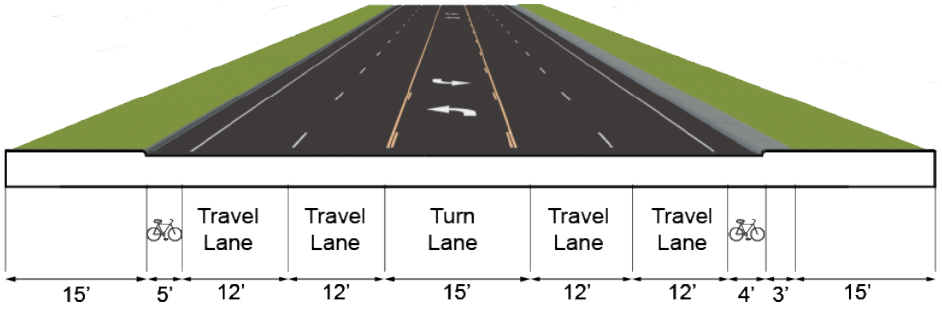
Pedestrian on sidewalk, Veterans Drive near Walnut Street

Roadway Characteristics

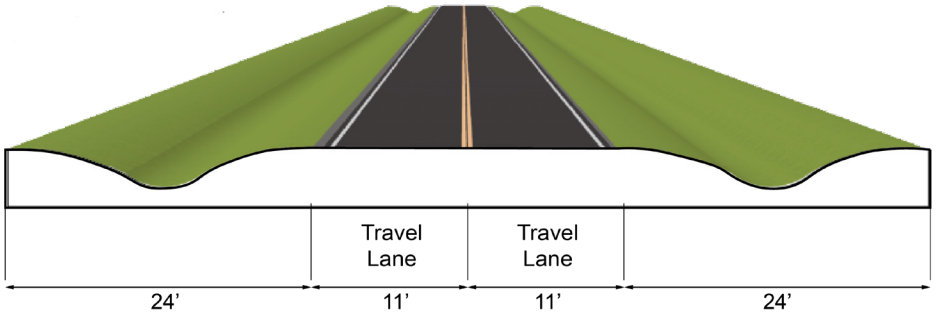
The existing conditions analysis examined roadway components along the corridor, including travel lanes, medians, railroad crossings, sidewalks, bike facilities, speed limits, and school bus stops. These attributes help provide context for the traffic operations and safety.

FM 518 (Broadway Street) is a state highway classified as a principal arterial. Within the 6.2 mile study area, there are 20 signalized intersections and four distinct segments. A map of signalized intersections and corridor segments can be seen in Figure 2.

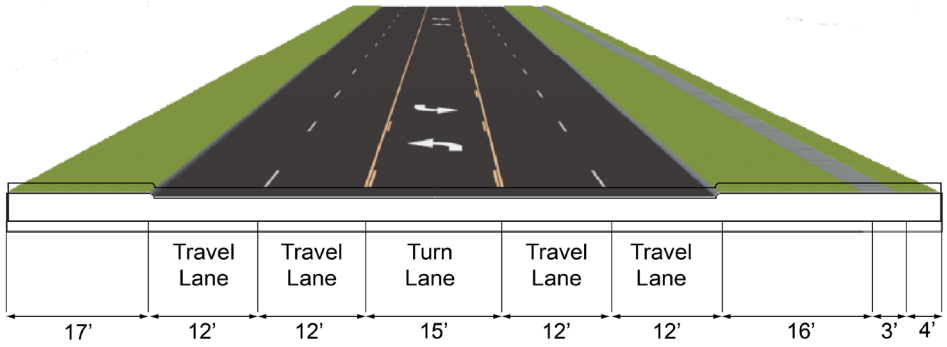
1A - FM 518 / Broadway Street (McLean Road to Barry Rose Road)
Four lanes with a striped median and a standard bike lane. Length of 1.6 miles and approximate width of 105 feet.



1B - W Walnut St (McLean Road to Barry Rose Road)
Most of this segment is only two lanes, but the road widens to four lanes with a median near the intersection with Main St. Length of 1.45 miles and approximate width of 24 feet to 70 feet.



2 - FM 518 / Broadway Street (Barry Rose Road to Sunset Meadows Drive/Winding Road)
Four lanes with a striped median. Length of 3.56 miles in length and around 105 feet wide.



3 - FM 518 / Broadway Street / N Friendswood Drive (Sunset Meadows Drive/Winding Road to Edgewood Drive)
Four lanes with raised landscaped medians. Length of 1 mile and approximate width of 100 feet.

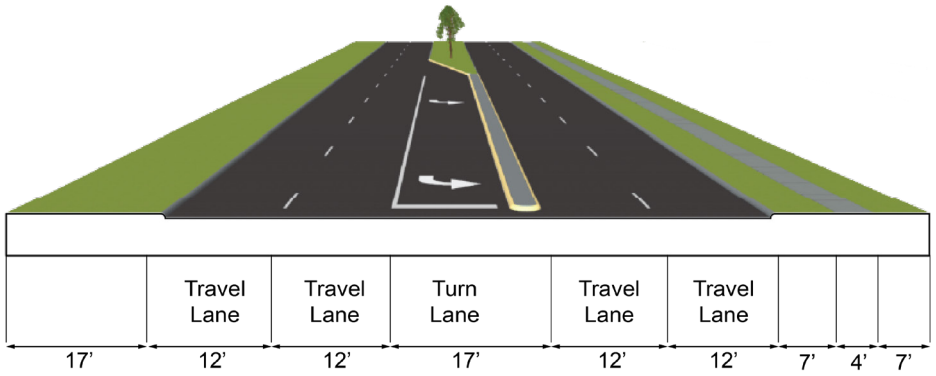
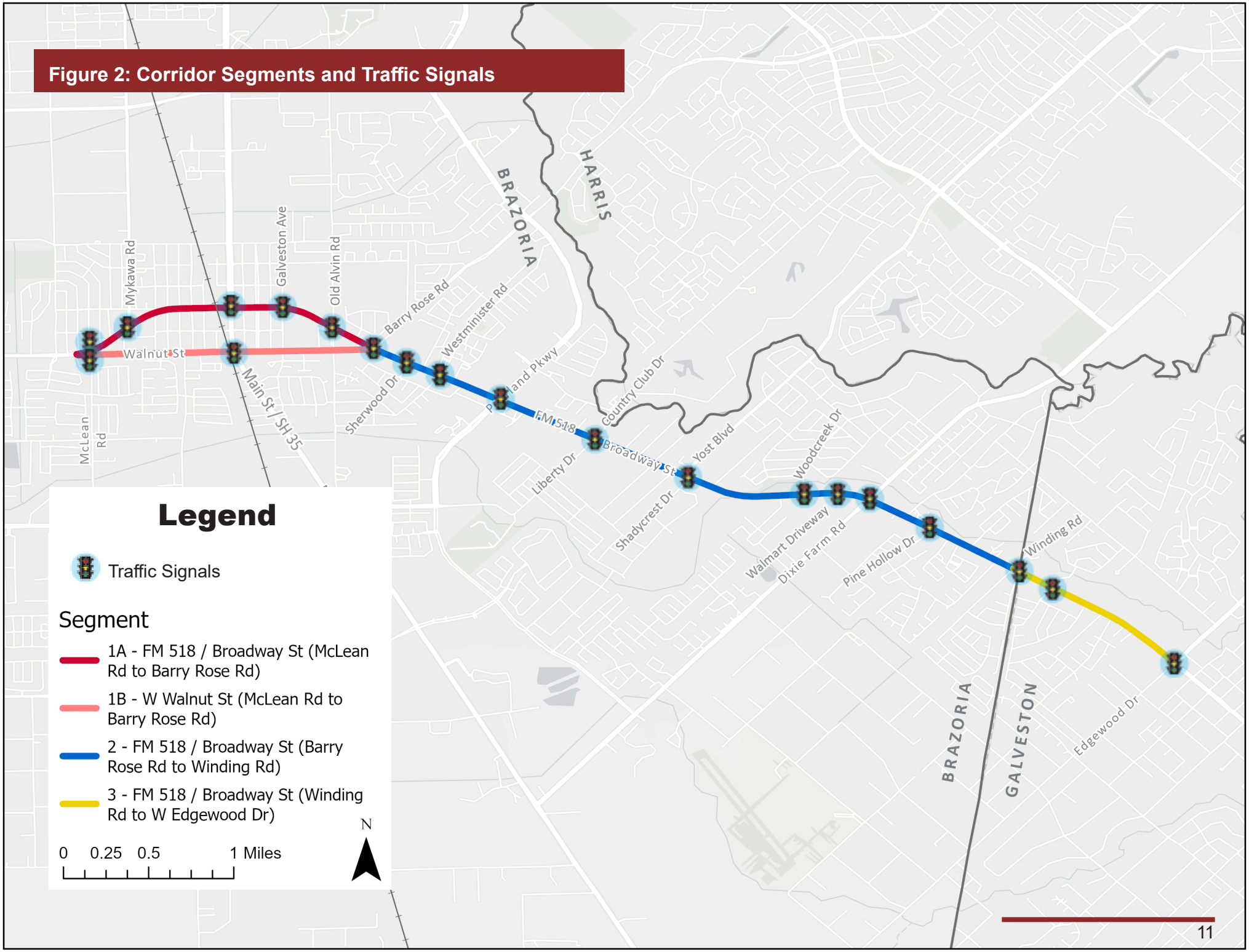


Figure 2: Corridor Segments and Traffic Signals



Sidewalks and Bike Lane Inventory

The existing conditions analysis examined where there is infrastructure to facilitate walking and biking along the corridor. This revealed several gaps in sidewalk connection. Table 1 shows an estimation of the percentage of each corridor segment that has complete sidewalks.

Table 1: Percentage of Complete Sidewalks

Segment	Start	End	Percent Complete
1A	McLean Road	Barry Rose Road	48%
1B	McLean Road	Barry Rose Road	33%
2	Barry Rose Road	Winding Road	46%
3	Winding Road	Edgewood Drive	26%

One section that notably has sidewalks on both sides of the roadway is FM 518 (Broadway Street) between Houston Avenue and Alexander Lane.

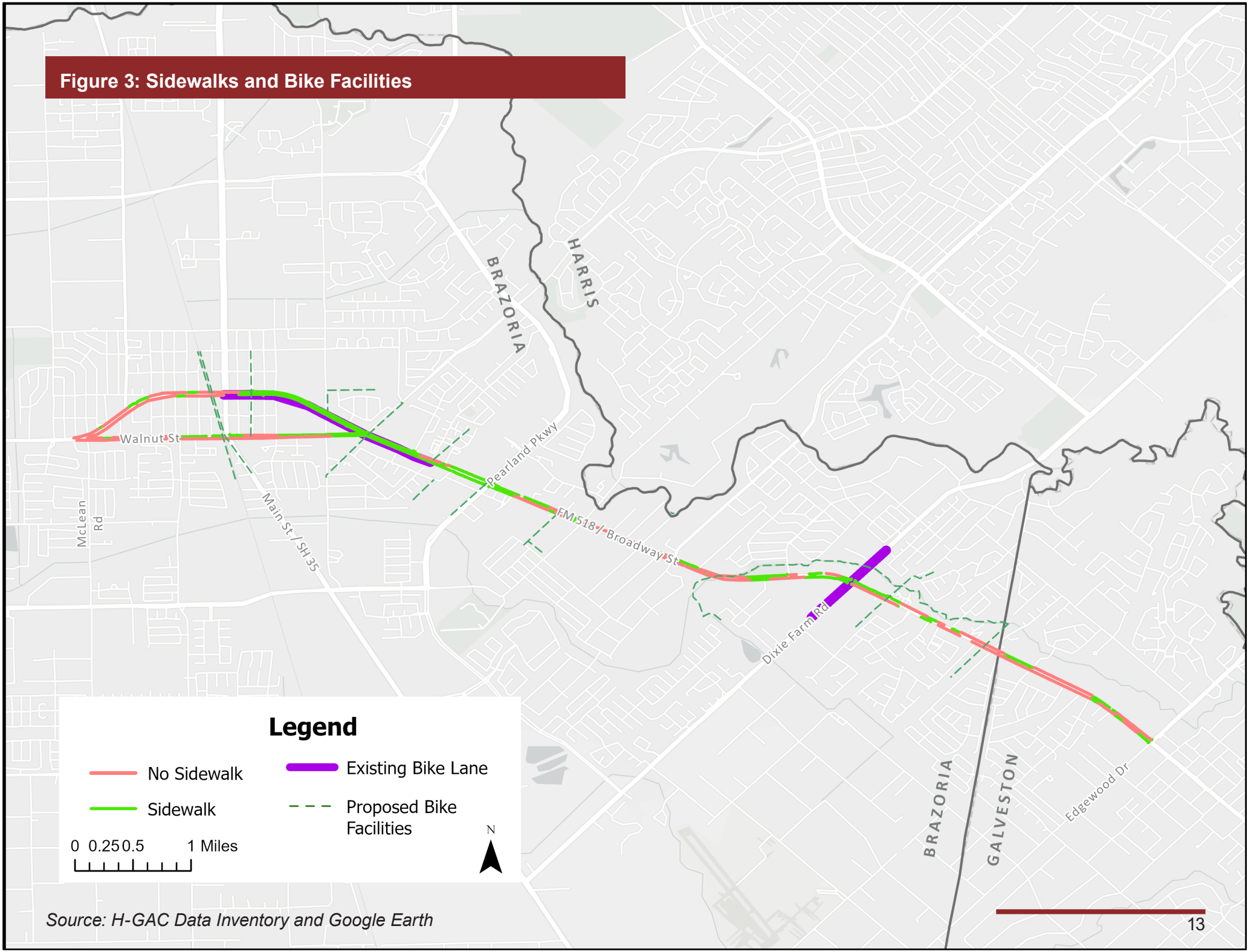
Some of the major gaps in sidewalk connectivity are along:

- Walnut Street from McLean Road to Old Alvin Road
- FM 518 (Broadway Street) from McLean Road to Main Street
- FM 518 (Broadway Street) from Pearland Parkway to Dixie Farm Rd
- FM 518 (Broadway Street) Dixie Farm Road to E. Edgewood Drive

For bicycle facilities, there is an existing on-street bike lane on the FM 518 (Broadway Street) corridor from Main Street to Westminster Road. In addition, the study area intersects with an existing bicycle facility (signed and striped bike lane) at FM 518 (Broadway Street) and Dixie Farm Road. Figure 3 shows sidewalks and bicycle facilities in the corridor study area.

Bike lane on Dixie Farm Road at FM 518

Figure 3: Sidewalks and Bike Facilities



Source: H-GAC Data Inventory and Google Earth

Other Roadway Characteristics

Median Inventory

Raised medians are physical barriers that separate opposing lanes of traffic and are often associated with improved safety and more efficient traffic operations. Walnut Street has a raised median from Texas Street to S. Grand Boulevard in the Pearland Old Town Site going through the BNSF railroad crossing. There are existing raised medians on FM 518 (Broadway Street) beginning at McLean Road to Mykawa Road in the Pearland Old Townsite. There is also a raised median at the BNSF railroad crossing. The remainder of the roadway in Pearland has a center turn lane without a raised median. The raised median begins again at the Friendswood city limit and runs through the eastern terminus of the study area at Edgewood Drive.

Railroad Crossing Inventory

The BNSF railroad crosses the project study area at-grade in two locations - one on FM 518 (Broadway Street) and again at Walnut Street. Train schedules were not available at the time of the writing of this report, but it has been reported that the trains pass through the study area numerous times a day causing a 5-10 minute delay each time.

