FORT BEND
SUBREGIONAL PLAN

Prepared For

HOUSTON-GALVESTON AREA COUNCIL | FORT BEND COUNTY

ARCOLA | MEADOWS PLACE | MISSOURI CITY | RICHMOND | ROSENBERG | STAFFORD | SUGAR LAND

PREPARED BY: ***TRAFFIC ENGINEERS, INC.***

MORRIS ARCHITECTS | TRANSYSTEMS | KIMLEY-HORN INC.| ASAKURA ROBINSON | THE LENTZ GROUP

FORT BEND
SUBREGIONAL PLAN

STAKEHOLDER ADVISORY COMMITTEE

AGENCY	COMMITTEE MEMBER
H-GAC PROJECT MANAGER	HANS-MICHAEL RUTHE
ARCOLA	MAYOR EVELYN JONES
MEADOWS PLACE	MAYOR CHARLES JESSUP DAN MCGRAW
MISSOURI CITY	SHARON VALIANTE VALERIE MARVIN
RICHMOND	TERRI VELA LENERT KURTZ COMMISSIONER GARY GILLEN
ROSENBERG	JEFF TRINKER JACK HAMLETT
STAFFORD	CHARLES RUSSELL JAMIE HENDRIXSON
SUGAR LAND	CATHY HALKA PAT WALSH
FORT BEND COUNTY TRANSIT	PAULETTE SHELTON
TEXAS DEPARTMENT OF TRANSPORTATION	JOEY WELCH

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CREDITS

Report prepared by:

Project Manager
Traffic Engineers Inc.
Strategic Planning; Multimodal Transportation Planning;
www.trafficengineers.com

Sub-Consultants
Asakura Robinson Company
Green Infrastructure and Reports
www.asakurarobinson.com

Kimley-Horn and Associates Inc.
Transit Planning
www.kimley-horn.com

The Lentz Group
Public Engagement
www.lentzgroup.com

Morris Architects
Land Use and Development Planning
www.morrisarchitects.com

TranSystems
Freight Rail Planning
www.transystems.com

Fort Bend County Courthouse

EXECUTIVE SUMMARY

The Fort Bend Subregional Plan is a joint effort between the Houston-Galveston Area Council (H-GAC), seven local stakeholder cities, and Fort Bend County to develop a common vision and strategic framework to help the Fort Bend study area successfully manage the significant growth projected for the region. H-GAC is the Metropolitan Planning Organization for the 8-county Gulf Coast Planning region of Texas. Its service area is 8,700 square miles and contains more than 5.8 million people. The Fort Bend Subregional Plan is one of several studies H-GAC has developed under the Subregional Planning Initiative (SPI) to develop long range land use and transportation plans for local communities in defined geographic areas within the region. In recognition of the need for a more holistic, strategic approach to regional planning, the SPI was created as a way to develop locally-conceived plans that identify local transportation goals and define projects and implementation strategies to achieve these goals.

A key component to the SPI approach is the recognition that transportation systems, land use, and economic development are strongly linked and therefore need to be integrated into an overall plan. Priority projects that are identified through the SPI planning efforts will be incorporated into regional planning tools including the 2040 Regional Transportation Plan (RTP). For the Fort Bend Subregional Plan, H-GAC has partnered with seven local cities within Fort Bend County as project sponsors. These jurisdictions include: City of Arcola, City of Meadows Place, City of Missouri City, City of Richmond, City of Rosenberg, City of Stafford and City of Sugar Land. Other local agencies and jurisdictions have also served on the project steering committee and as stakeholders for the project including Fort Bend County and the Fort Bend County Transit Authority, Texas Department of Transportation, and the Metropolitan Transportation Agency of Harris County (METRO).

The study area is located in Fort Bend County, the second largest county in the H-GAC planning region. The county is located directly southwest of the City of Houston and Harris County. The primary study area for this project focuses around the seven sponsoring cities in the central and eastern portion of the county. Overall, the study area within Fort Bend County has been very successful in terms of growth, economic development and quality of life with the region and many local cities being recognized as premier locations to live and work. This plan identified six key drivers of success for the region.

1. Strong Mobility and Access to Major Job Centers
2. High Quality Residential Housing Options
3. Strong Economic Growth
4. Enhanced Quality of Life and Amenities
5. Excellent School District Reputation
6. Increasing Diversity

Mark McGrath Municipal Park, Meadows Place

This success has attracted continued development growth. This growth, along with significant demographic shifts that are likely to be experienced within the Fort Bend study area, will create challenges to continue to deliver the exceptional quality of life that residents and business have come to expect in the region. With these challenges are also opportunities where regional planning efforts can create benefits from coordinated investment in economic development, transportation, and other amenities. This plan represents the effort of these communities to develop coordinated strategies to address these challenges.

The Fort Bend Subregional Plan has been developed though a collaborative, phased approach starting with an evaluation of existing conditions for the study area as well as an assessment of projected conditions for key trends like demographics, socioeconomic factors, economic development, and demands on the transportation system. Working through the Stakeholder Advisory Committee with representatives of each of the sponsoring jurisdictions, the plan establishes a Vision for the study that emphasizes the goal of remaining a premier location.

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to live, connect, prosper, learn, and enjoy an excellent quality of life while preserving the distinctive character, history and resources of the region

By comparing the needs assessment and future trends impacting the region with the Vision and goals, strategic priorities were developed. These were refined into a Strategic Plan Framework for the study area focused on three key areas.

1. Strengthening Activity Centers - Twenty-two activity centers were defined for the Fort Bend study area. These activity centers serve as the core locations for economic activity and transportation demand and in many ways provide the character of a community. A strategic toolbox to strengthen these centers was developed and applied to each commercial center to develop potential implementation strategies.

2. Enhancing Multimodal Transportation Links - regional mobility and access to job centers has been a key factor in Fort Bend's success. Future growth will create challenges that current infrastructure will have difficulty handling. Stakeholders are also increasingly interested in a more balanced set of transportation choices including transit, walking and biking. The Subregional Plan has developed a set of regional multi-modal transportation projects and strategies to manage future congestion issues and provide a more robust set of transportation options for the study area.

3. Creating Sustainable Neighborhoods that Retain their Value - Much of the Fort Bend study area was developed as master planned communities in the 1970s and 1980s. The developments, in particular the infrastructure, retail, and commercial, are reaching a point where reinvestment is required to maintain value. The Subregional Plan outlines strategies for neighborhoods to address this challenge. It also outlines strategies to develop new neighborhoods with the characteristics that will allow value to be maintained in a sustainable manner.

To support each of the stakeholder jurisdictions in implementing the strategies and projects developed in this plan, Implementation Workbooks have been developed outlining the strategies and projects included in this plan. These workbooks are intended to serve as organizing checklists for jurisdictions to use to manage funding strategies, coordination, and project implementation.

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THE STATE OF TEXAS
FORT BEND COUNTY

IMPERIAL SUGAR

FORT BEND COUNTY JUSTICE CENTER

A 1 INTRODUCTION

The Fort Bend Subregional Plan is a joint effort between the Houston-Galveston Area Council (H-GAC), local stakeholder cities and Fort Bend County to develop a common vision and framework to help the Fort Bend study area successfully manage the growth projected for the region. H-GAC is the Metropolitan Planning Organization for the 8-county Gulf Coast planning region of Texas. Its service area is 8,700 square miles and contains more than 5.8 million people. The Fort Bend Subregional Plan is one of several studies H-GAC has developed under the Subregional Planning Initiative (SPI) to develop long-range transportation plans for local communities in smaller geographic areas within the H-GAC region. In recognition of the need for more holistic, strategic approach to regional planning, the SPI was created as a way to develop locally-conceived plans that identify local transportation goals and define projects and implementation strategies to achieve these goals.

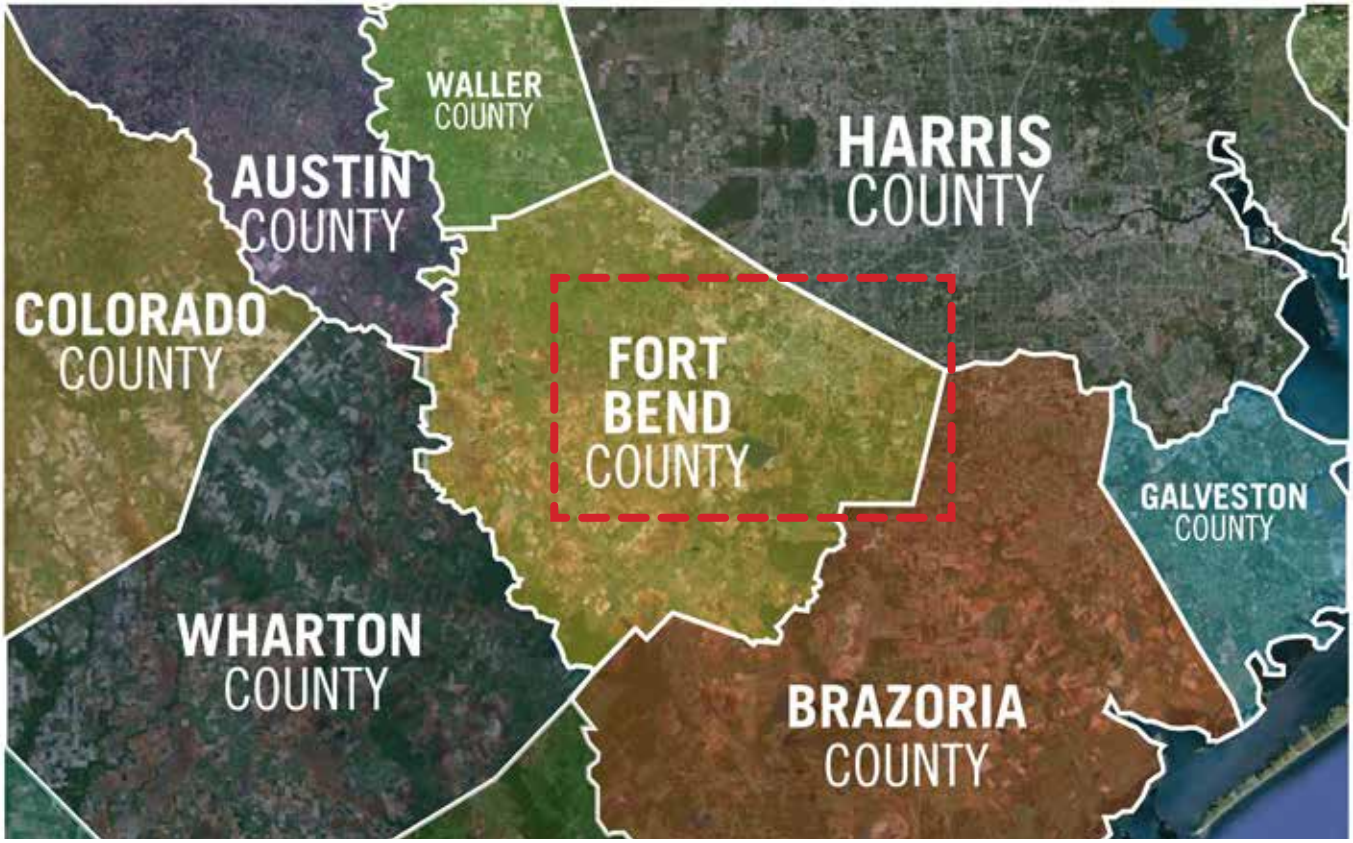
A key component to the SPI approach is the recognition that transportation systems, land use, and economic development are strongly linked and therefore need to be integrated into the overall plan. Priority projects that are identified through the SPI planning efforts will be incorporated into regional planning tools including the Regional Transportation Plan (RTP). The RTP is developed to guide investment in the transportation systems of the Houston-Galveston metropolitan region over the next 20 years. H-GAC is currently updating the RTP through 2040 and the SPI serves as a key input into that plan. The RTP also guides development of the Transportation Improvement Program (TIP), which is a short-range program of transportation improvements expected to be implemented during the following four-year period. The Fort Bend SPI plan will also support local Capital Improvement Plans, economic development strategies and other long-range planning projects, as well as develop strategies to support local jurisdiction in implementation and funding.

For the Fort Bend Subregional Plan, H-GAC partnered with seven local cities within Fort Bend County as project sponsors. These jurisdictions include: City of Arcola, City of Meadows Place, City of Missouri City, City of Richmond, City of Rosenberg, City of Stafford and City of Sugar Land. Other local agencies and jurisdictions also served on the project Stakeholder Advisory Committee including Fort Bend County, Texas Department of Transportation, and the Metropolitan Transportation Agency of Harris County (METRO).

Fort Bend County is the second largest county in the H-GAC planning region and is located southwest of the City of Houston and Harris County (Figure A1.1). The primary study area for this project is focused around the seven sponsoring cities in the central and eastern portion of the county and is depicted in Figure A1.2. Overall, the study area within Fort Bend County has been very successful in terms of growth, economic development and quality of life. The goal for this plan is to allow the region to continue to successfully position itself as one of the most desirable, attractive places to live and work while continuing to maintain a exceptional quality of life.

The Fort Bend Subregional Plan has been developed though a collaborative, phased approach starting with an evaluation of existing conditions for the study area as well as an assessment of projected conditions for key trends like demographics, socioeconomic factors, development and demands on the transportation system. This deep understanding of the current and projected conditions supports the identification of key strengths that have helped Fort Bend achieve its success but also identifies opportunities and challenges for the region to maintain its successful position. This evaluation and profile development of the study area was linked to the development of a vision and supporting goals for the study.

By comparing the vision and goals to the existing and projected conditions, a conceptual plan to achieve the vision was developed including major strategies for addressing mobility, economic development, land use, and quality of life. Through coordination with the public, key stakeholders, community leaders, and elected officials, these projects have been developed to a level of detail to support future planning and implementation including a description of benefits, funding strategies, key stakeholders and implementation partners, and potential cost estimates.



Study Area

Figure A1.1: Fort Bend Subregional Plan Study Area (Regional)

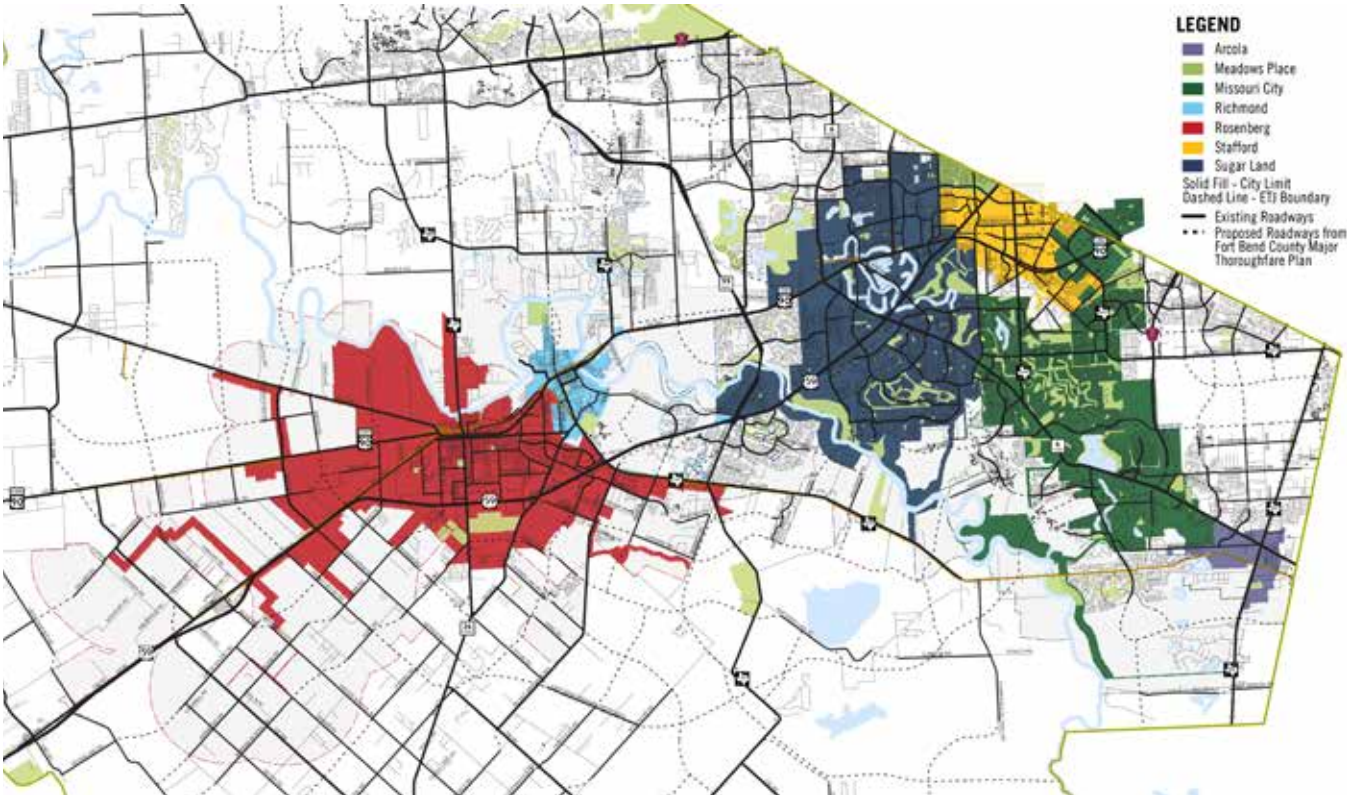
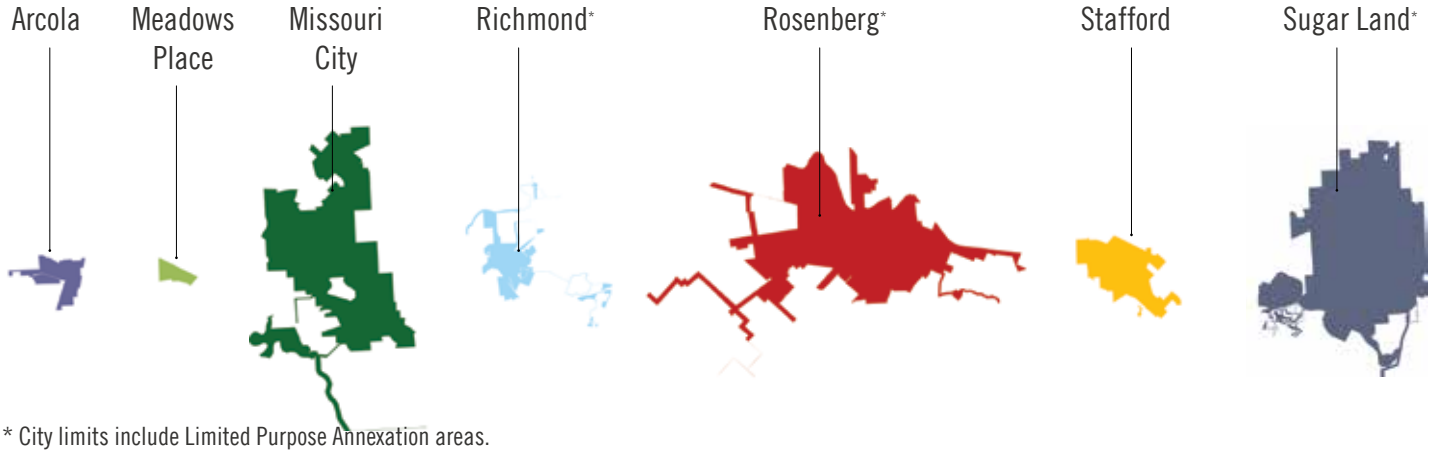


Figure A1.2: Fort Bend Subregional Plan Study Area (Detailed)

A 2 STUDY AREA AND CITY PROFILES

Fort Bend County is located in the southwest part of the Houston-Sugar Land-Baytown Metropolitan Statistical Area (MSA) in southeast Texas. The county encompasses a total of 875 square miles and has the second highest population of any county within the H-GAC region. With over 585,000 residents as of the 2010 Census, it trails only Harris County, which includes the majority of the City of Houston. As shown in Figure A1.2, the Fort Bend Subregional Plan study area covers a significant portion of Fort Bend County. The seven sponsoring cities that are the prime focus of the study, depicted in Figure A2.1, are:



* City limits include Limited Purpose Annexation areas.

Figure A2.1: Fort Bend County Study Area Cities

The study area contains three major corridors that provide the primary regional mobility options in central Fort Bend County: United States Highway Route 59 (US 59), United States Highway Route 90 Alternative (US 90A), and State Highway 6 (SH 6). US 59 traverses the center of the County from southwest to northeast; US 90A crosses the study area from east to west; SH 6 provides north-south mobility through the eastern section of the study area. Additional roadways including State Highway 36 (SH 36) and State Highway 99 (SH 99, Grand Parkway), the Fort Bend Parkway Toll Road, and Westpark Tollway provide important routes and connections through the study area and beyond. Other major features in the Fort Bend study area include natural features such as the Brazos River and Oyster Creek as well as major rail corridors operated by Union Pacific, BNSF, and Kansas City Southern Railroads.

As it has developed, Fort Bend County has been a regional success story for the greater Houston area. Over the past 30 years the County has become one of the most attractive places to live and work in the country with significant population growth and strong economic performance. Prior to 1950, only two of the Cities in the study area were incorporated: Richmond in 1837 and Rosenberg in 1902. As recently as the mid 1970s, Fort Bend was much less developed than neighboring Harris County with most of the land area comprised of agricultural and ranch land and most jobs were industrial jobs related to rail line access and grain mills. In 1980, the population was less than 25% of the current levels.

US 59 is the major spine through the study area. During the course of the study, US Highway 59 was designated as Interstate Highway 69 (I-69) from Rosenberg to I-610 within the City of Houston. This report will only refer to US 59 and not I-69 to ensure consistency.

Court Bros Store, Missouri City

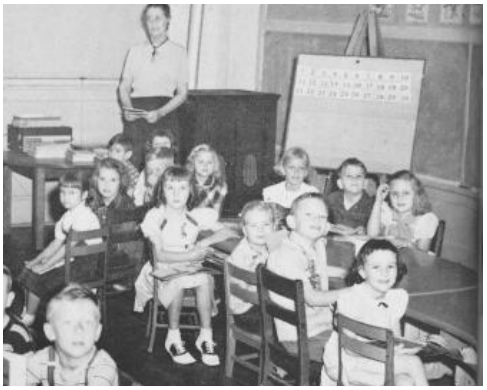
Company Offices, Sugar Land, 1952

Stafford gas explosion, 1964

Lamar Grid Team, Rosenberg, 1951

Sugar Land Oil Field, 1935

Richmond Ferry, 1922



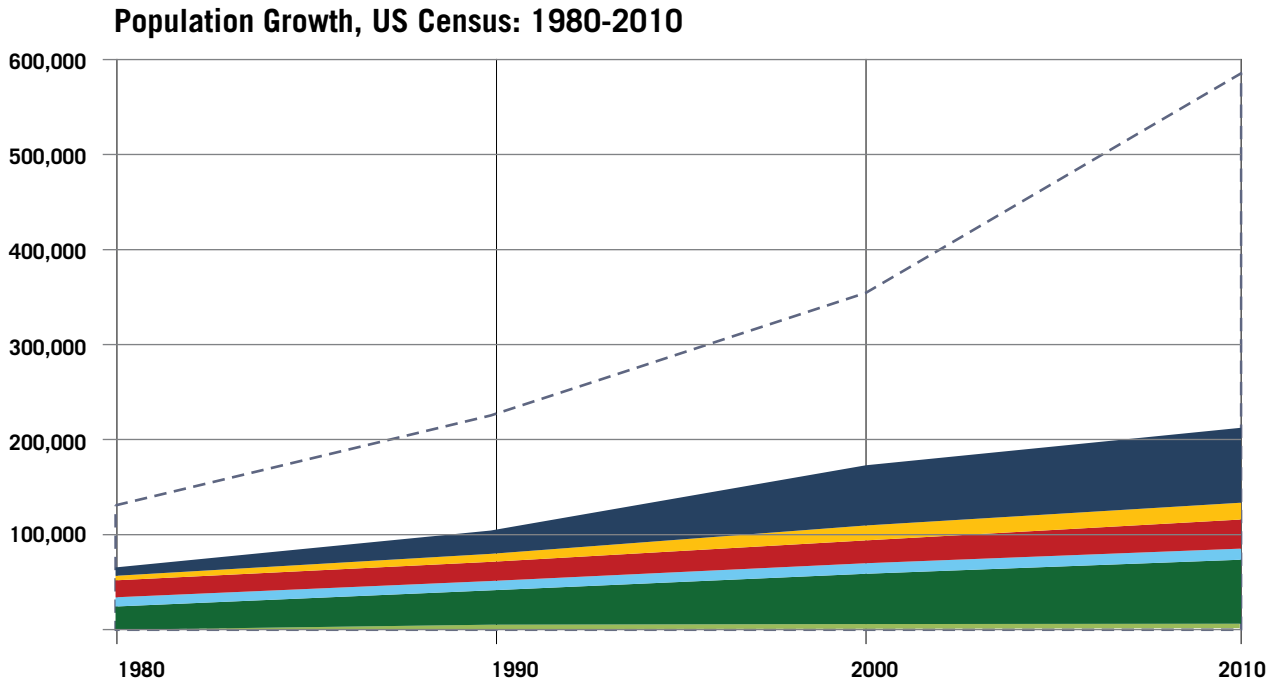
Missouri City Elementary, 1950's

Renaming Sugar Land street, 1958

Source: Chuck Kelly, "Old Sugar Land Club House" Blog, 2012

During the early 1970s, master planned communities such as Quail Valley and First Colony were developed in the cities of Missouri City and Sugar Land respectively, and the role of Fort Bend in the Greater Houston region began to change. Master planned communities continued to be developed within both the study area city limits and unincorporated Fort Bend County and the county population began to grow rapidly. Much of this growth was focused in the eastern portion of the county and related to the continued growth of Houston. These developments were viewed as prime locations for high-quality, suburban communities for commuters to jobs in the City of Houston. Today, Fort Bend County is home to more master planned communities than any other county in the State of Texas.

Since 1980 the county has experienced significant population growth of over 5% per year through the 2010 Census, as shown in Figure A2.2, The greatest growth rates have occurred in Sugar Land, Missouri City, and Stafford, as well as the areas of the county not encompassed by the seven cities' city limits. Meadows Place reached full residential build out in the 1980s and the City of Arcola has seen limited development within the city limits. Richmond and Rosenberg have continued to grow over this period but at a lower rate; as the development in Fort Bend County spreads west from the Harris County line and the number of regional jobs increases in the eastern part of Fort Bend County, population is expected to grow at a higher rate in both these cities.



	1980	1990	2000	2010	1980-2010 CAGR* (%)
FORT BEND COUNTY	130,846	225,421	354,452	585,375	5.1%
ARCOLA	X	666	1,048	1,642	3.1%
MEADOWS PLACE	X	4,606	4,912	4,660	0.0%
MISSOURI CITY	24,423	36,176	52,913	67,358	3.4%
RICHMOND	9,692	9,801	11,081	11,679	0.6%
ROSENBERG	17,840	20,183	24,043	30,618	1.8%
STAFFORD	4,755	8,395	15,681	17,693	4.5%
SUGAR LAND	8,826	24,529	63,328	78,817	7.6%
7 Cities Share of FBC	46%	46%	49%	36%	

*Compound Annual Growth Rate

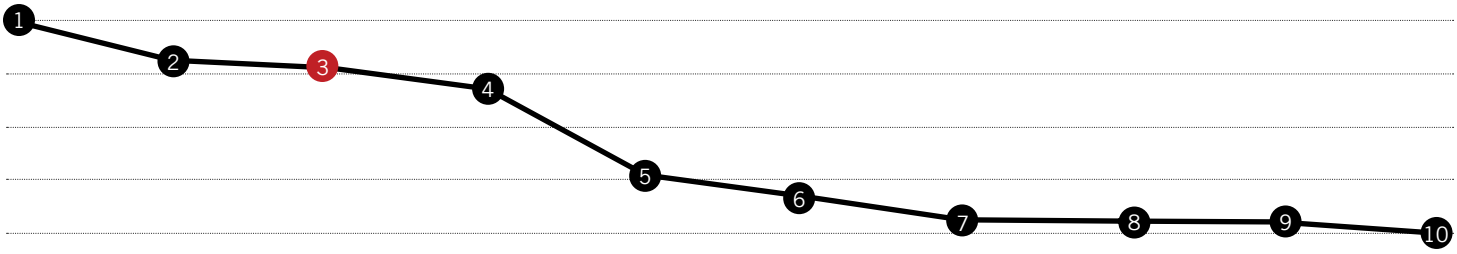
Figure A2.2: Fort Bend County Population Growth

Over the past 20 years, the Fort Bend Subregional Plan study area has become a large economic engine for the Houston region. Many businesses have grown or relocated into the region and there has been great focus on economic development. Fort Bend County has the third highest median household income and second highest mean household income in Texas (Figure A2.3). Much of that success is generated by the seven jurisdictions included in the study area. The success of Fort Bend has been recognized by others through a series of awards and rankings that support its position as one of the premier locations in Texas. A sampling of these rankings is shown in Figure A2.4 and covers everything from growth and development to quality of life, safety, and economic performance.

Median Household Income Rankings

All Counties in Texas

Rank	County	Location	Population	Median Income
1	Loving County	West Texas	82	$83,889
2	Collin County	Dallas-Fort Worth-Arlington MSA	782,341	$80,504
3	**Fort Bend County**	**Houston - Sugar Land - Baytown MSA**	**585,375**	**$79,845**
4	Rockwall County	Dallas-Fort Worth-Arlington MSA	78,337	$78,032
5	Denton County	Dallas-Fort Worth-Arlington MSA	662,614	$70,622
6	Williamson County	Austin - Roundrock MSA	422,679	$68,780
7	**Chambers County**	**Houston - Sugar Land - Baytown MSA**	**35,096**	**$66,764**
8	Kendall County	Central Texas - Edwards Plateau	33,410	$66,655
9	Hartley County	Panhandle	6,062	$66,583
10	**Montgomery County**	**Houston - Sugar Land - Baytown MSA**	**455,746**	**$65,620**



Mean Household Income Rankings

All Counties in Texas

Rank	County	Location	Population	Mean Income
1	Collin County	Dallas-Fort Worth-Arlington MSA	782,341	$101,911
2	**Fort Bend County**	**Houston - Sugar Land - Baytown MSA**	**585,375**	**$101,146**
3	Rockwall County	Dallas-Fort Worth-Arlington MSA	78,337	$97,189
4	Kendall County	Central Texas - Edwards Plateau	33,410	$95,055
5	Borden County	West Texas	641	$93,417
6	King County	Panhandle	286	$90,117
7	**Montgomery County**	**Houston - Sugar Land - Baytown MSA**	**455,746**	**$89,358**
8	Denton County	Dallas-Fort Worth-Arlington MSA	662,614	$89,247
9	Comal County	San Antonio–New Braunfels MSA	108,472	$83,871
10	Loving County	West Texas	82	$81,800

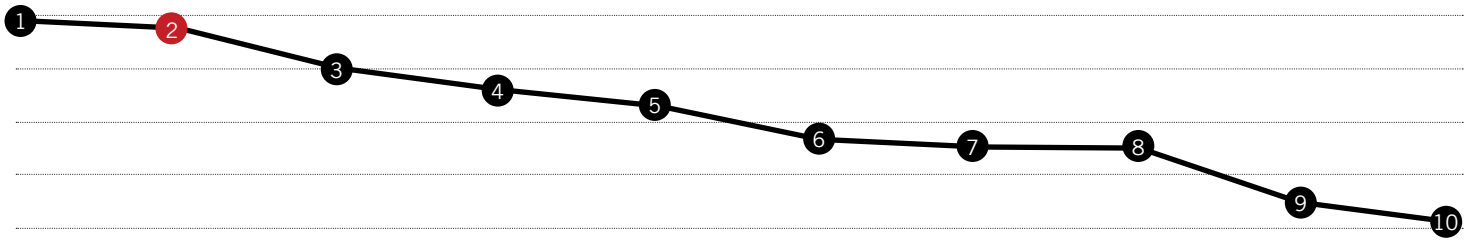


Figure A2.3: Texas Household Incomes

REGION

Forecasted to lead region in job creation, averaging more than three percent growth per year through 2015
(Woods & Poole Economics, 2011)

Healthiest residents in the Greater Houston area
(University of Wisconsin Population Health Institute, 2012)

#1 in employment growth in the U.S.
(U.S. Department of Labor, 2007)

Regional leader in ethnic diversity and high school graduation rates
(U.S. Census Bureau - American Community Survey, 2010)

CITIES

Sugar Land ranked 20th safest city in the Nation and ranked 2nd safest city in Texas
(*Congressional Quarterly Press*, November 2012)

Sugar Land named best place in the southwest to live
(*CNN/Money Magazine*, July 2006)

Missouri City ranked #21 on "Best Places to Live" list
(*CNN/Money Magazine*, August 2010)

Missouri City recognized on "Safest Cities in America" list
(*Congressional Quarterly*, November 2009)

MASTER PLANNED COMMUNITIES

Five of the top 20 master planned communities
(*Metrostudy*, September 2011)

Sienna Plantation voted best community in Texas
(CNBC's America's Property Awards, 2008)

Home to seven of the 10 most active residential communities in the Greater Houston area
(Houston Business Journal, July 2011)

Figure A2.4: Awards and Recognitions

The following pages provide information on the seven cities within the study area including data from the 2010 Census, major destinations and activity centers, and a brief history. Detailed demographic and sociological statistics for each of the cities is included in Appendix B.

ARCOLA | GOOD LIFE CLOSE TO THE 'BIG' CITY

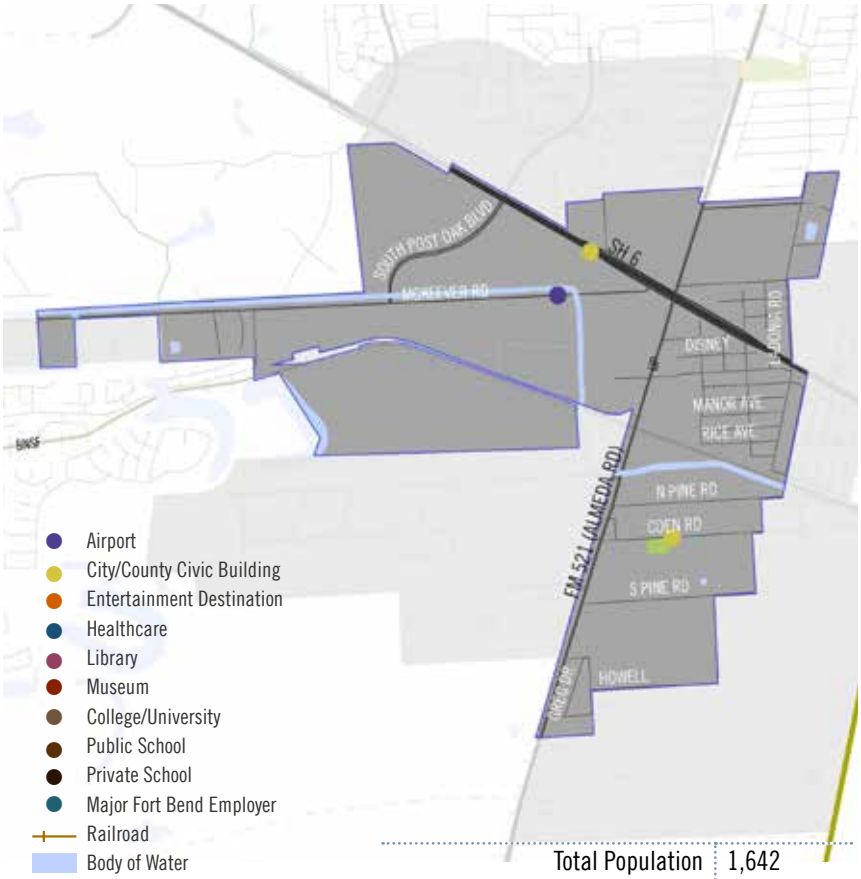
The City of Arcola is the smallest city by population of the seven cities in the study area. While the city's history extends to 1822 when the area around Arcola was part of an Old Three Hundred land grant, the city was originally incorporated in 1981. The name Arcola originated from Jonathan Dawson Waters' plantation named Arcola, which was one of the largest cotton and sugar plantations in Texas at the time. The City was developed around the intersection of the Atchison, Topeka and Santa Fe Railroad, now the BNSF Railroad's Galveston Subdivision, and the Buffalo Bayou, Brazos and Colorado Railroad, now the Union Pacific (UP) Railroad Popp Subdivision. In the past year the city has annexed over a ½ square mile of its ETJ and increased the city's land area by almost 35%. Part of newly annexed land was a 217 acre tract south of the Houston Southwest Airport along the BNSF Galveston Subdivision and the UP Popp Subdivision terminus allowing the city more access to the existing rail lines.

The major roadway corridors through Arcola are FM 521 and SH 6; the two corridors intersect in eastern Arcola. FM 521 runs parallel to US 288 from Arcola through the Texas Medical Center in the City of Houston, where it is known as Almeda Road. FM 521 was recently widened to a four-lane roadway from Beltway 8 to FM 2234 in the City of Pearland. Widening FM 521 was originally scheduled to continue south through Arcola but state funding challenges have slowed implementation of this proposed project.

While the City of Arcola has no public water system, in April 2012, the City of Arcola received a $2,000,000 loan and $1,440,000 Grant to construct a regional water system from the United States Department of Agriculture Rural Development. The regional water system is expected to be operational in two years which should increase the level of development in the area. It will also allow improved fire protection, lowering fire insurance rates that limit the desirability of residential units in Arcola.

Limited resources have been a contributor to Arcola's relatively slow growth in comparison to the surrounding communities. The City of Arcola has multiple large vacant tracts of land that present significant opportunity for new development. The City of Arcola is also home to the Houston Southwest Airport. The airport is a privately owned airport with one runway. The airport is primarily a general aviation airport.

The City is converting a portion of its City Hall to create a community center and gathering place for residents. The City is also looking to identify possible opportunities to create park space within the city limits to provide more amenities to City residents.



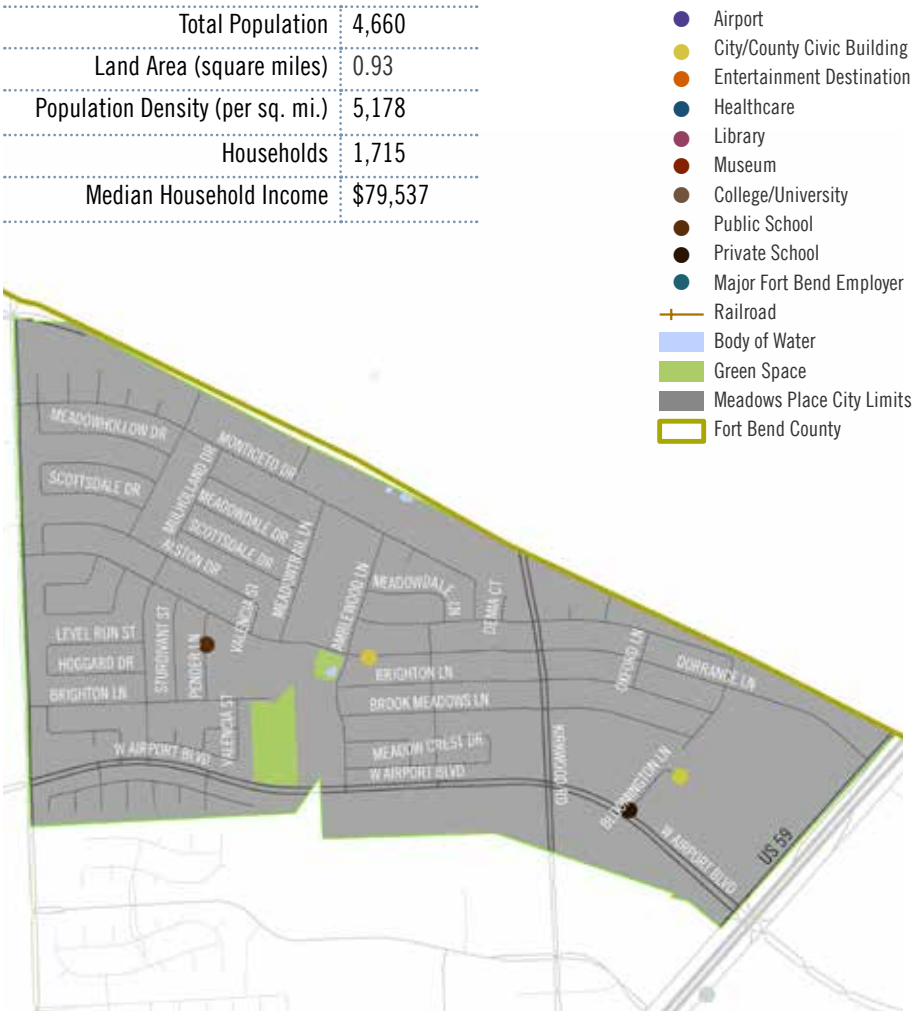
Total Population	1,642
Land Area (square miles)	2.65
Population Density (per sq. mi.)	840*
Households	451
Median Household Income	$44,750

Source: 2010 U.S. Census and Fort Bend County GIS, 2012
*Based on land area of 1.96 square miles recorded by 2010 US Census

Figure A2.5: Arcola City Profile

MEADOWS PLACE | YOUR PLACE FOR LIFE

Total Population	4,660
Land Area (square miles)	0.93
Population Density (per sq. mi.)	5,178
Households	1,715
Median Household Income	$79,537



Source: 2010 U.S. Census and Fort Bend County GIS, 2012

Figure A2.6: Meadows Place City Profile

Meadows Place is the second smallest city by land area in Fort Bend County. At 0.93 square miles (595 acres), Meadows Place sits on the border of Fort Bend County and Harris County between Eldridge Road and US 59. Originally a municipal utility district created in 1967, the City was incorporated in 1983 to prevent annexation into the City of Houston. Since incorporation, the population of Meadows Place has ranged between 4,600 and 5,000, staying constant in relation to surrounding Fort Bend County. The steady population is primarily due to the fact that the City of Meadow Places is primarily built out with single-family residential and there is little room for additional residential growth at current densities.

There are multiple areas for commercial growth and the City of Meadows Place has made the development of 20 acres of currently vacant land at the intersection of West Airport Boulevard and Kirkwood Road a priority. Also, the City has over 60 acres of commercial property along US 59 that is a possible location for redevelopment. Some redevelopment is already happening with the former Sam's Club and Garden Ridge being replaced by Texas Direct Auto. Texas Direct Auto is expanding from its southern campus across US 59 in Stafford and will be making many cosmetic improvements to the property as well as building a dog park. Currently, the major commercial establishments within the City include banks, pharmacies, restaurants, and a few automobile dealerships.

Meadows Place recently constructed a new park with a lake. The newly constructed lake is more then just a recreational destination, the lake is also a water reclamation project that will improve the City's irrigation. Including the new park, Meadows Place has over 12 acres of park land, totally 20% of the total city area.

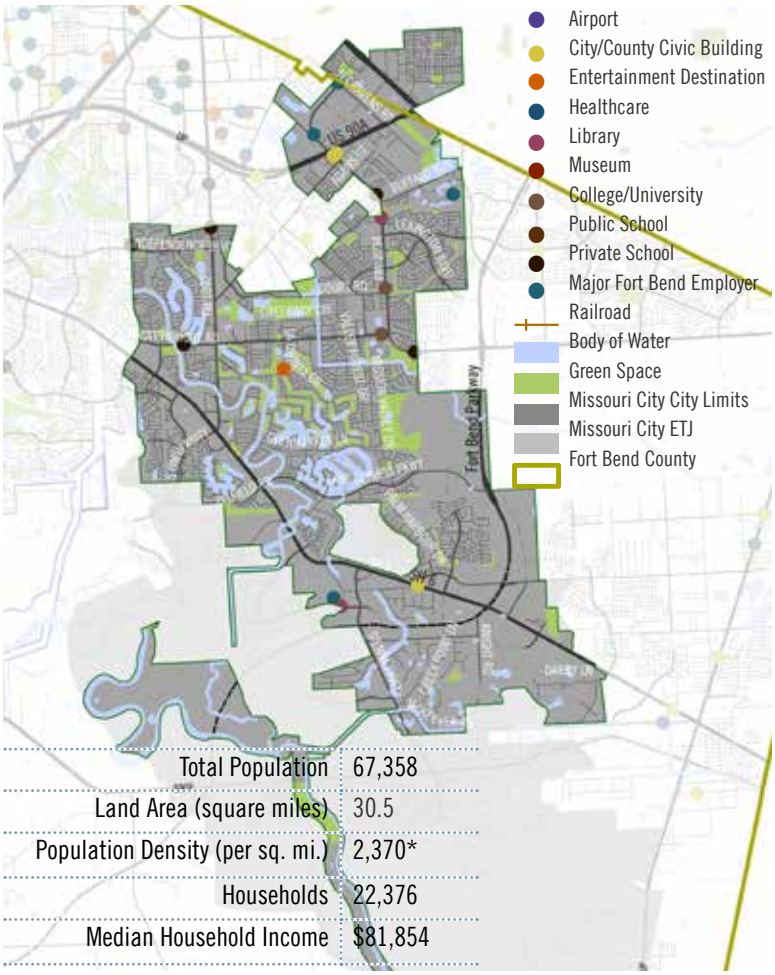
Easy access from Meadows Place to US 59 allows for quick and convenient access into the City of Houston as well as surrounding cities in Fort Bend County. While the city's location is convenient for travel into Houston as well as to surrounding Fort Bend County destinations, the City of Meadows Place prides itself on keeping a small town feel and a very community focused environment. The city will soon begin reconstruction of West Airport Boulevard with added capacity at the intersection with Kirkwood Road.

MISSOURI CITY | THE SHOW ME CITY

Missouri City was originally registered as a settlement in 1894. Initially a railroad town based on the Buffalo Bayou, Brazos and Colorado Railroad (now the UP Glidden Subdivision) rail line, the community slowly grew away from an agricultural-based town. By the 1950s it was becoming a bedroom community for the City of Houston. The City incorporated in 1956 to avoid annexation by the City of Houston. The majority of Missouri City is located within Fort Bend County, with a small section located within Harris County. Unlike the neighboring City of Houston, Missouri City is a zoned city and has been since 1981.

The Kinder Institute at Rice University conducted a study to determine the diversity of Houston and the surrounding areas. The study based diversity on four major races/ethnic groups. Missouri City is the most diverse city in the Houston region with a population over 50,000. The City also ranks very high on the state and national level.

The City is primarily residential with a growing retail and commercial presence. The City is focusing on becoming a self-sustaining community with more local jobs and economic activity. Two new business parks are under development in Missouri City and both have easy access to Beltway 8, increasing their appeal to potential tenants. Lakeview Business Park, the newer of the two, is being developed off of Fondren road south of Beltway 8 on a 168 acre site. Beltway Crossing Business Park is an over 400-acre site located at the US 90A and Beltway 8 intersection.



Total Population	67,358
Land Area (square miles)	30.5
Population Density (per sq. mi.)	2,370*
Households	22,376
Median Household Income	$81,854

Source: 2010 U.S. Census and Fort Bend County GIS, 2012
*Based on land area of 28.4 square miles recorded by 2010 US Census

Figure A2.7: Missouri City City Profile

The largest employers within Missouri City are the City of Missouri City and three private companies: Ben E. Keith Co, Global Geophysical Services, and Warren Alloy Values and Fittings. Ben E Keith Co and Global Geophysical Services are located south of Beltway Crossing Business Park and Warrant Alloy Values and Fittings is located within the new Lakeview Business Park.

Missouri City is the only city in Fort Bend County served by the Metropolitan Transit Authority of Houston (METRO). There is a Missouri City Park & Ride location at Beltway 8 and Fondren Road, outside of the Missouri City City Limits, that serves routes to Downtown Houston and the Texas Medical Center. There is also a temporary METRO park & ride at the Fort Bend Parkway and SH 6 intersection in a Kroger grocery store parking lot. A permanent park & ride is planned for the area and will be constructed when funding becomes available.

Missouri City has significant parks and open spaces, primarily around the major drainage facilities that link significant portions of the city, many with trails built or in the planning stages. The current Missouri City Comprehensive Plan created in 2009 prioritizes major initiatives such as enhancing the Brazos River as a future green corridor for public access, revitalizing the Texas Parkway and Cartwright Road corridors, developing a commuter rail link into Houston and associated Transit Orientated Developments (TODs), as well as prioritizing a Town Center for the city. Enhancements along Texas Parkway and Cartwright Road are currently underway. At completion, the project will include the construction of sidewalks and raised medians along Texas Parkway from Cartwright Road to US 90A as well as extensive landscaping.

A new Houston Community College campus was constructed on Sienna Parkway and also includes a Fort Bend County Library. Sienna Planation is a 10,000 acre master planned community in the Missouri City Extraterritorial Jurisdiction on the south side of the City. From 2000 to 2010 the Sienna Plantation population grew from 1,896 to 13,721. The development will be annexed when the development is at least 90% build out and the City is willing to assume any outstanding development debt.

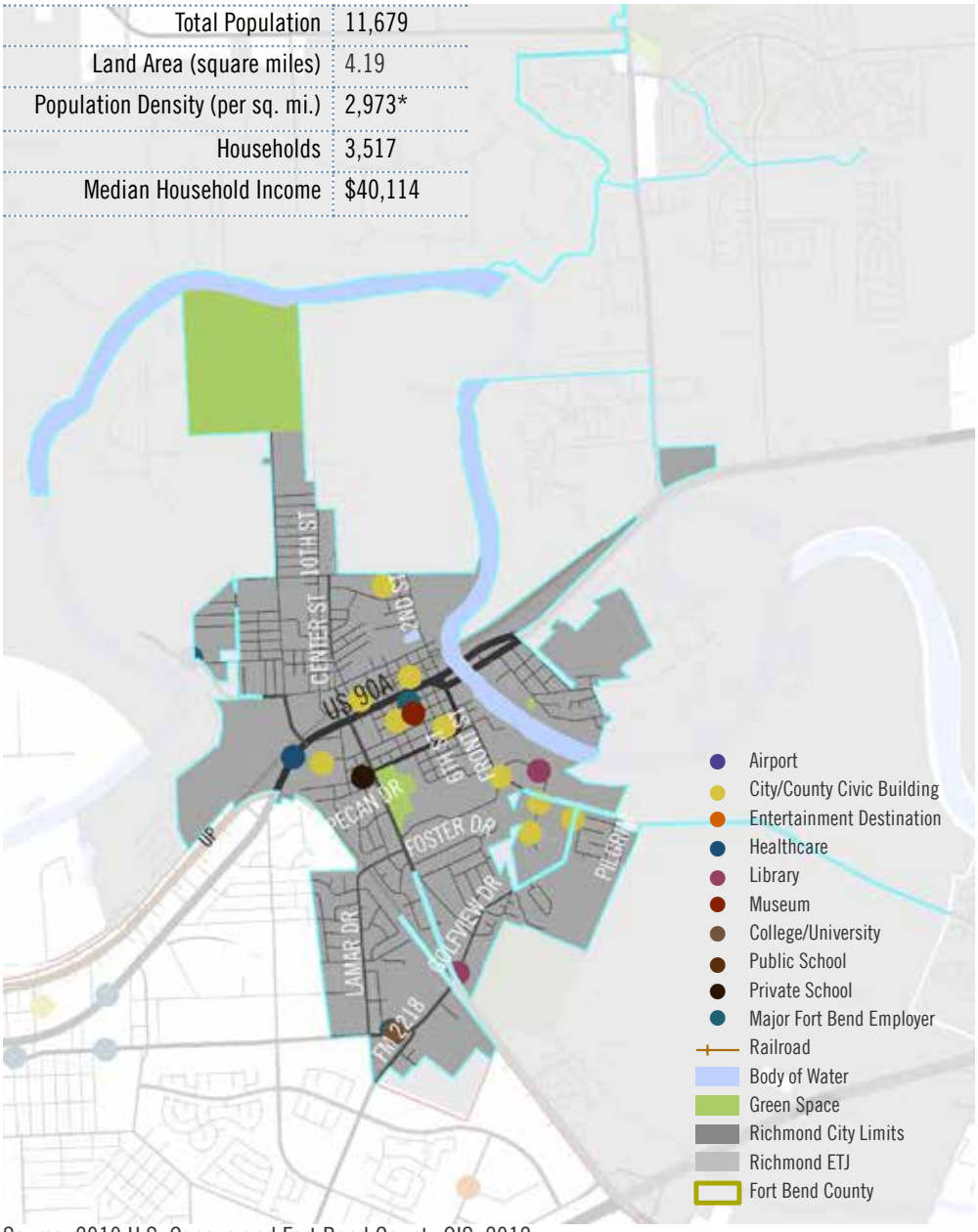
The history of Richmond starts with Stephen F. Austin and the Old Three Hundred, a group of the original colonist of what was then the Mexican Province of Texas. They were among the early settlers of a fort along a bend in the Brazos River that came to be known as Fort Bend or Fort Settlement and lent is name to the future county. The City of Richmond was incorporated in the Republic of Texas in May 1837. Fort Bend County was formed the following December and Richmond has been the county seat ever since.

In 1855, the Buffalo Bayou, Brazos and Colorado Railway (now part of Union Pacific Railroad) was extended into Richmond. The City's economy was mainly agriculture and ranching based until the 1920s when oil production began in Fort Bend County. Oil production was strong in the county until the 1950s and 1960s when production began to slow. Even after oil production slowed in the County, Richmond continued to attract residents based on the city's proximity to Houston. Since 1980, Richmond's population has only increased by 20% when the surrounding areas have had much higher population growth.

Many of Fort Bend County's major historical sites are located within Richmond which draws some tourism to the city including visitors to the historic downtown area. Five of the top 53 employers in the County are located within the City and three of the five are public entities. Fort Bend County is the fourth largest employer in the County, and the majority of County facilities are located within Richmond, many of which operate from newly constructed facilities including the county jail and the county court house. Other top employers in the City are the City of Richmond, Oak Bend Medical Center, and the Richmond State School.

The City is centered around the US 90A corridor, the Union Pacific Railroad parallel to US 90A, and FM 762 which provides north-south connectivity to US 59. Major retail within the City of Richmond is along US 90A in downtown Richmond. Recently, the city conducted a retail study to address declining retail within the city with the goal of keeping residents of Richmond and the surrounding communities shopping in Richmond to increase the sales tax base.

Richmond is bordered on the southwest by the City of Rosenberg. Since the incorporation of Rosenberg in 1902 the two cities have had strong ties. The two cities are the major population centers in west Fort Bend County and are linked by the US 90A corridor which stretches between the two historic downtowns.



Source: 2010 U.S. Census and Fort Bend County GIS, 2012
*Based on land area of 3.93 square miles recorded by 2010 US Census

Figure A2.8: Richmond City Profile

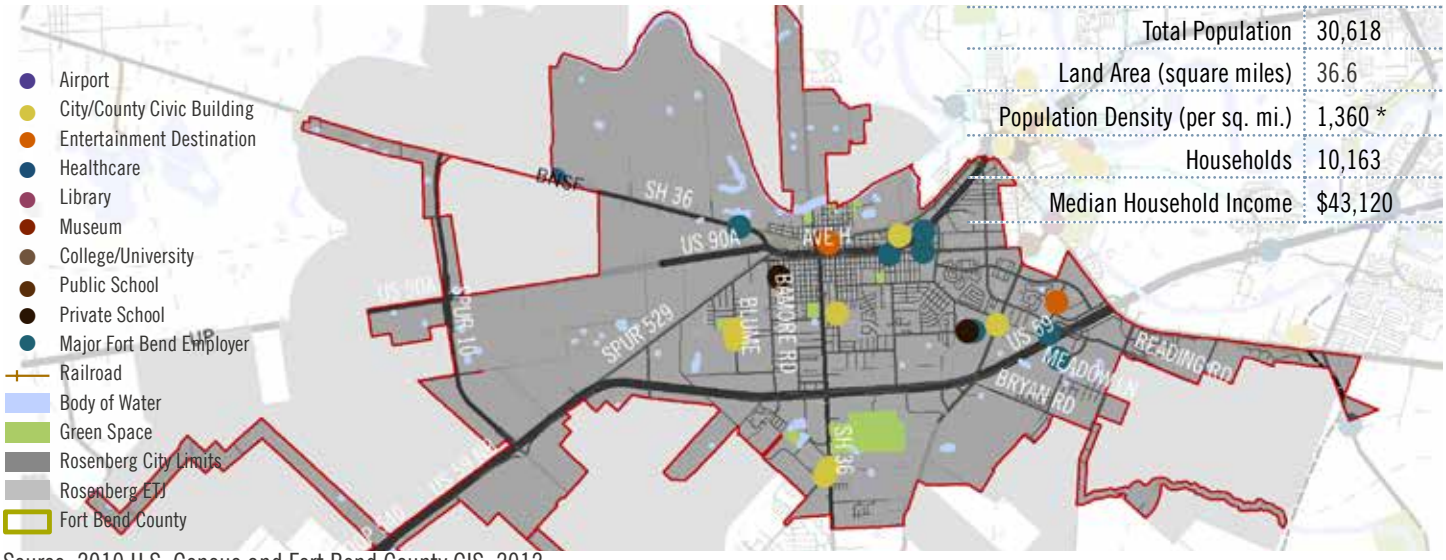
The City of Rosenberg started as a railroad-centric town and the railroad is still a large part of the city today. In 1880, the Galveston Columbia and Santa Fe Rail Line (now BNSF) intersected with the existing Galveston, Harrisburg and San Antonio rail line (now UP) and the junction became known as the Rosenberg Junction. The junction quickly grew into a town and incorporated in 1902. Today, the City sits at the junction of three Class 1 Railroads: BNSF, Union Pacific, and Kansas City Southern and experiences high level of freight rail traffic daily.

Rosenberg's already strong railroad ties are growing with the construction of the 800-acre CenterPoint Intermodal Facility, an over 600-acre industrial park located in the Rosenberg Extraterritorial Jurisdiction (ETJ) southwest of downtown Rosenberg. International automaker Nissan has taken advantage of the new Intermodal Facility and plans on making Rosenberg their distribution center for vehicles arriving from Aguascalientes, Mexico and headed to Texas, Louisiana, and Oklahoma. Rosenberg sits at the junction of three major roadway corridors in the county: US 59, US 90A, and Texas State Highway 36. State Highway 36 connects the Port of Freeport on the Gulf Coast, south of Rosenberg, to IH-10 in Sealy, Texas, northwest of Rosenberg. SH 36 was planned to be widened south of Rosenberg from the Fort Bend County line to Freeport due to the growing demand of freight traveling from Freeport northwest to IH-10.

The City of Rosenberg also has plans to improve Avenue H (US 90A) within downtown Rosenberg. The improvements are planned to both improve roadway operations and to enhance the attractiveness of the historic downtown. To alleviate current congestion, Avenue H along with Avenue I (FM 1640) are also being considered for conversion to one-way pair operations from Bamore Road to Louise Street. The City has also created the Avenue H Business Assistance Program to "enhance the economic vitality of the City of Rosenberg by encouraging visually appealing physical improvements to local business establishments." The Rosenberg Economic Development Corporation has designate the downtown area as a Cultural Arts District, and construction has begun on an Arts Center in downtown. Brazos Town Center is a newer development within Rosenberg on US 59 between Reading Road and FM 762. The development is 100 acres and includes retail, residential, and commercial and has become a major hub for shopping and entertainment in the region as well as a significant sales tax generator for the City. Rosenberg is also the location of the Fort Bend County Fairgrounds.

The Fort Bend County Transportation Department has been provided transit services to the City of Rosenberg including a new park & ride facility adjacent to the fairgrounds and demand response service. The residents of Rosenberg represent the largest community of demand response transit users in the county. The high demand for transit is mainly a result of the demographic makeup of the City. The City has a low median household income and almost 20% of the population lives below the poverty line. Also, 45% of the households in the City have either one or no vehicles available.

The top employers within the City include Lamar Consolidated ISD, Frito-Lay, Texana Center, Silver Eagle and multiple other manufacturing and distribution companies. The City of Rosenberg is also currently developing 3,250 acres for residential development within both the City limits and the ETJ. Rosenberg's ETJ is over two times as large as the current city limits and the city has annexed approximately 1.5 square miles of its ETJ over the past two years. The vast amount of land available around Rosenberg continues to be attractive for new business and residences.

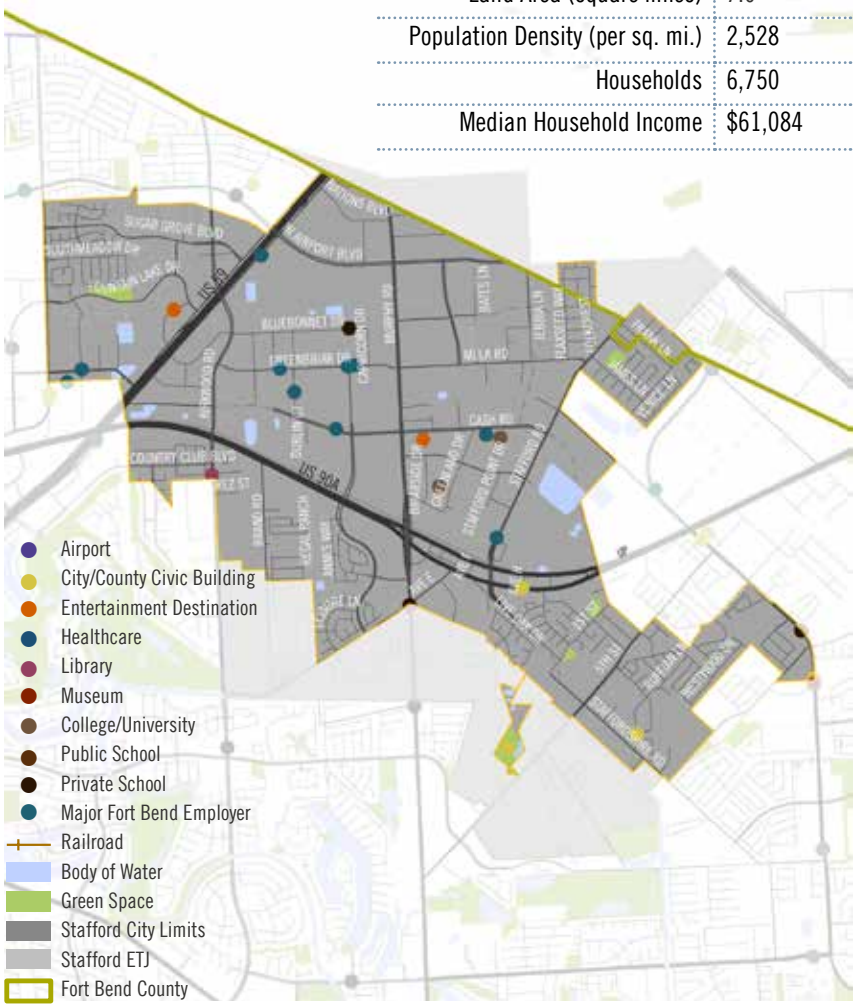


Source: 2010 U.S. Census and Fort Bend County GIS, 2012
*Based on land area of 22.5 square miles recorded by 2010 US Census

Figure A2.9: Rosenberg City Profile

STAFFORD | CITY WITH NO PROPERTY TAXES

Total Population	17,693
Land Area (square miles)	7.0
Population Density (per sq. mi.)	2,528
Households	6,750
Median Household Income	$61,084



Source: 2010 U.S. Census and Fort Bend County GIS, 2012

Figure A2.10: Stafford City Profile

The City of Stafford has a long history going back to the 1820's and William Stafford's Plantation. The City initially started as a township called Stafford's Point near the plantation that gave it its name. Initially the City was an agricultural town based around the rail line like so many of its neighboring cities in Fort Bend County. The City was incorporated in 1956. In the 1960's, Texas Instruments opened a manufacturing site near the newly designated US 59 and changed the commercial fabric of the City. Stafford has expanded it's commercial base to include light industrial and retail uses along US 59 including the Fountains on the Lake development. Texas Instruments will be closing its facility, which has operated in the city for over 40 years giving Stafford a new opportunity to attract new businesses and new development to the city.

The City of Stafford has a strong base of industrial manufacturing, specifically manufacturing valves for pipeline use. There are eleven valve manufacturing companies currently located in Stafford and an Italian valve company is expected to open its western hemisphere headquarter in Stafford in the next year.

As proudly stated in the City of Stafford motto, the City of Stafford has no municipal taxes. Starting in 1995, the city stopped levying non-school municipal property taxes. This is mainly due to the strong job and commercial base in the city. Stafford is the only cities in the study area where residents are outnumbered by employees; Stafford has always been an employment hub for the area with nine of the largest 53 employers in Fort Bend County located within Stafford.

As of 2010 U.S. Census, the City has a population of 17,693. Using the diversity index used by the Kinder Institute at Rice University, Stafford is the most diverse city in Texas, as well as one of the most diverse city or census designated place within the entire United States. Stafford is positioned near all the main transportation corridors in the County, specifically US 59 and US 90A. Proximity to both corridors allows for easy and convenient access into Harris County as well as to other Fort Bend destinations. The City of Stafford undertook a large project to depress US 90A as it runs through downtown Stafford. The grade separation of US 90A limited the impact of rail crossings in the city and creates potential for increased economic development in the city.

Stafford is unique from an education standpoint because the City of Stafford is home to the only Municipal School District in the entire state. Instead of a school district being run by an independent board, the city operates the school district within Stafford. All residents within the city limit are zoned to Stafford Municipal School District. Stafford is also home to a Houston Community College campus. In 2004, the Stafford Centre opened. The complex is a 90,000 square foot performing arts theatre and convention complex that has welcomed a variety of performers and events.

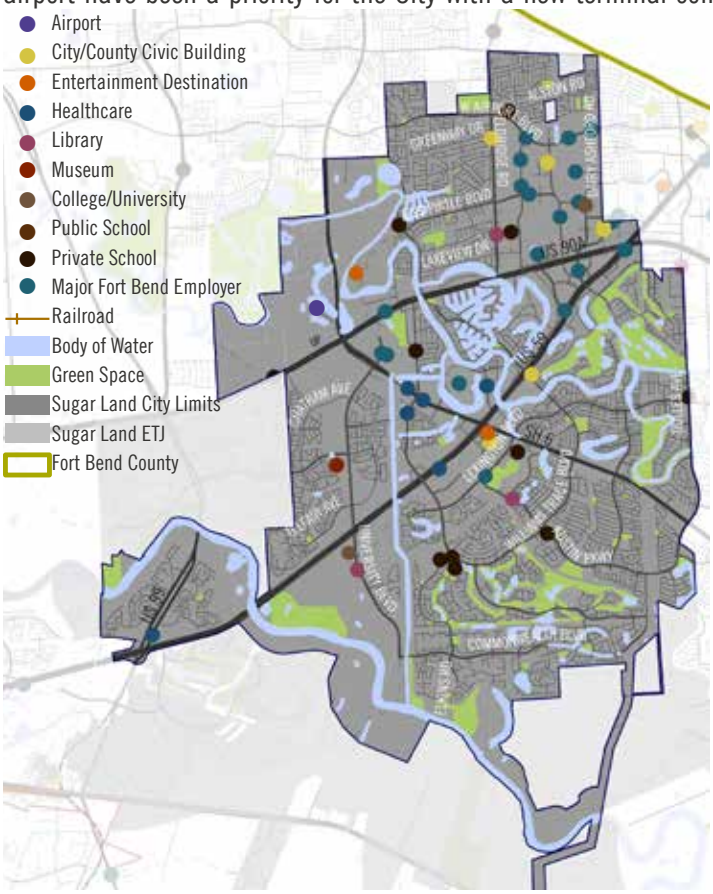
SUGAR LAND

One hundred years ago, the City of Sugar Land was a small company town for employees of Imperial Sugar. As the City and company grew, there was a need for Sugar Land to be more than just a company town. In 1959, the City was incorporated with the limits only encompassing 2,264 acres (approximately 14% of the current city limits). In the 1970s, Covington Woods, a new subdivision, was built in Sugar Land and introduced "contemporary affordable housing." In 1968, the first master planned community in the area, Sugar Creek, was developed on 1,200 acres of land acquired from the Imperial Cattle Ranch; Sugar Creek was annexed into Sugar Land in 1984. More master planned communities followed, most notably is the 10,000-acre development of First Colony which began in 1977. Starting in the 1980's, Sugar Land began to annex many of the surrounding municipal utility districts (MUDs) and the City grew. First Colony was fully annexed into Sugar Land in 1997.

The 1980's was also a time of economic growth with Sugar Land attracting large businesses such as Fluor Corporation, Schlumberger, and Unocal. With the influx of businesses, the Sugar Land economy diversified beyond just Imperial Sugar. In 2002, the Imperial Sugar Company refinery plant, a symbol of Sugar Land since its inception, closed. Imperial Sugar continues to be headquartered in the City and the refinery site has become a major redevelopment location. In 2001, the city broke ground on a new City Hall that would be the cornerstone of the Sugar Land Town Square development, a major mixed-use development located at US 59 and SH 6. The successful development has retail, restaurants, a Marriott Convention Center hotel, the new Sugar Land City Hall and became home to Minute Maid and other employers. Other major employers in the City include Fairfield Nodal, Fluor Corporation, Imperial Sugar Company, Minute Maid, Nalco, Schlumberger, Tramontina USA, Inc., Bechtel Equipment, Atos, Inc. Thermo Scientific, and Sunoco Logistics. In 2010, over 13% of the Fort Bend County population lived and worked in Sugar Land, the highest value for all of the seven study cities.

Sugar Land contains the intersections of US 59, US 90A, and SH6. These three roadways are the three main transportation corridors within the county. Part of the Grand Parkway also travels through the southwest section of the city as well as the ETJ. The UP Glidden Subdivision travels within the city limits giving the Sugar Land Business Park direct access to the rail line.

One of the economic advantages to Sugar Land is the Sugar Land Regional Airport. Over the past five years improvements to the airport have been a priority for the City with a new terminal completed in 2006. The airport is a corporate aviation hub for much of southeast Texas. Recently, Sugar Land Regional Airport was named the #1 Fixed Base Operation in the United State, due to the unrivaled focus on corporate aviation.



The City has also become an entertainment destination with the newly formed Sugar Land Skeeters minor league baseball team, which started playing in the 2012 baseball season at Constellation Field. Sugar Land is also home to a new branch of the Houston Museum of Natural Science.

The University of Houston Sugar Land, is a teaching center for The University of Houston. Residents of the County and other surrounding areas attend classes at the Sugar Land Campus without commuting to the University of Houston main campus. Sugar Land is an award winning community with accolades including rankings on many best place to live lists and safest and fittest cities rankings.

Total Population	78,817
Land Area (square miles)	35.1
Population Density (per sq. mi.)	2,434
Households	26,709
Median Household Income	$101,611

Source: 2010 U.S. Census and Fort Bend County GIS, 2012
*Based on land area of 32.4 square miles recorded by 2010 US Census

Figure A2.11: Sugar Land City Profile

HOUSTON MUSEUM
of
NATURAL SCIENCE
at SUGAR LAND

FORT BEND COUNTY JUSTICE CENTER

3831
SEABOURNE
CREEK PARK

B 1 MAJOR PLAN PHASES

The Fort Bend Subregional Plan seeks to build on the strengths of the communities within the study area to create a common vision and identify goals to maintain its position as one of the premier locations in Texas. The planning horizon for this project is through the year 2040. The approach to developing the Fort Bend Subregional Plan combined in-depth assessment and observations of the conditions and needs in the study area with a multi-faceted engagement with key stakeholders including government agencies, major employers, community leaders, and the general public. Stakeholders provided input on success factors for the study that led to the development of overall study goals. Six major project phases were conducted to support the development of this plan and translate the vision into a prioritized set of strategies that can be implemented by stakeholders in the region including local jurisdictions, state agencies, private developers, and other implementing organizations.

Major Phase Activities

Public Engagement	Community input was gathered though multiple Stakeholder Advisory Committee meetings, stakeholder interviews, public meetings, online tools and surveys, and outreach at other community meetings.
Vision and Goals Development	Stakeholders collaboratively developed the Vision and Goals for the study area outlining the desired outcomes from the implementation of the Fort Bend Subregional Plan.
Study Area Profile and Needs Assessment	Key study area strengths and potential challenges were defined and tested with key stakeholders. Existing conditions and trends were analyzed for key factors including transportation and land use, demographics, employment, and economic performance.
Transportation and Land Use Scenario Analysis	Potential scenarios for future transportation demand were developed based on land use projections and implementation strategies.
Conceptual Plan Development	A conceptual plan was developed to build on existing strengths and address challenges for the study area and meet the goals of the project. Recommendations were developed for multi-modal transportation improvements, economic development and land use strategies and building stronger neighborhoods.
Implementation Plan and Workbooks	Recommendations were tailored for individual stakeholder jurisdictions with project prioritization, cost estimates, feasibility, and implementation strategies.

B 2 STAKEHOLDER ADVISORY COMMITTEE

A successful plan is based on strong input from the community, in particular the stakeholders of local jurisdictions, that will ultimately be responsible for leading the major initiatives defined within the Fort Bend Subregional Plan. To ensure that the plan was developed with strong input from the local sponsors, a Stakeholder Advisory Committee (SAC) was formed with representatives from H-GAC and each of the local cites, Fort Bend County, and the Texas Department of Transportation. The SAC met at regular intervals throughout the plan development and provided feedback on the public outreach approach, Vision and Goals development, and major strategic initiatives developed through the course of the plan. A study area tour and meetings at venues from across the study allowed individual cities to share projects and new developments that they were working on to build a unique understanding of individual communities. Figure B2.1 shows the timeline and location for various SAC and public meetings held during the plan development. The SAC also helped refine the implementation plan development so that it met the needs of each of the stakeholder communities.

The members of the Stakeholder Advisory Committee included:

Agency	Member
H-GAC Project Manager	Hans-Michael Ruthe
Arcola	Mayor Evelyn Jones
Meadows Place	Mayor Charles Jessup Dan McGraw
Missouri City	Sharon Valiante Valerie Marvin
Richmond	Terri Vela Lenert Kurtz Commissioner Gary Gillen
Rosenberg	Jeff Trinker Jack Hamlett
Stafford	Charles Russell Jamie Hendrixson
Sugar Land	Cathy Halka Pat Walsh
Fort Bend County Transit	Paulette Shelton
Texas Department of Transportation	Joey Welch

Figure B2.1
Stakeholder Advisory Committee Timeline

B 3 PUBLIC ENGAGEMENT

In addition to the Stakeholder Advisory Committee, public input was collected in a number of ways throughout the course of the study. This input was invaluable in testing potential study goals, priorities, and the overall vision for the project. A variety of techniques were used to ensure that as broad a range of respondents were able to provide input.

STAKEHOLDER INTERVIEWS

Twenty-five one-on-one meetings between stakeholders and members of the consultant team were conducted to allow stakeholders to openly discuss their vision for their community and the entire county. Meetings were held with at least one elected official and one staff member for each of the seven cities within the study area as well as other community and county representatives ranging from County Commissioners to the independent school districts within the study area. These meetings helped develop the initial path and focus of this study; they allowed for the study to be completed and presented in a manner that encompasses each stakeholder's vision.

PUBLIC MEETINGS

Two rounds of public meetings were conducted as part of the study. Each round consisted of two meetings: one in western Fort Bend County and one in eastern Fort Bend County. The goal was to make the meetings as accessible to residents as possible. The first round was during the goals development phase of the plan. The second round was conducted during the recommendations development phase to receive feedback from residents to improve the study recommendations and to assist in project prioritization.

ELECTED OFFICIALS MEETING

During the recommendations development stage of the study, an elected officials meeting was held. The goal of the meeting was to inform elected officials of all seven cities as well as Fort Bend County on the progress of the study and the steps that will be taken during the conceptional plan development stage of the study.

WEBSITE AND ONLINE SURVEY

To better understand the concerns and vision of residents, an online survey was developed and administered to over 300 residents. The online survey allowed for a better understanding of the goals and needs of the entire study area as well as the individual cities.

The input received from the stakeholder interviews and committee meetings, public meetings and the online survey, as well as the elected officials meeting were an integral part of the development of the Fort Bend County Subregional Plan.

B 4 SUBREGIONAL VISION AND GOALS

Fort Bend, and in particular the study area, has a strong track record of success over the past 30 years that was built through foresight and planning to create great places and make investments in infrastructure such as roadways, rail connections, and other utilities to support growth. In speaking with stakeholders and from public comments and input, there is an opportunity to define a vision for this study that will support the continued success of the Fort Bend area for the next 30 years.

To build on the strength and success of the Fort Bend Subregional Plan study area, input from study stakeholders was gathered through a public engagement process to develop, enhance, and refine the vision. The broad vision speaks to the comprehensive nature of the plan's focus areas and the region's desire to maintain its competitive position. The proposed vision was refined through working with the Stakeholder Advisory Committee and received over 96% favorable support in the Fort Bend Subregional survey. The vision for the Fort Bend Subregional Plan is to:

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

TRANSLATING THE VISION INTO PROJECT GOALS

The vision for the Fort Bend Subregional Plan was defined and affirmed through an in depth evaluation of existing conditions and feedback received from stakeholders, the Stakeholder Advisory Committee, and the public. While the vision sets a high-level aspiration for the study area for the next 20-30 years, it is important to provide a greater level of clarity and definition to the vision in the form of specific goals that, if achieved, would result in the realization of the vision. To provide that clarity, goals were developed for the six key themes embedded in the overall vision based on significant input from the stakeholders and the public. Achieving these goals will provide an indication that the overall study area has achieved the vision. Definition of the goals for this study also supports performance metrics that will provide Fort Bend County and the individual cities with methods of measuring their performance against their stated aspirations. While it is difficult to develop a vision with complete accord among all residents and stakeholders that also captures everyone's priorities for the region, the vision and the supporting goals as defined have achieved a significant level of consensus.

As shown in Chapter C, in many ways the existing conditions of the study area reflect much of what has been defined in the Vision statement and the study area has many strengths on which to build to achieve the vision for the future. These strengths support the position of Fort Bend County as an attractive area for continued growth, with both the benefits and challenges that come with that. In Chapter D, a review of major trends, including growth projections, demographic and socioeconomic factors, and the existing built environments and transportation network, shows that in many ways achieving the Vision will be a challenge that will require a new level of planning and investment.

VISION THEMES	GOALS TO ACHIEVE VISION
	• Increase the availability of high-quality housing at various price points aligned with market demand • Provide housing choices to support demographic trends (aging, young professionals) and density preferences (from rural to urban) • Identify and prioritize nodes for increased development focus, regional destinations and opportunities for redevelopment
	• Increase connectivity and reduce delay with a focus on priority corridors linking major destinations • Increase transportation choices (transit, bicycling, and walking) • Improve compatibility and connectivity between travel modes including freight and goods movements • Support well-designed, well-maintained infrastructure that improves safety for all users • Coordinate regional investments in infrastructure to support growth
	• Attract an increased share of jobs for a diverse set of industries and job types • Maintain economic growth while adapting to demographics changes and aging infrastructure and housing stock
	• Support local schools' efforts to provide high-quality education • Support educational attainment and work force training to meet the needs of current and future employers
	• Increase accessibility, use, and quality of parks, open space and natural systems • Enhance performing and visual arts, sports, entertainment and other amenities • Increase mobility and recreational opportunities for a healthy and active lifestyle
	• Maintain and enhance places with local character and share cultural and historical heritage • Celebrate regional attractiveness for diverse populations • Strengthen quality, accessibility and conservation of water resources • Preserve opportunities for local agricultural and ranch lands

SIX KEY DRIVERS OF SUCCESS IN FORT BEND COUNTY

1. STRONG MOBILITY AND ACCESS TO MAJOR JOB CENTERS
2. HIGH QUALITY RESIDENTIAL HOUSING OPTIONS
3. FOCUS ON ECONOMIC DEVELOPMENT AND GROWTH
4. ENHANCED QUALITY OF LIFE AND AMENITIES
5. EXCELLENT SCHOOL DISTRICT REPUTATIONS
6. INCREASING DIVERSITY

C FORT BEND STUDY AREA EXISTING CONDITIONS: SIX KEY DRIVERS OF SUCCESS

Based on the assessment and analysis of the Fort Bend Subregional Plan study area and significant input from stakeholders, community leaders, and the public, six key drivers were defined which have supported Fort Bend's position as a premier County in Texas. These themes as defined on the preceding page, were repeatedly mentioned as key reasons why residents locate in Fort Bend County and why businesses found the subregion attractive. These drivers of success will be critical foundations for the future of Fort Bend County and the study seeks to identify how to capitalize upon them to achieve the regional vision. These drivers were developed using results and feedback from the Fort Bend Survey, which prioritized many of the same themes in answering why they chose to locate in Fort Bend County. The following chapter discusses each of these drivers and how they have developed to support the success of Fort Bend.

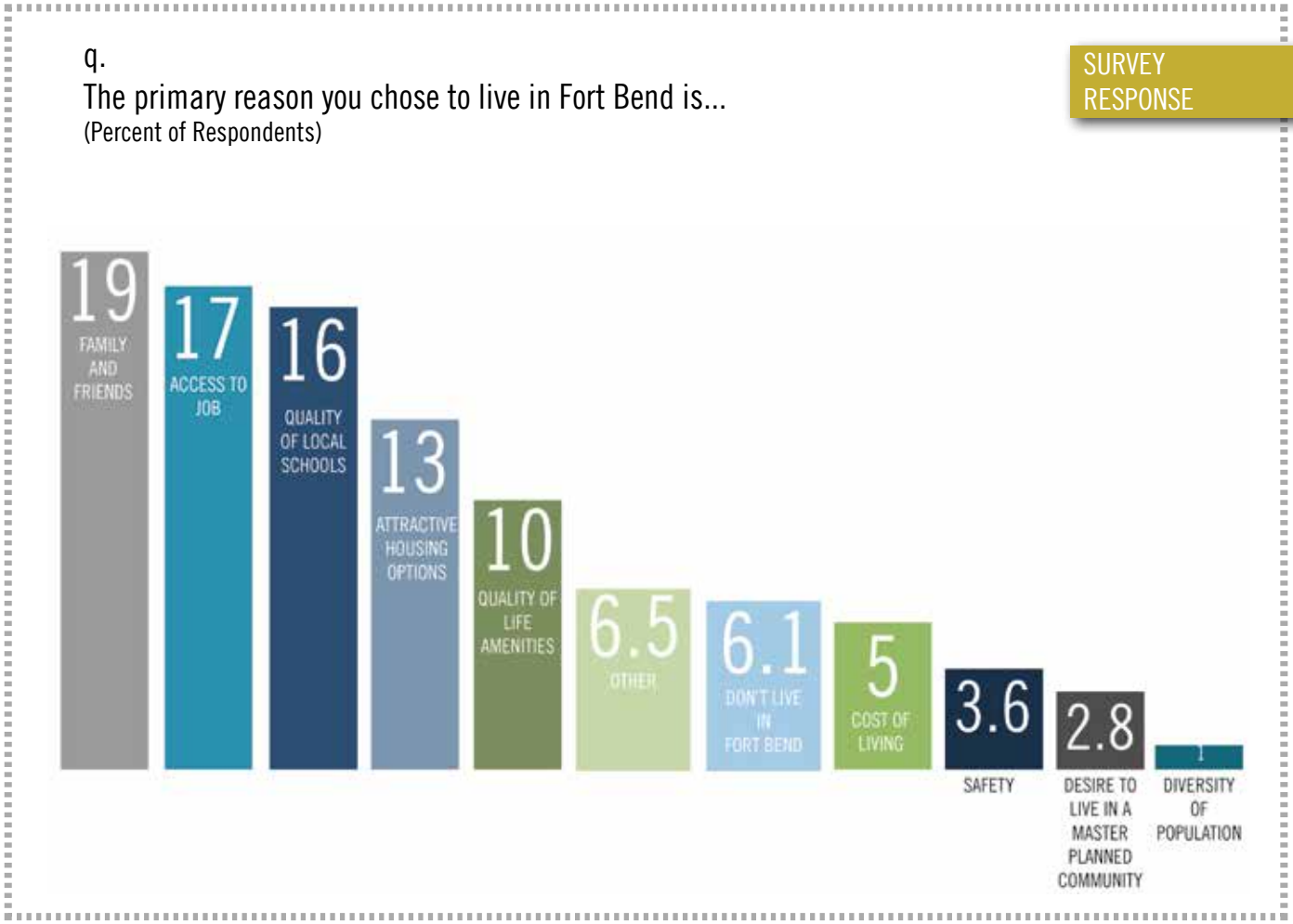


Figure C1.1: Survey: Reasons for Living in Fort Bend

SOUTH
59
NORTH
36
TEXAS
NORTH
59

C 1 STRONG MOBILITY AND ACCESS TO MAJOR JOB CENTERS

Fort Bend County's geographic location has traditionally made it an attractive location to access major job and activity centers in the greater Houston region. Major corridors in the study area, including all or a portion of many of the state highway system's roadways (US 59, SH 6, US 90A), have been widened in recent years allowing the roadway network to support continued growth in the region. The majority of the major roadways in the study area are roads on the state highway network or developed as local toll road facilities. Major regional activity centers are depicted in Figure C1.1. The major roadways within the county are profiled in Appendix C.

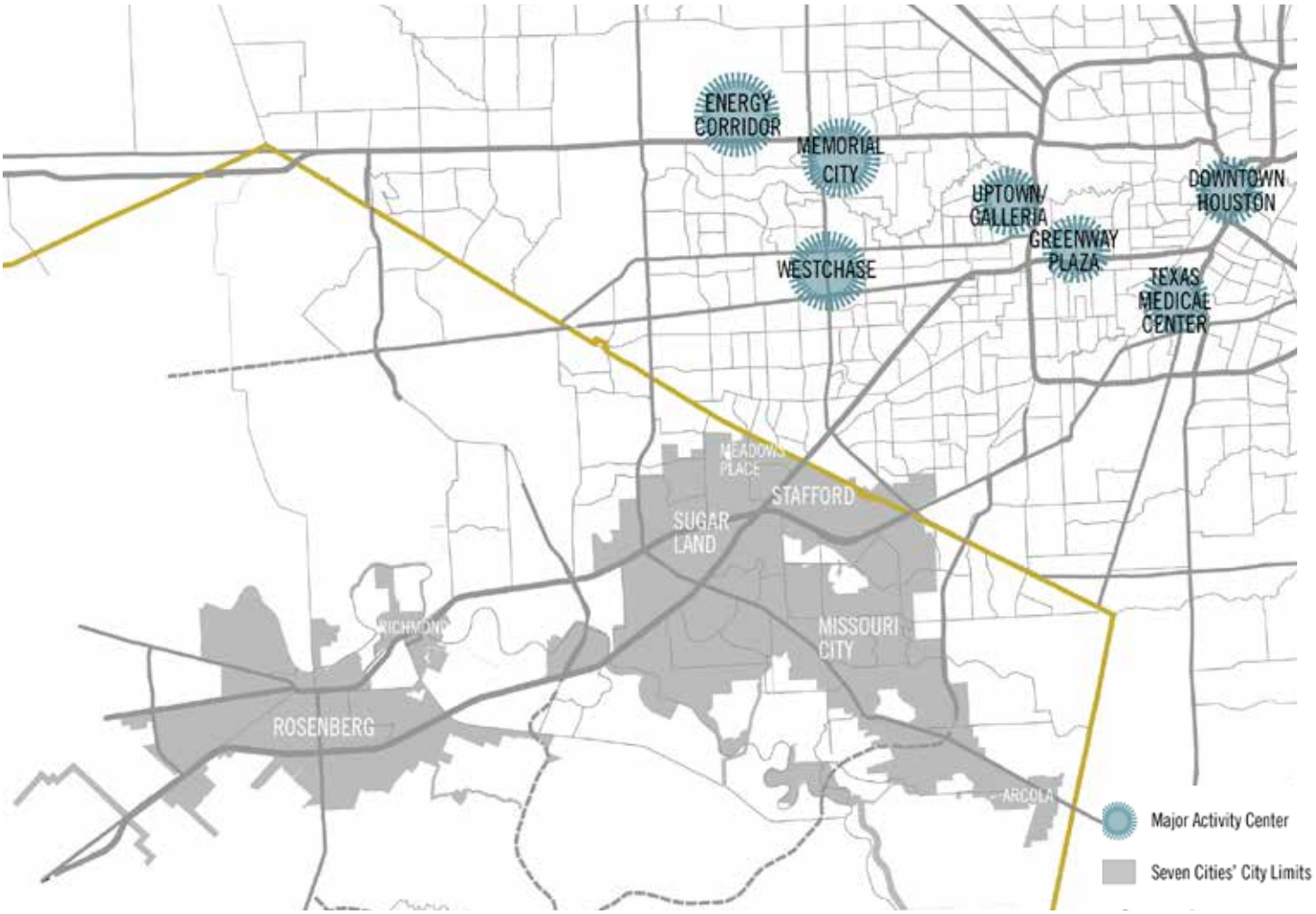


Figure C1.1: Major Employment Centers in the Greater Houston Region

CURRENT ROADWAY ASSESSMENT

To assess the current roadway network the H-GAC Travel Demand Model was used to evaluate conditions for both Fort Bend County and the regional network for a typical daily traffic volume during the year. This model uses elements such as roadway and transit networks, as well as population and employment data to calculate the potential demand for transportation facilities. The volume (demand) to capacity ratio for an average day was determined for all links within the system based on a comparison of the a link's capacity to the potential demand from the travel model.

As shown in Figure C1.2, for 2011, the model shows a majority of analyzed roadways in the study area operating at acceptable or better levels of congestion. Roadways classified as acceptable or better are roads operating below their capacity, or a volume-to-capacity (v/c) ratio less than 1. When comparing all roadway system links within Fort Bend County, 87% are operating below capacity and 59% of the links have a volume-to-capacity ratio under 0.6, which represents relatively free flow conditions.