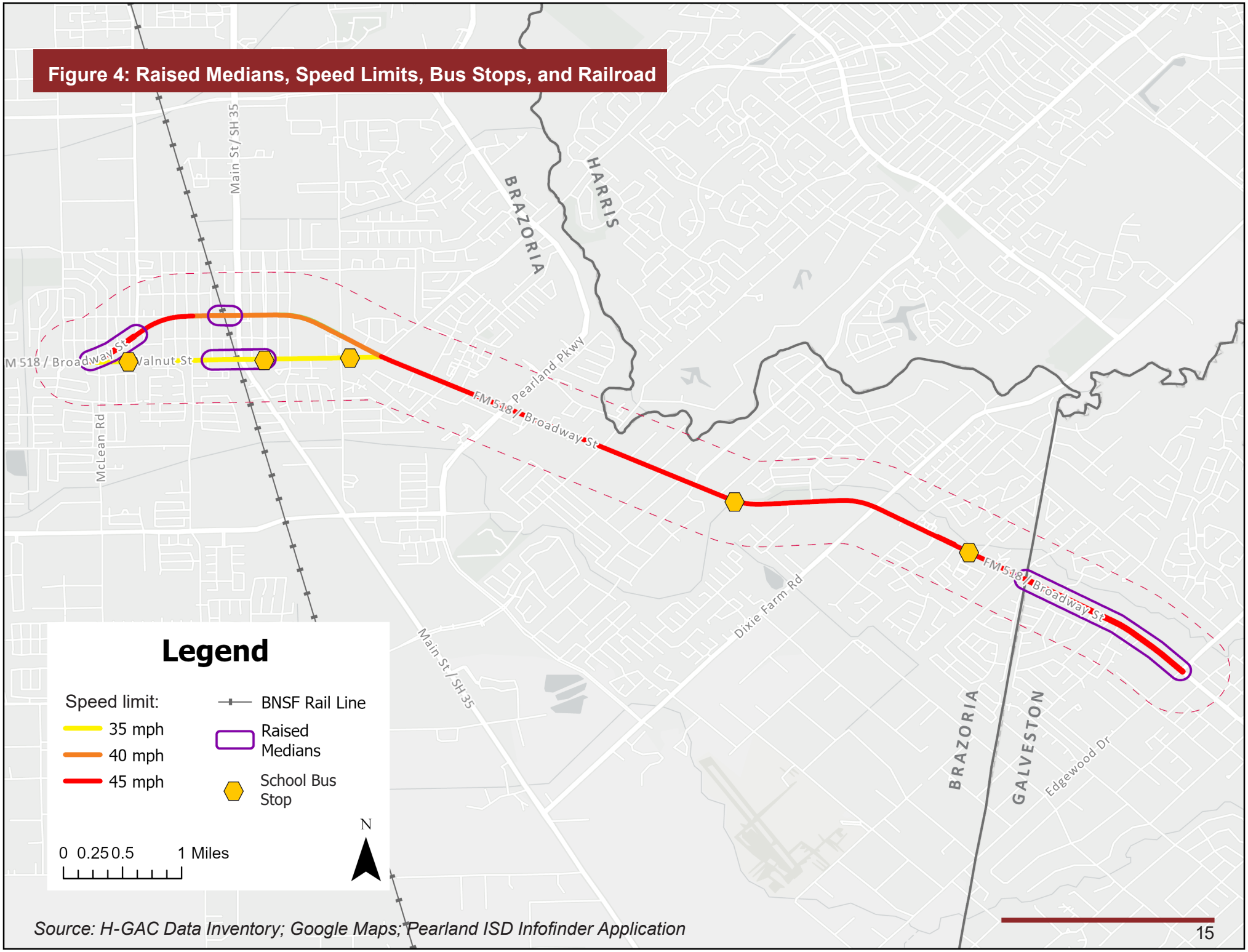
Posted Speed Limit Inventory

While traversing the 6.2 mile length project study area on FM 518 (Broadway Street), the posted speed limit changes four times. The majority of the corridor has a 45 mph speed limit, with a speed limit of 35 mph on Walnut Street.

School Bus Stop Inventory

School buses stop at five locations along the corridor. There are 11 bus routes that have scheduled pick up times between 6:25 and 8:00 in the morning and drop off times between 2:50 and 4:10 in the afternoon. Figure 4 illustrates the locations of bus stops along with other additional roadway characteristics.

Railroad Crossing at FM 518 (Broadway Street) in Pearland



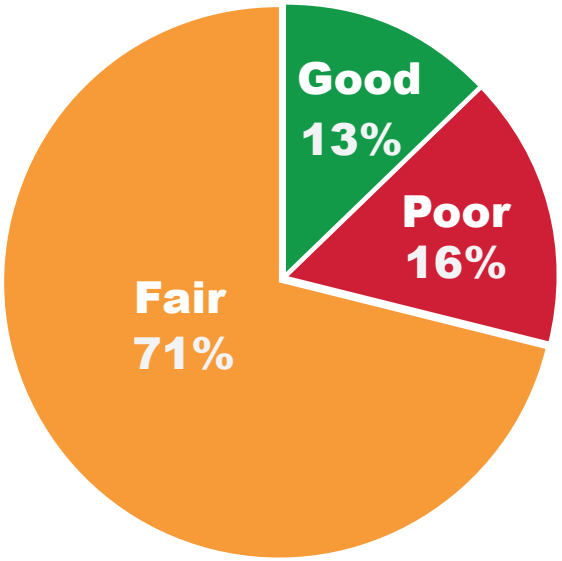
Source: H-GAC Data Inventory; Google Maps; Pearland ISD Infofinder Application

Roadway Conditions

The TxDOT Houston District provided 2024 pavement condition data for the FM 518 (Broadway Street) roadway. Walnut Street is a locally owned road and does not have pavement condition data available. Using the International Roughness Index (IRI), a measure that summarizes pavement qualities that impact vehicle suspension movement, roughly 13% of the corridor is in good condition, 71% is in fair condition and 16% is in poor condition.

Many of the pavement markings and striping along the corridor have faded over time with the exception of the intersection of FM 518 (Broadway Street) and Dixie Farm Road. Regular maintenance of pavement and striping is important for the safety and traffic flow of the corridor.

Figure 5: Pavement Conditions



Source: TxDOT pavement condition data, 2024

Roadway Characteristics Takeaways

Key findings for the current FM 518 roadway conditions include the presence of incomplete sidewalks, which may hinder pedestrian activity and safety. Additionally, the lack of bike facilities suggests a need for expanded cycling infrastructure. The busy school bus route schedule emphasizes the importance of ensuring safe routes for school children, while the frequent speed limit changes may impact traffic flow and driver compliance. These insights provide a foundation for targeted interventions to enhance the overall transportation network within the FM 518 corridor.

Traffic Analysis

This section describes the existing traffic conditions along the corridor, according to an analysis that utilized traffic counts, simulation models, and volume to capacity (V/C) ratio calculations. The level of traffic congestion relates to the corridor goal of efficiently moving people and goods, and is one of the main concerns received through public input.

Level of Service (LOS) is a method to convey the quality of traffic flow, categorized into six levels based upon speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Generally, the minimum acceptable LOS is ‘D’ or better. Figure 6 on page 18 shows the LOS of segments along the corridor at the PM peak period.

Table 4 shows the amount of overall intersection delay experienced by drivers at signalized intersections within the study area and the assigned LOS ratings. Large queues form at FM 518 (Broadway Street) and Pearland Parkway (northbound approach) and at FM 518 and Dixie Farm Road (west and southbound approaches). In addition, queues form on Edgewood Drive.

Table 2: Existing LOS and Delay at Signalized Intersections (2024)

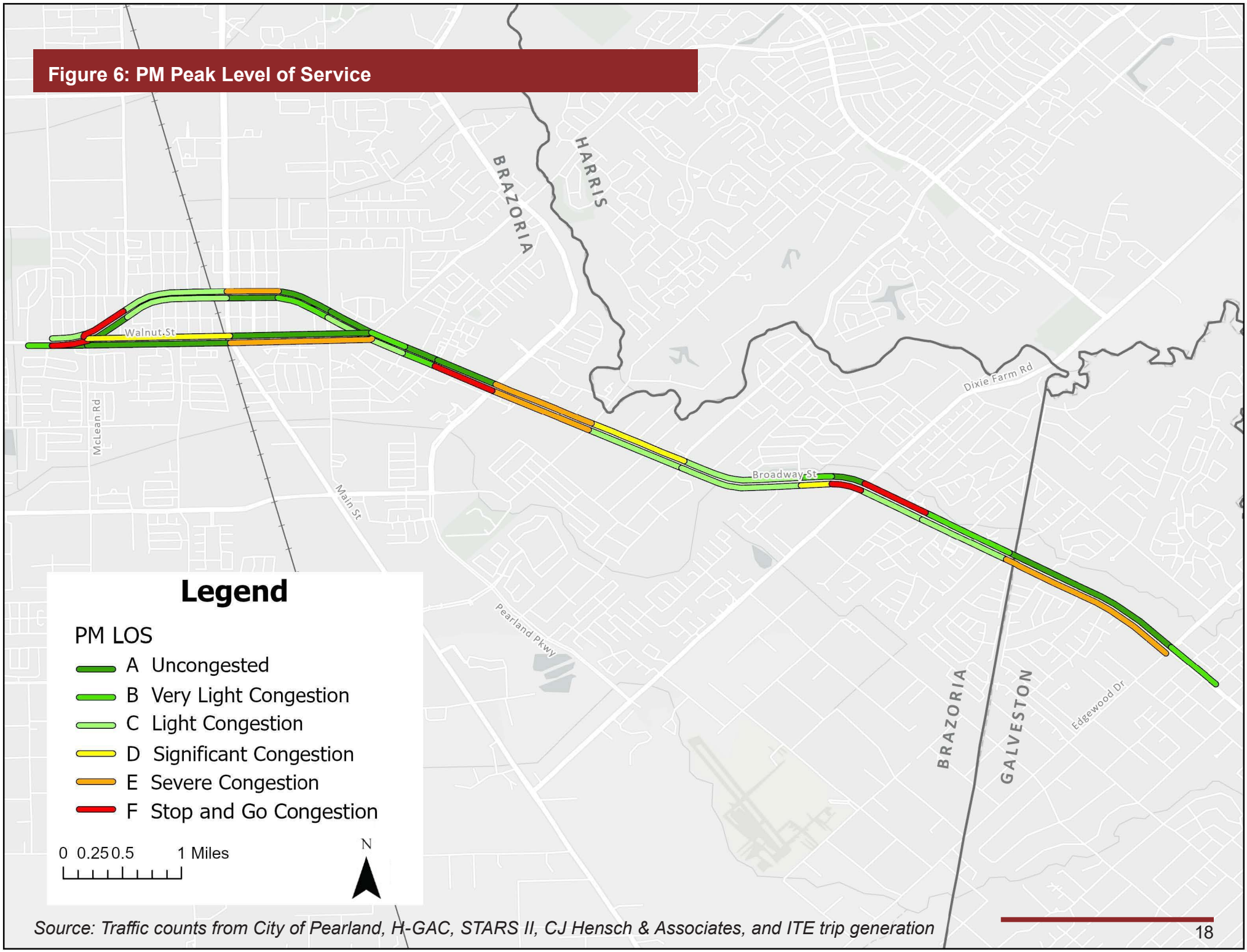
Intersection	Level of Service (Delay in Seconds/Vehicle)	
	AM Peak	PM Peak
FM 518 at Corrigan Drive/Woody Road	C (20.7)	A (7.9)
FM 518 at McLean Road	B (14.6)	B (15.7)
Walnut Street at McLean Road	C (31.0)	C (30.9)
FM 518 at Mykawa Road	C (20.2)	C (20.0)
FM 518 at Main Street	**D (43.7)**	**D (37.6)**
Walnut St at Main Street	C (27.5)	**D (47.7)**
FM 518 at N Galveston Avenue	C (22.6)	A (5.0)
FM 518 at Old Alvin Road	**D (45.8)**	C (25.4)
FM 518 at Walnut Street/Barry Rose Road	C (24.8)	C (26.2)
FM 518 at Sherwood Drive	A (5.6)	A (9.5)
FM 518 at Westminister Road	B (12.1)	B (17.5)
FM 518 at Pearland Parkway	**E (61.7)**	**F (88.1)**
FM 518 at Liberty Drive/Country Club Drive	B (18.4)	B (16.9)
FM 518 at Yost Boulevard/Shadycrest Drive	A (8.5)	A (8.6)
FM 518 at Woodcreek Drive	A (2.9)	B (11.8)
FM 518 at Walmart Access	B (14.0)	C (24.3)
FM 518 at Dixie Farm Road	**D (39.9)**	**E (57.6)**
FM 518 at Pine Hollow Drive	A (3.1)	A (4.4)
FM 518 at Sunset Meadows Drive/Winding Road	A (9.4)	B (11.8)
FM 518/Friendswood Drive at E Edgewood Drive	**E (75.1)**	**E (66.8)**

LOS: D Significant Congestion

LOS: E Severe Congestion

LOS: F Stop & Go Congestion

Figure 6: PM Peak Level of Service

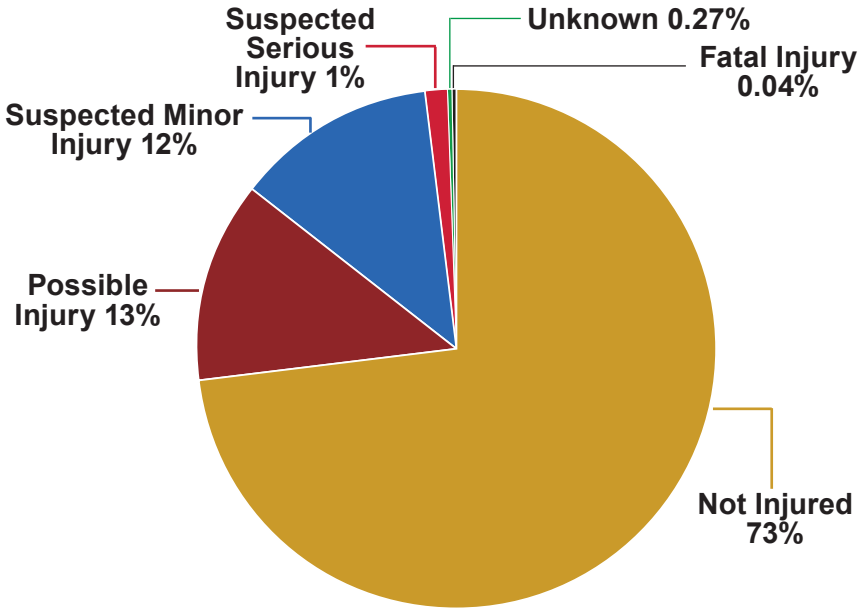


Source: Traffic counts from City of Pearland, H-GAC, STARS II, CJ Hensch & Associates, and ITE trip generation

Safety Analysis

A road safety analysis was conducted in accordance with Highway Safety Manual (HSM) procedures to diagnose safety issues. Crash data was obtained from TxDOT's Crash Record Information System (CRIS) for the recent seven-year period (2017-2023) which reported 2,231 crashes involving 6,620 persons resulting in a seven-year crash cost of over $166 million. Assuming an average daily traffic volume of 26,500 vehicles per day, the corridor has a crash rate of 487 traffic crashes per 100 million vehicle miles. This is nearly twice the statewide average for urban FM roads.

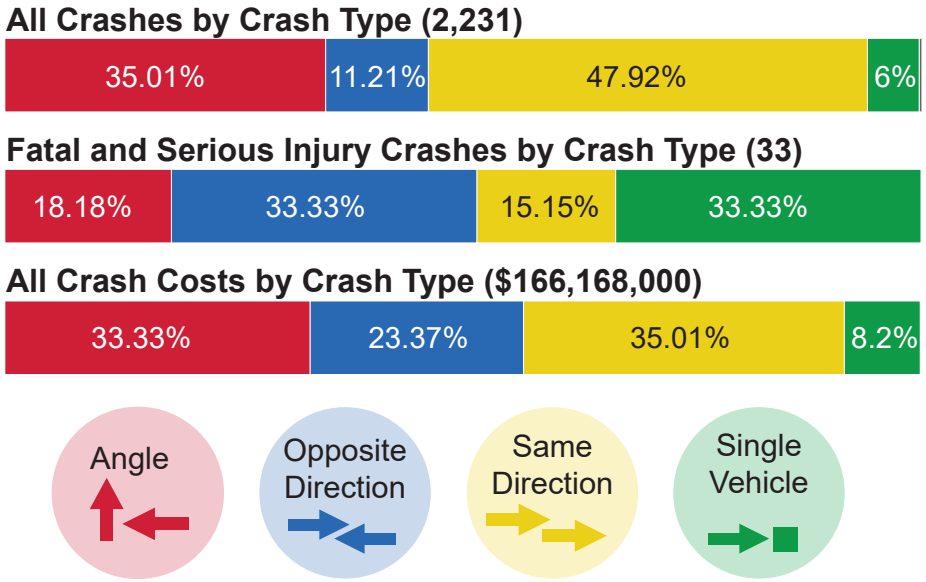
Figure 7: Total Crashes by Severity



Source: TxDOT CRIS 2017-2023

Figure 8 shows the breakdown of different crash types along the corridor from 2017 to 2023. While same direction crashes constitute the largest portion of all crashes, these crashes are less severe when compared to the other crash types. The next most severe and costly type of crashes are angled and opposite direction crashes, which account for around half of the fatal and serious injury crashes when combined. Although single vehicle crashes make up a small portion of all crashes at 5.65%, they account for a third of fatal and serious injury crashes due to the inclusion of crashes with vulnerable pedestrians and cyclists.

Figure 8: Crash Types



Source: TxDOT CRIS 2017-2023

The crash analysis found that over 55% of total crashes were reported at the 20 signalized intersections, and that around 35% of total crashes occurred within 250' of the top seven highest crash intersections (ranked by crash cost). Each of the seven signalized intersections have total crash costs of over $4 million, and are listed in Table 3. Table 4 shows corridor crash history details for all types of crashes, and a crash hotspot map can be seen in Figure 9.

Table 3: Top Seven Signalized Intersections Crash History (2017-2023)

Intersection	Total Crash Count	Cost (in Thousands)	Serious Injury	Minor Injury	Possible, No Injury & Unknown	Crash Rate / 100 Million Vehicles
Dixie Farm Road	211	$13,571	0	27	184	186
Pearland Parkway	198	$10,980	1	14	183	185
Main Street	91	$4,607	0	11	80	93
Country Club Drive	83	$7,810	2	15	66	104
FM 518/Walnut Street at McLean Road	81	$9,832	0	11	70	138
Yost Boulevard/Shadycrest Drive	76	$5,935	2	10	64	99
Woodcreek Drive	46	$4,484	2	11	33	74

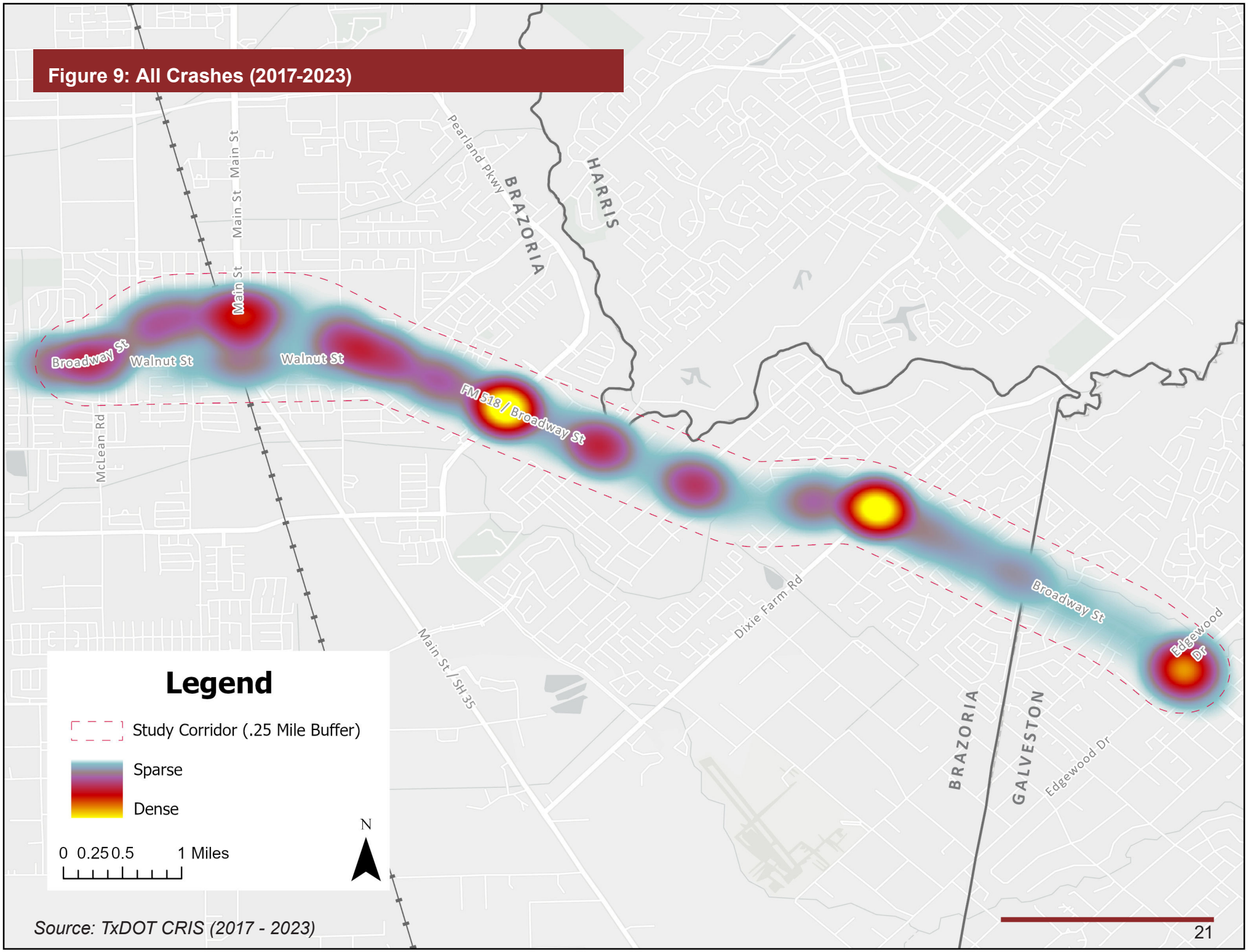
Source: TxDOT CRIS 2017-2023

Table 4: Segment Crash History (All Crashes 2017-2023)

Segment	Total Crash Count	Cost (in Thousands)	Fatal	Serious Injury	Minor Injury	Possible, No Injury & Unknown	Crash Rate/ 100 Million VMT
Pearland Parkway to Yost Boulevard	425	$31,050	0	7	50	368	474
Dixie Farm Road to Sunset Meadows Drive	342	$21,891	0	1	47	294	625
Woody Road to Main Street	304	$27,791	0	5	42	257	491
Main Street to Barry Rose Road	265	$15,794	0	2	31	232	560
Barry Rose Road to Pearland Parkway	226	$14,954	0	4	24	198	539
Sunset Meadows Drive to Edgewood Drive	213	$9,169	0	2	16	195	327
Yost Boulevard to Dixie Farm Road	209	$29,295	1	6	33	169	275
East of Edgewood Drive	85	$4,367	0	0	12	73	-
West of Woody Road	32	$2,902	0	2	6	24	-
FM 518 (Broadway Street) Total	**2,101**	**$157,212**	**1**	**29**	**261**	1,810	487
Walnut Street from McLean Road to Barry Rose Road	130	$8,956	0	3	17	110	416

Source: TxDOT CRIS 2017-2023

Note: Crash rates for short segments beyond (but within 0.25 miles of) the corridor limit are not displayed because the crash rate is inflated over small distances, and therefore does not provide an accurate representation of safety performance



Source: TxDOT CRIS (2017 - 2023)

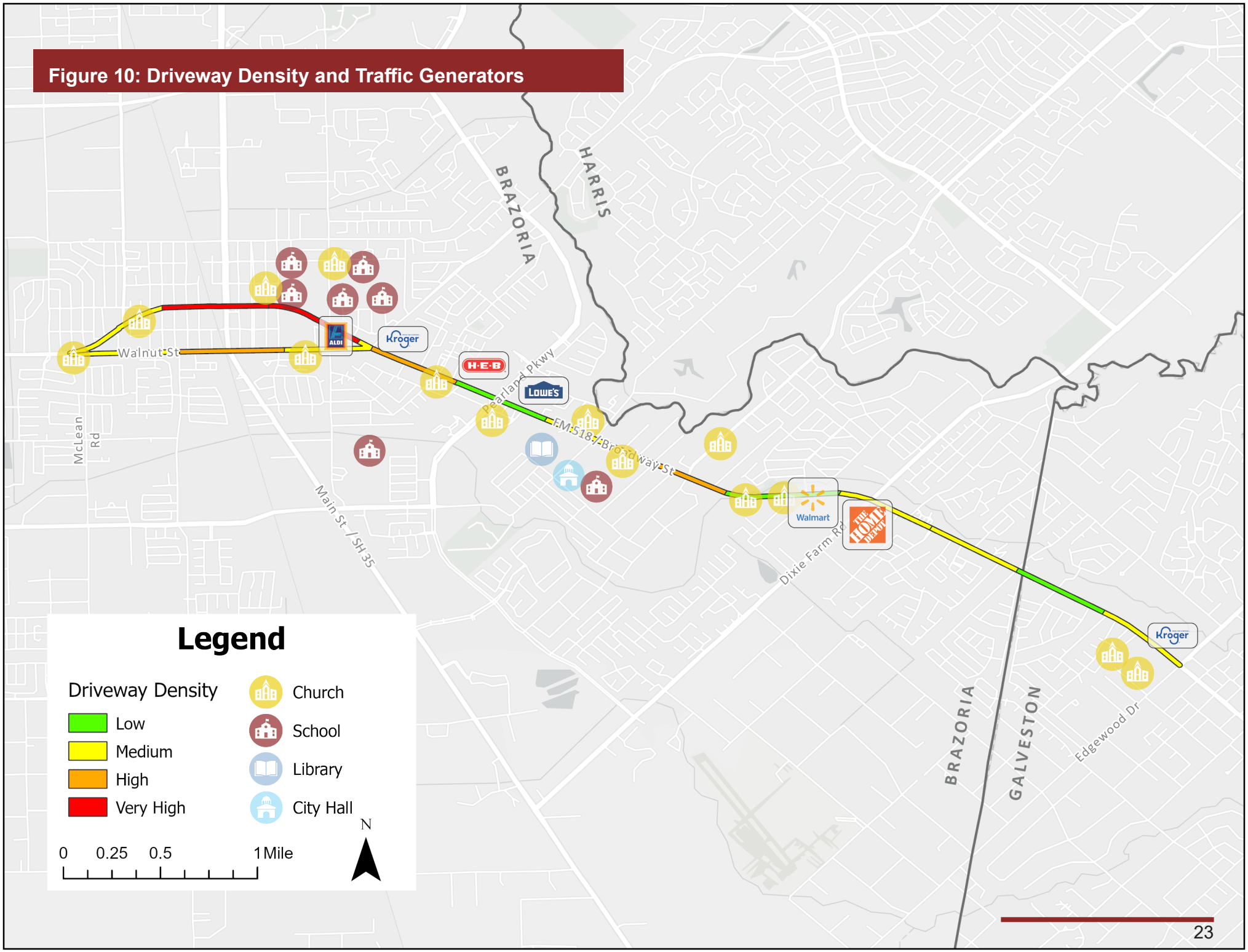
Driveways

Driveways and driveway density are emphasized throughout access management best practices and policies due to their correlation to crashes. It is desirable to minimize the number of driveways on arterials and collector streets to reduce the number of conflict points and allow for a better facilitation of traffic flow, this includes access easements to adjoining properties, or access to intersecting streets. Studies have indicated a strong association between the quantity of access points along a roadway and the incidence of crashes. Implementing regulations to reduce driveway density and promoting shared access will enhance safety along the corridor as redevelopment takes place and adherence to standards is enforced.

Driveway locations along FM 518 (Broadway Street) were identified via Google Street View, and their density calculated per 0.5 mile segment to identify areas of concern, as shown Figure 10. There is approximately one mile of the corridor classified as a very high driveway density, which runs through Old Townsite on either side of Main Street/SH 35. Major retailers and traffic generators are also shown, which require a balance between adequate access and driveway corridor access management strategies.

Intersection of FM 518 (Broadway Street) and Galveston Avenue

Figure 10: Driveway Density and Traffic Generators



Land Use and Access

The FM 518 (Broadway Street) corridor plays a crucial role in local and regional transportation networks. This section provides an overview of Land Use and Access along this corridor, incorporating data from both Pearland and Friendswood to offer a comprehensive analysis of zoning regulations and land utilization.

Currently, FM 518 (Broadway Street) is primarily a commercial hub, characterized by extensive commercial and business zoning. Notable features include large-scale commercial developments with substantial parking areas and prominent big-box retailers. Additionally, the corridor's landscape is influenced by the presence of schools and retail establishments, contributing significantly to traffic volumes.

Zoning

The study area is around 44% Single Family Residences, and around 32% is designated for General Business. The Old Townsite Zone is made up of three sub districts: Old Townsite - Residential, Old Townsite - General Business, and Old Townsite - Mixed Use. The vast majority of storefronts on the study corridor itself are designated General Business zones.

Land Use

FM 518 from McLean Road in Pearland to the Edgewood Drive intersection is primarily a business corridor, with predominantly commercial and business uses. Immediately behind the commercial lots fronting on the major thoroughfare are predominantly residential and make up around 48% of the land area. Both the City of Friendswood and the City of Pearland's Land Use Plans endorse commercial activities along this corridor, designating land use for business commercial, retail, offices, and services. The FM 518 (Broadway Street) corridor represents a vital commercial artery within the local and regional transportation networks of Pearland and Friendswood.

Environmental Considerations

It is important to understand where environmental points of interest exist because future improvements to the corridor may require land acquisition or environmental mitigation.

Cultural Resources

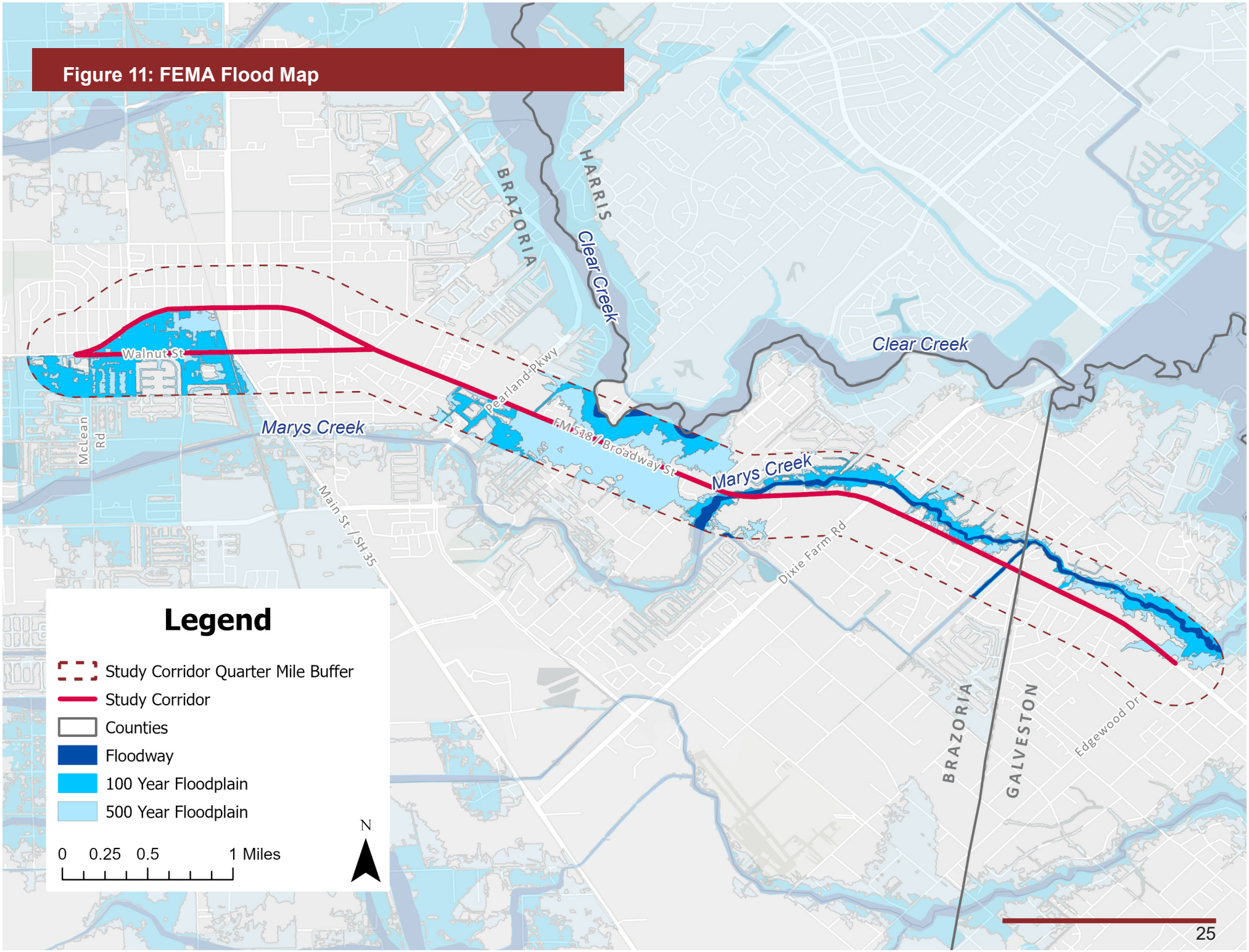
There are historic and cultural sites within the study area, including the Pearland Old Townsite. These areas are important to preserve because they contribute to the local heritage and character of the community. Historical markers exist within the Old Townsite district on the western side of the corridor, including the First United Methodist Church of Pearland, Zychlinski Park, and 1937 Pearland High School.

Towards the middle of the corridor, on the south side of FM 518 (Broadway Street), there is a historical marker for the original Santa Fe Railroad Depot that was built in 1900. This depot played a large role in enabling the original development and growth of the City of Pearland. Some of the other cultural sites near the corridor include the Busy Bee Cafe and the Central Texas Style BBQ restaurant, which have rich histories serving the community.

Hydrological Features and Floodplains

There are two creeks that intersect with the study area: a small portion of Clear Creek on the northern side, and Marys Creek on the eastern side. There are also several ditches and small ponds within the study area. These water features can support wetland habitats and are important for wildlife and stormwater management. For this reason, all future projects must consider potential impacts to environmental features. In addition, Figure 11 shows that much of the corridor is at risk of flood hazards.

Figure 11: FEMA Flood Map



3

Public Engagement

FM 518 Corridor Study

Public Engagement

The FM 518 (Broadway Street) Corridor Study involved gathering input from stakeholders and the public. A Steering Committee also provided guidance and feedback throughout the development of the study. The Steering Committee was composed of non-elected state and local governmental and non-governmental representatives from the City of Pearland, City of Friendswood, Brazoria County, and TxDOT.

Public engagement for the study was guided by a Public Participation Plan (PPP) that outlines a comprehensive and inclusive process to foster a respectful and informative community dialogue. Over the 18 month study period, efforts for outreach and public engagement were designed to be consistent, easy to navigate, engaging, collaborative, and inclusive. As described in the PPP, numerous methods of engagement and promotion were used, including flyers, in-person events, online surveys, social media posts, public meetings, and yard signs.

Steering Committee

The Steering Committee provided technical guidance and oversight of study activities. The Steering Committee met four times throughout the course of the study and provided input on existing conditions, challenges, analyses, and local considerations. The committee also provided feedback on alternatives for the future of the corridor. Members of the Steering Committee are listed on page 2.

Engaging Stakeholders

Businesses, schools, Home Owners Associations, apartment complexes and other organizations along the corridor represent stakeholders with unique concerns and priorities for the future of the FM 518 (Broadway Street) corridor. A contact list of potential stakeholders was developed for the study in conjunction with the Pearland Mobility Study project, comprising over 100 stakeholders. Stakeholder representatives were then invited to a focus group meeting on May 9, 2024. Input was collected through group discussions and written comments.

Figure 12: Focus Group Meeting

Engaging the Public

Throughout the course of the study, members of the public were given the opportunity to learn about the study and provide input. To ensure that public engagement was inclusive and accessible, outreach efforts were conducted in person, online, and with Spanish translation available.