H-GAC Travel Demand Model 2011 Projections (Volume/Capacity)

	Volume-to-Capacity Ratio (v/c)*	Percent of Links
	0.00 - 0.60	59%
	0.61 - 0.70	9%
	0.71 - 0.80	8%
	0.81 - 0.90	6%
	0.91 - 1.00	5%
	1.01 - 2.00	13%
	2.01+	0%

*Based on average annual daily traffic projections

Fort Bend County

Seven Cities' City Limits

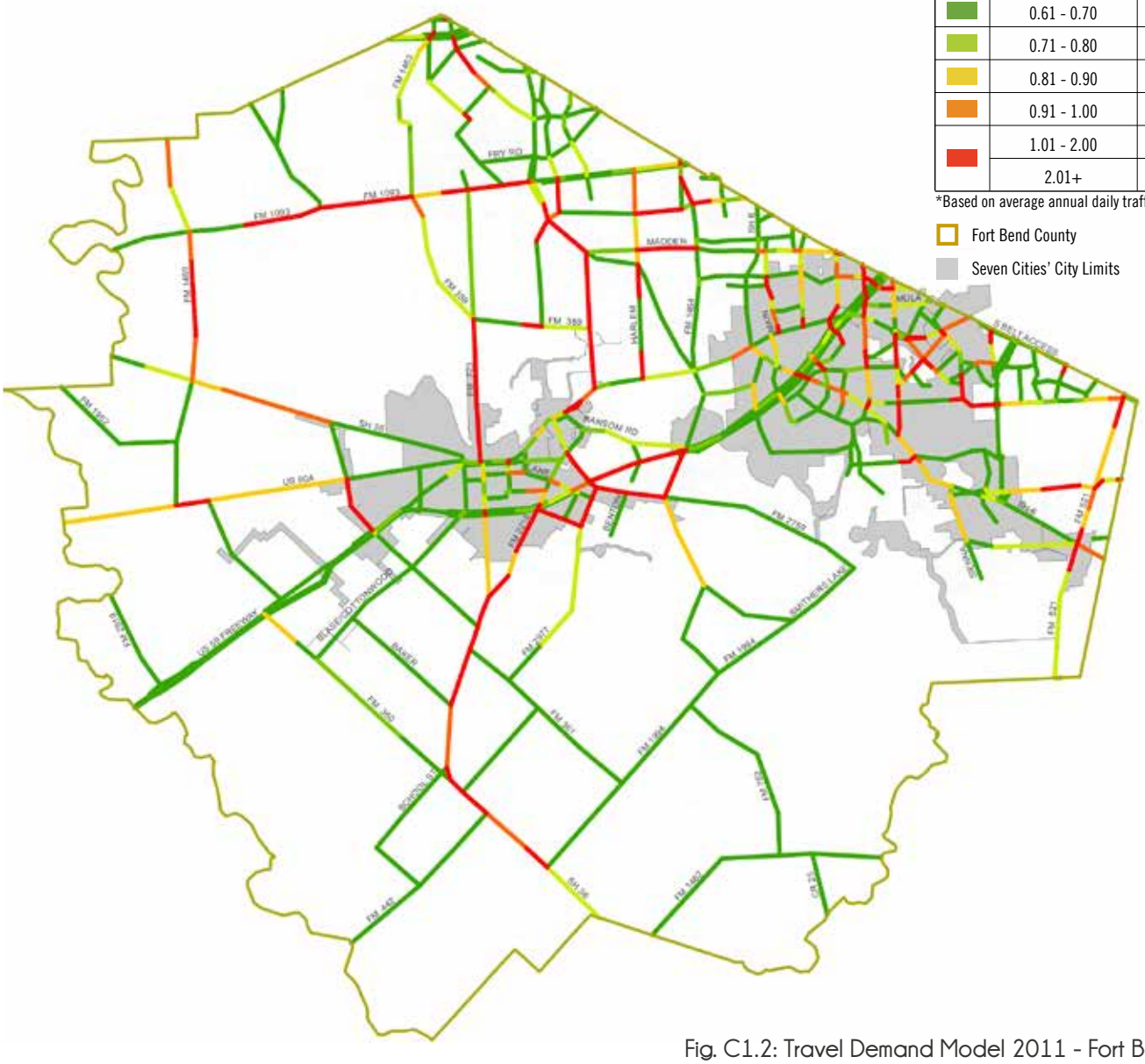
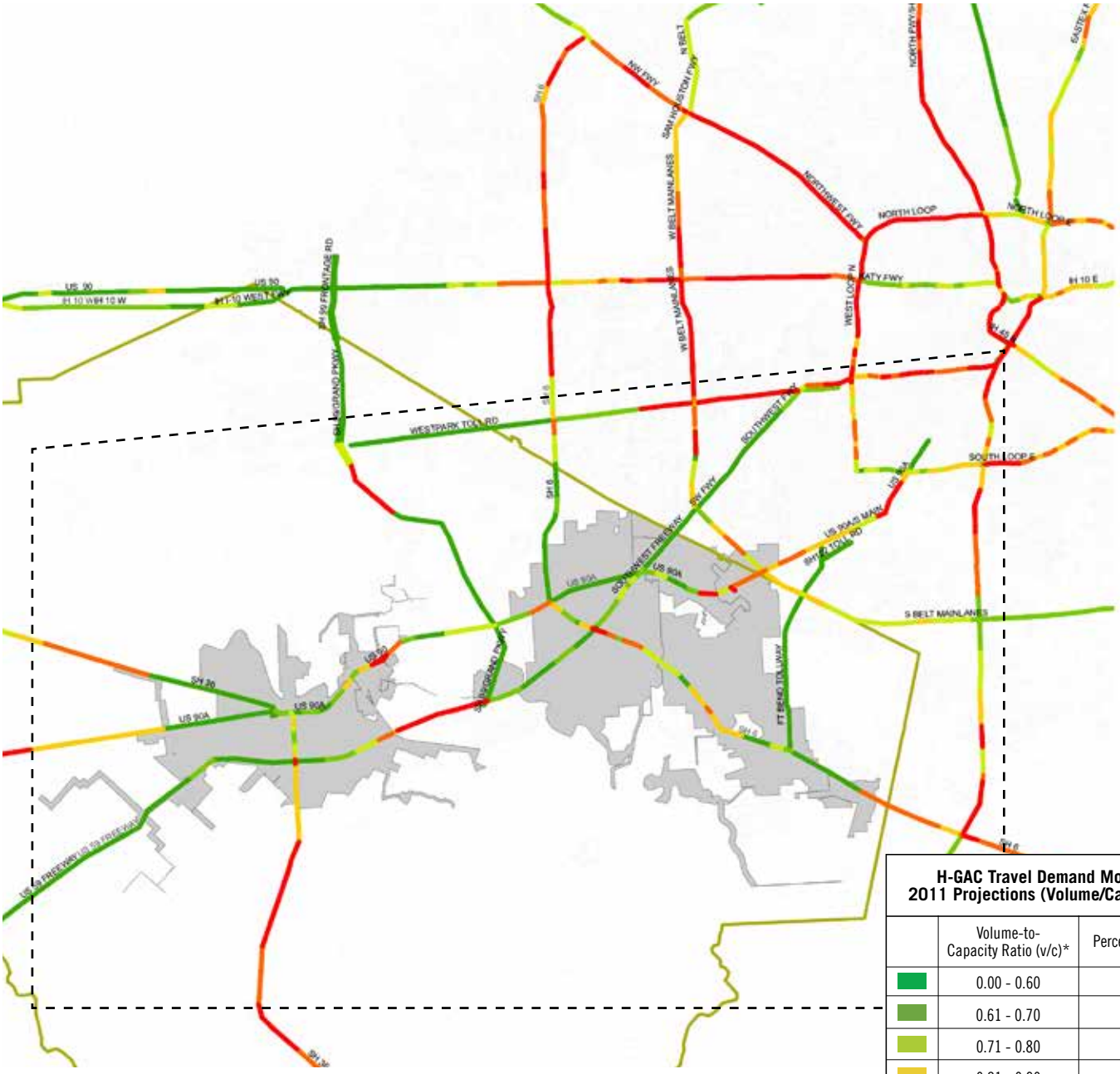


Fig. C1.2: Travel Demand Model 2011 - Fort Bend County Roadway Volume - to- Capacity Ratio (V/C)

Source: H-GAC Regional Travel Demand Model



H-GAC Travel Demand Model 2011 Projections (Volume/Capacity)

	Volume-to-Capacity Ratio (v/c)*	Percent of Links
	0.00 - 0.60	33%
	0.61 - 0.70	13%
	0.71 - 0.80	14%
	0.81 - 0.90	14%
	0.91 - 1.00	11%
	1.01- 2.00	26%
	2.01+	0%

*Based on average annual daily traffic projections

Fort Bend County

Seven Cities' City Limits

Analysis Area

Source: H-GAC Regional Travel Demand Model

Figure C1.3: Travel Demand Model 2011 - Regional Corridors

The Fort Bend study area has strong roadway connections from the county to major job centers such as Downtown Houston, the Texas Medical Center, Uptown/Galleria, Greenway Plaza, Westchase, and Memorial City along such roadways as US 59, US 90A, SH 6, and Beltway 8. The travel demand model information for 2011 for major freeways was analyzed to assess these regional connections. As shown in Figure C1.3, when the volume-to-capacity (v/c) ratio is calculated for the regional roadway network in and adjacent to the study area, 74% of the links are operating under capacity. Congestion is primarily concentrated near and within Loop 610, along US 59, and the Westpark Tollway. The overall level of congestion within the analysis area is low relative to other major corridors in the Houston region such as US 290 and IH-45.

The overall perception of roadway operation in Fort Bend is favorable as roadways are seen as the most effective transportation mode in the study area. As shown in Figure C1.4, the roadway network is viewed favorably, while other modes, especially transit, bicycling, and walking are viewed as less effective in providing mobility in the study area.

While current roadway traffic congestion is viewed as acceptable by the H-GAC Travel Demand Model and supported by the feedback from the Fort Bend Subregional Survey, the county has started to plan for the expected increase in demand. Population projections as well as future Travel Demand Model projections, which are discussed in depth in Section D2, show the enormous growth the county is expected to experience. The Fort Bend region has identified several major roadway capacity improvement projects that are included in the Regional Transportation Plan (RTP). The RTP is developed to guide investment in the transportation system of the Houston-Galveston metropolitan region over the next 20 years. It defines an overarching vision for future regional transportation, establishes principles and policies that will lead to the achievement of that vision, and allocates projected revenue to transportation programs and projects that reflect those principles and policies. An evaluation of RTP projects within the county is discussed in Chapter E.

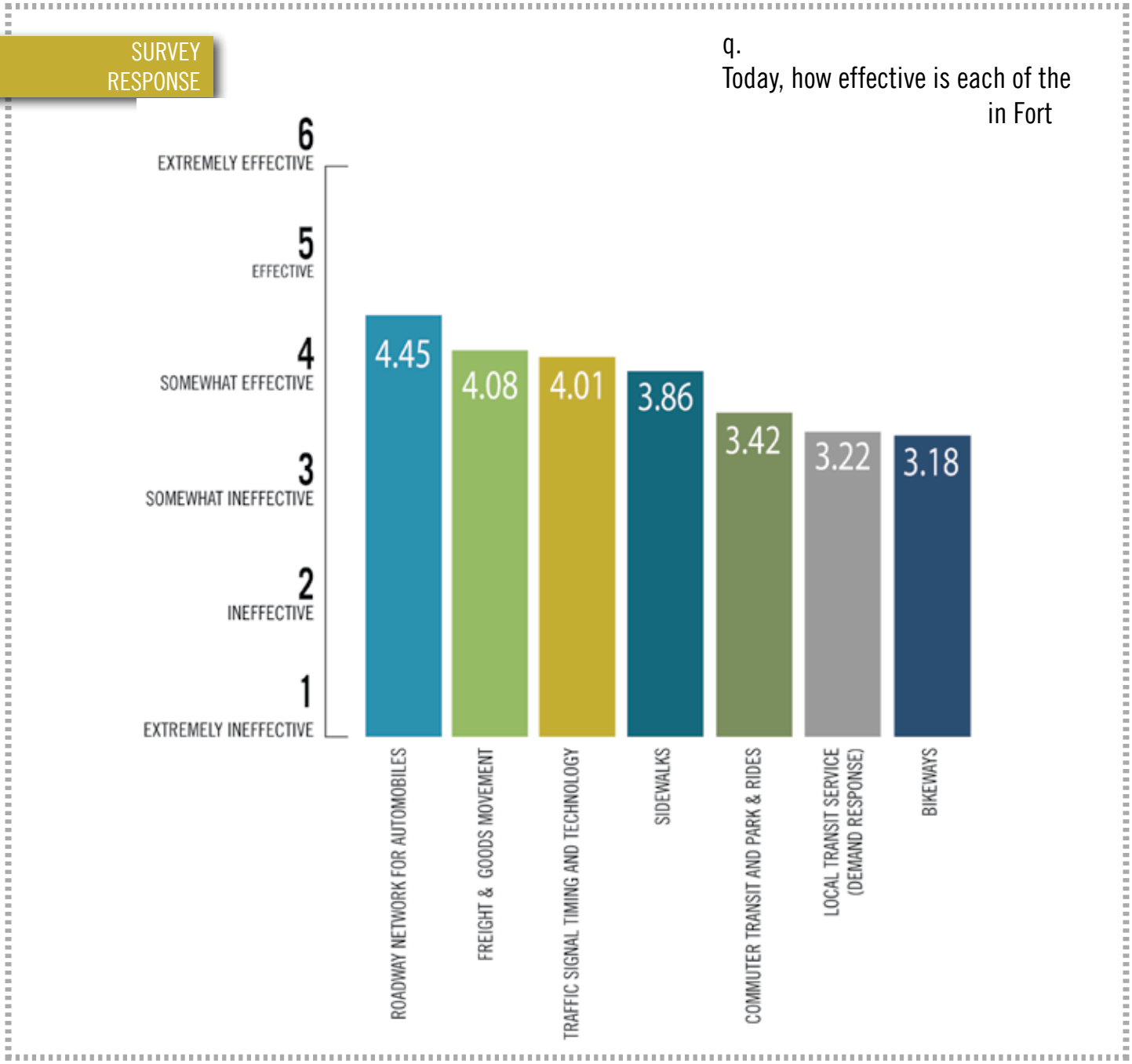
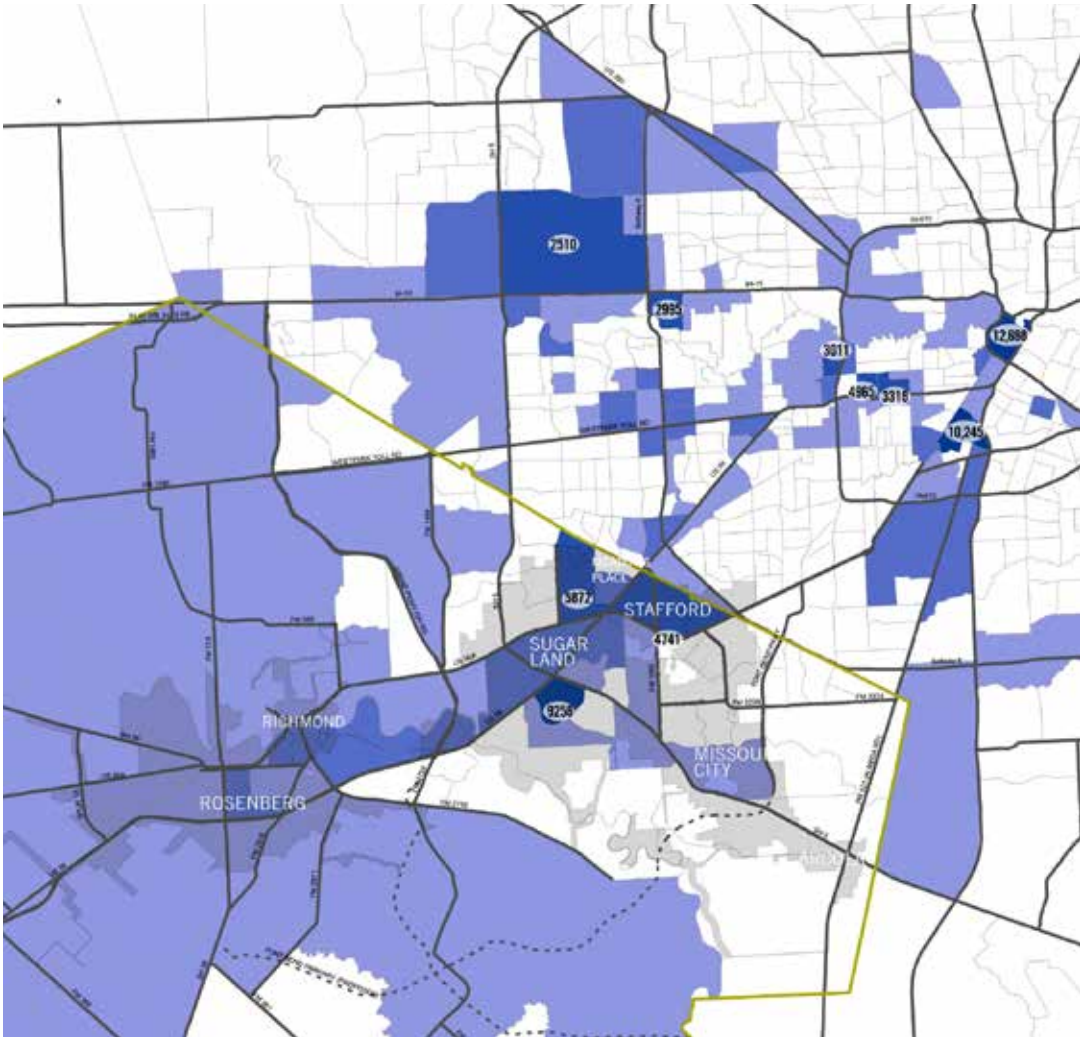


Fig. C1.4: Survey: Effectiveness of Mobility Factors

CONNECTIONS TO JOB CENTERS

The existing roadway network supports strong connections to major job centers and reasonable commute times for residents traveling to and from local and regional job centers. To better understand these critical connections and travel patterns, regional Journey to Work data was obtained for employees who live in Fort Bend County as well as those that work in Fort Bend County. The data was obtained from the United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) data source OnTheMap. It should be noted that OnTheMap is a new data source and the employment numbers are estimated based on multiple factors. The LEHD is compiled from datasets on Unemployment Insurance wage data, Quarterly Census of Employment wages, and Office of Personnel Management (OPM) source data. Jobs not included in the dataset include uniformed military, self-employed workers, and informally employed workers. Data was obtained for all residents and all jobs, including primary and secondary jobs. The employment values should therefore be used to determine overall trends and estimates to support planning and not necessarily to provide exact values.

Estimated employment data was obtained for residents of Fort Bend County and broken down by each of the seven study area cities to determine the overall commuting patterns for the county as well as subregional patterns within the study area. It is estimated that 20% of Fort Bend residents also work in Fort Bend County and 65% of residents work in Harris County. As shown in Figure C1.5, major regional job centers with strong connections to the Fort Bend study area include the Downtown Houston Central Business District, the Texas Medical Center, Greenway Plaza, and the Uptown/Galleria District which are all located in or near the core of the Houston region. Increasingly, jobs are also located on the west side of Houston in locations like Sugar Land Town Center, Stafford, and other business districts such as the Energy Corridor and the Westchase District.



LEGEND

- Fort Bend County
- Seven Cities' City Limits

Work Track Flow:
Living in Fort Bend County

- 1 - 500
- 501- 1000
- 1001 - 2500
- 2501 - 6000
- 6000 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure C1.5: Commute Trip Destinations for Employees Living in Fort Bend County

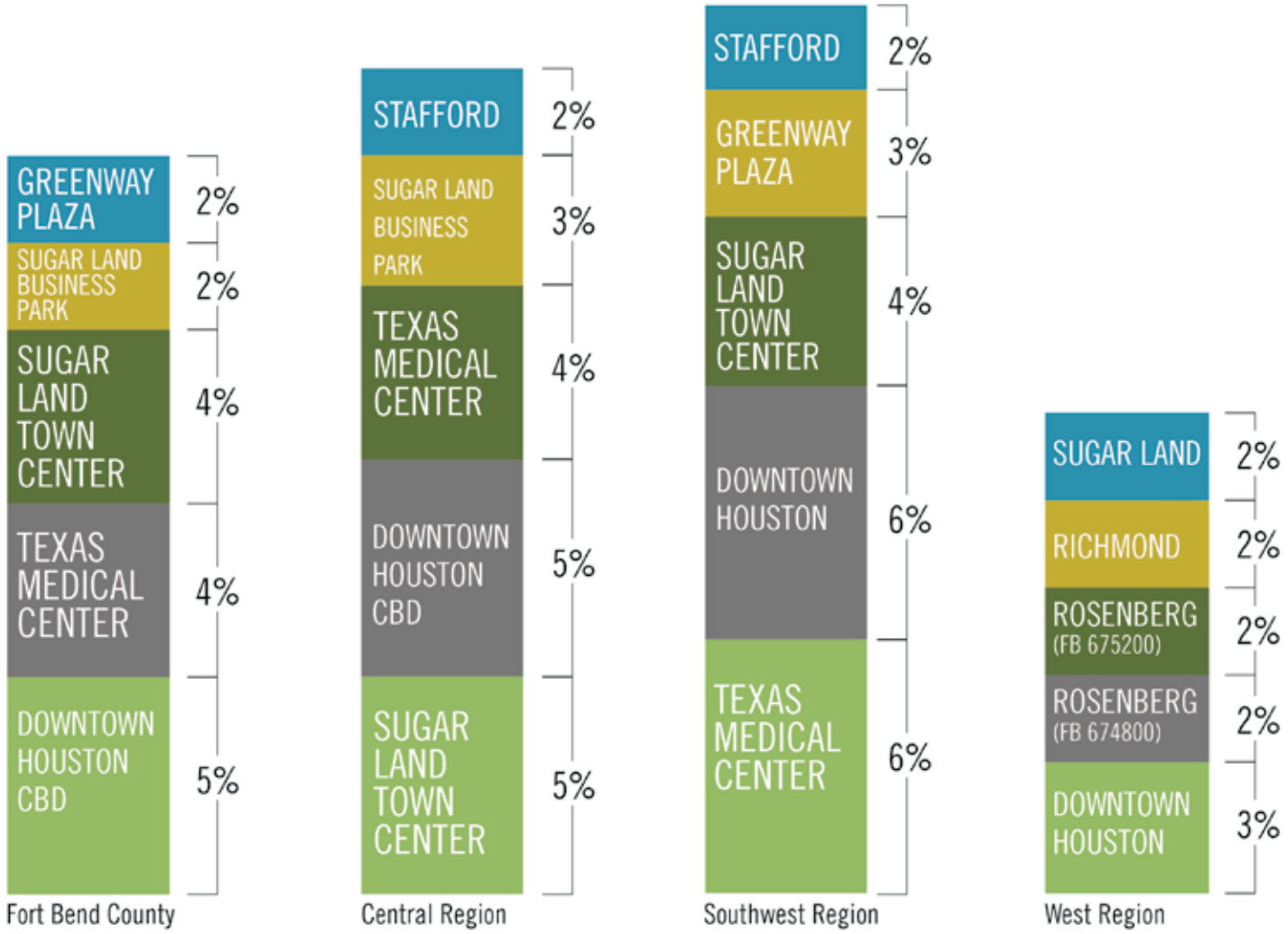
Journey to work analysis was also performed for three sub-regions within the county and are shown in Figure C1.6. The southeast region was assumed to include the cities of Arcola, Missouri City, and Stafford. The job distribution of the southeast region varied from the overall county data in that the highest job flow for residents in the southeast region is the Texas Medical Center, likely a result of the proximity and access to the Texas Medical Center along US 90A from southeast Fort Bend. The other top destinations are Downtown Houston, Greenway Plaza, Sugar Land Town Square, and the City of Stafford.

The central region was assumed to include the cities of Sugar Land and Meadows Place. The highest number of trips from the central region are to Sugar Land Town Center with Downtown Houston as second. Other census tracts with a high volume of trips from the central region are The Texas Medical Center, Sugar Land Business Park, and the City of Stafford.

The west region was assumed to be made up of the cities of Richmond and Rosenberg, west of the Brazos River. The job flows for the west region vary from the rest of the county with a high percentage of local intra-county trips, potentially due to being farthest from major urban job centers. While the highest percent of trips to one census tract is to downtown Houston, the other top destinations are within the county and three of the top five are local jobs within Richmond and Rosenberg.

Detailed maps of the job distribution for the three sub areas is show in Appendix D of this report.

DISTRIBUTION OF TOP COMMUTE TRIP LOCATIONS FOR EMPLOYEES WHO CURRENTLY LIVE IN FORT BEND COUNTY



Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure C1.6: Distribution of Commute Trips

COMMUTE TIME

Over 80% of survey respondents agreed that their current commute to work is acceptable. This is a strong indication of the relative satisfaction of the roadway network in the study area as commute times are typically an area with high levels of dissatisfaction. Commute times were obtained from the American Community Survey's five-year estimates. The approximate average for the entire county is 34 minutes, which is only slightly higher than the overall Houston MSA average of 30 minutes. Commute times of approximately 30 minutes are typically viewed as acceptable, especially if that distance allows them to find attractive housing options. Of the eight central counties of H-GAC, Fort Bend County ranked 6th in approximate average commute time but all are at or near the 30 minute boundary.

Commute times were also collected for the seven cities within the study area. The Figure C1.7 ranks the seven cities based on shortest to longest commute times.

Rank	City	Average Commute Time (Minutes)	Percent of Residents with Commute Time under 34 minutes
1	Stafford	28	77%
2	Richmond	28	73%
3	Meadows Place	29	83%
4	Rosenberg	29	72%
5	Sugar Land	32	67%
6	Missouri City	33	68%
7	Arcola	34	63%

Source: American Community Survey, 2006-2010

Figure C1.7: Commute Times

While the average commute time for Fort Bend County is 34 minutes, two-thirds of residents have a commute time shorter than 34 minutes. Having a majority of residents with a commute time under 34 minutes is also true for all seven cities within the study area. The averages for Arcola, Missouri City, and Sugar Land are higher than the Houston MSA average while Meadows Place, Richmond, Rosenberg, and Stafford averages are under the Houston MSA average of 30 minutes. Meadows Place and Stafford sit on the border of Harris County and have easy access to US 59 and US 90A which could account for shorter commute times in relation to the other seven cities. The shorter commute times in Richmond and Rosenberg are likely the result of the number of Richmond and Rosenberg residents who work locally, as shown in Figure C1.6.

To compare the seven cities to other cities within the Houston region, all cities and census designated places within the 8 central counties of H-GAC were evaluated. The 160 cities and places within the Houston MSA have approximate commute time averages that ranged from 19 to 60 minutes; all 160 cities were ranked from shortest to longest average commute time. Out of the seven cities, Stafford ranked highest at #55 and Arcola ranked lowest at #112.

EXPANDING COMMUTER TRANSIT SERVICE AND DEMAND RESPONSE TRANSIT SERVICE

To meet the growth in travel demand and help sustain levels of mobility at acceptable levels, as well as serve those that currently do not have access to or the ability to drive a car, it is important that transit options be evaluated as a key component of the transportation infrastructure. It is vital for this study to define the future mobility needs and then develop options to meet the growth in population with viable transit system infrastructure and services.

As the population expanded in Fort Bend County, it reached a critical mass that justified some transit operations. This enabled the creation of the Public Transportation Division of Fort Bend County in 2005 which has since been providing both rural and urban transit services. The existing transit needs are met using Demand Response Service and Commuter Route Service. Demand Response Transit Service is the most common and provides dial-a-ride service with the intent of serving areas that do not offer a large enough ridership base to require daily service routes. Typically, a ride is available to anyone within Fort Bend County who wishes to travel within the county and requests a ride with 24-hour's notice for a small fee (typically $1). Commuter Service Routes serve the highest population/commuter ridership potential areas and provide daily transit options to commuters from regional park-and-ride facilities to destinations in Harris County, primarily Greenway Plaza, Uptown/Galleria and the Texas Medical Center.

The existing demand response transit service currently serves over 60,000 annual riders using a fleet of 42 vehicles. Since it's inception transit ridership on Fort Bend County Transit's Demand Response service is growing in accord with population growth. The estimated annual breakdown of users by city of the Demand Response service is shown in Figure C1.8. Demand Response trips are largest in Sugar Land, but on a per capita basis Rosenberg and Stafford account for a more significant share of the overall trips.

Existing travel patterns indicate that most transit ridership is for daily commutes to and from work. Regional work trips are primarily destined to locations in Harris County such as Uptown/Galleria, Greenway Plaza, Downtown Houston, Texas Medical Center, and Westchase. Access to these destinations tends to focus on major routes such as US 59, IH 610, US 90A, SH 6, Beltway 8, and other major arterials in the metropolitan area. Although current travel patterns provide for sufficient operation today, these facilities will continue to become more congested as the region's population grows, making providing transit choices even more desirable.

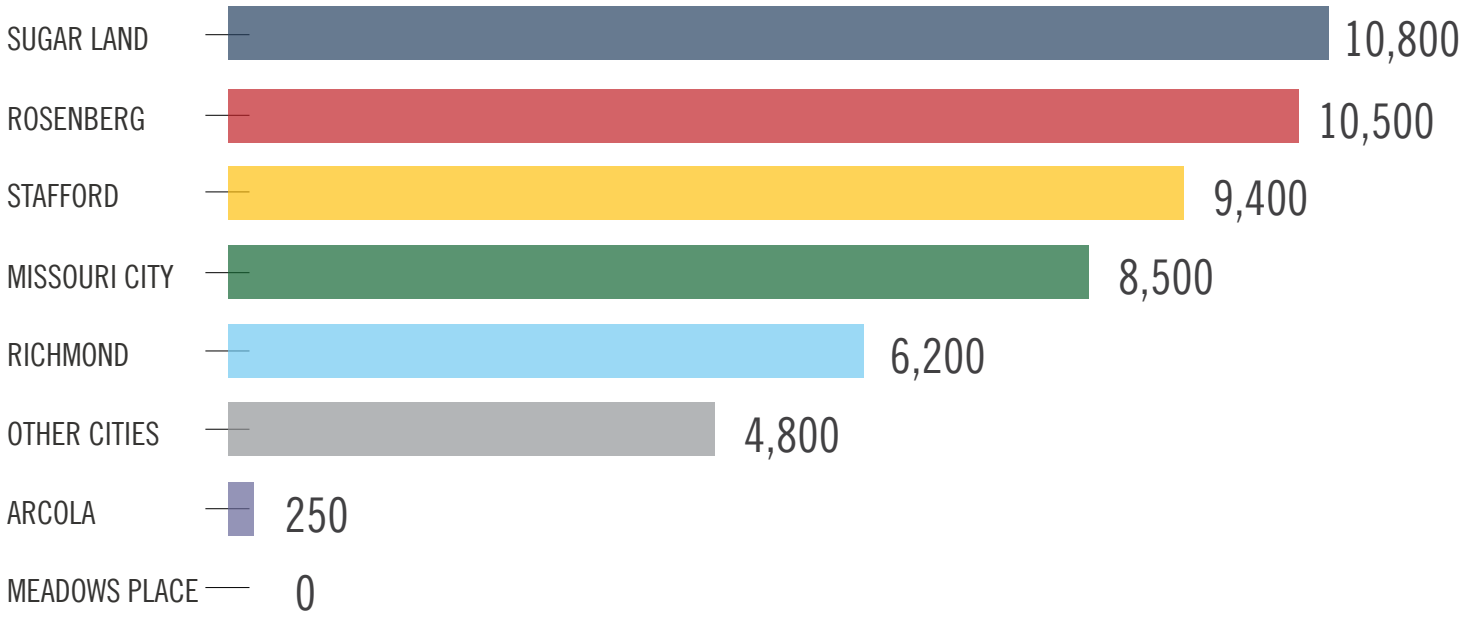
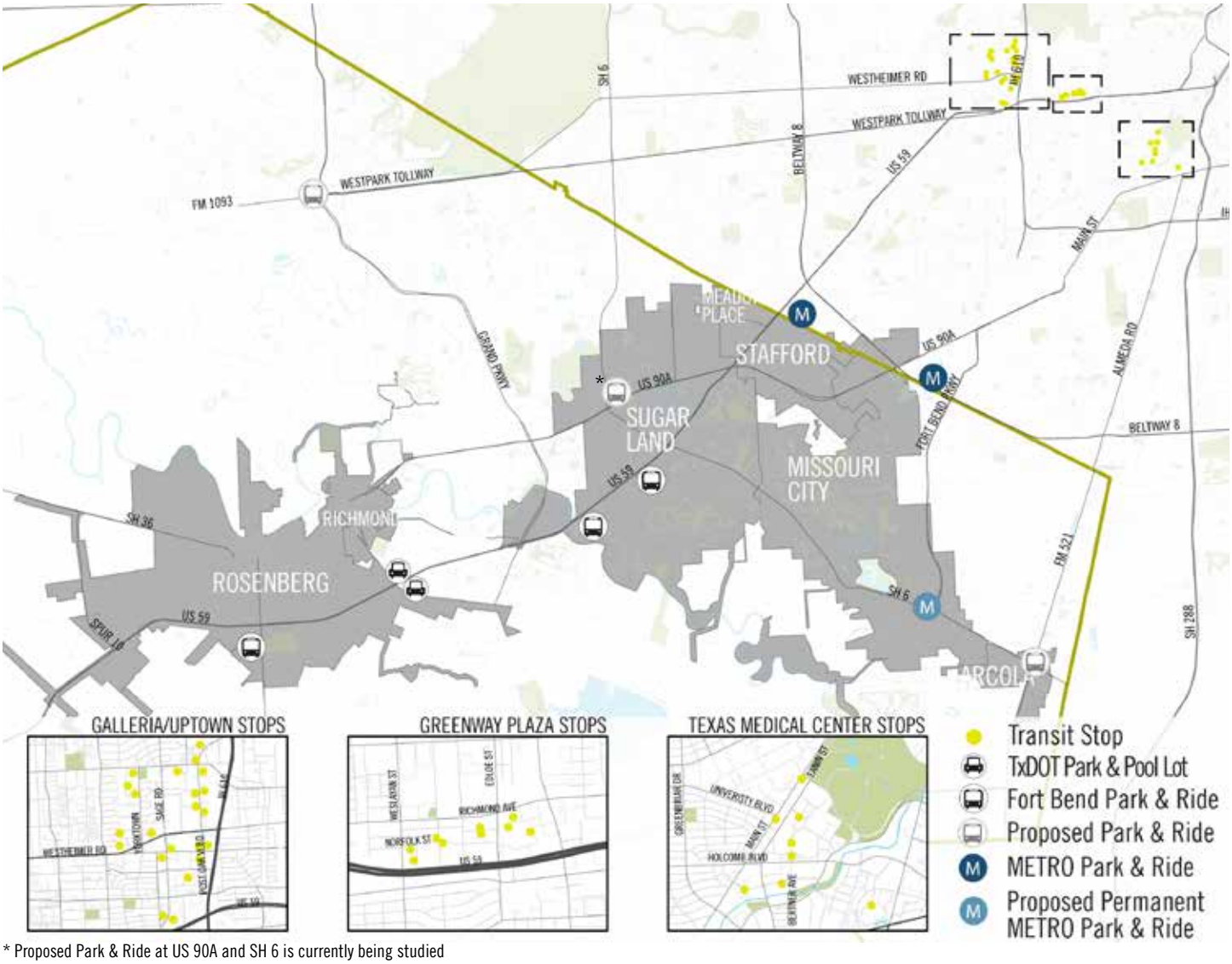


Figure C1.8: Annual Demand Response Calls by City

As shown in Figure C1.9, there are currently four park-and-ride locations within the study area. Two in Sugar Land and one in Rosenberg, operated by Fort Bend County Transit providing direct access to Uptown, Greenway Plaza and Texas Medical Center, with transfers available at the West Bellfort Park & Ride for service to downtown Houston and other destinations. The fourth existing park & ride is operated by METRO and located at a temporary location in Missouri City, at the intersection of the Fort Bend Parkway and SH 6, with plans to construct a permanent location in development. These locations offer primarily peak one-way service with some midday service but are targeted primarily for commuters. Two additional sites are being consider for future park & rides in or near the study area: US 90A at SH 6 and the West Park Tollway at SH 99 (Grand Parkway). As the number of available park-and-ride locations increase, the transit usage is also expected to grow. If residents are provided more options, and transit services are made available to major destinations with short headways, ridership will likely increase significantly.

Existing travel patterns, projected growth and demographic trends indicate that there will continue to be significant transit needs in the future. This need generates the opportunity to provide an effective transit option with the greatest potential to serve daily commuters. Additional commuter transit routes serving future park-and-ride locations or transit stops will play a role in alleviating the congestion predicted on area roadways, as discussed in Section D, and providing a choice to residents who don't want to drive. In addition, high capacity fixed route transit options such as light rail or commuter rail should also be evaluated for high ridership routes to connect residents to major activity centers within the Houston metropolitan area such as Downtown, Galleria, and the Texas Medical Center.



* Proposed Park & Ride at US 90A and SH 6 is currently being studied

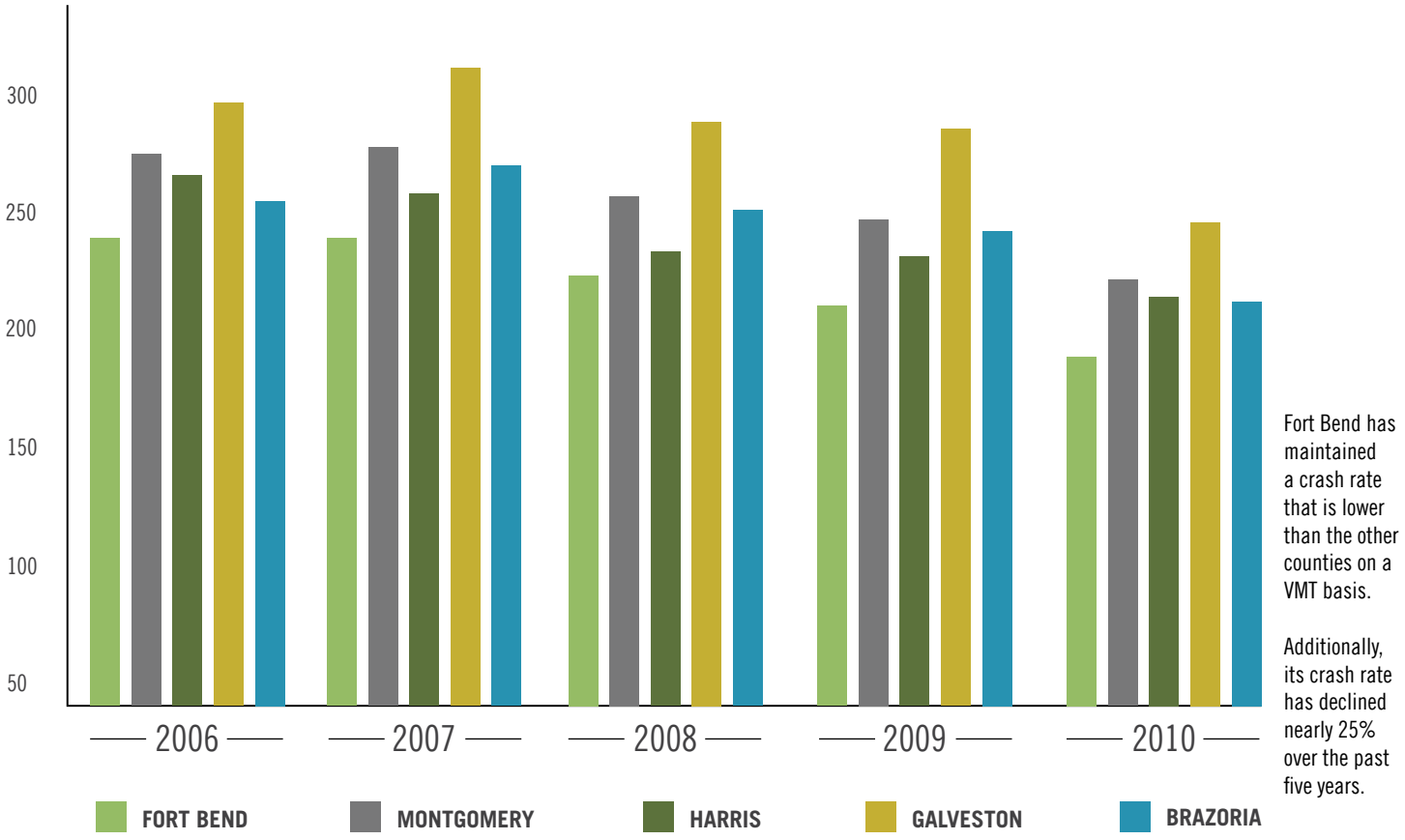
Source: Fort Bend County Transit Authority

Figure C1.9: Commuter Transit Stops

IMPROVING ROADWAY SAFETY

Roadway safety plays an important role in regional mobility and traffic operations on area roadways. Crash data was obtained for the five most populous counties in the Houston MSA from the TxDOT Crash Record Information System (CRIS) Database for the years 2006 to 2010. The CRIS Database only takes into account crashes that were reported to the police with damage over $1,000.

Historically, Fort Bend County has maintained the lowest crash rate per vehicle miles traveled (VMT) among the five most populous counties in the Houston MSA: Harris, Fort Bend, Montgomery, Brazoria, and Galveston. As shown in Figure C1.10, the trend among all five counties is a decrease in crashes per VMT since 2006; Fort Bend's crash rate has declined almost 25% from 2006 to 2010.



Source: H-GAC; TxDOT Crash Record Information Database

Figure C1.10: Total Crashes per Million Vehicle Miles Traveled

C 2 HIGH QUALITY RESIDENTIAL HOUSING OPTIONS

A major key to Fort Bend's growth over the past three decades has been the construction of high-quality housing options that attract new residents to the area. The county's growth rate (65% from 2000 to 2010, while the region grew 24%) reflects its attractiveness, as does the high median household income ($80,000, compared to $50,000 in the state as a whole.)

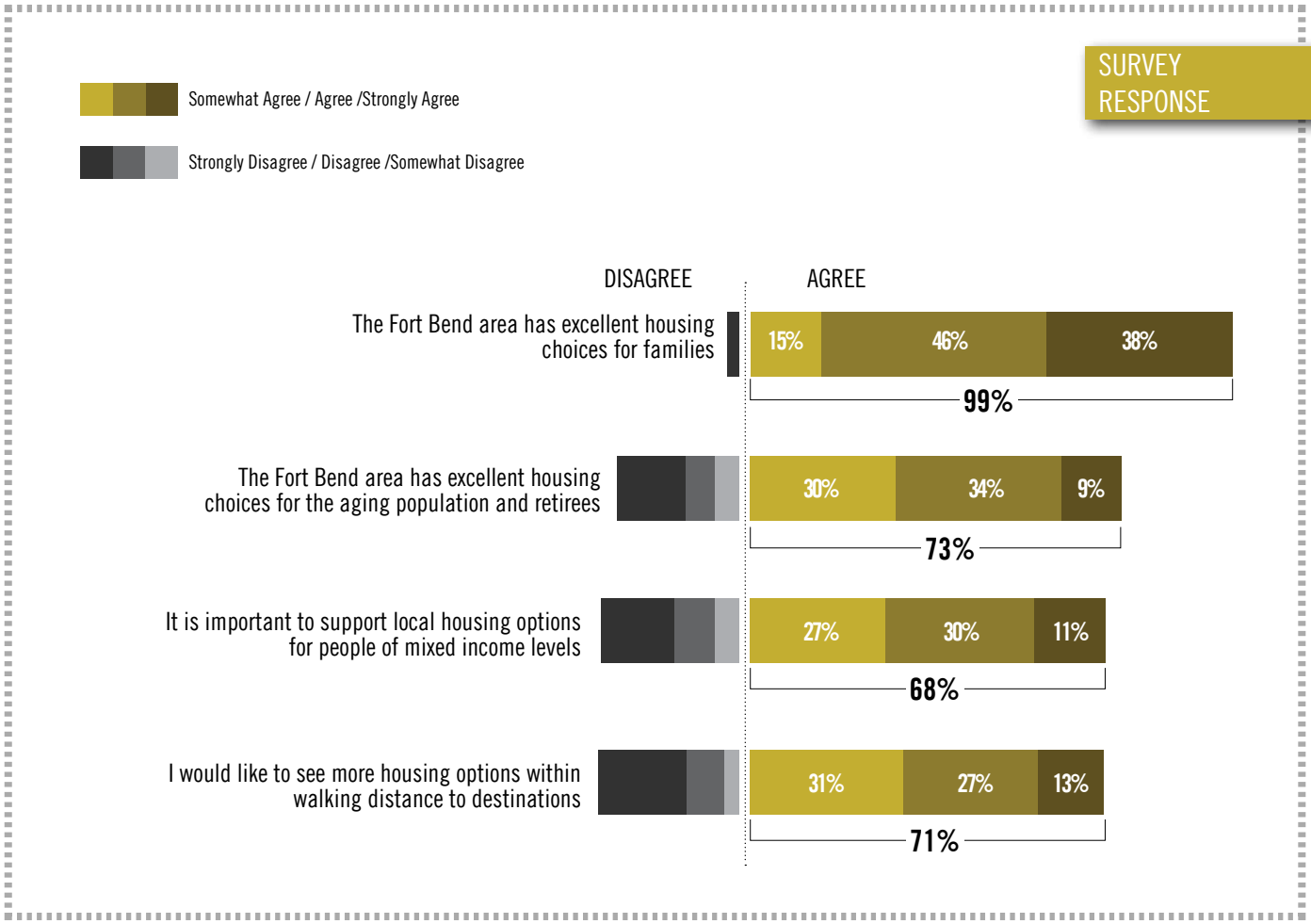
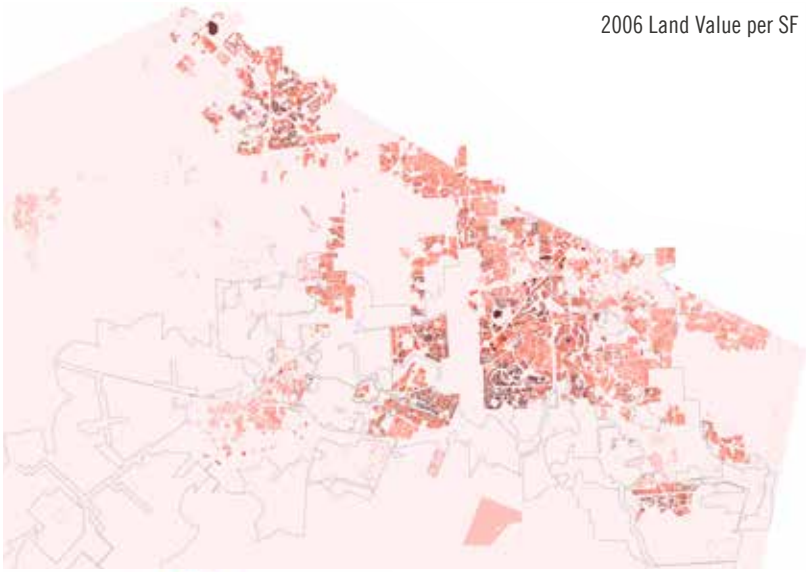
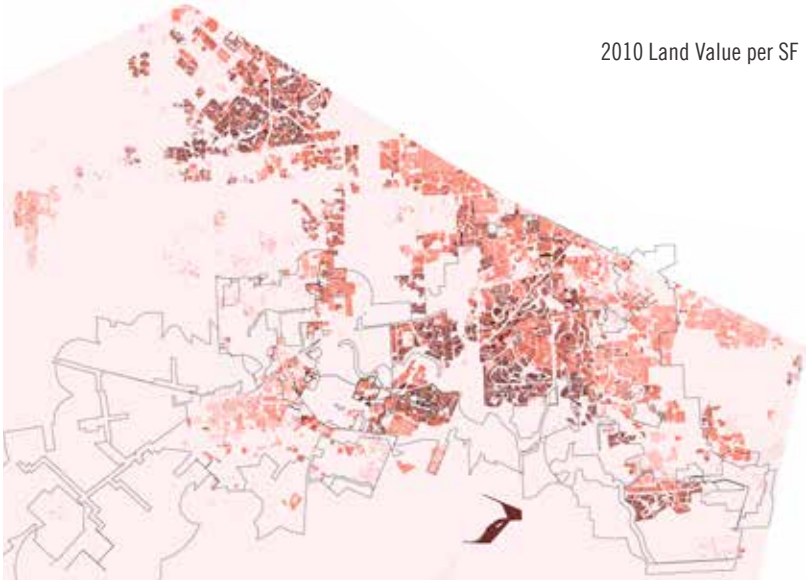


Fig. C2.1: Survey: Perspectives on Housing

One measure of the region's success is in property values, which grew even through the recession of 2008. Figure C2.2 shows property value per square foot in 2006 and 2010. The area of highest property value are single-family residential areas, frequently located in master planned communities, which account for a significant portion of Fort Bend's housing stock. The most dramatic value increase happened as farmland was developed into single-family residential. However, existing single-family residential properties also gained value. Property value is not equally distributed; Sugar Land accounts for nearly half the property value among the cities in the study area.

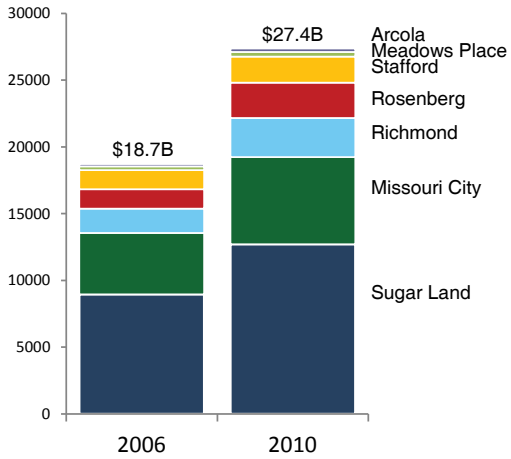




Legend

City Outlines

0-5
5-10
10-15
15-20
20-25
25-30
30-35
Over 35



Source: Fort Bend Appraisal District

Figure C2.2: Increasing Property Values

Housing costs vary dramatically between cities in the study area. Median monthly owner costs vary from $1,200 in Richmond and Rosenberg to $2,100 in Sugar Land. This variation reflects the variation in household incomes between the cities; in all cases 50%-60% of households have owner costs of 25% or less of household incomes.

Fort Bend's growth has been driven largely by owner-occupied single-family residential housing. Single-family homes account for 82% of the housing units in the study area. 89% or more of the housing units in Sugar Land, Missouri City, and Meadows Place are single-family, and over 80% of those are owner-occupied. Most of these are typical suburban homes: residential-only neighborhoods with fairly large lots in subdivisions with limited access points and many cul-de-sacs. Some of the older housing is in more traditional small town patterns, on grid streets with some mixed uses as in downtown Richmond and Rosenberg. More rural areas also have some ranchette housing on larger lots surrounded by agricultural uses.

SINGLE-FAMILY
82% of Total Units
57,973 Total Units

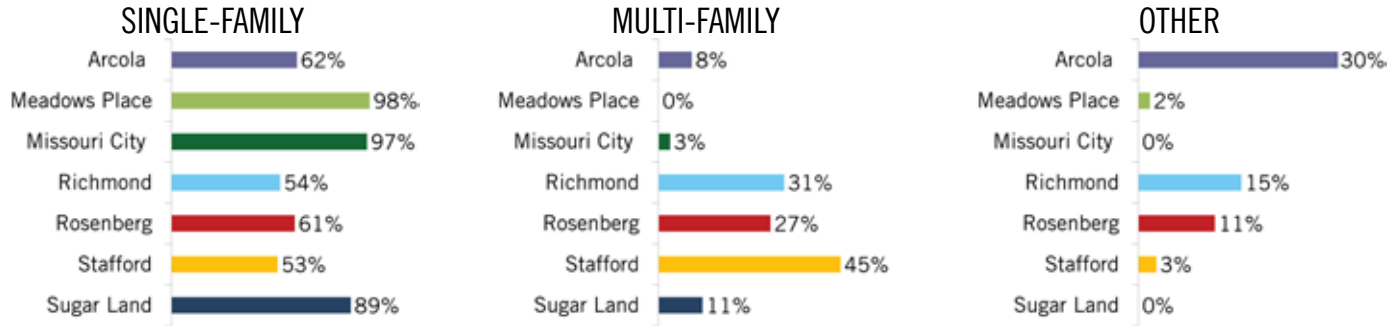
MULTI-FAMILY
15% of Total Units
10,488 Total Units

OTHER
3% of Total Units
2,272 Total Units

Source: 2006-2010 American Community Survey 5-Year Estimates; City Data

Figure C2.3: Housing Types

As shown in Figure C2.4, the highest concentrations of multi-family housing in the study area are in Rosenberg (27% of units), Richmond (31%), and Stafford (41%). These vary in style; some of the older units are in small complexes in traditional small town settings while most are in auto-oriented gated complexes consisting of multi-family buildings surrounded by surface parking. Fort Bend has succeeded by offering desirable housing options at an acceptable cost. However, the market is changing as demographic and economic trends impact consumer preferences for housing options. These challenges are detailed in Section D3 of this report.



Source: 2006-2010 American Community Survey 5-Year Estimates

Figure C2.4: Housing Mix by City

Minute Maid

TEXAS
GRILL
AIR CONDITIONE
DINING ROO

Buildings A and B
FLOOR
FLOOR

WE BUY & SELL
USED FURNITURE
Antiques

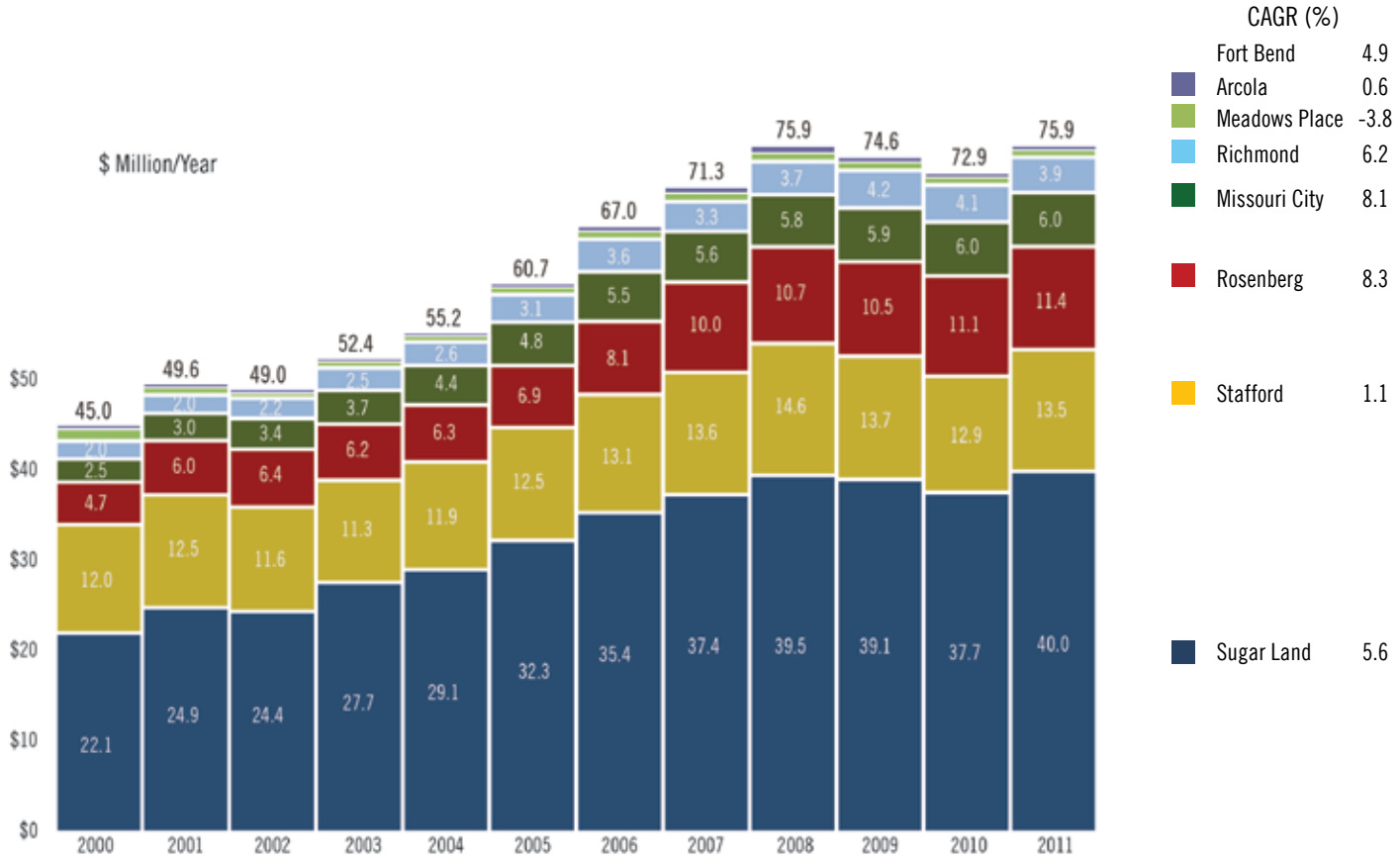
MEMORIAL HERMANN

C 3 STRONG ECONOMIC GROWTH

In addition to the increase in overall property values, the Fort Bend study area has been able to maintain strong economic performance in terms of both economic activities, as measured by sales tax revenue, as well as overall employment rates. Job growth has been strong enough to support Fort Bend County's #2 National County Ranking of "Where the Jobs Are" in a recent study by CNN Money, (August 2012). While the challenging national economy has impacted performance and lowered the overall growth rates, Fort Bend County has been able achieve reasonably high economic growth relative to other locations.

SALES TAX REVENUE

Annual Sales tax revenue data was obtained from the Texas Comptroller's Office for each city in the study area from 2000 to 2011. All cities, except for Meadows Place, have a positive compound annual growth rate (CAGR) over the 11-year period since 2000. Meadows Place sales tax revenue has decreased at an average value of 3.8% per year as several large retailers have relocated from the City during the analysis period though new development hopes to reverse this trend. Missouri City and Rosenberg had the highest yearly percent increase in sales tax revenue. This speaks to the economic strength in the study area which provides valuable revenue for cities to invest back into the community in infrastructure, services, or property tax reductions. Total sales tax revenue by city is show in Figure C3.1.



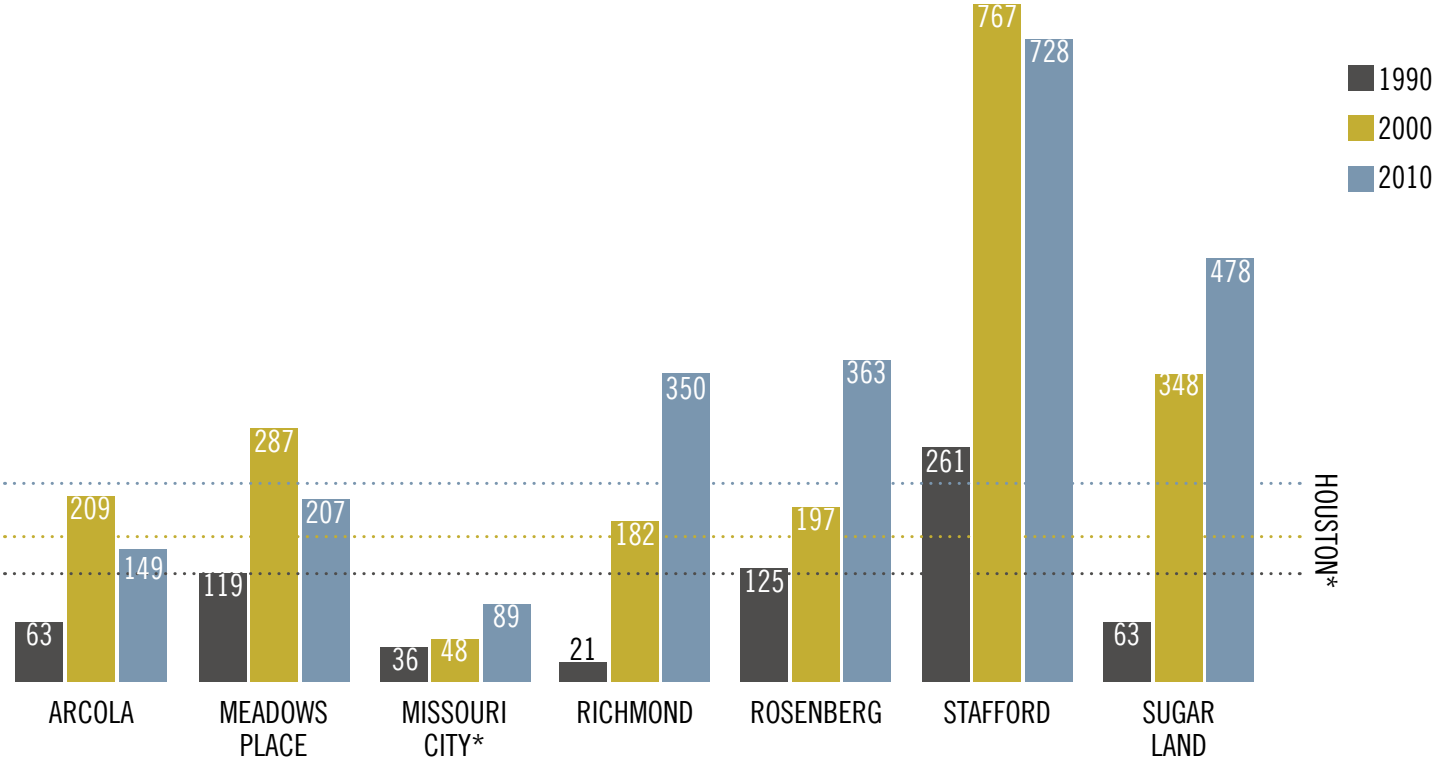
Source: Texas Comptroller's Office; City Budget Websites

Figure C3.1: Total Sales Tax Revenue

SALES TAX PER CAPITA

While overall sales tax revenue is important to support cities in funding services and investments, as well as providing an offset to property tax rates, the rate of sales tax collected per capita is also important and the study area has experienced growth on this metric as well. The greater the per capita rate the more revenue the city may utilize for each resident. Per capita sales tax collections were analyzed for three years, 1990, 2000 and 2010 to coincide with Census population estimates. Due to a significant share of commercial development, Stafford has the highest sales tax per capita in the study area. This is at least part of the reason the Stafford has not collected non-school related, municipal property taxes from residents since 1995. The largest increase in sales tax per capita has been in the City of Richmond. Richmond's sales tax per capita increased from $21 per person in 1990 to $350 per person in 2010. The second largest increase in sales tax per capita is Sugar Land which saw over 700% increase in sales tax per capita with an approximate 30% population increase from 1990-2010.

It is important to note than when comparing sales tax figures, Missouri City and the City of Houston allocate one cent of their maximum two cents of sales tax to fund the Metropolitan Transit Authority of Harris County (METRO). They receive roughly 25% of these funds back from METRO (Houston slightly less; Missouri City slightly more) to support General Mobility projects targeted at improving transportation in the region. If the one cent that went to METRO was included in the chart below, Missouri City would have a sales tax per capita that is comparable to Arcola and Meadows Place. The City of Houston's sales tax per capita value would be similar to Sugar Land's per capita rate.



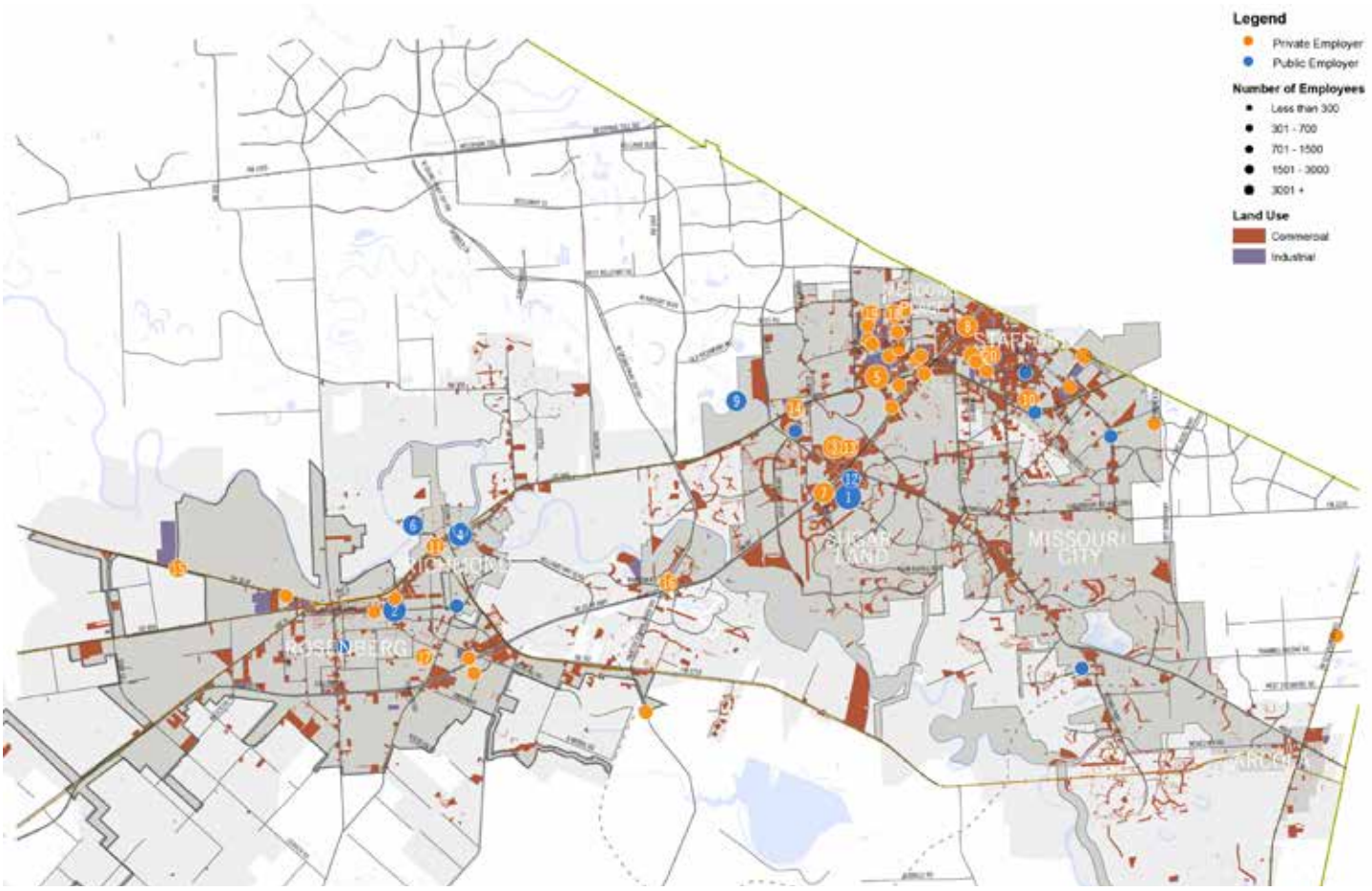
* One cent of potential of two cents of sales tax is allocated to the Houston MTA (METRO)
Source: US Census Bureau; Texas Comptroller's Office

Figure C3.2: Sales Tax Per Capita

ATTRACTIVE LOCATION FOR MAJOR EMPLOYERS

A key part of the growth in Fort Bend has been the region's continued evolution as a major job center. Figure C3.3 shows the location of the 53 largest employers in Fort Bend County, as of April 2011. Figure C3.3 also shows locations in the study area that are primarily commercial in red and areas that are primarily industrial in purple. In these locations, there are frequently many smaller employers that create clusters of job activity.

Of the 53 largest employers in the county, 48 are located within the seven cities. The highest concentration is within Sugar Land, which is home to 24 companies on the list. Stafford and Rosenberg are both home to 9 of the top employers. The major employers are a mix of public institutions (13), such as the local school districts and Fort Bend County itself, and private corporations (40) including Fluor Corporation and Schlumberger. There is also an increase in the healthcare sector with employers including Methodist, Memorial Hermann and Oak Bend hospitals. As shown, major employers tend to cluster along major roadways, such as US 59, SH 6, and US 90A. It is also important to note that the two top employers are school districts. These jobs are not concentrated in one place or city but spread throughout the school district and county.



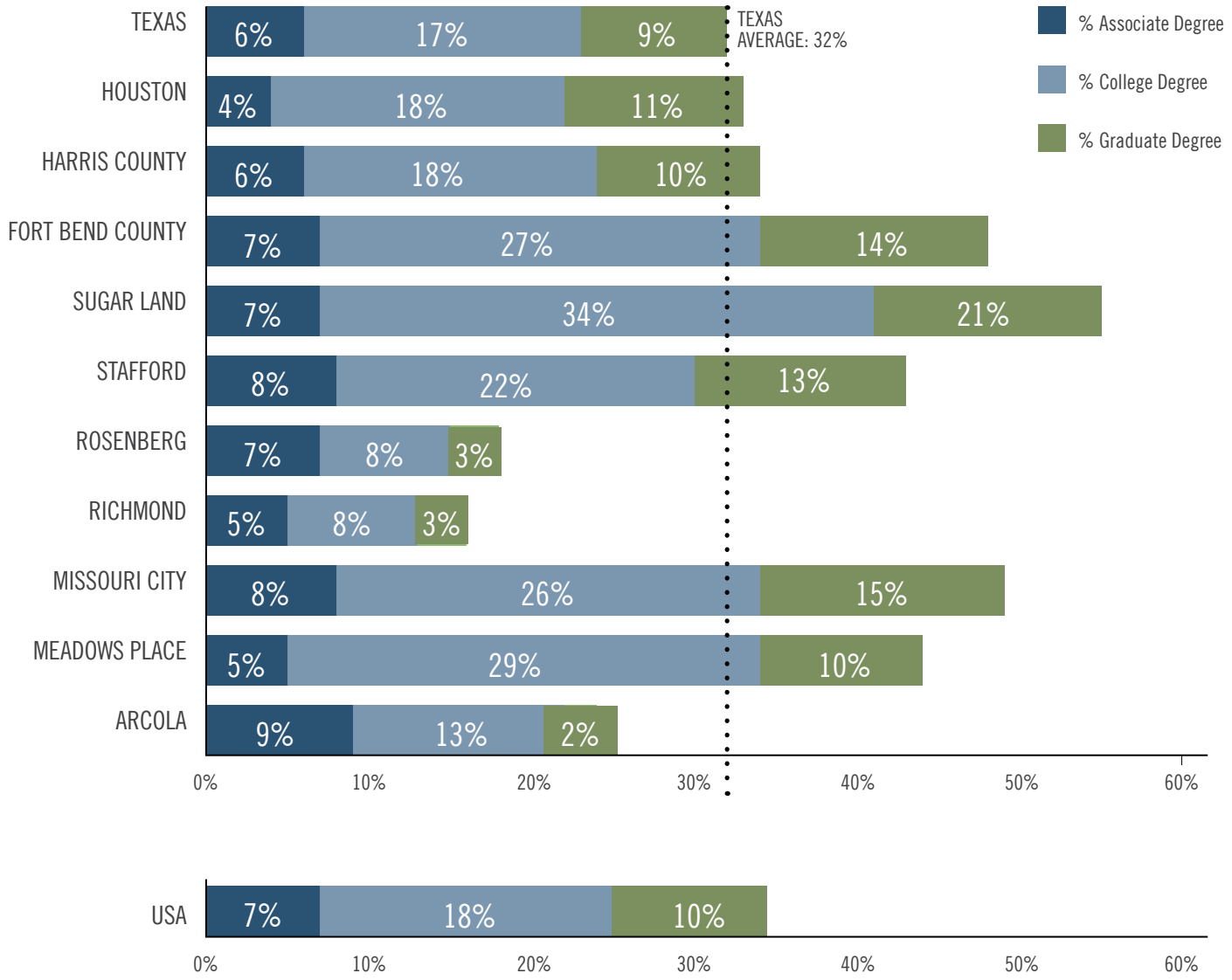
Source: Fort Bend Economic Development Council, April 2011

Figure C3.3: Top 20 Fort Bend Employment by Number of Employees

The list of major employers will continue to evolve. For example, the Texas Department of Criminal Justice, representing the Central Prison Unit located adjacent to the Sugar Land Regional Airport, closed in August 2011. Texas Instruments (TI) was the largest employer in the City of Stafford and was the first high-tech manufacturer to enter Fort Bend County in the 1960s. TI will close its plant by the end of 2012; TI will move some offices to Telfair in Sugar Land. Since the opening of the TI plant, many more companies have set up operation in Stafford and have created a cluster of high-tech manufacturing within the city. Both the former Central Prison Unit and TI campus represent significant potential for new development which may contain large employment components.

EDUCATED WORK FORCE

A key factor to support the continued growth in employment in the study area is access to a skilled local work force. This ensures that employers are able to attract and maintain a strong capable work force locally which is critical to managing a successful business long-term. As shown in Figure C3.4, 48% of Fort Bend County residents have an associates degree or higher. This is a substantially higher percentage than the Houston area and Texas statewide averages. Sugar Land has the highest level of educational attainment in the study area with 62% of the population (over 25 years of age) with an associates degree or higher. Stafford, Missouri City and Meadows Place are also all above the state average. While the county overall has a high educational attainment, Richmond, Rosenberg, and Arcola all rank much lower than the state average. While the percent of associates degrees is near the Texas average, the percent of college graduates is much lower than the state average.



Source: US Census Bureau. 2006-2010 American Community Survey

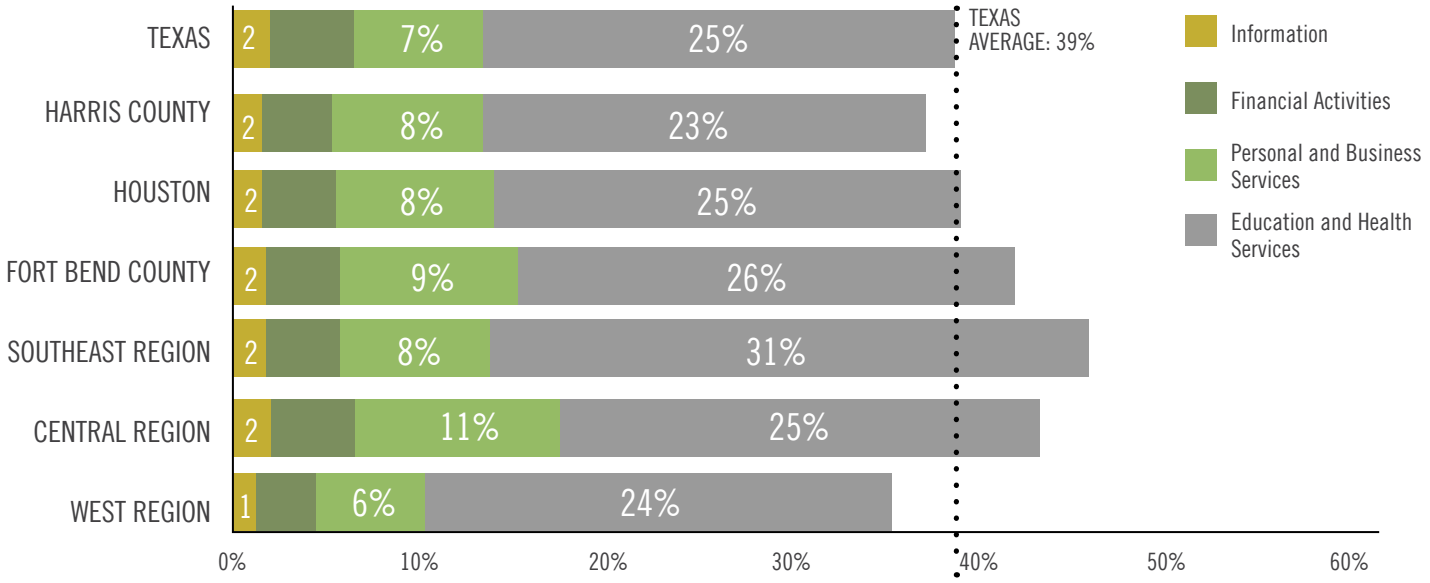
Figure C3.4: Residents with an Associates Degree or Higher

A key driver of economic growth for the region is the share of knowledge workers in the employee population. Jobs that are filled by knowledge workers are hard to classify and cannot be easily generalized using available data sources but can be thought of as jobs that work primarily in information. For this analysis, knowledge jobs were generalized to include four of the North American Industry Classification System (NAICS) main job classifications from 2010 Longitudinal Employer Household Dynamics (LEHD) datasets. For this analysis knowledge workers are those that work in Information, Financial Activities, Professional and Business Services, or Education and Health Services.

As shown in Figure C3.5, the southeast region (Missouri City, Arcola and Stafford) has the highest percentage of knowledge workers, led mainly by the very high percentage of education and health services workers in the area. The high percentage of education and health service workers in the area is most likely driven by convenient access and proximity to the Texas Medical Center. The west region of Richmond and Rosenberg falls below the Texas average for the number of residents who work in knowledge jobs. The west region also has the lowest percent of higher level degrees in the study area and has a local job base that tends to be more focused on light industry and logistics jobs.

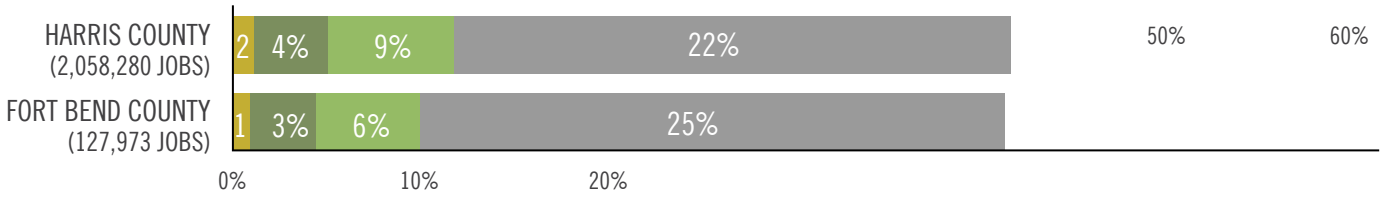
While employees living in Fort Bend County work in a higher percentage of knowledge jobs than Harris County residents, jobs available in Fort Bend County are under the state average of knowledge jobs available. This speaks to an opportunity to increase jobs through attraction of more corporate centers and healthcare jobs to reach or exceed the regional average.

JOB TYPES FOR FORT BEND RESIDENTS OVER-INDEXES IN KNOWLEDGE JOBS



Source: Census Bureau; Longitudinal Employer Household Dynamics (2010)

JOBS IN FORT BEND UNDER-INDEX IN KNOWLEDGE JOBS



Source: Census Bureau; Longitudinal Employer Household Dynamics (2010)

Figure C3.5: Knowledge Workers per Region

WELCOME TO THE
ROSENBERG RAILROAD MUSEUM
EDUCATIONAL PROGRAMS
GUIDED HISTORIC TOURS
PARTY PACKAGES
281-633-2846
Celebrating 125 Years With Historic Rosenberg

C 4 ENHANCEMENT OF QUALITY OF LIFE AND AMENITIES

Consideration of quality of life and cultural amenities are particularly important in developing the Fort Bend Subregional Plan as they affect day-to-day quality of life, but also impact future development, economic growth, and diversity. Aside from providing recreational opportunities for residents and visitors, these assets hold the potential for greatly affecting mental, physical, and social health of communities. Considerations include parks and open spaces, agricultural preservation, and various cultural amenities. By making sure amenities are available and accessible, residents have the opportunity to enjoy the place where they live and cities can create and preserve a unique identity for themselves. These goals are also important specifically for Fort Bend County residents. When asked how important the goal of improving quality of life amenities such as parks and entertainment venues is to the Fort Bend Subregional Plan, respondents gave it a 3.93 on a scale of 1-5, as shown in Figure C4.1.

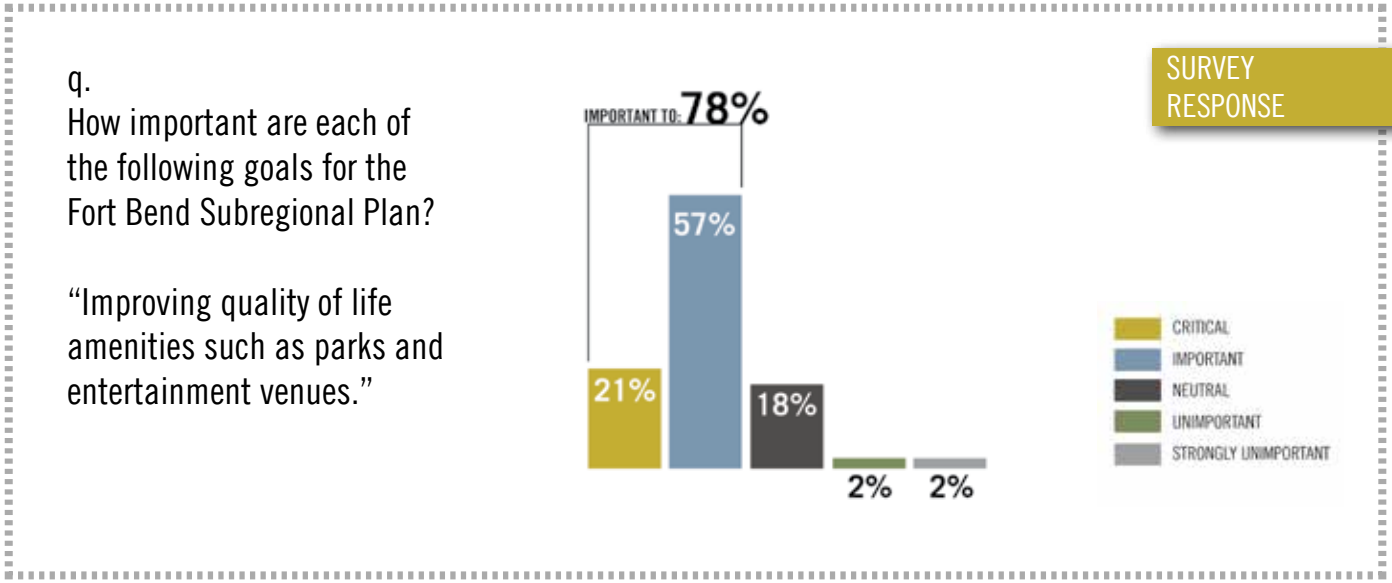
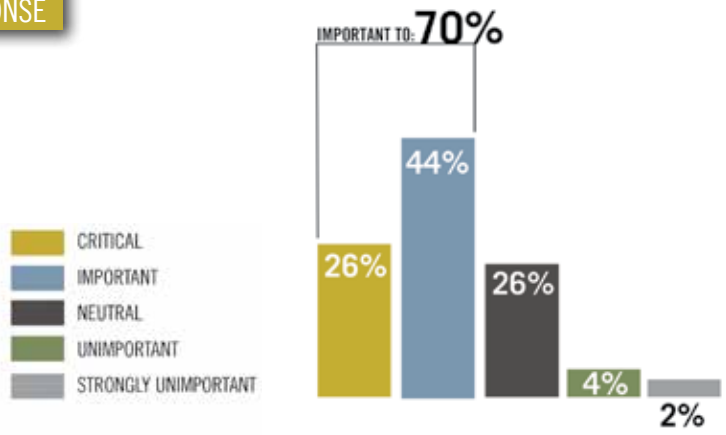


Figure C4.1: Survey: Importance of Goals

PARKS, OPEN SPACE, AND TRAILS

Fort Bend County has a multitude of amenities that support a good quality of life for residents. This is particularly evident in the number of green spaces that are currently being used as community parks and open spaces and that hold potential for further development. Parks, open spaces, and trails serve a number of functions and can be used to alleviate social, as well as physical issues. These include recreational uses, opportunities for mobility, alleviation of physical health problems, and storm water management. Well-designed green spaces have also been found to increase neighboring property values, thus contributing to the economic growth of an area, as well. The necessity of including parks and open spaces in the Fort Bend Subregional Plan is evident not only by the physical and economic benefits these amenities provide, but from the feedback of the residents of Fort Bend County. When asked how important a goal of encouraging increased open space, natural areas, and parks is to the Plan, about 70% of the respondents felt it is "critical" or "important", as shown in Figure C4.2

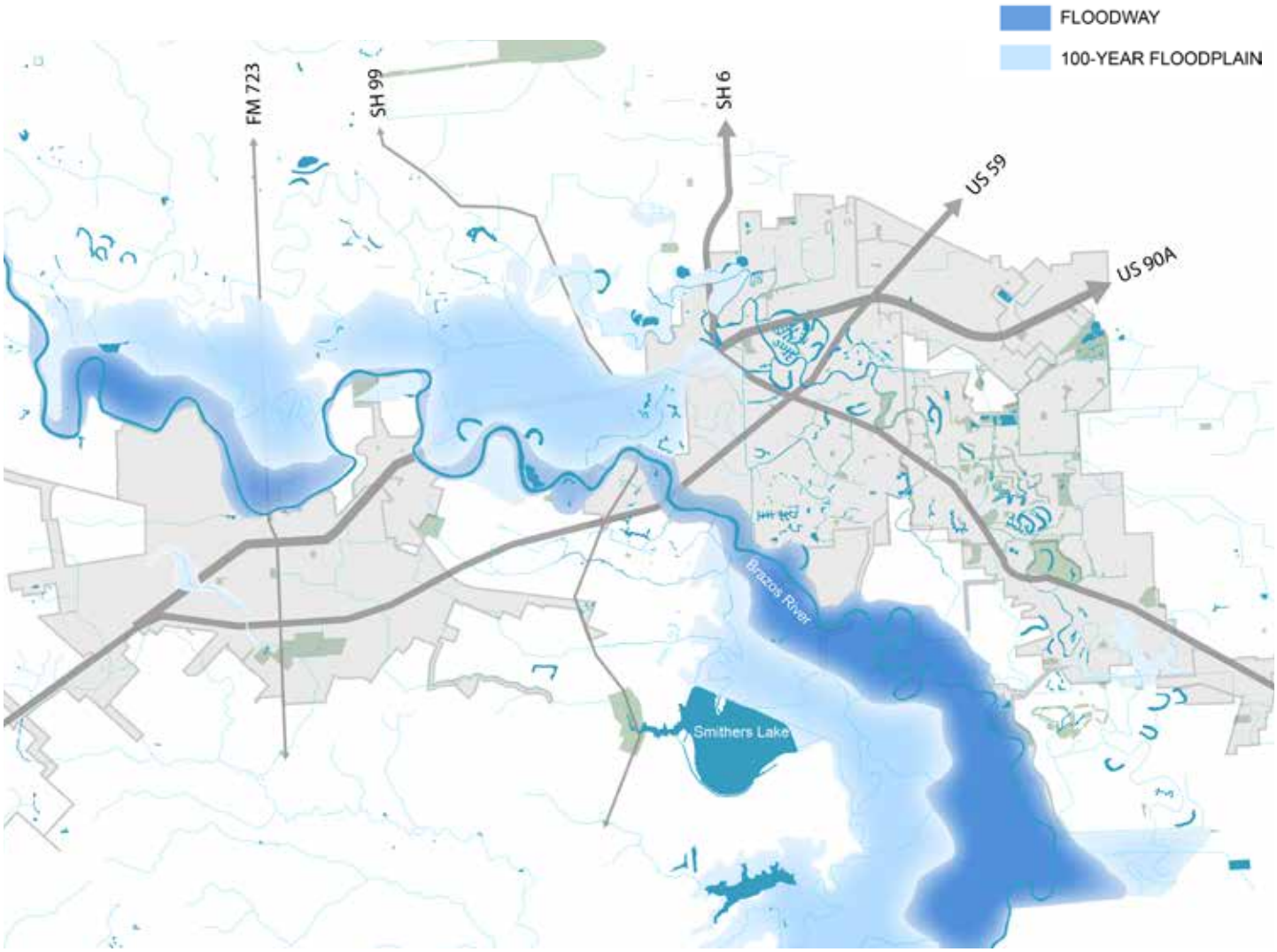
SURVEY RESPONSE



q.
How important are each of the following goals for the Fort Bend Subregional Plan?

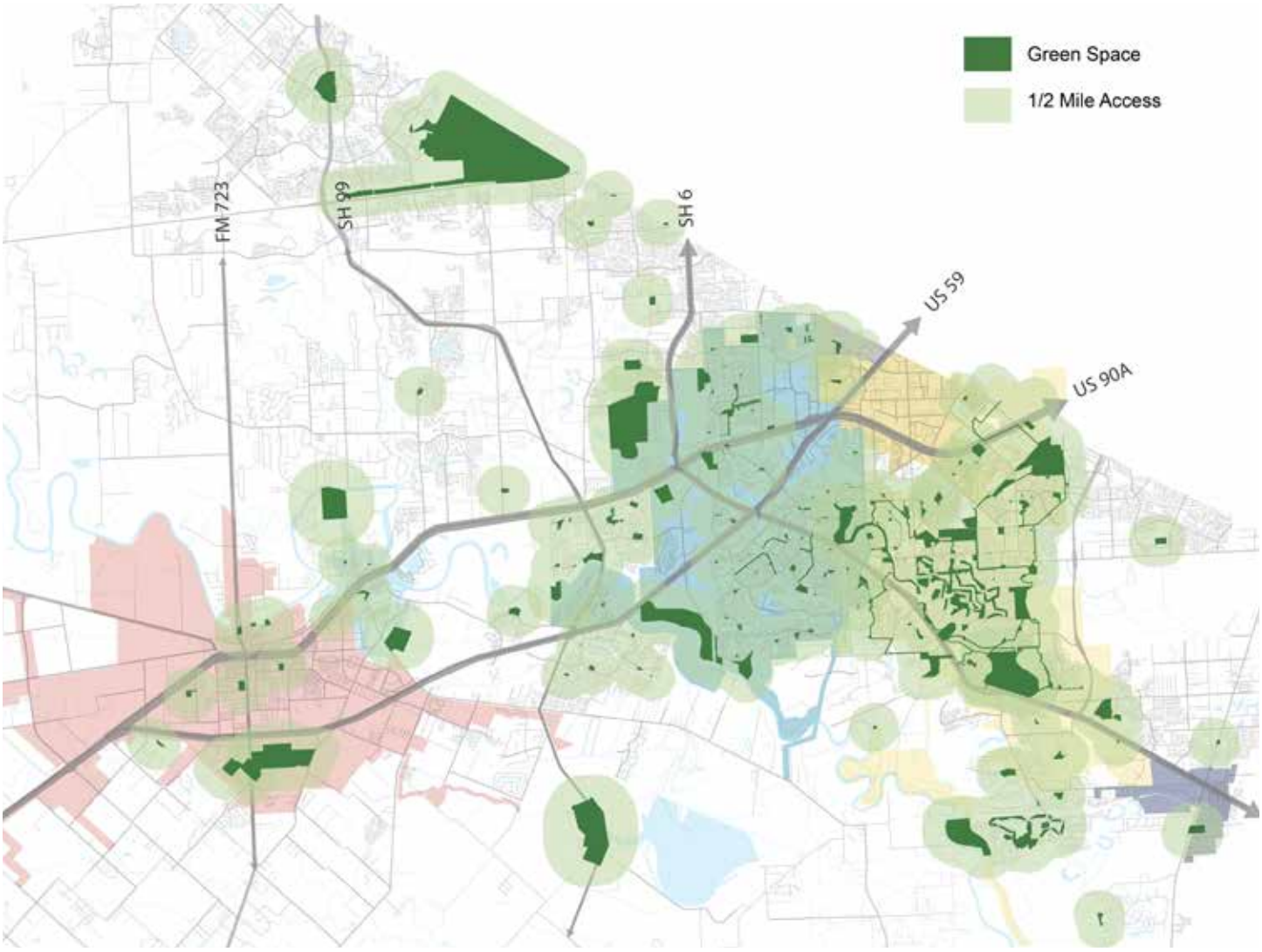
"Encouraging increased open space, natural areas, and parks."

Figure C4.2: Survey: Importance of Goals



Source: Fort Bend County Drainage District Digital Flood Map, 2009

Figure C4.3: Flood Zones in Fort Bend County



Source: Based on the H-GAC Land Use database, 2011

Figure C4.4: Green Space and Access over Fort Bend County

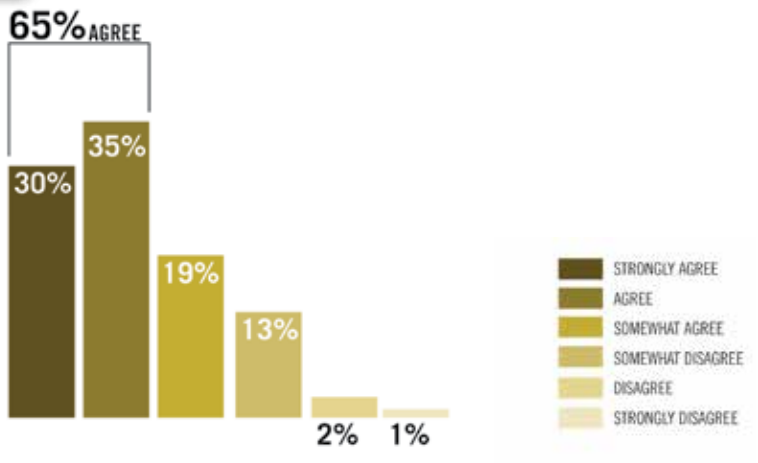
Fort Bend County has made efforts in preserving, developing, and maintaining parks and open spaces for residents. Figure C4.4 shows the allocated parks and open spaces throughout Fort Bend County, with a ½ mile radius around them, emphasizing accessibility. As seen in Figure C4.4, some cities, such as Missouri City have great amounts of recreational park space to offer and places such as the Quail Valley Golf Course have even become destinations for residents of Fort Bend County and beyond. Other cities, such as Arcola and Stafford, have very little or no park space, thus need different consideration in terms of preservation and development.

The flood conditions of Fort Bend County, seen in Figure C4.3 also present some opportunities for parks and open spaces. Currently much of the "floodway" is along the Brazos River and is not suitable for conventional development. These areas have potential for being developed as storm water catchment systems, while serving as recreational open spaces, and an aesthetically pleasing edging along the riverfront.

AGRICULTURE

While Fort Bend County is a rapidly growing area with a large majority of the population living a more urbanized lifestyle, about 1/5th Fort Bend's land area is allocated to agriculture and ranch. This makes Fort Bend an interesting place, with both rural and urban characteristics, and with a need to balance the two effectively. Places like the George Ranch are also a deep part of Fort Bend County's history and have become significant recreational destinations within the County. The desire to include agriculture as an important component of Fort Bend's development was further emphasized by residents, over 65% of whom feel that preserving these spaces is important to Fort Bend County, as shown in Figure C4.5.

SURVEY RESPONSE



q.
Please Indicate your level of agreement with each of the following statements:

"Preserving agricultural and ranching land in Fort Bend is important."

Figure C4.5: Survey: Effectiveness of Mobility Factors

CULTURAL AMENITIES

As seen in Figure C4.6, Fort Bend County is home to a number of entertainment venues, many of which commemorate its rich history and others that serve as significant destinations for business, pleasure, and community services. As preserving Fort Bend County's rich history and character is a top priority for residents, these hubs of activity help reinforce the identity of Fort Bend County, at large, while highlighting the unique attributes of the various cities. These places not only provide residents better economic opportunities and a more vibrant quality of life, but also help make Fort Bend County a destination for people from outside the County. Some of the existing destinations, such as the Historic Downtown of Richmond, Sugar Land Town Square, and the Quail Valley Golf Course in Missouri City, have really become iconic for their respective cities and have helped in strengthening their identity.

There has also been an emphasis on preserving historic building within the county, specifically the County Courthouse in Richmond. The Fort Bend County Courthouse was built in 1908 and is a strong example of "Texas Renaissance" architecture. In 1980, the courthouse became the first building within Fort Bend County to be added to the National Register of Historic Places. The Courthouse is currently undergoing restoration.

There are also certain development patterns following these establishments that can be noticed. Many of them are clustered and situated along prominent corridors. This grouping of destinations has created nodes within the cities, creating possibilities for future development, and also eases accessibility by residents and visitors.

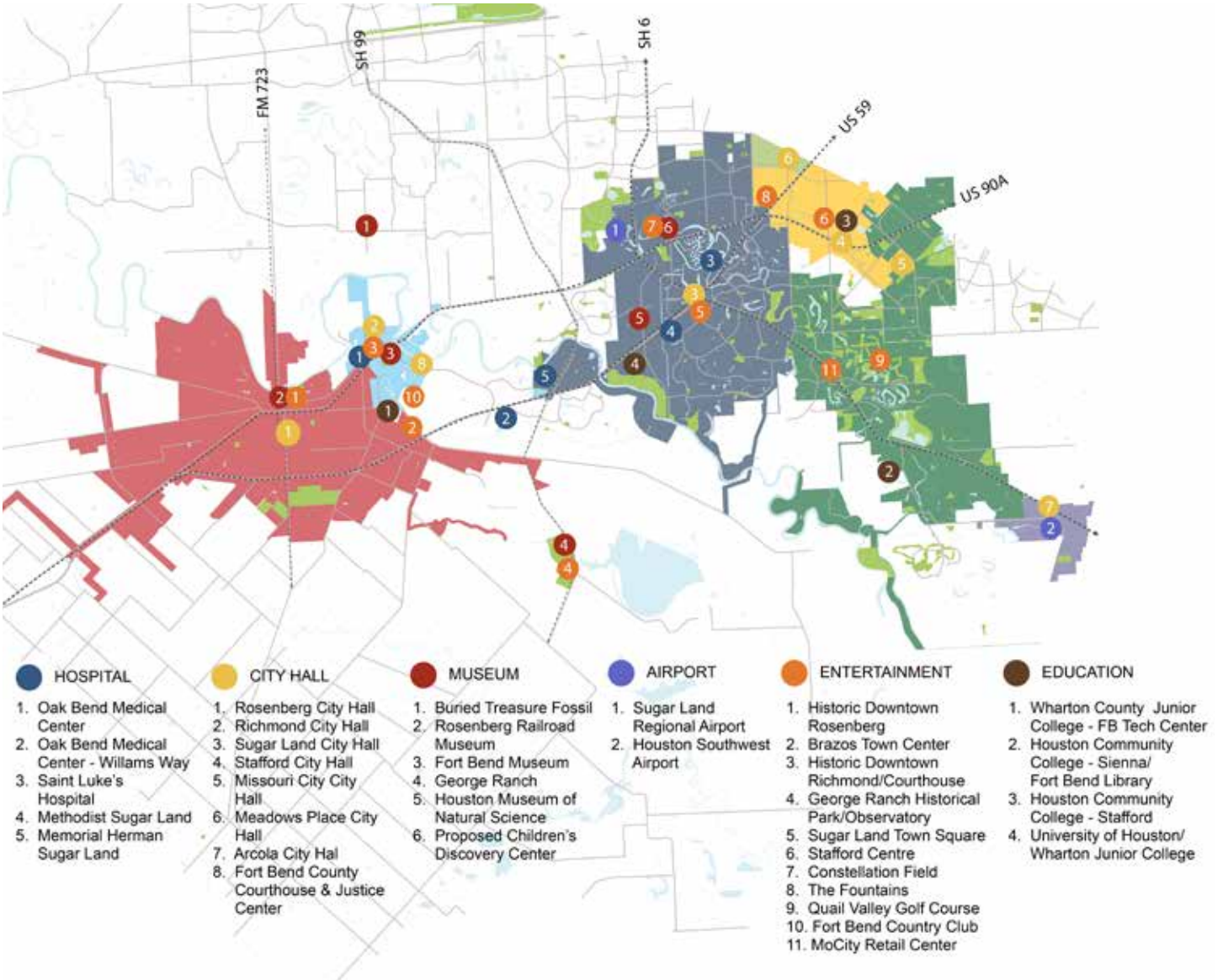


Figure C4.6: Major Destinations in Fort Bend County

TRAVIS
SCHOOL
RECOGNIZED
EXEMPLARY

STAFFORD HIGH SCHOOL
SPARTAN BAND

C 5 EXCELLENT SCHOOL DISTRICT REPUTATION

Fort Bend County is known for quality school districts, particularly in comparison with other large urban school districts in the Houston region. The good schools are consistently mentioned as one of the key factors for families that chose to live in Fort Bend County. There are six different school districts that operate within the county:

STUDY AREA

Fort Bend Independent School District

Lamar Consolidated Independent School District

Stafford Municipal School District

Katy Independent School District

Needville Independent School District

Brazos Independent School District

The study area is primarily served by the three of the six school districts: Fort Bend ISD (FBISD), Lamar Consolidated ISD (LCISD), and Stafford Municipal School District (SMSD). To support the strong population growth, the number of FBISD, LCISD, and Stafford MSD schools has grown from 92 in 2004 to 112 in 2011. That is almost three new schools per year over the past seven years.

FBISD is the third largest school district within the Houston Metropolitan area, ranked behind Houston ISD and Cypress-Fairbanks (Cy-Fair ISD) in number of students enrolled. Since its inception in 1959, FBISD has been recognized for its quality schools and excellent students. Since 2004, 12 new schools have been constructed within FBISD, with more currently under construction this year. During this same time period Houston Independent School District (HISD) has closed 11 schools. During the 2010 to 2011 school year FBISD operated 70 total schools: 11 high schools for grades 9-12, 13 middle schools for grades 6-8, 42 elementary schools for pre-kindergarten to 5th grade, and 4 specialized schools.

LCISD, was the result of multiple west Fort Bend County school districts uniting to created LCISD 65 years ago. Over the past 10 years, LCSID has continued to expand at a fast rate with eight new schools within the school district over the past seven years and more slated for construction. Not only are the number of schools within LCSID growing, but the quality of school as well. During the 2010 to 2011 school year, LCISD operated 36 total schools: 4 high schools for grades 9-12, 3 junior highs for grades 7-8, 1 junior high for grades 6-8, 3 middle schools for grade 6-8, 22 elementary schools for pre-kindergarten to 5th grade, and 5 specialized schools.

SMSD is the only municipal school district in the state of Texas; it was formed in 1981 after much litigation. Being a municipal school district gives the City control over the school instead of an independent school board. All SMSD schools are located on the same school campus within the City of Stafford. The district includes Stafford High School for grades 9-12, Stafford Middle School for grades 7-9, Stafford Intermediate School for grades 5-6, Stafford Elementary School for grades 2-4, and Stafford Primary School for early education students to first grade.

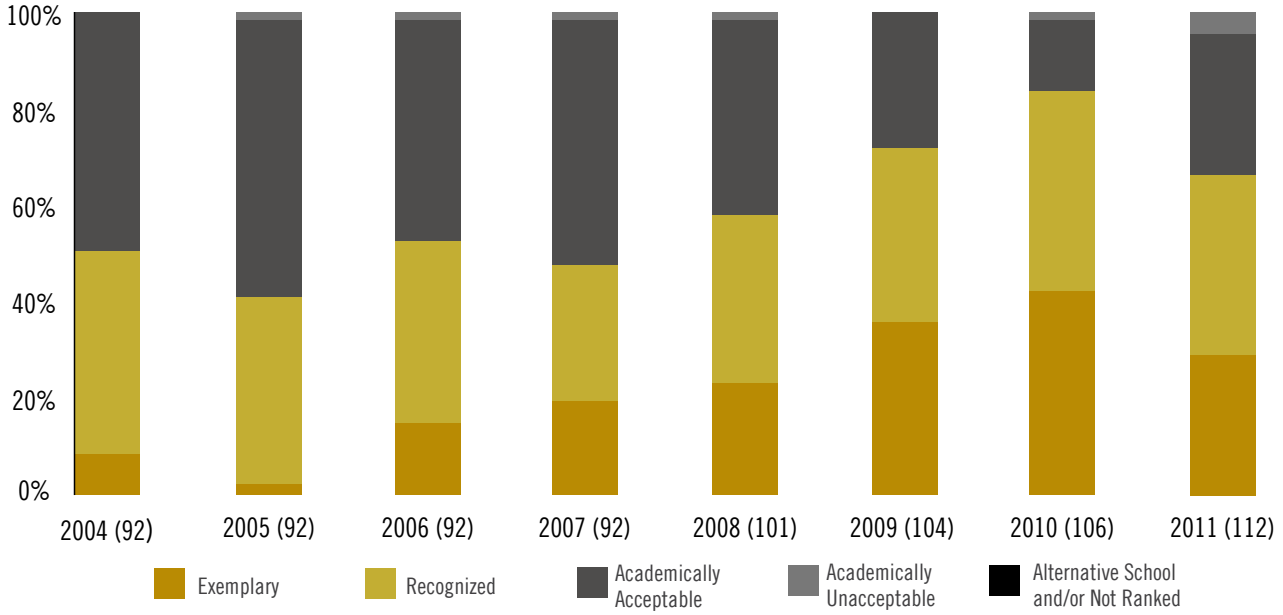
There are a number of private schools within the county. Not including daycare centers and kindergarten-only schools, there are approximately 26 private schools within the county. Only 5% of these private schools provide secondary education for grades 9-12. There are approximately 68 private schools within the City of Houston, where half provide secondary education for grades 9-12.

In the state of Texas, schools are scored by the Texas Education Agency using the Academic Excellence Indicator System (AEIS). Each year reports are created for each school and each district that rates their performance by grading each school with an accountability ranking. There are four possible accountability rankings: Exemplary, Recognized, Academically Acceptable, Academically Unacceptable. Rankings are based on a variety of factors including performance on the state wide Texas Assessment of Knowledge and Skills (TAKS) test, attendance, four year graduation rates, and dropout rates. (As of 2012, the state wide assessment exam was changed to the State of Texas Assessments of Academic Readiness exam, referred to as the STAAR.) Alternative education schools or specialized schools have been graded differently than general admission schools since 2006; alternative education schools and specialized schools are not included in Figure C5.1, the historical rankings chart.

As shown in Figure C5.1, the school rankings from 2004 to 2010 for the three study area school districts are improving on average with the percentage of Exemplary schools increasing and the percentage of Academically Unacceptable and Academically Acceptable schools decreasing. This trend stopped in 2011, when there was a change in the methodology used to rank the schools. The new methodology required a stronger set of requirements for a school to reach Recognized or Exemplary. Most Texas ISDs saw a drop in their percentage of Recognized and Exemplary schools in 2011. Despite the drop in 2011 of schools ranked Recognized or Exemplary, the quality of schools in the study area is steadily increasing and the trend is expected to continue.

Figure C5.2 shows the percent of schools within each of the four accountability categories for the three study area school districts in 2011. The figure also compares study area school districts to HISD as well as other suburban school districts including, Katy ISD, Cy-Fair ISD, Klein ISD, and Spring Branch ISD. The figure also shows dropout rates for each district. The dropout rate is calculated for Sate Accountability per the Texas Education code §39.053(g-1).

FBISD and LCISD perform better than HISD in both school rankings and in the percent of students who dropout. While FBISD and LCSID have strong reputations for quality schools, the percent of schools ranked Recognized or Exemplary is lower than other strong school districts within the Houston region. Katy ISD, Cy-Fair ISD, and Klein ISD all have a higher percentage of Recognized and Exemplary schools than both Fort Bend ISD and Lamar Consolidated ISD. Since 2004, Katy ISD has had at least 57% of schools ranked Recognized or Exemplary and no schools ranked Academically Unacceptable. Cy-Fair ISD has also had no schools ranked Academically Unacceptable in the 8 years of AEIS rankings analyzed. While Fort Bend ISD and Lamar CSID have low dropout rates and a high percentage of recognized and exemplary schools, both districts are falling behind other strong Houston-area school districts.

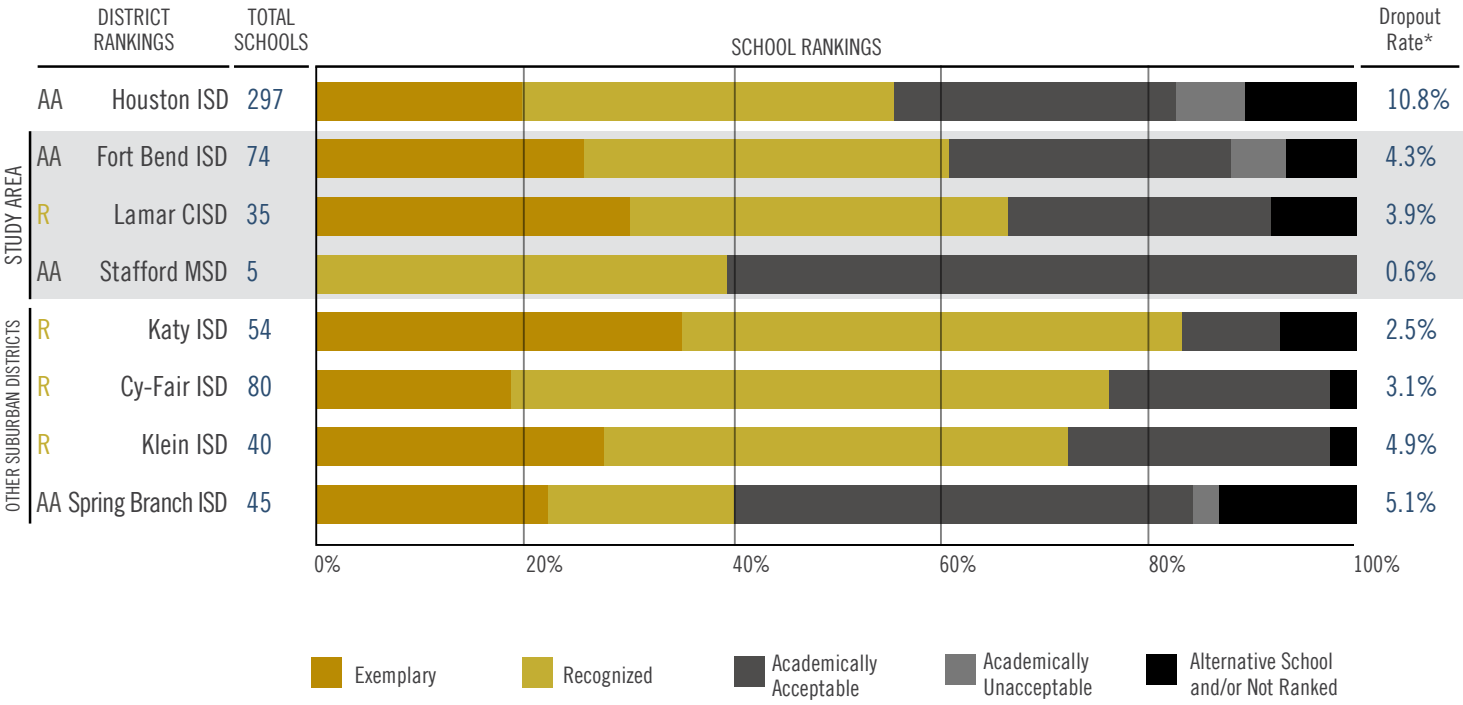


*Alternative Education Schools are graded with a different system and are not included

*AEIS Accountability Rankings are not available for all schools

Source: Texas Education Agency, Academic Excellence Indicator System

Figure C5.1: Historical AEIS Accountability Rankings for all FBISD, LCISD, and Stafford MSD schools (Total Schools)



*Calculated for State Accountability per Texas Education code §39.053(g-1)

Source: Texas Education Agency, Academic Excellence Indicator System

Figure C5.2: District and School Rankings, 2010-2011 Academic Year

Many schools within the study area school districts have won individual distinction for their academic quality. For example, the yearly Children at Risk ranking put Clements High School, in FBISD, as the 13th best public high school in the Greater Houston Region and the 36th best high school in the state. Many schools that ranked above Clements High School were specialty high schools and charter schools. Stephen F. Austin High School, Dulles High School, Kempner High School, and William B. Travis High School, all within FBISD, also rank high in the Children at Risk rankings as Texas Tier One public schools. Fort Settlement Middle School, in FBISD, was ranked as the 5th best middle school in greater Houston area and 13th best in Texas. Commonwealth Elementary School, in FBISD, was ranked as the 4th best elementary school in the greater Houston area and 15th best in the state. No LCISD high schools ranked as Texas Tier one High schools, but LCISD middle and elementary schools did rank among Texas Tier One schools.

To continue to compete with other suburban areas within the Greater Houston Area, quality schools are essential. While the percent of quality schools is growing, FBISD, LCISD, and SMSD are starting to fall short. Competing with Katy ISD, Cy-Fair ISD, Klein ISD and other area school districts requires a focus on the district as a whole as well as the already strong individual schools. A continued focus on education will allow the Fort Bend County study area to continue to thrive.

C 6 INCREASING DIVERSITY

As the population of Fort Bend continues to grow and the economic performance remains strong, Fort Bend has also become an increasingly diverse community in terms of changing racial and ethnic demographics. This speaks to a strength in Fort Bend in welcoming a wide range of people to contribute to the regional success. A study published by the Kinder Institute for Urban Research at Rice University and the Hobby Center for the Study of Texas determined that the Houston Metropolitan Statistical Area (MSA) is now the most racially/ethnically diverse of the largest MSAs in the United States. The report also evaluated all cities within the Houston region with populations over 50,000. Missouri City, in Fort Bend County, and Pearland, in neighboring Brazoria County, have higher diversity scores than the City if Houston. The 2010 census was the first time where a Houston suburb with a population over 50,000 ranked higher in diversity than the city itself.

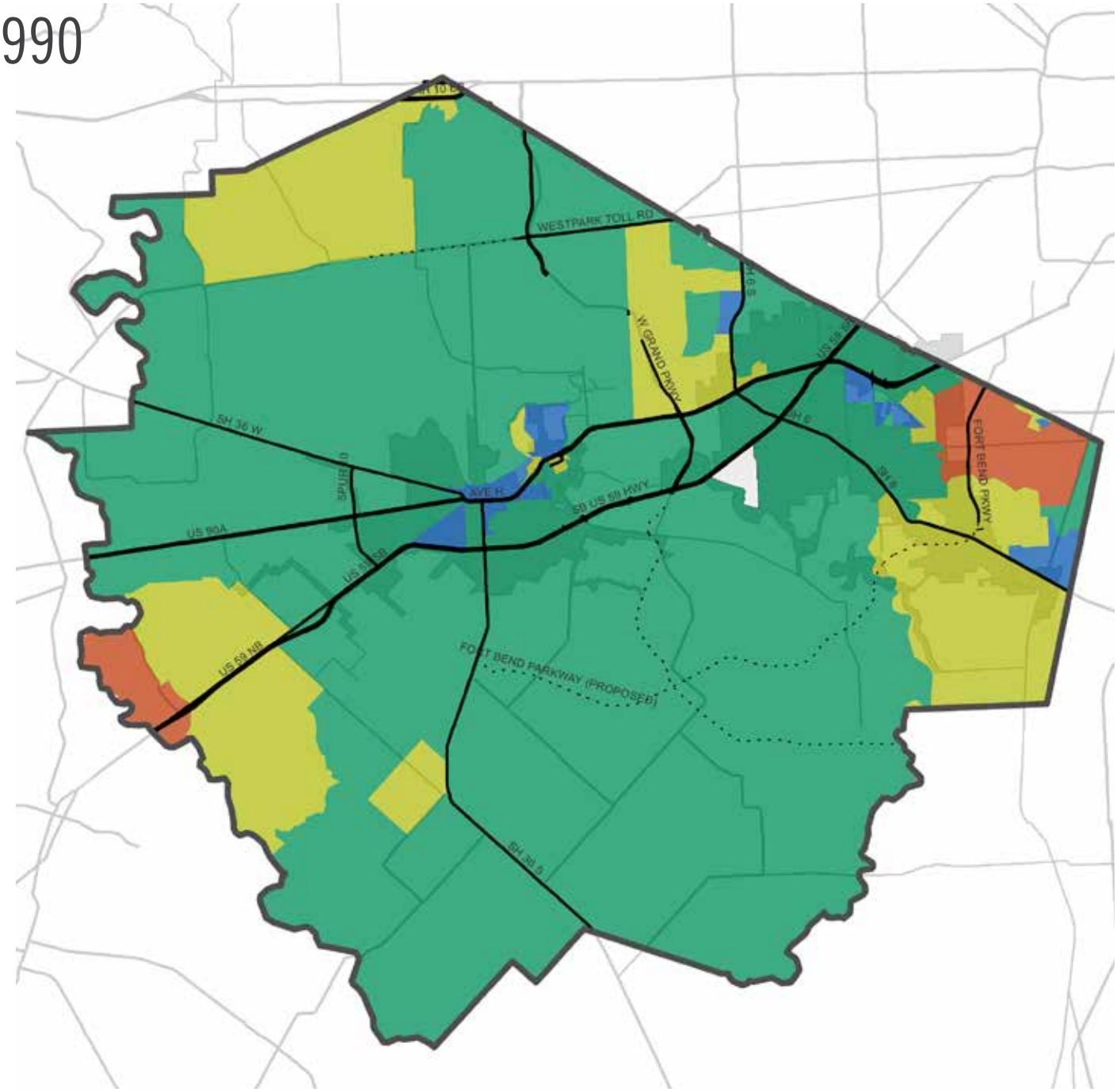
The analysis performed by the Kinder Institute was taken one step further for this study to determine the diversity of all cities within the Houston MSA, no matter the population. The methodology used by the Kinder Institute was based on the Entropy Index. The Entropy Index measures both the number of groups and their evenness along a collection of data. For this study, the entropy index was standardized to only take into account four major racial/ethnic groups: White, Asian, Black or African American, and Hispanic or Latino. If a population of an area is made up of only one racial/ethnic group then the entropy index is 0, if the population of an area is evenly divided by the four racial/ethnic groups analyzed then the entropy score would be 1.

Diversity scores were determined for all of the seven cities in the study area. The City of Stafford outranked Missouri City and was determined to not only be the most diverse city among the seven cities in the study area but as the most diverse city in the State of Texas and the most diverse city in the entire country. Missouri City ranks second in the state of Texas and 35th in the country. Meadows Place and Sugar Land also rank high, both with scores over the state average. Richmond, Rosenberg, and Arcola all rank below the state average for diversity score as all have a high population percentage of one racial/ethnic group.

With so many Fort Bend cities ranking high among the state and nation it would be accurate to assume the entire country ranks high in diversity. Fort Bend County is not only the most diverse county in the Houston region, but the most diverse county in the State of Texas and has been since at the least 1990 census. Fort Bend County ranked fourth among all US counties in the standardized entropy score based on the four major racial/ethnic groups.

In 1990, the county still had a majority of white (non Hispanic) residents. By the 2000 census, there was no racial or ethnic majority in the county and that trend of diversification has continued past 2010. Figures C6.1 and C6.2 show the racial and ethnic diversity by census tract across Fort Bend County. They show the increasing share of the county and the study area that have no racial majority as well as certain areas that have grown in racial or ethnic concentration.

1990



Total Population:

225,421

In 1990, most of the census tracts in Fort Bend were majority white (non-Hispanic).

Arcola and parts of Missouri City, Richmond and Rosenberg had relatively large areas of majority-minority populations.

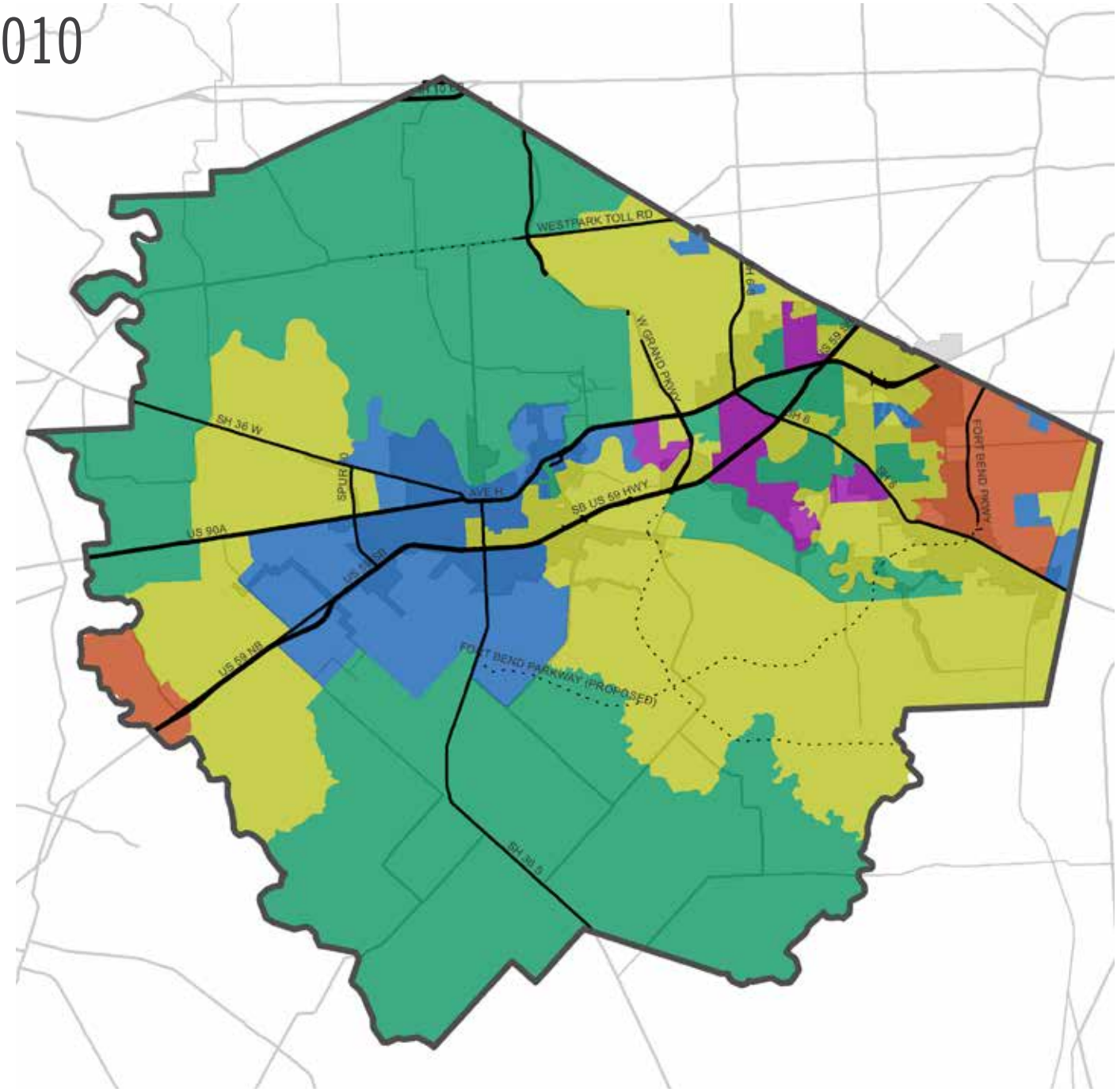
Source: 1990 US Census; 2000 US Census; 2010 US Census

RACE & ETHNICITY
BY BLOCK GROUPS

- **Majority White** (non-Hispanic)
- **Majority Asian** (non-Hispanic)
- **Majority Black or African American** (non-Hispanic)
- **Majority Hispanic or Latino**
- **No Racial Majority**
- **No Data Available**

Figure C6.1: 2010 Race and Ethnicity Distributions

2010



Total Population:

585,375

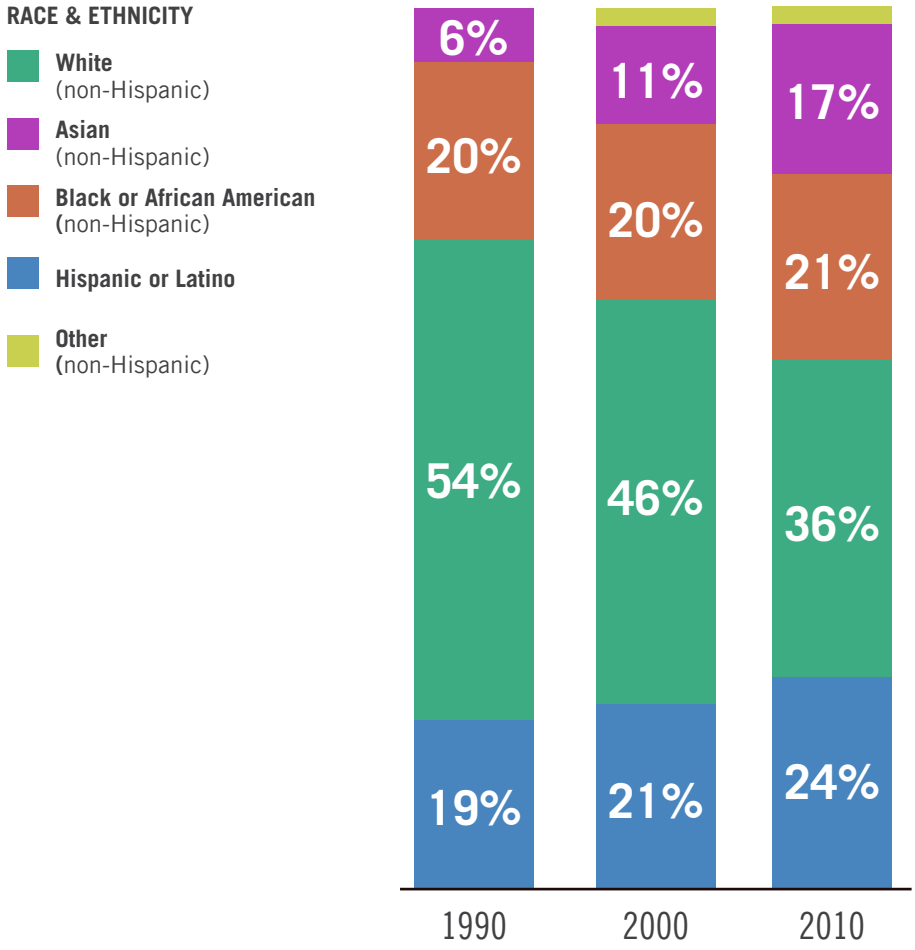
In 2010, Fort Bend is positioned as one of the most diverse counties in the country. Significant areas of the county have no racial majority. Growth in Hispanic population west of the Brazos River has led to large sections of Rosenberg and Richmond being majority Hispanic. Pockets of majority Asian populations (Sugar Land) and Black populations (Missouri City/Fresno) have grown in the region.

Source: 1990 US Census; 2000 US Census; 2010 US Census

RACE & ETHNICITY
BY BLOCK GROUPS

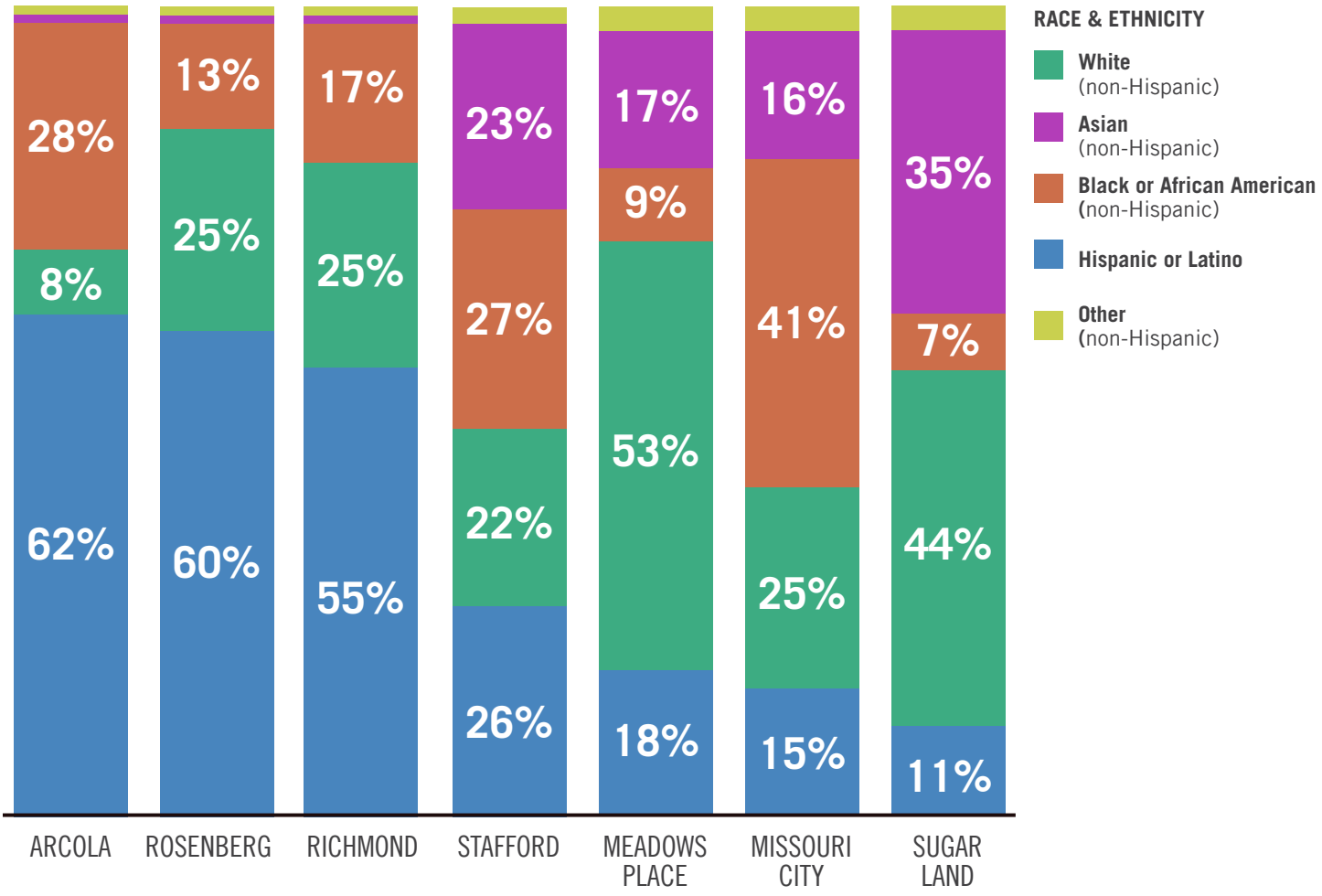
- **Majority White** (non-Hispanic)
- **Majority Asian** (non-Hispanic)
- **Majority Black or African American** (non-Hispanic)
- **Majority Hispanic or Latino**
- **No Racial Majority**
- **No Data Available**

Figure C6.2: 2010 Race and Ethnicity Distributions



Source: 1990 US Census; 2000 US Census; 2010 US Census

Figure C6.3: Ethnicity Breakdown: Fort Bend County (Percent, 1990 - 2010)



Source: 2010 US Census

Figure C6.4: Ethnicity Breakdown: Study Area Cities in Fort Bend County (Percent, 2010)

Figure C6.3 shows the evolving population diversity and the overall racial-ethnicity breakdown in Fort Bend County from 1990 to 2010. While the county as a whole may rank very diverse, the amount of diversity among the seven study cities varies. The general trend is for diversity to increase, with the exception of two cities. Arcola went from no racial majority to majority Hispanic or Latino, although lower population levels make changes more dramatic. Figure C6.4 shows the breakdown by city for 2010 for each of the study area jurisdictions. The largest change to the racial and ethnic breakdown of the study area is the increasing percentage of Asians with a concentration in the City of Sugar Land. In 1990, 6% of Fort Bend's population was Asian; at the 2010 census this percentage increased to 17%. Hispanic population has also grown as a percentage of the population from 19% to 24% while the share of Black or African American (non Hispanic) has remained relatively flat. The growth in diversity has coincided with a decline in the percent of White (non Hispanic) residents as a share of the overall population from a majority 54% in 1990 to 36% in the 2010 census. The study area's ability to attract a diverse group of residents will continue to drive demand and support the strong growth projected for the region.

The Fort Bend study area has been able to maintain its position as a premier county by focusing on maintaining a good balance between growth and investment. The area is in a sweet spot in its planning and development cycle. Planning, attractive developments, and investments in areas such as roadway infrastructure, parks and entertainment venues like museum, performance halls, and Constellation Ballpark have enabled the region to continue to grow and prosper. Overall growth rates for the Houston region have remained strong and Fort Bend has been a leader in that growth.

The Vision and Goals developed for the study area reinforce many of the strengths in the Fort Bend study area while seeking to create excellent transportation infrastructure with a sustaining attractiveness to residents and businesses. With rapid growth comes new challenges, in particular to maintain current levels of mobility and services, and a high quality of life in the study area. Other trends that are not necessarily specific to Fort Bend will also likely have a significant impact on the future of the study area. For example, demographic trends such as the growth in the population over the age of 65 are national trends as the baby boomer generation moves into retirement. These trends will require thinking through and adapting to the changes in transportation options and market demand for housing and services. This chapter outlines some of the major challenges that the Fort Bend Subregional Plan will need to address to achieve the Vision including the need to manage:

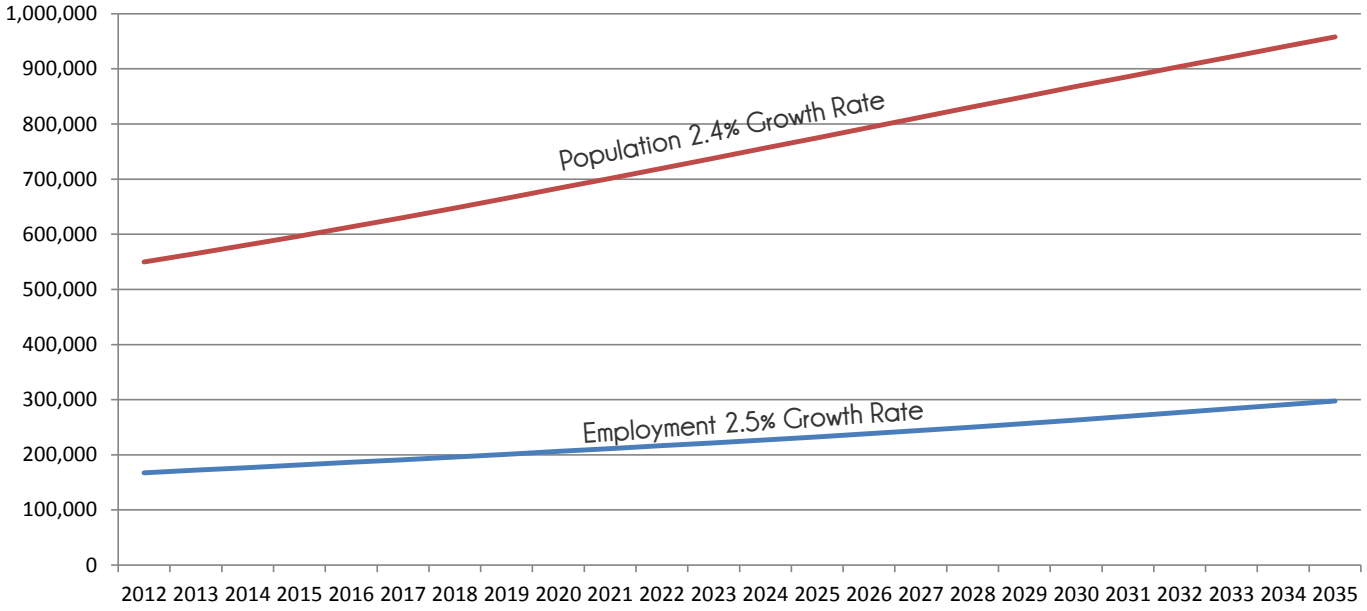
1. PROJECTED GROWTH AND DEMOGRAPHIC TRENDS
2. INFRASTRUCTURE AND MOBILITY TO SUPPORT GROWTH
3. ECONOMIC DEVELOPMENT AND REDEVELOPMENT
4. QUALITY OF LIFE IMPROVEMENTS AND NATURAL RESOURCES

D 1 PROJECTED GROWTH AND DEMOGRAPHIC TRENDS

POPULATION AND EMPLOYMENT GROWTH

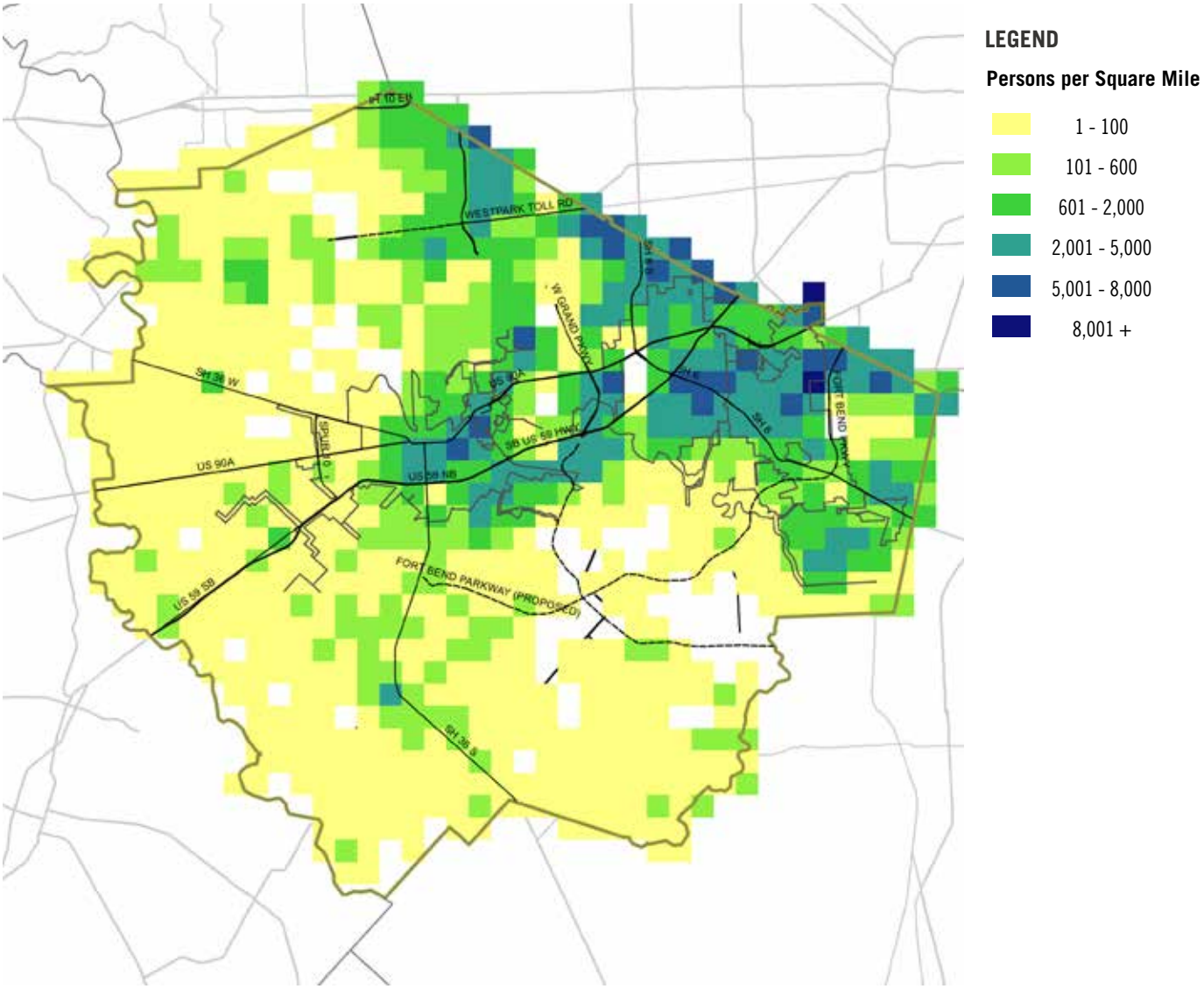
To support regional planning efforts, the Houston-Galveston Area Council (H-GAC) has leveraged several inputs including the most recent US Census data to develop estimates for population and employment through the year 2035 for H-GAC's planning region, including Fort Bend County. The development model used to generate these projections includes inputs such as current growth trends, land uses, and local and regional development patterns for the region. For Fort Bend County, the estimates for 2035 show population of approximately one million residences, a nearly 50% increase over current population levels. As shown in Figure D1.1, this results in an annual growth rate of 2.4% from 2012 to 2035, slightly lower than the historical rate of around 5%, primarily due to the fact that many of the major parcels in the eastern part of the study area have reached near full build out of development potential at current densities. This annual growth rate projected by H-GAC is the second highest in the region, behind only Montgomery County, which is projected to have a growth rate of 2.8% per year and has a higher percentage of undeveloped area with the exception of fast growing areas in and near The Woodlands development.

The projections show employment within Fort Bend County growing by a comparable but slightly higher rate of approximately 2.5% a year from 2012 to 2035. This growth rate is comparable with Montgomery County as the highest in the H-GAC region and supports the increase in suburban area job growth that has been a trend for the Houston region. Total employment would maintain a consistent ratio with population at about 0.3 jobs per resident in Fort Bend. This ratio is something many stakeholders would like to see grow, by attracting more and higher value jobs to local job centers.



Source: H-GAC 2012- 2035 Regional Population and Employment Demographics Model

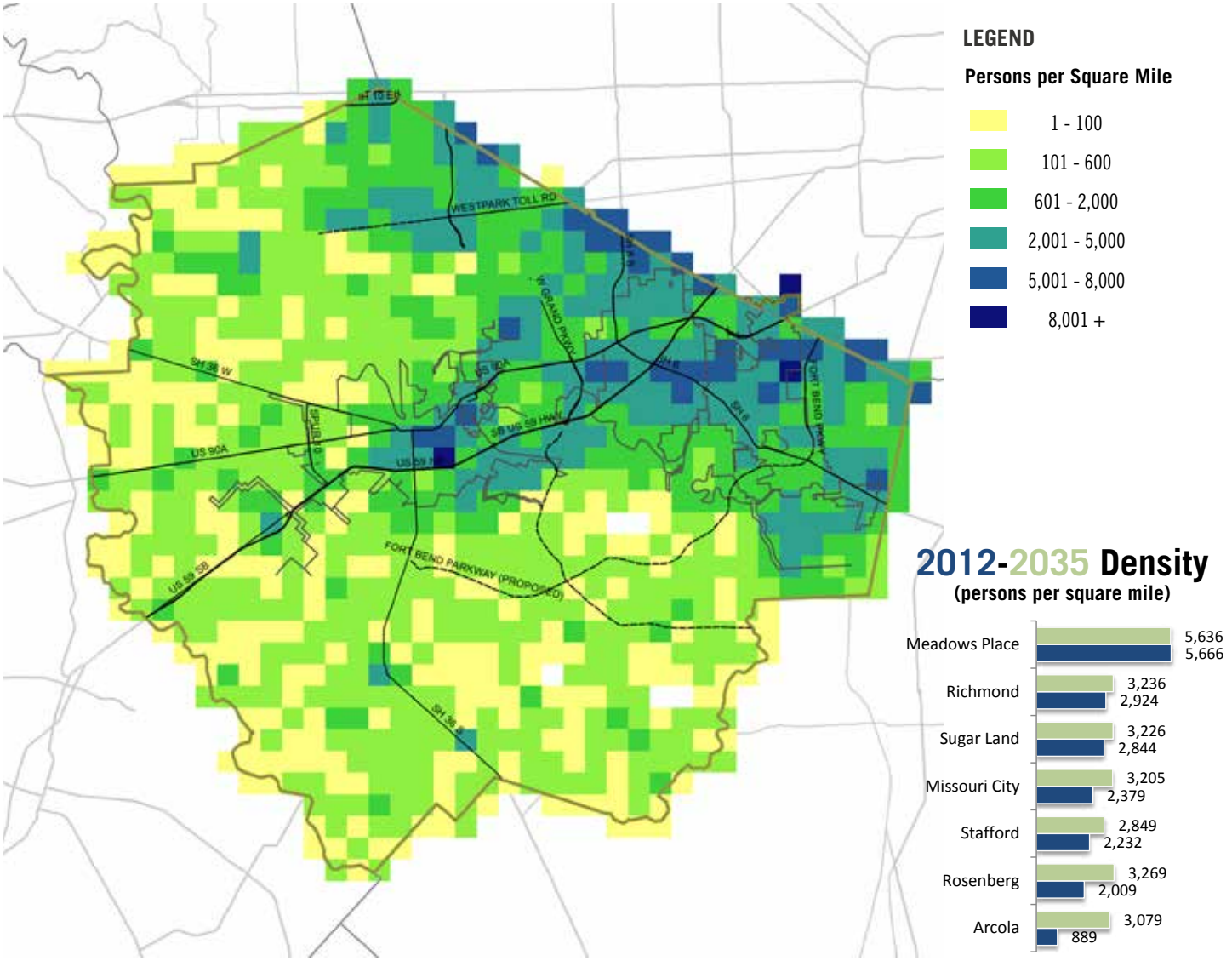
Figure D1.1: Jobs and Employment Projections Estimates (2012-2035)



Source: H-GAC 2035 Regional Population and Employment Demographics Model

Figure D1.2: Estimated Population Density in Fort Bend County (2012)

The H-GAC 2035 Regional Population and Employment Demographics Model provides a baseline for development in the area and shows what the population and employment distribution would look like in the projected scenario. Figures D1.2 & D1.3 show the current and projected population density based on H-GAC projections for one square mile sections of Fort Bend County. On average, the overall population density in the region is projected to increase though the peak density is not projected to increase significantly. This means higher density development that may be more urban and transit friendly is not projected to occur in significant amounts. The overall increase is due to the growth in density in less developed areas to achieve levels comparable to much of the currently developed residential densities found in the region today while the maximum population density stays the same in areas near the border with Harris County. This is partially driven by the fact that the model does not typically project land use changes, such as higher density redevelopment, in areas that currently have single-family residential land uses.

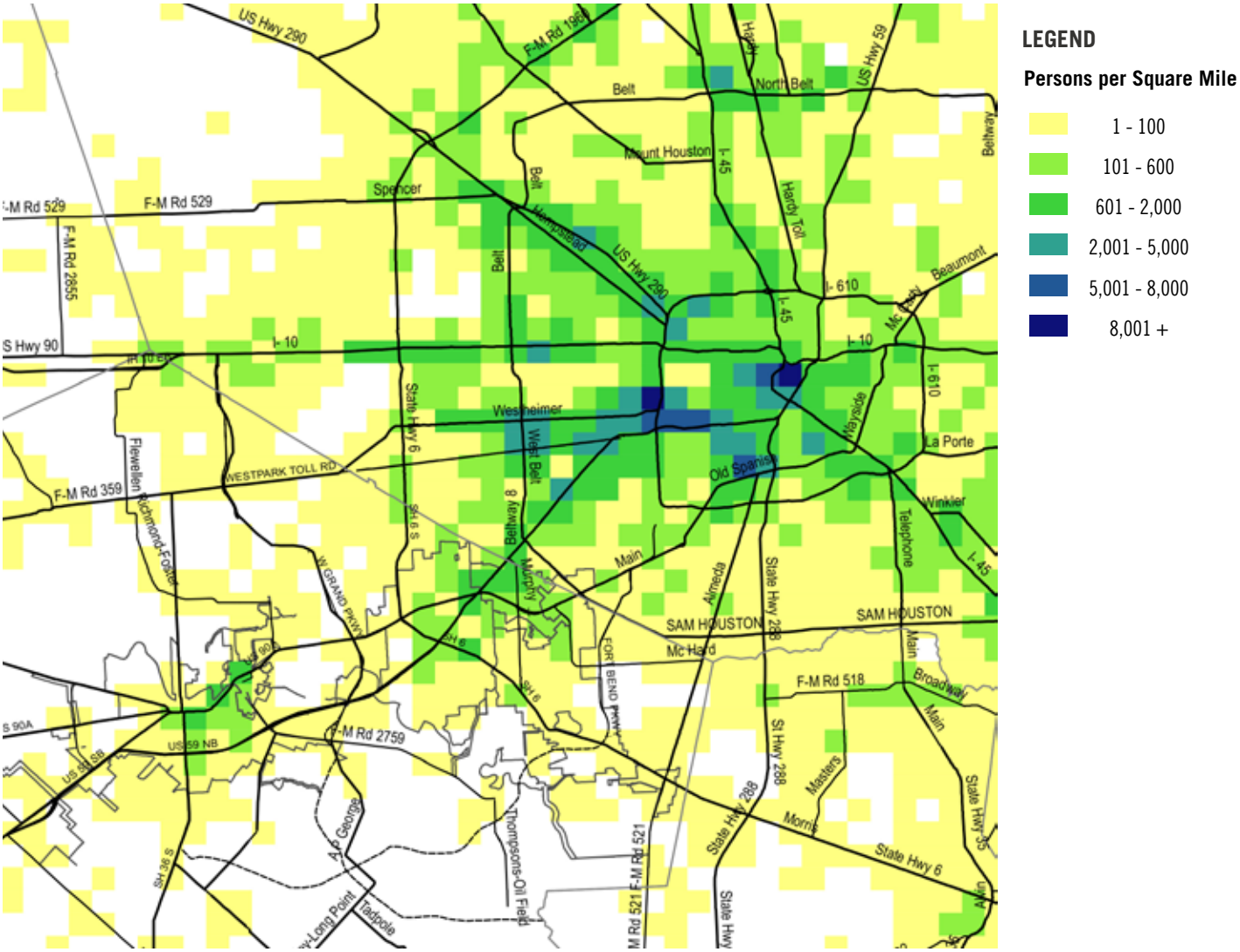


Source: H-GAC 2035 Regional Population and Employment Demographics Model

Figure D1.3: Projected Population Density in Fort Bend County (2035)

Therefore, the highest observed population density increases are seen in Arcola, Rosenberg, and Stafford primarily because they have the largest gap to full build out levels of residential. The population density in Meadows Place stays relatively constant due to the fact that city is already residentially built out, residential makes up the largest component of the city's developable land, and the city has no extraterritorial jurisdiction (ETJ).

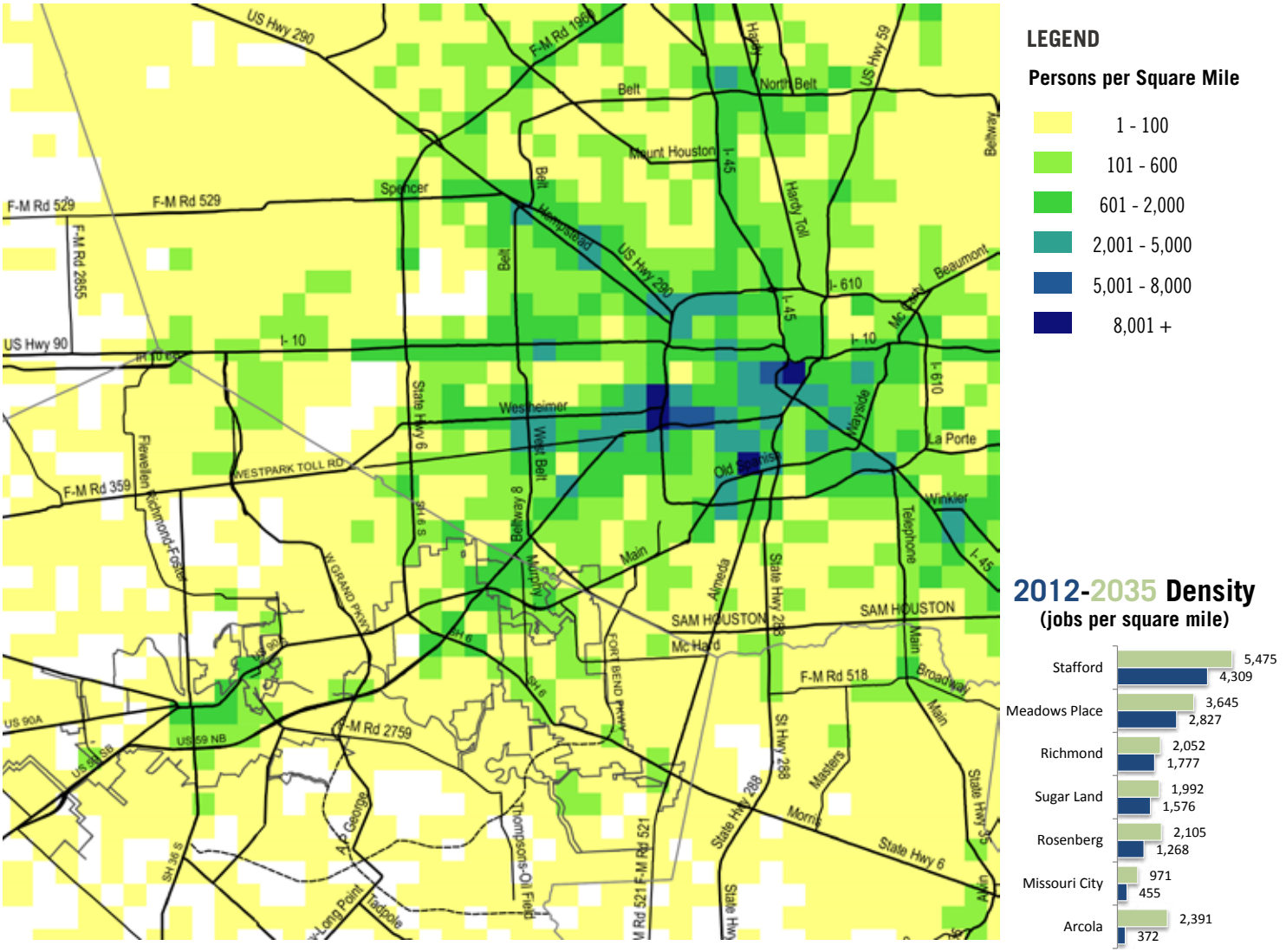
The 2035 population densities for the incorporated cities will likely vary from these values due the continued annexation of ETJs for each of the cities, except Meadows Place. Typically, each city is projected to continue to follow past trends and continue to annex surrounding developments and master planned communities as the timing and financial factors make sense. This continued growth in single-family residential development will increase the need for infrastructure like roadways and water, amenities like parks and open space, and other services such as transit covering a larger geographic region.



Source: H-GAC 2035 Regional Population and Employment Demographics Model

Figure D1.4: Employment Density in Houston Region (2012)

Regional employment growth was also evaluated using the 2035 H-GAC Regional Population and Employment Demographics Model as shown in Figure D1.4 and Figure D1.5. The regional growth model projects continued job growth in areas that already have some concentration of employment, plus employment increases at nodes around the major regional roadways. The model projects that, while job growth is projected to be strong in Fort Bend County, the majority of job growth will occur in the urban core and the most dense job centers will remain in locations such as Downtown Houston, the Texas Medical Center, Greenway Plaza and the Uptown/Galleria area. This indicates the long term need to maintain strong connections to these job center because a likely significant portion of the employment population will be travelling outside of Fort Bend for work. This is likely to remain the case even with significant growth in jobs in the study area. While for many people it is ideal to live relatively close to their workplace, thus shortening commute time and distance, it is frequently difficult in households where multiple people work to be able to match work and home locations for all employees.



Source: H-GAC 2035 Regional Population and Employment Demographics Model

Figure D1.5: Projected Employment Density in Houston Region (2035)

Certain areas within the Greater Houston Area, including Sugar Land Town Square, the Energy Corridor, and Westchase District, have outperformed the model predictions for the year 2012 due to significant growth and new commercial development. Based on the model projections for 2035 (Figure D1.5), the highest percentage of growth in job density will be in Arcola, which could go from an area with the lowest number of jobs per square mile to third highest behind Stafford and Meadows Place due to projected increase in industrial land uses likely related to the rail service and freeway access in the area. Other job centers are projected to focus along major corridors of US 59, SH 6, US 90A and Beltway 8.

DEMOGRAPHIC TRENDS

Significant demographic trends are effecting the entire United States. For example, the country is facing the effects of an aging population as the first of the baby boomer generation is reaching retirement. As life expectancy continues to rise and birth rates decline the percentage of persons over the age of 65 will continue to increase. The population of Fort Bend County is projected to increase for all age brackets, but the percentage increase for each age bracket is disproportionate due the increasing average age of all residents.

Based on an analysis beginning with the 2010 census, major age cohorts will see significant shifts in their share of the overall population. In 2010, 8% of Fort Bend County's population was estimated to be over the age of 65. By 2040, the percentage of Fort Bend residents over the age of 65 is projected to be 22%, an increase of over 130,000 seniors, a significantly larger portion of which will be female. While the 65+ bracket increases, the percentage of the population within the Under 18 and 18-24 brackets decreases.

This will have impacts on economic activity. Seniors tend to have and spend less disposable income during retirement. There will also be changing needs for social services, healthcare, and residential housing options. Figure D1.6 through Figure D1.9 show the breakdown of population by sex and age cohort projected through 2040.

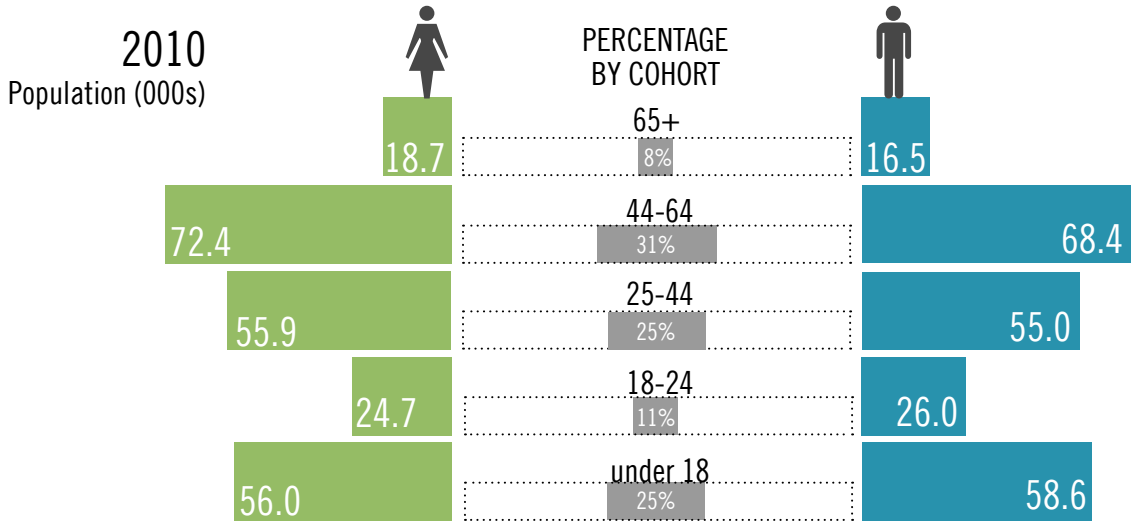


Figure D1.6: 2010 Demographic Breakdown

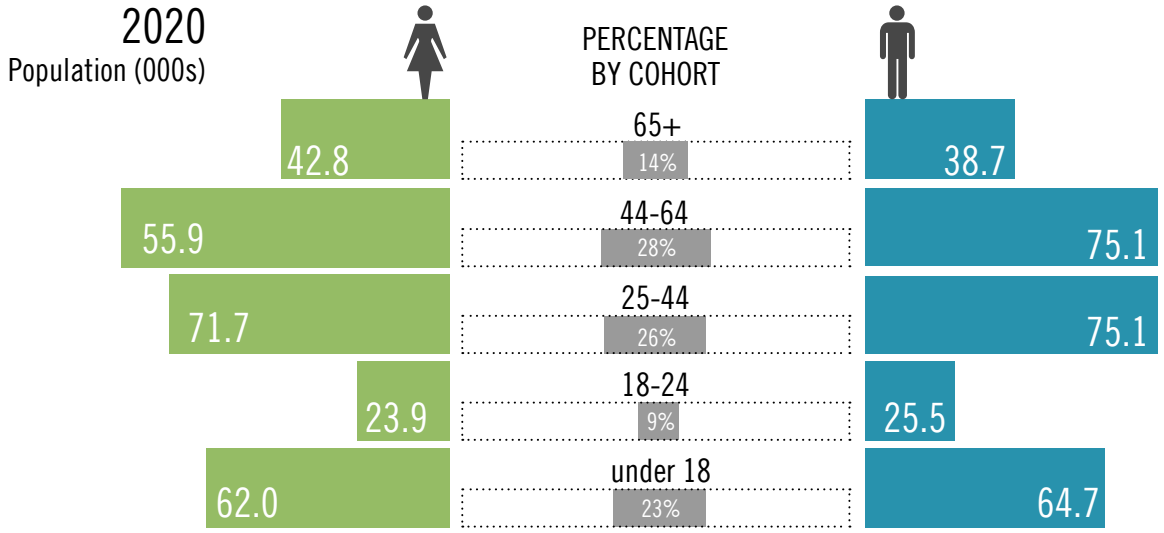


Figure D1.7: Projected 2020 Demographic Breakdown

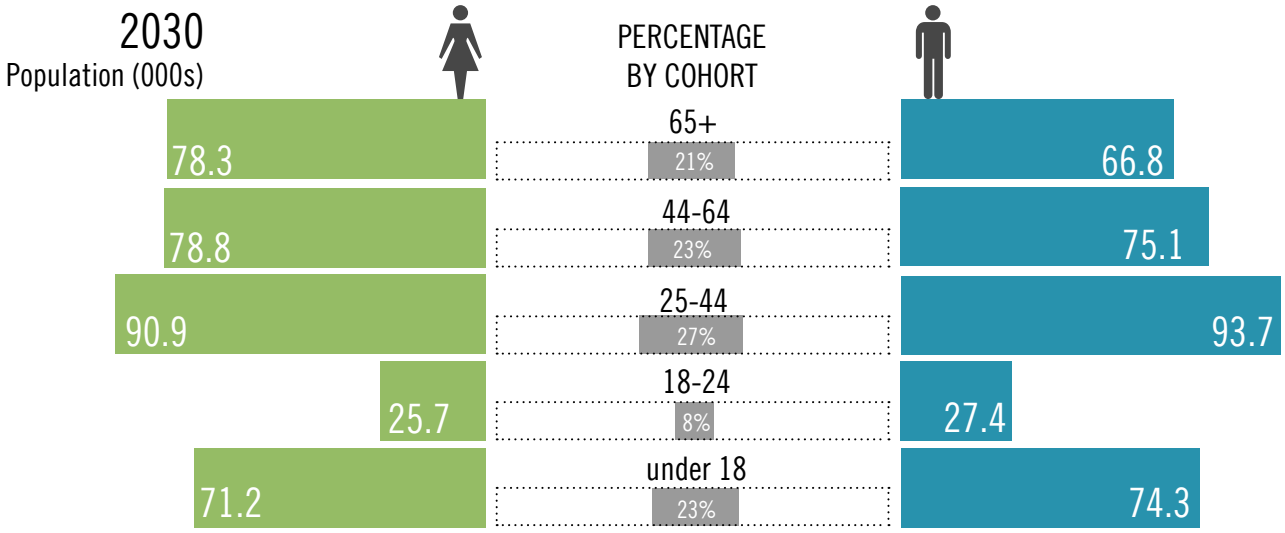


Figure D1.8: Projected 2030 Demographic Breakdown

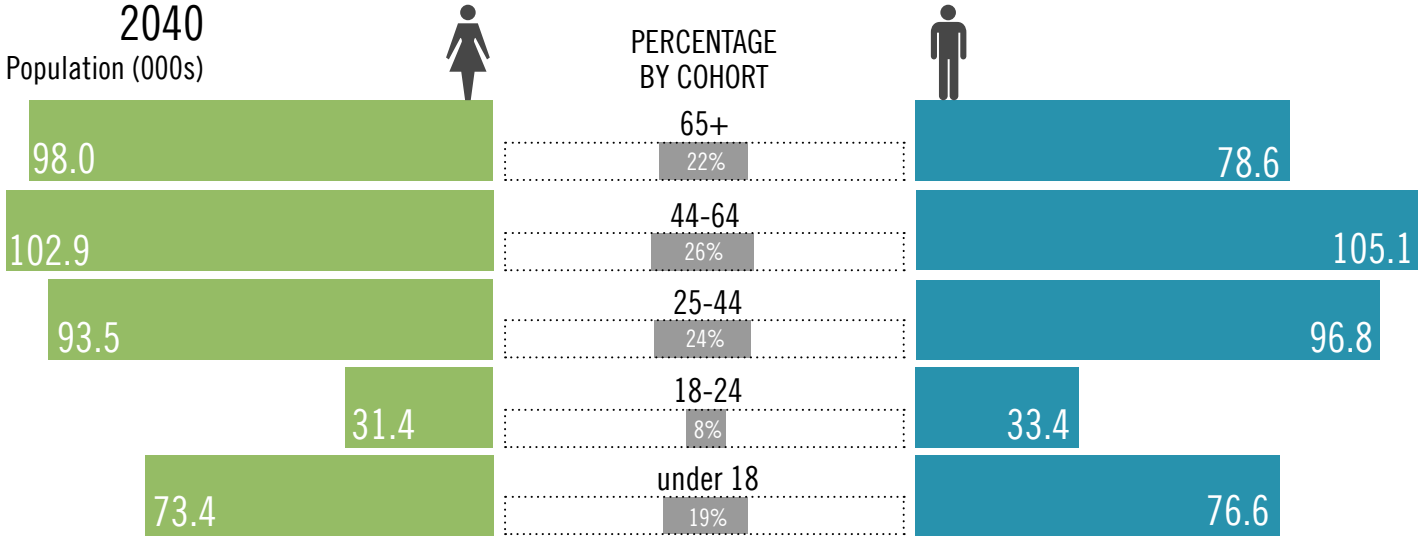
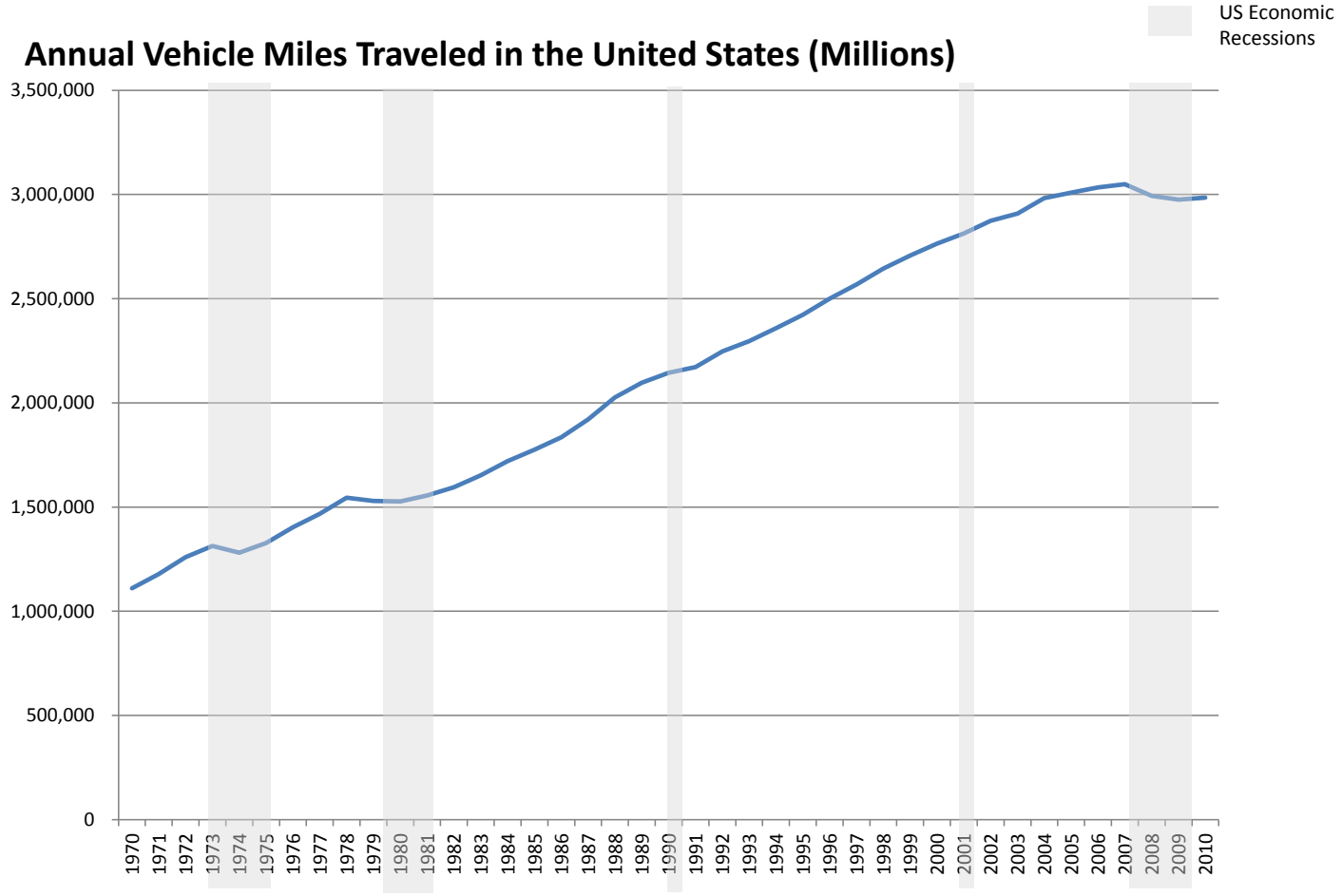


Figure D1.9: Projected 2040 Demographic Breakdown

Source for Figures E1.6-E1.9: US Census; Federal-State Cooperative for Population Projections; Texas State Data Center
Assumes 0.5 migration rate for 1990 migration as was developed prior to the 2010 Census; These assumptions underestimate the current population in Fort Bend County and are used to illustrate the growth in aging population

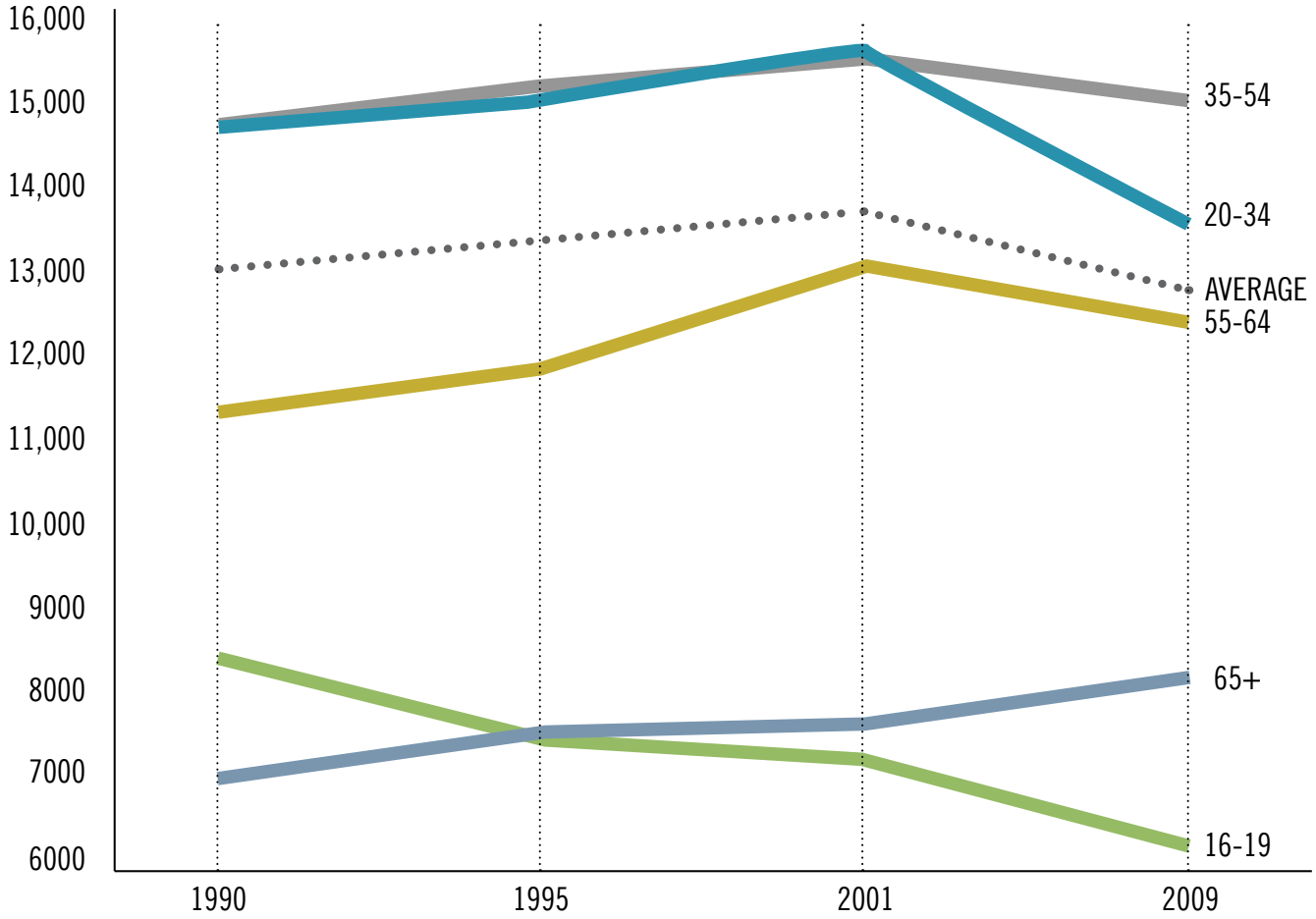
With changing demographics comes changing preferences that will impact issues such as housing and mobility. For example, economic and demographic trends have a significant impact on driving behavior. From 1970 until 2007 the annual vehicle miles traveled (VMT) by drivers in the United States has been steadily increasing at a rate faster than overall population growth. Typically, the only declines in VMT growth occur during periods of economic recession. As shown in Figure D1.10, starting with the economic recession in 2007, that upward trend has reversed to where current levels are similar to rates last seen in the 2003-2004 time period.



Source: FHWA Office of Highway Policy Information

Figure D1.10: Annual Vehicle Miles Traveled

This decline has occurred in part because the of a decline in average miles driven for licensed drivers though this has not occurred consistently across all age groups. This is partly due to economic conditions that have adversely effected younger people at a higher rate, with unemployment in the 29 and under range much higher than the national average. Also, an increasing body of research supports the finding that car ownership, driving, or obtaining a driver's license are becoming less of a priority among younger age groups. Many younger people no longer see the car as a status symbol but instead seek the latest smart phone or other electronic devise.



Source: 2009 National Household Travel Survey (Self Reported); Transportation and the New Generation: Why Young People Are Driving Less and What It Means for Transportation Policy (Frontier Group)

Figure D1.11: Annual Vehicle Miles Traveled in the Untied States by Driver Age

Figure D1.11 shows the average annual miles per licensed driver was lower in 2009 than it was in 1990. This is reflected in the relatively large decrease in VMT for drivers between the ages of 16 and 19 and 20 to 34, but all age groups declined from 2001 to 2009 with the exception of the older 65+ motorists. If these trends continue it will have a long term impact on both the vehicle demand on area roadways and the overall needs of the transportation system. If coupled with development that supports alternative transportation modes, providing alternatives to single occupant driving will be critical to the region's ability to attract young residents. It will be important to monitor these trend as economic performance improves in the coming years to determine whether the changes that have occurred are sticking and the driving rate remains lower among most demographic groups.

SOCIOECONOMIC VARIABILITY

While in total Fort Bend County has shown strong economic performance, there is a wide spectrum of socioeconomic characteristics within the county, as shown in Figure D1.12. The Fort Bend County median household income is $78,845 but the median income for each of the seven cities ranges from significantly lower (just above $40,000 in Rosenberg and Richmond) to significantly higher ($101,600 in Sugar Land). Meadows Place and Missouri City have similar median incomes to the regional. Richmond, Rosenberg, Arcola, and Stafford all have median household incomes that are less than the County median. While Stafford, Arcola and Rosenberg may fall short of the Fort Bend County median incomes they are higher than the City of Houston median income ($42,962), and Stafford is higher than the Harris County median income ($51,444).

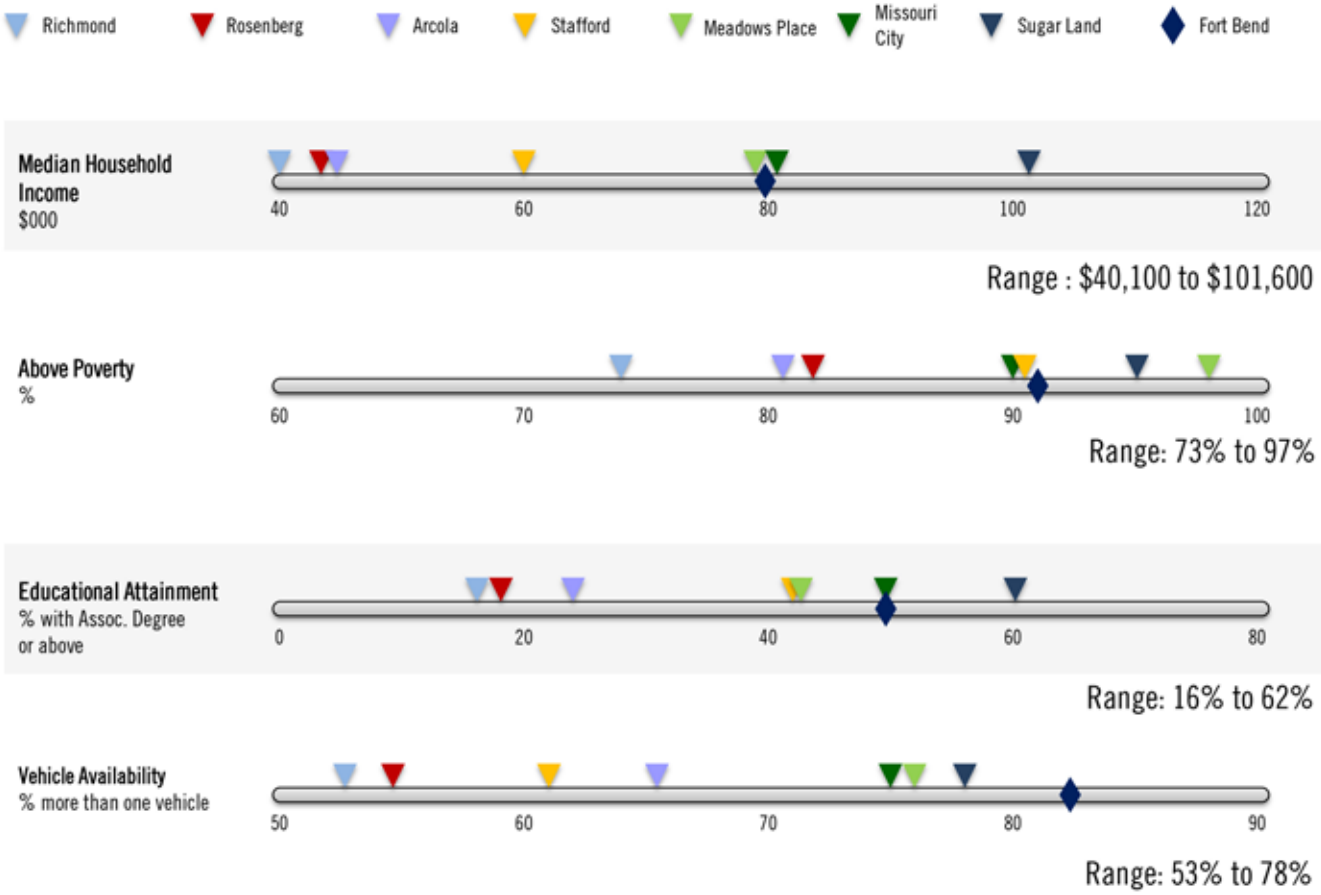


Figure D1.12: Socioeconomic Distribution by City

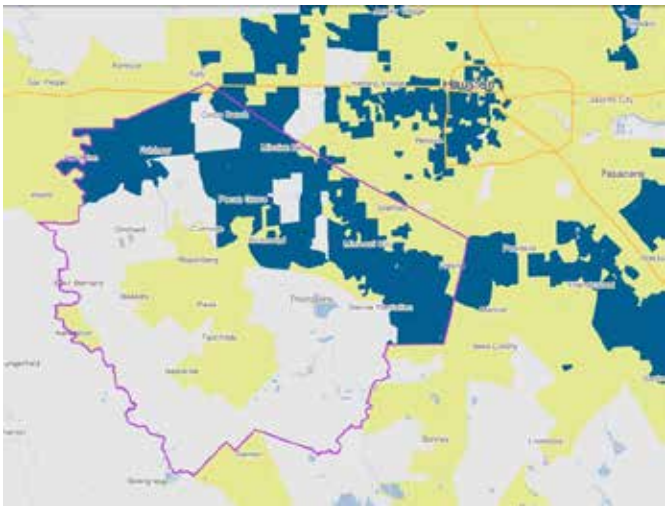
Variability exists across other socioeconomic factors as well. Within the entirety of Fort Bend County only 5.1% of the residents live below the poverty line (assumed in 2012 to be $23,050 for a family of 4). This value is less than the City of Houston (8%), Harris County (7.3%), and the state of Texas (7%). While the overall rate is low, the percentage of residents living in poverty ranges greatly from 3% of the population in Meadows Place to over 26% in Richmond. Income and poverty rates have strong correlations to educational attainment as discussed in Chapter C. While Fort Bend County overall, and in particular Sugar Land, have high rates of post-high school educational attainment, significant portions of the study area are well below the regional average. Developing a skilled workforce is a critical area when looking to attract new businesses and economic activity. The growth in educational options through the local University of Houston Sugar Land, Houston Community College campuses, and Wharton County Junior College campuses will play a key role in building this skilled workforce.

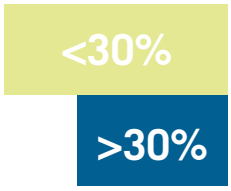
Another critical factor influencing the demands on area roadways and the need for alternatives is the share of households with access to a personal vehicle. The percentage of households in of each of the seven cities with only more than one vehicle available falls below the county average of 85%. Richmond has the lowest percentage of households with more than one car at 52%. In addition, 11% of Richmond households have no vehicles available; this is the highest among the seven cities. Seven percent of Rosenberg households have no vehicle available; this is likely a main contributing factor to Rosenberg having the highest number of demand response transit trips (assuming Rosenberg has outpaced Sugar Land since 2008, the last record of available data.)

In lower level socioeconomic areas, the cost of transportation can have a significant impact on people's total cost of living, particularly in areas where lower levels of public transportation are available. The H+T Index is a value developed by the US Department of Housing and Urban Development (HUD), the Center for Neighborhood Technology (CNT) and Center for Transit Orientated Development (CTOPD) to measure a neighborhood's "true affordability" by combining the cost of housing and transportation. Typically housing costs make up the highest percent of a household's expenses and transportation expenses are a significant portion. Figure D1.13 below shows Fort Bend County and surrounding areas by neighborhood block groups to illustrate the impact transportation costs have on affordability.

In Fort Bend County, 60% of neighborhoods have an average household cost less than 30% of the Houston MSA regional average Household Income for a typical family ($53,871), but only 13% of all neighborhoods have household plus transportation cost less than 45% of their income, which is viewed by HUD as a cutoff line for affordability. This is a significantly lower share of the study area that would be affordable for many moderate income residents with service jobs in the study area. The typical driving distances for many work trips, limited transportation alternatives, and cost of refueling impact the ability for families to locate in the area though frequently people do not fully factor transportation costs into their home purchase decisions. As congestion grows, the impact of transportation costs on households will likely increase which will create new challenges for the Fort Bend study area in terms of transportation investments, housing policy and attracting local job growth.