Spring Fest

The first in person outreach event occurred April 6, 2024 at the Pearland Spring Fest. The project team set up a table with maps, flyers, activities, and study information for festival attendees. This event gathered public input for the FM 518 (Broadway Street) Corridor Study in conjunction with the Pearland Mobility Study project through surveys and conversations with the project team. This initial outreach event primarily focused on informing the public about the study and determining the priorities of the community. Figure 13 is a photo of the Spring Fest.

Figure 13: Spring Fest Engagement Event Station

Online Engagement

The H-GAC website hosted digital content for the FM 518 (Broadway Street) Corridor Study, including a map of the corridor, notices for upcoming meetings, study schedule, and a survey and interactive map. The website listed contact information and project documents for download. At each outreach event, people were directed to the study website via web address and QR codes. In addition, social media posts promoted the study and opportunities for individuals to provide input.

Old Townsite Residents Meeting

A special meeting for residents of the Old Townsite area was held November 20, 2024 at the Pearland VFW post. This meeting provided information on the studied alternatives, with a focus on the one-way pair alternative. Because residents in this area would be especially impacted by the alternative, their input and feedback was imperative to a comprehensive evaluation. The Old Townsite residents meeting had 49 people in attendance who live and work near Walnut Street and FM 518 between McLean Rd and Barry Rose Rd. Attendees were encouraged to write out their input after a presentation, question and answer session, and examination of station exhibits.

Figure 14: Old Townsite Residents Meeting

Public Meeting

A meeting presenting all of the studied alternatives for the future of the corridor was held on December 3, 2024 at the Pearland Recreational Center. Held in a similar format to the Residents Meeting with a presentation and exhibit stations, this meeting was open to the public. Attendees were encouraged to ask questions and leave feedback.

Figure 15: Public Meeting

Public Engagement Outcomes

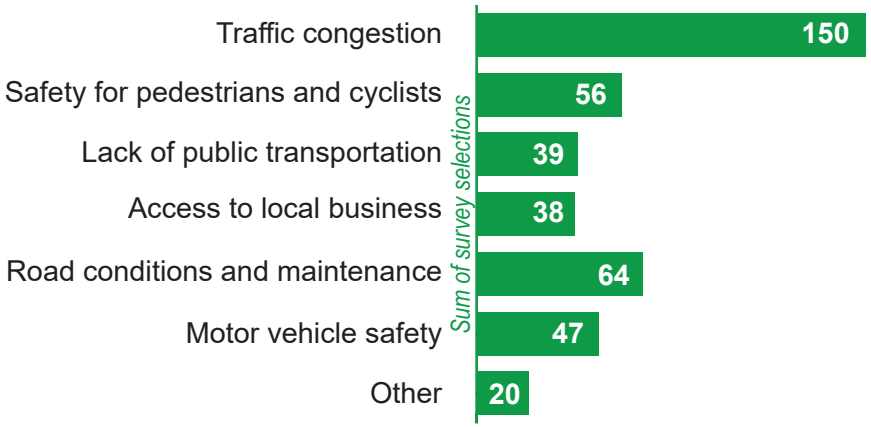
The input received from the various forms of public engagement provided insight into the priorities of the community and revealed preferences for potential alternatives.

Online Survey Results

In total, there were over 200 survey responses. Most of the respondents were White/Caucasian, between the ages of 26 and 45, and 40% have lived or worked in Pearland for 20 or more years.

The majority of respondents also indicated that the following transportation issues are of concern to them: safety, road maintenance, traffic congestion, and a lack of connectivity, sidewalks, and public transportation options. By far, the main concern of survey respondents for the FM 518 Corridor was traffic congestion (Figure 16). The survey results also show that most respondents are in favor of improving signal timing along the corridor.

Figure 16: Top Concerns for the FM 518 Corridor



Stakeholder Input

Stakeholder input from the focus group meeting highlighted the following topics as main concerns. Stakeholders also provided input on specific improvements and strategies to address these topics, which were then incorporated into the study analysis of alternatives.

- Safety
- Railroad activity
- Intersection operation and design
- Traffic Congestion
- Right-of-way
- Shared use bike and walking paths

Feedback from Meetings

The Old Townsite Meeting revealed that residents in the area have concerns about the potential impacts of the one-way pair. Concerns raised included cut-through traffic on the streets between FM 518 and Walnut Street, increased traffic on Walnut Street, and longer travel times to destinations. Of the written comments received, ten were not in favor of the one-way pair, five were favorable to the one-way pair. These concerns are incorporated into the analysis of the one-way pair alternative.

The Public Meeting did not receive as much feedback as the Residents Meeting, but attendees primarily indicated that they have concerns regarding the traffic impacts of trains passing through the corridor.

4

Future Conditions

FM 518 Corridor Study

Methodology

To evaluate the various alternatives presented in Chapter 5, it is necessary to first understand what the future of the FM 518 (Broadway Street) corridor will look like if no additional improvements are made to address increased traffic demand. This analysis uses data from nine annual count stations over a period of 20 years (2003-2023). The locations of count stations are listed below.

- One at Woody Road intersection with FM 518 (Broadway Street)
- Four near Main Street/SH 35 intersection with FM 518 (Broadway Street) - one in each direction
- One east of the Pearland Parkway intersection
- One west of the Dixie Farm Road intersection
- One east of the Winding Road intersection
- One east of the E. Edgewood Drive intersection

The analysis determined that an overall average growth rate was less than 2%. Per TxDOT Corridor Analysis Standard Operating Procedures guidance, a growth rate of 2% was used to estimate future traffic volumes for 2024-2045.

The growth rate was used in models run on PTV Vissim 2024 traffic analysis simulation software to estimate future traffic conditions. The primary Measures of Effectiveness (MOEs) evaluated through Vissim modeling included AM and PM peak Level of Service (LOS).

The No Build scenario represents future traffic volumes and conditions along the present FM 518 (Broadway Street) corridor. The No Build scenario has the following assumptions:

- Annual traffic volume growth by 2% annually.
- No additional projects or improvements are made except for those currently included in the Pearland Capital Improvement Plan (CIP):
  - Widening of FM 518 from SH 288 to McLean Road
  - Widening of Mykawa Rd north of FM 518
  - Pearland Pkwy intersection improvements and Dixie Farm Rd intersection improvements

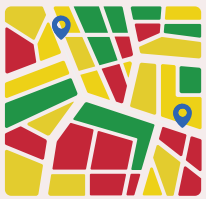
Planned Projects and Land Use Updates

According to the TxDOT Project Tracker, there are several newly completed or planned projects within or in close proximity to the study area (see Figure 17). Examples include:

- Widening FM 518 to 4-lanes for 3.9 miles from FM 865 to Mykawa Road. It includes a planned sidepath 10 feet in width on the north side, and a sidewalk 5 feet in width on the south side.
- Pearland Parkway and FM 518 intersection improvements.
- Restoration of FM 518 from SH 35 (Main Street) for 1.1 miles East of SH 35 (to approximately Westminster Drive).
- Safety Improvement Project on FM 518 at Liberty Drive/ Country Club Drive. (Completed)
- Landscape and Scenic Enhancement on FM 518 from Riverside Drive to Whispering Pines Avenue.

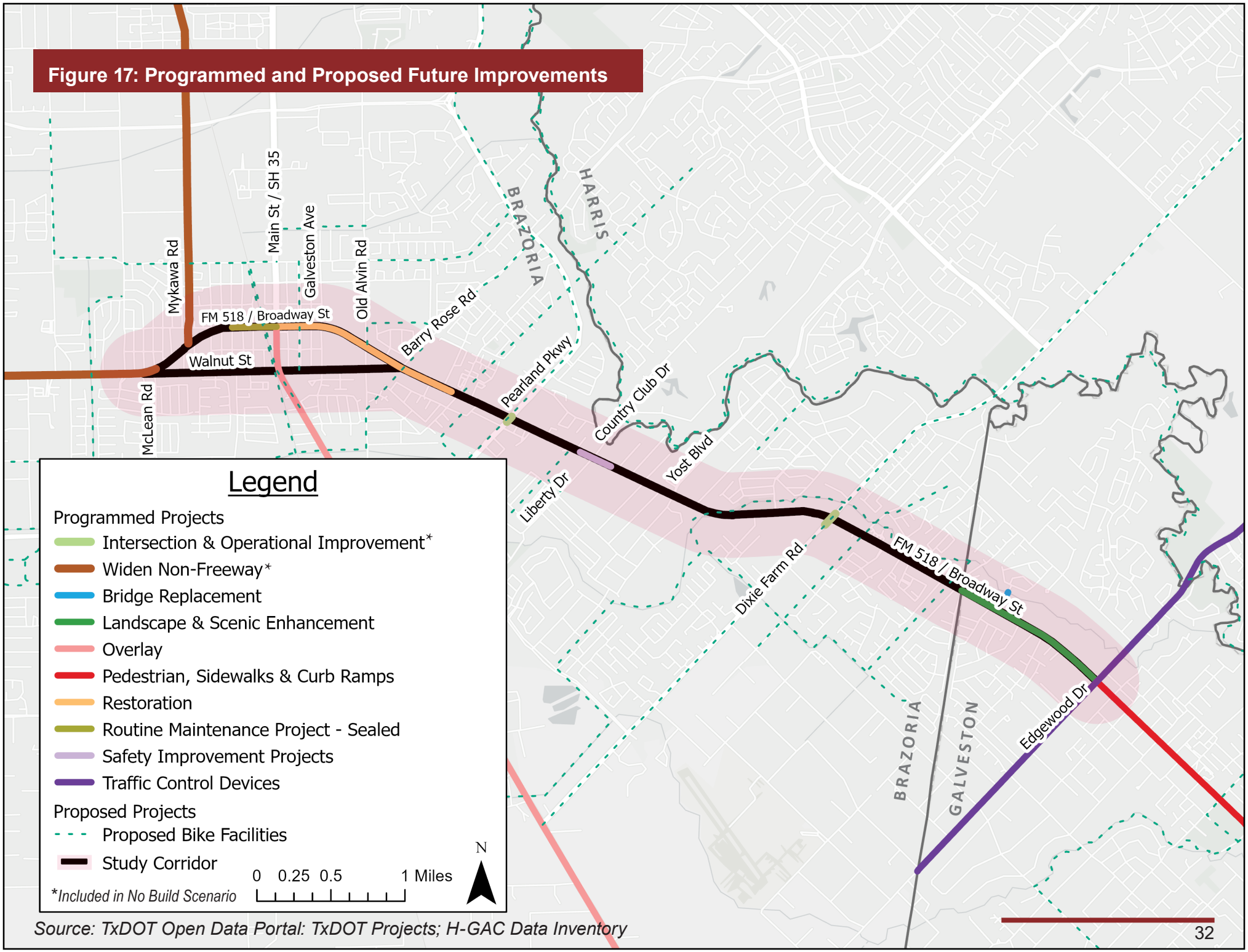
There are also several proposed locations for future bicycle infrastructure, including:

- Proposed shared use path/trails at FM 518 and Barry Rose Road, Westminister Road, Pearland Parkway, Smith Lane (at a utility easement), Longwood Drive, and along Marys Creek.
- Proposed signed shoulder bike route at Dixie Farm Road and FM 518.



The City of Pearland's 2040 comprehensive plan provides a future land use plan as a visual guide for future decision making related to development in Pearland. The FM 518 (Broadway Street) corridor does not have significant land use changes in the plan, and will remain a primarily commercial corridor with residential uses.

Figure 17: Programmed and Proposed Future Improvements



Source: TxDOT Open Data Portal: TxDOT Projects; H-GAC Data Inventory

Future Conditions

With the projected volume increase and assumptions previously described, traffic conditions can be expected to significantly worsen over time (Table 5). In the 2045 No Build peak AM period, over half of the intersections are projected to operate at a LOS of E or F. For the 2045 No Build, peak PM period almost all of the signalized intersections are expected to operate at a LOS of D, E, or F. The considerable change in LOS from the existing conditions demonstrates that if no additional improvements are made to the corridor, severe congestion and stop-and-go traffic will be a major issue, especially in the afternoons and evenings. Figure 18 shows the PM peak period intersection level of service for the 2045 No Build scenario.

Due to the importance of the corridor as a major thoroughfare with commercial, residential, and Old Townsite connections, improvements should be made to ensure future mobility along FM 518 (Broadway Street).

Table 5: Intersection Level of Service (Delay in Seconds/ Vehicle) Comparison between 2024 and 2045

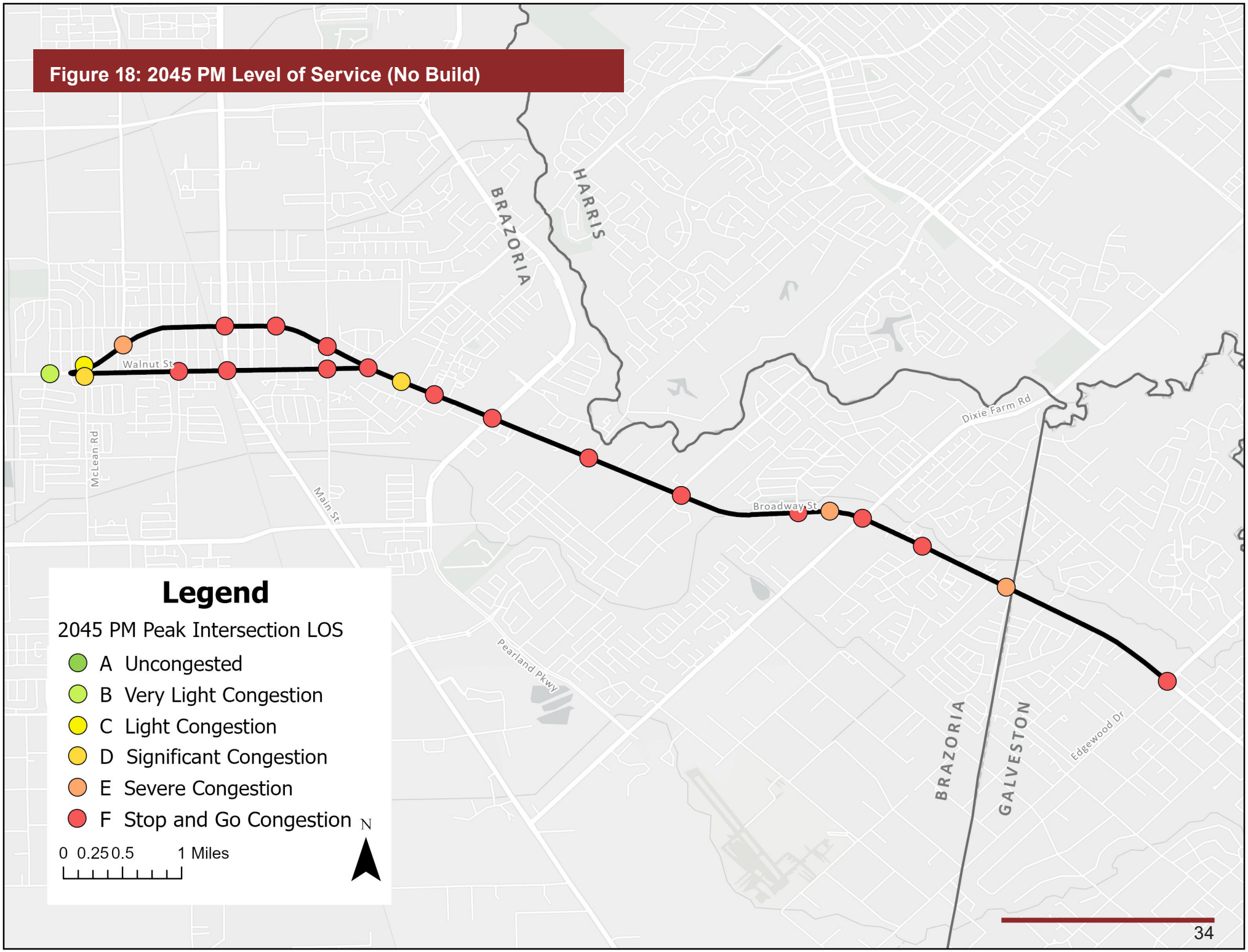
Intersection	AM Peak		PM Peak	
	2024 Existing	2045 No Build	2024 Existing	2045 No Build
FM 518 at Corrigan Drive/Woody Road	C (20.7)	C (32.8)	A (7.9)	B (14.5)
FM 518 at McLean Road	B (14.6)	C (21.4)	B (15.7)	C (30.1)
Walnut Street at McLean Road	C (31.0)	**E (55.5)**	C (30.9)	**D (41.6)**
FM 518 at Mykawa Road	C (20.2)	C (23.0)	C (20.0)	**E (70.2)**
FM 518 at Main Street	**D (43.7)**	**F (106.7)**	**D (37.6)**	**F (143.7)**
Walnut Street at Main Street	C (27.5)	**F (162.2)**	**D (47.7)**	**F (113.4)**
FM 518 at N Galveston Avenue	C (22.6)	**E (55.4)**	A (5.0)	**F (83.4)**
FM 518 at Old Alvin Road	**D (45.8)**	**F (83.2)**	C (25.4)	**F (115.8)**
FM 518 at Walnut Street/Barry Rose Road	C (24.8)	**E (70.1)**	C (26.2)	**F (112.6)**
FM 518 at Sherwood Drive	A (5.6)	B (20.0)	A (9.5)	**D (47.3)**
FM 518 at Westminister Road	B (12.1)	**E (70.3)**	B (17.5)	**F (106.2)**
FM 518 at Pearland Parkway	**E (61.7)**	**F (141.3)**	**F (88.1)**	**F (176.4)**
FM 518 at Liberty Drive/Country Club Drive	B (18.4)	**F (105.8)**	B (16.9)	**F (113.9)**
FM 518 at Yost Boulevard/Shadycrest Drive	A (8.5)	**E (56.1)**	A (8.6)	**F (179.8)**
FM 518 at Woodcreek Drive	A (2.9)	A (4.6)	B (11.8)	**F (82.5)**
FM 518 at Walmart Access	B (14.0)	B (12.0)	C (24.3)	**E (59.0)**
FM 518 at Dixie Farm Road	**D (39.9)**	**F (89.5)**	**E (57.6)**	**F (109.5)**
FM 518 at Pine Hollow Drive	A (3.1)	**F (100.3)**	A (4.4)	**F (118.8)**
FM 518 at Sunset Meadows Dr/Winding Road	A (9.4)	**F (96.2)**	B (11.8)	**E (73.6)**
FM 518/Friendswood Drive at E Edgewood Drive	**E (75.1)**	**F (175.0)**	**E (66.8)**	**F (146.0)**

LOS: D Significant Congestion

LOS: E Severe Congestion

LOS: F Stop & Go Congestion

Figure 18: 2045 PM Level of Service (No Build)



5

Alternatives

FM 518 Corridor Study

Alternatives Analysis

This chapter presents an evaluation and comparison of each alternative developed in the FM 518 Corridor Study, to identify the most viable option or options based on safety and operations. After the examination of each alternative, a recommendation will be provided in Chapter 6 to support future decision making and resource allocation along the corridor.