HOUSEHOLD COSTS AS A PERCENTAGE OF INCOME
Regional HHI: $53,871

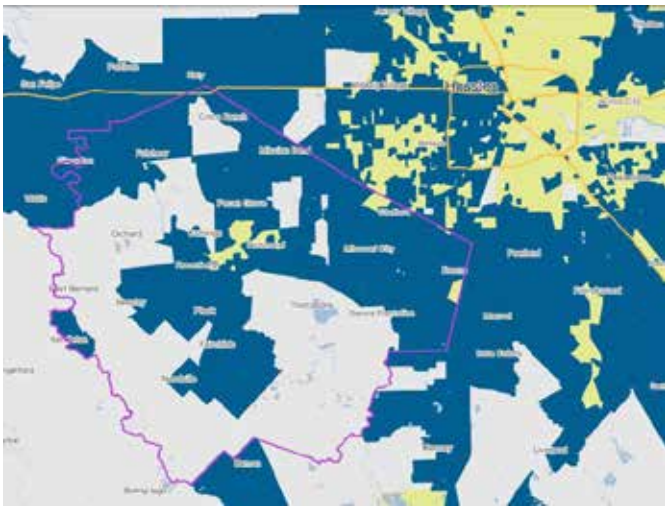


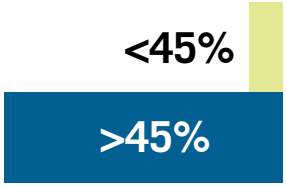


98 Neighborhoods = 60%

66 Neighborhoods = 40%

HOUSEHOLD AND TRANSPORTATION COSTS AS A PERCENTAGE OF INCOME
Regional HHI: $53,871





22 Neighborhoods = 13%

142 Neighborhoods = 87%

Source: Center for Neighborhood Technology Housing + Transportation Affordability Index; For more details on the methodology please visit: http://www.cnt.org/

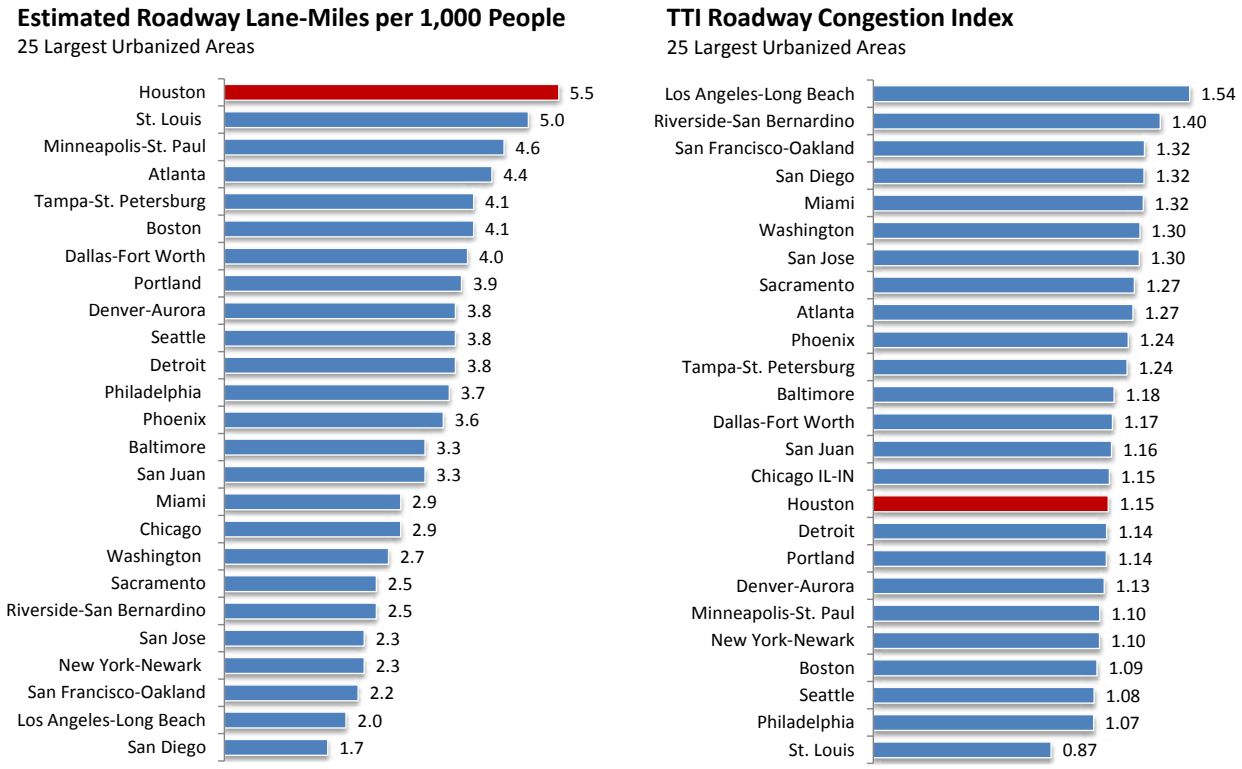
Figure D1.13: Fort Bend County Housing and Transportation Index

D 2 INFRASTRUCTURE AND MOBILITY TO SUPPORT GROWTH

The greater Houston region has supported the rapid growth over the past several decades with major investments in transportation enhancements, from transit services to bicycle trails to traffic operations improvements, but primarily with projects adding roadway capacity. As shown in Figure D2.1, out of the 25 largest urbanized area in the United States, the Houston urbanized area, which includes most of developed sections of Fort Bend County, ranks highest in the nation for the estimated roadway lane-miles per 1,000 people at 5.5 lane miles. This is 10% higher than the second highest, St. Louis, and 25-50% higher than other large growing southern cities including Dallas-Fort Worth, Atlanta and Phoenix.

This investment in roadway miles has allowed the Houston region to maintain relatively good performance on congestion metrics such as the Texas A&M Transportation Institute (TTI) Roadway Congestion Index. This metric assesses travel speeds during congested periods versus during free flow conditions. Houston outperforms many of the comparable cities on this metric and is significantly better than areas such as cities in California with much lower roadway to people ratios. The ratio does not completely capture the total delay because it doesn't account for average travel distance and delays which would skew data in favor of areas where commutes are shorter than they are in Houston.

While the investment in roadways has supported continued growth, over time this level of infrastructure investment will also require continued maintenance to sustain operations. Funding for transportation projects has been challenging due to such factors as declining gas tax revenue, so it will be important for jurisdictions in the study area to plan for long term financing for maintenance costs. This will be critical as major roadways in Fort Bend and the region reach the end of their useful life.



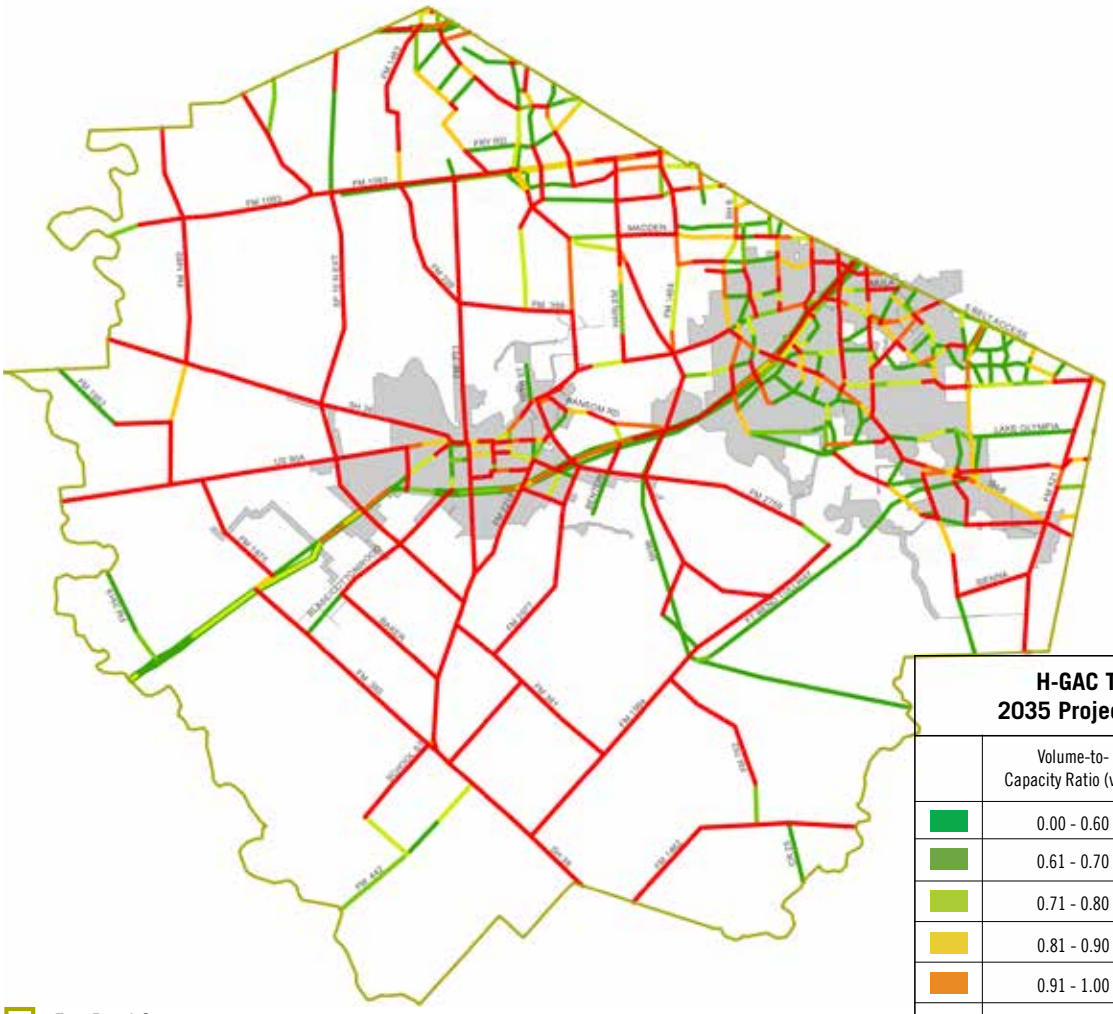
Source: FHWA Highway Statistics 2008, Urbanized Areas - 2008 Selected Characteristics

Figure D2.1: Roadway Miles and Congestion Index

POPULATION AND JOB GROWTH STRESS ON INFRASTRUCTURE AND MOBILITY

Even given the level of investment the region has made on transportation infrastructure, the roadway network in Fort Bend County is projected to experience a significant increase in congestion by 2035. The H-GAC Regional Travel Demand Model shows a majority of roadway links operating at acceptable capacity ratios for 2011, as measured by the projected demand relative to the roadway capacity. As shown in Figure D2.2, by 2035 for baseline conditions, the highest percentage of links in Fort Bend County will be over capacity with 35% of links having a demand to capacity ratio over 1. Major corridors, such as SH 6, US 59, FM 1092, and the Westpark Tollway, that serve both local access and regional trips and are projected to see increasing congestion that will impact mobility.

This model assumes the completion of sponsored projects identified in the 2035 Regional Transportation Plan (Figure D2.4) that impact Fort Bend County but does not include the construction of all of the major thoroughfares in the study area as defined in the latest Fort Bend County Major Thoroughfare Plan and the H-GAC Regional Thoroughfare Plan. This is important because the construction of major thoroughfares will be critical to providing alternative corridors for motorists to support projected growth and would be necessary to allow growth to occur. With the construction of these roadways, at least partly constructed by developers of adjacent properties, traffic will likely be more distributed and overall congestion levels will be improved.



H-GAC Travel Demand Model
2035 Projections (Volume/Capacity)

	Volume-to-Capacity Ratio (v/c)*	Percent of Links 2011	Percent of Links 2035
	0.00 - 0.60	59%	34%
	0.61 - 0.70	9%	6%
	0.71 - 0.80	8%	8%
	0.81 - 0.90	6%	8%
	0.91 - 1.00	5%	7%
	1.01 - 2.00	13%	35%
	2.01+	0%	2%

*Based on average annual daily traffic projections

Fort Bend County

Seven Cities' City Limits

Source: H-GAC Regional Travel Demand Model

Figure D2.2: 2011 Travel Demand Model

While traffic congestion will increase locally, the biggest impact of growth on the regional network is likely to be in regional trips, such as those to the Houston Central Business District, the Texas Medical Center, and other major activity centers. The regional roadway network around Fort Bend County, showed in the dashed area in Figure D2.3, will have more than 50% of the regional links over capacity. The 2035 regional travel model included future planned projects in the current Regional Transportation Plan (RTP) including the extension of the Fort Bend Parkway Toll Road, Westpark Tollway, and the Grand Parkway Section C (from US 59 to US 288). The current 2035 RTP Update was updated in 2010 to account for a change in guaranteed funding sources for some projects. A map of all RTP projects included in the 2010 RTP update within Fort Bend County is shown in Figure D2.4.

The increase in regional congestion levels, despite the planned added capacity projects from the RTP, will have a real impact on transportation costs as well as travel times within the study area. Increasing the share of local jobs can reduce travel times somewhat but maintaining the traditional strong links to regional centers will be critical to maintaining Fort Bend's strong economic position and attractiveness to residents and businesses. Widening the major corridors will be increasingly difficult and expensive therefore developing options for utilizing the existing right-of-way in these corridors will be critical.

Fort Bend County

Seven Cities' City Limits

Analysis Area

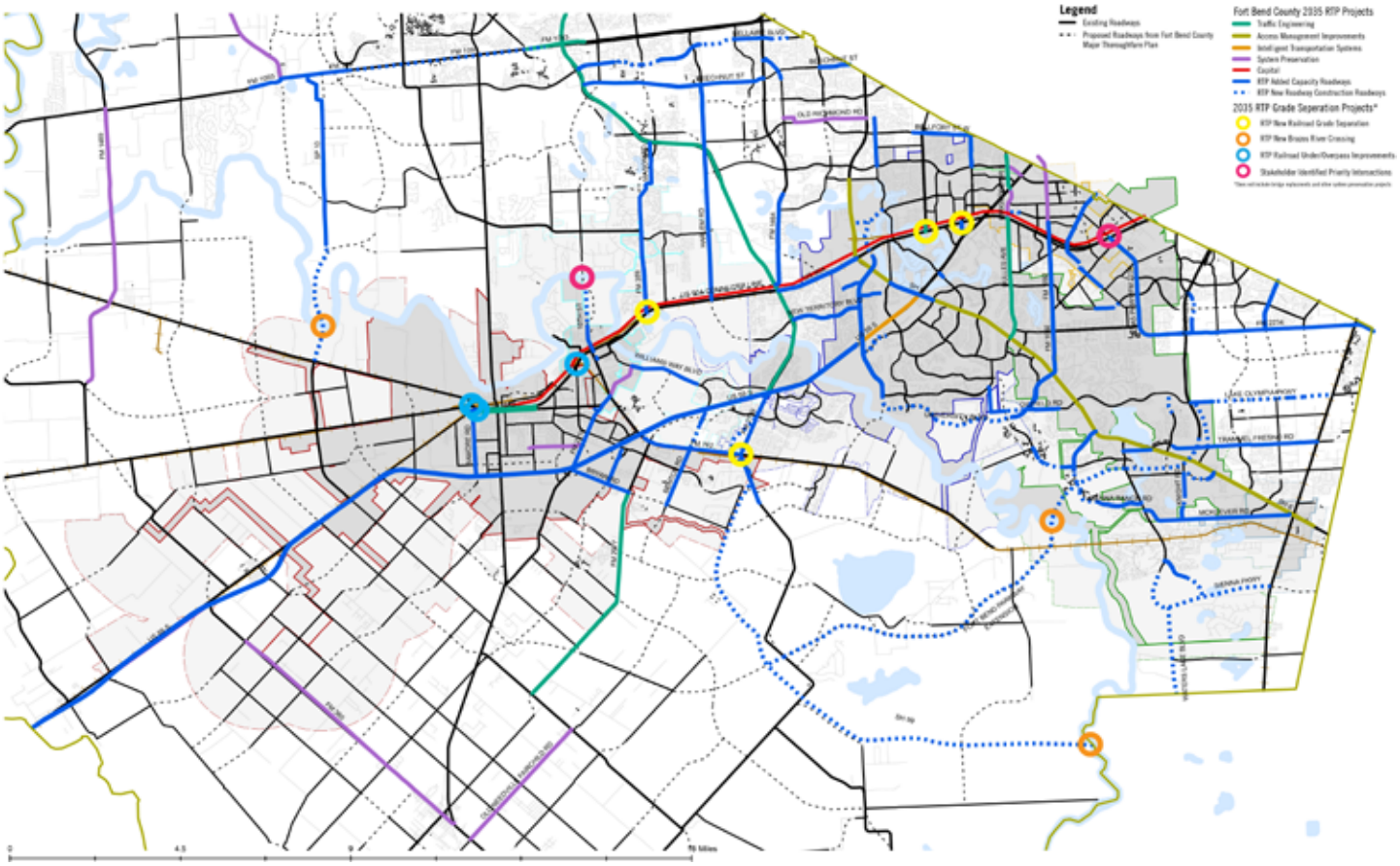
Source: H-GAC Regional Travel Demand Model

H-GAC Travel Demand Model 2035 Projections (Volume/Capacity)

	Volume-to-Capacity Ratio (v/c)*	Percent of Links 2011	Percent of Links 2035
	0.00 - 0.60	33%	9%
	0.61 - 0.70	13%	6%
	0.71 - 0.80	14%	9%
	0.81 - 0.90	14%	10%
	0.91 - 1.00	11%	15%
	1.01 - 2.00	26%	50%
	2.01+	0%	2%

*Based on average annual daily traffic projections

Figure D2.3: Projected 2035 Travel Demand Model



Source: H-GAC 2035 RTP Plan Update

Figure D2.4: Map of Future RTP projects

RTP PROJECTS

The 2010 RTP update guides investment in the transportation system of the Houston-Galveston metropolitan region over the next 20 years. It defines an overarching vision for future regional transportation, establishes principles and policies that will lead to the achievement of that vision, and allocates projected revenue to transportation programs and projects that reflect those principles and policies. Figure D2.4 shows the various projects currently defined in the 2035 RTP Update. The categories of projects are defined as follows:

ADDED CAPACITY

Construction of new roads and widening of existing roads for the purpose of adding system capacity. Projects may include grade separations, intersection improvements and frontage roads if they are components of a new construction or widening project.

SYSTEM PRESERVATION

The reconstruction of a road for the purpose of improving traffic flow, preserving the road and extending its useful life. Projects may include major reconstruction of freeways and principal arterials as well as routine maintenance and repair. These types of projects do not add capacity to the system.

TRAFFIC ENGINEERING/FLOW IMPROVEMENTS

Operational projects to improve traffic flow, enhance for pedestrians and provide access to transit services along selected primary arterials. Examples include the addition of turning lanes, coordinated traffic signalization, pedestrian/bicycle crossings, the addition of sidewalks and grade separations.

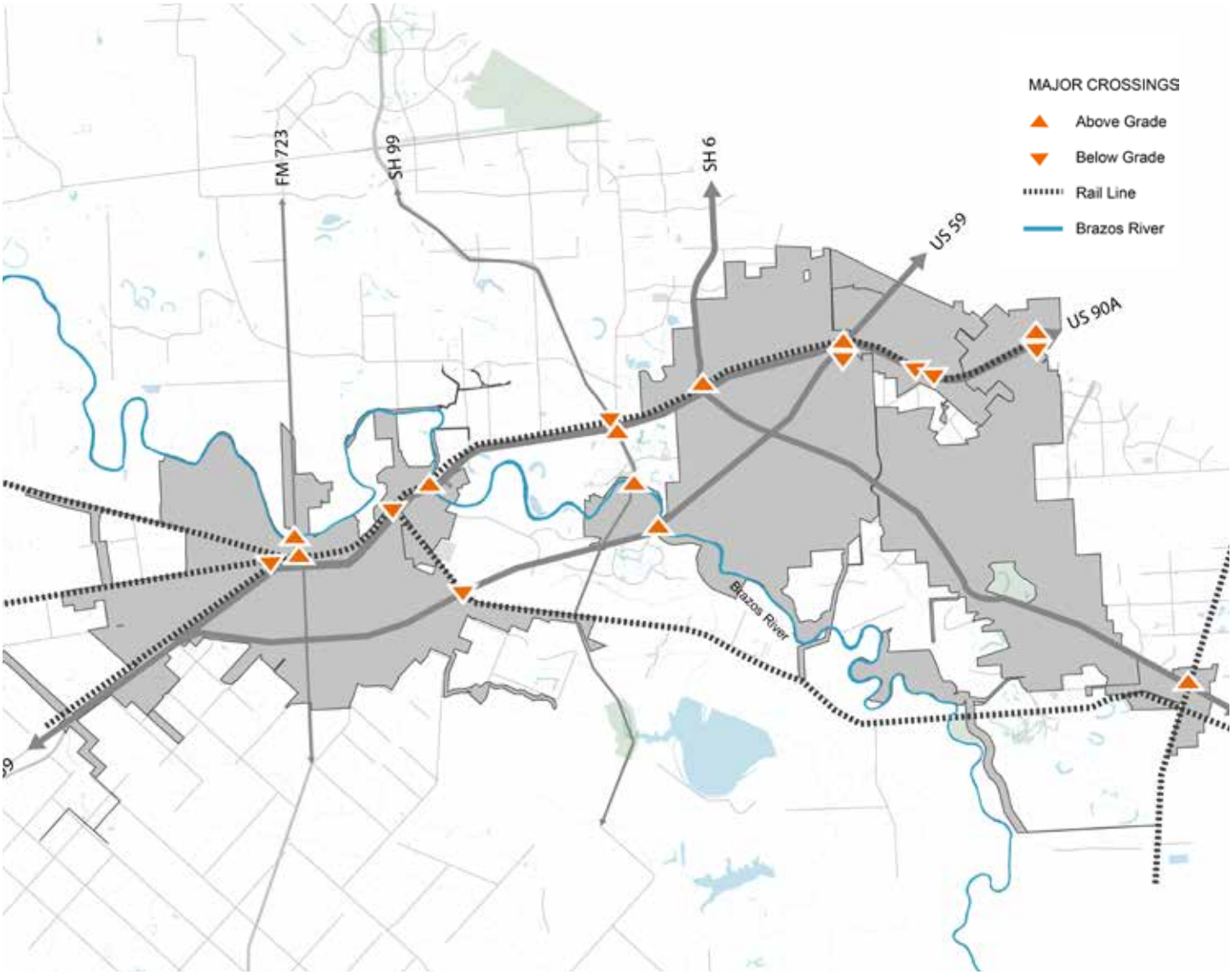
CAPITAL (TRANSIT)

Transit specific projects including, planned Park & Rides, Park & Ride expansion, bus purchases, and other high-capacity transit projects.

STRUCTURAL CHALLENGES AND BARRIERS TO MOBILITY

One of the key challenges to improving long-term mobility in the Fort Bend study area is the presence of existing barriers that limit connectivity. These barriers include natural features like the Brazos River, as well as major rail corridors including the Glidden Rail Subdivision and the BNSF Galveston Subdivision and roadway corridors like US 59. As shown in Figure D2.5, while many rail lines have grade separated crossings of freeways/highway, there are a significant number of at-grade crossings at major thoroughfares in the study area. These at-grade rail crossings present safety, noise and travel-delay impacts to the study area. Sugar Land has worked with the UP to limit some of the noise impacts through a wayside horn system and Stafford has developed several grade separations along 90A. But these cities along with Rosenberg, Richmond, and Missouri City experience significant delay at major thoroughfares that cross the Glidden Sub. These delays are expected to increase with projected rail traffic growth. Neighborhoods in Rosenberg north of the rail lines feel isolated and have limited connectivity to the rest of the city. The presence of the rail lines and the river also limit the ability to develop roadways due to the significant expense in developing new grade separations.

The limited number of crossings of the Brazos River make the existing crossings that much more critical to access. South of US 59 there is no crossing of the Brazos River within the study area. This will be addressed with the future extension of the Fort Bend Parkway toll road which will increase potential development in the southern part of the study area.



Source: Field Assessment

Figure D2.5: Major Crossings of Brazos River and Rail Barriers

Source: Fort Bend Appraisal District; H-GAC Freight Mobility study; Team Analysis

Figure D2.6: Fort Bend Freight Rail System

FREIGHT RAIL: AN ECONOMIC ENGINE AND CHALLENGE

While it does create mobility challenges for area roadways, freight rail has long served as a strong economic engine in Fort Bend County. The assessed value of the land served by the rail is over $1.2 Billion with major locations including the Smithers Lake Power Plant, the Sugar Land Business Park and the Kendleton Intermodal Center serving as key locations with rail access. Over 80% of Fort Bend Survey respondents agree that freight rail is a beneficial economic driver for Fort Bend County. This is a much larger percentage than the 52% that view freight trains as a significant impediment to getting around Fort Bend County, though clearly both are important issues.

Figure D2.6 shows the location of the major freight rail corridors in the study area.

BLUE: UP Glidden Subdivision is a key link in the Union Pacific's east-west rail traffic through the region. The corridor parallels 90A and carries 30-40 trains per day with projects taking it to 60-70 trains per day by 2035. UP is planning to double track this corridor from the Brazos River into Houston.

ORANGE: BNSF Galveston Subdivision provides east-west connectivity south of Houston to Galveston. The corridor parallels 90A and carries 30-40 trains per day with projects taking it to 60-70 trains per day by 2035.

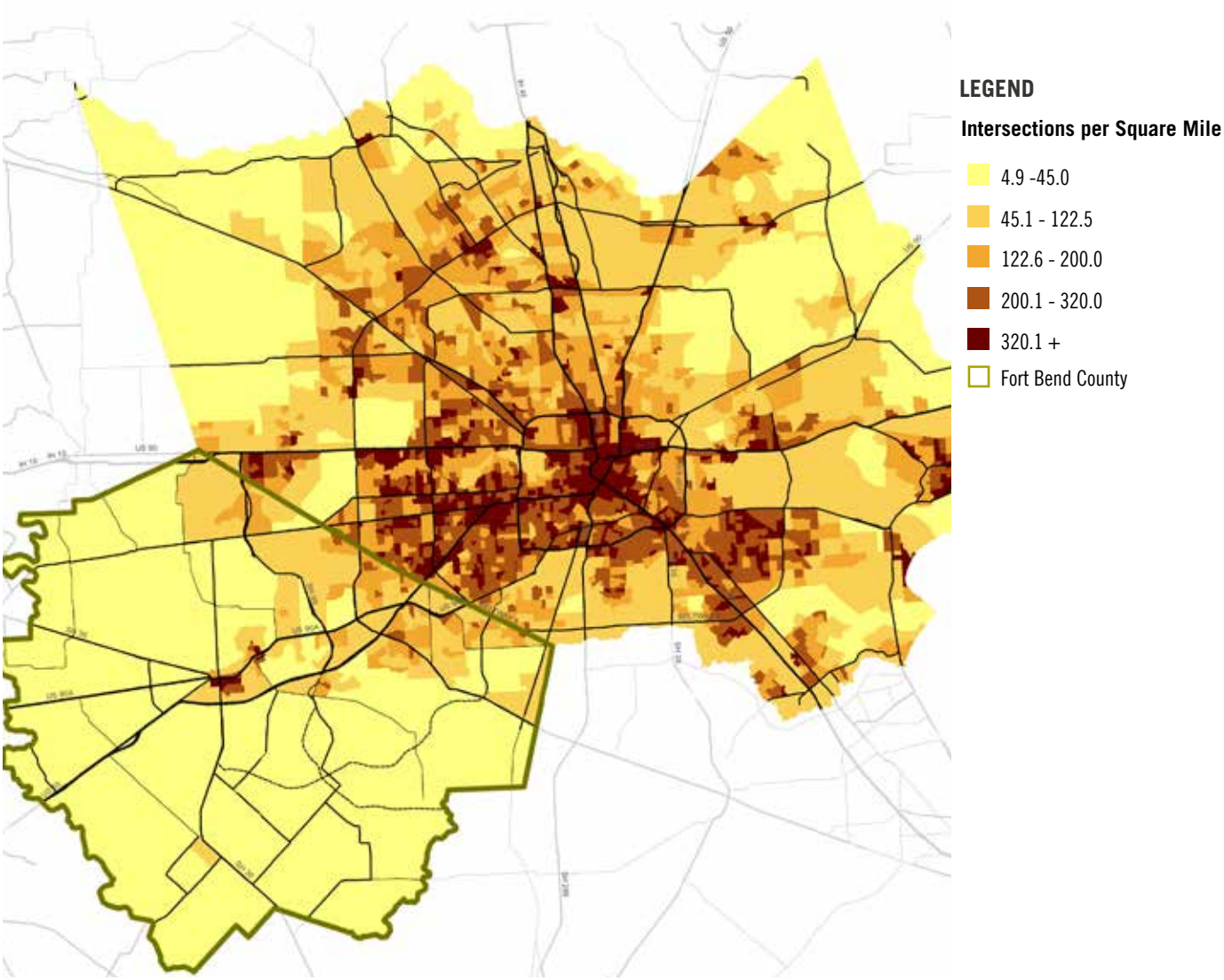
GREEN: Kansas City Southern Victoria-to-Rosenberg line which is an important link in the KCS strategy of improving rail connection to Mexico. A new Intermodal Terminal is being developed south of the study area near Kendleton.

Continued opportunities to create rail-served business parks exist in the study area and can be captured with careful planning. In addition, the US 90A corridor has been identified as a priority corridor for regional commuter rail and the Gulf Coast Rail District, with support of the County and local cities, is studying alternative bypass routes for the Glidden Subdivision which would increase the ability to allow commuter service along the US 90A corridor.

LIMITED ROADWAY NETWORK CONNECTIVITY

Figure D2.7 was created to evaluate the connectivity within both Harris County and Fort Bend County. The connectivity portrayed by the map is based upon the number of intersections per square mile by census block group. Typically, a higher number of intersections per square mile indicates a better connected neighborhood or region. A well connected region provides better dispersion of traffic by allowing alternate routes between destinations. Limited connectivity can concentrate traffic on fewer major corridors, exacerbating congestion on those corridors. Connectivity also plays a large role in creating walkable and bicycle-friendly areas as more connectivity typically means there are shorter more direct routes for these modes to reach their destination. Limited connectivity can significantly increase the distance that these active transportation modes must travel. This can also limit potential catchment areas for transit service when measured by actual walking distance as opposed to direct point-to-point measurements.

The map shows the significantly higher level of connectivity in Harris County than in Fort Bend County. Harris County, and in particular the City of Houston, has a relatively well-defined arterial grid network that supports this connectivity. This does not consistently continue as you get to the Fort Bend County area where individual developments frequently break up any connectivity in the network. The only places in the study area where connectivity measures highly is in the original neighborhoods of Rosenberg and Richmond, which are the oldest cities in the county and were developed with a fairly rigorous grid network. As additional development occurs, opportunities to increase connectivity will be important to limit the impact development has on the existing major corridors and provide alternate routes.



Source: US TIGER/Line Shapefile Files; US Census Bureau, Team Analysis

Figure D2.7: Regional Intersection Densities

DEVELOPING EFFECTIVE TRANSIT SERVICE AND ACTIVE TRANSPORTATION OPTIONS

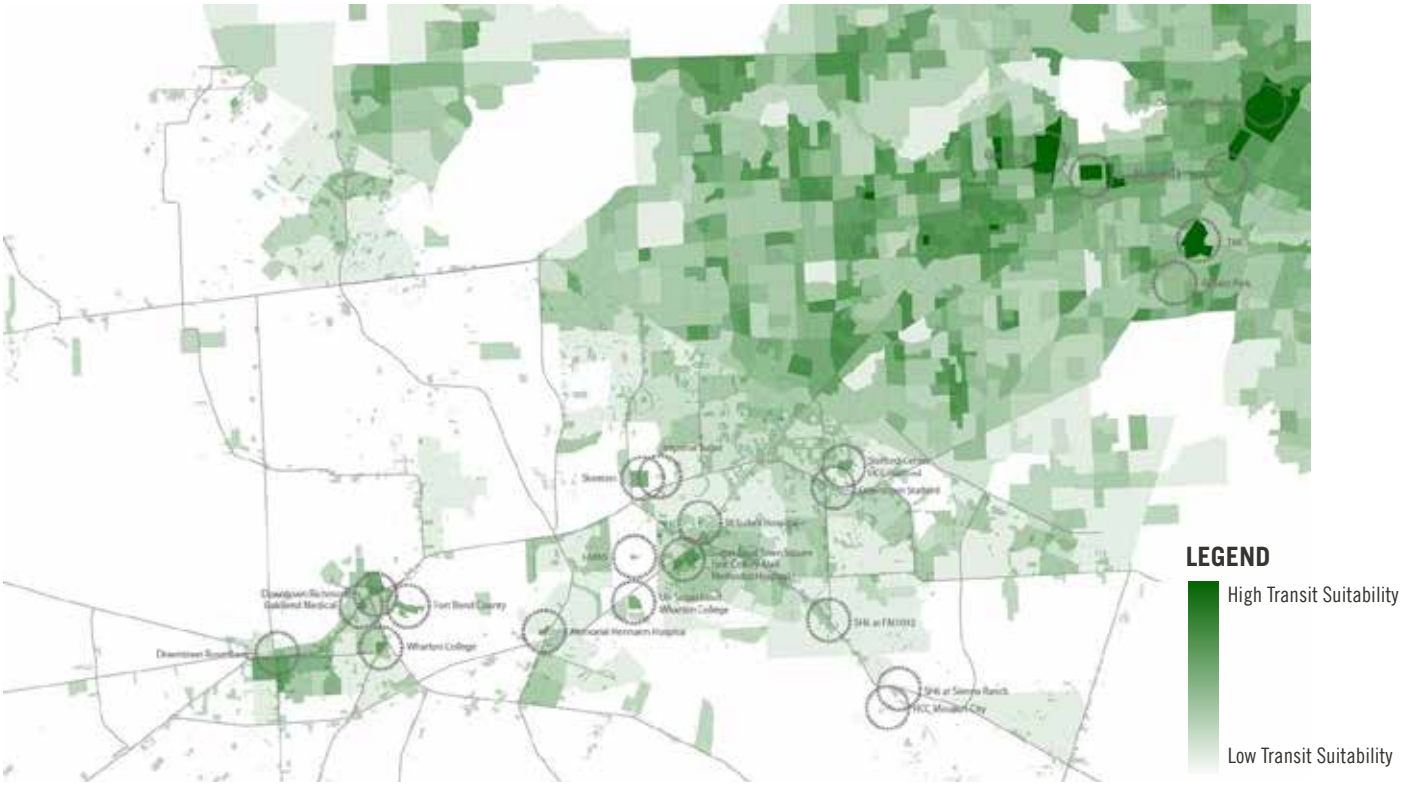
With roadway congestion expected to increase with growth in the study area, providing alternative modes to both reduce roadway demand and increase transportation choices for residents becomes increasingly important. Increasing the number of people using these modes, also known as increasing the mode share, is a critical tool in managing long-term mobility for the region. Only 16% of Fort Bend Survey respondents Agreed or Strongly Agreed that the current transportation network effectively balances the needs for automobile travel with the needs of transit users, pedestrians, and bicyclists. Less than 20% indicated they had access to attractive transportation alternatives to driving a car. Many stakeholders said effectively improving the transit services in the region was a priority. This is reflected in the declining mode share of commute trips that utilize these modes from 15% in 2000 to 14% in 2010. Transit and shared modes including park & ride, vanpools, and carpools, account for 13% of commute trips with active modes of walking and biking only accounting for 1% of the total. These patterns are consistent across the study area with each of the cities seeing a decline (except Sugar Land which remained flat) in transit and active mode share of the total commute trips. While the share of trips is declining, roughly 70% of Fort Bend Survey respondents indicated that they would utilize rail transit to access regional destinations and almost 50% indicated they would use bus transit for some of their trips if it were available. This is supported by the relatively strong ridership that the new Missouri City Park & Ride has experienced since it opened at SH 6 and the Fort Bend Parkway Tollroad.

The overall declining rate of transit usage appears to be driven by several factors. First, the commute type that did see percentage growth in the study area was work-at-home which could be impacted by economic conditions. Also, development patterns in the study area typically make driving the most effective travel mode for most users. Increased transit services such as new park & rides provided by METRO and Fort Bend County will continue to increase options for motorists and received strong support in the Fort Bend Survey. To assess the suitability for transit, the study area was analyzed based on several factors that correspond with transit usage and needs. Determining strong locations for transit service requires the evaluation of multiple factors. Figures D2.8 and D2.9 assess areas in the region and study area against key categories that align with good transit service potential. Factors driving potential transit suitability include:

- High Activity Density: residential population and employment density are key to having a strong pool of riders who would utilize effective transit service.
- Major Destinations: concentrated retail areas such as town centers or shopping malls, educational institutions, hospitals, cultural, sport and entertainment venues, as well as public service buildings such as court houses serve as trips generators.
- Roadway Connectivity: linked to walkability and expanded transit catchment areas as well as the likelihood of developing efficient transit service operations in a region.
- Redevelopment Opportunities: locations for redevelopment such as Downtown Richmond, Downtown Rosenberg, the Imperial Sugar site, locations along SH 6 in Missouri City, and Stafford's Island District present opportunities to integrating transit service into the development especially when linked to some of the above factors.

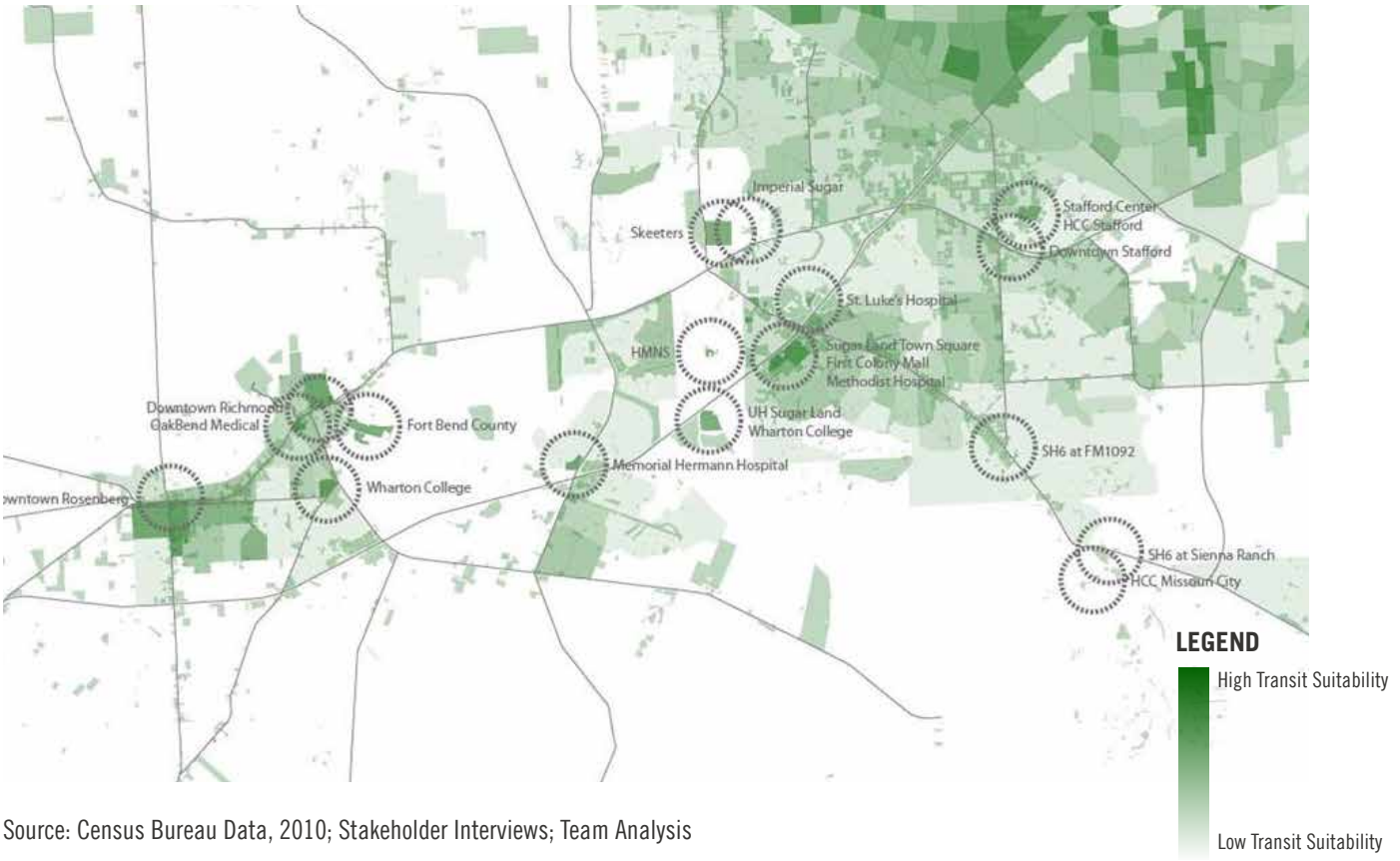
As shown in Figure D2.8 the most transit-suitable locations in the greater Houston region include Downtown Houston, the Texas Medical Center, Greenway Plaza, and Uptown/Galleria area. These are places where current Fort Bend service provides some level of connection. There are limited areas that would be classified as highly transit suitable in Fort Bend County today with the exception of Park and Ride service. As approximately 25% percent of jobs held by Fort Bend residents are within six main job centers in the Houston region, including the four listed above as well as Westchase and the Energy Corridor/Memorial City area, additional Park & Ride service to more effectively serve these destinations will likely be required to support future growth.

Another important aspect of effective transit service is being able to link multiple transit destinations along a line. This will be critical to provide future high-capacity, frequent transit service such as Bus Rapid Transit, light rail, or commuter rail to the study area. As shown, in Figure D2.9, most of the locations that are more transit suitable are along the major corridors of US 59, US 90A and SH 6. Regional corridors adjacent to the study area including US 59 and Beltway 8/Gessner Road also show higher transit suitability and should be looked at for future service.



Source: Census Bureau Data, 2010; Stakeholder Interviews; Team Analysis

Figure D2.8: Transit Suitability Analysis by Census Block Group- Fort Bend & Harris County Region



Source: Census Bureau Data, 2010; Stakeholder Interviews; Team Analysis

Figure D2.9: Transit Suitability Analysis by Census Block Group - Study Area

LIMITED BUT EXPANDING PEDESTRIAN AND BICYCLE INFRASTRUCTURE

Active transportation modes including walking and biking make up a small percentage of overall utilitarian trips in the study area but have been receiving increased focus based on community input and market trends. At the same time, feedback from stakeholder and survey respondents indicate that a significant percentage would walk or bike more with an increase in the number and quality of facilities that exist (Figure D2.10). Recognizing this, several study area cities, including Rosenberg, Sugar Land, and Missouri City, have developed and begun implementation of pedestrian and bicycle plans that will expand this network. Studies show walkability is correlated with economically durable places that retain and grow in value.[1] This is best shown in the study area in Sugar Land Town Square which has grown to be a major entertainment, shopping, and employment center in the region. The higher value of walkable places such as Town Center is enhanced due to the supply of walkable places not meeting the growing market demand from some developers as well as residents and employers.

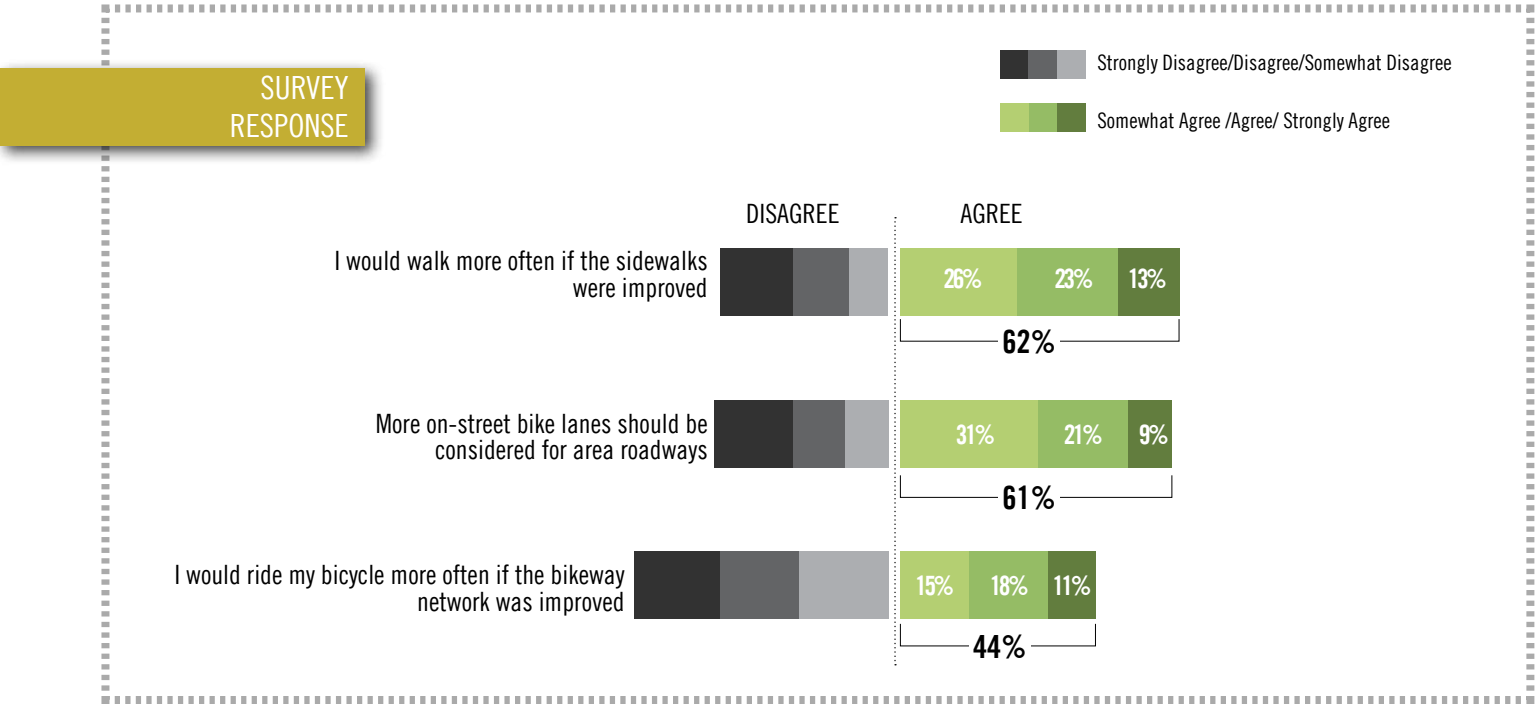
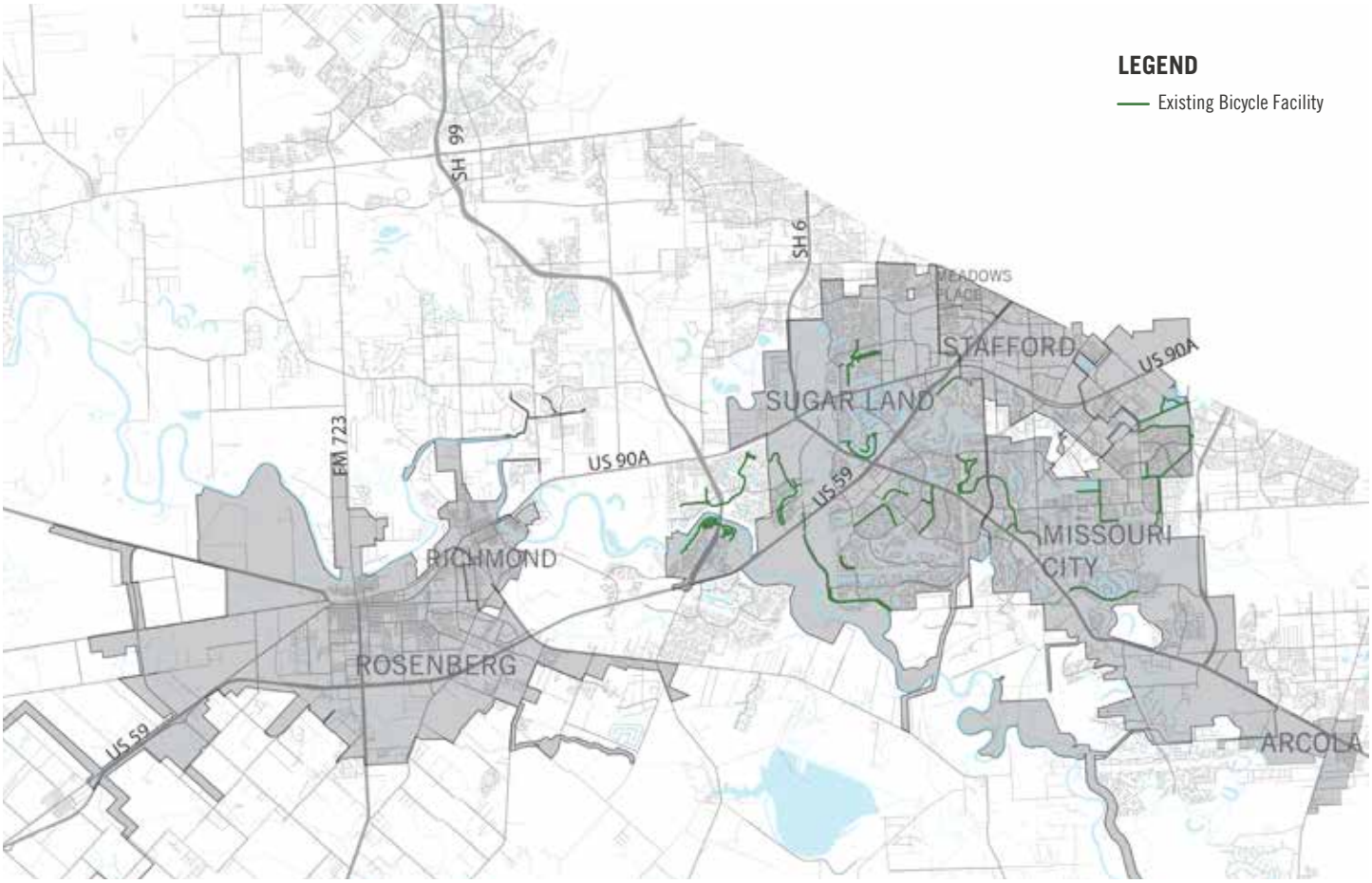


Figure D2.10: Survey Perspectives on Walking and Biking

Stakeholders identified trails and bike paths as desirable amenities to attract young families to neighborhoods and provide people with active transportation choices. Improvements to these modes was also viewed as beneficial if transit services are increased within the study area resulting in the ability for residents to walk or bike to a transit stop nearby and eliminating the need to utilize their personal vehicle. This is critical in areas where a larger percentage of people do not have regular access to a car.

A key issue to increasing walking and biking trips in the study area is perceived safety. Survey respondents' perceptions of walking and biking safety was indicated to be significantly lower than driving. In the study area, there are limited existing bicycle facilities (Figure D2.11) and inconsistent sidewalk regulations and implementation making the use of these modes difficult. Missouri City has implemented several trails along drainage easements through the City park system and is adding on-street facilities with more planning underway to expand the network. Sugar Land has developed a growing network of bicycle facilities and is working to implement a new Pedestrian and Bicycle Master Plan for the City to create more last-mile connections to major destinations and encourage utilitarian or non-recreational trips. Rosenberg identified a set of pedestrian and bicycle improvements to support future transit service in the City and connect underserved neighborhoods to key services, parks and commercial areas. And the City of Houston is making major strides in building out its off-road network of trails, primarily along it major bayous, funded partially by a voter-approved bond. Many of these trails are a relatively short connection to cities in Fort Bend along the Harris County border and provide connections to major destinations and job centers. Coordination across these plans and also identifying regional connections represents a key opportunity for the study area.

[1] Litman, Todd (2003), *Economic Value of Walkability*, Victoria Transport Policy Institute; Leinberger (2012) *Walk This Way*; Brookings Institute



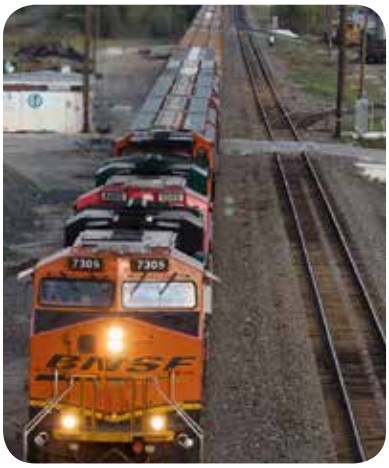
Source: Based on the H-GAC Land Use database, 2011

Figure D2.11: Regional Bicycle Facilities

Sidewalk policies within the study area vary widely. In many cases pedestrian facilities are not required on new roadways or adjacent to new developments and enforcement was reported to be inconsistent. Opportunities also exist to work with developers to improve on-site development standards to support pedestrian access. Addressing some of these issues through improved policies will increase the benefit delivered by investments in trails and sidewalk facilities by making last mile connections safer and more direct. Examples of pedestrian conditions on major corridors in the study area are shown in Figure D2.12.

To achieve the study goal of increased transportation choice will likely require a combination of infrastructure improvements combined with policies around development, infrastructure design and enforcement that will benefit from a coordinated approach across the study area jurisdictions.

Figure D2.12: Sidewalk Needs in the Study Area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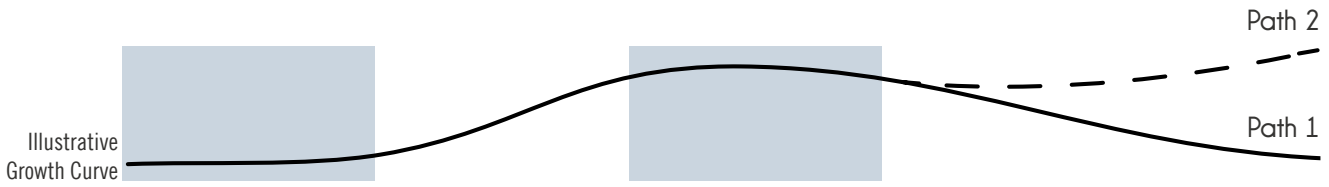
D 3 ECONOMIC DEVELOPMENT AND REDEVELOPMENT

Economic development of cities and the neighborhoods, commercial centers and infrastructure tends to go in cycles as shown in Figure D3.1. New developments with new infrastructure, amenities and housing stock attract buyers, including many young families attracted to the quality and opportunity. Population growth and new rooftops often attract new commercial development. The rapid growth in successful development leads to tax base growth to cover the initial investment in infrastructure for schools, roads and utilities. This growth is very attractive to cities as the initial cost is covered by the development and also supports improvements to areas outside of the development.

The development eventually reaches peak build out and homes and infrastructure begin to show their age. Overall, growth slows and the commercial development can begin to see turnover and eventually vacancies. Less developable land is available and increasingly cities will need to reinvest in the neighborhood to maintain the infrastructure. Cities must manage their finances to address these issues and be prepared to maintain infrastructure as it ages. Study area neighborhoods and commercial developments are increasingly being challenged by these issues and must be proactive in planning to address them. Once tax bases begin to decline it becomes increasingly difficult to keep up with maintenance which can accelerate the downward cycle. An understanding of what market demands are and will be is critical to managing this cycle successfully.



	SMALL TOWN	RAPID GROWTH	PEAK	PATH 1: DECLINE	PATH 2: REDEVELOPMENT
LOCATION	Outside the metropolitan area	At the edge of growth zone	Within metropolitan area	Well within metropolitan area	Well within metropolitan area
POPULATION	Small, stable	Rapidly growing	Slow growth	Stable or declining	Stable to growing
DEMOGRAPHICS	Mix	Largely young families	Older families in some areas; young families in others	Aging population	Aging population; influx of new residents
RESIDENTIAL PROPERTY	Mix	New single-family development with market appeal	Still relatively new and attractive	Aging, undesirable house stock; as original owners move out or die renters move in	New and renovated housing resells; new housing options
COMMERCIAL PROPERTY	Limited; local	Boom in new retail centers with national tenants	Original retail begins to turn over; national tenants moving to new centers while old centers begin to decline	Obsolete retail spaces with widespread vacancy; retail moving to other cities	Renovation and redevelopment of retail to new trail and to other uses
INFRASTRUCTURE	Limited	massive construction of new streets and utilities	New streets and utilities still being constructed; maintenance cost of original infrastructure begins to rise	Infrastructure decays; maintenance funding becomes increasingly challenge	Rehabilitation and transformation
TAX BASE/ PROPERTY VALUE	Low	Fast Growing; Continued room to expand and increase	Growing; less undeveloped land available	Flat/declining, may lead to tax increases and further decline	New development continues to increase tax base

Figure D3.1: Typical Neighborhood Development Cycle

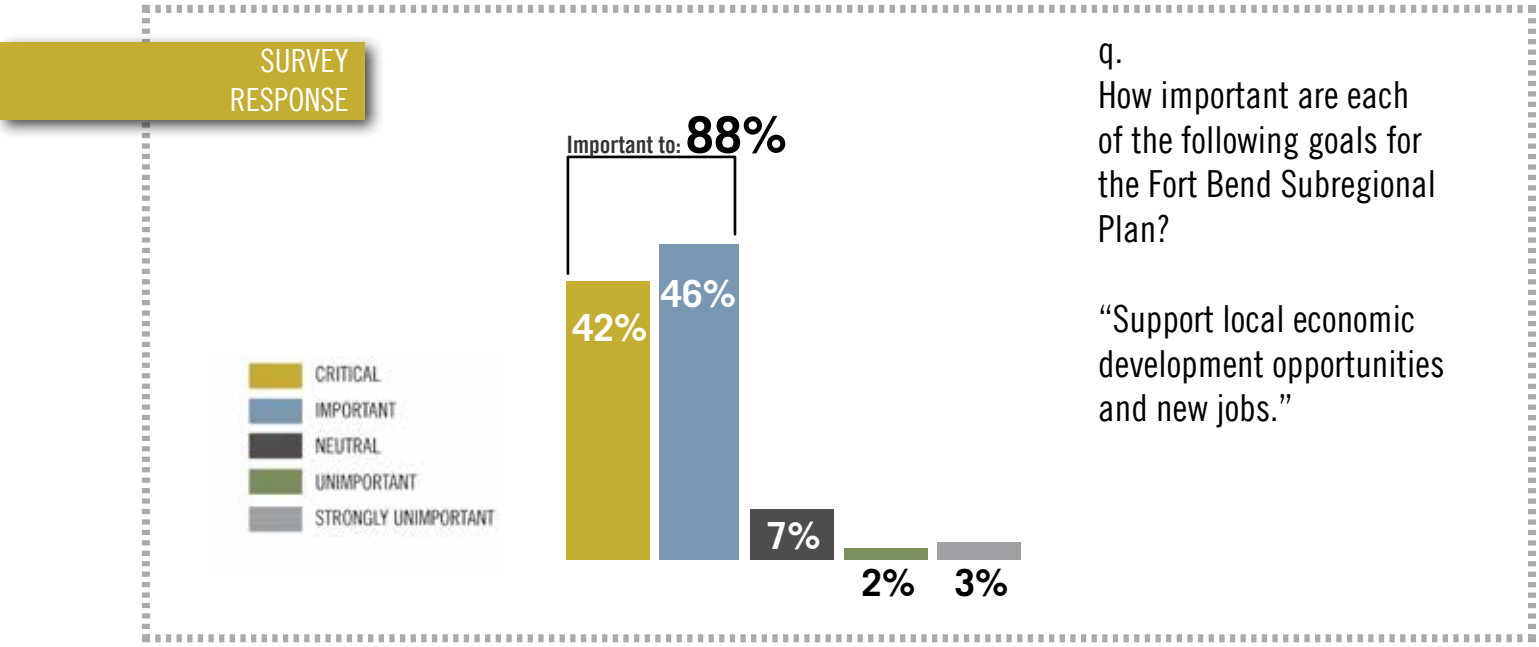


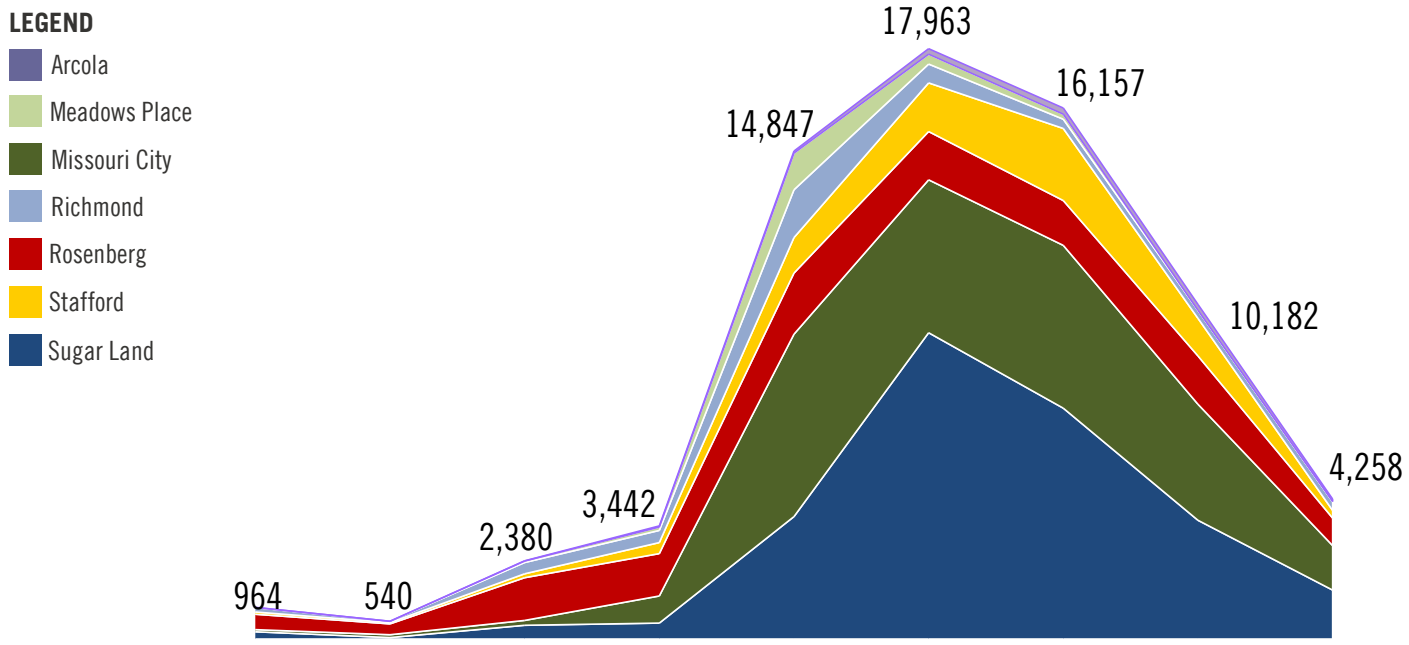
Figure D3.2: Survey Perspectives on Walking and Biking

Many Fort Bend residents bought their houses new. Older housing stock is generally less desirable than comparable newer homes. This has often led to stagnant or declining property values in older suburban areas, especially as the original residents move out. As the housing stock in the study area ages, this becomes a challenge for Fort Bend.

Because of the area's rapid growth, only 10% of the housing stock dates to before 1970 and 60% dates from between 1970 and 2000, as shown in figure D3.3. The median house in the area is around 25 years old. A city like Meadows Place saw the majority of its residential build out occur during the 1970s and is beginning to face many of these issues head on. It has focused on building a strong sense of community and improving access to amenities like parks to help ensure the city maintains its value.

Market demand is also shifting away from single-family residential subdivision. The Houston Area Survey found that from 2008 to 2012, Houston-area residents who preferred to live in "a single-family home with a big yard, where you would need to drive almost anywhere you want to" went from 59% to 47%, while residents who preferred "a smaller home in a less urbanized area, within walking distance of shops and workplaces" went from 36% to 51%. This represents a general culture shift but also generation changes; younger people tend to prefer urban and mixed-use suburban areas more than their parents did. More and more young families are looking for neighborhoods not only in good school districts but also neighborhoods near activity centers and communities that allow for safe walking and bicycling to and from multiple destinations. With a few expectations (such as Sugar Land Town Square), Fort Bend is not currently serving this demand.

Often, the commercial development that occurred to support new residential neighborhood begins to show its age before the residential areas do. Commercial trends change and newer shopping areas open up to increased competition. This has already happened to major strip centers along SH 6 and US 90A as newer developments like Sugar Land Town Square and Brazos Town Center have absorbed significant amounts of retail spending. These aging strip centers represent some of the best redevelopment opportunities in the study area where adapting to changing market conditions is positive.



	Pre-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2004	Post 2005
SUGAR LAND	1%	0%	2%	2%	14%	35%	27%	14%	6%
MISSOURI CITY	0%	0%	1%	4%	26%	22%	23%	17%	6%
MEADOWS PLACE	0%	0%	3%	6%	65%	17%	9%	0%	0%
STAFFORD	1%	1%	2%	5%	16%	22%	33%	17%	3%
ARCOLA	1%	0%	1%	5%	9%	23%	26%	25%	11%
ROSENBERG	5%	3%	13%	12%	18%	14%	13%	14%	8%
RICHMOND	4%	1%	9%	10%	39%	15%	8%	7%	7%
Total	1%	1%	3%	5%	21%	25%	23%	14%	6%

Source: 2006-2010 American Community Survey 5-Year Estimates; City Data

Figure D3.3: Current Housing Units by Age of Construction

Stafford Centre

D 4 QUALITY OF LIFE IMPROVEMENTS AND NATURAL RESOURCES

PARKS, OPEN SPACES, AND TRAILS

Within the study area, cities have made major investments in parks and open space, particularly leveraging drainage areas that also serve to manage flood water and improve water quality. Over 4,000 acres have been designated as park space and continued investment such as Memorial Park in Sugar Land and Seabourne Park in Rosenberg will allow this trend to continue. Figure D4.1 illustrates that over 92% of the residents at least Somewhat Agree that they have access to good parks and open spaces. It is important to recognize that the mere availability of parks, open spaces, and trails is not enough, but access to these destinations is of the utmost importance, as well. Figure D4.2 on the following page shows that for most study area cities, park access is relatively available within 1/2 mile of most residential properties. Maintaining and improving access to quality parks with good programming will be critical to continue to provide strong attractive communities as the study areas continued to grow.

SURVEY RESPONSE

q.
Please indicate your level of agreement with each of the following statements:

"I have access to good parks and open space."

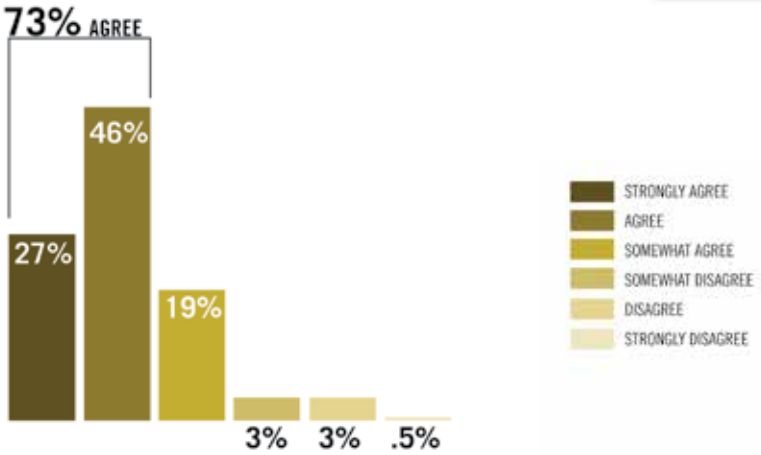
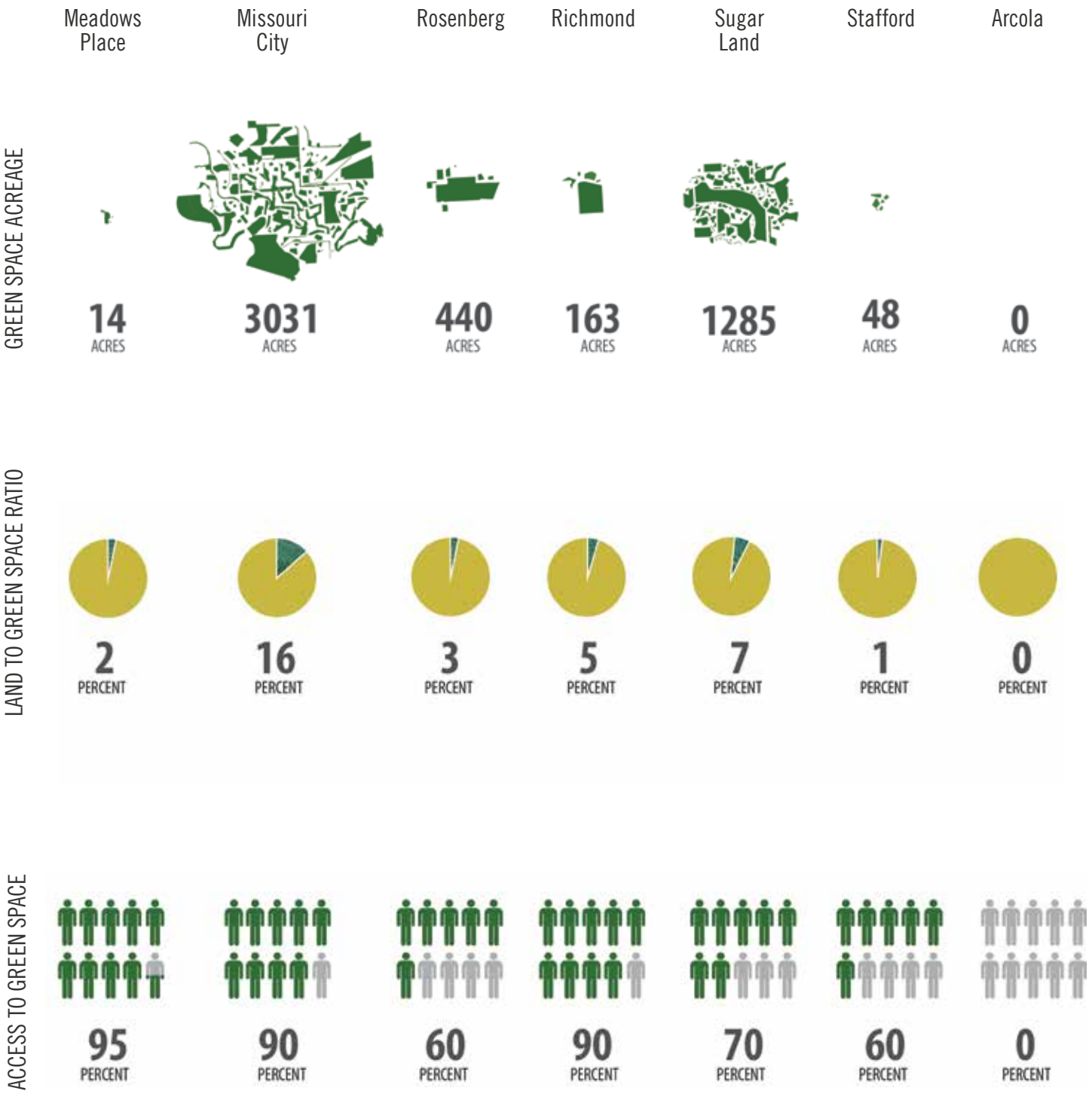


Figure D4.1: Survey: Access to Parks and Open Space



Source: H-GAC Land Use database, 2011

Figure D4.2: Green Space Availability and Access

While park space exists across the study area within close proximity of many residents, there is a lack of pedestrian and bicycle infrastructure in many areas which results in many residents driving to access area parks. This limits the potential physical health benefits the parks and open spaces can have for the community. In fact, when asked about the importance of encouraging healthy/active travel options, about 64% of the respondents felt it was "critical" or "important" (Figure D4.3). It will also be critical to continue to think about how to provide adequate park space as well as strong connections to parks as development occurs throughout the study area.

SURVEY

q.
How important are each of the following goals for the Fort Bend Subregional Plan?

"Importance of encouraging healthy/active travel options (i.e. walking or biking)."

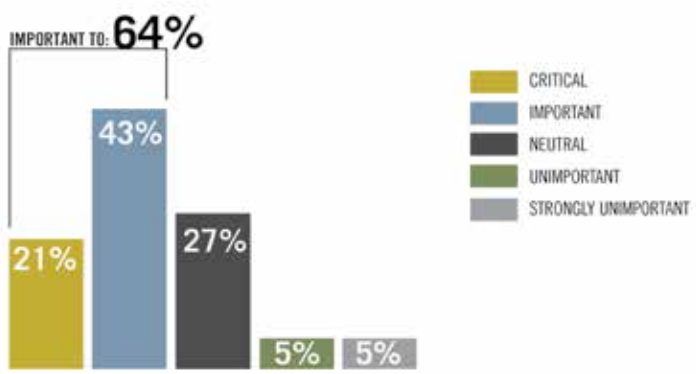


Figure D4.3: Survey: Importance of Healthy/Active Travel

AGRICULTURE

Fort Bend's historical roots are based in large part on the development of agricultural resources. As the population continues to grow, so will the demands on food production and supply. Demand and related land prices will likely lead to increased development pressures on agricultural land. Many communities have recognized the benefit of increasingly sourcing food from local farmers and this is predicted by many to increase. In many places, locally sourced food has become a key component of a community's sense of pride and cultural heritage. Fort Bend Survey respondents indicated a strong desire to maintain some level of local agriculture as a key ingredient to the local character and quality of life in the Fort Bend study area.

Therefore, it is imperative to have a plan in place to address these issues and provide the Fort Bend study area with proper tools to maintain these agricultural land uses where desired. Fort Bend County has the opportunity to continue to preserve and enhance its current stock of agricultural lands to support the needs of residents and neighboring areas. As food production continues to be a hot topic in global and local conversations, Fort Bend County can be at the forefront of innovation and education through programs like the Fort Bend Farmer's Market and the Texas A&M Agrilife Extension Program, and by developing strategies to support the preservation of agricultural lands in the County. The sustainability of agricultural assets will need further support through financial, social and educational programs.

CULTURAL AMENITIES

The challenge that lays ahead for Fort Bend County is preserving the existing landmarks and destinations that serve the community, like the current work being done to preserve the Fort Bend County Courthouse in Richmond, but also introducing new entertainment and service venues that enhance the quality of life for residents, are economically viable, and reflect the evolving culture and character of the County and individual cities. Furthermore, planning for access and connectivity of destinations is something that needs to be considered to ensure that services and amenities are easily accessible for residents and visitors.

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E 1 STRATEGIC PLAN DEVELOPMENT

INTRODUCTION

As shown in Chapter C, strong planning and foresight has enabled the Fort Bend study area to achieve an enviable position as one of the premier locations in Texas. Investments in transportation infrastructure, high-quality neighborhoods, strong destinations,and quality of life amenities have made the study area highly attractive to new residents and businesses, leading to strong population and economic growth. With this growth, proactive planning and a strong implementation approach will be required to maintain and strengthen the Fort Bend study area as a premier region.

The continued growth of the study area raises critical questions to address. As growth puts stress on the existing infrastructure, how can the region invest and evolve to capture the benefits of growth while mitigating the challenges that growth presents? How can the strong links to major job centers and destinations be maintained as greater demand is placed on area roadways? How can the study area remain a highly attractive location for both new and existing residents and businesses?

Chapter E of the Fort Bend Subregional Plan lays out a strategic plan for the study area that Fort Bend County and the local jurisdictions can take to address these issues and achieve the Vision and Goals that have been developed for his project.

STRATEGIC PLAN FRAMEWORK DEVELOPMENT - THREE PRINCIPLES

The strategic plan for the Fort Bend Subregional Plan study area outlines a framework of three principles for local jurisdictions to address the challenges and continue to build on their current strengths and opportunities. While there are many other factors that are part of the strength of a region, this strategic plan focuses on these three cross-cutting principles that impact most aspects of the community and require significant levels of local and regional planning.

This strategic plan framework is based on significant input from the Stakeholder Advisory Committee as well as community input on goals, priorities and key challenges related to economic development, transportation infrastructure, and quality of life. The strategic plan framework allows for the development of collaborative planning techniques for the entire study area that can be adapted to take into account the changing demographics and developments of the region as the county continues to grow and change. The framework allows for the major components of local planning to be coordinated to take into account overlapping regional priorities as well. The framework will support the prioritization of resources to maximize benefits and address both local and regional goals.

Strategic Plan Framework - Three Principles

1. **Strengthening Activity Centers** - Defining key areas of concentration for economic and transportation activity and developing strategies to strengthen each, tailored to their specific context

2. **Enhancing Multi-Modal Transportation Links** - Addressing key gaps and bottlenecks in the mobility network while enhancing the connections between activity centers within and outside the study area

3. **Creating Sustainable Neighborhoods that Retain their Value** - Supporting the continued strengthening of existing neighborhoods while planning for new neighborhoods that benefit the region

Figure E1.1: FORT BEND STRATEGIC PLAN FRAMEWORK

The framework allows the development of a strategic plan that, as the county continues to grow, addresses both current development and future expansion in a sustainable way. Sustainability means many things to many people, but here is meant to include continued economic vitality, reliable transportation choices, and durable neighborhoods that hold their value over time. The three strategic principles of the Fort Bend Subregional Plan address the undeniable relationship between land use and transportation, and how changes in each affect the other. An effective transportation network links activity centers, both to each other and to neighborhoods. Activity centers can only continue to thrive with a strong transportation network that provide strong access for goods and people.

The first principle of the strategic plan focuses on defining and strengthening the major activity centers of Fort Bend study area. The strengths of current activity centers have been identified and strategies have been developed to allow current and future activity centers to continue to prosper and create value for the region. The second principle of the strategic plan supports a continued improvement in the region's multi-modal transportation network. A strong regional roadway network provides the base for connecting activity centers with strong transportation links. The strategic plan addresses gaps and bottlenecks in this network while developing a path for increasing levels of multi-modal transportation options .

The third principle of the strategic plan addresses neighborhoods. The number and quality of master planned communities in Fort Bend County has been a competitive advantage for the region since the first master planned community was developed 50 years ago. While new communities and neighborhoods are currently being developed across the study area and many other areas in Fort Bend County, the continued success of all neighborhoods, new or old, will be critical to allow the county to prosper.

Cross-cutting through each of the strategic plan principles are opportunities for integrating quality of life enhancements such as greenways, open space, and natural system into communities in the study area. Fort Bend County has a plethora of natural resources that should be integrated into the planning process, from the Brazos River cutting through the study area, to Missouri City's parks and trail network, and to Rosenberg's vast agricultural lands.

To show how these principles could translate into implementation, several vision plans for activity centers have been developed to highlight potential outcomes focused on a range of development contexts; these vision plans take an integrated view of activity centers, the transportation network, and neighborhood planning. These are not intended to be top-down plans but visions of what is possible and how the strategies developed can be utilized by communities to think through critical transportation and development issues.

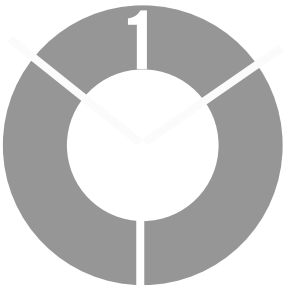
Importantly, as projects developed in the strategic plan move to implementation and the project sponsors seek funding opportunities for critical projects, this strategic framework aligns with the six livability principles outlined by the joint federal HUD, DOT and EPA Partnership for Sustainable Communities. The Partnership for Sustainable Communities established six livability principles that will act as a foundation for interagency coordination:

1.) **Provide more transportation choices:** Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.
2.) **Promote equitable, affordable housing:** Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.
3.) **Enhance economic competitiveness:** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.
4.) **Support existing communities:** Target federal funding toward existing communities – through such strategies as transit-oriented, mixed-use development and land recycling – to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.
5.) **Coordinate policies and leverage investment:** Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
6.) **Value communities and neighborhoods:** Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods – rural, urban or suburban.

At the time of this report, these factors have been important criteria for selection on increasingly competitive available funding opportunities. Chapter F breaks down the plans and projects to individual jurisdictions for consideration of implementation.

E

2
PRINCIPLE 1: STRENGTHENING MAJOR ACTIVITY CENTERS

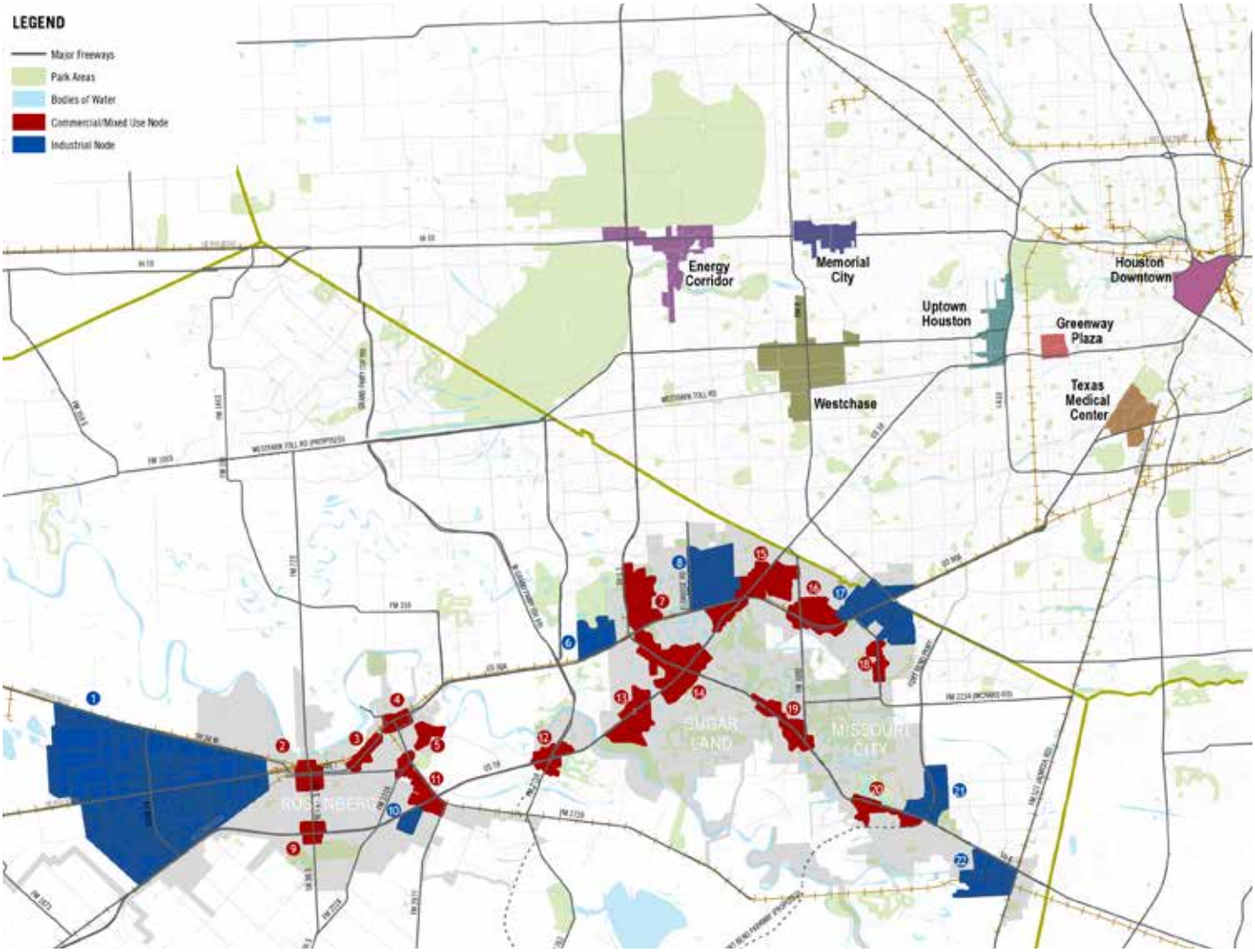


Activity centers serve as major economic engines and often define people's perception of a region. This can include the entertainment and shopping options, prospects for jobs, and cultural destinations that cause people to travel to a place and provide a large part of its character. Principle 1 in the Fort Bend Subregional Strategic Plan is defining and prioritizing major activity center locations and developing strategies to enhance and strengthen those places. Activity centers are defined geographic areas with a concentration of land uses that creates significant transportation demands and supports economic activity and growth. Typical land uses within an activity centers include:

- Medium to high-density residential including townhomes, apartments, and condos
- Office space ranging from small office clusters to large corporate campuses and high rise office buildings
- Commercial and retail
- Entertainment & Dining
- Education and Government
- Parks & Open Space
- Light industrial and/or logistics and distribution facilities

Many of the most successful activity centers contain either high a concentration of one type of the land uses, such as a business or industrial center, or a complementary mix of land uses. Well planned activity centers create value within an area and support stronger communities by efficiently leveraging investment in infrastructure and creating desirable destinations for residents and workers. Well planned activity centers also decrease transportation demand by providing multi-modal transportation options for the activity center that capture multiple types of trips. If a person can do their shopping and grab lunch in one trip, that limits the impact on the surrounding roadway network. If they can leave their car at home for some share of trips due to well integrated pedestrian and bicycle infrastructure, that reduces the impact on the roadway network further.

Twenty two activity centers were identified within Fort Bend study area. Some of the identified activity centers are well established areas such as Sugar Land Town Center at US 59 and SH 6 or the historic downtowns in Richmond and Rosenberg. Other identified areas are not currently well established activity centers, but have been identified as priority areas of future development and growth, such as the area surrounding the intersection of the Fort Bend Parkway Tollroad and SH 6 in Missouri City. The activity centers identified are shown in Figure E2.1 The activity centers are color coded based on their primary current or intended use: red for a commercial/mixed use activity center; blue for an industrial activity center. Existing single-family residential areas were excluded from the activity center boundaries as these residential areas are not projected to significantly redevelop and change from their current development pattern.



Fort Bend Activity Centers

1. West Fort Bend Intermodal Center
2. Downtown Rosenberg
3. 90A/Avenue H - Rosenberg
4. Downtown Richmond/Oak Bend
5. Fort Bend County Courts Area
6. Sugar Land Light Industrial Park/ Former Central Unit Prison
7. Imperial/Constellation Field
8. Sugar Land Business Park
9. US 59/SH 36 - Seabourne Park
10. Reading Center - Rosenberg
11. Brazos Town Center
12. Great Wood and Riverpark Commercial
13. Telfair - Cultural Arts - UH Sugar Land - Entertainment
14. Sugar Land Town Center - Lake Pointe
15. US 90A at US 59 - TI Site - Fountains
16. Stafford Island District - HCC
17. US 90A - Beltway Crossing Business Park - Lakeview Business Park
18. Missouri City City Hall and Texas Parkway
19. SH 6 Commercial
20. Sienna Plantation Commercial - HCC
21. Missouri City Business Park - Fort Bend Tollway
22. Arcola Business Park

Figure E2.1: FORT BEND COUNTY ACTIVITY CENTERS

The defined activity centers were vetted through discussions with the project Stakeholder Advisory Committee and additional public input. Where possible, they align with current city comprehensive plans and development plans of the individual jurisdictions within the study area. The twenty two identified activity centers in the Fort Bend study area are primarily located along the major roadway corridors within Fort Bend County: US 59, US 90A, FM 1092 and SH 6. Maintaining mobility on these corridors, as well as newer regional corridors including the Grand Parkway (SH 99) and the Fort Bend Parkway Tollroad, will be critical to the success of activity centers and is a core element of Principle 2 of the Fort Bend Subregional Plan strategies. Strengthening the activity centers within the Fort Bend study area is essential for economic growth as these locations contain the majority of employment and commercial activity in the region.

As discussed in Section C, even though Fort Bend County is becoming less of a suburban bedroom community to Houston and more of a center unto itself, the success of the Fort Bend study area will continue to be strongly linked with that of the greater Houston region. Therefore, developing a strategic plan that incorporates linking local activity centers with regional activity centers is important. Figure E2.1 shows seven major regional activity centers within Harris County that are critical destinations for residents of Fort Bend County.

The seven activity centers are (colors coincide with Figure E2.2):

- Downtown Houston CBD
- Texas Medical Center
- Uptown/Galleria
- Greenway Plaza
- Westchase District
- Energy Corridor
- Memorial City/Town & Country

All identified regional centers are commercial/mixed-use nodes with a primary focus of being major regional employment centers for the Greater Houston area. While these centers will compete with Fort Bend study area for investment, major employers and additional commercial investment, these nodes are likely to remain major employment centers for Fort Bend residents, with Downtown Central Business District (CBD) and the Texas Medical Center being primary destinations and the other activity centers each growing as regional draws. As Fort Bend continues to grow and enhance its major centers, the flow of people and economic activity is likely to become more balanced as people from all of the region seek the attractive jobs and entertainment options that exist in Fort Bend.

STRATEGIES TO CREATE AND STRENGTHEN MAJOR ACTIVITY CENTERS

Research and analysis of successful activity centers indicates key characteristics that are linked to the center's success. This does not mean that each activity center should follow the same path. This would prevent an activity center from leveraging its natural advantages to create sustainable value. Where a cluster of light industrial businesses may benefit from integrated mixed-use development to provide housing and dining options for their employees, a retail center on a lake front may want to focus on walkability and integrating water features into the development. Each of the 22 Fort Bend activity centers has a different profile that can be enhanced by a focus on a particular set of these key strategies. Each has a particular context that should be honored where possible. While higher density corporate office buildings may fit into the context of Sugar Land Town Center, they would be out of context in downtown Rosenberg or developing areas of Arcola.

This toolbox of eight strategies was developed to address each of the identified activity centers taking into account the Fort Bend Subregional Plan Vision and Goals and an understanding of what creates sustainable value. It is not intended that every one of these strategies applies to every activity center, rather they present a check list for any community to think through opportunities to strengthen and enhance an existing activity center. They also outline a set of potential design objectives to incorporate where possible when developing a new activity center. The eight strategies are:

1. Increase mixed-use development
2. Encourage industry clusters to create economies of scale for infrastructure, branding, employees
3. Integrate higher-density residential
4. Improve walkability
5. Increase multimodal access
6. Optimized parking strategies
7. Integrate water, parks, public and civic space
8. Enhance arts and entertainment include programing

These eight strategies are described in detail in the following section. Section E5 of this chapter develops vision plans for several of the activity centers that represent different development contexts. This includes redevelopment of older commercial areas, integrating strategies into historic downtown areas, and developing an activity center in a greenfield area. These visions are not intended to be development plans but to represent how applying these strategies in coordination with a well thought through multi-modal transportation plan, as outlined in Section E3, can create strong, sustainable activity centers throughout the Fort Bend study area.

EIGHT KEY ACTIVITY CENTER STRATEGIES

1. INCREASE MIXED USE DEVELOPMENT

Mercer Island, Washington

The most successful activity centers have activity all day, every day. The only way to achieve that is to have multiple uses. Offices will draw people during work hours. Educational institutions are busy in the evenings. Retail, restaurants, cultural institutions, and entertainment draw people on evening and weekends. Housing and hotels add people at all hours. All day, every day activity tends to strengthen all uses: restaurants will be more successful if they fill up at lunch and dinner; it is easier to support a hotel if it can fill up rooms on weekends as well as weekdays; and companies like to locate offices where their employees have things to do after work. Activity draws more activity, and more activity brings more economic success. This balance of uses also leverages existing investments in transportation, parking and utilities across more users and longer periods of use, potentially increasing the return on these investments.

2. ENCOURAGE INDUSTRY CLUSTERS

Paradoxically, most businesses tend to thrive when they are near their competitors.

This is true for corporate offices: firms want to locate where there is a large pool of qualified employees, and those employees want to live where there are multiple firms that employ them. Thus, in Houston, energy firms cluster in the Energy Corridor, law firms in Downtown, and hospitals in the Texas Medical Center. As these firms cluster, they also attract more support firms: the Energy Corridor has not only oil companies, but also engineering firms that do work for those oil companies. This further strengthens these clusters.

The same cluster effect applies to restaurants and retail. One might think that multiple restaurants located together will cannibalize each other's business, but in fact, the cluster attracts more people, and each restaurant has more business than it would have had if it stood alone. Thus, restaurants cluster in places like Chinatown, the Heights, and Sugar Land Town Center.

Clusters create economic efficiencies and build identity. A cluster is a brand, drawing both customers and the businesses that serve them. And once a cluster reaches critical mass, it tends not only to endure but to strengthen over time.

Texas Medical Center

3. INTEGRATE HIGHER-DENSITY RESIDENTIAL

The demographic trends shown in Chapter D – in particular a growing aging population – are driving demand for alternatives to the single-family tract house. So is market demand: more and more people want to live in smaller places that are within walking distance of services and amenities and close to work. In Houston, this demand has lead to a boom in older neighborhoods inside the 610 loop. Townhouses, luxury apartments, and high-rise condos are in high demand for young professionals and empty nesters. But there is demand for these kinds of living options in the suburbs, too. Already, people are commuting from Houston to Sugar Land because they cannot find the kind of housing options and neighborhoods they desire in Fort Bend.

This demand for alternate residential options in the suburbs can be met in many ways: smaller houses on smaller lots, for sale townhouses, for sale condos, rental apartments, age restricted housing, and assisted living. A mix of types is important to provide more options, and integration with surrounding land uses is critical. There is no one right way to implement denser residential and the approach and level of development should be tailored to a specific community.

Toronto, Ontario, Canada

Like suburban-style, single-family residential neighborhoods, denser residential can decline over time. In some places, apartments have become blights to the surrounding neighborhoods. But this is not inevitable: in Houston, places like Gulfton may have gone down market, but apartment complexes of the same age near the Galleria, only two miles north, are still drawing high rents. The difference is context: gated apartment complexes with no connection to the surrounding neighborhoods are essentially generic and interchangeable, while a newer complex will always have more value than an older one. But complexes in prime locations, close to restaurants, parks, and other amenities, hold their value over time. The key is planning – integrating residential with other land uses and quality public spaces – and building and design standards that ensure a high level of quality.

Higher-density residential in the suburbs not only meets a known market demand; it supports business. Higher density residential means more potential customers in a given area, supporting more businesses. In an activity center, or even just adjacent to a commercial street, residential supports restaurants and retail, giving office workers and residents of nearby single-family neighborhoods more options. Residential options are also a way to attract business who desire multiple residential options for their employees, especially young professional who may not be looking for a large home yet. Higher-density residential also adds activity to public spaces, making them more welcoming and safer.

Higher-density residential also builds the tax base. Once a suburban city has built out its ETJ, the growth in city revenues that comes with new development ends, meanwhile, the infrastructure of older neighborhoods wears out, frequently requiring increased tax dollars to maintain it. Higher tax rates are typically not the desirable solution, since they make the city less attractive to new residents. High-density infill development, or redevelopment of low-density commercial, represents a critical strategy to maintain some level of growth, adding residents and building the tax base and keeping the city affordable for everyone.

4. IMPROVE WALKABILITY

Improvements to walkability within an area can reduce local traffic congestions by encouraging people to walk to or between destinations. Much of the traffic on Fort Bend streets comes from short trips, shopping at multiple places, or just getting from an office to a restaurant for lunch, usually means getting in a car. By improving pedestrian connections between homes, offices, and businesses, we can get this traffic off the road, leaving capacity for longer trips.

Seattle, Washington

Walkability also builds places. Walking is a naturally social experience; by walking we meet our neighbors. By walking we get exercise. Walking also goes with window shopping; customers spend more, eat out more, and linger longer on foot. Thus, a place that encourages walking is more active, safer, healthier and more economically prosperous.

Designing for walkability involves both the public realm and the private realm. In the public realm, it requires comfortable, safe pathways, be they walkways or off-street paths. Paths need to be well-paved, wide enough for people to walk next to each other, shaded for the summer, well lit at night, and connected. Where they meet streets, they need to have safe crossings, and where there are barriers like rivers or major highways, there needs to be connections.

In the private realm, walkability requires density. People cannot walk to their destinations if those destinations are too far away, so walkability means putting enough destinations in a small enough area. Those destinations also need to be connected to the path; a surface parking lot can act like a moat between a sidewalk and building. An interesting building, filled with ground floor activity, located right on the sidewalk, with human-scaled texture creates the perfect activity center walking environment.

5. INCREASE MULTIMODAL ACCESS

As shown in Chapter D, Fort Bend residents want more choices: they want to be able to drive, but they also want to be able to walk, bike, and use transit. Nodes of activity are ideal for this because they pack many destinations in a small area, so a single transit stop or a one-bike ride can meet multiple needs.

The key to multimodal access is connectivity. We need to serve trips from door to door. Providing transit is not enough; the key is to make sure that destinations are a short walk from transit along good pedestrian connections. That means locating the transit station so that its zone of access – a quarter mile radius that corresponds to a 5-minute walk – includes as much of the node as possible. Likewise, bicycle connectivity has to link off-street trails right into the heart of the activity center and link across major barriers like highways. Direct connections are key: for a car, a half-mile detour adds less than a minute to a trip; for a bicycle it is two or three minutes, and for a pedestrian it is ten minutes. Disconnected paths can easily make a bicycle or pedestrian trip unattractive and unfeasible.

San Jose, California

6. OPTIMIZE PARKING STRATEGIES

Toronto, Ontario, Canada

Parking is the biggest user of space in low-density commercial development and one of the biggest cost drivers in high-density development. In suburban strip retail or shopping malls, the parking generally occupies more land than the store itself, reducing density – and thus walkability - dramatically. Putting that same parking in garages frees up land, but dramatically increases construction cost.

Thus, providing enough parking is vital, but providing too much parking comes at a great cost. So the key is optimizing parking. Different uses require parking at different times: an office building fills the most parking spaces at midday on a weekday, while retail requires spaces in the evenings and weekends. If the two share a parking lot, the same space can be used by an office worker during the day and a shopper that night. That means fewer spaces are required. So shared parking saves space, saves money, and allows more activity.

But it is not enough that parking is available – it needs to be easy to understand. Signage and parking rules need to be visitor-friendly; it should be obvious where to park. And there should be choices: someone making a quick stop to buy a coffee wants more convenient parking than someone parking for hours. That can be accomplished using parking rates: paid parking at the front door, free parking in a garage behind.

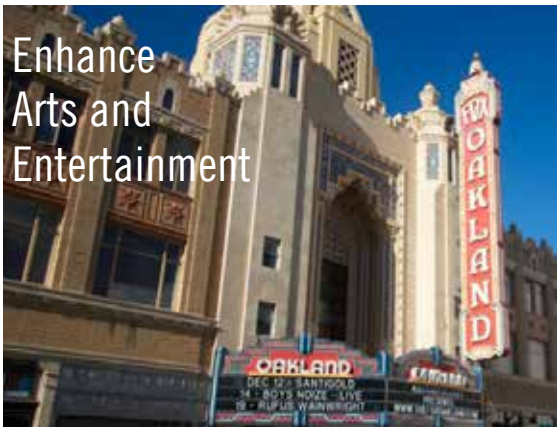
Toronto, Ontario, Canada

7. INTEGRATE WATER, PARKS, PUBLIC AND CIVIC SPACE

An activity center can be tied together by its public spaces, including streets, paths, plazas, parks, and open space. Public spaces connect buildings, and the quality of those spaces defines the ambiance of the area. Public spaces are also gathering spaces; they are where people meet and where events are held. They often serve as focal points for celebrations of civic pride that give an area vibrancy. Finally, public space provides elbow room for higher density: they are places where office workers can eat lunch to get away from their desk, where residents can walk their dogs, and where kids can play.

8. ENHANCE ARTS AND ENTERTAINMENT

Events draw crowds. Concerts, outdoor movies, arts festivals, farmers markets, performances, holiday celebrations, and other events bring people who then shop, eat out, and stay overnight. Those events also create a sense of community, bringing neighbors together and building pride in the city. They can help provide a context and an identity to an area and attract additional complementary activities and developments.



Oakland, California

E 3 PRINCIPLE 2: ENHANCING MULTI-MODAL TRANSPORTATION LINKS

MULTI-MODAL TRANSPORTATION IMPROVEMENTS

To support the access and mobility to, from, and within major activity centers, a strong transportation network is necessary. A robust and resilient transportation network integrates multiple travel modes to meet the demand of different users as well as different trip types. While Fort Bend is likely to remain a car-centric transportation system, integrating roadways, transit, pedestrian and bicycle facilities in a coordinated manner while incorporating innovative traffic management technologies will allow the Fort Bend study area to continue to grow as the demand on the transportation network continues to increase.

	More Local	More Regional
Roadway	Intersection improvements	State Highways
	Collectors and local roads	Tollroads / FBCTRA / FBGPTRA
	Connectivity	HOV / HOT lanes
	Complete/context sensitive streets	Transportation Management / ITS
Transit	Demand Response	Commuter rail
	Local bus	Suburban light rail
	Circulator routes	Express Bus / Bus Rapid Transit (BRT)
	Vanpool / Carpool	Park & Ride
Ped/Bike	Last mile connections	Regional trails and greenways
	On-street systems	Major easements
	Walkable neighborhoods & activity centers	Regional on-street facilities

Figure E3.1: TRANSPORTATION NETWORK STRATEGIES

Figure E3.1 identifies a range of regional and local transportation tools and strategies that can be employed to enhance transportation systems to support future growth. Fort Bend County and area cities have been using many of the strategies presented in Figure E3.1 to account for the expected future demand on Fort Bend roadways, specifically roadway improvements that focus on capacity enhancing strategies.

This section outlines potential improvements to expand and enhance the transportation network across various travel modes to create an integrated system. These recommendations are focused on regional priorities developed through this project and are not intended to be an exhaustive analysis of every project that may be possible within the study area. They primarily focused on linking activity centers within and outside of the Fort Bend study area.

2035 REGIONAL TRANSPORTATION PLAN

The 2035 Regional Transportation Plan (RTP) was developed by H-GAC in 2005 to be a blueprint for long range planning needs in the eight county Greater Houston region over a 30 year period. The RTP outlines transportation projects for the region. Projects are categorized by the target letting date as well as the funding source and/or sponsor for the project. Projects in the RTP are also categorized by project type. There are five overarching project categories related to enhanced mobility in the Fort Bend Study area: Added Capacity, System Preservation, Traffic Engineering/Flow Improvements, Capital (Transit), and Pedestrian & Bicycle.

Added Capacity

Construction of new roads and widening of existing roads for the purpose of adding system capacity. Projects may include grade separations, intersection improvements and frontage roads if they are components of a new construction or widening project.

System Preservation

The reconstruction of a road for the purpose of improving traffic flow, preserving the road and extending its useful life. Projects may include major reconstruction of freeways and principal arterials as well as routine maintenance and repair. These types of projects do not add capacity to the system.

Traffic Engineering/Flow Improvements

Operational projects to improve traffic flow, enhance for pedestrians and provide access to transit services along selected primary arterials. Examples include the addition of turning lanes, coordinated traffic signalization, pedestrian/bicycle crossings, the addition of sidewalks and grade separations.

Capital (Transit)

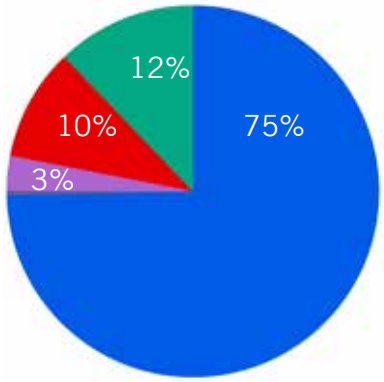
Transit specific projects including, Park & Ride and Transit Center construction or renovation, vehicle acquisition, future express or signature routes, proposed rail routes.

Pedestrian and Bicycle

Projects specifically targeted for pedestrians and bicyclists. Can include education/promotion, pedestrian and bike facilities like bike parking, bike lanes, separate paths, and sidewalks.

In 2010, the 2035 RTP was updated to take into account funding constraints. Projects in the RTP require dedicated funding from reasonably expected revenues. Prior to 2010, multiple financial constraints, mainly at TxDOT, required a reevaluation of projects in the RTP. Each year, an updated project list is released which removes completed projects and updates time lines and project costs for future projects where necessary. All RTP projects presented in this report are part of the 2035 RTP Update, and all values have been updated, where possible, with the 2012 Amendment, unless otherwise mentioned.

Figure E3.2 is a summary of estimated funding availability associated with all future projects included in the 2012 Amendment to the 2035 RTP Update for Fort Bend County, evaluated by project type. Figure E3.3 depicts all mappable RTP projects that are currently under construction or slated for the future within the study area. The figure also identifies RTP grade separation projects

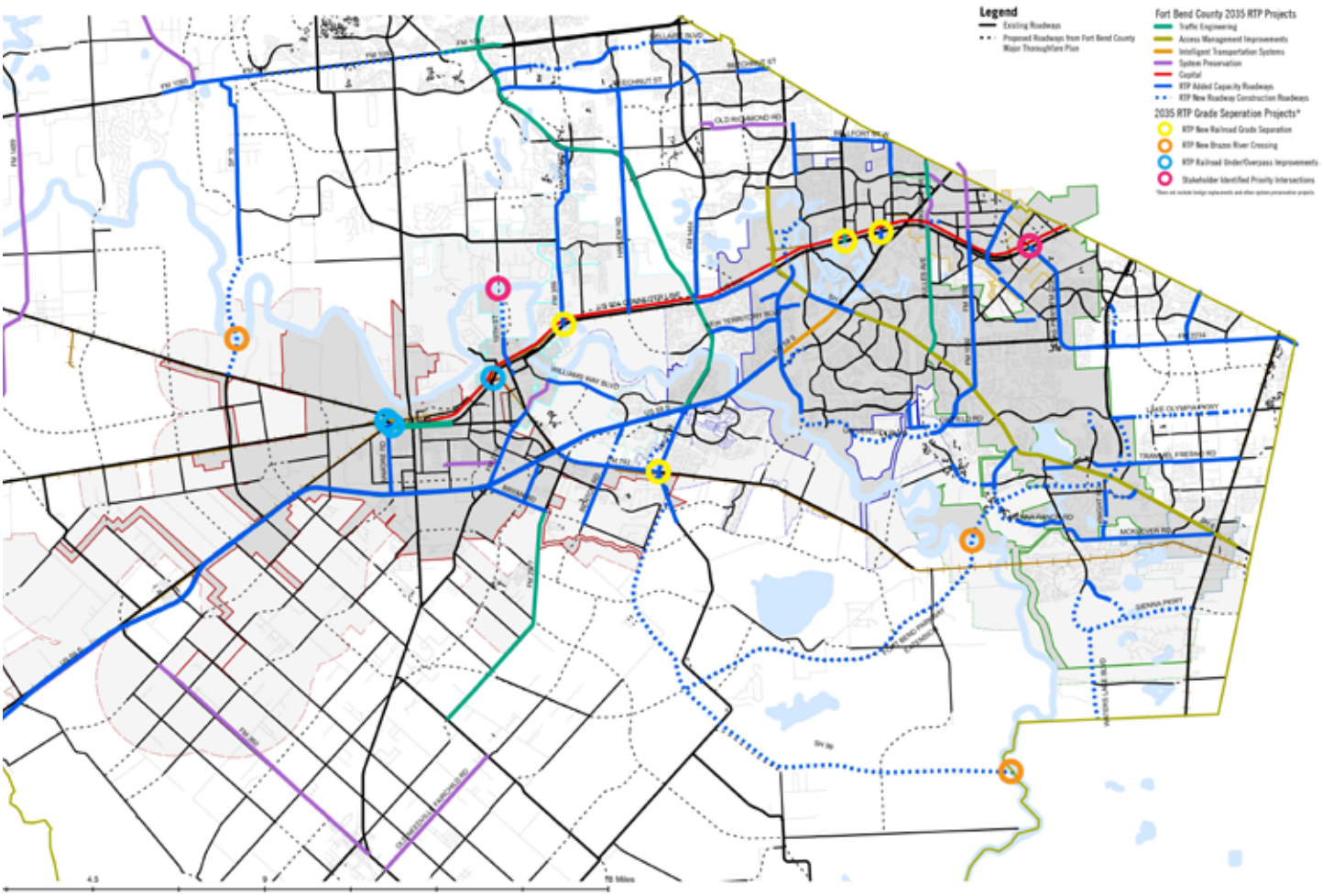


Category	Cost	Percent
Added Capacity	$3,012,864,000.00	74.73%
Traffic Engineering/Flow Improvements	$489,530,000.00	12.14%
Capital (Transit)	$394,381,000.00	9.78%
System Preservation	$123,840,000.00	3.07%
Pedestrian and Bicycle	$7,599,000.00	0.19%
Other*	$3,337,000.00	0.08%
ALL PROJECTS	$4,031,551,000.00	

*Smart Streets, Access Management, other miscellaneous transportation related projects

Source: H-GAC 2035 RTP Plan Update, 2012 Amendment

Figure E3.2: DEDICATED FUNDING FOR FUTURE FORT BEND COUNTY PROJECT COSTS



Source: H-GAC 2035 RTP Plan Update

Figure E3.3: Map of Future RTP projects

for both Railroads and Brazos River crossings, as well as stakeholder identified priority grade separation locations identified through this study.

Each of the major project categories supports multiple subcategories which help to better classify the variety of projects within the RTP. To evaluate projected projects targeted at mitigating the growing demand on Fort Bend roadways, capacity enhancing RTP projects were evaluated separately. Capacity enhancing projects include roadway expansions, new roadways, intersection improvements, grade separation, and access management projects. All capacity enhancing projects currently under construction and slated for the study area are included within the Appendix.

As can be seen from Figure E3.2 and Figure E3.3, the majority of funding dedicated to Fort Bend County for future projects is for added capacity projects. Within the added capacity dedicated funding, 45% is dedicated to new roadway constructed, primarily focused on the Grand Parkway and Fort Bend Parkway Tollroad extension. The other 55% of added capacity dedicated funding is dedicated to roadway widening, with the majority of cost going towards widening US 59 south of the Brazos River.

It appears from Figure E3.2, that transit is receiving a substantial percentage of RTP funding at 10% of the total, but the majority of the transit cost (89%) shown in the table is dedicated to the proposed commuter transit line along US 90A. This project has been assessed by METRO and is currently on hold with no dedicated funding source identified to be available in the near term. Therefore, the commuter rail project, unlike every other project in Fort Bend County on the RTP, has no sponsor. If the commuter rail line along US 90A is removed from the RTP, the percentage of funding dedicated to transit drops to 1% of total RTP funded projects, a similar level of funding to pedestrian and bicycle investments.

While the RTP includes many future transportation projects, some construction is not included, specifically roadways that would be built by developers as part of new development projects. These connections are frequently critical to regional mobility and should be addressed through the thoroughfare planning process.

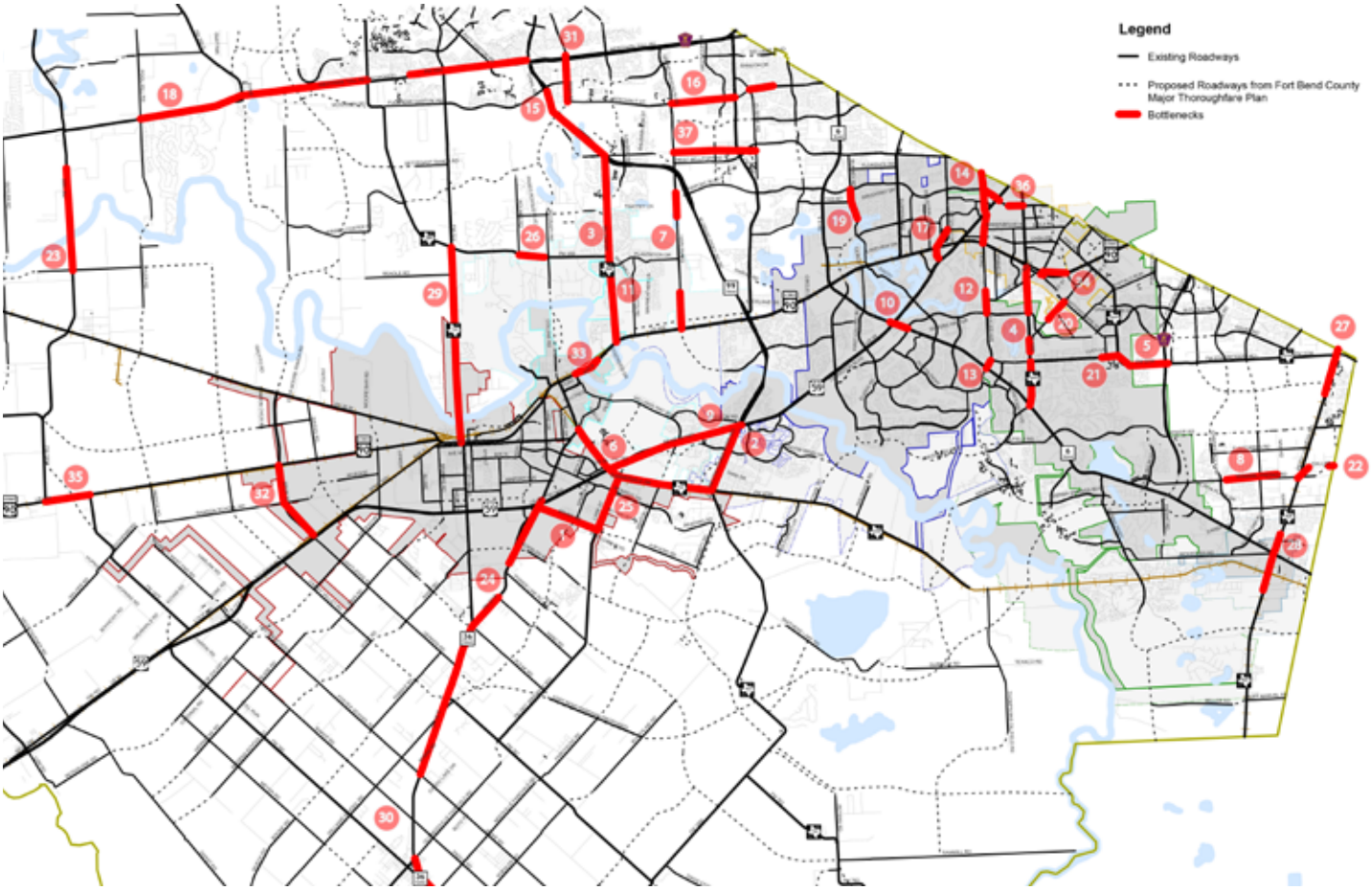
CAPACITY BOTTLENECKS

Based on the assessment of regional mobility through field observations, travel demand modeling, and stakeholder input there are currently a number of roadway bottlenecks that limit mobility and the efficiency of the transportation network within the county.

The 2011 H-GAC Travel Demand Model (TDM), initially presented in Section C, was used to identify current bottlenecks in the Fort Bend study area. The model uses an optimization algorithm that distributes trips across available roadways and travel modes in such a way that minimizes overall travel time and delay across the regional travel network. The TDM outputs an estimated volume for each link in the system. The TDM estimated roadway demand volumes were compared with the capacity of each roadway to identify roadways where the demand was significantly greater than the roadway capacity. To take into account possible output errors due to fact that the TDM outputs are only projections, only links where the V/C ratio was greater than 1 for a roadway length over 0.5 miles were identified as bottlenecks. Only identified bottlenecks within the study area were included in this analysis.

Thirty seven bottlenecks within the study area were identified. The map in Figure E3.4 shows the location of each of these bottlenecks. Bottlenecks were also evaluated using real world observations and stakeholder feedback to verify the model output. Bottlenecks are primarily located within areas with high levels of activity where both local and regional traffic places a demand on roadway corridors and intersections, or in rural areas where only 2-lane farm-to-market roads supply necessary transportation connections.

Nineteen of the thirty seven bottlenecks are projected to be addressed by future capacity enhancing roadway projects that are included in the 2035 Regional Transportation Plan (RTP). The categories of RTP projects identified as capacity enhancing are added capacity projects, traffic engineering projects, and access management projects. Figure E3.5 shows all roadway bottlenecks



Source: H-GAC Regional Travel Demand Model

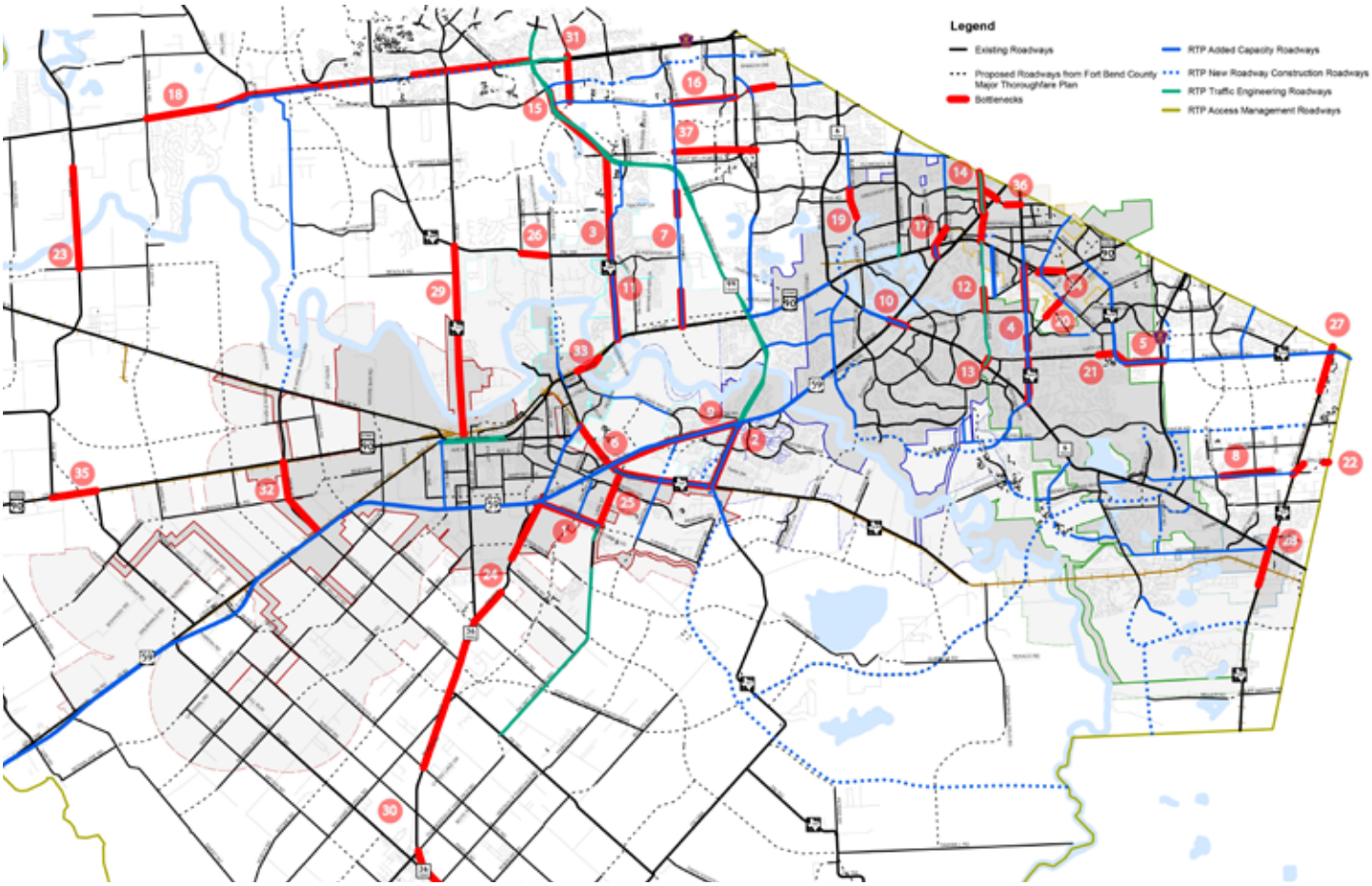
Figure E3.4: CURRENT ROADWAY BOTTLENECKS

within the study area as well as all RTP capacity enhancing projects.

The table included in Figure E3.6 summarized all thirty seven bottlenecks and whether the bottleneck is projected to be addressed by a future RTP project. Bottlenecks 1 through 19 are addressed by capacity enhancing projects in the RTP. Bottlenecks 20 through 37 are not. As previously stated, in 2010, the 2035 RTP was updated as a result of TxDOT's funding limitations. Twelve of the seventeen bottlenecks that are shown in Figure E3.6 table that are not addressed by future RTP projects were initially included in the 2035 RTP but were removed for the 2035 RTP Update. The bottlenecks located where an RTP project was removed from the 2035 RTP update are marked with an asterisk in Figure E3.6. Clearly areas with capacity issues have been targeted to be addressed as funding becomes available. Through planning, Fort Bend has been able to maintain a roadway network and supply capacity for the current demand. This trend need to continue to ensure the roadway network is strong for the projected growth in demand.

The alignment of planned and sponsored project for capacity bottlenecks speaks to the proactive focus Fort Bend has taken to addressing its mobility challenges. There are also significant regional resources being dedicated to the development of major new tollway and freeway capacity. Given this, there are limited roadway projects that have been identified as priorities through the Subregional Plan. As discussed in the following sections, stakeholders have identified critical projects to bridge gaps in the network, sometimes literally, such as a new bridge over the Brazos River north of downtown Richmond. Chapter F includes a list of projects, including the projects removed from the 2035 RTP Update from Figure E3.6, for each jurisdiction within the study area to assist in prioritizing projects as funding becomes available.

Stakeholders have also emphasized improved traffic operations management, thoroughfare planning to increase connectivity, and a more balanced level of investment in other transportation modes.



Source: H-GAC Regional Travel Demand Model and H-GAC 2035 RTP Plan Update

Figure E3.5: CURRENT ROADWAY BOTTLENECKS WITH 2012 RTP UPDATE CAPACITY ENHANCING PROJECTS OVERLAY

Bottleneck Number	Roadway	From	To	RTP Capacity Enhancing Project	Project Type	Project Description	Existing Lanes	Future Lanes
1	Bryan Road	US 59	Tori Road	YES	Added Capacity	Reconstruct and widen	2	3
2	Crabb River Road/FM 2759	US 59	FM 762	YES	Added Capacity and Traffic Engineering	Widen & intersection improvements	2	4
3	Mason Road	West Grand Parkway and West Bellfort Avenue	FM 359	Yes	Added Capacity	Construct curb & gutter roadway partially in new location	2	4
4	FM 1092/Murphy Road	SH 6	US 90A	YES	Added Capacity, Traffic Engineering, and Access Management	Access management Intersection improvement Reconstruct to 6-lane divided	4	6
5	FM 2234/McHard Rd	Court Road	Fort Bend Parkway	YES	Added Capacity and Traffic Engineering	Widen & intersection improvements	2	4
6	FM 762	FM 2218/B F Terry Boulevard	FM 2759/Crabb River Road	YES	Added Capacity	Widen	2	4
7	Harlem Road	US 90A	Grand Parkway/SH 99	YES Partially completed	Added Capacity	2011 TIP: Widen from 2 to 4 2020 RTP: Widen from 4 to 6	2	6
8	Trammel - Fresno Road	Teal Bend Boulevard	Kansas Street	YES	Added Capacity	Construct a 4-lane undivided roadway	2	4
9	US 59	FM 762	Grand Parkway/SH 99	YES	Added Capacity	Widen	4	8 (+2 HOV) 4 Frontage
10	SH 6	US 59 West Frontage Road	Lexington Boulevard	YES	Added Capacity	Widen	6	8
11	FM 359	Plantation Drive	US 90A	YES Roadway widening completed Intersection improvements at US 90A in 2025 RTP	Traffic Engineering	Railroad crossing improvement	4	4
12	Dulles Ave	River Creek Way	Lexington Boulevard	YES	Traffic Engineering	Intersection improvements	4	-
13	Dulles Ave	Cartwright Road	SH 6	YES	Traffic Engineering	Intersection improvements	4	-
14	South Kirkwood Road	Harris County Line	US 90A	YES	Traffic Engineering	Roundabout installation	4	2 with Roundabouts
15	SH 99/Grand Parkway	Bellaire Boulevard	West Bellfort Street	YES	Traffic Engineering	Grade separation at major intersections	4	-
16	Beechnut Street	Harlem Road	Soneto Drive	Partial	Added Capacity	Widen	2 or 4	4
17	South Dairy Ashford Road	Corporate Drive	US 59	Partial	Added Capacity	Widen Grade separation at UP RR	4	Widen to 6 lanes from Julie Rivers Drive to US 59
18	FM 1093	Pool Hill Road/Bowser Road	Grand Parkway	Partial	Added Capacity	Widen - Westpark Tollway extension	2	4 (Main Lanes) 4 (Frontage)
19	Burney Road	West Airport Boulevard	Ragus Lake Drive	Adjacent	Added Capacity	Widen	2	2

Bottleneck Number	Roadway	From	To	RTP Capacity Enhancing Project	Project Type	Project Description	Existing Lanes	Future Lanes
20	5th St	Guadalupe Street	Staffordshire Road	NO	-	-	4	-
21	Cartwright Road	Hawks Road	US 2234	NO	-	-	4	-
22	Dallas Road/CR 59	FM 521	Brazoria County Line	NO	-	-	2	-
23	FM 1489	Sanders Street	Johnson Road	Removed from 2035 RTP *	Added Capacity	Widen from 2 to 4 lanes with bridges from Waller County Line to US 90A	2	4
24	FM 2218	US 59	Pleak Road/SH 36	Removed from 2035 RTP *	Added Capacity	Widen from 2 to 6 lanes from SH 36 to US 59	2	6
25	FM 2977	FM 762	Bryan Road	Removed from 2035 RTP *	Added Capacity	Wodem from 2 to 6 lanes with bridges from FM 361 to FM 762	2	6
26	FM 359	Holmes Road/Richmond-Foster Road	Precinct Line Road/Grand River Road	Removed from 2035 RTP *	Added Capacity	Widen from 2-lane to 4-lane rural from FM 723 to Farmer Road	2	4
27	FM 521	Harris County Line	Sand Isle Drive	Removed from 2035 RTP *	Added Capacity	Widen from 2 to 6 lanes with bridges from Harris County Line to Sienna Parkway	2	6
28	FM 521	Broadmore Street	Coen Road	Removed from 2035 RTP *	Added Capacity and Grade Separation	Widen from 2 to 6 lanes with bridges from Harris County Line to Sienna Parkway and Construct Grade Separation at UP Railroad	2	6
29	FM 723	FM 359	Avenue J	Removed from 2035 RTP *	Added Capacity	Widen from 2 to 6 lanes with Bridges from FM 359 to US 90A	2	6
30	SH 36	Pleak Road/FM 2218	FM 1994	Removed from 2035 RTP *	Added Capacity	Widen to 4-lane divided rural with grade separations from FM 2218 to Needville Fairshilds Road	2	4
31	South Peek Road	FM 1093	Beechnut Street	NO	-	-	4	-
32	Spur 10	US 90A	US 59	Removed from 2035 RTP *	Added Capacity	Widen to 4-land divided roadway from SH 36 to US 59	2	4
33	US 90 A	2nd Street	Damon Street	Removed from 2035 RTP *	Added Capacity and System Preservation	Widen to 6 lanes divided from LP 762 to FM 359 and rehabilitate bridge and approaches at US 90A westbound at the Brazos River	2 in each direction	6
34	US 90 A	Stafford Road	Present Street	NO	-	-	4 in each direction	-
35	US 90A	FM 1950	FM 1875	Removed from 2035 RTP *	Added Capacity	Widen from 2 to 4-lane with bridges from Wharton County Line to SH 36	2	4
36	West Airport Boulevard	Kirkwood Road	FM 1092	NO	-	-	4	-
37	West Bellfort Avenue	Harlem Road	Clodine Road	NO	-	-	2 or 4	-

** Roadway addressed by original 2035 RTP but due to TxDOT funding constraints, project removed from 2035 RTP Update*

Source: H-GAC Regional Travel Demand Model and H-GAC 2035 RTP Plan Update

Figure E3.6: LIST OF CURRENT ROADWAY BOTTLENECKS

GRADE SEPARATIONS AT MAJOR BARRIERS

The discussion of mobility challenges in Section D2 presented the challenges that result from both the physical and natural barriers within Fort Bend County. These barriers restrict current and future connectivity for all modes of transportation in Fort Bend. Addressing these barriers was identified by stakeholders as a priority for this plan including several targeted additions for consideration for the RTP. Figure E3.7 summarizes future grade separation projects within the county. Projects fall into four categories: new railroad grade separation included in the RTP, new Brazos River crossing included in the RTP, RTP identified railroad under/overpass improvements, and stakeholder identified projects.

LOCATION

New Railroad Grade Separation - RTP

- Eldridge Road at US 90A
- FM 2759 at Sansbury
- FM 359 at US 90A and UP Railroad
- Dairy Ashford Road at US 90A*

New Brazos River Crossings - RTP

- Fort Bend Parkway Tollroad
- SH 99/Grand Parkway
- Spur 10

RTP Railroad Under/Overpass Improvements

- US 90A at West City Limits of Richmond
- SH 36 at UP Railroad in Rosenberg
- US 90A at UP Railroad in Rosenberg

Stakeholder Identified

- 10th Street at Brazos River north of Richmond
- Texas Pkwy/FM 2234 at 90A and UP Railroad

* While included in the 2035 RTP Update, the feasibility of this project is under review in the City of Sugar Land.

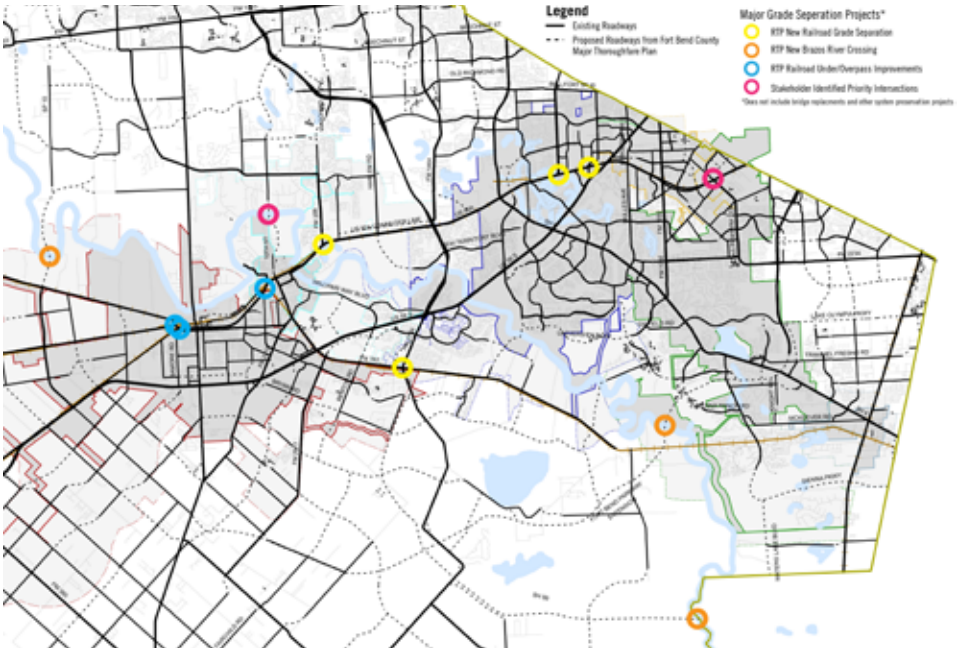


Figure E3.7: IDENTIFIED GRADE SEPARATION PROJECTS

While serving as an economic benefit for the study area, the presence of the Union Pacific (UP), Kansas City Southern (KCS), and the BNSF Railroad lines provide major physical barriers. While many railroad crossings along major freeway and state highways have been grade separated, a significant number of railroad crossings within the county along major thoroughfares are at-grade. Within the developed areas of the seven cities, the at-grade railroad crossing can cause adverse mobility issues for roadway users but also impact train operations and frequently increases the need for train horn use, causing noise disturbances for the surrounding neighborhoods. Three new grade separated crossings along US 90A are included in the RTP, along with one on FM 2759 at the future Grand Parkway. One stakeholder identified crossing, the UP at US 90A and FM 2234/Texas Parkway in Missouri City, was included in the original 2035 RTP, but was removed form the 2035 RTP Update because of funding constraints. At the time of this plan, it was still being considered for future funding. Many railroad crossings near city centers, such as in Rosenberg and Richmond are major barriers for pedestrians and bicyclists and future projects should take into account safe pedestrian and bicycle crossings as well as improved crossings for vehicles in the designs.

The Brazos River has acted as a physical and cultural divide between the more rural and agricultural based western Fort Bend region of the study and the more suburban eastern side. With development continuing to travel west, Brazos River crossings at multiple locations are becoming more important and crucial for county growth. Currently, there are only seven roadway crossings over the Brazos River within Fort Bend. There are three additional crossings planned within the 2035 RTP Update, all of which are part of larger roadway projects. The Fort Bend County Major Thoroughfare Plan includes an additional five river crossings, a number which will be refined through the Thoroughfare Plan update to be kicked off in 2013. The Major Thoroughfare Plan includes the extension of 10th Street north of Richmond to cross the Brazos River near George Park; this crossing was emphasized by stakeholders as a priority crossing desired by many Fort Bend residents and the local stakeholders in Richmond to improve connectivity to downtown and future development north of the Brazos River.

TRAFFIC MANAGEMENT

With the continued growth in the study area, demand is increasingly placed upon the key area roadways to carry the increased levels of traffic. Therefore when incidents occur on a corridor like US 59 or US 90A, the resulting congestion has limited alternate routes on which to disperse. An example of this would be if there were major incident on US 59 inbound during the morning peak hour just north of the Brazos River. The inbound traffic on US 59 would have limited alternatives to continue their trip; typically many motorists would seek alternate routes attempting to reach US 90A. The expansion of corridors like the Grand Parkway can help balance this traffic demand but frequently these trip diversions can overwhelm areas like downtown Richmond and Rosenberg where traffic signal systems are not coordinated to handle this level of traffic. One tool that has been identified to help address issues like these is the expansion of Intelligent Transportation Systems (ITS) and Traffic Management systems more broadly through the study area. These systems can also play a major role in emergency management for major incidents such as a hurricane evacuation.

The cities of Sugar Land and Missouri City have made significant investments in expanding their ITS and Traffic Management capabilities and each city has a version of a traffic management center. Houston Transtar (Figure E3.8) also provides roadway monitoring for portions of US 59 down to SH 6 and serves as a focal point for coordinating incident management to the region that includes Fort Bend County. For smaller cities, this level of investment is difficult and therefore developing a regional approach may be the most likely path to developing a system to address traffic management issues faced by these cities. There are several potential strategic opportunities for the jurisdictions in Fort Bend to pursue to enhance traffic management.

- Develop a Regional or Subregional Fort Bend Traffic Management Center - As Fort Bend continues to grow, the development of a regional Traffic and Emergency Management Center that can serve a larger segment of the county will be beneficial to the operations on area roadways. This can leverage existing facilities or be developed as a stand alone facility. City specific terminals may be provided for support of local incident and emergency management.

- Expand TxDOT ITS Coverage - with major projects including the US 59 widening south of the Brazos River, the TxDOT freeway camera system will likely be expanded further south on US 59 (Southwest Freeway) to include major locations including the Grand Parkway, the Brazos River Crossing, Williams Way, FM 762 and SH 36. As Spur 10 is widened to provide a bypass for SH 36 around the downtown Rosenberg area, this may also be an important location given the high levels of projected freight movement in the area.

- Develop an Emergency Response Plan - given the critical nature of each of the roadways that provide mobility in and around the Fort Bend study area, the development of an Emergency Management Plan outlining critical scenarios for different types of situations is recommended. This can include major natural disasters that impact mobility or how to mitigate the impact of roadway or railroad incidents should they occur. Having a regional traffic management center as a key tool will support the successful execution of any plans that would be developed.

Figure E3.8: MISSOURI CITY TRAFFIC MANAGEMENT CENTER / HOUSTON TRANSTAR TRAFFIC MAP

THOROUGHFARE PLANNING

Fort Bend County maintains a Major Thoroughfare Plan (MTP) that was last formally updated in 2007, and Fort Bend County plans to update its Major Thoroughfare Plan beginning in 2013. . The goal of the 2007 document was to outline the alignments and routes of major roadways that were desired within the county. The plan was intended to preserve corridors and rights-of-way as the county continues to grow and new development occurs. The plan classified major thoroughfares into four major categories: Interstate, Toll, State, Farm-to-Market (FM), Public Major Thoroughfare. The plan also outlines proposed roadways within the four major categories and existing public and private roadways. Major thoroughfares that experienced a status change from the 2004 plan were also identified. The plan also included existing and proposed grade separation and interchanges.

The county's GIS department also maintains a database of county roadways with classifications that is updated quarterly when new roadways are added to the county system. The map shown in Figure E3.9 depicts the current Fort Bend roadway network as well proposed roadways, according to the MTP. The figure does not separate roadways based on the four major categories outlined in the 2007 MTP.

The county contains a variety of roadways and different roads change character depending on their location. For example, FM 1092 in the City of Stafford is a seven lane (three lanes in each direction and one two-way left-turn lane) roadway that acts as a major arterial. FM 1489 west of the City Rosenberg is a two lane rural roadway with unimproved shoulders. Both FM 1092 and FM 1489 are classified as FM Roads in the MTP, but operate very differently.

Fort Bend is a diverse county with a variety of land uses and a variety of corridor types; it is recommended that the thoroughfare plan reflect that. Modern thoroughfare plans frequently classify corridors by more than ownership classification; they develop an understanding of a corridor and the context of how it is used to develop classifications. The current Fort Bend Thoroughfare Plan has acted as a guideline for roadway development but can be a key tool to support mobility related to future growth. The plan is recommended to evolve beyond a one size fits all classification system; a new plan should classify roadways based on how they

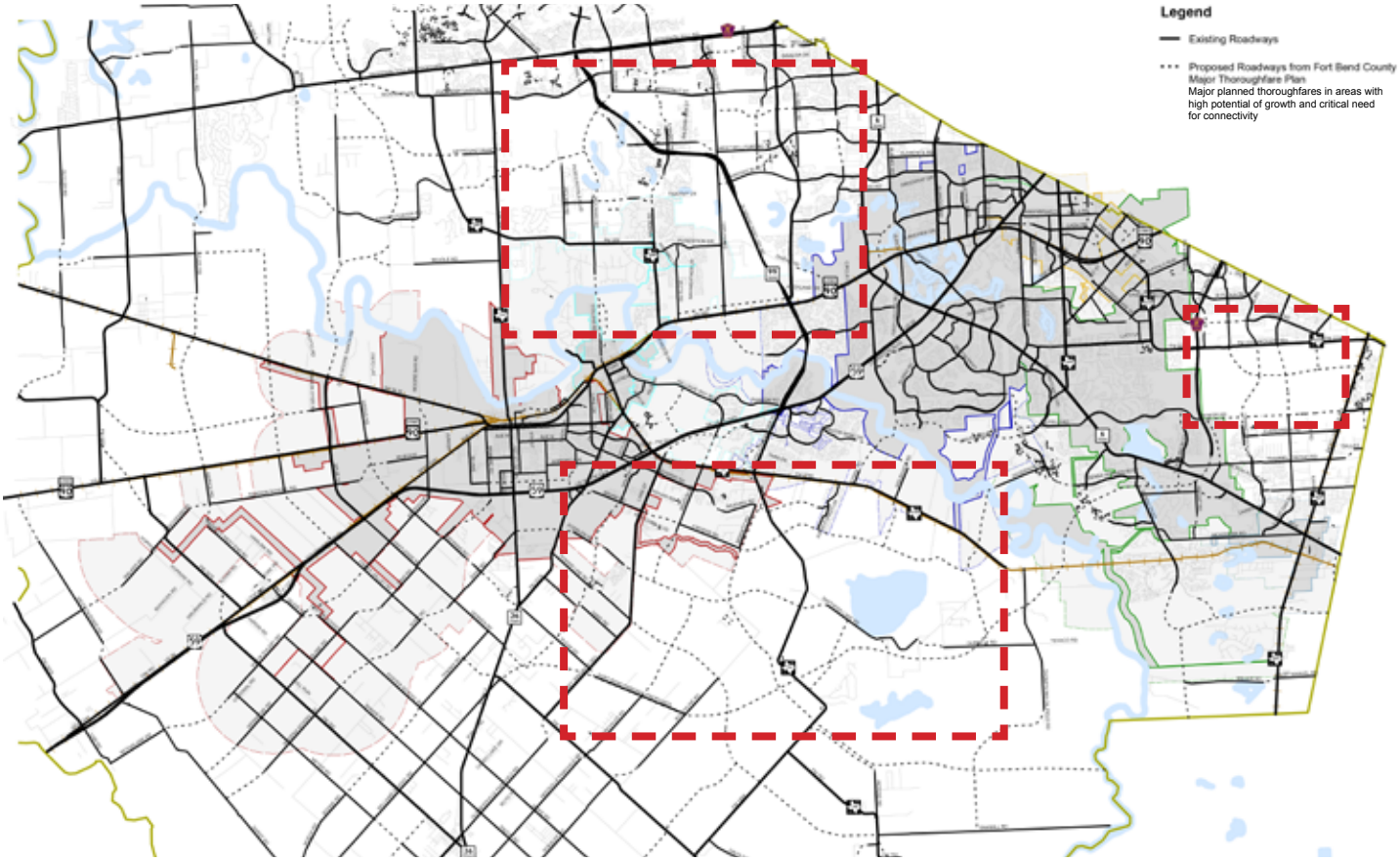


Figure E3.9: FORT BEND COUNTY MAJOR THOROUGHFARE PLAN

function and how they can function in the future with a focus on supporting regional growth and integrating multi-modal mobility plans where possible.

As shown in the connectivity map of Fort Bend County, Figure D2.7, the intersection density within the county is substantially less than Harris County. With the exception of historic downtowns of Richmond and Rosenberg, highly connected roadway networks are the exception. Strengthening and coordinating thoroughfare planning among cities and the county will support connectivity to develop alternative routes and decrease demand on the existing roadway network. The Greater Fort Bend Economic Development Council lists 49 master planned communities with the county, more than any other county within the State of Texas. As the population within the county continues to grow to the projected one million residents by 2035, current master planned communities will also continue to expand and new communities will be developed Therefore, it is essential that the Thoroughfare Plan be refined and enforced to ensure key corridors support regional mobility linked to future growth.

Currently, Fort Bend County design criteria requires new major thoroughfares to generally be four lanes with a minimum of 100 foot and a maximum of 120 feet of right of way. The county also requires minimum right of ways for major collectors (75ft), minor collectors (60ft), and residential streets (60ft) as classified by the developer. Sidewalks are not required by the county for any roadway type and the county puts responsibility of sidewalk development on the developer, home builder, and homeowners associations. Current design criteria is primarily focused on serving vehicle trips only. As the county continues to change, and congestion increases, emphasis should be put on developing multi-modal corridors and linking transit service, bicycle connections and pedestrian sidewalks into the MTP.

Cities including Rosenberg, Sugar Land, and Stafford also maintain city thoroughfare plans, with Sugar Land recently updating their plan in 2012 to be more comprehensive and provide more flexibility in developing cross sections that align with the context of the corridor. Overall, the county plan aligns with the city's plans, but there can be exceptions. As key roadway corridors cut across multiple jurisdictions, these plans should align to provide a coordinated regional focus on increasing the level of connectivity. And connectivity should not be limited to within Fort Bend County. Coordinating with H-GAC and the H-GAC Regional Thoroughfare Plan will assist in ensuring strong connections between Fort Bend County and surrounding counties. The counties and cities should work together to create comprehensive thoroughfare plans and ensure priority corridors are maintained.

A majority of added capacity roadway projects within the seven cities are focused on roadway widening and less on new roadway construction. With the exception of major new tollways like the Grand Parkway (SH 99) and the extension of the Fort Bend Parkway Tollroad south of Missouri City, new roadways will be primarily constructed as part of new developments. While new roadways are being built within the city limits, the majority of planned roadways projects, as seen though the RTP as well as the Fort Bend County Major Thoroughfare Plan, are outside of the seven cities in the study area. Figure E3.9 highlights three major sections in unincorporated Fort Bend County where proposed roadways have been drawn. The majority of these three areas is outside of any city jurisdiction, therefore enforcement of good roadway design is the responsibly of the county. The role the thoroughfare plan will play in this development is critical in guiding the development of roadway corridors that meet the needs of the region.

In addition to local thoroughfare plans, H-GAC maintains a Regional Thoroughfare Plan. This information is collected as information for local officials. H-GAC gathers this information as a preparatory step to understand future system expansion plans envisioned by local jurisdictions. The Thoroughfare Plan identifies existing thoroughfares as well as routes for future facilities. Member governments are encouraged to include all anticipated future facilities on the Regional Thoroughfare Plan. This helps identify gaps and alignment issues across jurisdictional boundaries, and alerts H-GAC that future facilities are being actively contemplated. Being noted on the H-GAC Regional Thoroughfare Plan is a first step for eventual inclusion in the long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Program (TIP)

STREET DESIGN TOOLBOX

A variety of street types have played a role in the development of the communities in the study area as highly attractive and desirable places to live, work and play. Future development and redevelopment efforts should continue providing a mix of street types while also creating new opportunities for multi-modal transportation, most commonly through the inclusion of transit facilities, bicycle amenities, and/or sidewalks. The role of street types should be based on surrounding land uses and desired travel and design speeds. The following represents a sample of different roadway design classification and standards that can be incorporated into future projects and standards.

Neighborhood (Local) Streets

For streets whose character is overwhelmingly residential, a typical cross section should include narrow lanes that are few in number (typically only one or two in each direction) and potential traffic calming devices such as speed bumps, chicanes, traffic islands, curb extensions or speed tables. As travel speeds are low, dedicated bicycle facilities are unnecessary as people would consider the streets safe places to bicycle. These streets are used primarily for local traffic and few people use them to connect to destinations outside of the neighborhood. These roadway can also provide locations for on-street parking for local residents in appropriate areas.

Neighborhood Collectors

Like neighborhood streets, this type is mostly residential, but may include some other uses as well. As the travel speeds are still relatively low, few people will use them for travelling long distances, however they may connect useful local destinations and be used by those outside of the residential area. With slightly higher speeds, dedicated bicycle facilities are more important.

Major Thoroughfares

These streets carry the majority of traffic in Fort Bend County and are frequently defined by higher speeds and more commercial and industrial land uses. They are uncomfortable places for cyclists and require physically separated facilities. Wider lanes accommodate both larger commercial vehicles and faster speeds. The context of these corridors can be important, an industrial thoroughfare that has a high percentage of trucks will have different design needs than one that serves more residential or mixed used development. Developing flexibility criteria to develop a corridors to best meet the local context will strengthen the mobility for the corridor and the region.

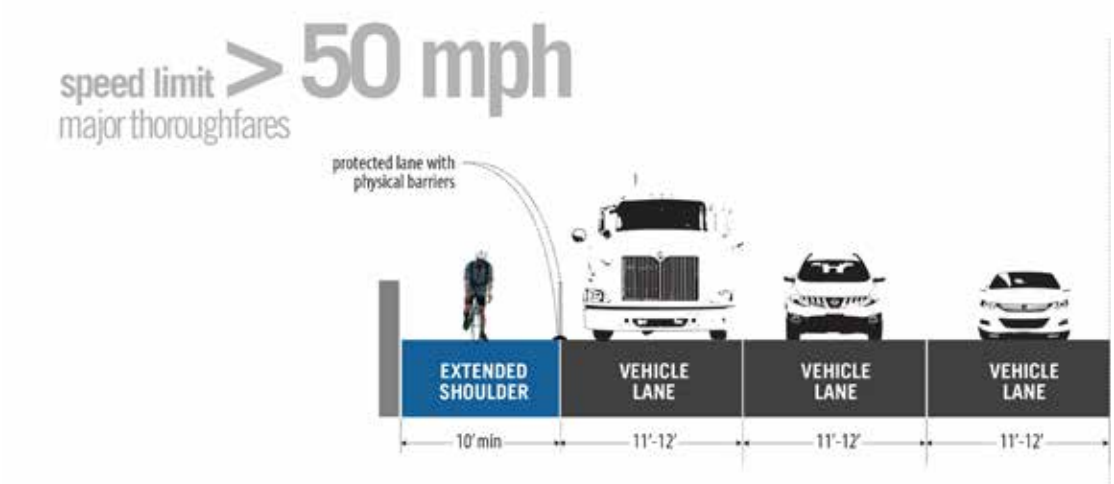
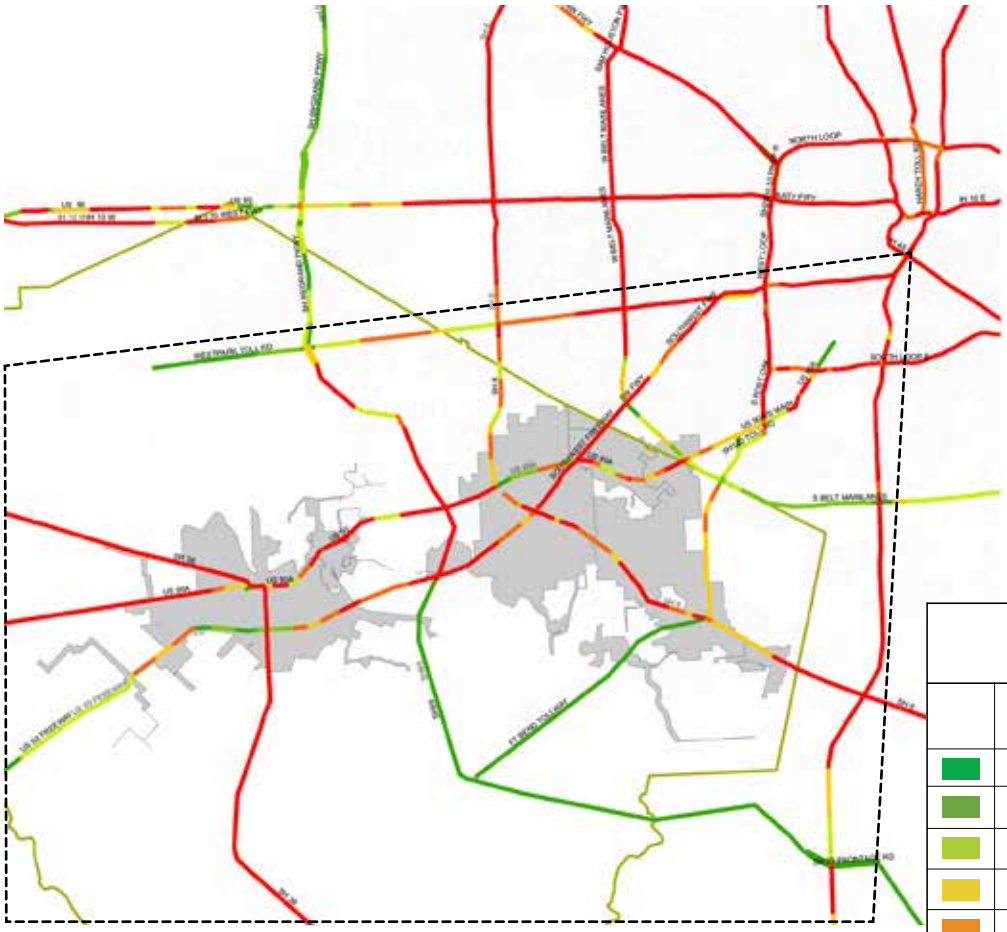


Figure E3.10: MAJOR THOROUGHFARE POSSIBLE MULTI-MODAL INTEGRATION

Section D.2 presented the Travel Demand Model results for the Year 2035 for both the local roadway network as well as the regional roadway network. Given the current roadway network, it is likely that the biggest impacts that will result from Fort Bend County's continued growth will be on the regional roadway network, shown for the analysis area in Figure E3.11. The corridors making up the Fort Bend regional roadway network, providing access to major activity centers, is projected to have more than 50% of the regional links over capacity by 2035 based on daily demand forecasts. Many of these corridors are projected to experience demand to capacity imbalances that would lead to major delays lasting significant portions of the day. This level of delay is projected even though the 2035 regional travel model includes the future planned 2035 RTP Update projects shown in Figure E3.3.

The increase in population and congestion levels, as well as transportation budget constraints that will be stretched to keep up with roadway maintenance, will have a major impact on the regional roadway network including transportation costs and travel time increases within the study area. Access to major employment centers represents a major historical strength of the study area. While local job growth is expected to continue and some residents will become less dependent on the regional roadway network, the county will continue to be linked to regional job and activity centers and maintaining these links will be critical to maintaining Fort Bend's strong economic position and attractiveness to residents and businesses. Acquiring additional right-of-way to widen major corridors such as US 59 will be increasingly difficult and expensive, therefore developing options for utilizing the existing right-of-way in these corridors most efficiently is critical. One of the most effective and efficient way to add capacity to the existing regional roadway corridors is to strongly incorporate high capacity transit. Stakeholders and survey respondents recognized the need to increase transportation choice and increasing the access and reach of higher-capacity transit is an important tool to address mobility needs in the future.



Fort Bend County

Seven Cities' City Limits

Analysis Area

Source: H-GAC Regional Travel Demand Model

H-GAC Travel Demand Model 2035 Projections (Volume/Capacity)

	Demand-to-Capacity Ratio	Percent of Links 2011	Percent of Links 2035
	0.00 - 0.60	33%	9%
	0.61 - 0.70	13%	6%
	0.71 - 0.80	14%	9%
	0.81 - 0.90	14%	10%
	0.91 - 1.00	11%	15%
	1.01 - 2.00	26%	50%
	2.01+	0%	2%

Figure E3.11: Projected 2035 Travel Demand Model

Though transit is viewed by many people as a key piece of the mobility toolbox, it is an area that can bring strong negative reaction from some stakeholders and respondents. It will be important to develop transit offerings that deliver high levels of service linked to the areas that have the highest demand. It will be also be important to articulate the key benefits of the transit service broadly, including sharing the benefits of the service to those that do not frequently utilize the service.

TRANSIT IN FORT BEND COUNTY

A majority of the Fort Bend study area, like many other suburban communities, was developed with a mobility focus centered around the personal vehicle. Transit service has not played a large role in the choices and options that the majority of Fort Bend residents utilize or often are even aware of, and current regional transportation investment is almost entirely focused on roadway projects. As discussed in Chapter C, current fixed route service in the study area is a combination of routes and services provided by the Metropolitan Transit Authority of Harris County (METRO) and the Fort Bend County Public Transportation Department (FBCPTD). FBCPTD also provides demand response services within Fort Bend County which has been growing and provides a life line service to many area residents who have a limited set of alternatives to get to where they need to be. Figure E3.12 depicts the current fixed route transit network within the Fort Bend study area. This service is primarily focused around peak hour, one-way service designed to connect people to and from their jobs in Uptown and the Galleria, Greenway Plaza, the Texas Medical Center, and Downtown Houston. Two METRO Park & Rides operate within the study area, both in Missouri City. FBCPTD operates three Park & Rides; one in Rosenberg and two in Sugar Land.

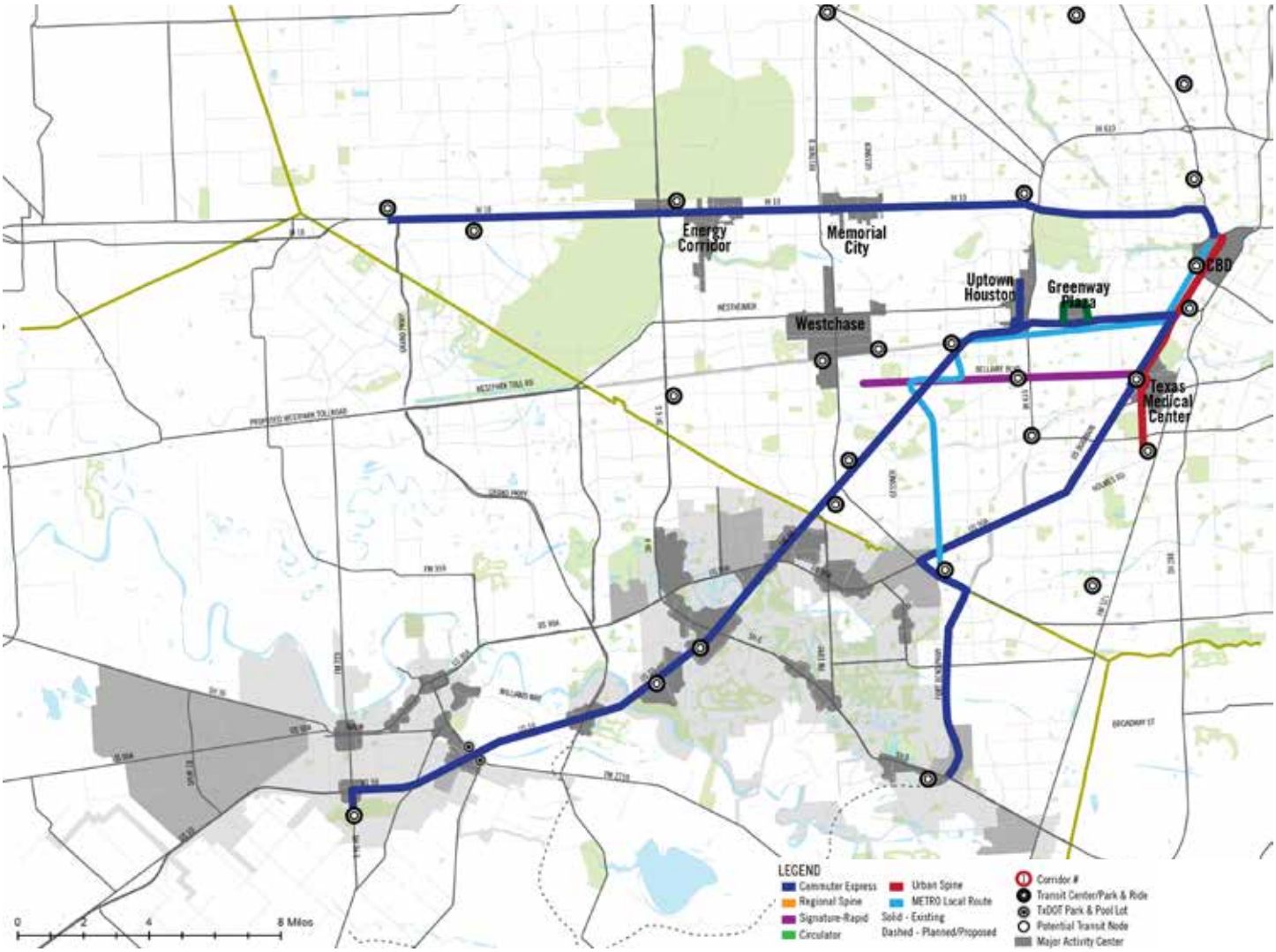


Figure E3.12: EXISTING FIXED ROUTE TRANSIT SERVICE WITHIN FORT BEND COUNTY

While transit services may have many goals, the effectiveness of transit to attract ridership is highly dependent on the ability of the system to conveniently and quickly transport riders between two desired locations. Personal vehicles have the ability to do this effectively and the associated convenience causes residents to continue to gravitate toward driving alone in spite of increasing congestion, delays, cost and other factors. The goal of a multi-modal system is to provide users a combination of mode choices in their daily trips. Multi-modal transportation does not mean switching all personal vehicle riders to transit and active modes; it encourages choice. This is increasingly a factor in where people choose to live and work, particularly younger people who have been shown to drive less and prefer transit more. Feasible and attractive multi-modal options would also help reduce the strain on the regional and local roadway network.

The toolbox of transit services is varied and can be tailored to a community's particular local and regional needs and goals, to develop a comprehensive transit system. Figure E3.13 describes a range of potential service types for Fort Bend County. The table shows the different service types by level of service, primarily as a function of frequency and span of service. The stop spacing, frequency, purpose, right of way requirements and different technology options are listed for each type of service. This plan outlines a phased approach to integrate the listed service types to create a system that will increase multi-modal access and

SERVICE	LOCAL EXAMPLES	RESERVED RIGHT OF WAY	TYPICAL STATION FEATURES					TYPICAL FREQUENCY				TYPICAL STOP SPACING	PURPOSE	TECHNOLOGY OPTIONS
			RESERVED RIGHT OF WAY	SHELTER/ BENCH	SIGNAGE	NET VEHICLE INFORMATION DISPLAY	TICKET MACHINES	RUSH HOUR	MIDDAY	EVENING	WEEKEND			
URBAN SPINE	Main Street Line	Y	Y	Y	Y	Y	Y	<15 min	<15 min	<15 min	<15 min	1/2 mile	all trip types between high density areas of the urban core	light rail, BRT, heavy rail
REGIONAL SPINE		Y	Y	Y	Y	Y	Y	<15 min	<15 min	<15 min	<15 min	.5 miles to 5 mile+	all trip types between regional activity centers and park and ride commutes	light rail, BRT, heavy rail, commuter rail
COMMUTER EXPRESS	Park and Ride	S (HOV lanes)	M	Y	Y			<20 min	Limited or no service			Limited/ non-stop up to 15 miles	park and ride commutes	bus
SIGNATURE-RAPID	similar to Bellaire Quickline			Y	Y	Y		<15 min	<15 min	<15 min	<15 min	1/2-1 mile	all trip types; longer trips	bus
FREQUENT LOCAL	similar to Westheimer			Y	Y			<15 min	<15 min	<15 min	<15 min	1/8 to 1/4 mile	all trip types; shorter trips	bus, streetcar
LOCAL	typical METRO routes			P	Y			15-60 min	20-60 min	30-60 min	30-60 min or none	1/8 mile	basic transit service	bus, streetcar
CIRCULATOR	Greenlink			P	Y			every 15-30 min	Additional service varies by purpose			1/8 mile	short trips within an activity center	bus, streetcar

Y - Yes M - Maybe S - Sometimes P - Preferred

*Stops may be spaced closer in high activity areas and farther in low activity areas
** Assumes continued operation for demand response type services

Figure E3.13 Transit Service Types

mobility for not only the residents of the Fort Bend study area but employees and visitors as well.

The plan links investment in transit to demand driven needs for connections between activity centers, as well as potential to increase or integrate transit oriented development into existing or new activity centers. Where possible, the plan seeks to utilize existing roadway corridors to enhance transit service, with investments targeted at connecting transit to the locations where people want to reach. The plan seeks to provide efficient, safe, and cost-effective alternatives by which interested people are able utilize transit for some of their daily trips.

In general, demand for transit develops gradually over a period of time. The Fort Bend region has started to see growth in transit ridership since Fort Bend County Transit initiated services for the region. Proposed transit solutions for the Fort Bend region should be ones that can evolve and grow through the years. Hence, the transit recommendations for the Fort Bend Subregional Plan utilize a phased approach for developing the transit system. It is also necessary to implement transit improvements in a manner that is scalable so that transit systems implemented as part of the short or medium term option can be redefined or upgraded as a solution for the long term.

The first step in improving transit in Fort Bend is to enhance the current transit system. An increase in marketing as well as easy to use maps, schedules, and online tools can help bolster the already existing system. The current commuter express service can also be increased with more routes throughout the day and potentially increased connections to job centers in Westchase and the Energy Corridor that do not currently have significant service. These may be most beneficial from the proposed park & ride facilities that Fort Bend Public Transportation Department has in the planning stages.

A stronger focus can be put on increasing service in the non-peak hour direction to encourage all-day bidirectional ridership to allow riders more flexibility. As congestion worsens the demand for transit will increase and supplying a high quality system will attract more riders. Given the demographic changes that are likely to be experienced in Fort Bend, one key aspect will be to ensure that the Demand Response service provided by FBCPTD is scaled to meet the demand. By 2035, over 20% of the population in the county will be over 65. Ensuring that the transit service continues to meet the needs of this community will be critical. This can also be accomplished by ensuring that services are located within walking distance from any fixed route service that exist within the study area. This is yet another area where an integrated approach to transportation and land use planning will have significant potential benefits.

The following pages outline a phased approach to enhance transit in the Fort Bend study area. The services described in the Figure E3.13 will be used to outline the recommended improvements in each phase. The actual name or operation of the service may differ based on the implementation strategy or funding availability.

TRANSIT AND ACTIVITY CENTERS

Principle 1 of the strategic plan outlined eight key strategies that should be used to help create and strengthen activity centers with in the study area, including a recommendation to improve multi-modal connections and access (e.g., transit, cycling, walking) with activity centers. Twenty-two activity centers were identifies within the study area, fifteen of which are designated as significantly mixed use with large components of commercial or retail activity. The remainder of the activity centers projects as primarily business park and industrial centers with significant concentrations of employment. These centers support the types of activity density that will support higher ridership of any transit projects that is implemented. The recommendations outlined for the growth of transit in the Fort Bend study area build off of the goal of increasing access to these centers and nearly all of the activity centers would be in close proximity to one of the recommended transit improvements.

Providing enhanced transit access not only provides improved transportation choice and has the potential to remove some vehicles causing congestion from the roadway network, a strong transit network can also act as a catalyst for economic development and increased economic value[1]. This is particularly true for high quality transit service that has reliable, fast travel times at frequencies that support increased consideration of transit in people's travel decisions. Transit oriented development is likely to take time as the travel patterns in the region adjust to the availability of higher quality transit. As the regional and local roadway network become more congested, providing transit options to connect activity centers also supports the continued viability of activity centers by allowing a broader range of people to access the location in a timely fashion.

1 Nadine Fogarty (2008) *Capturing the Value of Transit*, USDOT Center for Transit Oriented Development

TRANSIT PHASE 1 : EXPANDING FORT BEND COMMUTER PARK AND RIDE

METRO and Fort Bend County Public Transportation Department are continuing to expand their respective Park & Ride services. For the near term, transit expansion within the county is likely to be driven by increased Park & Ride service and the associated facilities. Currently there are four proposed Park & Ride locations to be constructed in the study area, as shown in Figure E3.14. Three of these are Fort Bend County projects and one is a METRO sponsored project in coordination with FBCPTD. The Westpark Park & Ride, included in the 2035 RTP Update will be located near the intersection of the Westpark Tollway and US 99/Grand Parkway. Service from this Park & Ride is expected to provide service to major job centers within Harris County including improved service between Fort Bend County and Westchase, and the Energy Corridor. Also included in the 2035 RTP Update, is the FM 521 Park & Ride. The Park & Ride, to be located at the intersection of FM 521 and SH 6, is expected to provide peak hour commuter service to residents of east Fort Bend County as well as Brazoria county.

The 2035 RTP Update includes dedicated funding to construct a permanent Park & Ride at the current terminus of Fort Bend Parkway and SH 6. Currently commuter express service is provided by METRO Route 170 Missouri City from the Kroger parking lot and this route has experienced solid ridership demand. This site represents an opportunity to effectively integrate transit into the surrounding development effectively. The Park & Ride located at the intersection of SH 6 and US 90A is not included in the 2035 RTP Update but has been proposed as a potential future location for a Park & Ride as new development in this area continues, including the Imperial site redevelopment project. Further study on the feasibility of this site may be needed.

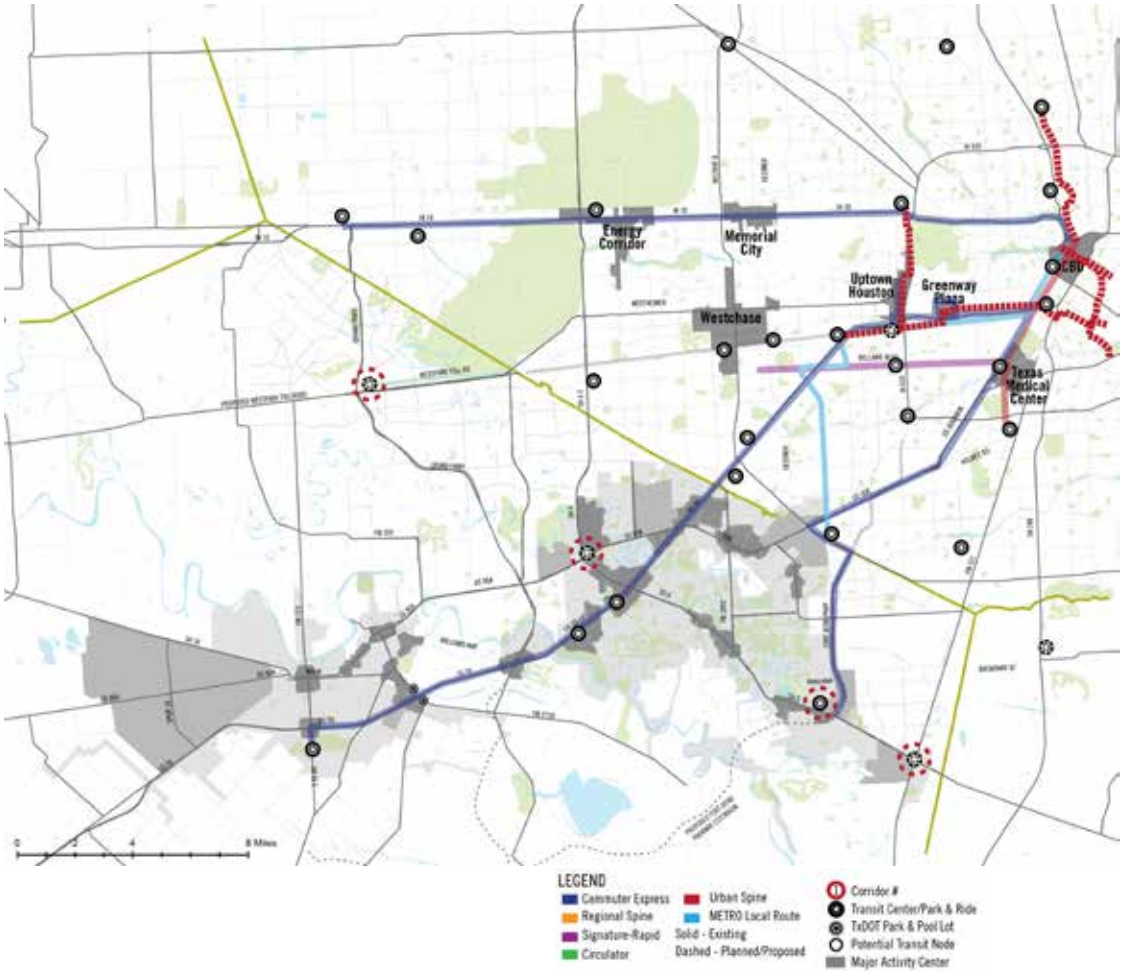


Figure E3.14: PROPOSED PARK&RIDE LOCATIONS

TRANSIT PHASE 2 : ENHANCED METRO CORRIDORS

The planned Park & Rides as well as continued enhancement of FBCPTD and METRO service will provide key links Fort Bend County and major Harris County activity Centers. As METRO continues to enhance its local bus service, corridor enhancements are expected to occur along Gessner Road, Westheimer Road, Westpark Tollway, and Fort Bend Parkway to link into the new Park & Ride locations (Figure E3.15). Gessner Road and Westheimer Road have been proposed for future upgrades from local service to signature-rapid service, similar in branding to the current service along Bellaire Road, though likely with all-day service versus only peak hours. Signature-rapid service provides higher quality service than basic local bus service - it can also allow for more frequent service throughout the entire day and weekends. The proposed signature-rapid service along Gessner would connect Missouri City with Westchase and Memorial City, as well as connections to the US 290, Westheimer, Westpark, and US 59 corridors.

The new Park & Ride on the Westpark Tollway will provide connections from northern Fort Bend County into Westchase, Uptown/ Galleria, Greenway Plaza and Downtown Houston. The 2035 RTP Update for the Westpark Park & Ride also discusses the possibility of service to the Energy Corridor. Commuter Express service along Westpark Tollway will provide a transit option for residents who use the Westpark Tollway as their major corridor to and from employment centers. A key challenge for this corridor is the limited ability to provide differentiated transit service though provision of dedicated corridors, limiting travel time benefits versus auto traffic.

The near term METRO transit improvements will assist in building a transit network with strong connections between existing Harris County activity centers and Fort Bend County. These services also provide strong connections to recommended transit improvements outlined in the following phases.

These transit corridors are shown as 1 - Fort Bend Parkway Tollroad/US 90A, 2- Westpark Corridor, and 3 - Gessner in Figure E3.15.

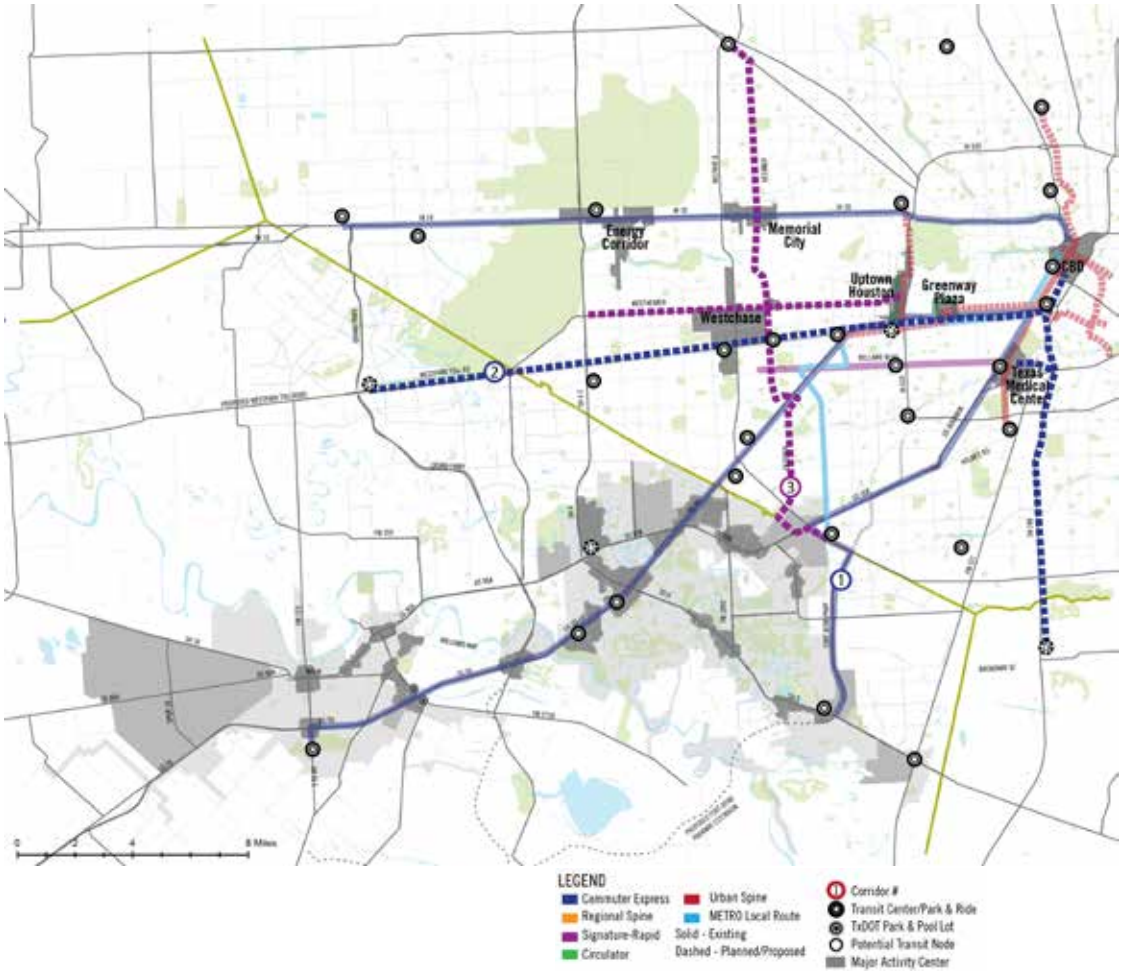


Figure E3.15: ENHANCED METRO CORRIDORS

TRANSIT PHASE 3 : US 59 REGIONAL TRANSIT SPINE

US 59 is the main transportation spine for the Fort Bend study area and represents the highest potential regional transit corridor based on connections to activity centers in Fort Bend and regional job centers including Downtown, Texas Medical Center, Uptown and the Galleria. Currently FBCPTD provides commuter express service along the corridor to Uptown/Galleria, Greenway Plaza, and the Texas Medical Center, with transfers available to Downtown Houston at METRO's West Bellfort lot. Service is provided from three Park & Rides: Fort Bend County Fairgrounds, University of Houston - Sugar Land, and First Colony Mall - AMC Theater. Only the Fort Bend County Fairgrounds Park & Ride is a permanent facility, the other two Park & Rides lease existing parking lots. Service is only provided during peak hours, with the exception of one noon hour route along the Texas Medical Center route. Currently there is no commuter direct access to Downtown Houston, a major employment center for Fort Bend County residents.

The transition of the US 59 corridor from a Commuter Express corridor to a Regional Spine that provides services to all activity centers along the corridor will play a critical role in creating a successful and sustainable transit system within the study area (Figure E3.16). Strong service along US 59 will also allow for connections to other transit corridors along Gessner Road, Bellaire Boulevard, and the Main Street Light Rail.

The critical aspect of this approach will be leveraging the existing corridor right-of-way wherever possible and to create transit station links at key activity centers and transfer points. Building transit along a freeway corridor has significant benefits if the existing right-of-way can be leveraged. But the drawback is that stations and stops must be carefully thought through to ensure that transit riders can access their destinations safely and conveniently and that the freeway itself does not act as a significant barrier to transit access.

The US 59 transit corridor is shown as Route 4 in Figure E3.16.

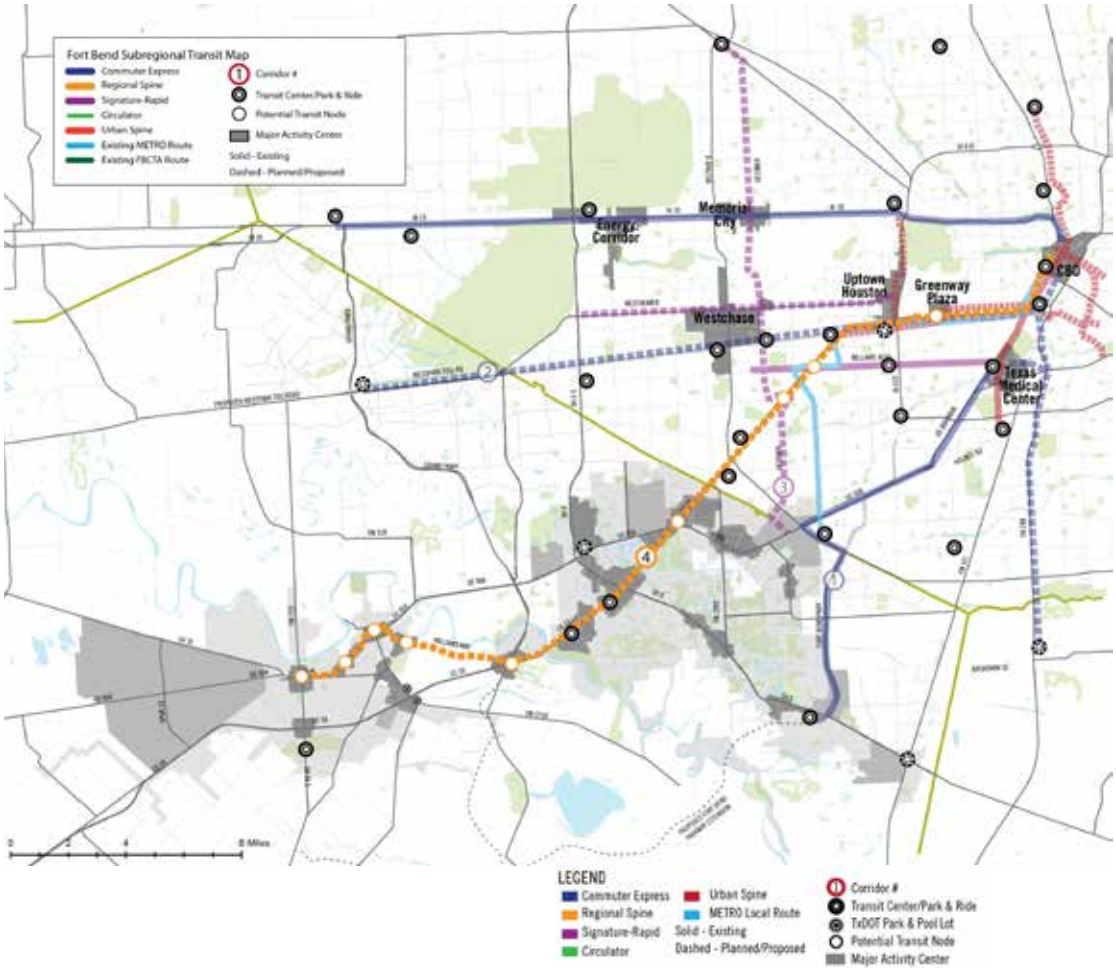


Figure E3.16: PROPOSED US 59 REGIONAL SPINE

POSSIBLE TECHNOLOGIES FOR US 59 CORRIDOR REGIONAL SPINE

The conversion of service from Commuter Express service to Regional Spine along US 59 could occur in stages, with gradually more complex construction and technology applications applied over the course of time based on demand as well as funding availability. Alternatively, the highest capacity system described as the last stage of development in the form of trains operating in an aerial transitway above the freeway could be designed and implemented immediately, as could any phase of development if there is sufficient funding and political consensus.

AT GRADE BUS RAPID TRANSIT

Bus Rapid Transit (BRT) is defined by high frequency bidirectional dedicated transitway service with regular stops. This provides a greater level of reliability and fixed travel times to the corridors, making it more attractive to riders. The current Commuter Express service along US 59 travels along a dedicated transitway, the US 59 HOT/HOV lanes, during the heavy commute travel direction, but uses main lanes of US 59 in the opposite direction. True BRT along US 59 would require bidirectional dedicated transitway separated from all other non-transit traffic, as well as regular stop spacing. Stops can either be placed within the US 59 corridor or special transit connectors, such as T-Ramps, could be constructed to link the BRT service to adjacent activity centers along surface streets. To improve any service along surface streets, Traffic Signal Prioritization signal interaction should be introduced.