This chapter first describes analysis results for the **short-** to **medium-term** improvements or alternatives, including intersection improvements and the Walnut Street closure alternative. Examples of intersection improvements include signal timing optimization and the addition of turn lanes. These improvements can be implemented relatively quickly - within five years or up to ten years if ROW acquisition is required.

Next, this chapter describes the analysis results for **long-term** alternatives. These longer term alternatives were identified during the initial phases of the study or throughout the course of the study. The types of long term alternatives include one-way pair conversion, access management, and adding additional throughput capacity by adding additional lanes.

Performance Measures

Move people and goods efficiently
Performance Measure: Level of Service (LOS) by delay in seconds or percent improvement in delay.[3]

Improve safety
Performance Measure: Anticipated reduction in crashes using benefit-cost analyses (BCA)[4] Safety Performance Functions (SPFs) and Crash Modification Factors (CMFs).[5]

[3] Alternatives modeled with PTV Vissim 2024 traffic simulation software
[4] USDOT BCA guidelines
[5] AASHTO Highway Safety Manual (HSM) and TxDOT Traffic and Safety Analysis Procedures Manual guidance

Short- and Medium-Term

Intersection Improvements

Thirteen intersections were evaluated under three scenarios to determine their Level of Service (LOS): existing conditions using 2024 data, “no build” conditions in 2029, and projected conditions for 2029 with the recommended improvements included. The year 2029 is used as the year for comparison because it reflects the highest level of expected increase in traffic volumes while still being within a “short” time frame.

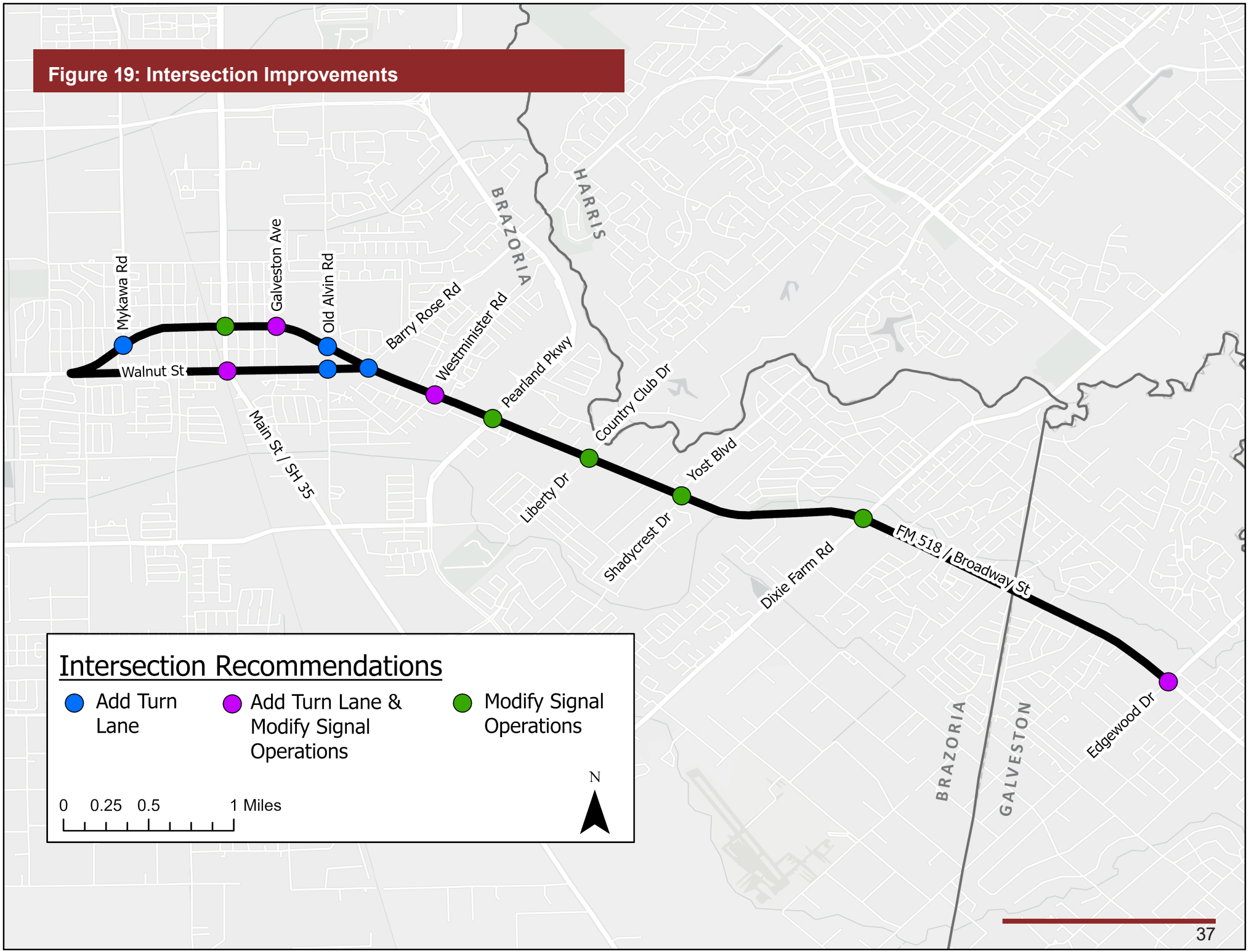
To evaluate safety in the corridor, crash data from 2017 to 2023 was obtained from the TxDOT Crash Records Information System (CRIS). The number of crashes, crash rates (or the number of crashes per million entering vehicles (MEV)), along with the proportion of crash types were compared for each intersection to identify specific potential safety countermeasures. The following countermeasures should be considered at all intersections:

- Intersection and street lighting
- Refreshed pavement markings
- Retroreflective backplates
- Clearance intervals
- Pedestrian crosswalks
- Sidewalks
- Leading pedestrian intervals[6]

Each intersection listed below contains an improvement recommendation description, impact to LOS,[7] cost estimate, and specific safety countermeasures where appropriate.

[6] Leading pedestrian intervals are 3-7 seconds of head start time for pedestrians before green lights for vehicles.
[7] Percent improvement in delay between no build and 2029 improvement scenarios are described as mild (under 25%), moderate (20-50%) or significant (more than 50%)

Figure 19: Intersection Improvements



FM 518 (Broadway St) at Mykawa Road

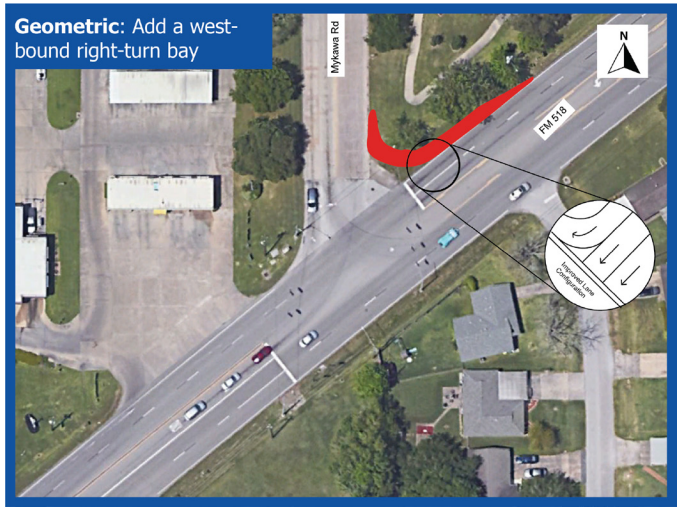
This is a signalized three-legged intersection. The eastbound approach (FM 518) has two through lanes and a left-turn lane. The westbound approach (FM 518) has a shared through-right lane and one additional through lane. The southbound approach (Mykawa Road) has a right-turn lane and a left-turn lane. There is a proposed project that would widen Mykawa Road to 4-lanes from Beltway 8 to FM 518.

Recommendation: Add a right-turn bay on westbound FM 518. ROW is needed to make this improvement, as shown in red below. When Mykawa Road is widened, it should be aligned (squared up) with Ray Street or Johnson Street to safely accommodate the volume of turning vehicles, improve visibility, and provide more consistent and safer operations.

Results: This is anticipated to result in mild improvements in intersection delay in both the 2029 AM peak (10%) and PM peak (5%) periods compared to 2029 no build.

No specific safety countermeasures were identified for this location.

Cost Estimate: $315,000



FM 518 (Broadway St) at SH 35 (Main St)

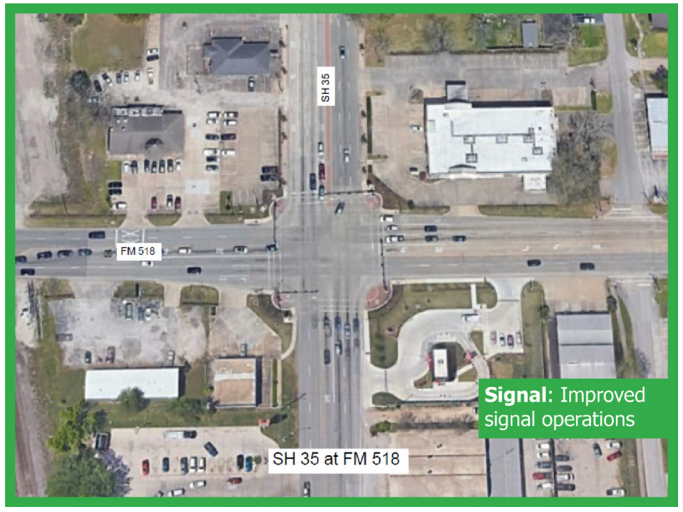
This intersection is a signalized four-legged intersection. The eastbound approach (FM 518) has one right-turn bay, two through lanes, and one left-turn bay. The westbound approach (FM 518) has one right-turn bay, two through lanes, and one two-way left-turn lane (TWLTL). The northbound approach (SH 35) has one right-turn bay, two through lanes, and one TWLTL. The southbound approach (SH 35) has one right-turn lane, two through lanes, and one left-turn bay.

Recommendation: Implement permitted/protected and lead/lag phasing for eastbound and westbound left-turns.

Results: This is anticipated to result in a mild improvement to delay in the 2029 AM (19%) and a mild improvement to delay (5%) in the PM when compared to 2029 no build.

One of the crashes that occurred at this location was an overturned vehicle. The installation of a raised median is a possible safety countermeasure for this issue.

Cost Estimate: $45,000 (including safety countermeasure costs)



Note: All cost estimates are planning level only. Estimates include construction, right-of-way acquisition, engineering services, and a 20% contingency to account for unknown items which may affect costs in the future.

Walnut St at SH 35 (Main St)

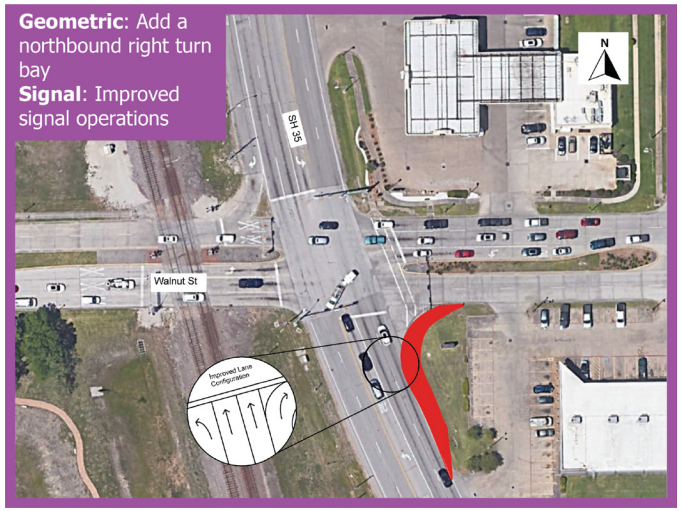
This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (Walnut St) have one shared through-right lane, one through lane, and one left-turn bay. The northbound approach (SH 35) has one shared through-right lane, one through lane, and one TWLTL. The southbound approach (SH 35) has one channelized right-turn bay, two through lanes, and a TWLTL.

Recommendation: Add a northbound right turn bay; Increase green time for southbound approach.

Results: This is anticipated to result in moderate (30%) improvement in delay during the AM peak period. Unfortunately, it is not anticipated to help during the PM peak period. Some additional ROW is needed.

To see an improvement during the PM peak, a more substantial improvement would be necessary beyond these short- and medium-term improvements. For example, SH 35 (Main Street) requires additional analysis to assess potential capacity expansion and operational improvement options.

Cost Estimate: $250,000



FM 518 (Broadway St) at Galveston Ave

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one shared through-right lane, one through lane, and one TWLTL. The northbound and southbound approaches (Galveston Ave) have one shared lane for all turning movements.

Recommendation: Add southbound right-turn bay; Implement permitted/protected phasing for eastbound and westbound left-turn lanes. ROW is needed to make this improvement, as shown in red below.

Results: This is anticipated to provide a significant (67%) improvement during the AM peak period. Additional ROW is needed.

Cost Estimate: $100,000

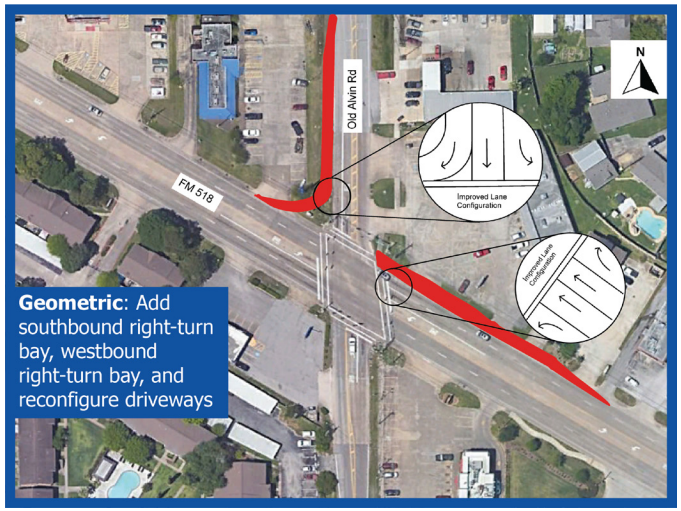
FM 518 (Broadway St) at Old Alvin Rd

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one shared through-right lane, one through lane, and one TWLTL. The northbound and southbound approaches (Old Alvin Road) have one shared through-right lane and one left-turn bay.

Recommendation: Add southbound right-turn bay, westbound right-turn bay, and reconfigure driveways. ROW is needed to make this improvement, as shown in red below.

Results: This improvement is anticipated to result in moderate (34%) improvement in delay in the AM and a mild (8%) improvement in delay in the PM.

Cost Estimate: $845,000



Walnut St at Old Alvin Rd

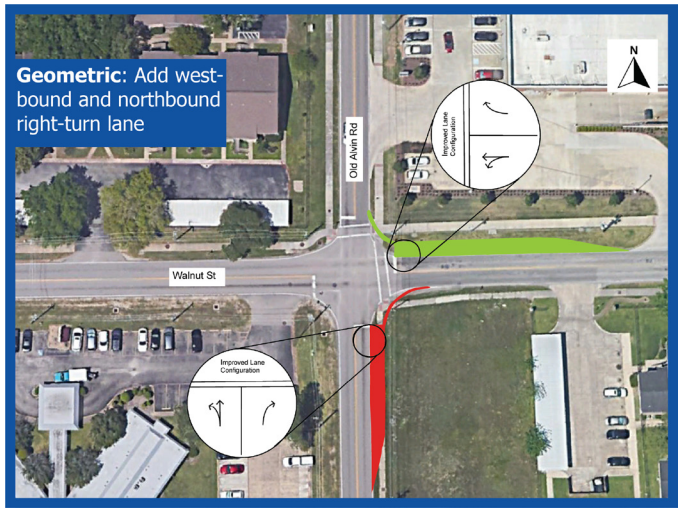
This intersection is an unsignalized all-way stop-controlled four-legged intersection. All four approaches have one shared lane for all turning movements.

Recommendation: Add westbound and northbound right-turn lane. No additional ROW is needed for northbound turn lane (shown in green below); additional ROW is needed for westbound turn lane (shown in red below).