Implementing BRT along US 59 requires the reconfiguration of ROW to allow for bidirectional service. Unlike current HOV/HOT lanes, a BRT lane only needs to be wide enough to accommodate a bus without the need for emergency lanes or shoulders. Therefore, the current HOV/HOT lane along US 59 can likely be converted to a bidirectional transitway for BRT, but would result in the discontinuation of HOV and HOT service along US 59. There are a few areas where there may be capacity constraints and width restrictions for a bidirectional transitway, specifically at I-610. Thoughtful design would be required to address these issues.

GRADE SEPARATED BUS RAPID TRANSIT

If there is a desire to maintain the current HOV/HOT capacity while also implementing Regional Spine transit service, a dedicated aerial transitway could be constructed. The aerial transitway could extend along parts of the corridor or for the entire corridor. Due to higher costs, a elevated aerial transitway would be a medium to long-term solution.

An aerial structure that provides for unimpeded transit vehicle movement in both directions at all times of the day would need to be located along the centerline of the freeway alignment, or along/over one of the service roads. Constructing the aerial transitway along the US 59 centerline would maximize station access for inline stops along the route. Construction of the transitway along a service road will favor one side of US 59 and provide less connections along the entire corridor. While inline transit stops provide better connections in all directions of the stop, it can be a challenge for pedestrian access. Accessible, safe, and easy pedestrian connections are essential for a strong transit system.

Figure E3.17: EXAMPLE OF ELEVATED TRANSITWAY ALONG FREEWAY CENTERLINE

In the next section, activity center growth strategies are discussed and an example of an aerial transit way with a T-Ramp is depicted as an example of what this type of design would look like.

ADVANCED TECHNOLOGY APPLICATION

At a future point in time when a dedicated aerial transitway has been constructed, the opportunity to convert the operating technology from manually operated transit vehicles to fully automated vehicles will exist. The 21st century is seeing significant strides in autonomous vehicles, and the technology step could be as simple as replacing manually operated buses with automated buses, or at least buses that can be switched to fully automated operation over portions of the route where there is a protected

transitway and manual operation over other portions which exist in mixed traffic environments. This will be a natural transition as this type of advanced technology becomes readily available. A prototype of this technology, shown at right, was developed and tested by Toyota at the 2005 Transportation Expo in Aichi, Japan. Although this demonstration project carried hundreds of thousands of people in buses along a route that included automated platoon creation (as shown in the figure), Toyota decided to not bring it to the market place at the current time. The future will certainly provide multiple sources for this technology, but it may be more dependent on the market place than the simple ability to run automated transit vehicles.

Figure E3.18: EXAMPLE OF DEDICATED TRANSITWAY

MAXIMUM CAPACITY TRANSIT SYSTEM

Ultimately, the US 59/ Southwest Freeway transitway could be converted to its highest capacity configuration by providing the ability to run entrained vehicles, much like more conventional trains in operation at high capacity rail systems. The application of full automation to transit lines of this type is occurring all over the world, and this aspect of full automation can allow an even higher level of capacity due to the ability to run trains safely with very close headways. In New York City, near JFK airport, trains have operated in a fully automated operation along the Van Wyck corridor between JFK Airport and Jamaica Station. This is essentially a modern version of the same automated train technology that has been running in Vancouver, British Columbia for over 25 years.

ALIGNMENT ALTERNATIVE INSIDE IH 610/ WEST LOOP

The most difficult portion of the US 59 corridor to construct for a proposed Regional Spine transit system is in the segment between IH 610- West Loop and Downtown. In this segment, the placement of the transitway within the METRO owned Bellaire Subdivision rail corridor that once ran along the Westpark Corridor is a potential alternative to building the elevated structure within the freeway median. If this corridor is utilized, then it would probably remain elevated over most of the length due to the urban development that surrounds it and the associated number and frequency of streets that would cross this alignment. At locations where the system passes by large employment districts, such as Uptown/Galleria and Greenway Plaza, another transit circulator system may be required for the passengers' last mile connection into the district. Alternatively, the aerial transitway could cross over US 59 to penetrate the district and then return to the Westpark alignment.

TRANSIT PHASE 4: US 90A REGIONAL SPINE

US 90A has long been considered as the future regional transit corridor between Fort Bend County and Harris County. The reason for this is due to the number of residents of Fort Bend who currently work in the Texas Medical Center as well as the existing freight rail line that runs parallel to US 90A. Unfortunately the UP rail line has significant volumes of freight traffic (40-plus trains per day) and turning this corridor into a commuter rail line has not proven to be feasible in the near term due to the lack of parallel freight lines from the west through Fort Bend County. Although rail may not be the short-term answer to transit along US 90A, other high capacity transit options are possible.

US 90A provides a strong connection from Fort Bend County to the Texas Medical Center and destinations along the existing METRO Main Street Light Rail line (Figure E3.16) although the capacity of this line would be limited by the headway constraints along the Main Street portion of the line. Given current land use, this corridor would begin as a Commuter Express service, with future expansion in to a Regional Spine as land uses changes and demand grows. The most probable transit service along US 90A in the near term is bus service with the future expansion to BRT. Implemented Traffic Signal Priority (TSP) and queue jumping as well as dedicating right-of-way for transit can allow for high quality transit service along US 90A.

Demand for high-quality transit service along this corridor will continue to grow especially if the planned METRO light rial expansion occurs. METRO initiated an Alternative Analysis and Environmental Impact Study to address the possibility of expanding LRT into Missouri City along US 90A. This service could support more transit oriented development and significantly increase transit capacity to reach the Medical Center from Fort Bend County, as well as potentially be extended west to activity centers in Stafford and Sugar Land. Currently, the possibility of expansion is limited by current funding availability for major capital transit projects. Therefore, high quality bus service may be the most feasible and easy to implement service to provide access between Fort Bend County and Harris County along US 90A in the near to medium term.

The US 90A transit corridor is shown as Route 5 in Figure E3.19.

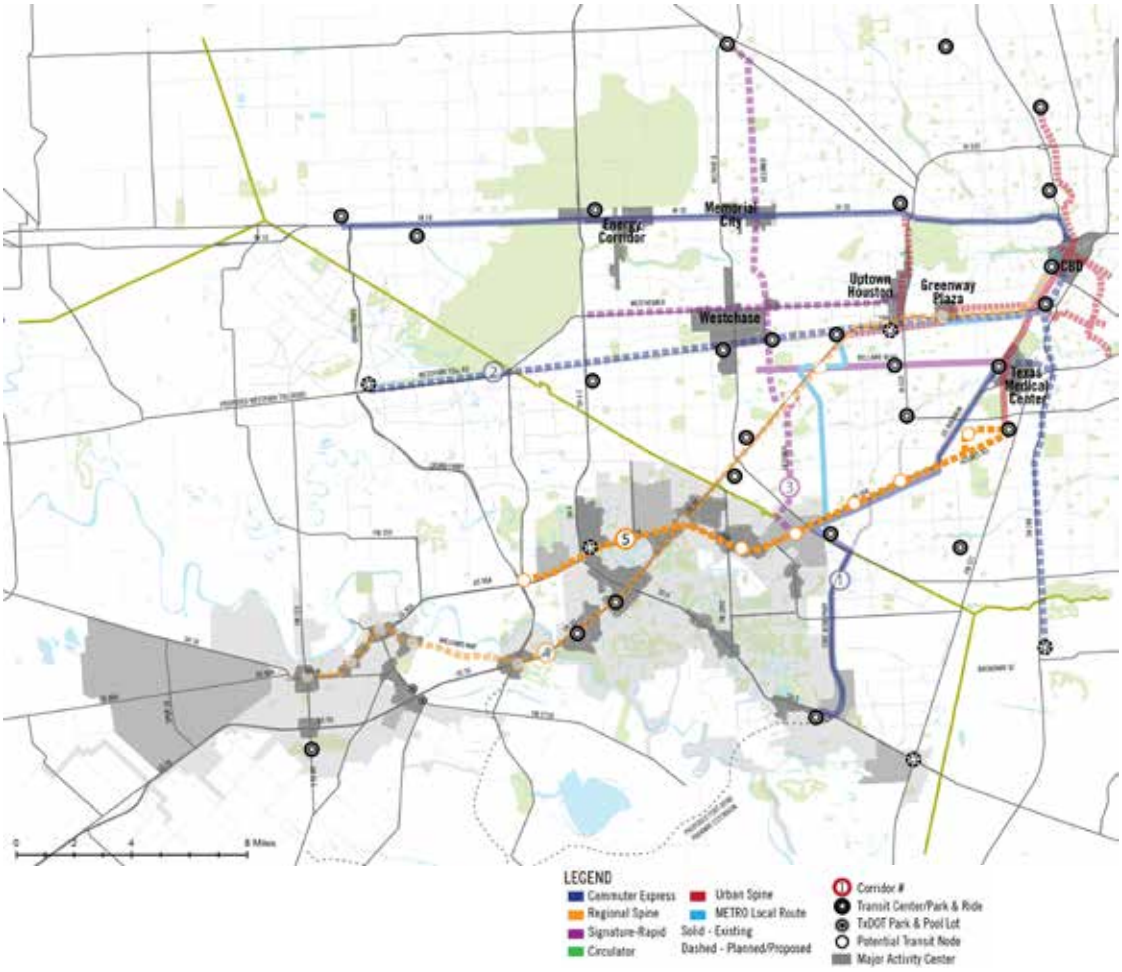


Figure E3.19: US 90A REGIONAL SPINE

TRANSIT PHASE 5 : NORTH/SOUTH CONNECTIONS WITHIN FORT BEND COUNTY

While US 59 and US 90A serve as strong east/west connections, there is a growing demand to strengthen north/south connection to major destinations in Harris County as well as create links to and from the east/west corridors. SH 6 represents an increasingly developed corridor all the way from Missouri City to the Energy Corridor along IH 10 and provides connections to each of these east-west corridors, as well as Westpark, Westheimer and IH-10. Service along SH 6 could begin as a Local or Signature bus service and expand into a Regional Spine if warranted by ridership demand. Due to the current congestion on SH 6, transit service would require designated right-of-way and/or signal priority to ensure transit can be considered an advantage over personal vehicle use. SH 6 is a wide corridor in most locations and Bus Rapid Transit could be implemented using either middle lanes or outside lanes. As an initial phase, prior to dedicated transit ROW , Bus-on-Shoulder operations could also be considered for locations along SH 6 with a shoulder to provide transit service an advantage over personal vehicles. Utilizing the shoulder of a roadway during peak travel times will allow for faster and more reliable transit service.

The SH 6/FM 1092 corridor has many potential destinations, including many of Fort Bend's top employers, and potential links to METRO transit service at the West Bellfort and Hillcroft Transit Centers. The FM 1092 Corridor can provide connections from SH 6 to Uptown, the Galleria, and Gessner Road which would then allow connections to the Westpark Corridor, Westchase, and Memorial City. Like SH 6, the key to a successful route is creating a competitive advantage over personal vehicles. The advantage can be achieved through TSP, queue jumping, and dedicated ROW.

Currently the travel patterns between Fort Bend County and Pearland in Brazoria County are strong, especially between portions of southeastern Fort Bend County, Sienna Planation and Arcola. As the Pearland region continues to grow, the ties are likely to get stronger. Currently METRO is in partnership with the City of Pearland to develop a Park & Ride in Pearland along SH 288. Linking transit into Brazoria and the future Park & Ride will allow for alternative access to the Texas Medical Center and Downtown Houston for residents in southeastern Fort Bend County, and it will allow the entire regional transit system to better service Fort Bend County.

These transit corridors are shown as 6 - SH 6, 7- SH 6/ FM 1092 and 8 - Pearland P&R connection in Figure E3.20.

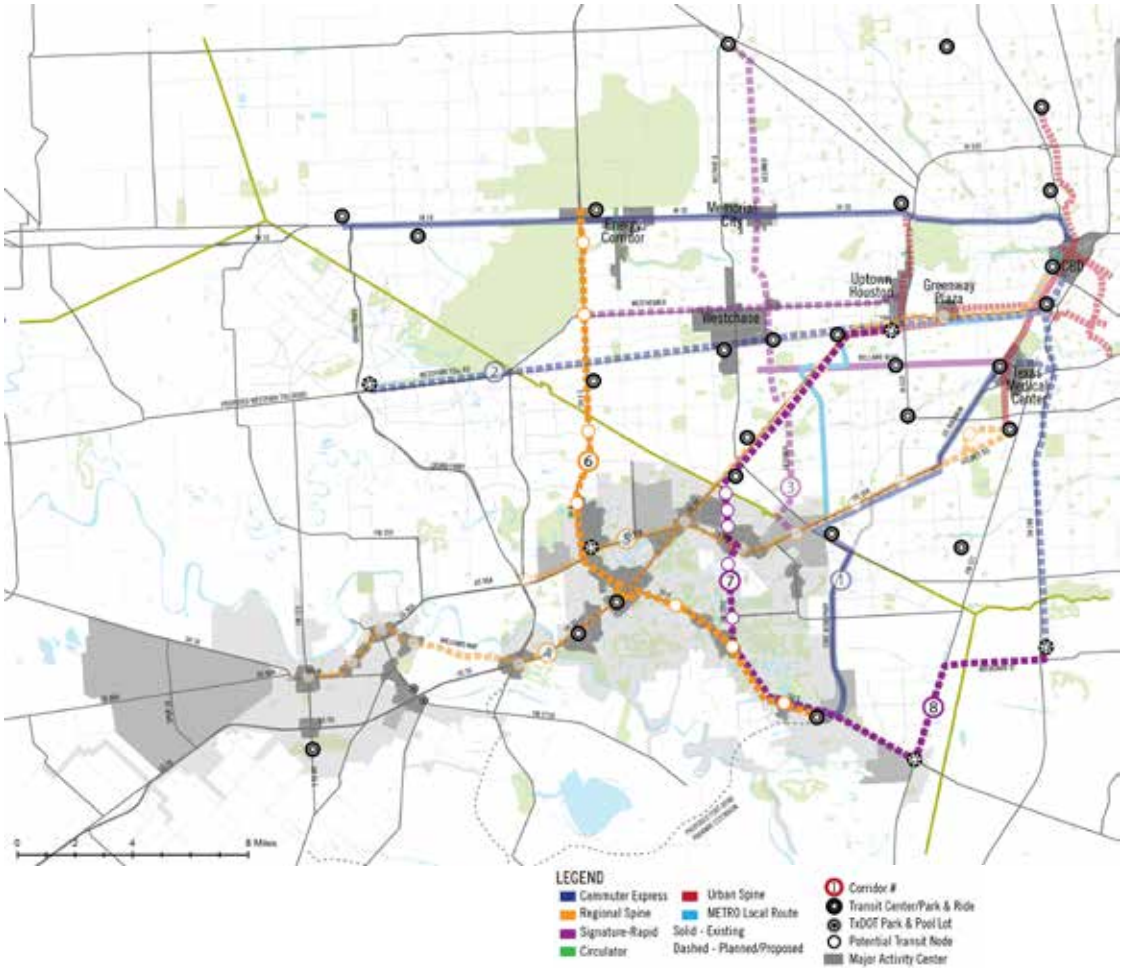


Figure E3.20: NORTH/SOUTH CONNECTIONS

TRANSIT PHASE 6 : LOCAL CIRCULATORS

The previous transit phases address the regional priorities for transit for the Fort Bend study area. The focus of the regional transit phases is to connect major activity centers within Fort Bend County, as well as employment and activity centers in Harris County. It is also important to address connections on a more local scale.

Local circulators are a way to provide more focused local transit service. While local circulators may not be a high priority for regional connectivity through transit, they are a high priority for smaller communities and can be implemented in the short and medium term. There are two locations where local circulators have been studied and prioritized:

- Sugar Land: As major destinations develop within the City, a transit circulator would connect areas including Town Square, Constellation Field/Imperial and the UH-Sugar Land campus.
- Rosenberg/Richmond: Transit system designed to connect higher-transit-need sections of the city to major destinations including Oak Bend Hospital, Brazos Town Center and County Social Service facilities. This could also act as a distribution center for passengers from the US 59 Regional Spine service.

These systems would provide citizens an ability to use transit for short trips, such as shopping and eating out, as well as serve as distributors for the last mile connection of a longer transit ride.

Both systems are shown as C1 - Sugar Land and C2 - Rosenberg/Richmond in Figure E3.21. To improve service levels, the routes could employ TSP to reduce delays through signalized intersections. Funding for both circulators can be provided though a partnership between the local municipalities and the county as well as potentially though local businesses that would benefit from the service. Fort Bend County Public Transportation Department represents the likely operator for these services.

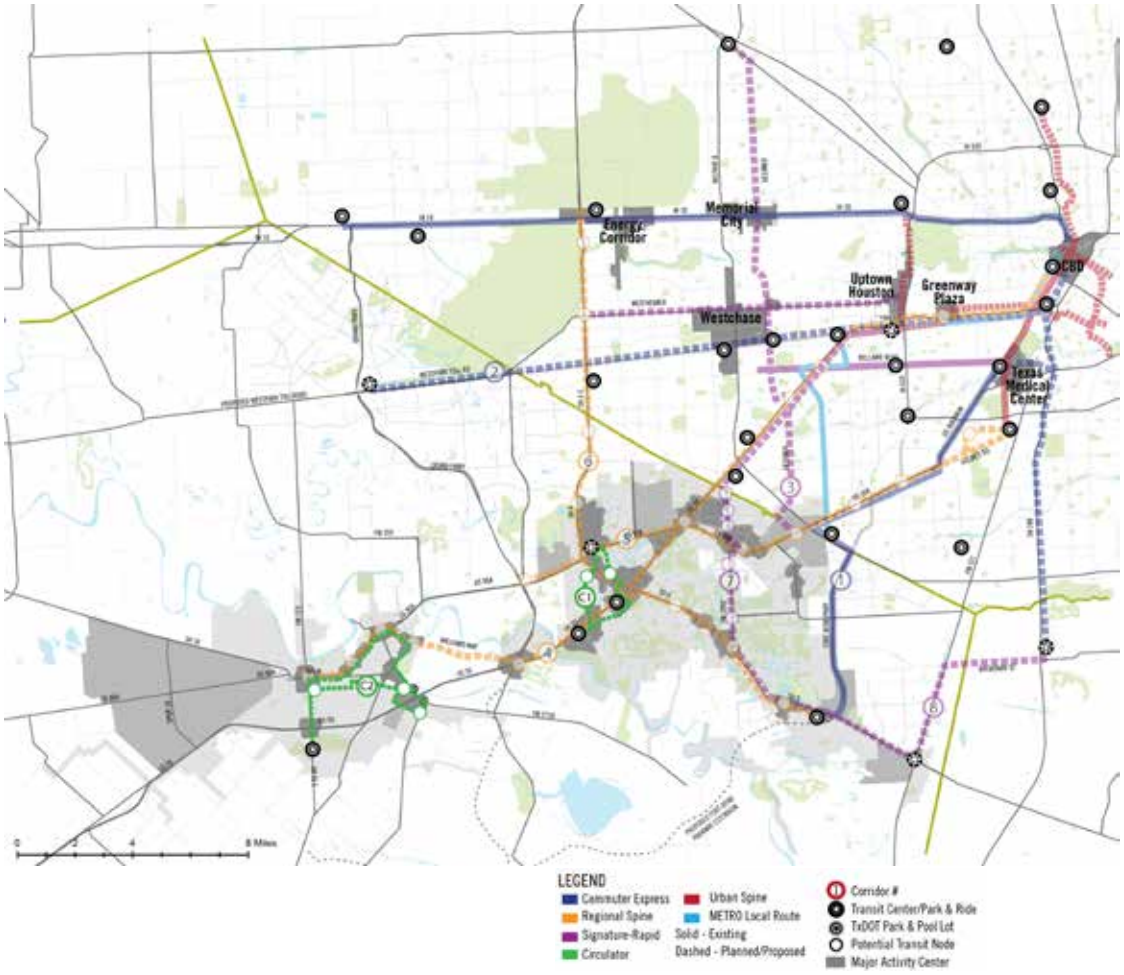
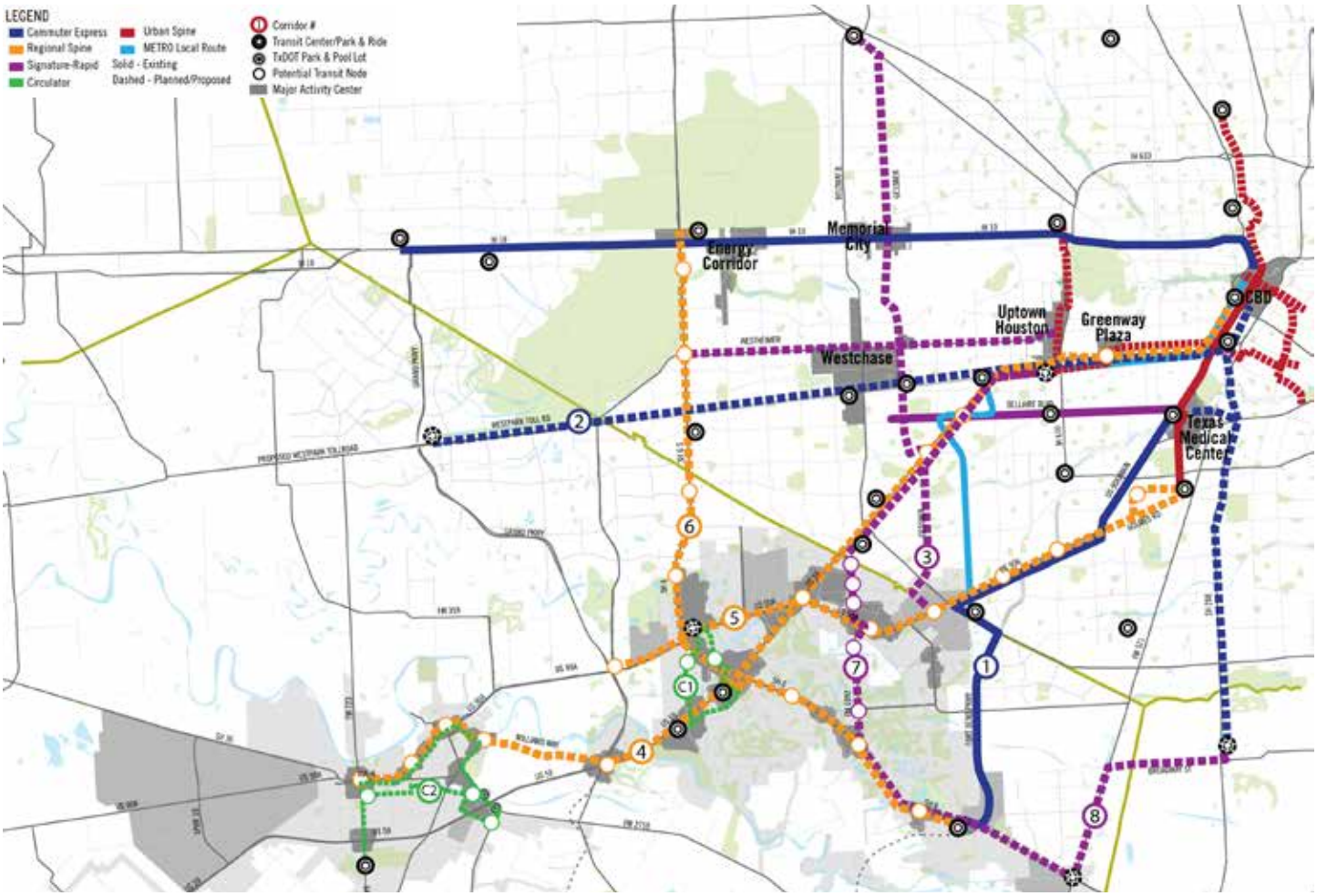


Figure E3.21: LOCAL CIRCULATORS

PROPOSED FIXED ROUTE TRANSIT SERVICE

Figure E3.22 depicts the proposed transit network for the Fort Bend study area. The variety of routes will provide a range of services that will allow residents to choose transit and experience a high level of service. Given that the future demand and related delay projections for regional roadways is high and right-of-way is limited, transit will increasingly become a critical component to providing reliable travel times and connections to major activity centers in the region. Transit can serve as a catalyst for some of the development strategies outlined for activity centers and integrated into future designs for these areas. Transit needs to be evaluated and pursued as an avenue to allow Fort Bend to continue to grow from both a population and economic standpoint.



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/ Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - Grand Parkway to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

C1 Sugar Land Circulator

C2 Rosenberg/Richmond Circulator

Figure E3.22: PROPOSED FIXED ROUTE TRANSIT SERVICE WITHIN FORT BEND COUNTY

FREIGHT RAIL STRATEGIES

Freight rail will continue to serve as a strong economic driver for the Fort Bend study area and projections are for the amount of freight rail through the study area to continue to increase. In additional to the freight rail grade separation identified in the Regional Transportation Plan, two approaches have been identified to address freight rail traffic within the study area. The first is to develop infrastructure improvements which support more efficient freight movements while minimizing the impact on local mobility of other travel modes and quality of life. The second is to identify and plan for those areas which could serve as freight rail served light industrial areas and thus increase the area's economic vitality.

One current option for addressing freight rail mobility within the Fort Bend area is to develop a rail bypass through southern Fort Bend County, south of the Fort Bend Subregional study area. The bypass option provides the potential for diverting some but not all of the trains travelling along the Union Pacific's Glidden Subdivision through the Fort Bend study area parallel to US 90A. This would minimize traffic conflicts with current grade crossings due to the potential reduction in train traffic. Future studies will also look at the potential to utilize the existing US 90A corridor for commuter rail service as the majority of freight service would be relocated to the Bypass. This concept has been through one preliminary study which has been advanced to a Phase II study looking at the conceptual planning for this corridor. The Gulf Coast Rail District is the primary entity leading these studies with close coordination with local agencies and stakeholders. Because the current bypass options primarily address the Fort Bend area, connections into Harris County, which is the primary area for freight delays and congestion in the region, will need to be assessed to understand the potential for the bypass and determine project benefits at a regional level.

A second major freight rail operation strategy to move freight efficiently through the area is the recommendation that a railroad grade separation for Tower 17 be studied and potentially implemented based on the assessment and funding availability. Tower 17, shown in Figure E3.23 is the location in Rosenberg where the Kansas City Southern (KCS), the Union Pacific Railroad (UPRR), and the BNSF Railway (BNSF) rail tracks come together just east of where US 90A and SH 36 split and just west of the FM 723 overpass over the existing rail lines. This location represents on of the primary intersections between the east-west trains and the north-south trains through the region. Therefore, in order to improve the regional mobility of freight movement, it is recommended that a future study assess the elevation of the BNSF tracks over the UPRR tracks. The exact location and profile associated with this is outside of the scope of this project, but it is envisioned that FM 723 would potentially be reconstructed to go under the UPRR tracks and the BNSF would be elevated over. This would keep the railroad improvements within or adjacent to the existing tracks, minimizing impacts on adjacent properties. This type of approach would address the freight rail operator's concerns to improve operations through the region as it would not increase the travel distances for its trains. The major drawback is that the elevated track would create a potential physical and visual barriers for the downtown Rosenberg area. Drainage issues due to the location's proximity to the Brazos River must also be addressed.

The second freight rail approach is to identify and plan for Activity Centers where additional rail served light industrial sites could be located or enhanced. As shown in Figure E3.23 each of the three main rail lines which go through the Fort Bend county area, has potential industrial opportunities. For example, the KCS line goes from Rosenberg near Tower 17 south toward Victoria along the north side of US 59. Its shipper facility has been constructed and is generating new business development near the Kendleton area. Additional plans for adjacent rail served industries are being discussed and thus represent a new economic zone for light industry that will continue to support regional economic activity and employment.

Another potential development area would be along the UPRR's Glidden Subdivision. The Glidden Subdivision is heavily traveled and thus no additional or new connections are likely. Therefore, the potential to relocate the current connection associated with the existing rail yard and transload facility in Sugar Land behind the old Imperial Sugar Plant should be evaluated. The existing rail yard and transload facility could be relocated to the now-closed prison area west of the Sugar Land Airport known as Tract 2 (#6 in Figure E3.23). Because the rail access is being relocated, it may be more acceptable to the UPRR. If it could be relocated, then rail service could be provided to the area zoned as light industrial west of the airport. This is consistent with the recommendations of the City of Sugar Land's Comprehensive Mobility Plan. Rail service to Nalco, a business located along US 90A east of the Airport in Sugar Land would also have to be considered in this plan.

Another development area would be along the BNSF tracks adjacent to the rail spur that serves the Power Plant in southern Fort Bend County. By extending this line, a light industrial area could be located next to the power plant and thus be a more compatible

land use for the area. This area was not identified as a specific activity center but does have some potential to become one.

Figure E3.23 shows existing and planned light industrial and logistics activity centers in the study area, primarily along the rail corridors, especially US 90A. The presence of three Class 1 rail lines traveling through the county gives Fort Bend a huge potential advantage to support this type of development. There is currently a successful industrial and business park located along the UP line in Sugar Land, (#8 in Figure E3.23) that is primarily built out but additional opportunities remain for the city as discussed. Missouri City has been cultivating two new business parks: Lakeview Business Park and Beltway Crossing Businesses Park. Missouri City's master land use plan also calls out the intersection of Fort Bend Parkway and SH 6 as a prime location for future light industrial development. The opportunities in the City of Rosenberg offer a distinct advantage due to the convergence of all three railroad lines within the city limits. The majority of the west side of Rosenberg is a prime location for the West Fort Bend Intermodal Center (#1 in Figure E3.23). While the UP, KCS, and BNSF railroad lines that travel through Fort Bend can be a major barrier for local traffic, they can also be a major economic catalyst. Incorporating these development opportunities into the overall planning efforts is critical to long term mobility and economic success for the study area.

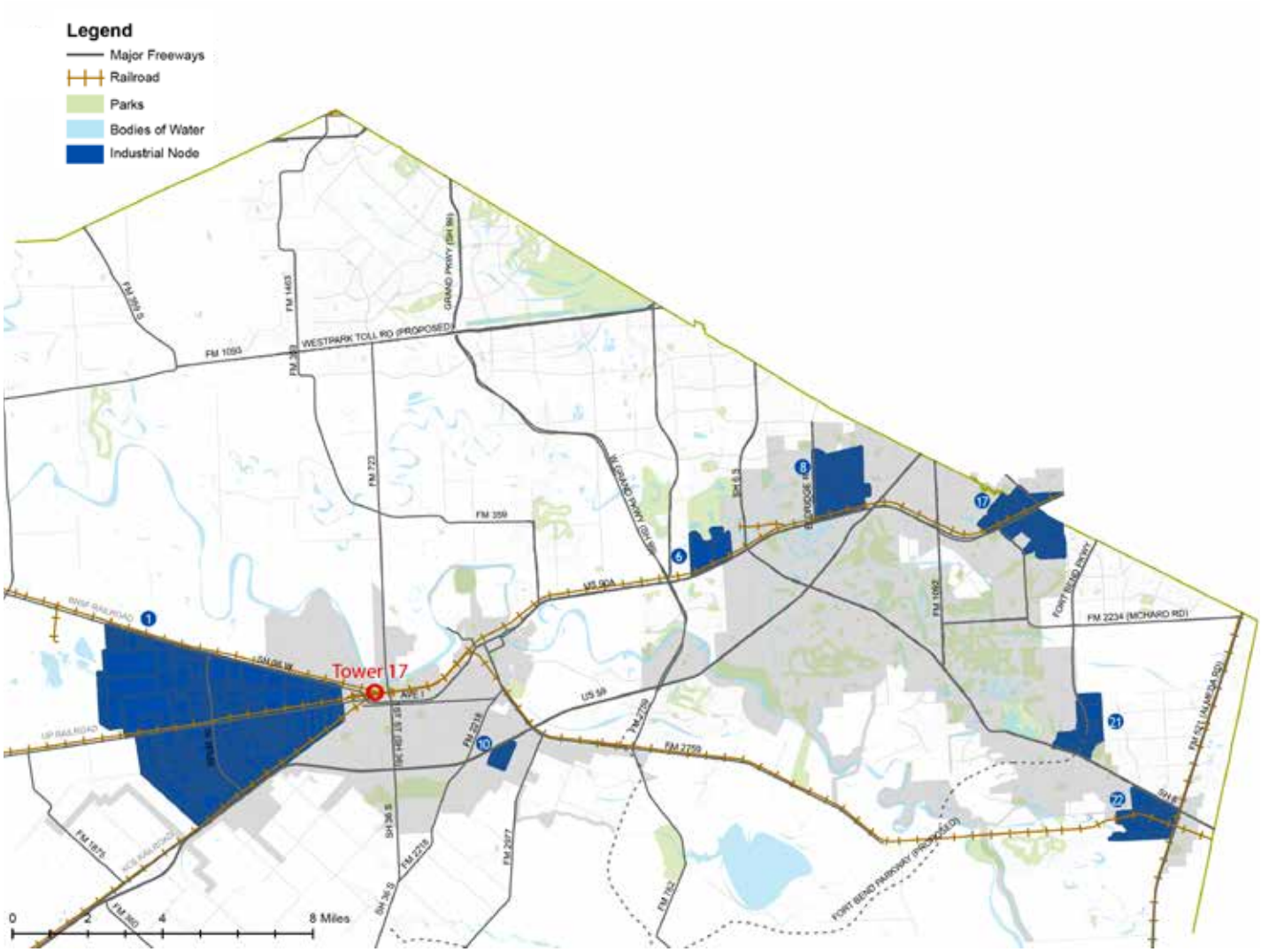


Figure E3.23: RAIL CORRIDORS AND INDUSTRIAL CENTERS

ENHANCING THE REGIONAL TRAIL NETWORK

Increasingly, the communities in the Fort Bend study area are working to address bicycle mobility and an enhanced network of on-street facilities and off-street shared use trails as a key component of their transportation options. Many of the communities and stakeholders interviewed for this project also identified this as a key differentiator to enhance the quality of life for their communities. The Fort Bend Subregional Plan represents an opportunity to focus on the regional corridors that connect communities and destinations and corroboratively identify the future corridors that will serve as the backbone for local networks that many of the study area cities are working to develop. They can also serve as a catalyst to increase planning to connect these corridors to major activity centers.

Key objectives in developing the regional trail network for the Fort Bend Subregional Plan include:

- Providing a safe and healthy transportation choice for more users
- Expanding the reach of the trail network to more cities and destinations
- Creating a cohesive network connecting internal activity centers
- Linking to regional trail network and expanding opportunities to connect to activity centers outside of Fort Bend County
- Enhancing connection to and increasing recreational value of the Brazos River as an asset for the region
- Providing opportunity for additional gateways and natural areas for the region

The traction and funding of the Bayou Greenway Initiative in the City of Houston and Harris County will expedite the development of the Houston region into one of the premier trail destinations in the United States. Fort Bend's trail system thus has the opportunity to expand and tie into this network that will continue the growth of the county as a premier residential and business community, linked into the major destinations of Harris County.

Figure E3.25 on the following page identifies these key regional corridors where resources are recommended to be focused. It also shows how linking into major Bayou Greenways projects would benefit the region. Possible connections exist to connect to Keegans/Brays Bayou, Sims Bayou and Clear Creek. For example, if Meadows Place were to connect to the extension of the Keegans Bayou Trail currently under construction, residents of Meadows Place would have a continuous trail from their city to the Texas Medical Center and the University of Houston, a distance of over 15 miles, almost entirely separated from vehicle traffic. This would be a true asset for Meadows Place as a recreational facility and would potentially be an attractive selling point for the City.

For each of these corridors, there may be several implementation strategies that should be considered. Where existing right-of-way exists, such as along drainage easements and utility corridors, separated trails that serve bicyclists, walkers and joggers should be prioritized. Along roadway corridors alternative approaches may be required, including the implementation of shared use paths or barrier separated facilities such as buffered bike lanes and cycletracks. Close analysis of each corridor will determine the best path to implementation and how local connections should be made to connect to major destinations and other bicycle and pedestrian facilities.

Where possible, these recommendation have be aligned to reflect plans developed by the local jurisdictions such as Pedestrian & Bicyclist plans developed by Sugar Land and Missouri City concurrent with this study.

Figure E3.24 GATEWAYS / TRAILHEADS LEADING INTO FORT BEND

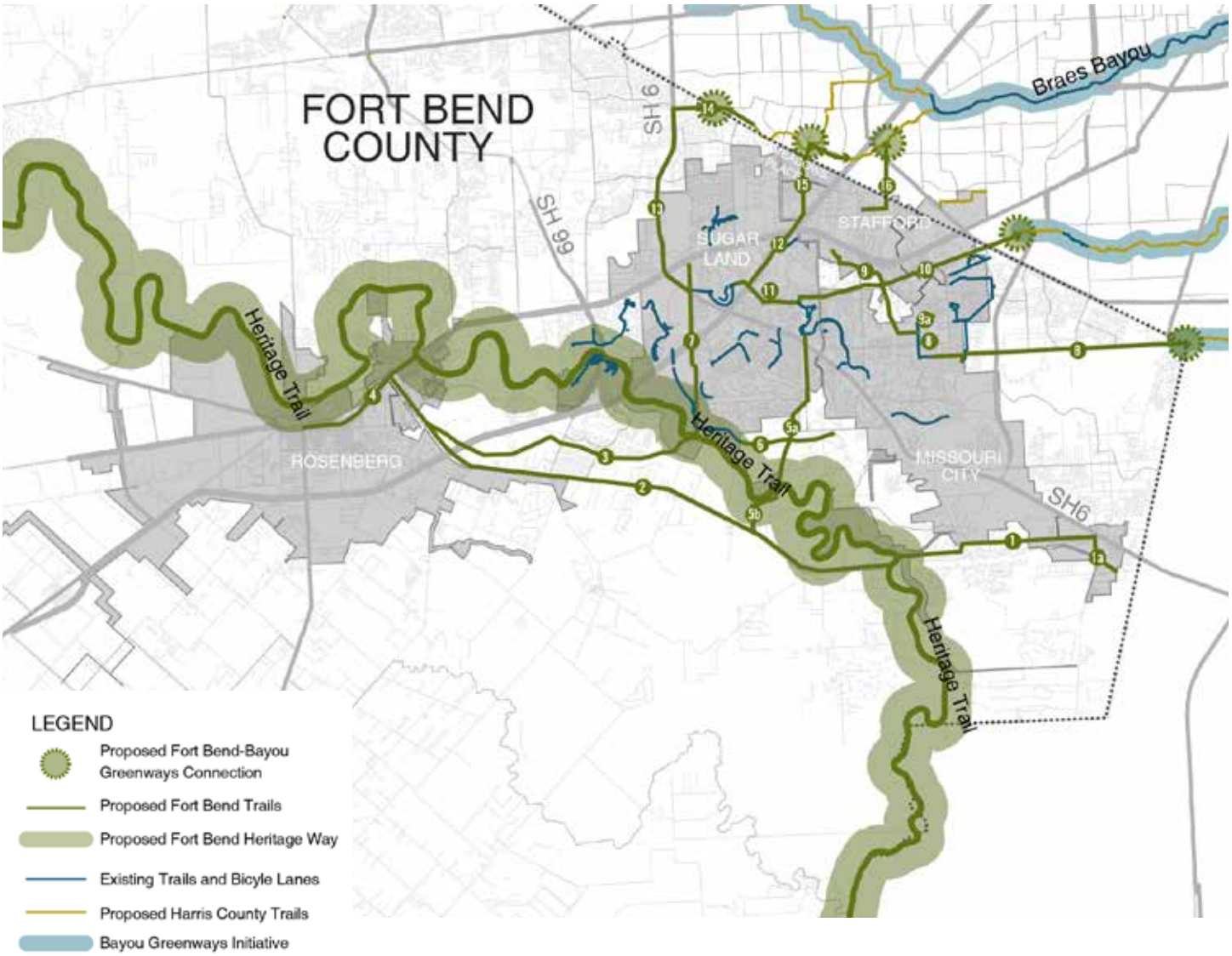


Figure E3.25: REGIONAL TRAIL OPPORTUNITIES

1. East/West Drainage Corridor from the Brazos River to Highway 6
1a. Arcola Spur
2. FM 2759/FM 762 from the Brazos River to Richmond
3. Rabbs Bayou from FM 762 to the Brazos River
4. US 90A from downtown Richmond to downtown Rosenberg
5. North/South Utility Corridor and Brazos River Crossing
6. University Boulevard from Current Terminus at Sugar Land City Limit to LJ Parkway
7. Ditch H through Sugar Land
8. McHard Road from Missouri City to Clear Creek
9. Drainage Corridor from Stafford to Missouri City
9a. Independence Blvd Spur
10. Utility Corridor from Sims Bayou to Sugar Land
11. Lexington Boulevard/Williams Trace Boulevard
12. US 59 from Oyster Creek to the Meadows Place/Sugar Land Utility Corridor
13. Highway 6 from Ditch H to Keegans Bayou
14. Keegans Bayou
15. Meadows Place/Sugar Land Utility Corridor from US 59 to Keegans Bayou
16. Drainage Corridor from Stafford to Keegans Bayou

IMPROVED WALKABILITY

For many of the primary years of development in the Fort Bend study area, design practices often did not consider the inclusion of sidewalks, including within many master planned communities. In many areas, walkability has become increasingly desirable to home buyers and existing residents, especially as aging populations see the desirability of walking safely in their own neighborhoods for both recreation and transportation. At the same time, there may be areas that will still consider sidewalks unwelcome or unnecessary. Figure E3.26 shows an overview of city requirements for sidewalk implementation in the study area.

	RESIDENTIAL	COLLECTOR THOROUGHFARE	BIKE LANE TRAIL	ACCESSIBILITY REQMTS
SUGAR LAND	5’	5’	Comply with Pedestrian & Bicycle Master Plan	Intersections and Driveways
MISSOURI CITY	5’	5’	Comply with City Bicycle Network Plan	Intersections
RICHMOND	4’ (if required)	4’	10’	
ROSENBERG	4’	5’ - One Side		Intersections
STAFFORD	Reqd - no minimum	Reqd - no minimum		Intersections
ARCOLA	No Policies Identified			
MEADOWS PLACE	No Policies Identified			

Figure E3.26: CITY SIDEWALK REQUIREMENTS

Based on the feedback from stakeholders, market trends, and mobility improvement goals, it is recommended that improved walkability in the Fort Bend study area take a two pronged approach. First, streets that provide a useful connections to shops, schools, transit nodes and park space should be prioritized for new sidewalk construction on existing streets. Second, city ordinances should be updated to include sidewalks in new development.

Sidewalk widths should vary depending on the adjacent land uses and street types; however, as a rule of thumb, the “conversation test” provides a useful benchmark. This common sense concept simply states that two people pushing strollers or in wheelchairs should be able to travel side-by-side and have a conversation. In most cases, this would mean a minimum sidewalk width of 6 feet in residential areas, while commercial areas should typically be wider. For bicycle-pedestrian trails and other sidewalks where high levels of bicycle traffic are expected, wider widths to accommodate the separation of cyclists and pedestrians should be encouraged.

Due to Fort Bend’s climate, adequate shade is also an important component of sidewalks that will encourage significant use frequently provided by well designed tree canopies. Pedestrian lighting and amenities such as ramps and marked crossings are also recommended to serve the broad set of likely users. At signalized intersections, numerous studies have shown the importance of “Pedestrian Leading Intervals (PLIs)” which allow pedestrians to proceed before auto traffic. These signals allow pedestrians to begin crossing before vehicles take right turns, eliminating a common conflict point between pedestrians and motorists.

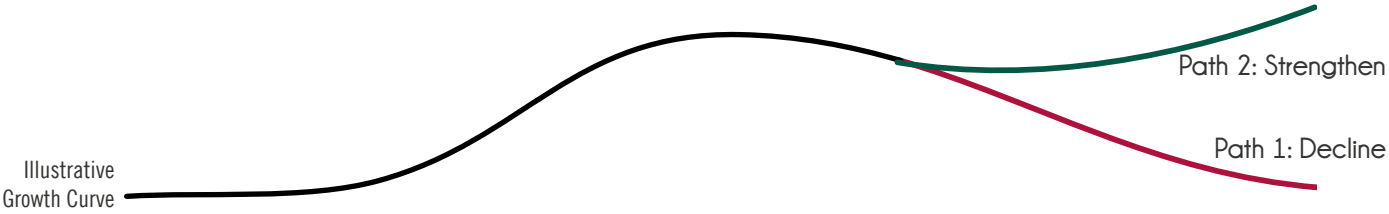
E 4 PRINCIPLE 3: CREATE SUSTAINABLE MODELS FOR DEVELOPING AND STRENGTHENING NEIGHBORHOODS

STRENGTHENING NEIGHBORHOODS

Existing neighborhoods represent the most significant developed portion of the study area. Single-family residential is the largest land use in the area in terms of property value, and the largest likely land use in the study area in cities where new development is projected. The continued economic health and desirability of these neighborhoods is critical to Fort Bend's future. This section outlines strategies to strengthen existing neighborhoods and support the development of new neighborhoods so both can sustain their attractiveness and value into the future.

EXISTING NEIGHBORHOODS

As discussed in Chapter D, and shown again in Figure E4.1 below, single-family neighborhoods have a typical development cycle. They go from a greenfield or a small town through a period of rapid growth as new housing stock comes to market. As they reach build out of the development they reach a peak phase. At this point, the area is fully built out and values are high. However, the families living in the neighborhood are typically beginning to age and children that may have moved in have grown and moved



	GREENFIELD/ SMALL TOWN	RAPID GROWTH	PEAK	PATH 1: DECLINE	PATH 2: REDEVELOPMENT
LOCATION	Outside the metropolitan area	At the edge of growth zone	Within metropolitan area	Well within metropolitan area	Well within metropolitan area
POPULATION	Small, stable	Rapidly growing	Slow growth	Stable or declining	Stable to growing
DEMOGRAPHICS	Mix	Largely young families	Older families in some areas; young families in others	Aging population	Aging population; influx of new residents
RESIDENTIAL PROPERTY	Mix	New single-family development with market appeal	Still relatively new and attractive	Aging, undesirable house stock; as original owners move out or die renters move in	New and renovated housing resells; new housing options
COMMERCIAL PROPERTY	Limited; local	Boom in new retail centers with national tenants	Original retail begins to turn over; national tenants moving to new centers while old centers begin to decline	Obsolete retail spaces with widespread vacancy; retail moving to other cities	Renovation and redevelopment of retail to new trail and to other uses
INFRASTRUCTURE	Limited	massive construction of new streets and utilities	New streets and utilities still being constructed; maintenance cost of original infrastructure begins to rise	Infrastructure decays; maintenance funding becomes increasingly challenge	Rehabilitation and transformation
TAX BASE/ PROPERTY VALUE	Low	Fast Growing; Continued room to expand	Growing; less undeveloped land available	Flat/declining, may lead to tax increases and further decline	New development continues to increase tax base

Figure E4.1: TYPICAL NEIGHBORHOOD DEVELOPMENT CYCLE

out. The infrastructure is starting to wear out and commercial development is turning over, often faster than the housing stock. Frequently, new developments, often further from the urban core, are offering newer, more desirable housing stock.

Once a neighborhood has reached the peak of the development cycle, it can take two paths. Some neighborhoods continue to strengthen, with new people moving in, houses being updated, and new commercial development. Others decline, with houses being inadequately maintained and selling for less, public spaces falling into disrepair, and vacant storefronts.

Once a neighborhood, and especially a city, is on the path of decline, it is very difficult to reverse. Once decline starts, a city finds itself in a financial bind: as property values stagnate, tax revenues do too, and there are less public funds for improving infrastructure and public spaces. Raising taxes to raise funds will only make the city less desirable, but a lack of public investment will only cause further deterioration and further decline. Even more critically, prospective homeowners will not buy and risk their own financial futures in a place they see as declining.

To continue its success, Fort Bend and area cities must support neighborhoods in taking the path of strengthening, not decline. To do this, city governments must respond to the causes of decline. The following tables lists these, and calls out what government can do, first to proactively support strong existing neighborhoods and secondly to respond to challenges for aging and declining neighborhoods.

QUALITIES OF NEIGHBORHOODS THAT INCREASE VALUE AND STRENGTHEN	WHAT CITIES CAN DO TO SUPPORT THESE NEIGHBORHOODS
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities
Civic pride	Civic events, public participation

CHARACTERISTICS OF DECLINING NEIGHBORHOODS	WHAT CITIES CAN DO TO OFFSET DECLINE
Original residents age and begin to leave	Provide alternate housing options and support good schools to attract families
Infrastructure (e.g., roads, utilities) reaches end of useful life	Keep infrastructure in good repair; Regular maintenance investments
Public amenities (parks) wear out	Reinvest in public amenities
Adjacent commercial declines/ development preference change	Encourage commercial redevelopment

The ultimate decision on how a neighborhood or commercial area will fare is not made by governmental entities; it is made by the market. Home buyers and commercial developers will decide where to buy, and the sum of many of these individual decisions will determine the fate of many neighborhoods. What governments must do is understand how these decisions are made and respond by addressing the needs of existing neighborhoods to ensure their continued health.

NEW SUSTAINABLE DEVELOPMENT STANDARDS

The best way to prevent the decline of neighborhoods is to build them well in the first place. This is obvious in the Houston area: places like The Woodlands or the earliest Fort Bend master planned communities like First Colony which were built to high standards with desirable amenities and where they had good connections to employment areas, have remained desirable even as other neighborhoods from the same era have declined.

Significant thought was put into these neighborhoods to ensure they maintained value as attractive places to live as they went through the Rapid Growth phase of development.

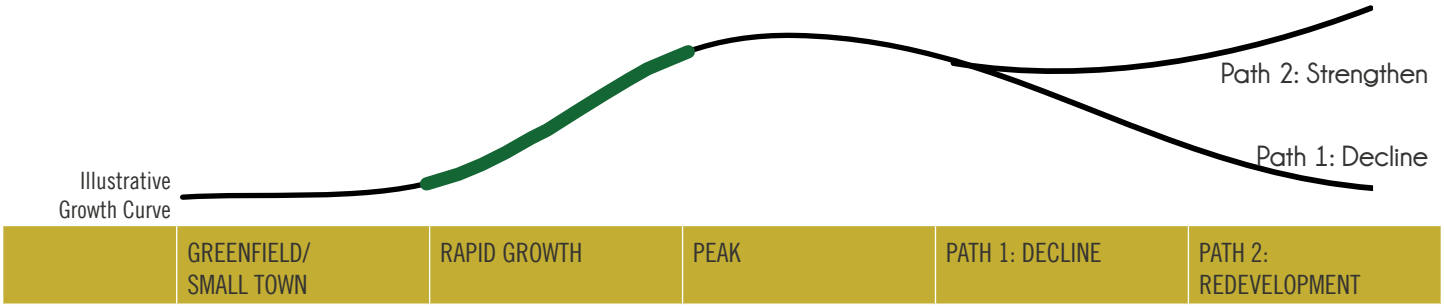


Figure E4.2: TYPICAL NEIGHBORHOOD DEVELOPMENT CYCLE

Many of the strategies to create these sustaining places parallel the strategies that enhance activity centers and in many mays the neighborhoods should be developed with the connections and integration of the local activity centers as key aspects of the design approach. Strategies to support sustainable neighborhoods include:

- Integrating amenities (park space, community centers, hike and bike trails)
- Ensuring connectivity to jobs, education, and retail by multiple modes
- Including a variety of housing options to attract and retain diverse residents - these are discussed in more detail in the next section of this report
- Including retail and services in the neighborhood, within walking and biking distance of home
- Building robust infrastructure and budgeting for long-term maintenance and replacement
- Using land planning and environmental design approaches including Low-Impact Development to minimize storm water and impacts on local resources

These solutions come from many different aspects of government: zoning, development codes, transportation planning, transit, infrastructure standards, and school planning.

New development standards should be developed in conjunction with existing residents and with the development industry. The support of the community is key to implementation, and consultation with developers will ensure that the market can support the standards. In general, developers benefit from better standards; their developments will gain in value from the higher quality, and standards ensure that the neighboring tract built by another developer will not lower the surrounding values.

HOUSING STRATEGIES

As shown in Chapter D, and as discussed above in the context of activity centers and sustainable neighborhoods, there is market demand for alternative housing types in Fort Bend. Demographic changes have led an increasing number of aging baby boomers, empty nesters, and young professionals to look at alternatives to traditional single-family developments. At the same time many want to remain within the Fort Bend study area. Ultimately, the market will determine what can be built, but cities should enable the construction through land use codes and zoning structures.

Across Fort Bend, land use regulations would need to be updated to allow a broader spectrum of housing options. This can be controversial; many associate multi-family in particular with the decline of neighborhoods. But, as noted in the activity centers discussion, this depends more on the quality of the construction, the amenities supplied, and the context of the development, than on the nature of multi-family. Cities must write development ordinances that make sure multi-family development, like single-family development, is built to a suitable standard, served by quality amenities, and integrated with other land uses. A number of different housing options are potentially suitable, particularly where they can be integrated into the activity centers within the study area. These include:

SMALL LOT SINGLE-FAMILY HOMES. These are smaller homes and smaller lots, following the patterns of typical single-family neighborhoods but at higher density. The smaller homes appeal to retirees, couples without children, and new families who like the feeling of having a standalone house but want less house to maintain. Smaller lots increase density, making it easier to support local retail and put destinations within walking or biking distance. Homes like this exist already in the older neighborhoods which make up the small towns of Fort Bend County and in Houston neighborhoods like the Heights.

TOWNHOUSES. Townhouses keep each home separate, with its own roof and front door, but eliminate the space between homes for increased density, as an intermediate step between single-family homes and multifamily. Townhouses allow single-family living at a higher density. Townhouses can be a very suitable land use within activity centers. Houston has seen a boom in townhouse construction as people choose the convenience of living close to work.

ACCESSORY DWELLING UNITS. An accessory dwelling unit is a second living unit on the same property as a single-family house. This can be a cottage or a garage apartment. Accessory dwelling units can be used by members of the same extended family (like grandparents) who want to live near their relatives but want their own separate living space. They can also be rented. Accessory dwelling units are common in older neighborhoods like West University Place where many units are filled with university students.

APARTMENTS AND CONDOMINIUMS. Apartments come in many shapes and sizes. Fort Bend already has several garden-style complexes where units are surrounded by parking in a gated complex. In Houston, and across the county, more compact buildings with entrances directly facing the street and, often, retail on the ground floor are becoming more popular. Apartments can appeal to many different demographics depending on their price range and amenities.

Condominiums take the same form as apartments, but by virtue of being owned, rather then rented, play a different role in the market. They are popular with people who expect to stay in them for longer periods: retirees, couples without children, and mature singles. In some cities, condominiums are starting to appeal to families as well.

Careful planning as to where these types of housing will be in most demand will likely be the role of the private sector but local government can play a significant role in the success of these developments. Housing policies, development standards and land use controls will all be critical to the success of any development type in the region. Coordinated transportation and other infrastructure investments, along with the potential for public-private partnerships can provide the catalyst for successful developments that create choice for residents of the study area and increase the value of the communities, generating future tax dollars to continue to ensure the communities retain there appeal and value.

Other keys to enhancing the study area and the neighborhoods and activity centers within them are to ensure that adequate parks, open space, and agricultural lands remain readily accessible to the majority of local residents. This section identifies several strategies available to ensure that the goals of the study can be realized.

PARKS, OPEN SPACES, AND TRAILS

The enhancement and preservation of open green spaces in the Fort Bend County area can be accomplished in a multitude of ways. Some sites can be functional and contribute to the infrastructure management, health, and revenue of the County, while others can primarily have aesthetic and recreational value, contributing to a greater quality of life. Individual cities within the Fort Bend study area can incorporate parks and open space development into their goals and make enhancements, but there needs to be a county-wide investment in this initiative in order to have the most effective impact on land preservation and best use of open land.

There are a number of possibilities for types of programming and uses within open spaces. Each category responds to a functional need such as storm water management and/or provides social and recreational opportunities such as a farmer's market or recreational park. The opportunities available within the Fort Bend County area include:

ECOLOGY

Ecological preservation of aquatic wildlife and plant life. This is particularly important along the Brazos River. The ecological preservation can also serve as an educational resource for schools and the community at large. This can be further accentuated by the addition of an educational resource center along one of the preservation sites.

FOOD PRODUCTION

Areas should be protected for local food production, and, in particular, sustainable farming. Strong support was shown in the regional survey for agricultural preservation. This will not only reduce negative environmental impacts of development, but create a revenue source for local farmers and preserve some of the historic character of the region. The New Territory community west of SH 99 in Sugar Land provides an example of local farming integrated into a single family subdivision.

RANCH LAND

Existing ranch land should be preserved for production as well as recreational use. Both uses can generate revenue, reducing any maintenance costs. This can be coordinated with the flood plains along the river where development is unlikely.

SCENIC DESTINATIONS

Enhancing interesting spots in natural areas, especially along the Brazos River can turn these into destinations. These areas can encourage healthy living, while also creating opportunities for events, gathering, sports and recreation.

FARM STANDS

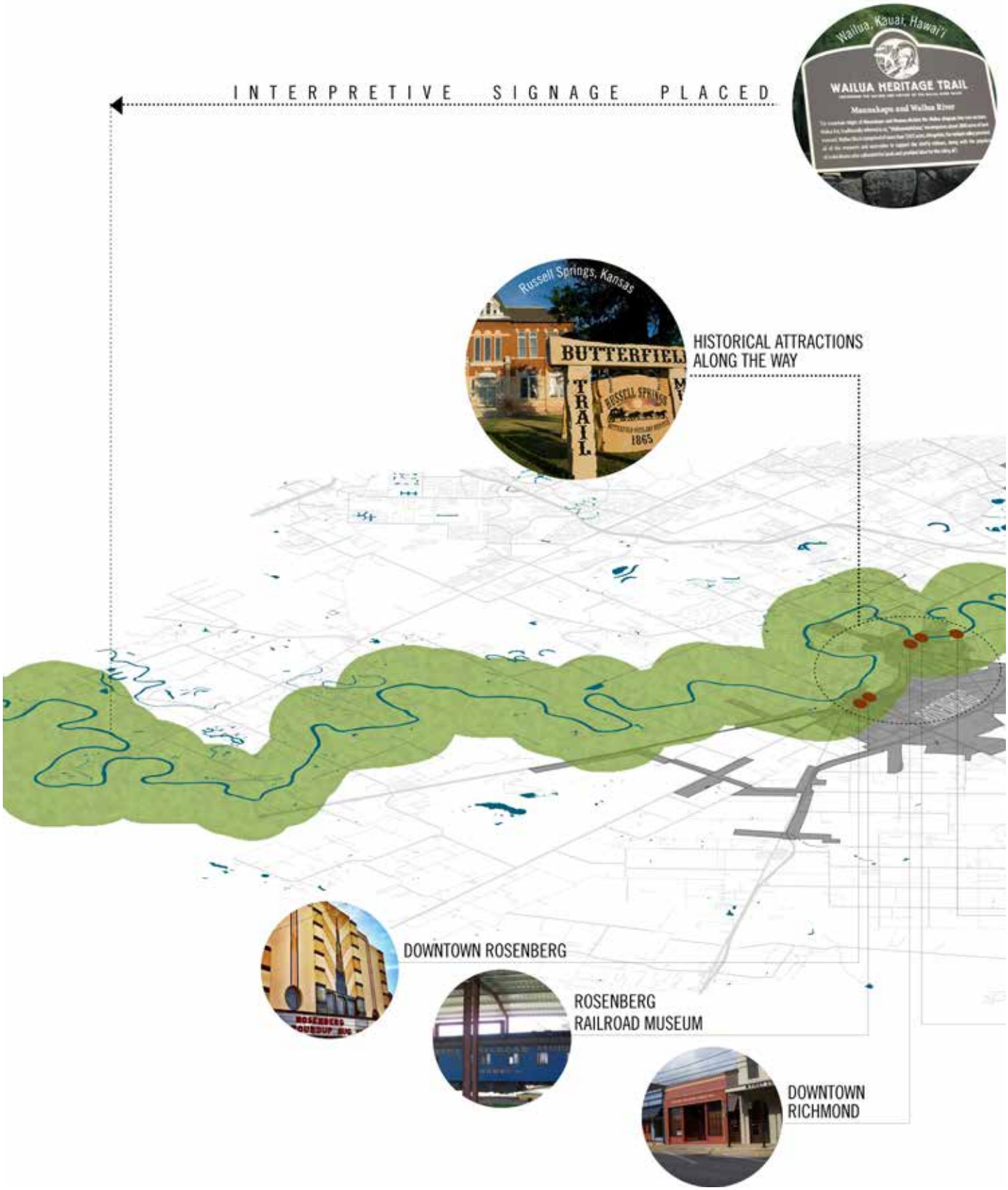
Local agricultural production can be further promoted through farm stands that sell healthy and local produce. These stands, not only support local farmers, but create markers of identification, along large swaths of agricultural land. Farmer's markets such as the one currently at the Imperial Sugar site, can also serve as aggregators for customers and suppliers.

STORM WATER MANAGEMENT

Storm water management is a great opportunity to create natural buffers, especially along the Brazos River. Preserving and creating green infrastructure will lessen financial and environmental burdens normally imposed by impermeable surfaces.

HERITAGE WAY

Cohesion amongst the parks and open spaces in the County can occur by leveraging the Brazos River and creating a green spine that unifies the cities. Preserving the green space on either side of the River and creating a "Heritage Way" will provide opportunities for recreation, historic preservation, and multi-modal transport. With the use of interpretive signage and recognition



of landmarks, the corridor will not only become a strong functional component for the County, but can form a critical part of the Fort Bend cultural identity as well. This approach aligns with the ongoing efforts of Fort Bend Green, a project undertaken by the communities along the Brazos River to enhance the river as an asset for the region.

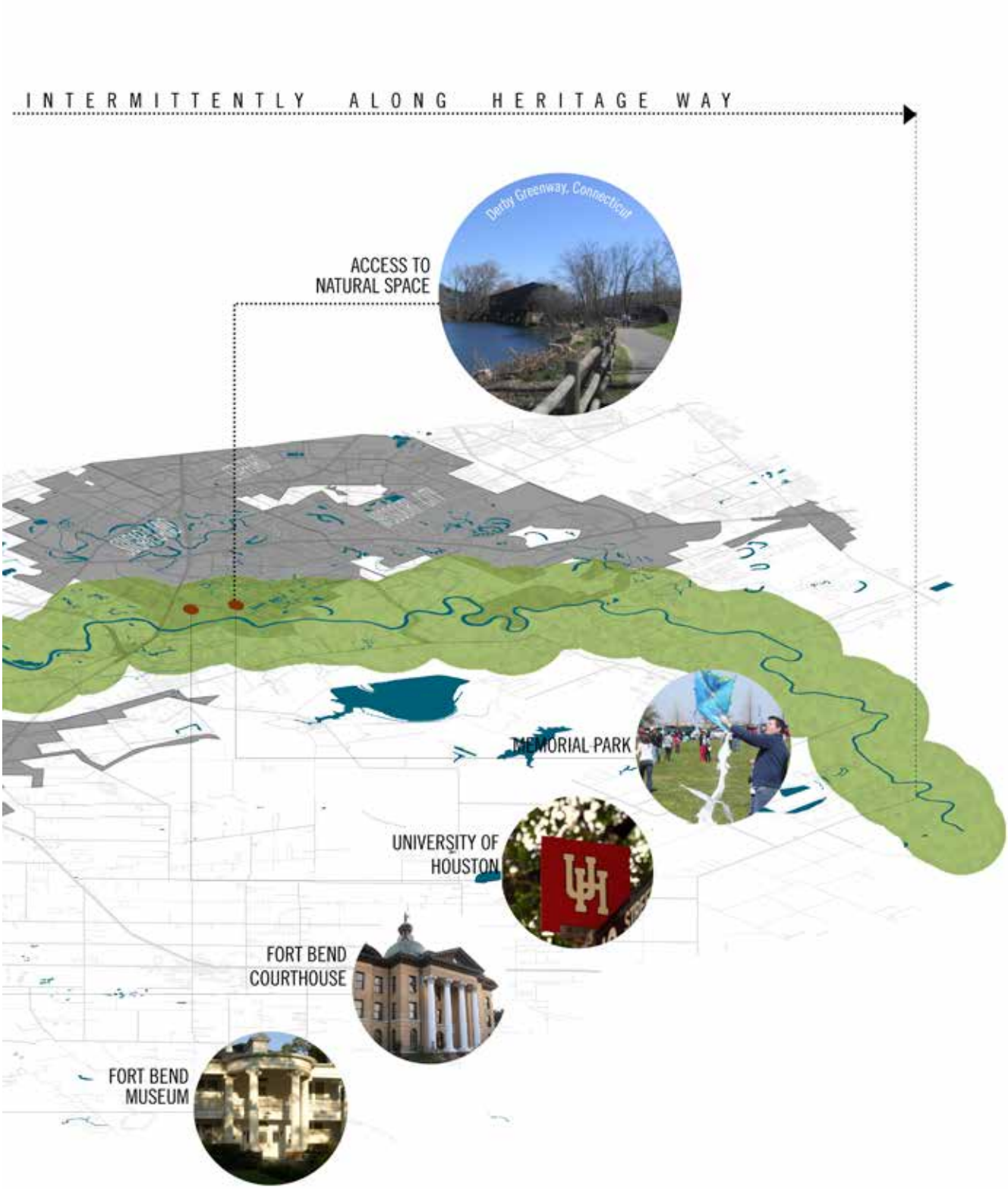


Figure E4.3: HERITAGE WAY CORRIDOR

Existing farmlands and ranches are a strong part of Fort Bend County's historical, economic, and social foundation. The decrease in farmland reduces the local availability of food and attractive open space The development of greenfields not only reduces potential for agricultural productivity, but also can have long-lasting environmental effects on ground water and air quality. Therefore, where possible, cities and developers should identify opportunities to try to consolidate developments with existing developed areas rather than greenfield areas. By creating a program to preserve some of these open spaces, as shown in Figure E4.4, farmers can receive incentives that make their investment in agriculture less burdensome, while protecting them from the possibility of acquisition by private developers and public eminent domain. These programs can also alleviate financial strains by providing capital to expand operations, eliminate debt, and further estate and retirement planning goals. Possibilities of cost-sharing grants should also be explored. Preservation can occur through the following approaches:

Sale of Development Easements:
Landowners can sell their development easements. Landowners still own the land, but sell the rights to develop it for anything, except agriculture. The deed restrictions remain in place for future landowners. The development easements can be sold to the County, local cities, or non-profit organizations.

Donation of Development Easements:
Landowners may choose to donate part or all of their development rights. This could create real estate and income tax and benefits for the landowners.

Sale of Entire Property:
Landowners can sell their entire property to the County at fair-market value. The County can then sell the property to a private owner, with agricultural deed restrictions, to ensure its continued preservation.

Other methods are also appropriate such as landowners voluntarily setting term limits on deed restrictions. Environmental stewardship standards (such as those dealing with erosion, water conservation, etc.) should also be considered to promote more sustainable practices in farming and water usage.

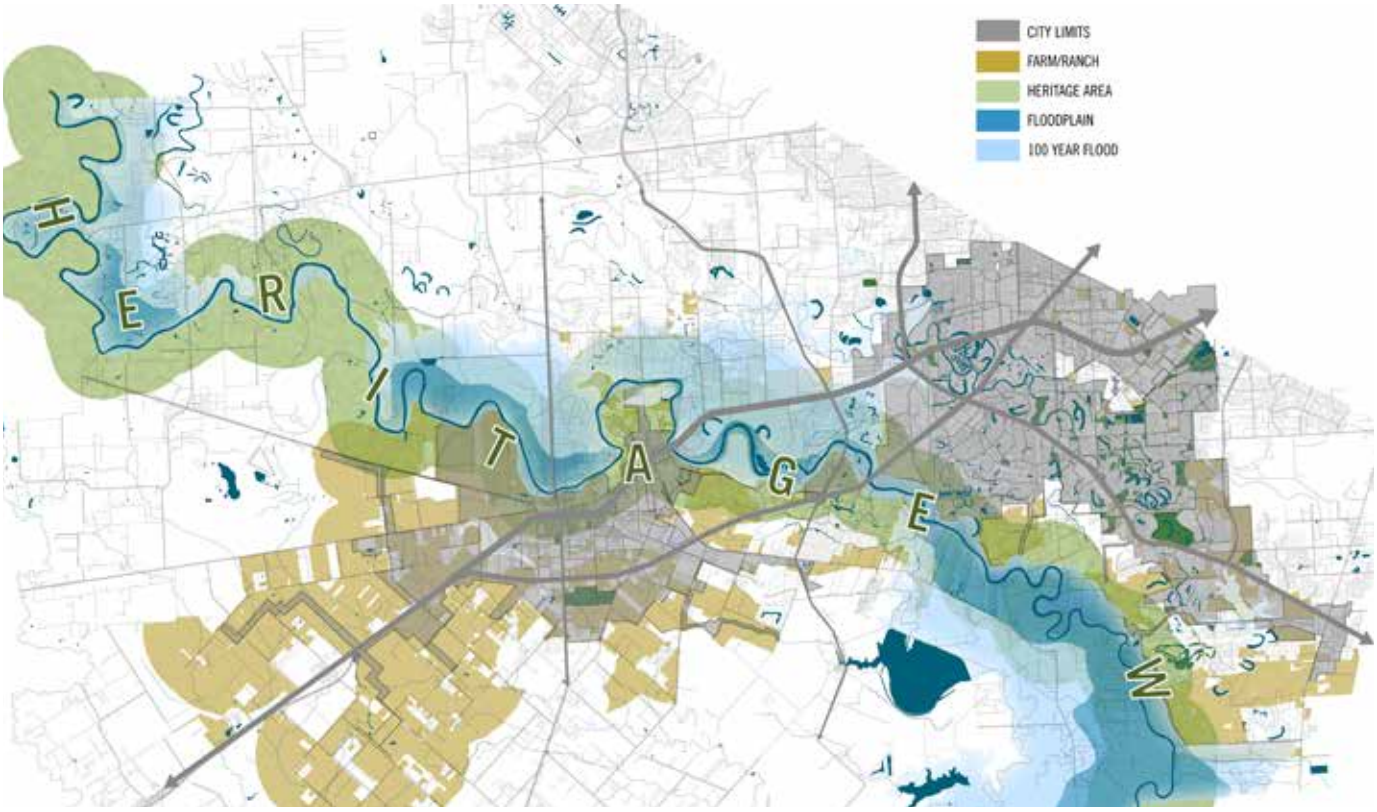


Figure E4.4: Agricultural and Ranch Land Preservation Opportunities

E 5 STRATEGIC PLAN VISIONS

This chapter has presented three Principles to strengthen the Fort Bend study area and support the region in managing its future growth and development in a sustainable manner. From the identification and enhancement of a range of diverse activity centers to the continued development of a more robust multi-modal transportation system, this strategic plan outlines a set of actions that the region and individual communities can take to position themselves to meet the demands of the region and capture their share of high-quality growth. These strategies build off of the deep understanding of the existing strengths of the Fort Bend study area as well as challenges and opportunities to the region from major trends including economic development and population growth, demographic changes, and continued infrastructure needs.

While project lists and implementation strategies will be detailed in Chapter F of this report, this section serves to share a vision of what the application of the Strategic Plan might look like. These visualizations are not intended to be a plan for a specific development or activity center, though many of these ideas can inform development opportunities. They are also not intended to prescribe a final plan for what an area will become. Instead these are intended to show a vision of the potential benefits and outcomes from taking an integrated approach to land use, development and transportation investments can have for a region and the key activity centers within it.

While each leverages the eight activity center strategies outlined in Section E2 and integrates the proposed transportation strategies, these are not one-size fits all solutions. Developments that may be entirely appropriate for the more urban context of Sugar Land Town Center area may be significantly out of place in more historic areas of downtown Rosenberg and Richmond. And many areas have yet to develop, giving planners and the development community an opportunity to apply these strategic approaches to the successful development of an area. Three locations were chosen from the activity centers presented in Figure E2.1. While the activity centers presented are large regions within the study area, three specific locations were used to present the eight activity center strategies. The three locations chosen were selected in many ways because they each reflect a different character and serve as examples that many be leveraged in other similar locations within that activity center or within the study area. The three areas are:

- Sugar Land Town Center (Within Activity Center #14) - one of the leading examples of a modern town center development focused around the intersection of SH 6 And US 59.
- SH 6 at Fort Bend Tollway (Within Activity Centers #20 & #21) - Largely greenfield development with some existing commercial and a planned METRO Park & Ride to be constructed to replace the current temporary lot.
- Historic Downtown Rosenberg (Within Activity Center #2) - historic district with focus on development of the cultural arts center. Fine grain grid street network and future redevelopment potential related to transit and roadway improvements.

Each of these visions would require significant partnership between the local jurisdictions, developers, Fort Bend County, TxDOT and other key players to successfully implement. The goal of these visions is to spark these types of discussions in these areas and others to achieve the goals outlined in this study.

ACTIVITY CENTER #14: SUGAR LAND TOWN CENTER - LAKE POINTE

LAND AREA	CURRENT LAND USE
1030 Acres	Retail, Commercial, Multifamily, Medical

ACTIVITY CENTER #14 STRENGTHS

- Center of Sugar Land activities
- Sugar Land Town Square
- Many hospitals making area a mini Medical Center. Hospitals include: Methodist Sugar Land, St. Luke's Sugar Land Hospital, Kelsey-Seybold Clinic, Kindred Hospital Sugar Land, Sugar Land Surgical Hospital
- Both Lake Pointe and Town Square are prime real estate location for both retail and restaurants

ACTIVITY CENTER #14 STRATEGIES

MIXED USE DEVELOPMENT	▪ Expand redevelopment to aging retail sites and surface parking
ENCOURAGE INDUSTRY CLUSTERS	▪ Continue to grow attractiveness of retail and restaurant real estate ▪ Continue to attract medical offices, hospitals, and other major employers
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Consider expansion of successful multi-family developments within the node to activate and complement potential future redevelopment
IMPROVE WALKABILITY	▪ Connect destination on both sides of US 59 with improved freeway crossings
INCREASE MULTIMODAL ACCESS	▪ Integrate transit into future plans ▪ Integrate transit stop for US 59 and SH 6 corridors ▪ Build better bicycle connections to neighborhoods, as well as local and regional trails
OPTIMIZE PARKING STRATEGIES	▪ Develop parking management district to encourage shared parking ▪ Build new shared structured parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Include plazas with public amenities and a sense of place in new development
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue programming events

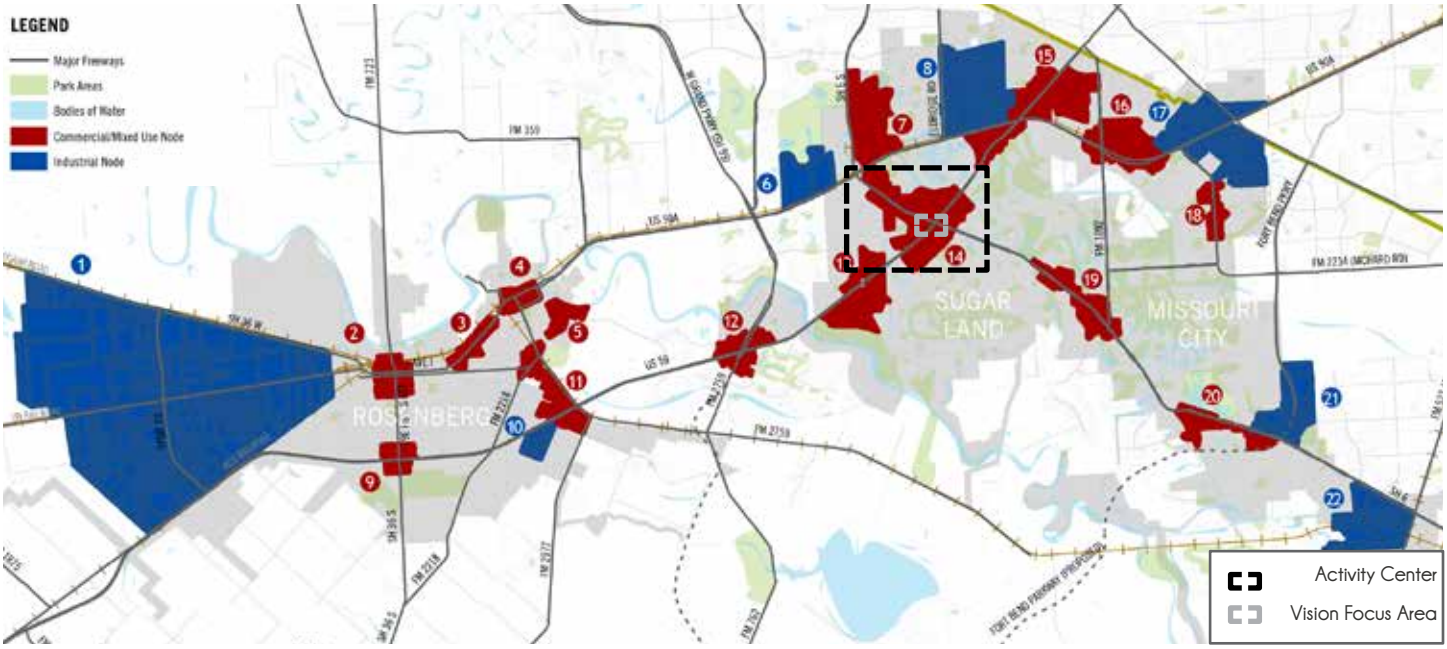


Figure E5.1: ACTIVITY CENTER #14 STRENGTHS AND STRATEGIES

SUGAR LAND TOWN CENTER VISION

This vision extends the successful core of Sugar Land Town Square, creating a large, mixed use, walkable node linked by transit. Surface parking lots are replaced by structured parking, freeing up space for new office, retail, green space and residential. Transit corridors on 59 and SH 6 join on Town Center Boulevard, placing a station in the middle of the node that can serve as a catalyst for development. A new bridge carries transit, pedestrians, bicycles and local transit over US 59, linking both side of the freeway and relieving the congestion at the SH 6/ US 59 intersection. The node builds on existing activity to create a true downtown for Sugar Land, bustling with employees during the day, shoppers on evenings and weekends, families for special events, and residents all week long.

Figure E5.2: SUGAR LAND TOWN CENTER VISION

ACTIVITY CENTER #20: SIENNA PLANTATION COMMERCIAL - HCC

While the activity node vision presented in Figure E5.4 for SH 6 at Fort Bend Parkway Tollroad is located within both Activity Center #20 and Activity Center #21, strategies were only developed for commercial nodes and the strategies shown below in Figure E5.3 are only for Activity Center #20: Sienna Planation Commercial - HCC.

LAND AREA	CURRENT LAND USE
270 Acres	Commercial, Retail, Multifamily ,and Vacant

ACTIVITY CENTER #20 STRENGTHS

- New HCC campus and Library
- Master planned community with growth potential
- SH 6 access
- Fort Bend Parkway access
- Kitty Hollow Park

ACTIVITY CENTER #20 STRATEGIES

MIXED USE DEVELOPMENT	▪ Create new mixed use town center
ENCOURAGE INDUSTRY CLUSTERS	▪ Build on existing retail to create a retail hub
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build new high density residential within walking distance of transit hub
IMPROVE WALKABILITY	▪ Create better connections between residential and retail and commercial areas ▪ Add new connections across SH 6
INCREASE MULTIMODAL ACCESS	▪ With the future permanent Missouri City Park and Ride, encourage Transit Oriented Development near the Park and Ride
OPTIMIZE PARKING STRATEGIES	▪ Plan new development around shared use parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Enhance access to existing parks and green space ▪ Add new parks and plazas in new developments ▪ Use green space to create a buffer between the Fort Bend Parkway and new development
ENHANCE ARTS AND ENTERTAINMENT	▪ Include arts organizations in new development

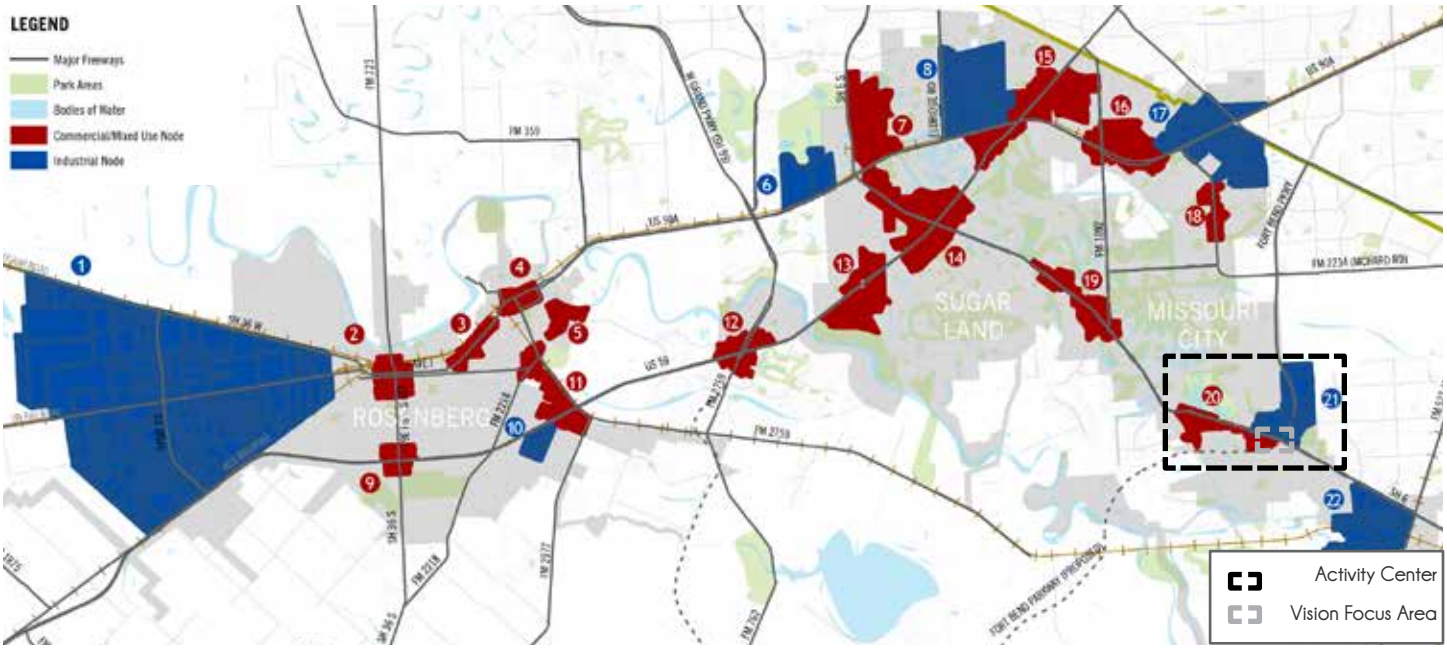


Figure E5.3: ACTIVITY CENTER #20 STRENGTHS AND STRATEGIES

SH 6 AT FORT BEND PARKWAY TOLLROAD VISION

This vision supports the development of a new activity node on undeveloped land where SH 6 and the Fort Bend Tollway meet. A new street grid, linked to surrounding major thoroughfares, and new parks create the framework for dense, mixed use development. Bridges over SH 6 keep pedestrians and local traffic separate from through traffic, and green space along the Fort Bend Parkway buffers highway noise. In Phase 1, the Park & Ride now under development is a surface lot; in Phase 2 it is replaced by structured parking and a transit station in the center of SH 6, bringing good transit access to development on both side of the highway. This well-connected node brings jobs, retail, and civic spaces to support the surrounding single-family communities and creates a true center for the southern part of Missouri City.

Transit Station/Park & Ride Stop
Public Parking Structures
Existing Buildings
Future Development
Park & Open Space
Bike & Pedestrian Route
Transit
Local Circulator

Figure E5.4: SIENNA PLANTATION COMMERCIAL SH 6 AT FORT BEND TOLLWAY VISION

ACTIVITY CENTER #2: DOWNTOWN ROSENBERG

LAND AREA	CURRENT LAND USE
230 Acres	Commercial, Retail, and Residential

ACTIVITY CENTER #2 STRENGTHS

- Cultural Arts District
- Local identity and historic small town character
- Historical attractions including the Railroad Museum
- Brazos River nearby
- Grid roadway network
- Improvements to sidewalks
- Dining Options

ACTIVITY CENTER #2 STRATEGIES

MIXED USE DEVELOPMENT	▪ Utilize space above retail for either loft residential or opportunities for co-work spaces or business incubators
ENCOURAGE INDUSTRY CLUSTERS	▪ Encourage more local restaurants and entertainment ▪ Do joint marketing for restaurants, retail, and entertainment ▪ Encourage sidewalk cafes by converting parking spaces to allow for more space for outdoor seating and allow for alcohol consumption outside ▪ Determine uses of vacant retail spaces, for example business incubators ▪ Develop additional mixed use (ground floor retail with residential above) at a scale compatible with the existing downtown
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Develop townhome residential, and multifamily (lofts) above new retail ▪ Develop live-work spaces
IMPROVE WALKABILITY	▪ Expand sidewalk improvement projects near downtown Rosenberg ▪ Focus on intersection improvements and pedestrian amenities (e.g. street trees and benches)
INCREASE MULTIMODAL ACCESS	▪ Develop new transit center, integrated with new development, for local circulator and BRT ▪ Define potential station locations for Richmond/Rosenberg Circulator ▪ Improve bicycle access across railroad tracks
OPTIMIZE PARKING STRATEGIES	▪ Expand on-street parking ▪ Build shared parking garages to serve entire downtown area to support retail and serve as park-and-ride
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Improve connection to Brazos River ▪ Build downtown pocket parks and plazas
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue to develop Cultural Arts District ▪ Programing of events to attract visitors

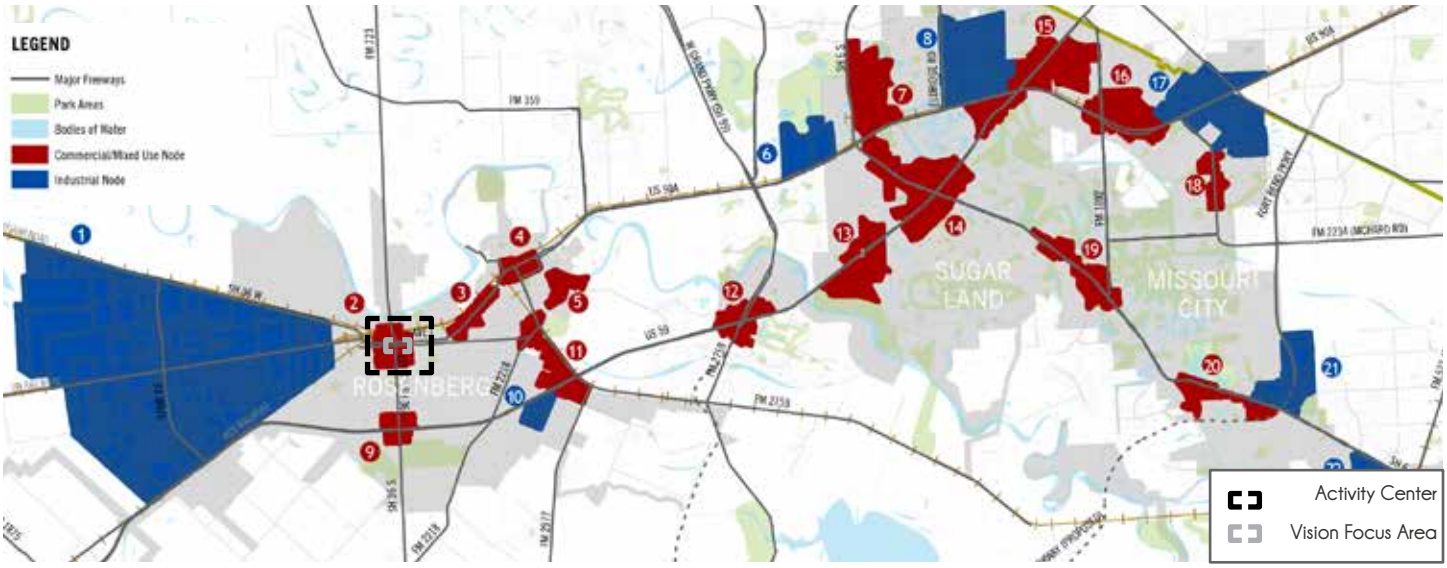
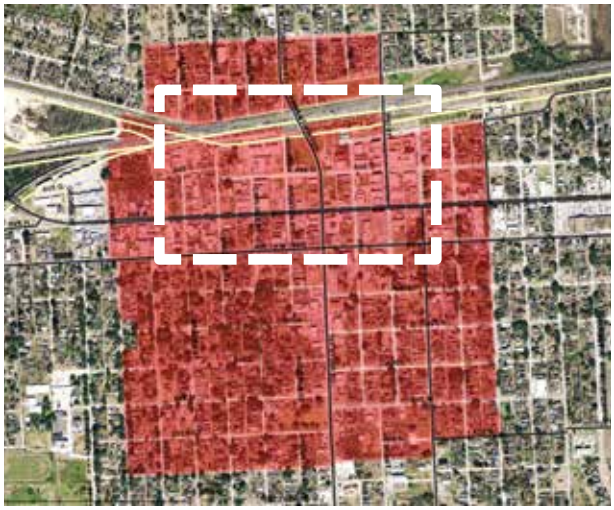
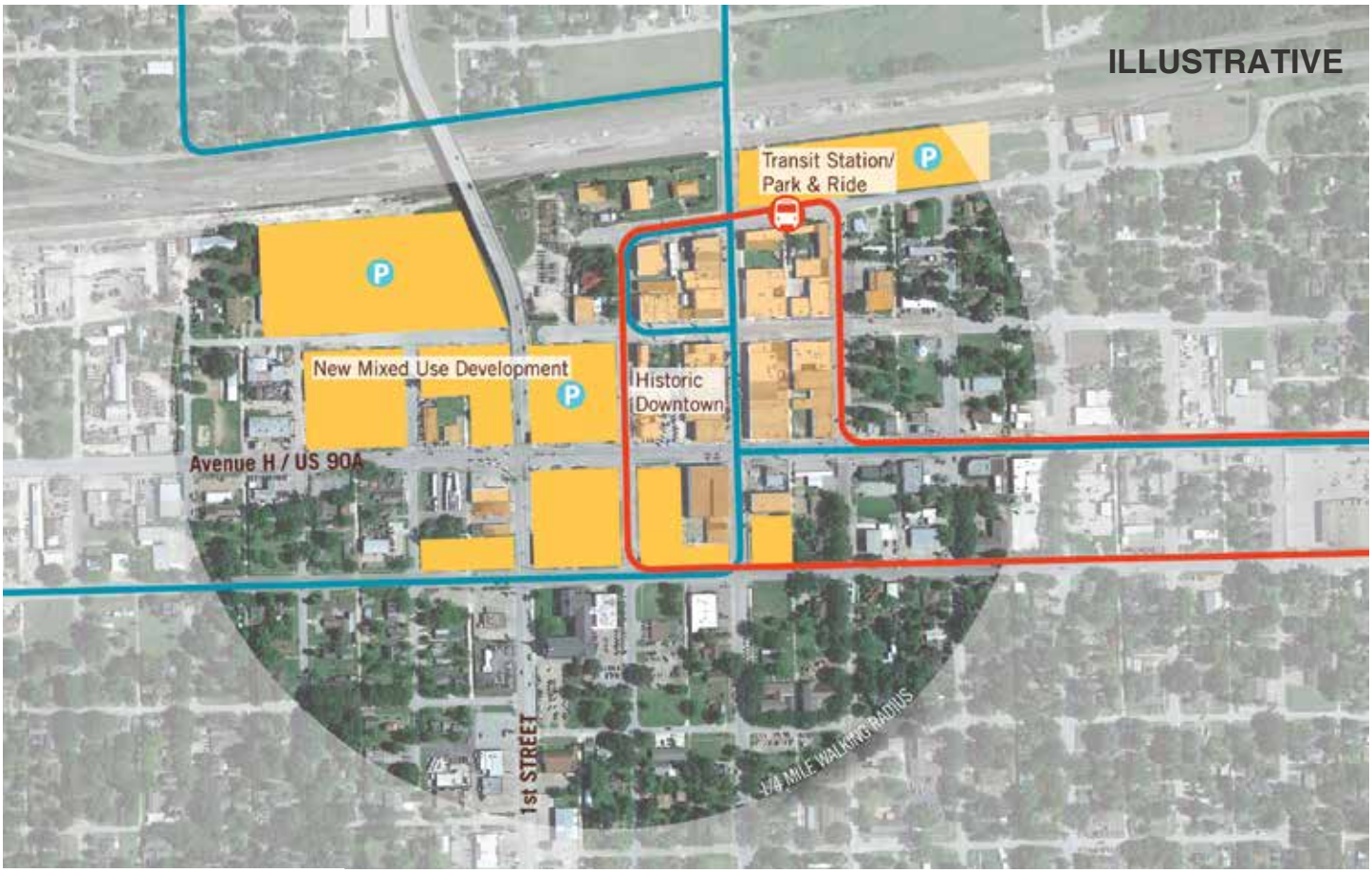


Figure E5.5: ACTIVITY CENTER #2 STRENGTHS AND STRATEGIES

HISTORIC DOWNTOWN ROSENBERG VISION

This vision builds on the small historic town character of Downtown Rosenberg. Existing buildings are preserved and restored; streets are rebuilt to enhance walking and build business. At the edges of Downtown, new buildings fill in surface parking and vacant lots, extending retail cultural arts and restaurant activity at ground level and housing residents and small businesses above. Structured parking garages are conveniently located for visitors. A new transit center, bringing together the US 59 transit spine and local transit circulators, serves as a Park & Ride for local residents commuting to work but also brings shoppers from elsewhere interested in the unique stores and local character. The new development is careful scaled to the existing town, adding economic activity and keeping Downtown at the center of the city while preserving small town character.