Results: This will result in a moderate improvement in delays (36%) in the AM and a mild improvement in delays (20%) in the PM. While it will still operate at an LOS F, the change in seconds of delay is notable.

Traffic volumes should continue to be monitored at this location to determine if signalization is warranted in the future. The Texas Manual on Uniform Traffic Control Devices (TMUTCD) provides more information on studies and factors for justifying traffic control signals.

Cost Estimate: $700,000



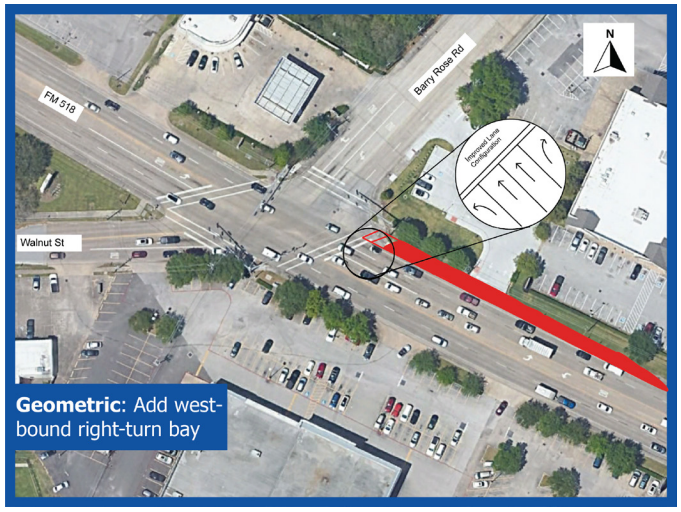
FM 518 (Broadway St) at Walnut St/Barry Rose Rd

This intersection is a signalized four-legged intersection. The approaches on FM 518 both have one shared through-right lane, one through lane, and one TWLTL. The approach on Walnut Street has one right-turn bay and one shared left-through lane. The approach on Barry Rose Road has one right-turn lane, one through lane, and one TWLTL.

Recommendation: Add westbound right-turn bay. ROW is needed to make this improvement, as shown in red below.

Results: No Improvement in delay at this specific location, however the lack of improvement in the PM peak hour can be attributed to the improvement seen at the intersections of Walnut Street at Old Alvin Road and FM 518 at Old Alvin Road. Some safety benefits may occur because of the improvement.

Cost Estimate: $350,000



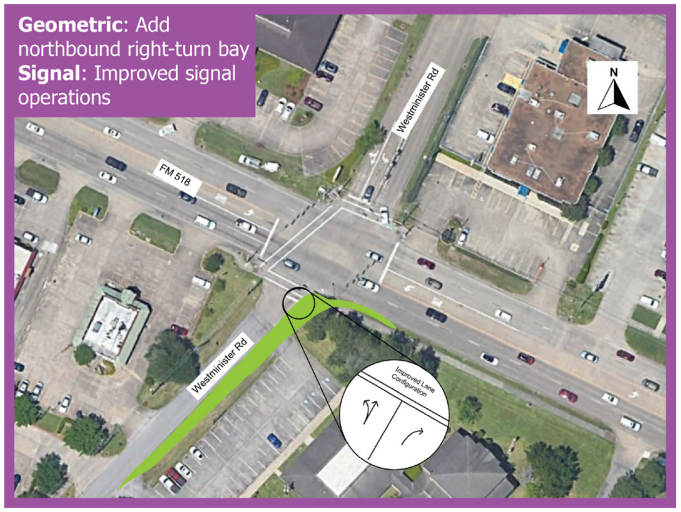
FM 518 (Broadway St) at Westminister Rd

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one shared through-right lane, one through lane, and one TWLTL. The northbound approach (Westminister Road) has one shared lane for all turning movements. The southbound approach (Westminister Road) has one shared through-right lane and one left-turn lane.

Recommendation: Add northbound right-turn bay; Allow both approaches on Westminister Road to run simultaneously. No ROW is needed to make this improvement, as shown in green below.

Results: This improvement is anticipated to result in a mild (22%) decrease in delay in the AM and a mild (7%) decrease in delay during the PM period for 2029 when compared to the no build scenario.

Cost Estimate: $400,000



FM 518 (Broadway St) at Pearland Pkwy

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one channelized right-turn bay, two through lanes, and one TWLTL. The northbound approach (Pearland Parkway) has one shared through-right lane, one through lane, and one left-turn bay. The southbound approach (Pearland Parkway) has one shared through-right lane, one through lane, and two left-turn bays. The City of Pearland currently has plans to upgrade the signal and construct dual left turns on the northbound approach, along with right-turn bays on northbound and southbound approaches.

Recommendation: Traffic signal timing optimization.

Results: The improvement will result in mild (12%) improvement in delay during the AM peak and a mild (7%) improvement in delay during the PM period.

Specific counter measures identified to address the high frequency of crashes include installing raised medians and conducting an Intersection Control Evaluation (ICE) to consider intersection configuration with reduced conflict points.

Cost Estimate: $55,000 (including safety countermeasure costs)

FM 518 (Broadway St) at Country Club Dr/Liberty Dr

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one shared through-right lane, one through lane, and one TWLTL. When data was collected in April 2024, the northbound approach (Liberty Drive) had one shared through-right lane and one left-turn lane. The southbound approach (Country Club Drive) has one shared through-right lane and one left-turn lane. As of January 2025, the northbound approach has one right-turn bay, one shared left-through lane, and one left-turn lane.

Recommendation: Traffic signal timing optimization

Results: This is anticipated to result in a mild improvement in delay (7%) in the AM and significant improvement in delay (69%) in the PM period.

To address specific crash types at this location (same direction and angle crashes), the following countermeasures were identified:

- Install raised median
- Operate protected only phasing for east bound and west bound left

Cost Estimate: $55,000 (including safety countermeasure costs)

FM 518 (Broadway St) at Yost Blvd/Shadycrest Dr

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one shared through-right lane, one through lane, and one TWLTL. The northbound approach (Shadycrest Drive) has one shared through-right lane and one left-turn bay. The southbound approach (Yost Boulevard) has one right-turn lane, one through lane, and one left-turn bay.

Recommendation: Traffic signal timing optimization

Results: This improvement is anticipated to have a mild improvement (2%) in the AM and significant improvement (49%) in the PM period.

To address opposite direction and wet surface crashes, the following counter measures were identified:

- Install raised median
- Operate protected only phasing for east bound and west bound left
- Pavement friction management

Cost Estimate: $75,000

FM 518 (Broadway St) at Dixie Farm Rd

This intersection is a signalized four-legged intersection. The eastbound and westbound approaches (FM 518) have one channelized right-turn bay, two through lanes, and one TWLTL. The northbound and southbound approaches (Dixie Farm Road) have one right-turn bay, two through lanes, and two left-turn bays.

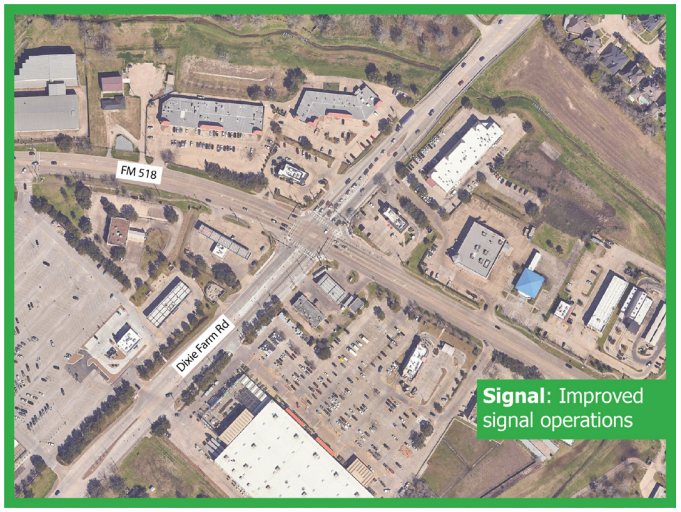
Recommendation: Traffic signal timing optimization

Results: This improvement is anticipated to have a mild improvement in delay in both the AM (8%) and PM (10%) peak periods.

To address specific crash types at this location (same direction, angle crashes, and bicyclist crashes), the following counter measures were identified:

- Install raised median
- Bicycle green markings

Cost Estimate: $65,000 (including safety countermeasure costs)



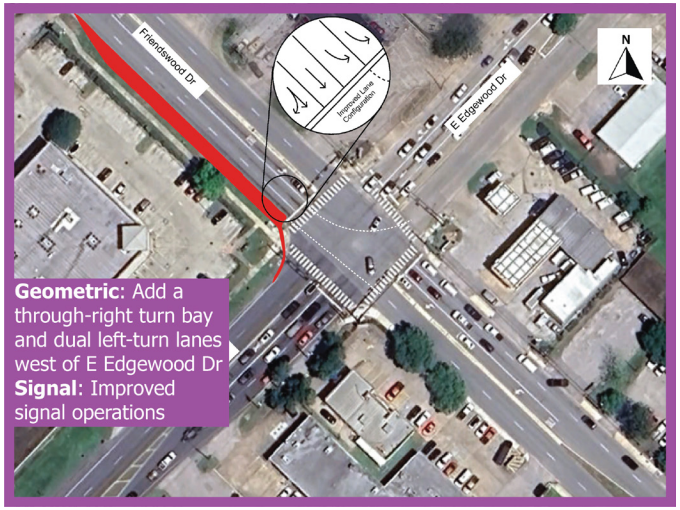
FM 518 (Friendswood Dr) at E. Edgewood Dr

This intersection is a signalized four-legged intersection. The approaches on Friendswood Drive have one shared through-right lane, one through lane, and one TWLTL. The approaches on E. Edgewood Drive have one shared through-right lane, one through lane, and one left-turn bay.

Recommendation: Add a through-right turn bay and dual left-turn lanes west of E. Edgewood Drive; Optimize signal timings. ROW is needed to make this improvement, as shown in red below.

Results: This is anticipated to have a significant improvement to delay during the AM period (64%) and a moderate improvement to delay (25%) during the PM period.

Cost Estimate: $400,000

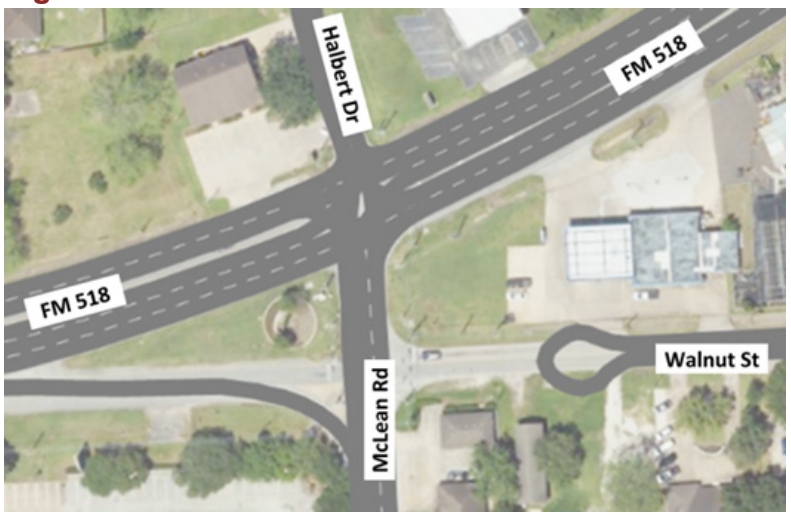


Walnut Street Closure Alternative

The Walnut Street Closure alternative includes the removal of the signal at Walnut Street and the removal of the connection of Walnut Street to McLean Road on the east side of McLean Road. The western terminus of Walnut Street (east of McLean Road) becomes a cul-de-sac. Traffic headed eastbound on FM 518 must either continue on FM 518 or is diverted to travel southbound on McLean Road. Traffic headed westbound on Walnut Street to proceed west on FM 518 must turn into Veterans Drive, turn right on Fite Road, then turn right on McLean Road. From McLean Road, traffic would turn left to proceed on FM 518 west. This alternative could be implemented relatively quickly, but may require some ROW acquisition.

The Walnut Street Closure alternative was not pursued further due to concerns about access for emergency services, as identified by the Steering Committee. Although this alternative could have positive impacts on certain goals, the restriction of emergency services precludes it from further consideration.

Figure 20:Walnut Closure Alternative



Long-Term Alternatives

Three long-term alternatives were developed for analysis: one-way pair conversion, access management, and additional capacity. These alternatives are compared to the “no-build” alternative in 2045.

The measures of effectiveness, or MOEs, for these alternatives is the same as the short- and medium-term to analyze traffic operation and safety improvements. Additional qualitative considerations are discussed in this section, including whether the improvement improves conditions for bicycling and walking, whether it is anticipated to affect economic conditions for businesses in the corridor, and how the alternative was viewed by community members that attended meetings.

The cost estimates provided for long-term alternatives are at the planning level for informational purposes only (see page 58).

Alternative	Configuration	
	McLean Rd to Barry Rose Rd	Barry Rose Rd to E. Edgewood Dr
1a. One-Way Pair with 4-lane to east	3 lanes eastbound on Walnut St; 3 lanes westbound on FM 518	Current configuration: 4-lane with two-way left-turn lane
1b. One-Way Pair with 6-lane to east	3 lanes eastbound on Walnut St; 3 lanes westbound on FM 518	6-lane with raised median
2. Access Management (4-lanes)	Replaces two-way left-turn lane (TWLTL) with raised medians on FM 518 where possible, no change to Walnut (2-lane)	Replaces TWLTL with raised medians on FM 518 where possible. Terminates at Friendswood City Limits
3. Six-Lane Capacity Improvement (with raised medians)	Current configuration on FM 518 (4-lane with TWLTL) and Walnut St (2-lane)	6-lane with raised median

FM 518 (Broadway Street)

Alternative 1: One-Way Pair

The One-Way Pair Alternative would convert FM 518 to one-way west bound and Walnut Street to one-way east bound from McLean Road to Barry Rose Road (Figure 21). It includes three travel lanes in each direction on each of the aforementioned roadways. See Figure 22 for One-Way Pair location.

Two different scenarios were established:

- **Scenario A** with FM 518/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 4-lane with a two-way left-turn lane from Barry Rose Road to E. Edgewood Drive.
- **Scenario B** with FM 518/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 6-lane from Barry Rose Road to E. Edgewood Drive with a raised median.

Figure 21: Alternative 1 - One Way Pair Traffic Direction

One-Way Pair Conversion
Strategies to Reduce Cut Through Traffic

The One-Way Pair Alternative redirects the flow of traffic on FM 518 (Broadway Street) and Walnut Street, primarily using the existing roadway cross sections. With the change in east and west movement, there is a concern that vehicles will use local neighborhood streets to facilitate north and south movement across the pair of one way streets.

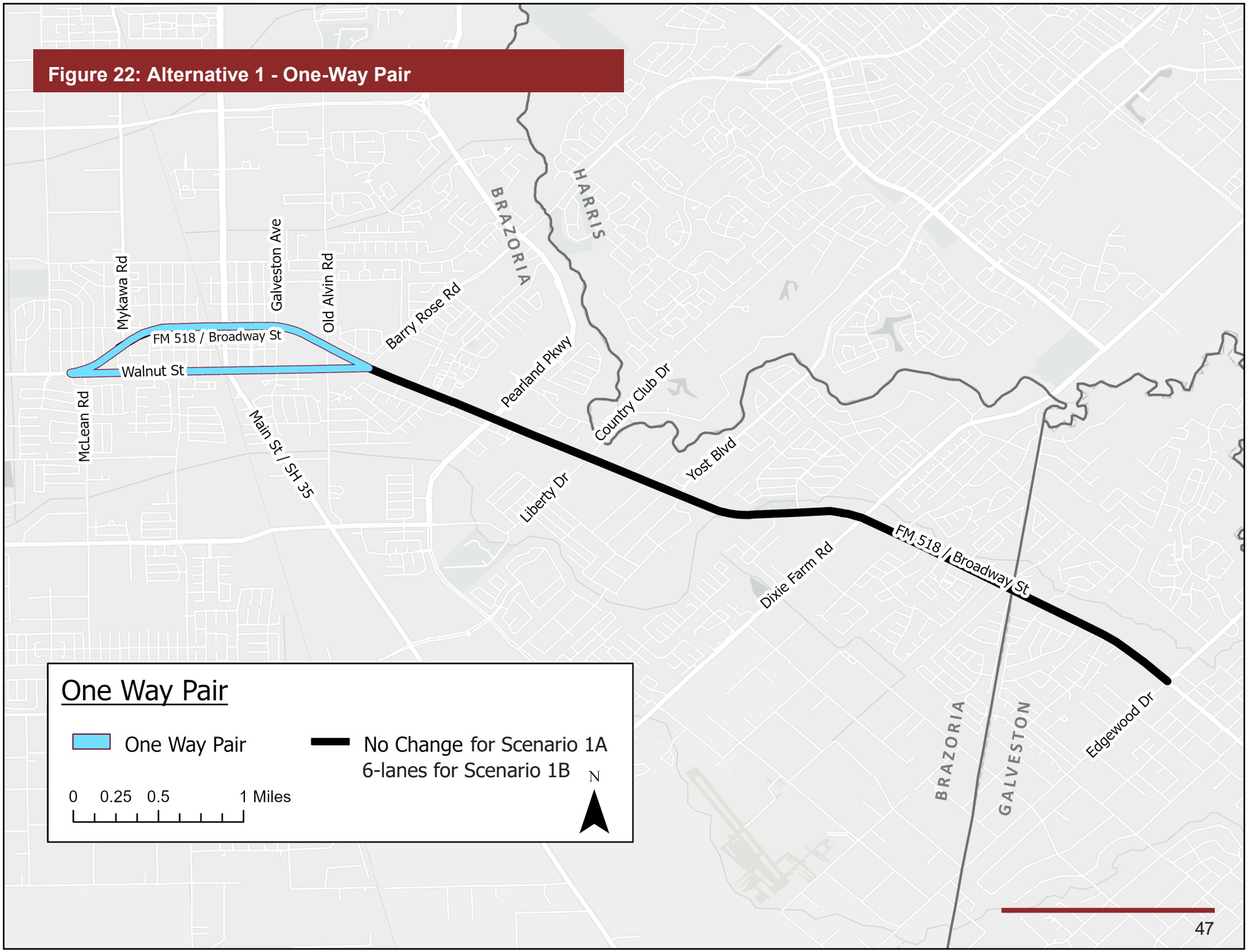
There are several inexpensive strategies that can be easily implemented to discourage and limit the amount of cut through traffic that the roads between FM 518 (Broadway Street) and Walnut Street experience. Examples include diverters that force vehicles to turn at certain intersections. These can be constructed with concrete, prefabricated barriers, planters, or vertical bollards. In addition, speed cushions can be used to calm and slow traffic.