Transit Station/Park & Ride Stop
Public Parking Structures
Existing Buildings
Future Development
Park & Open Space
Bike & Pedestrian Route
Transit
Local Circulator

Figure E5.6: HISTORIC DOWNTOWN ROSENBERG VISION

SIENNA RANCH

ANTIQUES
CORNER

BRAZOS TOWN CENTER

FORT BEND COUNTY JUSTICE CENTER

F IMPLEMENTATION WORKBOOKS

Chapter E of this report outlines a Strategic Plan for the Fort Bend Subregional study area including projects, policies and actions for the region to support meeting the Vision outlined for the Plan. The Strategic Plan was developed to provide a regional perspective on how to address key issues related to future growth and trends faced by the region. The Strategic Plan also builds off the current strengths of the region as a launching point for recommendations.

Chapter F translates the Strategic Plan into potential implementation actions that plan stakeholders, including Fort Bend County and the seven sponsoring cities, organizing key projects and policies into Implementation Workbooks for each participating jurisdiction. These Workbooks will serve as a potential checklist and reference guide for each jurisdiction as they plan for future transportation projects, as well as land use and development strategies.

Each Implementation Workbook has been streamlined to include four basic elements aligned with the needs assessments and strategic planning framework of this study. These four sections include:

- **Key Takeaways** - Chapters C and Chapter D detail Six Key Drivers of Success and Challenges to Achieving the Vision respectively to develop a fact base and understanding of what has made the Fort Bend region successful and what key trends are likely to create challenges and potential opportunities to achieving the Vision for the Project. These include:

Six Key Drivers of Success

- Strong Mobility and Access to Major Job Centers
- High-quality Residential Housing Options
- Strong Economic Growth
- Enhancement of Quality of Life and Amenities
- Excellent School District Reputation
- Increasing Diversity

Key Trends and Challenges to the Vision

- Continued Population and Employment Growth
- Demographic Trends
- Maintaining Infrastructure to Support Sustainable Growth and Mobility
- Continued Economic Development
- Quality of Life Enhancements

For each jurisdiction, Key Takeaways have been summarized related to these trends to allow the jurisdiction to quickly summarize and share the insights from the study as context and impetus for the implementation of the Strategic Plan.

The remainder of the workbooks summarize Key Takeaways for each jurisdiction against the three principles of the Strategic Plan.

- Strengthening Activity Centers - Strong activity centers form a core component of the overall success of the study area. They serve as economic drivers for a large share of the employment and commercial tax base of the region. They also contain many of the attractions, entertainment options, and civic and green space necessary to deliver a high quality of life for the local communities. The continued focus on existing and new activity centers is critical to achieving the level of development growth and continued strong economic performance for the study area and the overall Fort Bend region.

  The Implementation Workbooks outline specific strategies aligned against the eight overall activity center strategies developed in the Strategic Plan. They provide actionable projects, policies and guidelines for each center identified in the Strategic Plan that is within each jurisdiction. These strategies build off the existing character and context of the area and the assessment of the activity center's potential. These are based on stakeholder input as well as experience from members of the study team. The eight key strategies for strengthening activity centers include:

  1. Increase Mixed Use Development
  2. Strengthen clusters to create economies of scale for infrastructure, branding, employees
  3. Integrate higher density residential
  4. Improve walkability
  5. Increase multi-modal access
  6. Optimized parking strategies
  7. Integrate water, parks, public and civic space
  8. Enhance arts and entertainment include programing

- Enhancing Multi-modal Transportation - Addressing key gaps and bottlenecks in the mobility network while enhancing the connections between activity centers will be a key aspect of managing future growth in the study area. Increasingly the community and stakeholders also see the need to provide a more balanced set of enhanced transportation choices including transit, walking, and biking to create a more robust transportation network. The Implementation Workbooks outline key projects and planning priorities within each jurisdiction across transportation modes. Projects were included if all or part of the project was within or adjacent to a city. Many of these will require continued coordination among the plan stakeholders to successfully finance and implement. The Implementation Workbooks include:

  1. Major roadway projects within the Regional Transportation Plan (RTP) with a focus on those that address current roadway bottlenecks with the study area
  2. Additional transportation projects that address key gaps in the transportation network or crossings of major barriers
  3. Transit improvements
  4. Regional trail and bikeway improvements
  5. Traffic management strategies
  6. Additional planning (e.g., thoroughfare planning) to address future opportunities

  For each major initiative, planning level project cost ranges have been estimated to support continued funding efforts. Transit cost are summarized in Figure F1.1 and are broken down by phase as well as alternative technologies where appropriate. For projects already contained within the RTP the existing project cost was utilized; trail projects proposed that are currently included in the Sugar Land Pedestrian & Bicycle Master Plan, adopted in 2012, are listed with the cost from the Sugar Land document. For projects not currently within the RTP or the Sugar Land Pedestrian & Bicycle Master Plan, project costs from previous planning efforts or new estimates were developed to support jurisdictions in planning. Project cost listed for each trail are the cost for the entire trial based on assumptions about length and design characteristics; depending on the design of the trail and funding structure of multi-jurisdiction trials, the cost of a trail for each city may vary from what is listed in each city's workbook.

- Creating Sustainable Neighborhoods that Retain their Value - The Implementation Workbook seeks to highlight the key role neighborhoods play within a community. These include existing neighborhoods that require on going investments to sustain their value. These strategies are more generalized across cities but where specific projects or policies to support new and existing neighborhoods have been developed they have been highlighted.

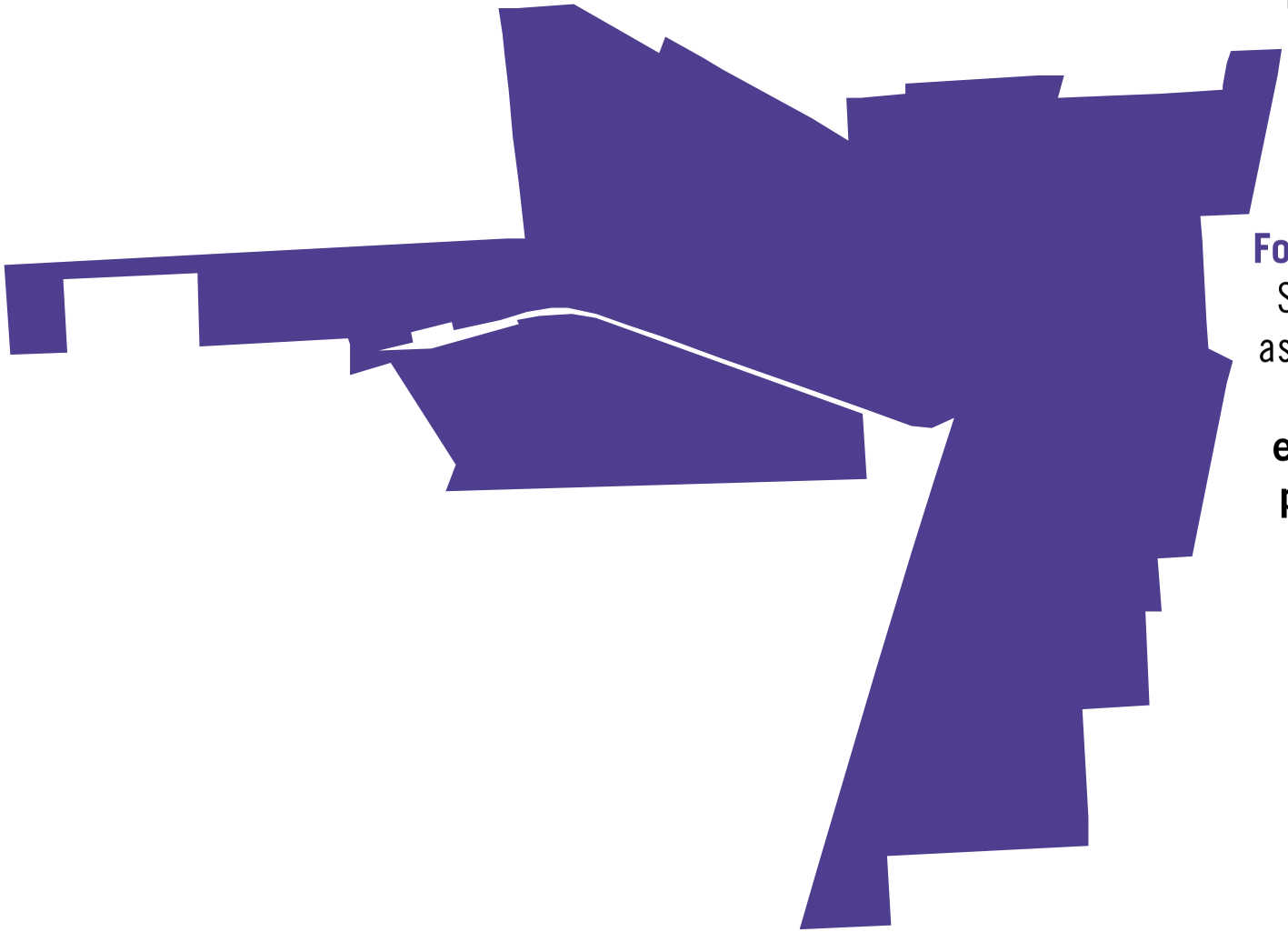
Where projects show up across multiple jurisdictions that have been identified in each jurisdiction's workbook. These projects represent critical opportunities for agencies to work together to implement these projects that have regional significance.

PROPOSED PROJECT	TOTAL LENGTH (MILES)	SECTIONS	1			2			3			GRAND TOTAL ($)
			LENGTH (MI)	STATIONS	COST (MILLION $)	LENGTH (MI)	STATIONS	COST (MILLION $)	LENGTH (MI)	STATIONS	COST (MILLION $)	
1 FORT BEND PARKWAY TO TEXAS MEDICAL CENTER	15	3	MISSOURI CITY TO US 90A			US 90A TO I-610			I-610 TO TEXAS MEDICAL CENTER			3,350,000
			8	3	0.3	4	5	.5	3	6	2.55	
2 WESTPARK TOLLWAY TO UPTOWN/DOWNTOWN	28	3	GRAND PARKWAY TO US 59 (TOLL PORTION)			US 59 TO I-610			I-610 TO UPTOWN & DOWNTOWN			7,850,000
			17	8	0.8	2	2	.2	9	10	6.85	
3 GESSNER ROAD - MISSOURI CITY TO WESTCHASE AND MEMORIAL CITY	18	1	MISSOURI CITY TO WESTCHASE TO MEMORIAL CITY TO US 290									13,500,000
			18	18	13.5							
4 US 59 - ROSENBERG TO DOWNTOWN	33	3	SOUTH - AT GRADE (ROSENBERG TO SUGAR LAND)			MIDDLE - HOV OR ELEVATED (SUGAR LAND TO WESTPARK)			NORTH - ELEVATED (GALLERIA/WESTPARK TO DOWNTOWN)			3,215,000,000
			12	5	410	12	6	1,560	9	6	1,245	
5 US 90A - GRAND PARKWAY TO TEXAS MEDICAL CENTER	20	Phases 2	GRAND PARKWAY TO TEXAS MEDICAL CENTER (RAPID BUS)			LRT			COMMUTER RAIL			1,365,000,000
			20	20	10	16	12	860	20	3	495	
6 SH 6 - MISSOURI CITY TO ENERGY CORRIDOR	23	Phases 2	MISSOURI CITY TO ENERGY CORRIDOR (RAPID BUS-SIGNATURE)			DEDICATED TRANSITWAY						925,750,000
			23	23	5.75	23	23	920				
7 SH 6/FM 1092/US 59 - MISSOURI CITY TO GESSNER ROAD	14	2	SH 6/ FM 1092 (BUS RAPID TRANSIT)			US 59 SEGMENT						8,750,000
			11	14	8.55	3	2	.2				
8 FM 521 - PEARLAND P&R CONNECTION FROM MISSOURI CITY AND FM 521 P&R	18	2	SH 6 SEGMENT			SH 288 SEGMENT						8,900,000
			12	8	8.6	6	3	.3				
C1 SUGAR LAND CIRCULATOR	9	1	9	9	7.2							7,200,000
C2 ROSENBERG/RICHMOND CIRCULATOR	16	1	16	16	12.8							12,800,000

CITY OF ARCOLA

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative



Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

FORT BEND SUBREGIONAL PLAN 10 TAKEAWAYS ABOUT ARCOLA

01 Between the 1980 and 2010 Censuses, population in **Arcola grew 3.1% per year** while overall **Fort Bend County grew 5.1%**.

02 Total County population likely to **exceed 1 million residents** in the next 25 years.

03 The **annual Sales Tax growth rate** from 2000 to 2011 was **0.6%** with Sales Tax per capita declining from **$209/person to $149/person**.

04 Current **average commute times** for Arcola residents are **estimated at 34 minutes** though traffic growth is likely to cause travel times to increase and become more variable.

05 **62%** of Arcola's housing stock is **single-family homes**, with over **80%** of the housing stock being constructed **post-1980**.

06 Arcola is **less diverse that Fort Bend County** overall. Currently the population is **62% Hispanic**, **28% Black**, and **8% White**.

07 Arcola has lower economic levels that surrounding Fort Bend County, with **18%** of the population living **below the poverty rate** and the **median household income** being about **$44,000.**

08 **24%** of Arcola residents have at least an **Associate's degree**. Overall **47% of Fort Bend County Residents** have similar level of education.

09 Arcola **lacks significant park land** within the City limits.

10 Arcola is home the **Houston Southwest Airport** and is looking to convert a part of its **City Hall to a Community Center**.

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Arcola**

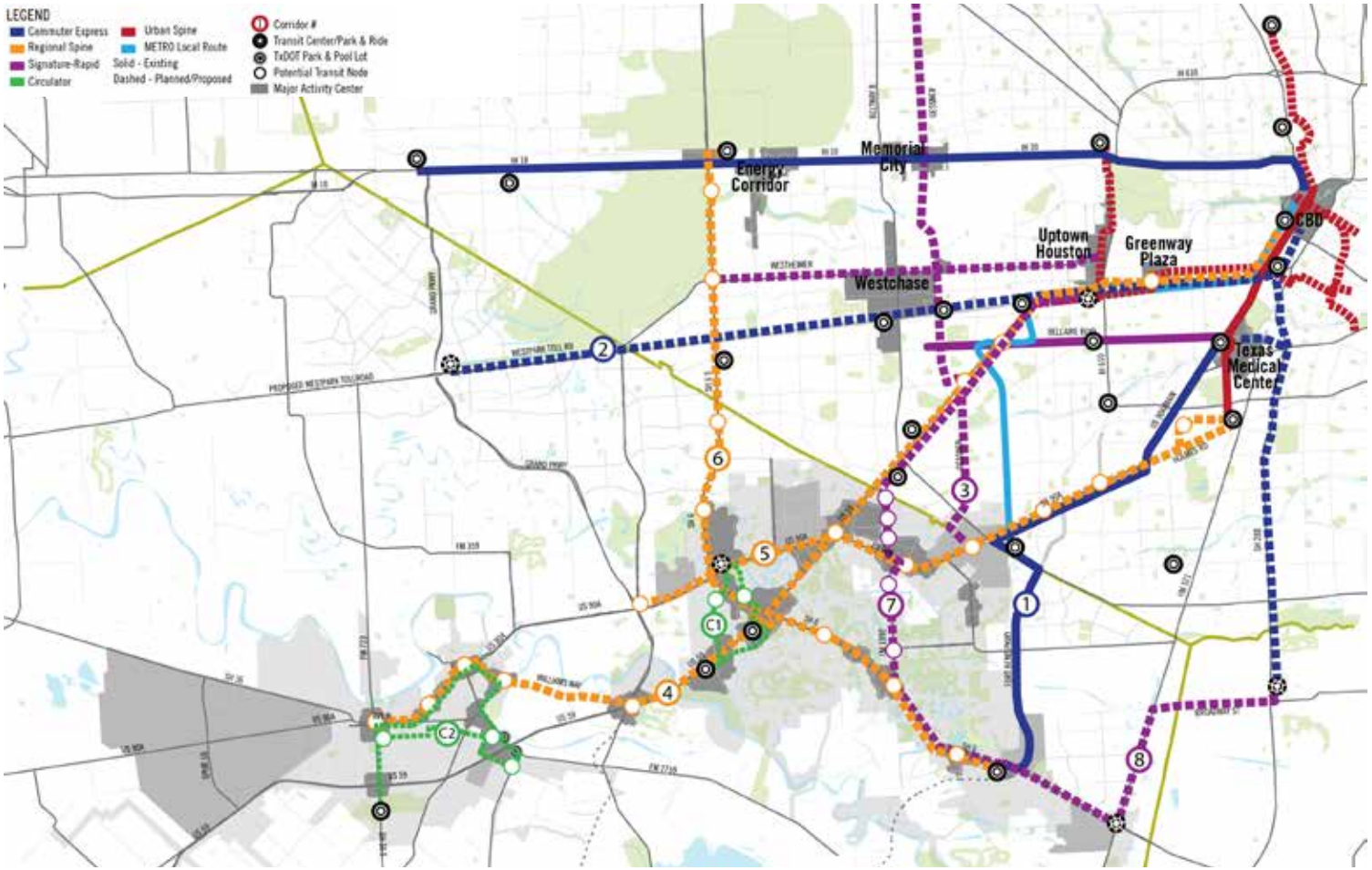
Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
CURRENT 2035 RTP UPDATE PROJECTS												
Added Capacity	Roadway Widening	7732	McKeever Road	SH 6	Sienna Parkway	2023 RTP	Widen from 2 To 4-Lanes and Realignment	2	4	City Of Missouri City	1/1/2023	$19,300,000.00
PREVIOUS RTP PROJECTS WITHOUT IDENTIFIED TXDOT FUNDING												
Traffic Engineering	Grade Separation	14200	FM 521	At UP Railroad		RTP - SHORT	Construct Grade Separation (DOT #447 969Y)			TxDOT Houston District		$12,506,794.00
Added Capacity	Roadway Widening	802	FM 521	Irrigation Canal	SH 6	RTP - LONG	Widen to 4-Lane	2	4	TxDOT Houston District		$5,949,753.00
Added Capacity	Roadway Widening	12753	FM 521	Harris County Line	Sienna Parkway	RTP - LONG	Widen from 2 to 6 Lanes with Bridges	2	6	TxDOT Houston District		$73,270,223.00
Added Capacity	Roadway Widening	11622	SH 6	US 90A	McKeever Road	RTP - LONG	Widen from 6 to 8 Lanes Intersections	6	8	TxDOT Houston District		$108,475,423.00
Added Capacity	Roadway Widening	11623	SH 6	FM 521	Brazoria County Line	RTP - LONG	Widen to 8 Lane Intersections	6	8	TxDOT Houston District		$7,748,244.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

ITS AND THOROUGHFARE PLANNING

Arcola is unlikely to have sufficient demand or resources to operate their own Traffic and Incident Management Center. The City would benefit from regional coordination on these issues with Fort Bend County and neighboring cities. Arcola should leverage the 2013 Fort Bend Thoroughfare Planing process to assist in the development of any regional corridors to support future mobility needs.

Enhancing Multi-modal Transportation - Transit



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

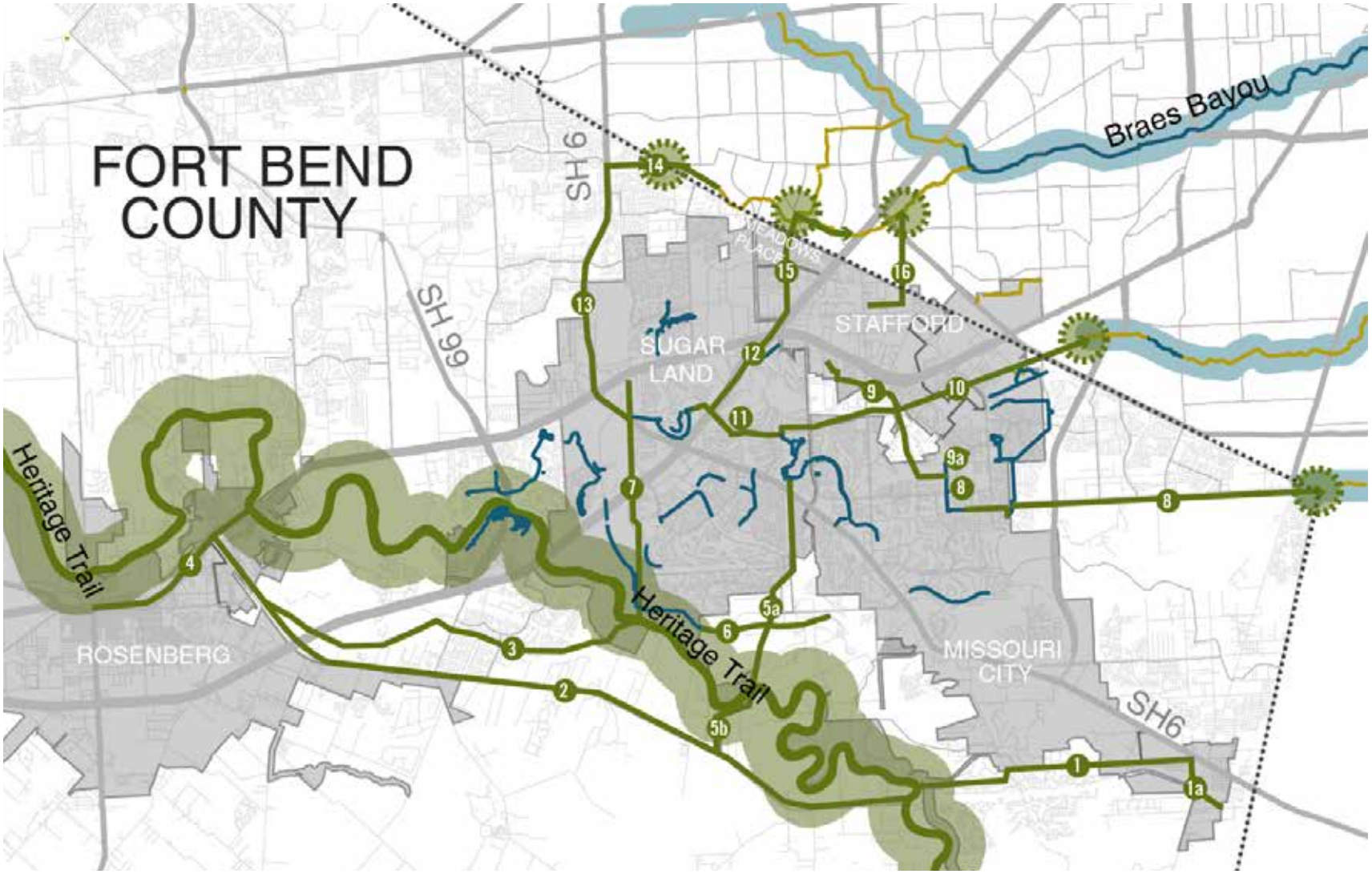
ROUTE	SERVICE TYPE	FROM	TO	LENGTH
7 SH 6/FM 1092/US 59*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Uptown Park & Ride	21 miles
8 FM 521*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Pearland Park & Ride	11 miles

EXISTING TRANSIT PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT	DESCRIPTION	PROJECT STATUS	SPONSOR	COST
FM 521 FBCTRA Park & Ride [MPOID 11532]	Acquire 6 Large Transit Vehicles (Phase 2) for Express Services from FM 521 P&R from Arcola-Sienna P&R	2024 RTP	Fort Bend County	$6,855,684.00

*Cost estimates presented in Figure F1.1

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
1 East/West Drainage Corridor from the Brazos River to Highway 6	5.8 miles	$4,593,600
1a Arcola Spur	1.2 miles	$950,400

*Cost estimates are for entire trail length

The City of Arcola has limited Ped/Bike infrastructure today but would benefit from supporting walkability in new development and linking to regional trail systems where possible.

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are “out of date”	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

Potential Actions For Arcola

- Plan for infrastructure linked to growth potential from both planed communities and light industrial
- Revisit City development standards and policies to support desired growth in the city and potential ETJ
- Develop marketing about development opportunities in Arcola region; leverage Fort Bend Economic Development Corporation and others to spread the word

CITY OF MEADOWS PLACE

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

10 TAKEAWAYS ABOUT MEADOWS PLACE

01 Between the 1980 to 2010, population in **Meadows Place was flat largely due to build out** while overall **Fort Bend County grew 5.1%**.

02 Total Fort Bend County population likely to **exceed 1 million residents** in the next 25 years with 22% over the age of 65 Vs. 8% today

03 The **annual sales tax growth rate** of the City, from 2000 to 2011 was **(-3.8%)** due to loss of some large retail. **Trend has turn positive since 2011**.

04 Current **average commute times** for Meadows Place residents is **estimated at 29 minutes** though traffic growth likely to cause travel times to spike and become more variable.

05 **98%** of Meadow Place's housing stock is **single-family homes**, with over **65%** of the housing stock being constructed **between 1970-1979.**

06 Fort Bend County and Meadows Place are diverse. Currently Meadows Place population is **53% White**, **18% Hispanic**, **17% Asian** and **9% Black**.

07 Meadows Place is relatively affluent with **97%** of the population living **above the poverty rate** and the **median household income** being about **$79,000**.

08 Educational attainment is on par with Fort Bend, **45%** have at least an **Associate's degree** versus **47% of Fort Bend County residents**.

09 Meadows Place has over **14 acres** of **park land**, and **95% of residents are close to a park**.

10 Meadows Place is conveniently located with **US 59 providing easy access** to destinations such as **The Fountains** and locations in nearby cities

Strengthening Activity Centers - Meadows Place

US 59 AT US 90A - THE FOUNTAINS

LAND AREA	CURRENT LAND USE
924 Acres	Commercial, Retail, and Light Industrial

STRENGTHS

- The TI Site will soon be sold and is an opportunity for the city of Stafford for redevelopment
- Access to US 59 and FM 1092
- Industry cluster of specialized technological manufacturing

Activity Center #15

STRATEGIES

MIXED USE DEVELOPMENT	▪ Master plan the TI Site as mixed use for continued growth in Stafford
ENCOURAGE INDUSTRY CLUSTERS	▪ Include office space in new development to support Stafford's strengths in manufacturing and distribution
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Create more rooftops to support expanded commercial development through higher density residential
IMPROVE WALKABILITY	▪ Improve pedestrian access between sites within the node and along FM 1092 and across US 59
INCREASE MULTIMODAL ACCESS	▪ Plan for future transit along US 59 and FM 1092
OPTIMIZE PARKING STRATEGIES	▪ Plan new development around shared parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Include new park in the development
ENHANCE ARTS AND ENTERTAINMENT	

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Meadows Place**

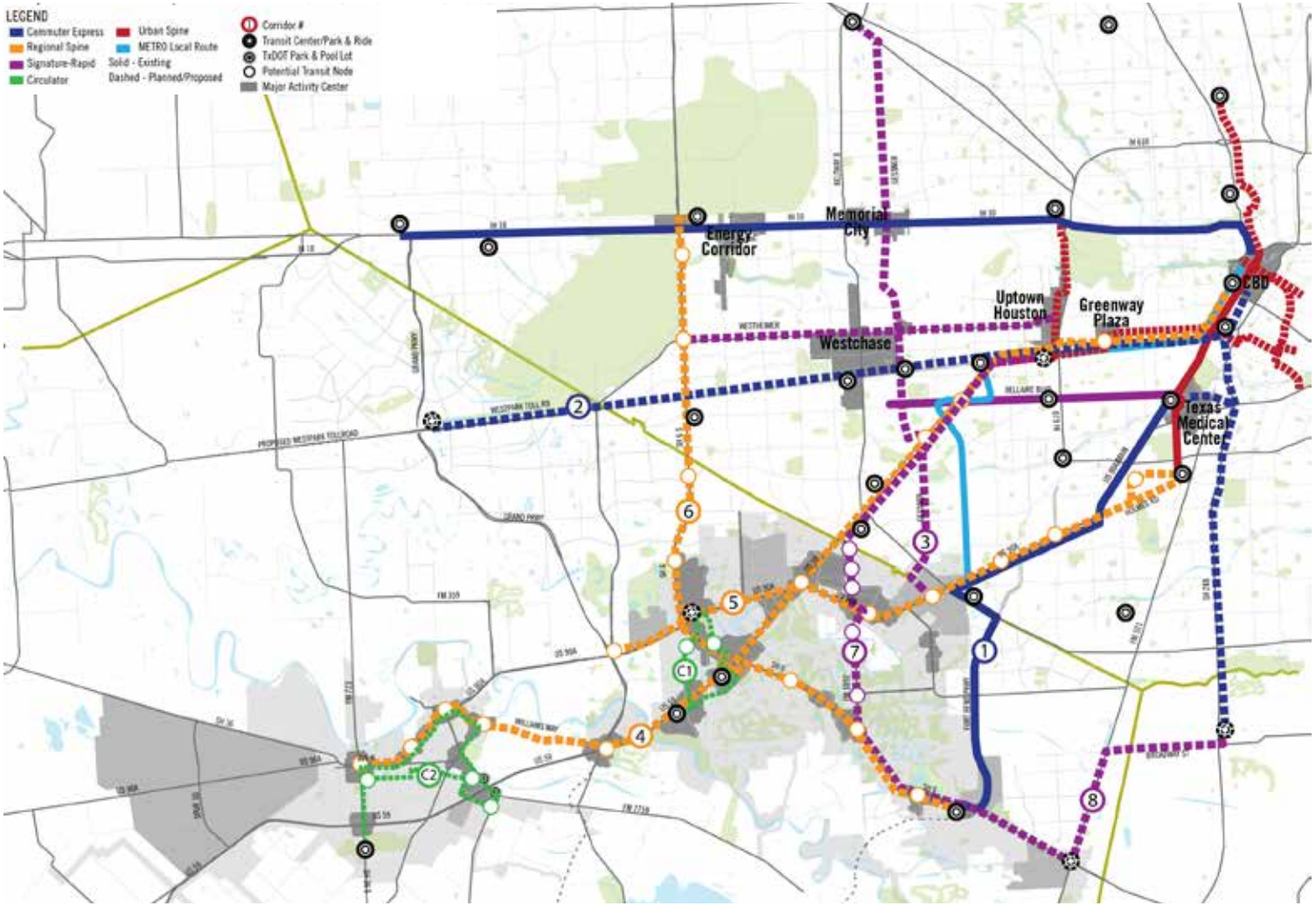
Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Traffic Engineering	Other	975	Kirkwood Dr S	Harris County County Line	City of Meadows Place City Limit	2013 TIP	2-Lane Roadway with Roundabouts	4	2	City Of Meadows Place	1/1/2013	$1,872,000.00
Added Capacity	Roadway Widening	977	West Bellfort	FM 1876	Harris County County Line	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$7,700,455.00
Added Capacity	Roadway Widening	973	Dairy Ashford Road	Harris County County Line	West Airport Boulevard	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$3,804,156.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

ITS AND THOROUGHFARE PLANNING

Meadows Place is unlikely to have sufficient demand or resources to operate their own Traffic and Incident Management Center. The City would benefit from regional coordination on these issues with Fort Bend County and neighboring cities. Meadows Place should leverage the 2013 Fort Bend Thoroughfare Planing process to assist in the development of any regional corridors to support future mobility needs.

Enhancing Multi-modal Transportation - Transit



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

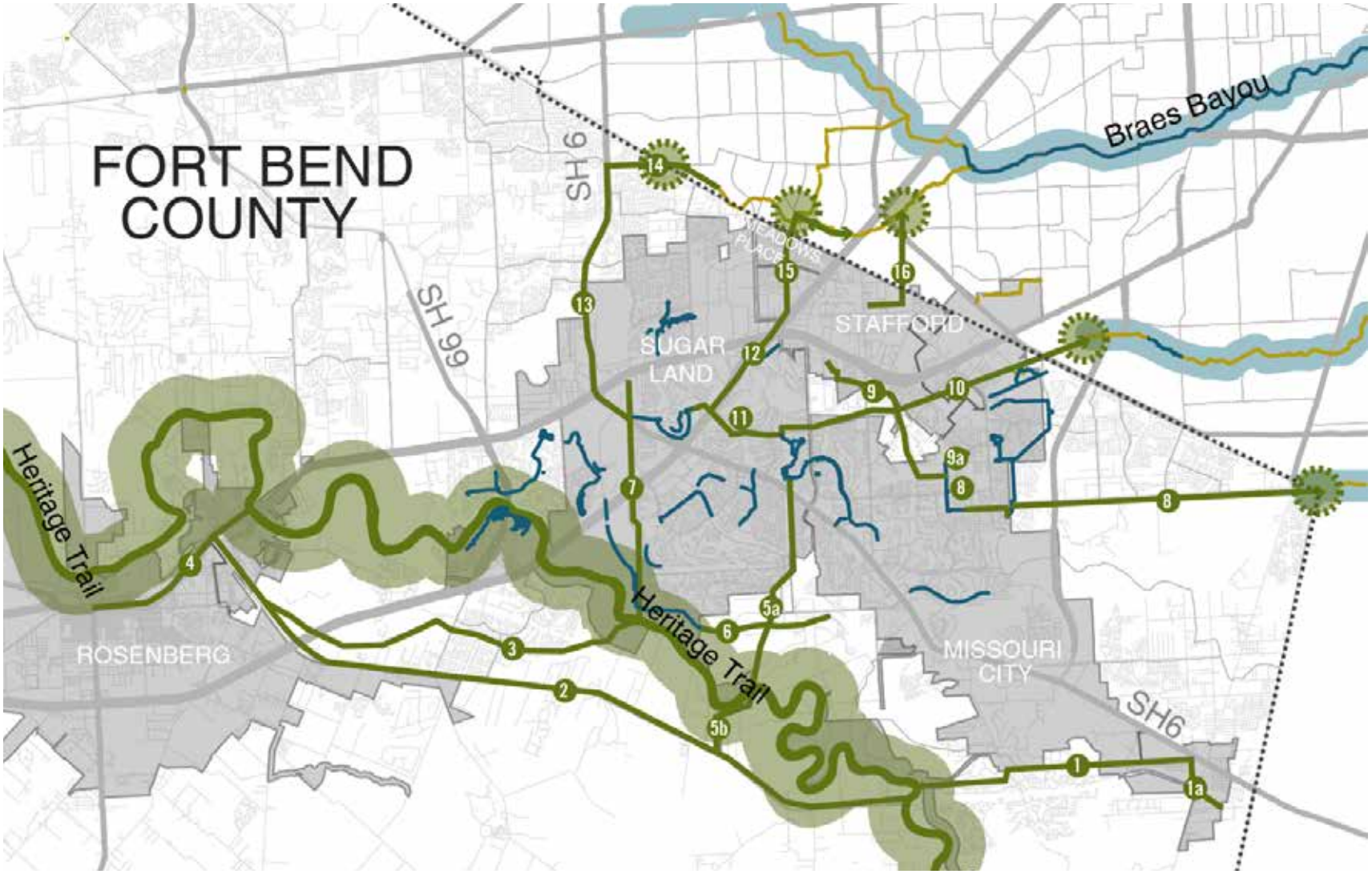
C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

	ROUTE	SERVICE TYPE	FROM	TO	LENGTH
4	US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles

*Cost estimates presented in Figure F1.1

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
15 Meadows Place/Sugar Land Utility Corridor from US 59 to Keegans Bayou	1.9 miles	$1,504,800

*Cost estimates are for entire trail length

Connection to Keegans/Braes Bayou would provide Meadows with significant bicycle connectivity to large trail system and major destinations.

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

KEY ACTION FOR MEADOWS PLACE

- Manage aging infrastructure as city streets begin to wear out requiring delicate balance of construction and revenues to pay for them.
- Continue to emphasize character of the city, which is frequently cited as significant asset for the city
- Create marketing and consider limited incentives to support commercial redevelopment along US 59

CITY OF MISSOURI CITY

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

FORT BEND SUBREGIONAL PLAN - 10 TAKEAWAYS ABOUT MISSOURI CITY

01 Between the 1980 to 2010, population in **Missouri City grew 3.4% per year**; overall **Fort Bend County grew 5.1%**.

02 Total Fort Bend County population likely to **exceed 1 million** in the next 25 years.

03 The **annual sales tax growth rate** from 2000 to 2011 was **8.1%** with Sales Tax per capita going from **$48/person to $89/person**.

04 Current **average commute times** for Missouri City residents is **estimated at 33 minutes** though growth is likely increase congestion

05 **97%** of Missouri City's housing stock is **single-family homes**, with over **68%** of the housing stock being constructed **post-1980**.

06 Missouri City has significant diversity. Currently the population is **41% Black**, **25% White**, **16% Asian**, and **15% Hispanic**.

07 **90%** of the population lives **above the poverty rate** and the **median household income** is over **$80,000.**

08 Missouri City has a relatively educated population, **49%** of whom have at least an **Associate's degree** vs. **47% of Fort Bend County Residents**.

09 Missouri City has over **3031 acres** of **park land**, providing over **90%** of its residents with **close access** to green space.

10 Missouri City has growing number of cultural assets including **City Center at Quail Valley, Houston Community College and Town Hall Civic Center**

Strengthening Activity Centers

SH 6 COMMERCIAL

LAND AREA	CURRENT LAND USE
420 Acres	Commercial and Retail

STRENGTHS

- SH 6 is a high traffic corridor that provides access to and from many residential communities
- Surrounding neighborhoods are retaining their value
- Close to Oyster Creek Park and hike-and-bike trails

Activity Center #18

STRATEGIES

MIXED USE DEVELOPMENT	▪ Reimagine aging strip retail as mixed use development
ENCOURAGE INDUSTRY CLUSTERS	
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Integrate higher density residential, including townhouses, in new mixed use development.
IMPROVE WALKABILITY	▪ Improve walkability between retail locations
INCREASE MULTIMODAL ACCESS	▪ Support and integrate future SH 6 transit lines into commercial corridor
OPTIMIZE PARKING STRATEGIES	▪ Develop a shared parking to maximize parking usage and minimize parking spaces
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Link new development to existing park space ▪ Take advantage of existing lakes to create waterfront gathering spaces
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue public art program

MISSOURI CITY - CITY HALL AND TEXAS PARKWAY

LAND AREA	CURRENT LAND USE
171 Acres	Civic Buildings and Commercial

STRENGTHS

- Cluster of Civic Buildings including Missouri City City Hall and Missouri City Branch Library
- Recent access management improvements to Texas Parkway

Activity Center #19

STRATEGIES

MIXED USE DEVELOPMENT	▪ Create in incentives to create critical mass of adjacent development
ENCOURAGE INDUSTRY CLUSTERS	▪ Leverage activity of city services ▪ Support expansion of neighborhood service retail and commercial along Texas Parkway
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Increase residential density near node; Civic center represents potential higher density residential site
IMPROVE WALKABILITY	▪ Facilitate roadway improvements including better crosswalks and improved sidewalks near City Hall and provide connections to new sidewalks along Texas Parkway
INCREASE MULTIMODAL ACCESS	▪ Enhance trails network along Oyster Creek and improve neighborhood access
OPTIMIZE PARKING STRATEGIES	▪ Allow use of city parking for other uses during off hours ▪ Encourage shared parking among commercial and retail
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Connect Trail and Park system to important Missouri City destinations ▪ Improve connections between parks and neighborhoods.
ENHANCE ARTS AND ENTERTAINMENT	

Strengthening Activity Centers

SIENNA PLANTATION COMMERCIAL - HOUSTON COMMUNITY COLLEGE MISSOURI CITY

LAND AREA	CURRENT LAND USE
270 Acres	Commercial, Retail, Multifamily ,and Vacant

STRENGTHS

- New HCC campus and Library
- Master planned community with growth potential
- SH 6 access
- Fort Bend Parkway access
- Kitty Hollow Park

Activity Center #20

STRATEGIES

MIXED USE DEVELOPMENT	▪ Create new mixed use town center
ENCOURAGE INDUSTRY CLUSTERS	▪ Build on existing retail to create a retail hub
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build new high density residential within walking distance of transit hub
IMPROVE WALKABILITY	▪ Create better connections between residential and retail and commercial areas ▪ Add new connections across SH 6
INCREASE MULTIMODAL ACCESS	▪ With the future permanent Missouri City Park and Ride, encourage Transit Oriented Development near the Park and Ride
OPTIMIZE PARKING STRATEGIES	▪ Plan new development around shared use parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Enhance access to existing parks and green space ▪ Add new parks and plazas in new developments ▪ Use green space to create a buffer between the Fort Bend Parkway and new development
ENHANCE ARTS AND ENTERTAINMENT	▪ Include arts organizations in new development.

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Missouri City**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Access Management Improvements		15418	FM 1092	Missouri City City Limit	Hampton Drive	2014 TIP	Construction Of Access Management (Medians) Consisting Of Grading, Drainage, Signing, and Pavement Markings	4	4	City Of Missouri City	10/1/2013	$1,859,949.00
Access Management Improvements		15421	FM 2234	US 90A	Turtle Creek Drive	2013 TIP	Intersection Improvements: Signal System Upgrade And Reconfiguration	2	2	City Of Missouri City	8/1/2013	$2,752,386.00
Added Capacity	New Roadway Construction	400	Independence Boulevard	320' E Of GCWA Canal	Staffordshire Rd	2015 TIP	Construct New 4-Lane Roadway (In Sections)	0	4	City Of Missouri City	1/1/2015	$6,700,000.00
Added Capacity	New Roadway Construction	13740	Knight Road	Watts Plantation	McKeever Rd	2023 RTP	Extend 2-Lane Roadway	0	2	City Of Missouri City	9/1/2022	$4,400,000.00
Added Capacity	New Roadway Construction	12380	Sienna Parkway	Waters Lake Blvd	FM 521	2020 RTP	Extend 4-Lane Roadway	0	4	City Of Missouri City	1/1/2020	$36,700,000.00
Added Capacity	New Roadway Construction	13719	Sienna Ranch Road	SH 6	West of Sienna Parkway	2015 LET	Extend 4-Lane Roadway	0	4	City Of Missouri City	9/1/2011	$7,414,853.00
Added Capacity	New Roadway Construction	13744	Sienna Spring Road	Hagerson Rd	Sienna Parkway	2015 LET	Extend 4-Lane Roadway	0	4	City Of Missouri City	9/1/2011	$7,546,212.00
Added Capacity	New Roadway Construction	408	Trammel Fresno Rd	Vicksburg Blvd	Fort Bend Parkway	2014 TIP	Construct 4-Lane Concrete Divided w/ Storm Sewers, Esplanades, Curb & Gutter, Street Lights & Landscaping, and Construct 2-Lane Concrete Roadways to Existing Interchange at Fort Bend Pkwy	2	4	City Of Missouri City	2/1/2014	$8,933,357.00
Added Capacity	New Roadway Construction	13728	Waters Lake Boulevard	Sienna Pkwy	Brazoria County Line	2023 RTP	Construct 4-Lane Roadway	0	4	City Of Missouri City	1/1/2023	$18,900,000.00
Added Capacity	New Roadway Construction	13742	Waters Lake Boulevard	Existing Terminus	South of Sienna Parkway	2020 RTP	Extend 4-Lane Boulevard	0	4	City Of Missouri City	1/1/2020	$5,550,000.00
Added Capacity	New Roadway Construction	13739	Watts Plantation Road	Knight Rd	SH 6	2024 RTP	Extend 2-Lane Roadway	0	2	City Of Missouri City	1/1/2024	$4,550,000.00
Added Capacity	Roadway Widening	13641	FM 1092/Murphy Road	US 90A	Lexington Boulevard	2020 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts and Bridge Widening	4	6	City Of Missouri City	1/1/2020	$10,100,000.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	13642	FM 1092/Murphy Road	Lexington Blvd	Cartwright Road	2020 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts	4	6	City Of Missouri City	1/1/2020	$10,100,000.00
Added Capacity	Roadway Widening	13643	FM 1092/Murphy Road	Cartwright Rd	SH 6	2022 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts and Bridge Widening	4	6	City Of Missouri City	1/1/2020	$9,914,231.00
Added Capacity	Roadway Widening	980	FM 2234	US 90A	Lexington Boulevard	2020 RTP	Widen From 4 to 6-Lanes Undivided	4	6	City Of Missouri City	1/1/2020	$11,350,000.00
Added Capacity	Roadway Widening	7732	McKeever Road	SH 6	Sienna Parkway	2023 RTP	Widen from 2 To 4-Lanes and Realignment	2	4	City Of Missouri City	1/1/2023	$19,300,000.00
Added Capacity	Roadway Widening	13637	Texas Parkway/FM 2234	Lexington Blvd	Cartwright Road	2020 RTP	Widen 4 to 6-Lanes Divided	4	6	City Of Missouri City	1/1/2020	$9,550,000.00
Added Capacity	Roadway Widening	656	Trammel Fresno Rd	Sienna Pkwy	SH 6	2018 RTP	Construct 4-Lane Undivided Road	2	4	City Of Missouri City	1/1/2018	$2,737,939.00
Traffic Engineering	Intersection Improvements	13721	Murphy Road/FM 1092	At 5th Street		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$403,015.00
Traffic Engineering	Intersection Improvements	13724	Murphy Road/FM 1092	At El Dorado Boulevard		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$393,070.00
Traffic Engineering	Intersection Improvements	13730	Murphy Road/FM 1092	At Hampton Drive		2015 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$383,371.00
Traffic Engineering	Intersection Improvements	13723	Sienna Parkway	At Sienna Spring Boulevard		2020 RTP	Addition of NB and SB Left Turn Lanes	6	6	City Of Missouri City	1/1/2020	$393,070.00
Traffic Engineering	Intersection Improvements	13727	Sienna Parkway	At Bee's Passage		2020 RTP	Addition of NB and SB Left Turn Lanes	4	4	City Of Missouri City	1/1/2020	$383,371.00
Traffic Engineering	Intersection Improvements	13729	Sienna Parkway	At Watts Plantation		2020 RTP	Addition of NB And SB Left Turn Lane; Addition Of WB Turn Lane On Watts Plantation	4	4	City Of Missouri City	1/1/2020	$720,273.00
Traffic Engineering	Intersection Improvements	13733	Texas Pkwy/FM 2234	At Independence Boulevard		2015 TIP	Addition of One NB Right Turn Lane	4	4	City Of Missouri City	1/1/2015	$328,588.00
Traffic Engineering	Intersection Improvements	13735	Texas Pkwy/FM 2234	At Court Road		2012 TIP	Addition of One EB Left Turn Lane	4	4	City Of Missouri City	2/1/2012	$290,000.00
Traffic Engineering	Intersection Improvements	13736	Texas Pkwy/FM 2234	At Cartwright		2012 TIP	Addition of On SB Through Lane	4	4	City Of Missouri City	2/1/2012	$290,000.00
Traffic Engineering	Other	13732	Sienna Parkway	At Trammel Fresno		2020 RTP	Addition Of NB and SB Left Turn Lanes. Addition Of WB Left Turn Lane On Trammel-Fresno.	4	4	City Of Missouri City	1/1/2020	$702,500.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Missouri City**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Traffic Engineering	Other	13738	Sienna Parkway	At Sienna Ranch		2020 RTP	Addition of NB Dual Left Turn Lane and Channelized EB Right Turn Lane with Acceleration Lane on Sienna Ranch Road	4	4	City Of Missouri City	1/1/2020	$620,000.00
Added Capacity	New Roadway Construction	919	Fort Bend Parkway Toll Road	Sienna Pkwy	SH 99	2025 RTP	Construct 4-Lane Toll Road and Brazos River Bridge	0	4	FBCTRA	9/1/2024	$240,861,162.00
Added Capacity	Roadway Widening	15	FM 2234	Fort Bend Parkway Toll Road	FM 521	2025 RTP	Widen 2 Lanes to 4-Lane Divided Rural Section	2	4	TxDOT Houston District	8/1/2025	$47,483,555.00
Added Capacity	Roadway Widening	15419	FM 2234	FM 3345	Fort Bend Parkway	2013 TIP	Reconstruct and Widen from 2 Lanes to 4-Lane Divided Rural Section (Raised Median)	2	4	TxDOT Houston District	6/1/2013	$12,746,000.00
Added Capacity	Roadway Widening & HOV	9912	US 59 S	W of FM 762	W of FM 2759	2017 RTP	Construct 2-Way HOV Lanes	4	8	TxDOT Houston District	8/1/2017	$12,265,000.00
Added Capacity	New Roadway Construction	15563	Fort Bend Parkway Toll Road	SH 6	Sienna Parkway	2012 TIP	Construct 4-Lane Toll Road	0	4	Fort Bend County	8/1/2012	$18,000,000.00
Added Capacity	New Roadway Construction	652	Lake Olympia Parkway	Fort Bend Parkway Toll Road	FM 521	2018 RTP	Construct 4-Lane Undivided Road	0	4	Fort Bend County	1/1/2018	$35,935,457.00
Added Capacity	Roadway Widening	7803	Trammel Fresno Rd	Fort Bend Pkwy	FM 521	2014 TIP	Widen Existing Roadway from 2 To 4-Lanes Rural Roadway	2	4	Fort Bend County	9/1/2013	$25,435,300.00
PREVIOUS RTP PROJECTS WITHOUT IDENTIFIED TXDOT FUNDING												
Traffic Engineering	Grade Separation	9419	FM 2234	0.38 MI North of US 90A	0.62 MI South of US 90A	RTP - SHORT	Construct FM 2234 Mainlanes Depressed with at Grade Frontage Road	4	4	TxDOT Houston District		$20,000,000.00
Traffic Engineering	Grade Separation	14224	FM 2234	At UP RR		RTP - SHORT	Construct Grade Separation (DOT #447 968S)	4	4	TxDOT Houston District		$13,102,355.00
Added Capacity	Roadway Widening	11622	SH 6	US 90A	McKeever Road	RTP - LONG	Widen from 6 to 8 Lanes Intersections	6	8	TxDOT Houston District		$108,475,423.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

ITS AND THOROUGHFARE PLANNING

Missouri City has been a regional leader on Traffic Management Systems implementation. As Fort Bend County and other regional cities expand their efforts in these areas. Sugar Land can serve as both a key partner for coordination as well as a resource on best practices.

Missouri City should ensure coordination with Fort Bend County on its upcoming 2013 Thoroughfare Planning process to ensure key roadway segments are aligned and connectivity in the region is optimized.

Enhancing Multi-modal Transportation - Transit

1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

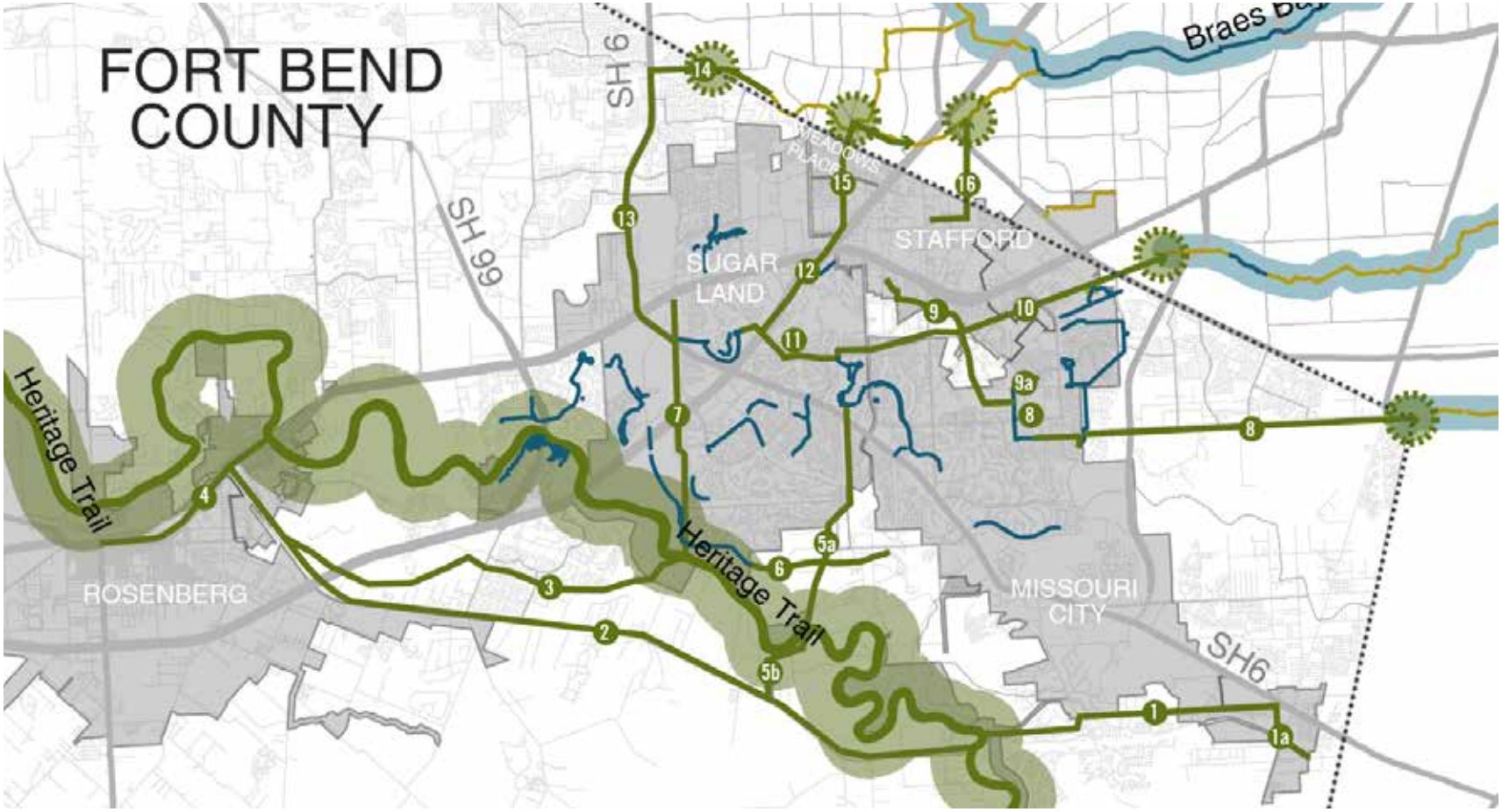
ROUTE	SERVICE TYPE	FROM	TO	LENGTH
1 Fort Bend Parkway *	Commuter Express	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Texas Medical Center Transit Center	18 miles
4 US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles
5 US 90A*	Regional Spine	US 90A at SH 99/Grand Parkway	Fannin South Park & Ride	19 miles
6 SH 6*	Regional Spine	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Addicks Park & Ride	25 miles
7 SH 6/FM 1092/US 59*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Uptown Park & Ride	21 miles

*Cost estimates presented in Figure F1.1

EXISTING TRANSIT PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT	DESCRIPTION	PROJECT STATUS	SPONSOR	COST
Missouri City P& Ride (SH 6) at Fort Bend Parkway [MPOID 15308]	Missouri City Park And Ride - FY 2011	2011 TIP	METRO	$50,000
Missouri City P& Ride Near SH 6 and Fort Bend Parkway [MPOID 15309]	Missouri City Park And Ride	2012 TIP	METRO	$19,530,391
Missouri City P& Ride Near SH 6 and Fort Bend Parkway [MPOID 11536]	Construct Additional 500 Parking Spaces (Ultimate Lot Size to Include 1,000 Spaces)	2023 RTP	METRO	$3,130,391

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
1 East/West Drainage Corridor from the Brazos River to Highway 6	5.8 miles	$4,593,600
8 McHard Road from Missouri City to Clear Creak	6.5 miles	$5,148,000
9 Drainage Corridor from Stafford to Missouri City	4 miles	$3,168,000
9a Independence Blvd Spur	0.4 miles	$316,800
10 Utility Corridor from Sims Bayou to Sugar Land	5.9 miles	$4,672,800

*Cost estimates are for entire trail length

EXISTING BICYCLE/PEDESTRIAN PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT	DESCRIPTION	PROJECT STATUS	SPONSOR	COST
FM 2234 from US 90A to Turtle Creek Drive [MPOID 2270]	Restripe roadway for on-street bicycle lane	2015 TIP	City of Missouri City	$52,562

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

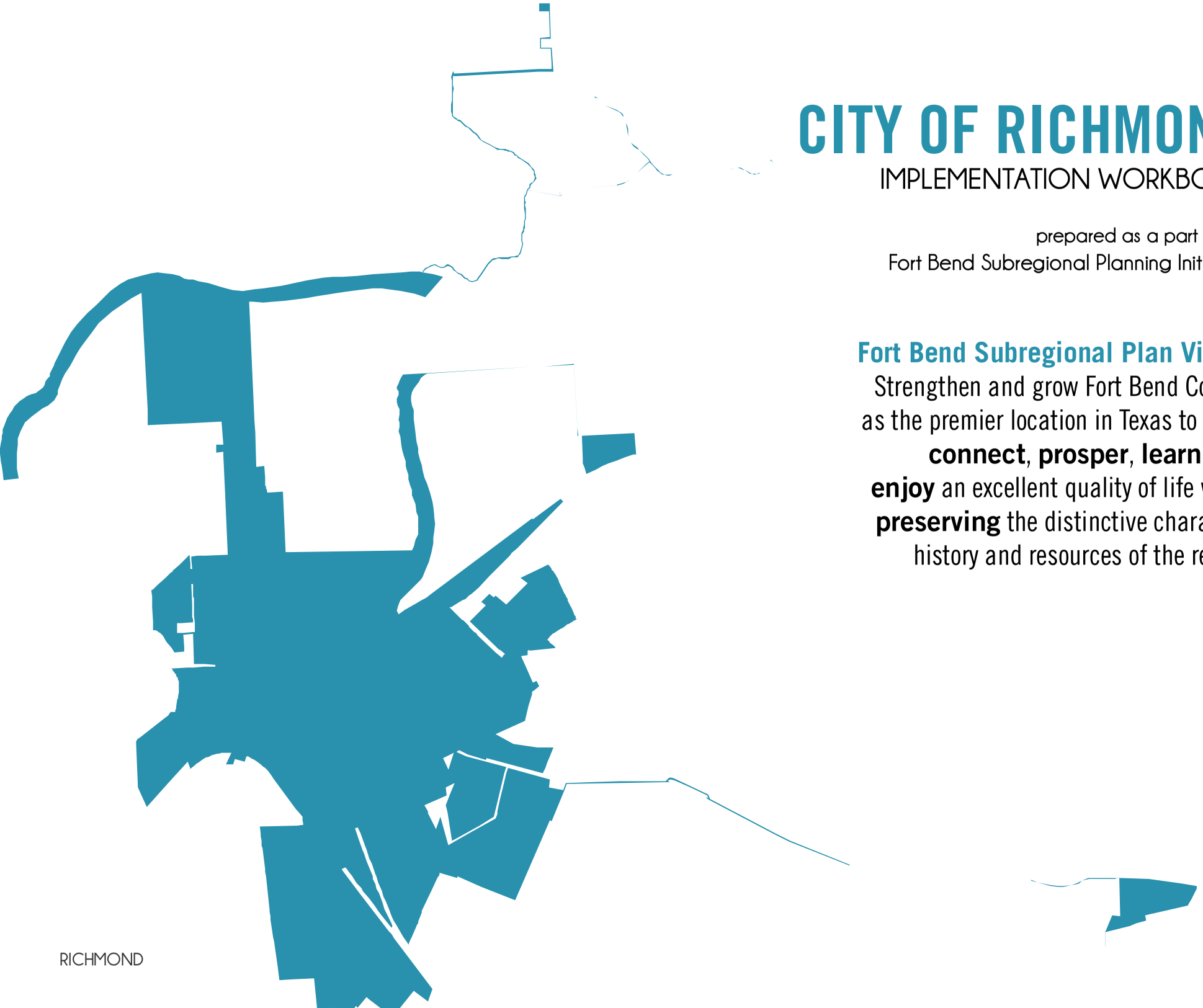
What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

KEY ACTIONS FOR MISSOURI CITY

- Revise Development Standards to support target development objectives focused in activity centers
- Coordinate current Parks Master Plan and Ped/Bike plans into development strategies
- Assess need for enhanced low impact development standards as well and land planning strategies to continue to expand



CITY OF RICHMOND

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

10 TAKEAWAYS ABOUT RICHMOND

01 Between the 1980 to 2010, population in **Richmond grew 0.6% per year;** overall **Fort Bend County grew 5.1%.**

02 Total Fort Bend County population likely to **exceed 1 million** in the next 25 years.

03 The **annual sales tax growth rate** from 2000 to 2011 was **6.2%** with sales tax per capita going from **$182/person to $350/person**.

04 Current **average commute times** for Richmond residents is **estimated at 28 minutes** though traffic growth likely to increase congestion.

05 **54%** of Richmond's housing stock is **single-family homes**, with over **63%** of the housing stock being constructed **pre-1980**.

06 Currently the population is diverse: **55% Hispanic**, **25% White**, **17% Black and 3% Other** ethnicities.

07 **26%** of the population lives **below the poverty rate** and the **median household income** being about **$40,000**.

08 **15%** Richmond residents have at least an **Associate's degree** versus **47% of Fort Bend County**.

09 Richmond has over **163 acres** of **park land**, and over **90%** of its residents have **close access** to green space, with new park space being developed.

10 A number of cultural assets contributing to its quality of life including the **Fort Bend Museum**, **Historic Downtown Richmond**, and the **George Ranch Historic Ranch**.

Strengthening Activity Centers

90A/AVENUE H CORRIDOR

LAND AREA	CURRENT LAND USE
146 Acres	Commercial and Retail

STRENGTHS

- Highly traveled corridor
- Potential for new restaurants and redeployment
- Grid roadway network
- Between Rosenberg Historic Downtown and Richmond Historic Downtown
- Part of the West Fort Bend Management District

Activity Center #3

STRATEGIES

MIXED USE DEVELOPMENT	▪ Re-purpose existing buildings and excess parking ▪ Build new buildings that front onto 90A with parking behind
ENCOURAGE INDUSTRY CLUSTERS	▪ Develop potential light industrial clusters ▪ Encourage potential health care facilities to complement nearby Oak Bend Medical
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build higher density multifamily residential (townhouses or apartments) ▪ Preserve the scale of adjoining single-family neighborhoods.
IMPROVE WALKABILITY	▪ Create a management district overlay to install sidewalk requirements ▪ Ensure access management strategies along corridor encourage improvements to walkability ▪ Add safe pedestrian crossings of 90A
INCREASE MULTIMODAL ACCESS	▪ Support access management strategies to improve operations of 90A as well as emphasize transit and bicycle access ▪ Support development of Richmond/Rosenberg Circulator and identify potential station location ▪ Design for future BRT stop.
OPTIMIZE PARKING STRATEGIES	▪ Develop shared parking strategies to reduce amount of excess parking spaces
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Re-purpose excess land to create park space
ENHANCE ARTS AND ENTERTAINMENT	▪ Improve links to downtown Rosenberg and downtown Richmond

DOWNTOWN RICHMOND/OAK BEND MEDICAL

LAND AREA	CURRENT LAND USE
150 Acres	Commercial, Retail, and Residential

STRENGTHS

- Grid roadway network
- Brazos River nearby
- Many city and county facilities
- Historical significance
- Local identity and character
- Major Destinations: Oak Bend Medical Center, City of Richmond, Fort Bend Museum, Richmond City Hall, Richmond Community Center

Activity Center #4

STRATEGIES

MIXED USE DEVELOPMENT	
ENCOURAGE INDUSTRY CLUSTERS	▪ Grow downtown destinations such as local retail and restaurants ▪ Strengthen link to Oak Bend Medical Center
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Possibility of higher density development from either downtown lofts above retail or townhome developments within the node
IMPROVE WALKABILITY	▪ Expand and improve sidewalks ▪ Improve pedestrian crossings across railroad track
INCREASE MULTIMODAL ACCESS	▪ Support the development of a Richmond/Rosenberg Circulator ▪ Plan for future BRT stop
OPTIMIZE PARKING STRATEGIES	▪ Enhance on-Street parking for downtown destinations ▪ Provide shared public off-street parking lots to support retail and restaurants
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Emphasize link to the Brazos River ▪ Promote historical sites ▪ Create walking network with wayfinding and historical markers. ▪ Create park space around the courthouse to emphasize it as a center of downtown.
ENHANCE ARTS AND ENTERTAINMENT	▪ Due to historical significance and historical architecture, there are opportunities to make downtown Richmond a destination for arts and entertainment ▪ Program events to attract visitors

Strengthening Activity Centers

FORT BEND COUNTY COURTS

LAND AREA	CURRENT LAND USE
135 Acres	Civic Buildings

STRENGTHS

- Cluster of Fort Bend County activities
- Space for growth of court complex and related office space
- Brazos River access
- Location of historic Fort Settlement

Activity Center #5

STRATEGIES

MIXED USE DEVELOPMENT	
ENCOURAGE INDUSTRY CLUSTERS	▪ Develop complimentary office space ▪ Locate additional government facilities
INTEGRATE HIGHER DENSITY RESIDENTIAL	
IMPROVE WALKABILITY	▪ Improve walkability between buildings ▪ Develop new buildings to be pedestrian friendly
INCREASE MULTIMODAL ACCESS	▪ Support Richmond/Rosenberg Circulator and other transit opportunities ▪ Plan for future BRT stop
OPTIMIZE PARKING STRATEGIES	
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Emphasize historic location of Fort Settlement/Fort Bend ▪ Create connection to the Brazos River ▪ Develop the plaza in front of the Justice Center as civic gathering space.
ENHANCE ARTS AND ENTERTAINMENT	

BRAZOS TOWN CENTER - WHARTON JC

LAND AREA	CURRENT LAND USE
435 Acres	Commercial, Retail, and Residential

STRENGTHS

- Major retail tenants
- Located along US 59 and FM 762
- New Construction

Activity Center #11

STRATEGIES

MIXED USE DEVELOPMENT	▪ Strengthen links between retail and residential
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for retail growth and Wharton Junior College Expansion ▪ Continue develop of regional retail
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Increase multifamily near Wharton Junior College to attract students ▪ Improve pedestrian connections between multifamily and retail
IMPROVE WALKABILITY	▪ Improve walkability between all retail to decrease the need to drive from one retail location to another within Brazos Town Center ▪ Improve connections between residential and retail in Brazos Town Center
INCREASE MULTIMODAL ACCESS	▪ Develop stop locations for Richmond/Rosenberg circulator transit service. Stops should be convenient to retail.
OPTIMIZE PARKING STRATEGIES	▪ Master plan parking and access for the entire area, not parcel by parcel. Develop new retail to encourage parking once to visit multiple stores.
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Locate a new park in the Town Center area
ENHANCE ARTS AND ENTERTAINMENT	

Strengthening Activity Centers

GREAT WOOD AND RIVER PARK COMMERCIAL

LAND AREA	CURRENT LAND USE
170 Acres	Retail, Medical, and Vacant

STRENGTHS

- Located near Great Wood and Riverpark single-family residential developments
- Located at current terminus of US 99 at US 59
- Memorial Herman Sugar Land Hospital

Activity Center #12

STRATEGIES

MIXED USE DEVELOPMENT	▪ Encourage mixed use development in future development
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for expansion of Memorial Herman hospital and attract other medical offices
INTEGRATE HIGHER DENSITY RESIDENTIAL	
IMPROVE WALKABILITY	▪ Develop pedestrian links between hospital, retail, and adjoining residential areas.
INCREASE MULTIMODAL ACCESS	▪ Plan stop locations for future circulator.
OPTIMIZE PARKING STRATEGIES	
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Develop trail network through surrounding communities to tie into proposed Brazos River trail network
ENHANCE ARTS AND ENTERTAIN-MENT	

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Richmond**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Added Capacity	New Roadway Construction	7741	10th Street	Brazos River North Bank	US 90A	2020 RTP	Construct 2-Lane Concrete Divided W/ Curb & Gutter (In Sections)	2	4	City Of Richmond	1/1/2020	$10,939,400.00
Added Capacity	New Roadway Construction	7809	Lamar Drive	FM 1640	FM 2218	2016 TIP	Construct 4-Lane Roadway on New Location	0	4	City Of Richmond	1/1/2016	$366,376.00
Added Capacity	New Roadway Construction	15224	SH 99/Grand Parkway	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000.00
Traffic Engineering	Interchange Improvements	14247	SH 99	At US 59 S		2030 RTP	Construct 4 Direct Connectors (Toll) (Segment C)	2	2	FBCTRA	8/1/2017	$104,000,000.00
Traffic Engineering	Grade Separation	9637	US 90A	At West City Limits of Richmond	The Northern & Santa Fe Railroad	2021 RTP	Replace Railroad Underpass	4	4	TxDOT Houston District	8/1/2021	$41,483,000.00
Traffic Engineering	Grade Separation - RR	12855	FM 359	At US 90A and UP RR		2025 RTP	Railroad Grade Separation (Elevated T)	2	2	TxDOT Houston District	12/1/2024	$25,799,147.00
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 Ml, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000.00
Added Capacity	Roadway Widening	14711	FM 2759	US 59	FM 762/FM 2759 on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748.00
Added Capacity	Roadway Widening	12622	Harlem Rd	SH 99	US 90A	2020 RTP	Widen from 4 to 6 Lanes with Bridges	4	6	Fort Bend County	6/6/2020	$33,892,128.00
Added Capacity	Roadway Widening	14753	Harlem Rd	SH 99	Plantation Drive	2013 TIP	Reconstruct Existing 2-Lane to 4-Lane Curb & Gutter with Open Ditch Drainage.	2	4	Fort Bend County	4/1/2013	$5,948,800.00
Added Capacity	New Roadway Construction	15560	Mason Road	SH 99	Skinner Ln	2014 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2014	$6,500,000.00
Added Capacity	Roadway Widening	11658	Mason Rd	Skinner Ln	FM 359	2012 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2012	$4,000,000.00
Added Capacity	Roadway Widening	7740	Williams Way Blvd	Hillcrest Dr	Ransom Road	2013 TIP	Widen from 2-Lane to 4-Lane Divided Urban Section	2	4	Fort Bend County	1/1/2013	$8,334,000.00
Added Capacity	New Roadway Construction	7806	Williams Way Boulevard	US 59	FM 762	2016 TIP	Widen to 4-Lane Divided Roadway and Extend 4-Lane Divided Roadway in New Location	2	4	Fort Bend County	1/1/2016	$10,956,369.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Richmond**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
REMOVED FROM RTP												
Added Capacity	Roadway Widening	488	FM 359	FM 723	Farmer Road	RTP - SHORT	Widen from 2-Lane to 4-Lane Rural	2	4	TxDOT Houston District		$16,769,360.00
Added Capacity	Roadway Widening	12621	FM 359	FM 359	US 90A	RTP - LONG	Widen from 2 to 6-Lanes	2	6	TxDOT Houston District		$18,981,891.00
Added Capacity	Roadway Widening	982	FM 762	US 90A WB at Brazos River	FM 1640	RTP - LONG	Widen to 6-Lanes Divided	4	6	TxDOT Houston District		$5,396,900.00
Added Capacity	Roadway Widening	12812	FM 762	FM 1640	FM 2759	RTP - LONG	Widen from 2 to 6 Lanes (Intersections)	2	6	TxDOT Houston District		$33,450,464.00
Added Capacity	Roadway Widening	272	US 90A	Millie Street	FM 762	RTP - LONG	Reconstruct from 4 Lanes to 6-Lane Divided Curb and Gutter Section	4	6	TxDOT Houston District		$48,500,898.00
Added Capacity	Roadway Widening	10114	US 90A	LP 762	FM 359	RTP - LONG	Widen to 6 Lanes Divided (Phase 3 of 3)	4	6	TxDOT Houston District		$34,484,612.00
Added Capacity	Roadway Widening	10115	US 90A	FM 359	SH 99	RTP - LONG	Widen to 6 Lane Divided (Phase 2 of 3)	4	6	TxDOT Houston District		$72,751,298.00
System Preservation	Road Rehabilitation	11269	US 90A	US 90A WB at Brazos River		RTP - SHORT	Rehabilitate Bridge and Approaches			TxDOT Houston District		$7,622,424.00
PRIORITY PROJECT IDENTIFIED THROUGH FORT BEND SUBREGIONAL PLAN												
Added Capacity	New Roadway Construction		North 10th Street	South Bank of Brazos River	North Bank of Brazos River		Continue 10th Street construction/extension to cross the Brazos River and provide connections to Richmond ETJ north of the River.			TxDOT Houston District		$7,500,000 to $10,000,000

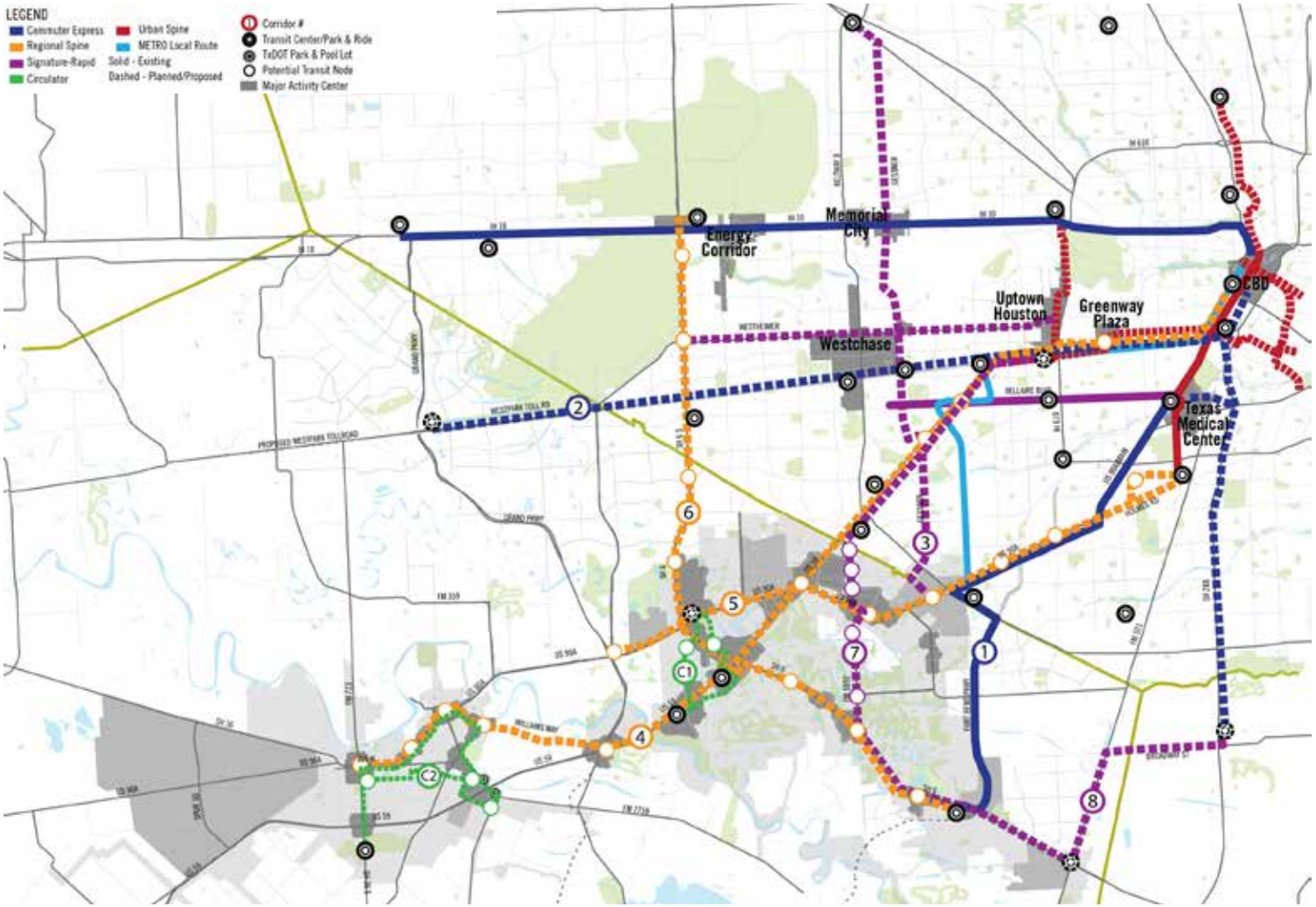
***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

ITS AND THOROUGHFARE PLANNING

The City of Richmond has expressed the development of a regional traffic management center to support the City in incident management and traffic operations as a priority.. While the city may not seek more than a small center or terminal to support these traffic operations, as Fort Bend County and other regional cities expand their efforts in these areas, Richmond should seek to partner to leverage these efforts.

Richmond should ensure coordination with Fort Bend County on its upcoming 2013 Thoroughfare Planning process to ensure key roadway segments are aligned and connectivity in the region is optimized.

Enhancing Multi-modal Transportation - Transit



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

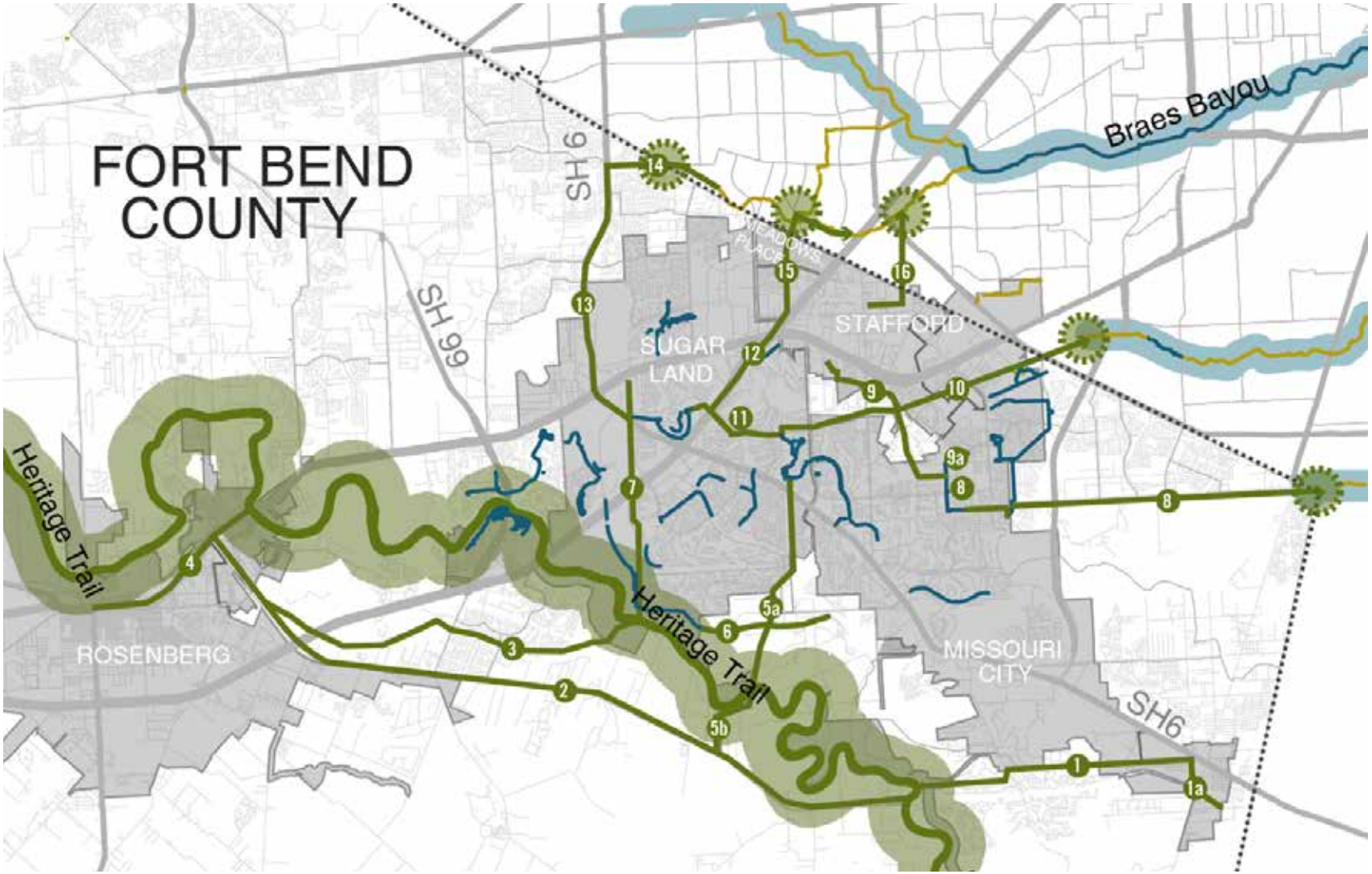
C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

	ROUTE	SERVICE TYPE	FROM	TO	LENGTH
4	US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles
C2	Richmond & Rosenberg Circulator *	Local Circulator	Connects Fort Bend Fairgrounds, Downtown Richmond, Downtown Rosenberg, and the Brazos Town Center		18 miles

*Cost estimates presented in Figure F1.1

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
2 FM 2759/FM 762 from the Brazos River to Richmond	15 miles	$11,880,000
3 Rabbs Bayou from FM 762 to the Brazos River	10 miles	$7,920,000
4 US 90A from downtown Richmond to downtown Rosenberg	3.7 miles	$2,930,400

*Cost estimates are for entire trail length

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
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- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
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- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

KEY ACTIONS FOR RICHMOND

- Review development standards to ensure desired development outcomes are achieved
- Focus on connectivity to link existing and new development with activity centers
- Embrace the Brazos River as an unique, attractive asset to development opportunities

CITY OF ROSENBERG

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

10 TAKEAWAYS ABOUT ROSENBERG

01 Between the 1980 to 2010 Censuses, population in **Rosenberg grew 1.8% per year** while overall **Fort Bend County grew 5.1%** over the same time period.

02 Total County population likely to **exceed 1 million residents** in the next 25 years.

03 The **annual sales tax growth rate** from 2000 to 2011 was **8.3%** with Sales Tax per capita going from **$197 to $363 per person**.

04 Current **average commute times** for Rosenberg residents is **estimated at 29 minutes** though traffic growth likely to cause travel times to spike and become more variable.

05 **61%** of Rosenberg's housing stock is **single-family homes**, with over **50%** of the housing stock being constructed **post-1980**.

06 Rosenberg is less ethnically diverse than greater Fort Bend County. The city population is **60% Hispanic**, **25% White**, and **13% Black**.

07 Rosenberg has lower economic levels that surrounding Fort Bend County, with **18%** of the population living **below the poverty rate** and the **median household income** being about **$43,000.**

08 **18%** of Rosenberg's residents have at least an **Associate's degree**. Overall **47% of Fort Bend County Residents** have similar level of education.

09 Rosenberg has over **440 acres** of **park land**, providing over **60%** of its residents with **close access** to green space.

10 Rosenberg has a number of cultural assets including the **Rosenberg Railroad Museum**, **Brazos Town Center**, **Seabourne Park** and **Historic Downtown**.