Top: Speed cushion, Credit PBIC-Dan Burden

Middle: Diverted street, Credit PBIC-Adam Fukushima

Bottom: Neighborhood traffic circle, Credit PBIC-Dan Burden

Figure 22: Alternative 1 - One-Way Pair



Alternative 1 Scenario A Evaluation

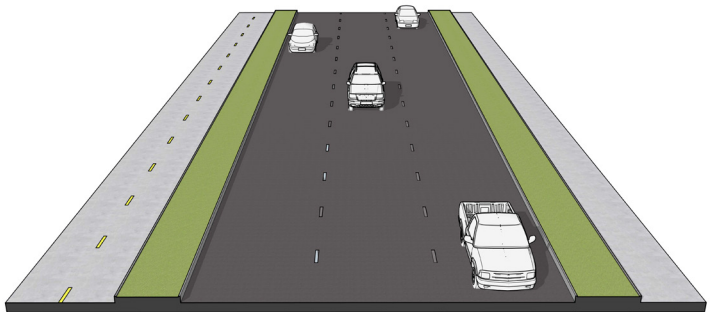
Scenario A: FM 518 (Broadway Street)/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 4-lane with a two-way left-turn lane (TWLTL) from Barry Rose Road to E. Edgewood Drive.

Movement of People and Goods: Scenario A would result in the continuation of adverse effects along the study corridor, since the congestion on Pearland Parkway backs up far enough to stop cars on the one-way pair from advancing.

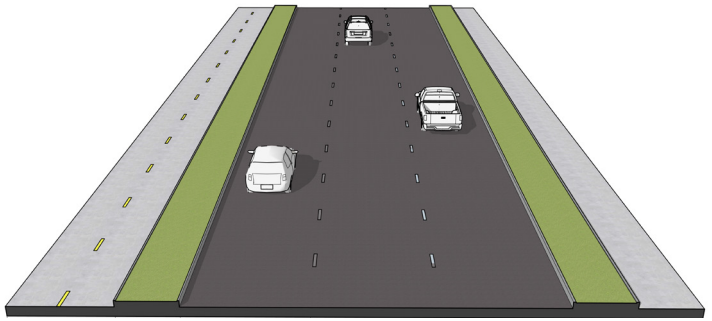
Safety: The one-way pair scenario A is anticipated to have a positive impact on safety. The Safety Performance Functions (SPFs) method of crash analysis identified a safety benefit of $21.9 million, and a crash reduction factor of 40% for the one-way pair.

Other considerations

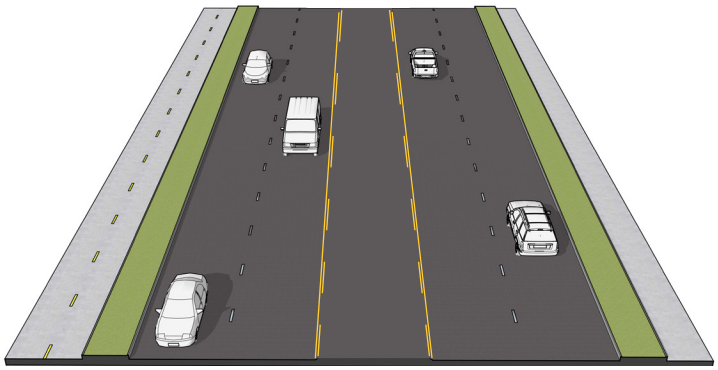
- **Bicycle and Pedestrian Infrastructure**: This alternative improves pedestrian environments through the inclusion of sidewalks and side paths. Scenario A offers shorter crossing distances due to the narrower roadway cross section.
- **Regional Economic Competitiveness**: Initially, businesses relying on pass-by traffic may see a drop due to reduced traffic volumes on FM 518. However, new traffic patterns are expected to emerge, minimizing long-term impacts.
- **Public Opinion**: The one-way pair alternative was unpopular among the public, receiving more opposition than support in meetings. The Steering Committee remains neutral on this option.
- **Cost Estimate**: This alternative is estimated to cost around $76 million, including construction, engineering and design services, and a 20 percent contingency to account for unknown items which may affect costs in the future.



FM 518 (Broadway Street) from McLean Road to Barry Rose Road with three lanes in one direction, sidewalk, and side path



Walnut Street from McLean Road to Barry Rose Road with three lanes in one direction, sidewalk, and side path



FM 518 (Broadway Street) From Barry Rose Road to E. Edgewood Drive with four lanes and a TWLTL

Alternative 1 Scenario B Evaluation

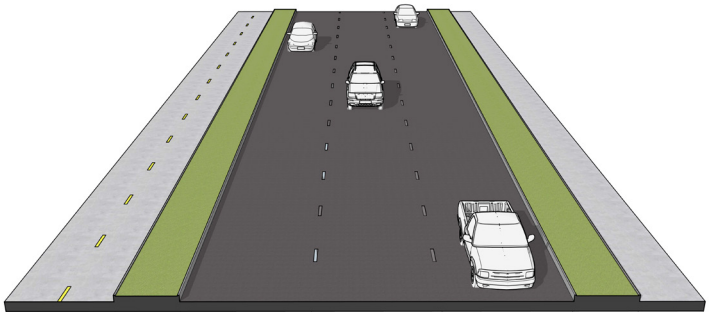
Scenario B: FM 518 (Broadway Street)/Walnut Street one-way pair from McLean Road to Barry Rose Road, and 6-lane from Barry Rose Road to E. Edgewood Drive with a raised median.

Movement of People and Goods: Scenario B would have positive results along the study corridor, mitigating traffic coming from Pearland Parkway.

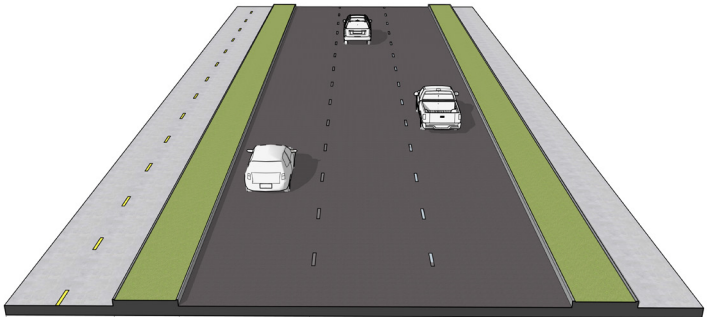
Safety: The one-way pair scenario B is anticipated to have a positive impact on safety. The Safety Performance Functions (SPFs) method of crash analysis identified a safety benefit of $21.9 million, and a crash reduction factor of 40% for the one-way pair. Widening FM 518 from Barry Rose Road to E. Edgewood Drive is expected to have a $71.3 million safety benefit and crash reduction factor of 50% when added to Scenario B.

Other considerations

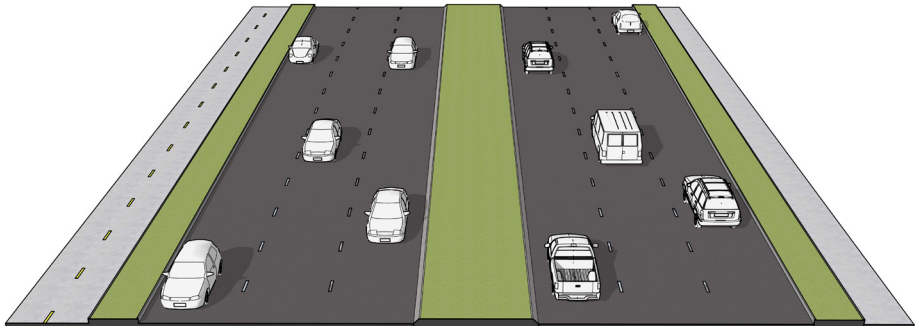
- **Bicycle and Pedestrian Infrastructure**: This alternative improves pedestrian environments through the inclusion of sidewalks and side paths. Scenario B enhances multi-modalism requires wider ROW from Barry Rose Road to E. Edgewood Drive, slightly increasing crossing distances for pedestrians.
- **Regional Economic Competitiveness**: Initially, businesses relying on pass-by traffic may see a drop due to reduced traffic volumes on FM 518. However, new traffic patterns are expected to emerge, minimizing long-term impacts.
- **Public Opinion**: The one-way pair alternative was unpopular among the public, receiving more opposition than support in meetings. The Steering Committee remains neutral on this option.
- **Cost Estimate:** This alternative is estimated to cost around $126 million, including construction, engineering and design services, and a 20 percent contingency to account for unknown items which may affect costs in the future.



FM 518 (Broadway Street) from McLean Road to Barry Rose Road with three lanes in one direction, sidewalk, and side path



Walnut Street from McLean Road to Barry Rose Road with three lanes in one direction, sidewalk, and side path



FM 518 (Broadway Street) From Barry Rose Road to E. Edgewood Drive with six lanes and a raised median

Alternative 2: Access Management (4-lane)

The Access Management Alternative includes the addition of raised medians from McLean Road to the Friendswood City Limits, where raised medians currently exist (see Figure 23). Walnut Street would remain a 2-lane facility.

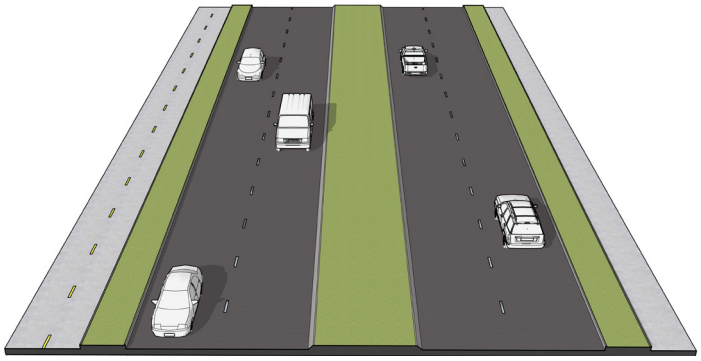
Evaluation

Movement of People and Goods: The scenario would result in positive outcomes at some intersections and negative results at other intersections in the future, so the results are characterized as neutral. In most cases, vehicles would have to turn right in and out of developments and find a place to U-turn or alter their route instead of turning left in and out of developments. Access points could be present for some busier locations, but this would not be an adequate standalone improvement, operationally. Storage lengths in medians will need to be of sufficient length to prevent backing up into through travel lanes.

Safety: The access management alternative is expected to increase safety. This alternative reported the greatest safety benefit when compared to other alternatives.

Other Considerations:

- **Bicycle and Pedestrian Infrastructure**: The addition of raised medians provides a safe refuge for pedestrians at intersections along FM 518 offering a positive impact. In addition, this alternative includes a side path on the north side of the corridor and a sidewalk on the south.
- **Regional Economic Competitiveness**: There may be some negative impacts for regional competitiveness, including inconveniences for truck deliveries and changes in customer trips, especially during construction.
- **Cost Estimate:** This alternative is estimated to cost around $54 million, including construction, engineering and design services, and a 20 percent contingency to account for unknown items which may affect costs in the future.



FM 518 (Broadway Street) From McLean Road to Friendswood City Limits with four lanes and a raised median

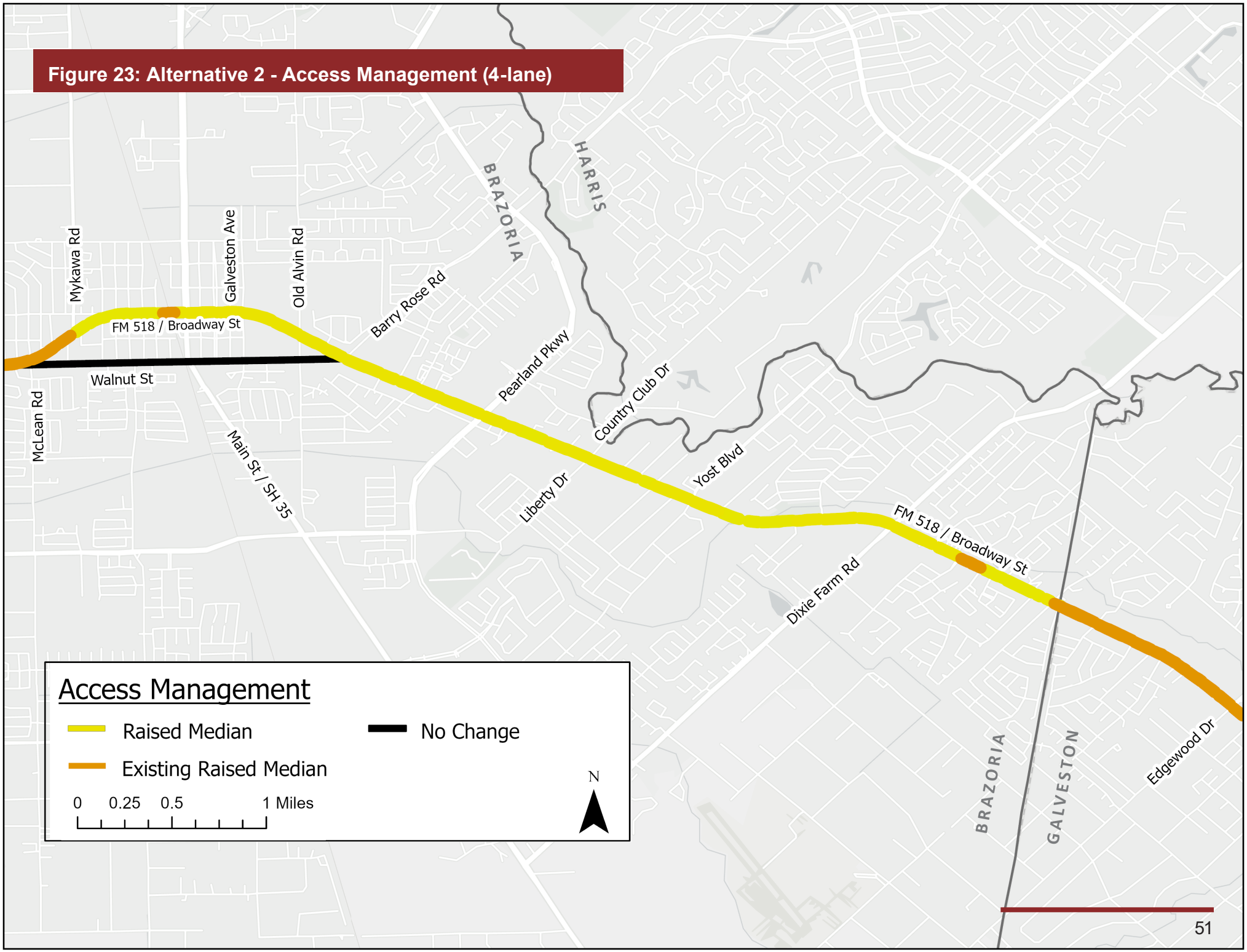
What is Access Management?

Access management is a design strategy for roadways aimed at enhancing safety by regulating points of entry and exit for vehicles. Some techniques recommended by the Federal Highway Administration that can be used to effectively manage corridor access include the following:

- Access Spacing: the strategic placement of traffic signals
- Driveway Spacing: minimizing the number of driveways along a road and properly spacing them apart
- Median Treatments: tools for managing access and mitigating crashes such raised medians
- Right-of-Way Management: considerations such as ensuring good visibility
- Safe Turn Lanes: dedicated left- and right-turn, indirect left-turns and U-turns

Source: U.S. Department of Transportation (2021). Federal Highway Administration. What is Access Management? https://ops.fhwa.dot.gov/access_mgmt/what_is_accsmgmt.htm.

Figure 23: Alternative 2 - Access Management (4-lane)



Alternative 3: Six-Lane Capacity Improvement (with raised medians)

The six-lane capacity improvement includes adding an additional lane in each direction and installing a raised median from Barry Rose Road to E. Edgewood Drive. Walnut Street would remain a 2-lane facility, as it is today. According to TxDOT, adding a lane to FM 518 (Broadway Street) in each direction from McLean Road to Barry Rose Road would not be feasible due to the presence of historical properties.

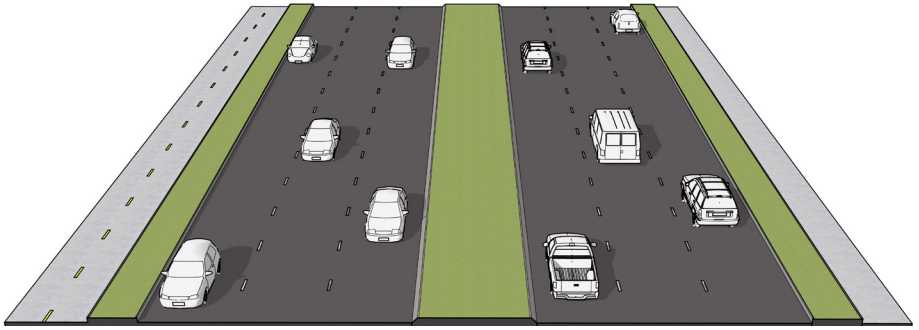
Evaluation

Movement of People and Goods: The scenario would improve traffic along the corridor by adding an additional travel lane in each direction.

Safety: The six-lane capacity improvement alternative with raised medians is anticipated to improve safety.

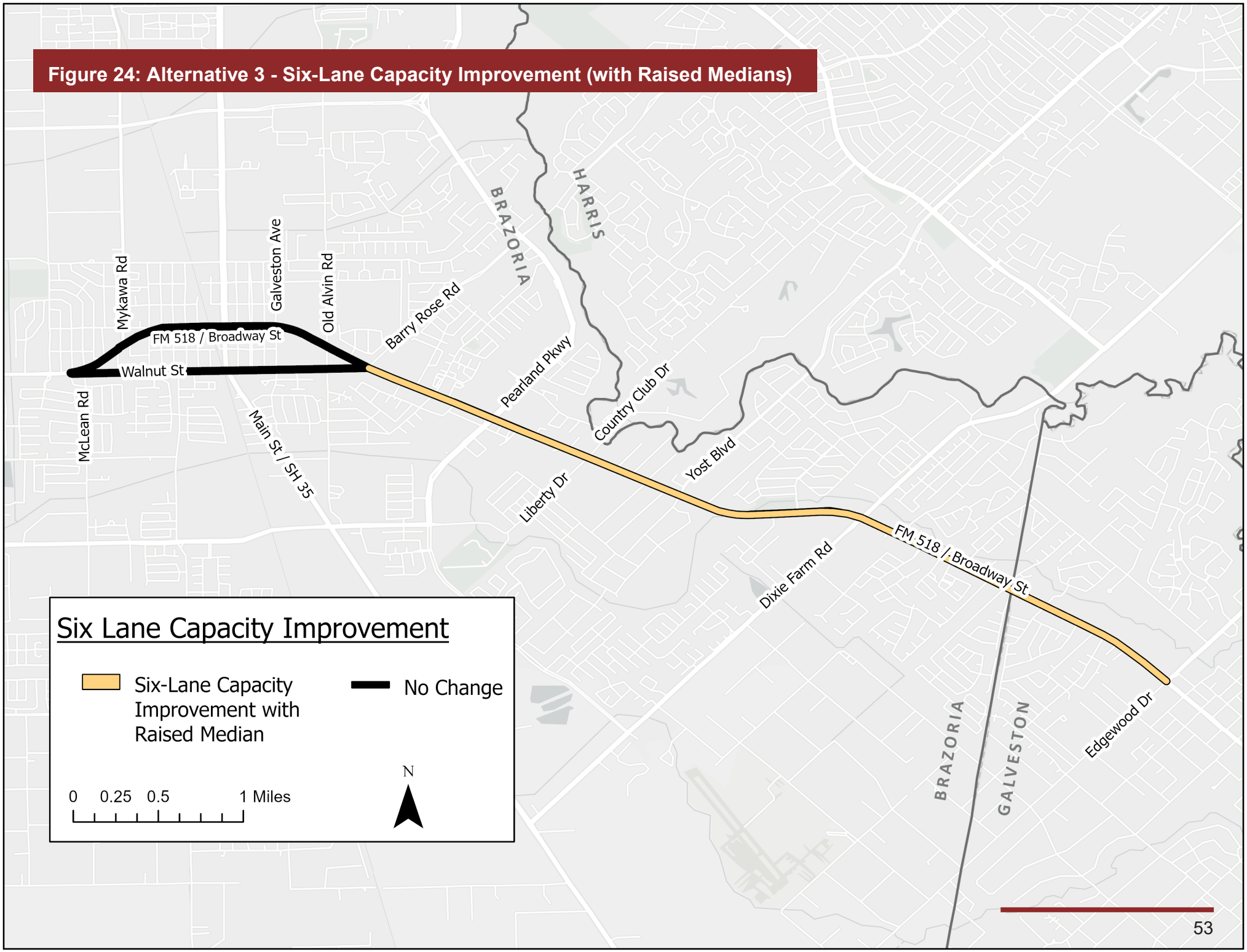
Other Considerations:

- **Bicycle and Pedestrian Infrastructure**: The addition of a 10 ft side path on the north and a 6 ft sidewalk on the south would improve the conditions for people who want to walk or bike in the area, however the wider road means longer crossing distance.
- **Regional Economic Competitiveness**: This alternative is considered to have a neutral impact. East of Barry Rose Road, the level of service remains acceptable, but the west side breaks down during PM peak period with stop and go congestion. They balance each other out, but do not support the City's Old Townsite placemaking goals.
- **Cost Estimate**: This alternative is estimated to cost around $80 million, including construction, engineering and design services, and a 20 percent contingency to account for unknown items which may affect costs in the future.



FM 518 (Broadway Street) From Barry Rose Road to E. Edgewood Drive with six lanes and a raised median

Figure 24: Alternative 3 - Six-Lane Capacity Improvement (with Raised Medians)



6

Recommendations

FM 518 Corridor Study

Corridor Recommendations

This chapter describes the process for identifying recommended improvements, taking into account operations and safety enhancements identified through analysis, as well as other factors including cost, public opinion, and level of effort required for implementation.

Recommendations are grouped into three categories: general, intersection, and long-term improvements. General recommendations are focused on strategies for safety and pedestrian and bicycle facilities that are applicable to the entirety of the corridor.

Intersection recommendations draw from the intersection improvements detailed on page 37 through page 44.

Long-term recommendations identify the preferred alternative based on the goals established for the corridor.

A discussion of Implementation and Next Steps concludes the Chapter.

Recommendation Classifications

Short Term (0-5 Years)

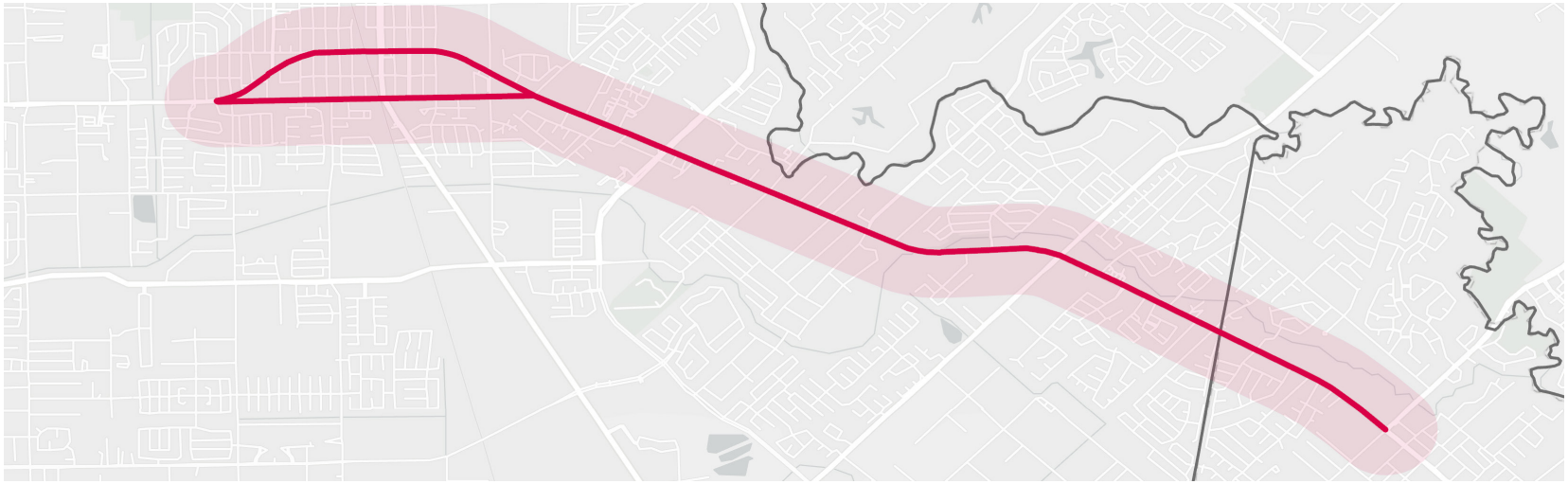
- Traffic Safety & Operational Improvements
- Low Cost
- Do not require ROW

Medium Term (6-10 years)

- Traffic Safety and Operational Improvements
- Low to Moderate Cost
- May Require ROW and Coordination

Long Term (more than 10 years)

- More complex projects that add capacity or greater anticipated safety benefits
- May have higher costs
- Require ROW, more extensive design, and coordination



General Recommendations

Safety Countermeasures

These countermeasures were identified as part of a road safety analysis conducted in accordance with the Highway Safety Manual (HSM) procedures to diagnose safety issues and recommend improvements to reduce fatal and injury crashes.

Regular maintenance of pavement and striping: This is important for the safety and traffic flow of the corridor.

Install intersection and street lighting: Adequate lighting is one of the FHWA's proven safety countermeasures to reduce crashes.

Installation of Retroreflective backplates: Some traffic signals on the corridor currently have retroreflective backplates. As signals are upgraded or replaced, backplates should be added to increase visibility of the signal.

Adjust clearance intervals as needed: Appropriate yellow change intervals can reduce red light running by 36-50% and total crashes by 8-14%.[8]

Implement leading pedestrian intervals: Leading pedestrian intervals provide time for people to cross the street before any vehicles enter the intersection.

Update for ADA Accessibility: Existing sidewalks and crosswalks should also be updated to ADA standards with curb ramps and other accessibility features so that pedestrian facilities are usable for all.

Source: Adobe Stock - Pavement maintenance

Source: Adobe Stock - lighting

Source: Google Earth - FM 518 (Friendswood Dr) Intersection

[8] FHWA Proven Safety Countermeasures https://highways.dot.gov/safety/proven-safety-countermeasures/yellow-change-intervals

Multimodal Recommendations

Regardless of the Long Term Alternative selected for further development, improvements for walking and bicycling facilities are included in all scenarios. All spot improvements include:

- Pedestrian Signal Head with push button
- High Visibility Crosswalks
- ADA accessible ramps with tactile warning surfaces

All long term improvement alternatives include:

- Sidewalks: Six-foot in width, with a six-foot buffer, on the south side of the roadway.
- Side paths: Ten-foot in width, six-foot buffer, on the north side of the roadway

To address gaps in the sidewalk network in the interim period, the City of Pearland has applied for Transportation Alternatives funds in the 2025 application cycle.

Source: ATG|DCCM - Example Sidepath in New Orleans

Sidewalks and ADA features at Dixie Farm Road at FM 518

Intersection Recommendations

If the City of Pearland and TxDOT move forward with implementing the short- and medium-term intersection improvements, it is advisable that ROW be acquired and preserved where necessary to develop the additional turn lanes. Since each intersection improvement described in Chapter 5 impacts the level of service at surrounding intersections, it is suggested to implement them all to fully realize the benefits.

Long-Term Recommendations

This study was completed because of the need for long-term intervention along the corridor. The roadway beyond the study limits to the west will be widened along with Mykawa Road, increasing capacity. With the projected increase in traffic volumes, the FM 518 (Broadway Street) corridor will also need additional capacity. Because it is not possible to widen FM 518 (Broadway Street) from McLean Road to Barry Rose Road, the one-way pair is a necessary component of the recommended long-term solution.

Alternative 1B, or the one-way pair of FM 518 (Broadway Street)/ Walnut Street from McLean Road to Barry Rose Road and 6-lanes with a raised median on FM 518 (Broadway Street) from Barry Rose Road to E. Edgewood Drive, demonstrated the best results. While both Alternative 1B and Alternative 3 show some improvement in operations, they do not provide the same level and extent of operational benefits. The model shows that Alternative 1B improves operations by at least one letter grade during either the AM or the PM peak period at 19 of the 22 intersections studied, while Alternative 3 improves operations by one letter grade at 10 of the 22 intersections during either the AM or PM peak period. Based on these factors, Alternative 1B is recommended for long-term implementation out of the alternatives presented in this study. However, there are many other factors that influence the suitability of the alternative, and there are other potential improvements that can be analyzed for comparison to Alternative 1B.

Next Steps

The City of Pearland, in collaboration with TxDOT, will determine when and what improvements to implement based on informed decision making. Proposed projects that are selected for implementation will be included in the City of Pearland's Capital Improvement Plan and H-GAC's Regional Transportation Plan (RTP) and the Transportation Improvement Plan (TIP) in order to secure funding for the proposed improvements. In addition, further study and identification of different alternatives can be completed and compared to the results of this study.

Table 7: Alternative Comparisons

Evaluation at a Glance		Improvement in Safety	Improvement in Operations	Cost Estimate*
1A	One-Way Pair Scenario A	Yes	No	$76,013,000
1B	One-Way Pair Scenario B	Yes	Yes	$126,209,000
2	Access Management (4-lanes)	Yes	Neutral	$53,824,000
3	Six-lane Capacity Improvement (with raised median)	Yes	Yes	$80,061,000
	No Build	No	No	N/A

** Cost estimates are planning level only. Estimates include construction, right-of-way acquisition, engineering services, and a 20% contingency to account for unknown items which may affect costs in the future.*

Project Development and Delivery Process

In order to advance projects to construction, projects follow a well-established project delivery process. The process varies depending on the nature and scale of the project, but can generally be described as:

- **Feasibility**: Evaluation of the projects cost-effectiveness and benefits
- **Securing Funding**: Identifies and secures appropriate funding resources
- **Preliminary Engineering and Environmental Analysis**: Refines project alternatives and examines the project's environmental, social and community impacts
- **Final Design**: Completes detailed design
- **Obligation of funding**: Contractually obligates funding to the project
- **Construction**: Brings the project online
- **Operation and Maintenance**: Sustains the project for its life cycle.

Following the completion of this analysis, the City of Pearland will need to decide which course of action they would like to pursue and coordinate with H-GAC and TxDOT to determine the feasibility of that action.

Funding Sources

Funding for transportation projects comes from a variety of sources, including local, state and federal funding programs, as well as private sector and non-governmental sources. Many state and federal funding sources necessitate a local match, typically 20%. Because this project involves both state and local roadways, the following information is provided as a resource for consideration.

Local Funding Sources include:

- **Property Taxes**: Historically the primary source of funding for local governments, accounting for over 80% of local tax revenues. Property taxes are significant in Texas due to the absence of state and local-option income taxes.
- **General Sales Taxes**: Another important source, typically imposed on retail sales at a uniform percentage of the selling price.
- **Bond Issues**: Revenues from property and sales taxes can be used to repay general obligation or revenue bonds, issued upon public approval.
- **User Fees**: Fees collected from users of services or facilities, such as parks, water and sewer services, transit systems, toll roads, and solid waste facilities.
- **Special Assessments**: Funds generated from those who directly benefit from public improvements, often within Special Assessment Districts.
- **Roadway Impact Fees**: Fees established to fund capital costs for roadways, offsetting public costs at the time of new developments.
- **Tax Increment Reinvestment Zone (TIRZ)**: A political subdivision created to implement tax increment financing, with revenues used for diverse projects, including transportation.
- **Roadway/Street Maintenance Fees**: Fees used to preserve the existing transportation system, addressing rising maintenance costs.

Potential State and Federal Funding Sources:

- H-GAC Call for Projects: H-GAC issues its call for projects to allocate funds by category in the Transportation Imprvement Program (TIP) as they become available. Once the H-GAC Transportation Policy Council approves a project, it is added to the TIP and STIP for TxDOT.

Implementation Actions

The public agencies previously mentioned are responsible for selecting and programming proposed projects. The process for securing funding, beginning preliminary engineering and environmental clearance, and preserving right-of-way should begin in a timely manner once an alternative or improvement project is approved. This will reduce project delays, which add to the cost of construction.

Coordination

Currently, Walnut Street is owned, operated and maintained by the City of Pearland, whereas FM 518 (Broadway Street) is owned, operated and maintained by TxDOT. Major changes to the direction of travel and operations of the corridor would require coordination between the City of Pearland and TxDOT. If either of the One-Way Pair Alternatives is selected, TxDOT will need to add Walnut Street to the State Highway System.

Ongoing Studies and Other Considerations

The City of Pearland is currently performing an Old Townsite Revitalization Plan. Conceptual alternatives being developed and modeled in tandem with that study include:

- Alternative 1: FM 518 has one lane in each direction, on-street parking, and additional pedestrian traffic. Walnut Street is two lanes in each direction
- Alternative 2: FM 518 is two lanes in each direction, pedestrian traffic is increased. Walnut Street is two lanes in each direction.
- Alternative 3: FM 518 has one lane in each direction, on-street parking, and additional pedestrian traffic. Walnut Street is three lanes in each direction.

If one of these alternatives is selected as the local preference, the City of Pearland will need to work with TxDOT to establish a legal agreement that outlines the terms and conditions of a roadway swap, or an addition to the State Highway System.

School bus near Walnut Street