Strengthening Activity Centers

DOWNTOWN ROSENBERG

LAND AREA	CURRENT LAND USE
230 Acres	Commercial, Retail, and Residential

STRENGTHS

- Cultural Arts District
- Local identity and historic small town character
- Historical attractions including the Railroad Museum
- Brazos River nearby
- Grid roadway network
- Improvements to sidewalks
- Dining Options

Activity Center #2

STRATEGIES

MIXED USE DEVELOPMENT	▪ Utilize space above retail for either loft residential or opportunities for co-work spaces or business incubators
ENCOURAGE INDUSTRY CLUSTERS	▪ Encourage more local restaurants and entertainment ▪ Do joint marketing for restaurants, retail, and entertainment ▪ Encourage sidewalk cafes by converting parking spaces to allow for more space for outdoor seating and allow for alcohol consumption outside ▪ Determine uses of vacant retail spaces, for example business incubators ▪ Develop additional mixed use (ground floor retail with residential above) at a scale compatible with the existing downtown.
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Develop townhome residential, and multifamily (lofts) above new retail. ▪ Develop live-work spaces
IMPROVE WALKABILITY	▪ Expand sidewalk improvement projects near downtown Rosenberg ▪ Focus on intersection improvements and pedestrian amenities (e.g. street trees and benches)
INCREASE MULTIMODAL ACCESS	▪ Develop new transit center, integrated with new development, for local circulator and BRT. ▪ Define potential station locations for Richmond/Rosenberg Circulator ▪ Improve bicycle access across railroad tracks
OPTIMIZE PARKING STRATEGIES	▪ Expand on-street parking ▪ Build shared parking garages to serve entire downtown area to support retail and serve as park-and-ride.
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Improve connection to Brazos River ▪ Build downtown pocket parks and plazas
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue to develop Cultural Arts District ▪ Programing of events to attract visitors

90A/AVENUE H CORRIDOR

LAND AREA	CURRENT LAND USE
146 Acres	Commercial and Retail

STRENGTHS

- Highly traveled corridor
- Potential for new restaurants and redeployment
- Grid roadway network
- Between Rosenberg Historic Downtown and Richmond Historic Downtown
- Part of the West Fort Bend Management District

Activity Center #3

STRATEGIES

MIXED USE DEVELOPMENT	▪ Re-purpose existing buildings and excess parking ▪ Build new buildings that front onto 90A with parking behind
ENCOURAGE INDUSTRY CLUSTERS	▪ Develop potential light industrial clusters ▪ Encourage potential health care facilities to complement nearby Oak Bend Medical
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build higher density multifamily residential (townhouses or apartments) ▪ Preserve the scale of adjoining single-family neighborhoods.
IMPROVE WALKABILITY	▪ Create a management district overlay to install sidewalk requirements ▪ Ensure access management strategies along corridor encourage improvements to walkability ▪ Add safe pedestrian crossings of 90A
INCREASE MULTIMODAL ACCESS	▪ Support access management strategies to improve operations of 90A as well as emphasize transit and bicycle access ▪ Support development of Richmond/Rosenberg Circulator and identify potential station location ▪ Design for future BRT stop.
OPTIMIZE PARKING STRATEGIES	▪ Develop shared parking strategies to reduce amount of excess parking spaces
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Re-purpose excess land to create park space
ENHANCE ARTS AND ENTERTAINMENT	▪ Improve links to downtown Rosenberg and downtown Richmond

Strengthening Activity Centers

US 59 AT SH 36

LAND AREA	CURRENT LAND USE
165 Acres	Retail and some single-family residential

STRENGTHS

- Intersection of two major corridors in Fort Bend: US 59 and SH 36
- Near Seabourne Creek Nature Park
- North of Fort Bend County Fairgrounds

Activity Center #9

STRATEGIES

MIXED USE DEVELOPMENT	▪ Develop master plan for the site to attract potential development
ENCOURAGE INDUSTRY CLUSTERS	
INTEGRATE HIGHER DENSITY RESIDENTIAL	
IMPROVE WALKABILITY	▪ Plan for the area to have strong connections to and from the park to future development
INCREASE MULTIMODAL ACCESS	▪ Improve connections to Park and Ride located at Fort Bend Fairgrounds
OPTIMIZE PARKING STRATEGIES	
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Improve links to and between the Rosenberg Civic Center and Seabourne Park
ENHANCE ARTS AND ENTERTAINMENT	

BRAZOS TOWN CENTER - WHARTON COUNTY JUNIOR COLLEGE

LAND AREA	CURRENT LAND USE
435 Acres	Commercial, Retail, and Residential

STRENGTHS

- Major retail tenants
- Located along US 59 and FM 762
- New Construction

Activity Center #11

STRATEGIES

MIXED USE DEVELOPMENT	▪ Strengthen links between retail and residential
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for retail growth and Wharton Junior College Expansion ▪ Continue develop of regional retail
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Increase multifamily near Wharton Junior College to attract students ▪ Improve pedestrian connections between multifamily and retail
IMPROVE WALKABILITY	▪ Improve walkability between all retail to decrease the need to drive from one retail location to another within Brazos Town Center ▪ Improve connections between residential and retail in Brazos Town Center
INCREASE MULTIMODAL ACCESS	▪ Develop stop locations for Richmond/Rosenberg circulator transit service. Stops should be convenient to retail.
OPTIMIZE PARKING STRATEGIES	▪ Master plan parking and access for the entire area, not parcel by parcel. Develop new retail to encourage parking once to visit multiple stores.
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Locate a new park in the Town Center area
ENHANCE ARTS AND ENTERTAINMENT	

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Rosenberg**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Added Capacity	Roadway Widening	13747	Benton Road	FM 762	Meyers Road	2017 RTP	Reconstruct Existing 2-Lane Rural Roadway to 4-Lane Curb & Gutter Boulevard with Storm Sewer	2	4	City Of Rosenberg	1/1/2017	$1,345,706.00
Added Capacity	Roadway Widening	13748	Bryan Road	FM 2218	Spacek Street	2012 TIP	Reconstruct Existing 2-Lane Rural Roadway to 3-Lane Curb & Gutter with Storm Sewer	2	3	City Of Rosenberg	6/1/2012	$1,695,124.00
Added Capacity	New Roadway Construction	266	SH 99/Grand Parkway	FM 762	Brazoria County Line	2017 RTP	Seg C-2: Construct 4-Lane Tollway with Non-Continuous Two 2-Lane Frontage Roads and Interchanges	0	4	FBCTRA	3/1/2017	$279,800,000.00
Added Capacity	New Roadway Construction	10128	SH 99/Grand Parkway	US 59	FM 762	2017 RTP	Seg C-1: Construct 4-Lane Tollway With Non-Continuous Two 2-Lane Frontage Roads And Interchanges	0	4	FBCTRA	1/1/2017	$217,600,000.00
Added Capacity	Roadway Widening	14711	FM 2759	US 59	FM 762/FM 2759 on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748.00
Added Capacity	Roadway Widening	14710	FM 762	FM 762/FM 2759	South of LCISD School on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748.00
Added Capacity	New Roadway Construction	464	Spur 10	Waller County Line	SH 36	2018 RTP	Extension of 2-Lane Roadway	0	2	Fort Bend County	1/1/2020	$14,317,318.00
Traffic Engineering	Grade Separation	15382	FM 2759	1000FT N of Sansbury Boulevard to 1000FT S	1000Ft N of BNSF RR to 1000Ft S	2019 RTP	Phase 2: Construct 4-Lane Underpass of Crabb River Road @ Sansbury Blvd and Elevated Intersection of Crabb River Road and Thompson's Highway Over BNSF RR	4	4	Fort Bend County	4/1/2019	$30,918,888.00
Traffic Engineering	New Roadway Construction	15559	FM 1640	Spur 529	Millie Street	2015 TIP	EB One-Way Pair, Criss-Cross, Intersections And 1.5" Overlay	4	4	TxDOT Houston District	3/1/2015	$2,068,000.00
Added Capacity	Roadway Widening	803	FM 762	US 59	Crabb River Road	2034 RTP	Widen 2-Lane to 4-Lane Divided Suburban Arterial	2	4	TxDOT Houston District	9/1/2033	$57,491,183.00
Traffic Engineering	Intersection Improvements	15422	FM 2977	EB at Fairchilds Longpoint/FM 361	NB at Bryan and NB at Koeblen	2012 TIP	Install Left Turn Lanes	2	2	TxDOT Houston District	8/1/2012	$939,900.00
Added Capacity	New Roadway Construction	15572	Spur 529	FM 1640	US 90A	2017 RTP	Realign and Widen to 4 Lanes	2	4	TxDOT Houston District	9/1/2016	$1,919,000.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
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REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Rosenberg**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	6051	US 59 S	W of SP 10	West of Hamlick Road	2031 RTP	Widen to 6-Main Lanes, Grade Separations, 2-Lane Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$100,582,927.00
Added Capacity	Roadway Widening	6052	US 59 S	W of FM 360	West of Hamlick Road	2032 RTP	Widen to 6 Main Lanes, W/ 2-Lane Frontage Roads, Grade Separations, ITS &TMS	4	6	TxDOT Houston District	9/1/2031	$157,035,324.00
Added Capacity	Roadway Widening	6053	US 59 S	W of Darst Road	W of FM 360	2031 RTP	Widen to 6-Mainlane Freeway W/ 2-Lane Frontage Roads, Grade Separations, ITS & TMS	4	6	TxDOT Houston District	9/1/2030	$139,952,507.00
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 MI, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000.00
Added Capacity	Roadway Widening	6049	US 59 S	W of SH 36	W of FM 762	2018 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS & TMS with Grade Separation	4	6	TxDOT Houston District	9/1/2017	$173,254,000.00
Added Capacity	New Roadway Construction	15558	US 90A	Spur 529	Millie Street	2015 LET	WB One-way Pair, Criss-cross, Intersections and 1.5" Overlay	4	4	TxDOT Houston District	3/1/2015	$2,620,000.00
Added Capacity	Roadway Widening	6050	US 59 S	W of SP 10	W of SH 36	2031 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$285,238,958.00
Traffic Engineering	Grade Separation	9430	SH 36	At UP RR in Rosenberg		2017 RTP	Replace Railroad Underpass	2	2	TxDOT Houston District	9/1/2016	$18,510,000.00
Traffic Engineering	Grade Separation	6088	US 90A	At UP RR in Rosenberg		2017 RTP	Replace Railroad Underpass	4	4	TxDOT Houston District	9/1/2016	$41,019,000.00
REMOVED FROM RTP												
Added Capacity	Roadway Widening	13	FM 2218	US 59	SH 36	RTP-SHORT	Widen from 2 Lanes to 4-Lane Divided	2	4	TxDOT Houston District		$16,000,000.00
Added Capacity	Roadway Widening	12741	FM 2218	SH 36	US 59	RTP - LONG	Widen from 2 to 6 Lanes	2	6	TxDOT Houston District		$33,003,465.00
Added Capacity	New Roadway Construction	13507	FM 2759	0.1 MI South of US 59	0.9 MI S of US 59	RTP-SHORT	Construct 2 3-Lane Frontage Roads with Concrete Box Culvert at Middle Bayou (Phase 1)			TxDOT Houston District		$5,500,000.00
Added Capacity	Roadway Widening	12745	FM 2759	FM 762	Smithers Lake Road	RTP - LONG	Widen from 2 to 6-Lanes with Bridges	2	6	TxDOT Houston District		$65,538,048.00
Added Capacity	Roadway Widening	12743	FM 2977	FM 361	FM 762	RTP - LONG	Widen from 2 to 6-Lanes with Bridges	2	6	TxDOT Houston District		$35,086,375.00
Added Capacity	Roadway Widening	12740	FM 360	US 59	SH 36	RTP - LONG	Widen from 2 to 4 lanes	2	4	TxDOT Houston District		$37,643,770.00
Added Capacity	Roadway Widening	981	FM 723	FM 1093	N of Brazos River	RTP - LONG	Widen to 4-lane divided rural	2	4	TxDOT Houston District		$31,131,000.00
Added Capacity	Roadway Widening	12620	FM 723	FM 359	US 90A	RTP-SHORT	Wide from 2 to 6 Lanes with Bridge	2	6	TxDOT Houston District		$45,491,048.00
Added Capacity	Roadway Widening	983	FM 762	S of LCISD School on Crabb River Road	FM 1994	RTP - LONG	Widen to 4-lane divided rural	2	4	TxDOT Houston District		$14,940,199.00

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REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Rosenberg**, continued

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Added Capacity	Roadway Widening	7750	SH 36	Austin County Line	SP 529 in Rosenberg	RTP - LONG	Widen existing pavement to 4-lane divided rural	2	4	TxDOT Houston District		$216,473,792.00
Added Capacity	Roadway Widening	263	SH 36	US 59	FM 2218	RTP - LONG	Widen to 4-lane divided rural	2	4	TxDOT Houston District		$30,242,760.00
Added Capacity	Roadway Widening	262	SH 36	0.45 MI N OF FM 2218	0.284 MI S of Needvlle Farichilds	RTP - SHORT	Widen to 4-lane divided rural with Grade Separation	2	4	TxDOT Houston District		$84,590,212.00
Added Capacity	Roadway Widening	261	SP 10	SH 36	US 59	2008 TIP	Widen to 4-lane Divided Roadway	2	4	TxDOT Houston District		$9,838,000.00
Added Capacity	Roadway Widening	9695	SP 10	US 59	SH 36	RTP - SHORT	Widen to 4-lane divided rural facility (phase 2)	2	4	TxDOT Houston District		$26,792,422.00
Added Capacity	Roadway Widening	12619	US 90A	Wharton County Line	SH 36	RTP - SHORT	Widen from 2 to 4-lanes with Bridges	2	4	TxDOT Houston District		$167,461,737.00

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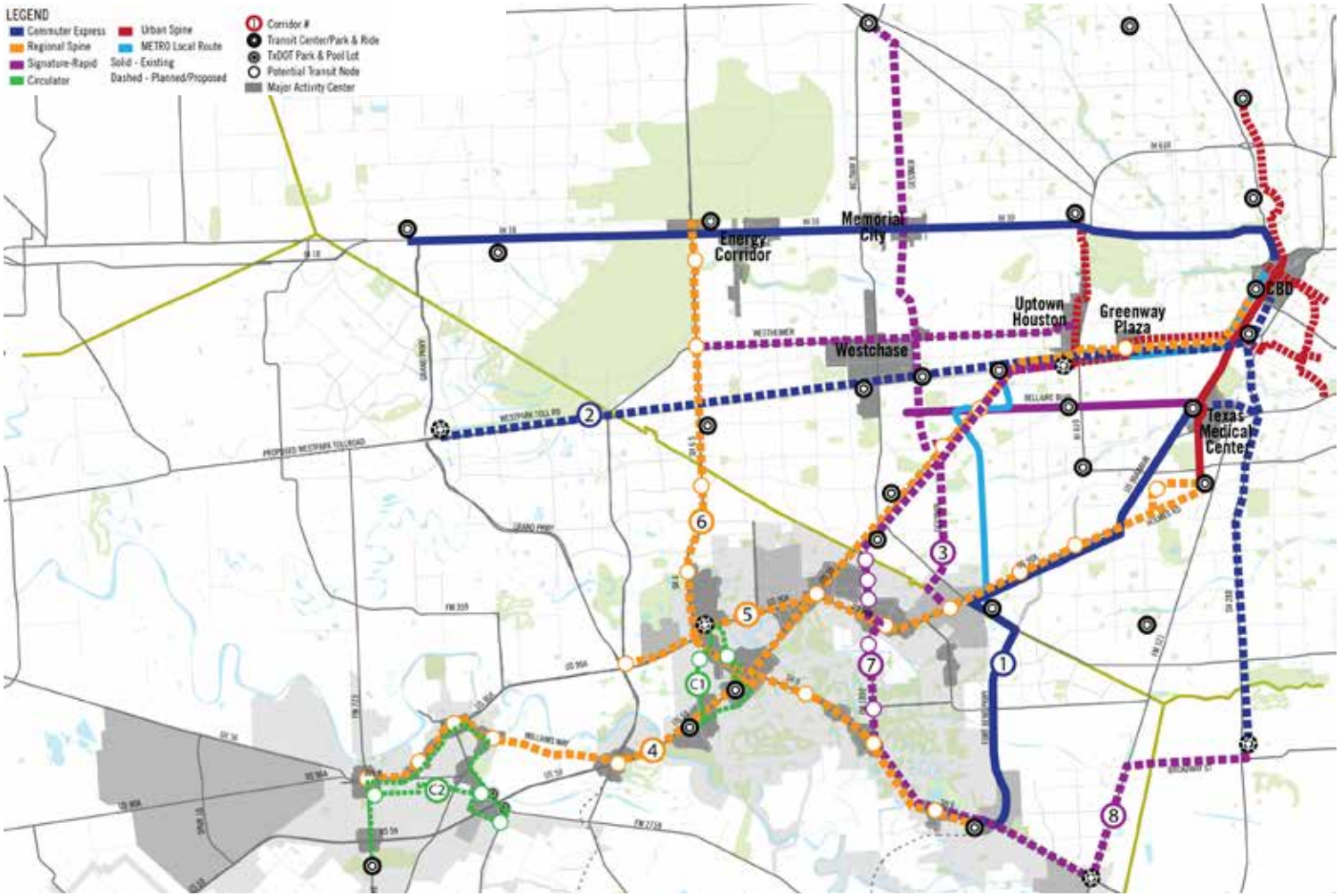
Rosenberg should ensure coordination with Fort Bend County on its upcoming 2013 Thoroughfare Planning process to ensure key roadway segments are aligned and connectivity in the region is optimized. This is particularly critical in the ETJ areas of Rosenberg where future development is likely to request variances for proposed thoroughfare plans.

Enhancing Multi-modal Transportation - Transit



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C2 Richmond - Rosenberg Circulator

ROUTE	SERVICE TYPE	FROM	TO	LENGTH
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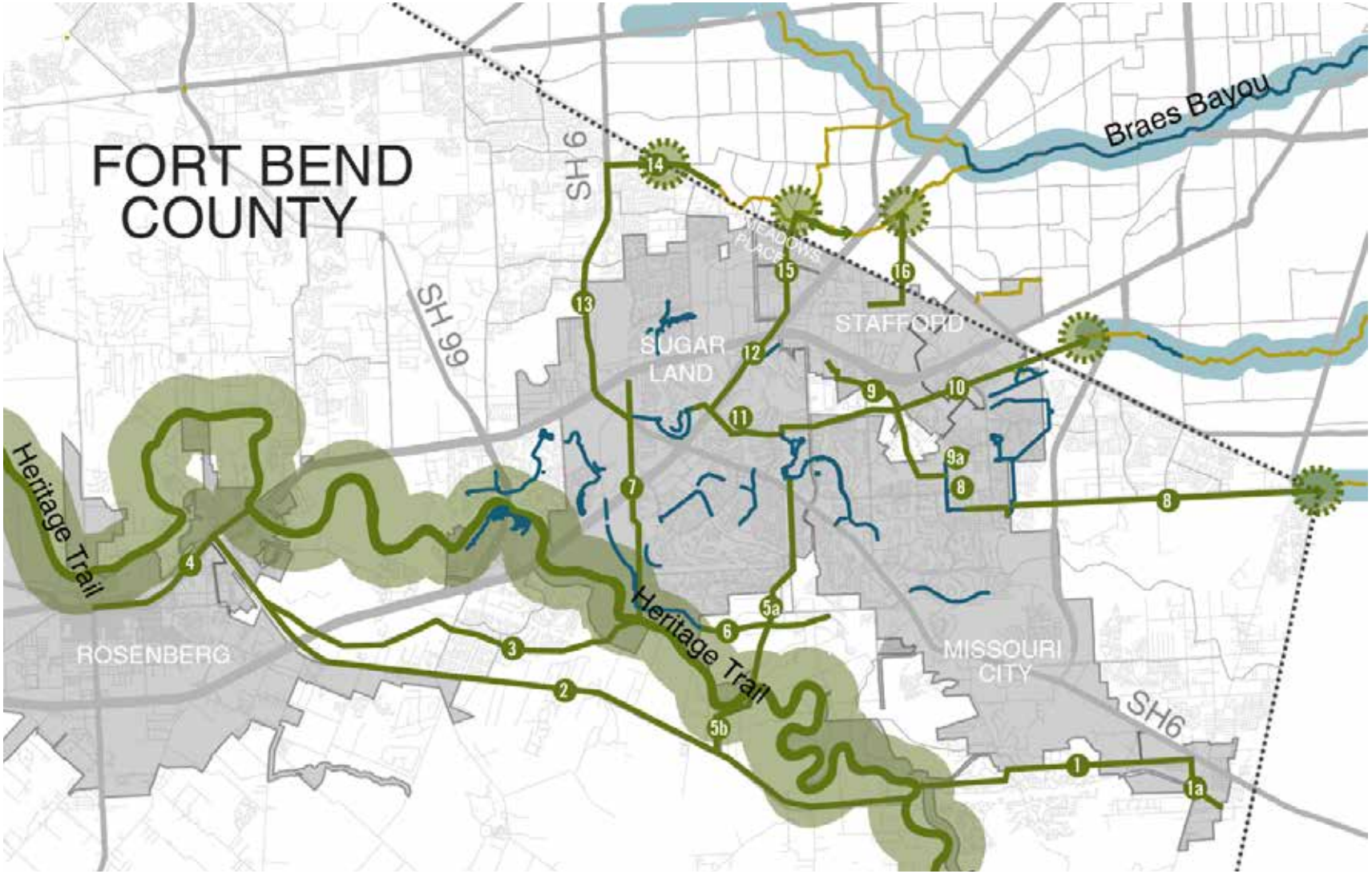
*Cost estimates presented in Figure F1.1

EXISTING TRANSIT PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT/DESCRIPTION	PROJECT STATUS	SPONSOR	COST
Construct Transit O&M Facility adjacent to the Fort Bend County Fairgrounds P&R to Support Express Bus, Vanpool, Circulator, Connector, & Social Services Vehicles Operations [MPOID 11540]	2015 TIP	Fort Bend County	$3,000,000

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
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Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
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- Include amenities (park space, community centers, hike and bike trails)
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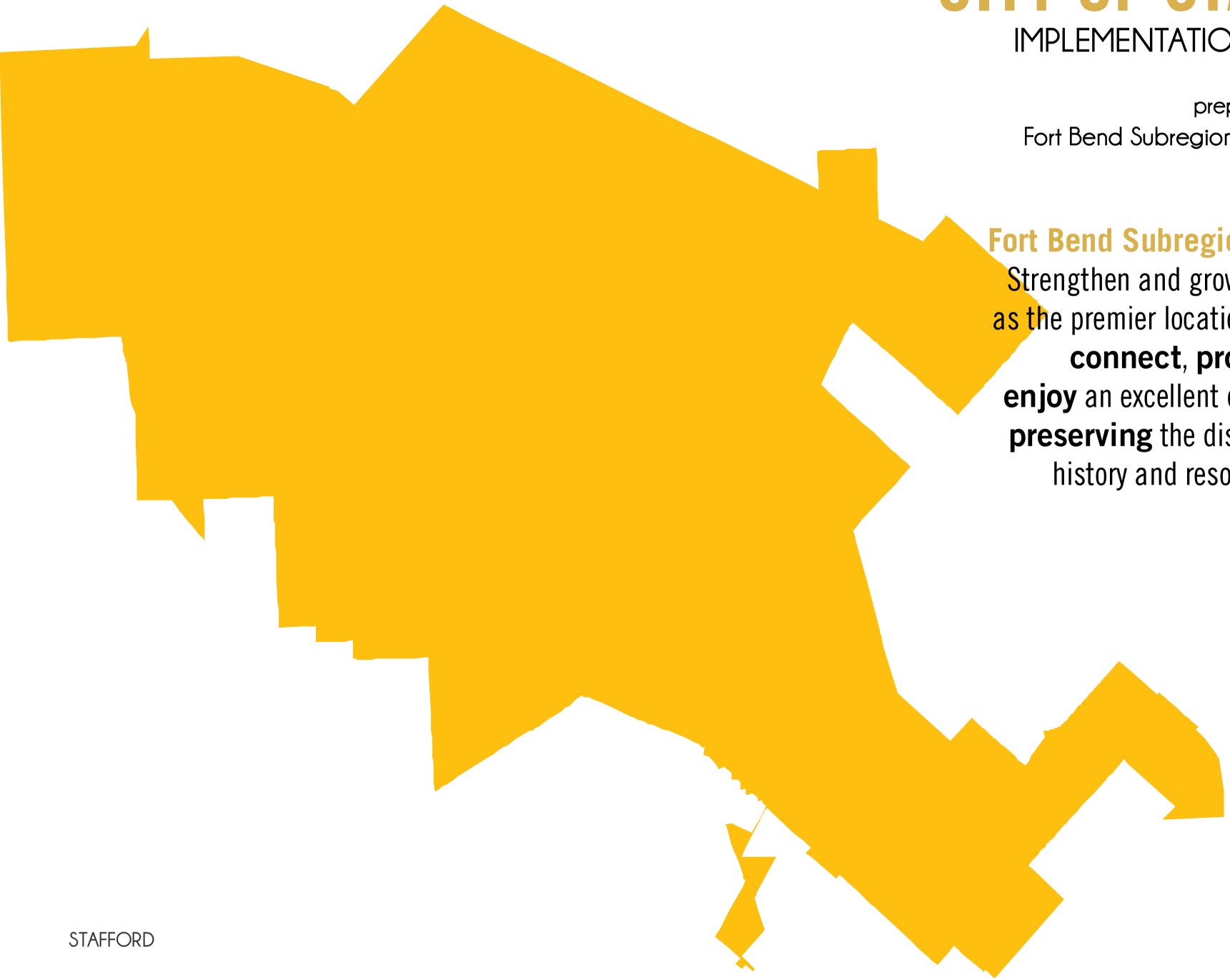
KEY ACTIONS FOR ROSENBERG

- Review development standards to ensure desired development outcomes are achieved, including partnership with West Fort Bend Management District)
- Focus on connectivity to link existing and new development with activity centers including Brazos Town Center and Historic Downtown
- Support and potential incent redevelopment of aging commercial properties
- Embrace the Brazos River as an unique, attractive asset to development opportunities

CITY OF STAFFORD

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative



Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

10 TAKEAWAYS ABOUT STAFFORD

01 Between the 1980 to 2010, population in **Stafford grew 4.5% per year**; overall **Fort Bend County grew 5.1%**.

02 Total Fort Bend County population likely to **exceed 1 million residents** in the next 25 years.

03 The **annual sales tax growth rate** from 2000 to 2011 was **1.1%** with Sales Tax per capita declining from **$767/person to $728/person**.

04 Current **average commute times** for Stafford residents is **estimated at 28 minutes** though growth is likely increase congestion.

05 **53%** of Stafford's housing stock is **single-family homes**, with over **90%** of the housing stock being constructed **post-1970**.

06 Stafford continues to see high ethnic diversity. Currently the population is **27% Black**, **26% Hispanic**, **23% Asian** and **22% White**.

07 Stafford has a financially stable community, with **91%** of the population living **above the poverty rate** and the **median household income** being over **$60,000.**

08 Stafford has lower educated attainment than the region, **43%** of residents have at least an **Associate's degree** vs. **47% of Fort Bend County residents**.

09 Stafford has over **48 acres** of **park land**, and over **60%** of its residents have **close access** to green space.

10 Stafford has a number of cultural assets contributing to its high quality of life including a **Houston Community College** campus, **The Fountains**, and the **Stafford Centre**.

Strengthening Activity Centers

US 59 AT US 90A - THE FOUNTAINS

LAND AREA	CURRENT LAND USE
924 Acres	Commercial, Retail, and Light Industrial

STRENGTHS

- The TI Site will soon be sold and is an opportunity for the city of Stafford for redevelopment
- Access to US 59 and FM 1092
- Industry cluster of specialized technological manufacturing

Activity Center #15

STRATEGIES

MIXED USE DEVELOPMENT	▪ Master plan the TI Site as mixed use for continued growth in Stafford
ENCOURAGE INDUSTRY CLUSTERS	▪ Include office space in new development to support Stafford's strengths in manufacturing and distribution
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Create more rooftops to support expanded commercial development through higher density residential
IMPROVE WALKABILITY	▪ Improve pedestrian access between sites within the node and along FM 1092 and across US 59
INCREASE MULTIMODAL ACCESS	▪ Plan for future transit along US 59 and FM 1092
OPTIMIZE PARKING STRATEGIES	▪ Plan new development around shared parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Include new park in the development
ENHANCE ARTS AND ENTERTAINMENT	

STAFFORD ISLAND DISTRICT - HOUSTON COMMUNITY COLLEGE

LAND AREA	CURRENT LAND USE
625 Acres	Commercial, Retail, and Light Industrial

STRENGTHS

- Proximity of Stafford Center to HCC Campus as well as green space and vacant lots around both complexes to all for expansion
- Major Destinations: Houston Community College - Stafford, Stafford City Hall, Houston Community College Fine Arts and Speech Campus, Stafford Centre

Activity Center #16

STRATEGIES

MIXED USE DEVELOPMENT	
ENCOURAGE INDUSTRY CLUSTERS	
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Develop more rooftops to support continued commercial development in Stafford
IMPROVE WALKABILITY	▪ Allow for easy access for pedestrian between the Island District, HCC, the Stafford Centre, and other prime destinations
INCREASE MULTIMODAL ACCESS	▪ Improve transit access along US 90A and FM 1092
OPTIMIZE PARKING STRATEGIES	▪ Design around shared parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Identify park location near Stafford Centre and HCC
ENHANCE ARTS AND ENTERTAINMENT	▪ Improves access to and the visibility of the Stafford Centre ▪ Seek complementary development to the Stafford Centre

Strengthening Activity Centers

SH 6 COMMERCIAL

LAND AREA	CURRENT LAND USE
270 Acres	Commercial, Retail, Multifamily ,and Vacant

STRENGTHS

- New HCC campus and Library
- Master planned community with growth potential
- SH 6 access
- Fort Bend Parkway access

Activity Center #20

STRATEGIES

MIXED USE DEVELOPMENT	▪ Create new mixed use town center
ENCOURAGE INDUSTRY CLUSTERS	▪ Build on existing retail to create a retail hub
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build new high density residential within walking distance of transit hub
IMPROVE WALKABILITY	▪ Create better connections between residential and retail and commercial areas ▪ Add new connections across SH 6
INCREASE MULTIMODAL ACCESS	▪ With the future permanent Missouri City Park and Ride, encourage Transit Oriented Development near the Park and Ride
OPTIMIZE PARKING STRATEGIES	▪ Plan new development around shared use parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Enhance access to existing parks and green space ▪ Add new parks and plazas in new developments ▪ Use green space to create a buffer between the Fort Bend Parkway and new development
ENHANCE ARTS AND ENTERTAINMENT	▪ Include arts organizations in new development.

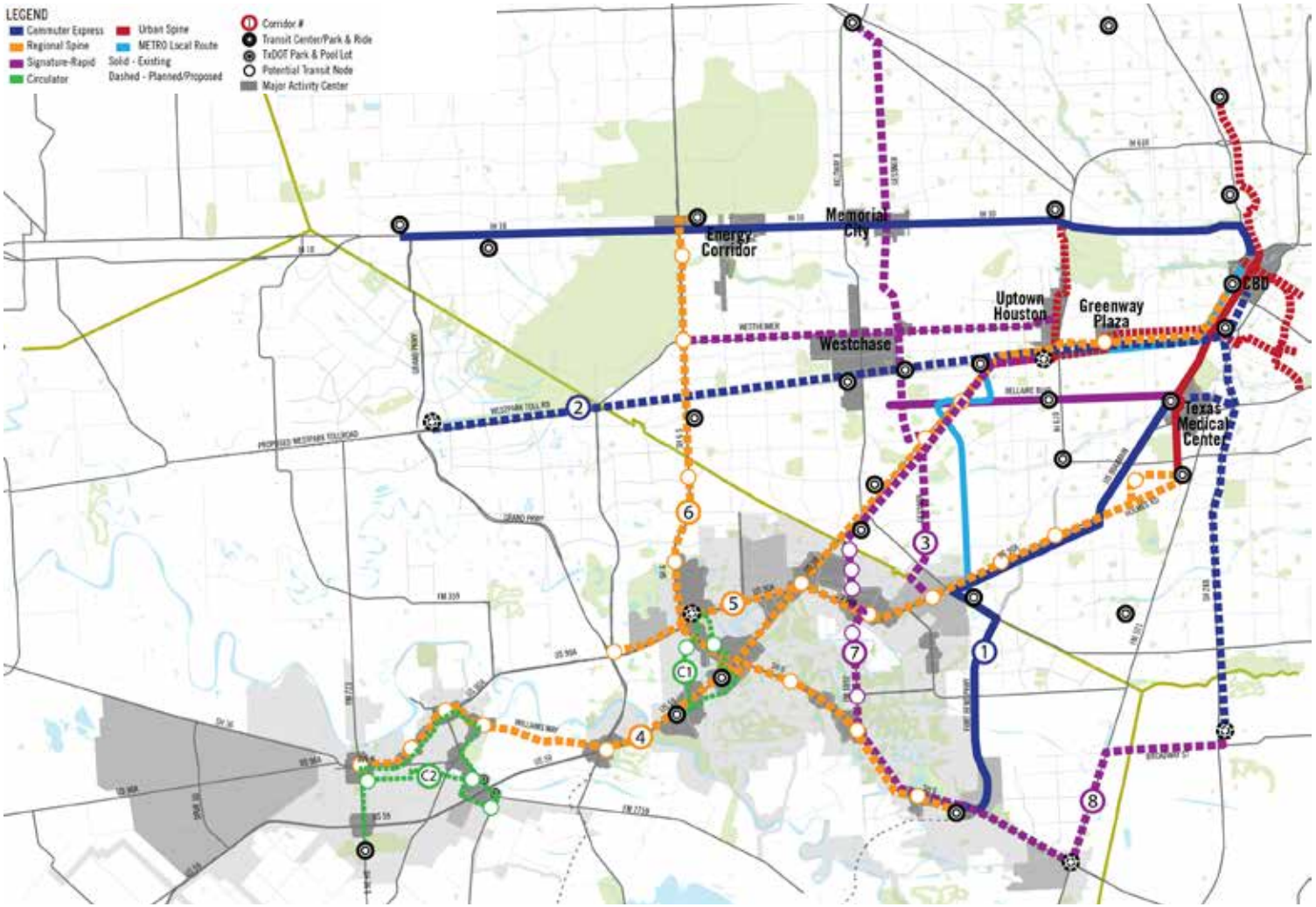
Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Stafford**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Access Management Improvements		15418	FM 1092	Missouri City City Limit	Hampton Drive	2014 TIP	Construction Of Access Management (Medians) Consisting Of Grading, Drainage, Signing, and Pavement Markings	4	4	City Of Missouri City	10/1/2013	$1,859,949.00
Added Capacity	New Roadway Construction	13586	Cash Road	Trinity Road	Kirkwood Road at Wright Road	2013 TIP	Construct New 4-Lane Concrete Blvd from Existing Termini at Trinity Rd to Kirkwood, Includes Intersection Modifications on Kirkwood	0	4	City Of Stafford	9/1/2012	$1,076,411.00
Added Capacity	Roadway Widening	13585	Brand Lane	US 90A	Avenue E	2013 TIP	Widen 2-Lane Asphalt Roadway to a 4-Lane Concrete Undivided Roadway with Underground Storm Sewer	2	4	Fort Bend County	8/1/2013	$3,500,000.00
Added Capacity	Roadway Widening	10005	Staffordshire Rd	5th Street	Lexington Blvd/ Scanlin Rd	2013 TIP	Widen 2-Lane Roadway to 4-Lane Blvd Section with Curb And Gutter	2	4	City Of Stafford	8/1/2013	$3,930,576.00
Added Capacity	Roadway Widening	10005	Staffordshire Rd	5th Street	Lexington Blvd/ Scanlin Rd	2013 TIP	Widen 2-Lane Roadway to 4-Lane Blvd Section with Curb And Gutter	2	4	City Of Stafford	8/1/2013	$3,930,576.00
Added Capacity	Roadway Widening	13642	FM 1092/Murphy Road	Lexington Blvd	Cartwright Road	2020 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts	4	6	City Of Missouri City	1/1/2020	$10,100,000.00
Added Capacity	Roadway Widening	13643	FM 1092/Murphy Road	Cartwright Rd	SH 6	2022 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts and Bridge Widening	4	6	City Of Missouri City	1/1/2020	$9,914,231.00
Traffic Engineering	Intersection Improvements	13721	Murphy Road/FM 1092	At 5th Street		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$403,015.00
Traffic Engineering	Intersection Improvements	13724	Murphy Road/FM 1092	At El Dorado Boulevard		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$393,070.00
Traffic Engineering	Intersection Improvements	13730	Murphy Road/FM 1092	At Hampton Drive		2015 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$383,371.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

Enhancing Multi-modal Transportation - Transit



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

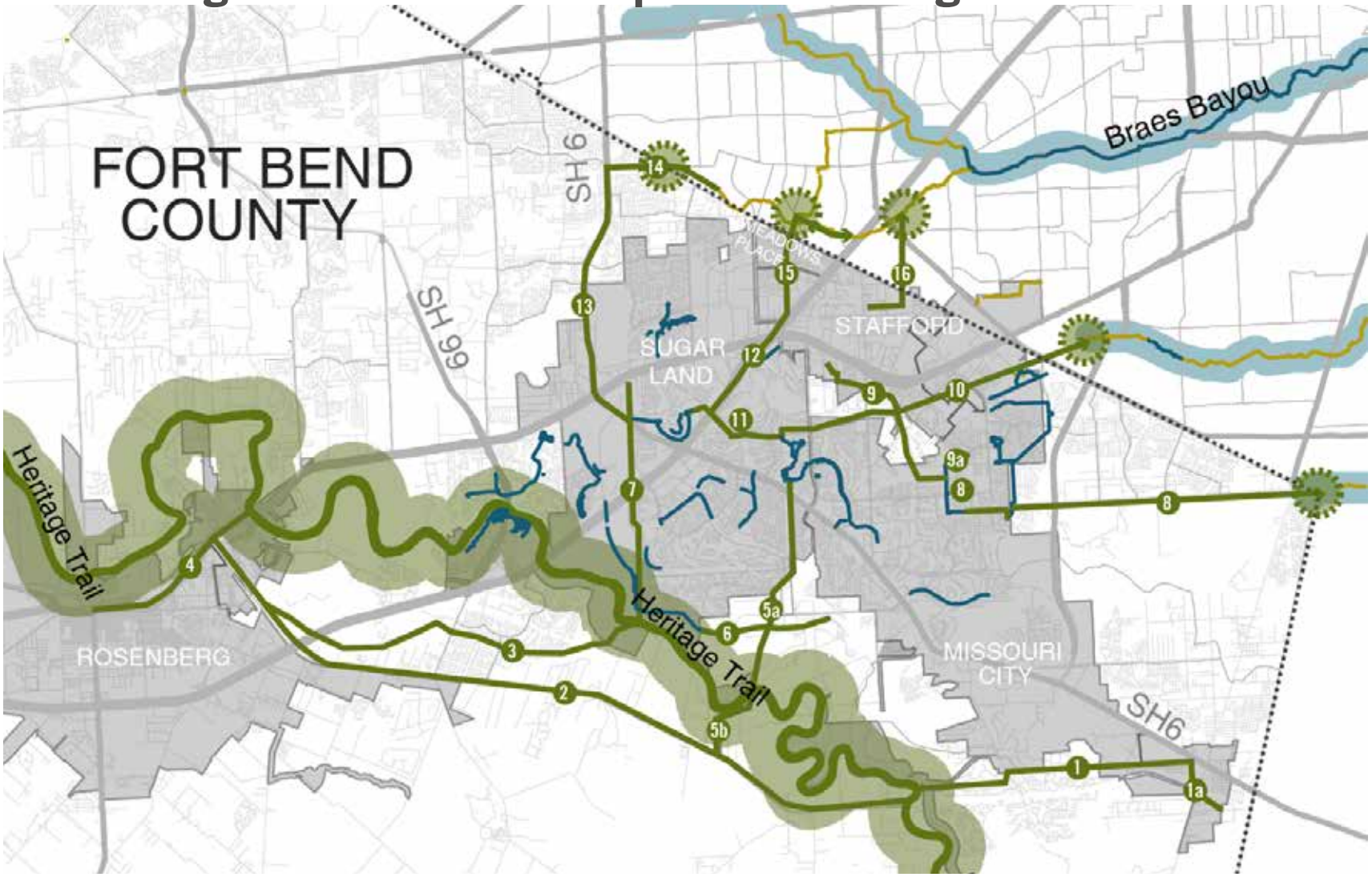
C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

ROUTE	SERVICE TYPE	FROM	TO	LENGTH
4 US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles
5 US 90A*	Regional Spine	US 90A at SH 99/Grand Parkway	Fannin South Park & Ride	19 miles
7 SH 6/FM 1092/US 59*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Uptown Park & Ride	21 miles

*Cost estimates presented in Figure F1.1

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
9 Drainage Corridor from Stafford to Missouri City	4 miles	$3,168,000
10 Utility Corridor from Sims Bayou to Sugar Land	5.9 miles	$4,672,800
12 US 59 from Oyster Creek to the Meadows Place/Sugar Land Utility Corridor	2.3 miles	$1,821,600
15 Meadows Place/Sugar Land Utility Corridor from US 59 to Keegans Bayou	1.9 miles	$1,504,800
16 Drainage Corridor from Stafford to Keegans Bayou	2.0 miles	$1,584,000

*Cost estimates are for entire trail length

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

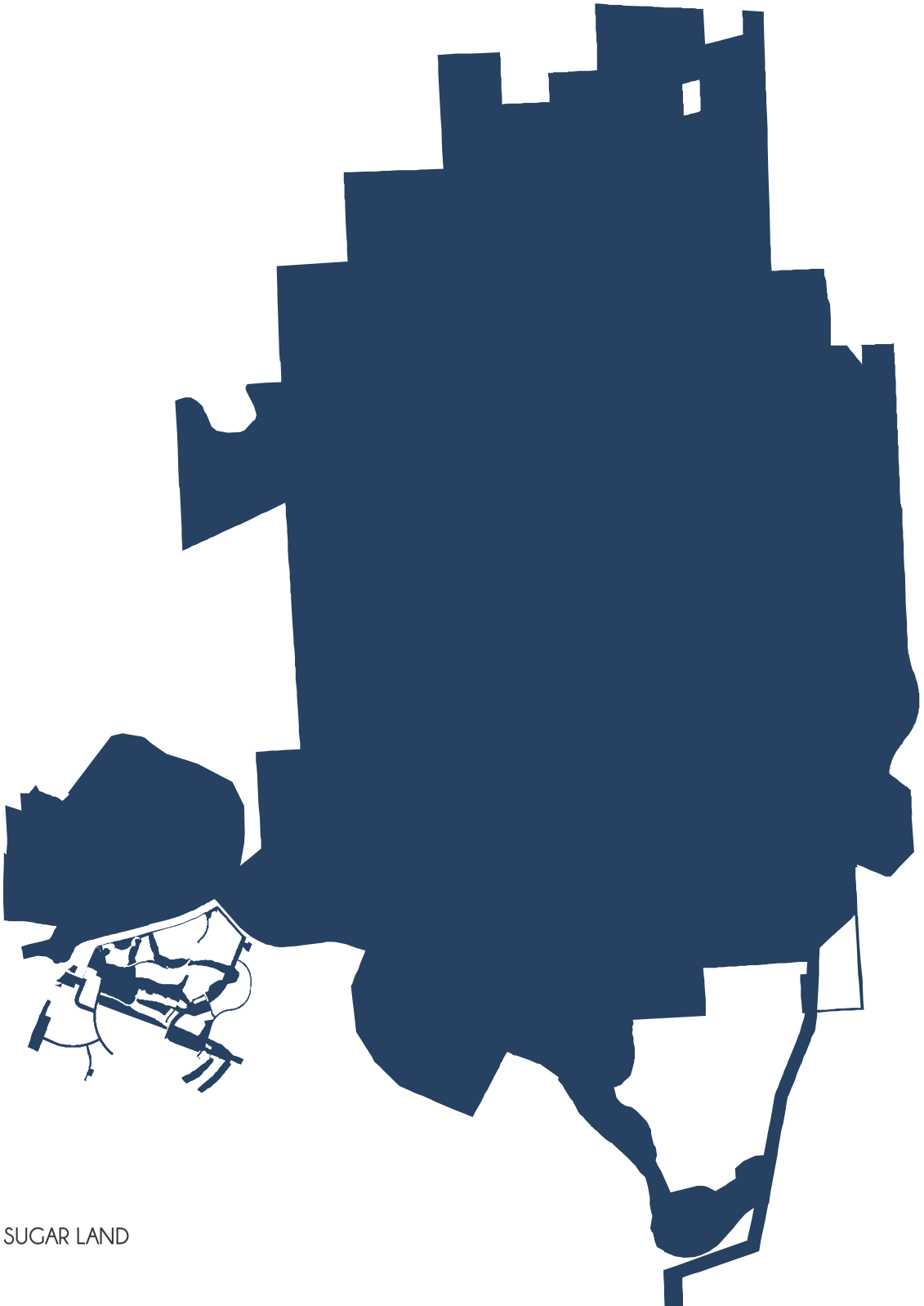
What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

KEY ACTIONS FOR STAFFORD

- Review development standards and land use regulations to ensure desired development outcomes are achieved
- Consider increased residential options to support new/redevelopment of commercial sites
- Integrate multi-modal connectivity into development strategies with focus on connections to educational facilities



CITY OF SUGAR LAND

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

FORT BEND SUBREGIONAL PLAN - 10 TAKEAWAYS ABOUT THE CITY OF SUGAR LAND

01 Between the 1980 to 2010, population in **Sugar Land grew 7.6% per year** while overall **Fort Bend County grew 5.1%**.

02 Overall projections for Fort Bend County show **continued population growth of 2-3%** with the majority of growth coming from outside the study area.

03 The **annual sales tax growth rate** of the City, from 2000 to 2011 was **5.6%** with sales tax revenue per capita increasing from **$348/person to $478/person.**

04 Current **average commute times** for Sugar Land residents **estimated at 30 minutes** though traffic growth likely to cause travel times to spike and become more variable.

05 **89%** of Sugar Land's housing stock is **single-family homes**, with over **80%** of the housing stock being constructed **post-1980**.

06 Consistent with the greater Fort Bend County, Sugar Land continues to see significant ethnic diversity. Currently the population is **44% White, 35% Asian**, **11% Hispanic**, and **7% Black**.

07 Sugar Land is a relatively affluent community, with **97%** of the population living **above the poverty rate** and a **median household income** over **$101,000**.

08 Sugar Land has a highly educated population, **62%** of whom have at least an **Associate's degree**. **47% of Fort Bend County Residents** have a similar level of education.

09 Sugar Land has over **1,285 acres** of **park land**, providing over **70%** of its residents with **close access** to green space.

10 Sugar Land has a number of cultural assets including the **Sugar Land Town Square**, **Constellation Field**, and the **University of Houston** campus.

Strengthening Activity Centers

IMPERIAL DEVELOPMENT

LAND AREA	CURRENT LAND USE
745	Vacant, Commercial, Industrial

STRENGTHS

- New development with existing opportunities
- Future location of Children's Museum of Houston Discovery Center
- Located at intersection of two major corridors in Fort Bend County: US 90A and SH 6
- Constellation Field has become a center of Sugar Land and Fort Bend Activity

Activity Center #7

STRATEGIES

MIXED USE DEVELOPMENT	▪ Support ongoing mixed use development at Imperial
ENCOURAGE INDUSTRY CLUSTERS	▪ Encourage development business park districts at Imperial
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Build multifamily as planned
IMPROVE WALKABILITY	▪ Improve walkable connections to surrounding development as well as within Imperial ▪ Improve pedestrian connections across 90A
INCREASE MULTIMODAL ACCESS	▪ Strengthen links to the other nodes within Sugar Land and Fort Bend County through bicycle routes and transit routes ▪ Improve bicycle connections across 90A
OPTIMIZE PARKING STRATEGIES	▪ Use ballpark parking for other purposes
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Strengthen connections to Oyster Creek and Gannoway Lake Park
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue to develop programs and events at Constellation Field and other sites to make Imperial a center of local activity

GREATWOOD AND RIVERPARK COMMERCIAL

LAND AREA	CURRENT LAND USE
170 Acres	Retail, Medical, and Vacant

STRENGTHS

- Located near Greatwood and Riverpark single-family residential developments
- Located at current terminus of US 99 at US 59
- Memorial Hermann Sugar Land Hospital

Activity Center #12

STRATEGIES

MIXED USE DEVELOPMENT	▪ Encourage mixed use development in future development
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for expansion of Memorial Hermann Hospital and attract other medical offices
INTEGRATE HIGHER DENSITY RESIDENTIAL	
IMPROVE WALKABILITY	▪ Develop pedestrian links between hospital, retail, and adjoining residential areas.
INCREASE MULTIMODAL ACCESS	▪ Plan stop locations for future regional spine transit service
OPTIMIZE PARKING STRATEGIES	
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Develop trail network through surrounding communities to tie into proposed Brazos River trail network
ENHANCE ARTS AND ENTERTAINMENT	

Strengthening Activity Centers

TELFAIR - UH SUGAR LAND

LAND AREA	CURRENT LAND USE
580 Acres	Vacant, University, Park Space

STRENGTHS

- Future performing arts center as part of Telfair development south of US 59 and east of University Boulevard
- Memorial Park and existing trail and shared-use paths
- Existing park & ride transit service

Activity Center #13

STRATEGIES

MIXED USE DEVELOPMENT	▪ Support mixed use development within Telfair Development
ENCOURAGE INDUSTRY CLUSTERS	▪ Encourage University of Houston build out
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Higher density residential can provide appropriate student housing ▪ Construct multi-family as planned
IMPROVE WALKABILITY	▪ Enhance the pedestrian friendly designs of Lexington Boulevard ▪ Connect multiple trails in Memorial Park and shared-use path along University Boulevard with the trails within the Telfair development
INCREASE MULTIMODAL ACCESS	▪ Improve existing bicycle facilities and connect with other bicycle facilities and trials within Sugar Land ▪ Create permanent transit facility at University of Houston Sugar Land campus or within Tract 5
OPTIMIZE PARKING STRATEGIES	▪ Expand shared parking for all uses ▪ Integrate park-and-ride transit parking into development.
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Improve links to and from Memorial Park and future festival grounds
ENHANCE ARTS AND ENTERTAINMENT	▪ Support existing and future arts and entertainment centers including the Museum of Natural Science and future performing arts center and festival grounds

SUGAR LAND TOWN CENTER - LAKE POINTE

LAND AREA	CURRENT LAND USE
1030 Acres	Retail, Commercial, Multifamily, Medical

STRENGTHS

- Center of Sugar Land activities
- Sugar Land Town Square
- Many hospitals making area a mini Medical Center. Hospitals include: Methodist Sugar Land, St. Luke's Sugar Land Hospital, Kelsey-Seybold Clinic, Kindred Hospital Sugar Land, Sugar Land Surgical Hospital
- Both Lake Pointe and Town Square are prime real estate location for both retail and restaurants

Activity Center #14

STRATEGIES

MIXED USE DEVELOPMENT	▪ Expand redevelopment to aging retail sites and surface parking
ENCOURAGE INDUSTRY CLUSTERS	▪ Continue to grow attractiveness of retail and restaurant real estate ▪ Continue to attract medical offices, hospitals, and other major employers
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Consider expansion of successful multi-family developments within the node to activate and complement potential future redevelopment
IMPROVE WALKABILITY	▪ Connect destination on both sides of US 59 with improved freeway crossings
INCREASE MULTIMODAL AC-CESS	▪ Integrate transit into future plans ▪ Integrate transit stop for US 59 and SH 6 corridors ▪ Build better bicycle connections to neighborhoods, as well as local and regional trails
OPTIMIZE PARKING STRATEGIES	▪ Develop parking management district to encourage shared parking ▪ Build new shared structured parking
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Include plazas with public amenities and a sense of place in new development
ENHANCE ARTS AND ENTERTAINMENT	▪ Continue programming events

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Sugar Land**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Added Capacity	New Roadway Construction	11183	East/West Arterial	Burney Rd	SH 6	2012 LET	Construct 4-Lane Boulevard with Sidewalks	0	4	City Of Sugar Land	9/1/2011	$4,500,000.00
Added Capacity	New Roadway Construction	11182	Meadowcroft Boulevard	University Blvd	First Colony Blvd	2013 TIP	Construct Roadway Extension (Sugar Land to Fund 50% of the Bridge and 100% of the Roadway Section)	0	4	City Of Sugar Land	10/1/2012	$2,281,292.00
Added Capacity	New Roadway Construction	475	Stadium Drive	N of Oyster Creek	Burney Road	2015 LET	Construct 4-Lane Roadway	0	4	City Of Sugar Land	1/1/2015	$17,000,000.00
Added Capacity	New Roadway Construction	431	University Blvd	US 90A	Current Terminus S Of Ditch-H	2011 TIP	Construct 4-Lane Roadway	0	4	City Of Sugar Land	1/1/2011	$4,665,115.00
Added Capacity	New Roadway Construction	7051	University Blvd	US 59	Commonwealth Blvd	2023 RTP	Phase 2: Widen to 6 & 8-Lane Divided Roadway (In Sections)	4	8	City Of Sugar Land	1/1/2023	$4,500,000.00
Added Capacity	New Roadway Construction	7052	University Blvd	Commonwealth Blvd	SE Corner Of Brazos Landing Subdivision	2011 LET	Construct New 4-Lane Curb & Gutter Section	0	4	City Of Sugar Land	6/1/2011	$23,581,900.00
Added Capacity	New Roadway Construction	15431	University Blvd	N of Oyster Creek	US 90A	2018 RTP	Construct 4-Lane Roadway	0	4	City Of Sugar Land	8/1/2018	$4,000,000.00
Added Capacity	Roadway Widening	12624	Dairy Ashford Road	Julie Rivers Dr	US 59	2014 TIP	Widen from 4 To 6-Lanes	4	6	City Of Sugar Land	8/1/2014	$2,570,000.00
Added Capacity	Roadway Widening	11197	New Territory Blvd	LID 17	University Boulevard	2019 RTP	Widen to 6-Lane Blvd (Phase II)	4	6	City Of Sugar Land	1/1/2019	$1,105,105.00
Added Capacity	Roadway Widening	18	Scenic River Dr	Commonwealth Blvd	University Boulevard	2020 RTP	Reconstruct & Widen to 4-Lane Blvd	2	4	City Of Sugar Land	9/1/2019	$3,000,000.00
Added Capacity	Roadway Widening	15383	SH 6	Lexington Blvd	Brooks Street	2015 TIP	Widen From 6 to 8-Lanes	6	8	City Of Sugar Land	2/1/2015	$7,590,000.00
Added Capacity	Roadway Widening	7053	University Blvd	Commonwealth Blvd	SH 6	2025 RTP	Widen To 5-Lane & 6-Lane (Phase 2)	4	6	City Of Sugar Land	1/1/2025	$8,600,000.00
Added Capacity	Roadway Widening	11196	University Blvd	US 59	SH 6	2026 RTP	Widen 4-Lane to 6-Lane (Phase 2)	4	6	City Of Sugar Land	1/1/2026	$4,300,000.00
Added Capacity	Roadway Widening	13803	University Blvd	SE Corner of Brazos Landing Subdivision	Scenic River Drive	2015 LET	Extend 4-Lane Roadway	0	4	City Of Sugar Land	9/1/2014	$14,591,259.00
Added Capacity	Roadway Widening	978	Williams Trace Blvd	US 59	Oyster Creek	2025 RTP	Widen to 6-Lane Divided	4	6	City Of Sugar Land	8/1/2025	$22,314,000.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Traffic Engineering	Grade Separation	13591	Dairy Ashford Rd	AT US 90A		2025 RTP	Grade Separation Over RR	4	4	City Of Sugar Land	10/1/2025	$39,197,398.00
Traffic Engineering	Grade Separation	13590	Eldridge Road	AT US 90A		2020 RTP	Underpass at Us 90A and Eldridge Rd	4	4	City Of Sugar Land	8/1/2020	$25,043,130.00
Traffic Engineering	Intersection Improvements	11184	Dulles Ave	US 90A	SH 6	2011 LET	Intersection Improvements Including Turn Lanes From SH 6 To Lexington and Full Reconstruction at 4 Lanes From Avenue E to Just South of Us 90	4	4	City Of Sugar Land	3/1/2011	$15,379,500.00
Added Capacity	New Roadway Construction	15224	SH 99/Grand Parkway	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000.00
Traffic Engineering	Interchange Improvements	14247	SH 99	At US 59 S		2030 RTP	Construct 4 Direct Connectors (Toll) (Segment C)	2	2	FBCTRA	8/1/2017	$104,000,000.00
Added Capacity	Roadway Widening	9	Burney Road	Old Richmond Rd	West Airport Boulevard	2013 TIP	Reconstruct from 2-Lane To 4-Lane Divided Concrete Section with Storm Sewer	2	4	Fort Bend County	1/1/2013	$4,650,880.00
Added Capacity	Roadway Widening	9	Burney Road	Old Richmond Rd	West Airport Boulevard	2013 TIP	Reconstruct from 2-Lane To 4-Lane Divided Concrete Section with Storm Sewer	2	4	Fort Bend County	1/1/2013	$4,650,880.00
Added Capacity	Roadway Widening	973	Dairy Ashford Road	Harris County County Line	West Airport Boulevard	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$3,804,156.00
Added Capacity	Roadway Widening	14711	FM 2759	US 59	FM 762/FM 2759 on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748.00
Added Capacity	Roadway Widening	14711	FM 2759	US 59	FM 762/FM 2759 on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748.00
Added Capacity	Roadway Widening	977	West Bellfort	FM 1876	Harris County County Line	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$7,700,455.00
Added Capacity	Roadway Widening	275	US 90A	SH 99/Grand Parkway	0.3 MI W of SH 6	2019 RTP	Widen from 4 to 6-Lanes	4	6	TxDOT Houston District	9/1/2018	$6,557,000.00
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 MI, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000.00
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 MI, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
PREVIOUS RTP PROJECTS WITHOUT IDENTIFIED TXDOT FUNDING												
Added Capacity	Roadway Widening	11622	SH 6	US 90A	McKeever Road	RTP - LONG	Widen from 6 to 8 Lanes Intersections	6	8	TxDOT Houston District		$108,475,423.00
Added Capacity	Roadway Widening	11648	SH 6	Beechnut	US 90A	RTP - LONG	Widen to 8 Lanes Intersections	6	8	TxDOT Houston District		$27,620,239.00
Added Capacity	Roadway Widening	10115	US 90A	FM 359	SH 99	RTP - LONG	Widen to 6 Lane Divided (Phase 2 of 3)	4	6	TxDOT Houston District		$72,751,298.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) AND THOROUGHFARE PLANNING

Sugar Land has been a regional leader on issues like Thoroughfare Planning and Traffic Management Systems. As Fort Bend County and other regional cities expand their efforts in these areas. Sugar Land can serve as both a key partner for coordination as well as a resource on best practices.

Sugar Land should ensure coordination with Fort Bend County during their upcoming Thoroughfare planning process to ensure key roadway segments are aligned and connectivity in the region is optimized.

Enhancing Multi-modal Transportation - Transit

1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

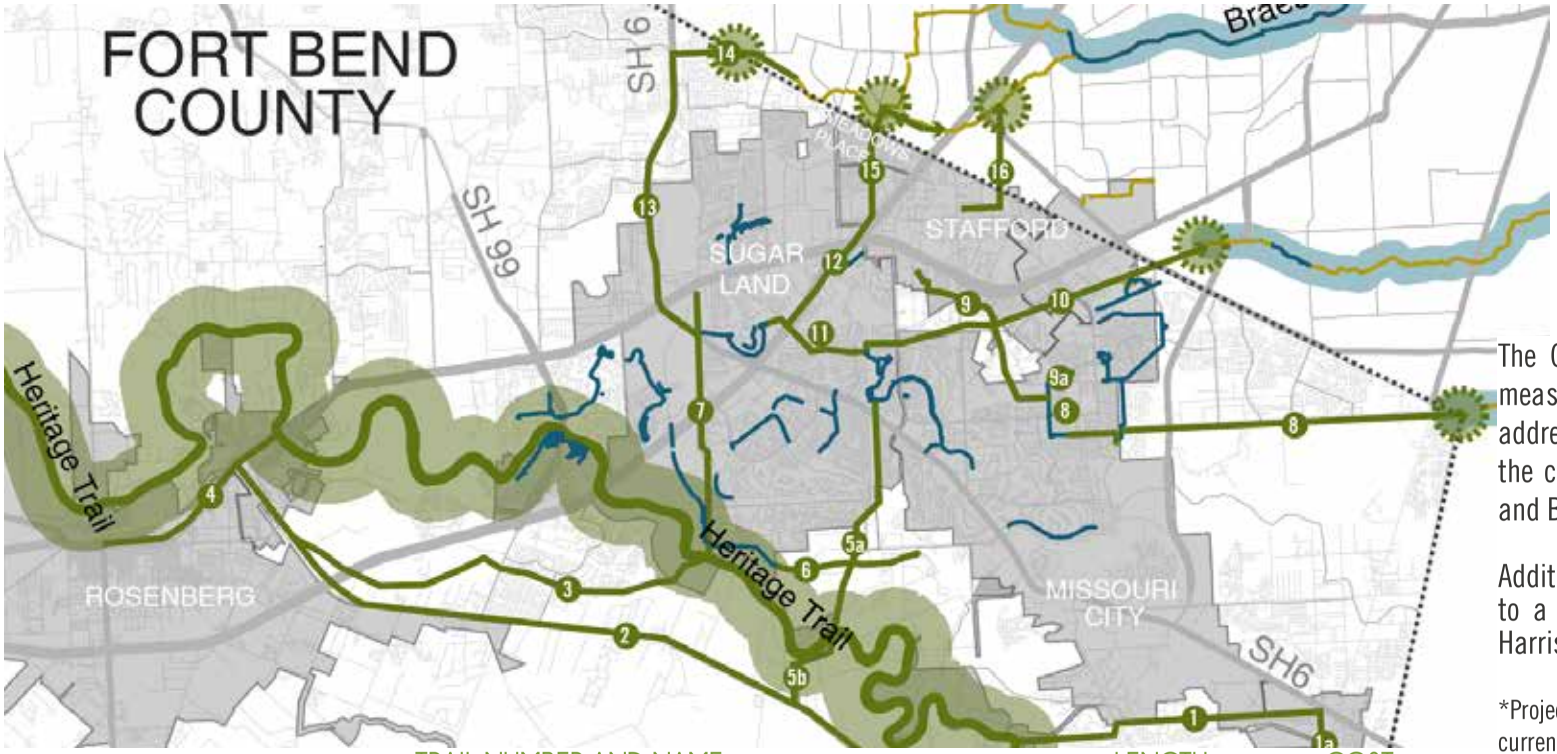
ROUTE	SERVICE TYPE	FROM	TO	LENGTH
4 US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles
5 US 90A*	Regional Spine	US 90A at SH 99/Grand Parkway	Fannin South Park & Ride	19 miles
6 SH 6*	Regional Spine	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Addicks Park & Ride	25 miles
7 SH 6/FM 1092/US 59*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Uptown Park & Ride	21 miles
C1 Sugar Land Circulator*	Local Circulator	Connects Sugar Land Town Square with University of Houston Sugar Land, Telfair, Constellation Park, and Lake Pointe		10 miles

*Cost estimates presented in Figure F1.1

EXISTING TRANSIT PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT	DESCRIPTION	PROJECT STATUS	SPONSOR	COST
Fort Bend O&M Facility - Sugar Land Area Site TBD [MPOID 11541]	Construct a Second Fort Bend County Transit Operations and Maintenance Facility to Support Expanded Transit Services	2015 TIP	Fort Bend County	$3,000,000

Enhancing Multi-modal Transportation - Regional Trails



The City of Sugar Land has already taken measures to improve its trails system and address concerns of walkability including the current update to the 2012 Pedestrian and Bicycle Master Plan.

Additional efforts should be made to connect to a regional trail system, as well as the Harris County Bayou Greenway Initiative.

*Projects **5a**, **6**, **7**, and **11** are projects that are currently included in the Pedestrian and Bicycle Master Plan and the costs listed were obtained from that document. Project 6 will be completed by the developer of Riverstone.

The parts of projects **3, **10**, **12**, and **13** within Sugar Land City Limits and ETJ are also included within the Pedestrian and Bicycle Master Plan, but the cost estimates listed in this report are based on the estimated cost of $150 per foot for the entire project length. Further design will enable refinement to these project cost estimates.

TRAIL NUMBER AND NAME	LENGTH	COST
3 Rabbs Bayou from FM 762 to the Brazos River**	10 miles	$7,920,000
5a North/South Utility Corridor in Sugar Land North of the Brazos River*	4 miles	$2,821,000
5b North/South Utility Corridor in Sugar Land South of the Brazos River and Brazos River Crossing	1.7 miles	$1,821,400
6 University Boulevard from Current Terminus at Sugar Land City Limit to LJ Parkway*	2.0 miles	$3,000,000
7 Ditch H through Sugar Land*	4.22 miles	$3,010,500
10 Utility Corridor from Sims Bayou to Sugar Land**	5.9 miles	$4,672,800
11 Lexington Boulevard /Williams Trace Boulevard*	3.14 miles	$2,104,000
12 US 59 from Oyster Creek to the Meadows Place/Sugar Land Utility Corridor**	2.3 miles	$1,821,600
13 Highway 6 from Ditch H to Keegans Bayou**	4.9 miles	$3,880,800

EXISTING BICYCLE/PEDESTRIAN PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT	DESCRIPTION	PROJECT STATUS	SPONSOR	COST
City of Sugar Land Town Center [MPOID 14658]	City of Sugar Land Pedestrian/Bicycle Improvements	2014 TIP	City of Sugar Land	$3,701,420
US 59 South between Williams Trace Blvd and Ditch H [MPOID 15317]	10' Wide Shared-Use Path North And South Bound Within Frontage Road Row With Ped/Bike Crossing Improvements	2014 TIP	City of Sugar Land	$3,445,000

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reaches end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preferences change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

KEY ACTION FOR SUGAR LAND

- Develop long range land use plan including development of multi-family policy focused on activity centers and redevelopment strategies for aging strip center commercial
- Assess need for enhanced low impact standard as well as land planning strategies to continue to expand
- Integrate multi-modal transportation plans into development strategies including neighborhood platting and activity center strategies

FORT BEND COUNTY

IMPLEMENTATION WORKBOOK

prepared as a part of the
Fort Bend Subregional Planning Initiative

Fort Bend Subregional Plan Vision

Strengthen and grow Fort Bend County as the premier location in Texas to **live**, **connect**, **prosper**, **learn**, and **enjoy** an excellent quality of life while **preserving** the distinctive character, history and resources of the region

FORT BEND SUBREGIONAL PLAN - 10 TAKEAWAYS ABOUT FORT BEND COUNTY

01 Overall **Fort Bend County grew 5.1% per year** between the 1980 to 2010 Censuses.

02 Significant **growth** in Fort Bend is occurring in the **unincorporated areas outside of the study area** for the Subregional Plan

03 Overall projections for Fort Bend County show **continued population growth of 2-3%**. Total County population likely to **exceed 1 million residents** in the next 25 years.

04 **86%** of the study area's housing stock is **single-family homes**, with **90%** of the housing stock being constructed **post-1970.**

05 Fort Bend County, remains one of the most ethnically diverse counties in the US. Currently the population is **36% White**, **24% Hispanic**, **21% Black,** and **17% Asian**.

06 The County has relatively affluent communities, with **92%** of the population living **above the poverty rate** and the **median household income** being about **$80,000.**

07 Land values in Fort Bend grew from **$18.7B in 2006 to $27.4B in 2010**, a time of significant economic challenges

08 Nearly **50% of the land area** within the study area remains **agricultural and ranch land**. Community feedback seeks to preserve some of this from development.

09 Fort Bend County's communities are well educated; **47% of Fort Bend County residents** have at least an **Associate's degree**.

10 Fort Bend County has a number of cultural assets contributing to its high quality of life including **thousands of acres of park land**, the **Fort Bend Museum**, and **University of Houston** and **Houston Community College** campuses.

Strengthening Activity Centers

BRAZOS TOWN CENTER - WHARTON JC

LAND AREA	CURRENT LAND USE
435 Acres	Commercial, Retail, and Residential

STRENGTHS

- Major retail tenants
- Located along US 59 and FM 762
- New Construction

Activity Center #11

STRATEGIES

MIXED USE DEVELOPMENT	▪ Strengthen links between retail and residential
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for retail growth and Wharton Junior College Expansion ▪ Continue develop of regional retail
INTEGRATE HIGHER DENSITY RESIDENTIAL	▪ Increase multifamily near Wharton Junior College to attract students ▪ Improve pedestrian connections between multifamily and retail
IMPROVE WALKABILITY	▪ Improve walkability between all retail to decrease the need to drive from one retail location to another within Brazos Town Center ▪ Improve connections between residential and retail in Brazos Town Center
INCREASE MULTIMODAL ACCESS	▪ Develop stop locations for Richmond/Rosenberg circulator transit service. Stops should be convenient to retail.
OPTIMIZE PARKING STRATEGIES	▪ Master plan parking and access for the entire area, not parcel by parcel. Develop new retail to encourage parking once to visit multiple stores.
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Locate a new park in the Town Center area
ENHANCE ARTS AND ENTERTAINMENT	

GREAT WOOD AND RIVER PARK COMMERCIAL

LAND AREA	CURRENT LAND USE
170 Acres	Retail, Medical, and Vacant

STRENGTHS

- Located near Great Wood and Riverpark single-family residential developments
- Located at current terminus of US 99 at US 59
- Memorial Herman Sugar Land Hospital

Activity Center #12

STRATEGIES

MIXED USE DEVELOPMENT	▪ Encourage mixed use development in future development
ENCOURAGE INDUSTRY CLUSTERS	▪ Allow for expansion of Memorial Herman hospital and attract other medical offices
INTEGRATE HIGHER DENSITY RESIDENTIAL	
IMPROVE WALKABILITY	▪ Develop pedestrian links between hospital, retail, and adjoining residential areas.
INCREASE MULTIMODAL ACCESS	▪ Plan stop locations for future circulator.
OPTIMIZE PARKING STRATEGIES	
INTEGRATE WATER, PARKS AND CIVIC SPACE	▪ Develop trail network through surrounding communities to tie into proposed Brazos River trail network
ENHANCE ARTS AND ENTERTAINMENT	

Enhancing Multi-modal Transportation - Roadways

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Unincorporated Fort Bend County**

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
2035 RTP UPDATE PROJECTS												
Added Capacity	New Roadway Construction	919	Fort Bend Parkway Toll Road	Sienna Pkwy	SH 99	2025 RTP	Construct 4-Lane Toll Road and Brazos River Bridge	0	4	FBCTRA	9/1/2024	$240,861,162.00
Added Capacity	New Roadway Construction	266	SH 99/Grand Parkway	FM 762	Brazoria County Line	2017 RTP	Seg C-2: Construct 4-Lane Tollway with Non-Continuous Two 2-Lane Frontage Roads and Interchanges	0	4	FBCTRA	3/1/2017	$279,800,000.00
Added Capacity	New Roadway Construction	10128	SH 99/Grand Parkway	US 59	FM 762	2017 RTP	Seg C-1: Construct 4-Lane Tollway With Non-Continuous Two 2-Lane Frontage Roads And Interchanges	0	4	FBCTRA	1/1/2017	$217,600,000.00
Added Capacity	New Roadway Construction	11378	SH 99/Grand Parkway	At FM 1093 (Westpark Tollway) Interchange		2019 RTP	Construct 4 Tolled DC'S (SB-WB,WB-SB,NB-WB,EB-SB)	2	2	FBCTRA	9/1/2018	$78,800,000.00
Added Capacity	New Roadway Construction	15224	SH 99/Grand Parkway	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000.00
Added Capacity	Roadway Widening	14239	SH 99	At FM 1093/Westpark Tollway		2018 RTP	Construct 2 Direct Connectors (Toll) (WB-NB, NB-EB) (Seg. D)	2	4	FBCTRA	8/1/2018	$38,400,000.00
Traffic Engineering	Grade Separation	15224	SH 99	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000.00
Traffic Engineering	Interchange Improvements	14247	SH 99	At US 59 S		2030 RTP	Construct 4 Direct Connectors (Toll) (Segment C)	2	2	FBCTRA	8/1/2017	$104,000,000.00
Added Capacity	Grade Separation	15562	SH 99/Grand Parkway	Morton Road/West Bellfort	South of Peek Drive	2013 TIP	Construct 2-Lane NB Frontage Road And U-Turn At Morton Rd/W Bellfort	0	2	Fort Bend County	9/1/2012	$5,136,768.00
Added Capacity	New Roadway Construction	6	Bellaire Boulevard	FM 1464	San Pablo	2017 RTP	Construct New 4-Lane Road	0	4	Fort Bend County	1/1/2017	$3,854,686.00
Added Capacity	New Roadway Construction	7	Bellaire Boulevard	SH 99	FM 1464	2018 RTP	Construct 4-Lane Blvd (In Sections)	0	4	Fort Bend County	1/1/2018	$40,503,077.00
Added Capacity	New Roadway Construction	15563	Fort Bend Parkway Toll Road	SH 6	Sienna Parkway	2012 TIP	Construct 4-Lane Toll Road	0	4	Fort Bend County	8/1/2012	$18,000,000.00
Added Capacity	New Roadway Construction	652	Lake Olympia Parkway	Fort Bend Parkway Toll Road	FM 521	2018 RTP	Construct 4-Lane Undivided Road	0	4	Fort Bend County	1/1/2018	$35,935,457.00
Added Capacity	New Roadway Construction	15560	Mason Road	SH 99	Skinner Ln	2014 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2014	$6,500,000.00
Added Capacity	New Roadway Construction	464	Spur 10	Waller County Line	SH 36	2018 RTP	Extension of 2-Lane Roadway	0	2	Fort Bend County	1/1/2020	$14,317,318.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Unincorporated Fort Bend County**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	New Roadway Construction	487	Westpark Tollway	SH 99	West of FM 723/Spring Greek Drive	2018 RTP	Construct 4 Toll Lanes and One Direct Connector	0	4	Fort Bend County	8/1/2018	$75,018,639.00
Added Capacity	New Roadway Construction	8014	Westpark Tollway	West of FM 723/Spring Green Drive	West of Cross Creek Ranch Boulevard	2020 RTP	Construct 4 Toll Lanes	0	4	Fort Bend County	8/1/2020	$44,712,495.00
Added Capacity	Roadway Widening	972	Beechnut Street	Addicks Clodine Rd	Harris County Line	2018 RTP	Widen To 6-Lane Divided	4	6	Fort Bend County	1/1/2018	$6,173,526.00
Added Capacity	Roadway Widening	13754	Beechnut Street	SH 99	FM 1464	2019 RTP	Widen from 2-Lane to 4-Lane Rural Roadway	2	4	Fort Bend County	12/1/2018	$35,090,118.00
Added Capacity	Roadway Widening	977	West Bellfort	FM 1876	Harris County Line	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$7,700,455.00
Added Capacity	Roadway Widening	13749	Clodine Reddick Road	FM 1464	Old FM 1464	2023 RTP	Reconstruct 2-Lane Roadway To 4-Lane Curb & Gutter with Storm Sewer	2	4	Fort Bend County	1/1/2023	$7,457,363.00
Added Capacity	Roadway Widening	14738	FM 1093	James Ln	FM 1093/FM 359	2014 TIP	Widen To 4 Lanes Arterial, Non-Toll	2	4	Fort Bend County	10/1/2013	$3,978,303.00
Added Capacity	Roadway Widening	14739	FM 1093	SH 99	FM 1463/FM 359	2013 TIP	Construct Two 2-Lane Frontage Roads	0	4	Fort Bend County	10/1/2012	$30,175,693.00
Added Capacity	Roadway Widening	14736	FM 359	FM 1463/FM 359	West of Cross Creek Ranch Boulevard	2014 TIP	Construct Two 2-Lane Frontage Roads	2	4	Fort Bend County	10/1/2013	$15,322,479.00
Added Capacity	Roadway Widening	14737	FM 359	West of Cross Creek Ranch Blvd	FM 1093/FM 359	2014 TIP	Widen to 4 Lanes Arterial, Non-toll	2	4	Fort Bend County	10/1/2013	$11,956,255.00
Added Capacity	Roadway Widening	12622	Harlem Rd	SH 99	US 90A	2020 RTP	Widen from 4 to 6 Lanes with Bridges	4	6	Fort Bend County	6/6/2020	$33,892,128.00
Added Capacity	Roadway Widening	14753	Harlem Rd	SH 99	Plantation Drive	2013 TIP	Reconstruct Existing 2-Lane to 4-Lane Curb & Gutter with Open Ditch Drainage.	2	4	Fort Bend County	4/1/2013	$5,948,800.00
Added Capacity	Roadway Widening	11658	Mason Rd	Skinner Ln	FM 359	2012 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2012	$4,000,000.00
Added Capacity	Roadway Widening	7803	Trammel Fresno Rd	Fort Bend Pkwy	FM 521	2014 TIP	Widen Existing Roadway from 2 To 4-Lanes Rural Roadway	2	4	Fort Bend County	9/1/2013	$25,435,300.00
Added Capacity	Roadway Widening	15	FM 2234	Fort Bend Parkway Toll Road	FM 521	2025 RTP	Widen 2 Lanes to 4-Lane Divided Rural Section	2	4	TxDOT Houston District	8/1/2025	$47,483,555.00
Added Capacity	Roadway Widening	15419	FM 2234	FM 3345	Fort Bend Parkway	2013 TIP	Reconstruct and Widen from 2 Lanes to 4-Lane Divided Rural Section (Raised Median)	2	4	TxDOT Houston District	6/1/2013	$12,746,000.00
Added Capacity	Roadway Widening	6049	US 59 S	W of SH 36	W of FM 762	2018 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS & TMS with Grade Separation	4	6	TxDOT Houston District	9/1/2017	$173,254,000.00
Added Capacity	Roadway Widening	6050	US 59 S	W of SP 10	W of SH 36	2031 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$285,238,958.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
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REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Unincorporated Fort Bend County**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	6051	US 59 S	W of SP 10	West of Hamlick Road	2031 RTP	Widen to 6-Main Lanes, Grade Separations, 2-Lane Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$100,582,927.00
Added Capacity	Roadway Widening	6052	US 59 S	W of FM 360	West of Hamlick Road	2032 RTP	Widen to 6 Main Lanes, W/ 2-Lane Frontage Roads, Grade Separations, ITS &TMS	4	6	TxDOT Houston District	9/1/2031	$157,035,324.00
Added Capacity	Roadway Widening	6053	US 59 S	W of Darst Road	W of FM 360	2031 RTP	Widen to 6-Mainlane Freeway W/ 2-Lane Frontage Roads, Grade Separations, ITS & TMS	4	6	TxDOT Houston District	9/1/2030	$139,952,507.00
Added Capacity	Roadway Widening	6063	US 59 S	CR 227 in Wharton County	West of Darst Road	2034 RTP	Widen to 6-Main Lanes, W/ 2-Lane Frontage Roads, Grade Separations, ITS &TMS	4	6	TxDOT Houston District	9/1/2033	$216,002,591.00
Added Capacity	Roadway Widening	275	US 90A	SH 99/Grand Parkway	0.3 MI W of SH 6	2019 RTP	Widen from 4 to 6-Lanes	4	6	TxDOT Houston District	9/1/2018	$6,557,000.00
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 MI, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000.00
Added Capacity	Roadway Widening & HOV	9912	US 59 S	W of FM 762	W of FM 2759	2017 RTP	Construct 2-Way HOV Lanes	4	8	TxDOT Houston District	8/1/2017	$12,265,000.00
Traffic Engineering	Intersection Improvements	15422	FM 2977	EB at Fairchilds Longpoint/FM 361	NB at Bryan and NB at Koeblen	2012 TIP	Install Left Turn Lanes	2	2	TxDOT Houston District	8/1/2012	$939,900.00
Traffic Engineering	Grade Separation	12855	FM 359	At US 90A and UP RR		2025 RTP	Railroad Grade Separation (Elevated T)	2	2	TxDOT Houston District	12/1/2024	$25,799,147.00
PREVIOUS RTP PROJECTS WITHOUT IDENTIFIED TXDOT FUNDING												
Added Capacity	Roadway Widening	979	FM 1093	Austin County Line	FM 359	RTP-SHORT	Widen to 4-Lane Divided Rural Road	2	4	TxDOT Houston District		$104,906,119.00
Added Capacity	Roadway Widening	12617	FM 1093	Harlem	SH 99	RTP-LONG	Widen from 2 to 6 Lanes	2	6	TxDOT Houston District		$32,680,652.00
Added Capacity	Roadway Widening	12748	FM 1462	FM 762	Brazoria County Line	RTP-LONG	Widen from 2 to 4 Lanes	2	4	TxDOT Houston District		$15,827,693.00
Added Capacity	Roadway Widening	11	FM 1463	FM 1093	Harris County Line	RTP-LONG	Widen to 4 Lanes	2	4	TxDOT Houston District		$15,335,094.00
Added Capacity	Roadway Widening	12616	FM 1489	Waller County Line	US 90A	RTP-LONG	Widen from 2 to 4 Lanes with Bridges	2	4	TxDOT Houston District		$51,995,580.00
Added Capacity	Roadway Widening	12750	FM 361	SH 36	FM 1994	RTP-LONG	Widen from 2 to 4 Lanes with Bridges	2	4	TxDOT Houston District		$32,190,837.00
Added Capacity	Roadway Widening	12754	FM 521	Sienna Pkwy	Brazoria County Line	RTP-LONG	Widen from 2 to 4 Lanes with Bridges	2	4	TxDOT Houston District		$10,681,186.00
Added Capacity	Roadway Widening	11681	SPUR 529	US 59	FM 1640	RTP-LONG	Widen to 4 Lane Intersections	2	4	TxDOT Houston District		$11,186,045.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
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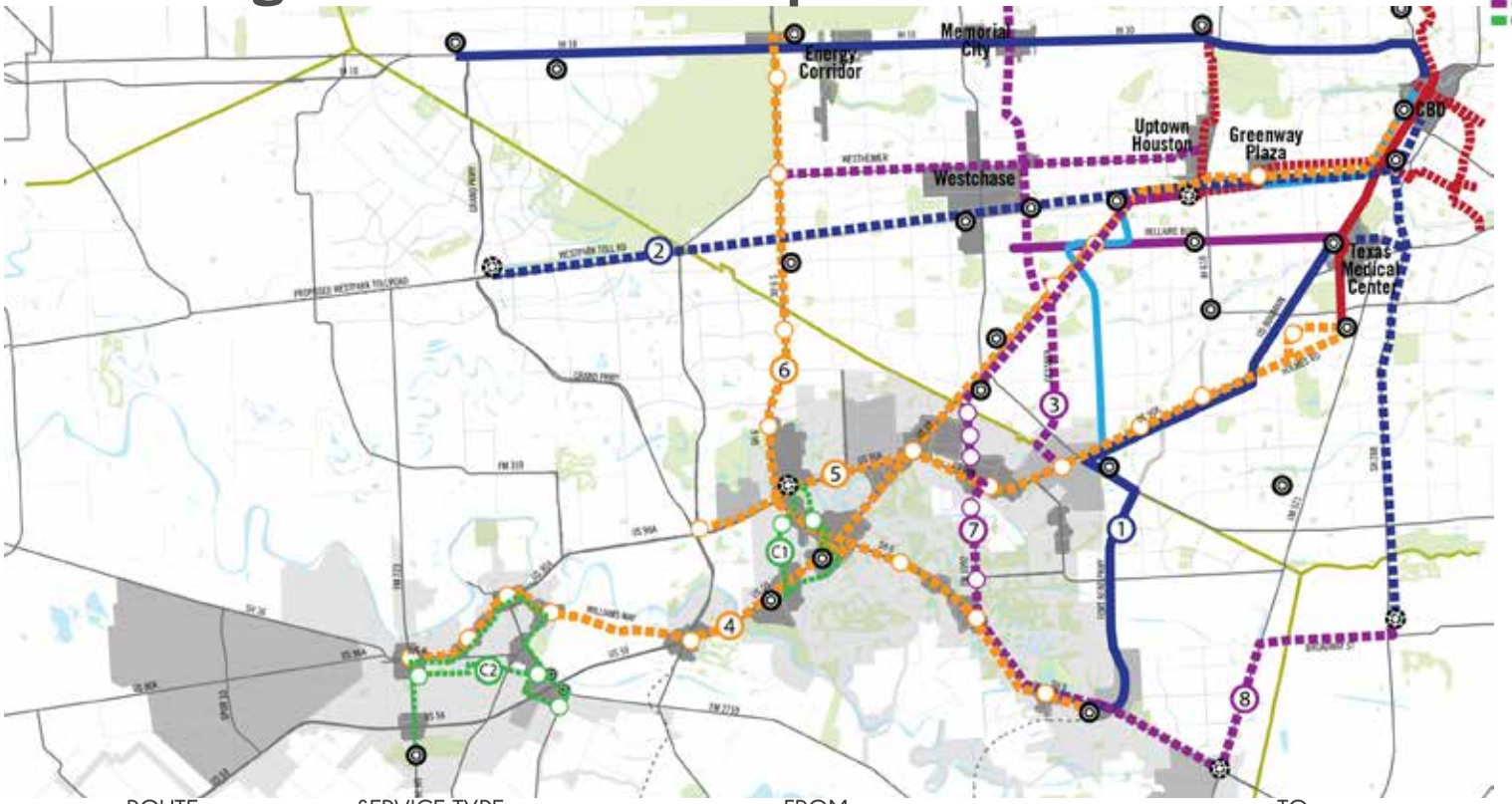
REGIONAL TRANSPORTATION PLAN - Capacity Enhancing Projects in Unincorporated Fort Bend County**, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	12747	FM 762	FM 1994	FM 1462	RTP-LONG	Widen from 2 to 4 Lanes with Bridges	2	4	TxDOT Houston District		$29,817,585.00
Added Capacity	Roadway Widening	11562	SH 36	S of Needville	Brazoria County Line	2008TIP	Widen to 4-lane divided rural	2	4	TxDOT Houston District		$59,290,102.00
Added Capacity	New Roadway Construction	14231	SH 99	Fry Road	FM 1093	2008TIP	Construct 2 Lane Northbound Frontage Road	0	2	TxDOT Houston District		$2,000,000.00
Added Capacity	Roadway Widening	274	US 90A	FM 640	0.17 MI E of FM 1640	RTP-LONG	Widen from 4 lanes to 6-lane Divided Curb and Gutter Section	4	6	TxDOT Houston District		$2,678,136.00
Other		10903	US 59 S	SH 6	Wharton County Line	RTP-LONG	Multimodal Transportation Corridor Feasibility Study	n/a	n/a	TxDOT Houston District		$2,782,205.00

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**
**** Additional projects may be identified in 2012 RTP related to System Preservation**

Enhancing Multi-modal Transportation - Transit



1. *Fort Bend Parkway* to Texas Medical Center
2. *Westpark Tollway* to Uptown/Downtown
3. *Gessner Road* - Missouri City to Westchase and Memorial City
4. *US 59* - Rosenberg to Downtown
5. *US 90A* - US 99/Grand Pkwy to Texas Medical Center
6. *SH 6* - Missouri City to Energy Corridor
7. *SH 6/FM 1092/US 59* - Missouri City to Gessner Road
8. *FM 521* - Pearland P&R Connection from Missouri City and FM 521 P&R

C1 Sugar Land Circulator

C2 Richmond - Rosenberg Circulator

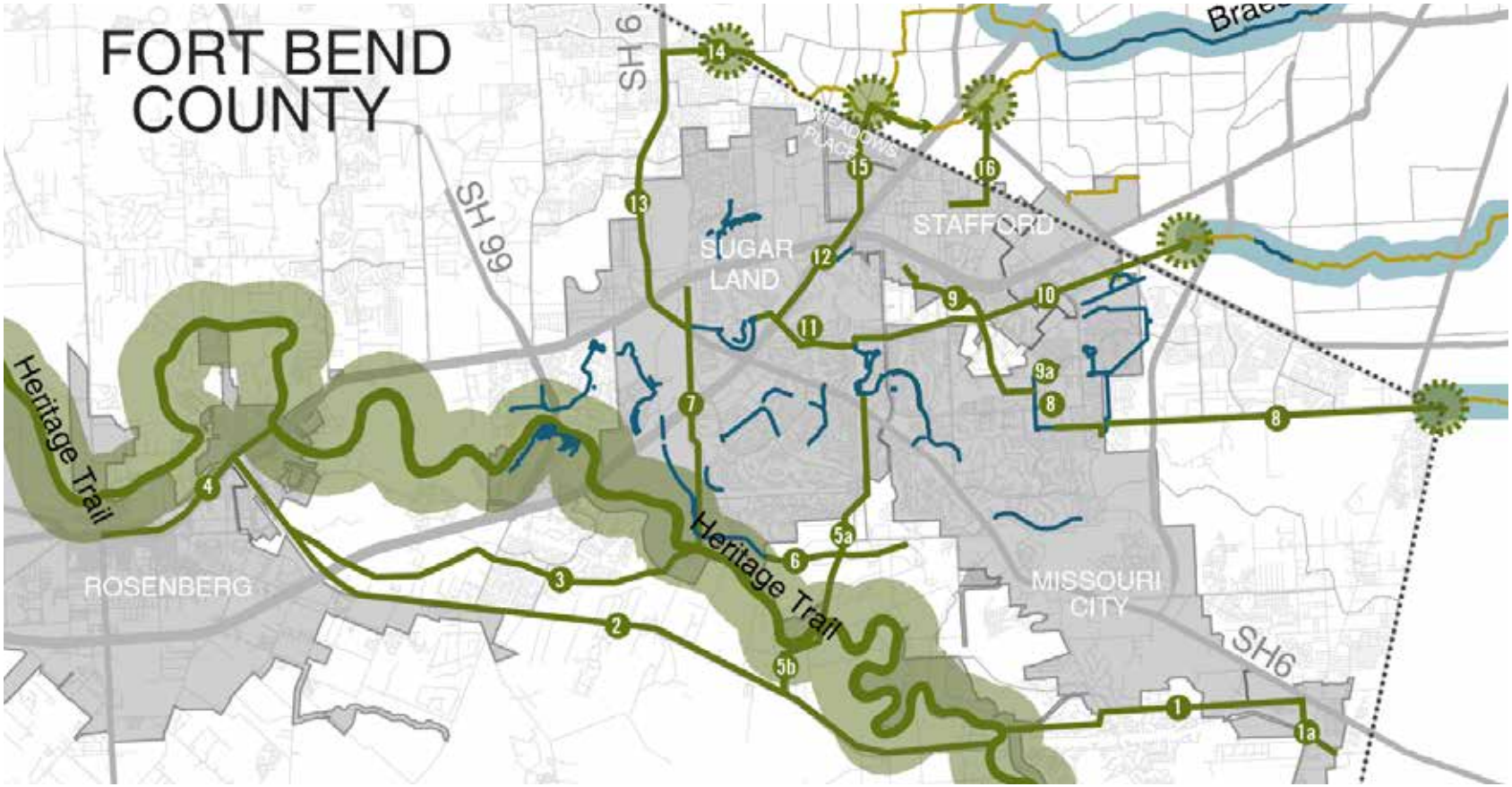
ROUTE	SERVICE TYPE	FROM	TO	LENGTH
1 Fort Bend Parkway *	Commuter Express	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Texas Medical Center Transit Center	18 miles
2 Westpark Tollway*	Commuter Express	Future Westpark Park & Ride at SH 99/Grand Parkway	Downtown Houston	26 miles
4 US 59*	Regional Spine	Downtown Rosenberg	Downtown Houston	33 miles
5 US 90A*	Regional Spine	US 90A at SH 99/Grand Parkway	Fannin South Park & Ride	19 miles
6 SH 6*	Regional Spine	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Addicks Park & Ride	25 miles
7 SH 6/FM 1092/US 59*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Uptown Park & Ride	21 miles
8 FM 521*	Signature - Rapid	Missouri City Park & Ride at SH 6 and Fort Bend Parkway	Future Pearland Park & Ride	11 miles

EXISTING TRANSIT PROJECTS INCLUDED IN THE 2012 RTP UPDATE

PROJECT/DESCRIPTION	PROJECT STATUS	SPONSOR	COST
Westpark Tollroad Park & Ride [MPOID 11533]	2013 TIP	Fort Bend County	$3,130,219
Acquire 6 Additional Large Transit Vehicles (Phase 1) for Express Services from Westpark P&R [MPOID 11534]	2015 TIP	Fort Bend County	$549,566
Acquire 6 Additional Large Transit Vehicles (Phase 2) for Express Services from Westpark P&R [MPOID 11537]	2023 RTP	Fort Bend County	$1,252,156
Construct 2nd 500 Spaces of P&R to Serve Express Bus and Vanpool Services to the Energy Corridor, Greenway-Galleria, Downtown and Other Employment Centers. Ultimate Lot Size to Include 1,000 Spaces [MPOID 11538]	2023 RTP	Fort Bend County	$3,209,590

*Cost estimates presented in Figure F1.1

Enhancing Multi-modal Transportation - Regional Trails



TRAIL NUMBER AND NAME	LENGTH	COST*
1 East/West Drainage Corridor from the Brazos River to Highway 6	5.8 miles	$4,593,600
1a Arcola Spur	1.2 miles	$950,400
2 FM 2759/FM 762 from the Brazos River to Richmond	15 miles	$11,880,000
3 Rabbs Bayou from FM 762 to the Brazos River	10 miles	$7,920,000
8 McHard Road from Missouri City to Clear Creak	6.5 miles	$5,148,000
9 Drainage Corridor from Stafford to Missouri City	4 miles	$3,168,000
10 Utility Corridor from Sims Bayou to Sugar Land	5.9 miles	$4,672,800
13 Highway 6 from Ditch H to Keegans Bayou	4.9 miles	$3,880,800
14 Keegans Bayou	2.4 miles	$1,900,800

*Cost estimates are for entire trail length

Sustainable Neighborhoods that Retain their Value

The best way to ensure that neighborhood retain their value is to design and develop them well, with high standards for design and construction. Once neighborhood begin to reach full build out and age, continued focus and investment will be required to sustain them as attractive locations.

What causes some neighborhoods to keep their value and strengthen?	What can cities do?
Location and nearby attractions	Develop activity centers
Good neighborhood schools	Improve school support from community
Public amenities (parks, bike trails, community centers)	Build/improve amenities

What causes neighborhoods to decline?	What can cities do?
Original residents age and begin to leave	Provide alternative housing options and support good schools to attract families
Houses are "out of date"	Keep infrastructure in good repair
Infrastructure (e.g. roads, utilities) reach end of useful life	Reinvest in public amenities
Adjacent commercial declines/development preference change	Commercial redevelopment

BUILDING SUSTAINABLE NEIGHBORHOODS

- Include amenities (park space, community centers, hike and bike trails)
- Create well-connected roadway network providing distributed travel routes through the neighborhood
- Ensure connectivity to jobs, education, and retail by multiple modes
- Include a variety of housing option to attract and retain diverse residents
- Include retail and services in the neighborhood, within walking and biking distance of home
- Build robust infrastructure and budget for maintenance and replacement
- Use land planning and environmental design approaches including Low-Impact Development to minimize storm water

APPENDIX A INCLUDES THE FOLLOWING:

1. The Fort Bend Subregional Plan Survey Questionnaire
2. The Fort Bend Subregional Plan Survey Results

FORT BEND SUBREGIONAL PLAN SURVEY

2012 Fort Bend Subregional Plan Survey

1. Introduction and Demographics

During the past 30 years, Fort Bend County has experienced great success and growth as one of the premier places to live and work in the country. With this survey, the Houston-Galveston Area Council (H-GAC) invites your participation in the Fort Bend Subregional Plan, a planning effort that will help build on this success for the future of Fort Bend County.

For more information about the project and the study area, please go to: http:///www.h-gac.com/go/fbspi

Thank you for your participation in the 2010 Fort Bend Subregional Plan Survey.

The entire survey should take you approximately 15-20 minutes, and we appreciate you taking the time to complete this important survey.

This page asks for some background information on you as the respondent. Your responses will help refine the remainder of the survey responses. If you do not wish to provide this information please select the "Prefer not to answer" option for each question. Please remember that all responses are anonymous.

1. Where is your primary residence?

2. What is your Zip Code?

ZIP:

3. Gender?

4. Age?

5. Household size (Please enter the number of of people living in your household by age range)?

Adults (18+)

Children (0-18)

2012 Fort Bend Subregional Plan Survey

2. Why Fort Bend?

6. The primary reason you chose to live in Fort Bend is..

- ◯ Quality of the local schools
- ◯ Attractive housing options
- ◯ Low cost of living
- ◯ Desire to live in a master planned community
- ◯ Access to my (or my spouses) job
- ◯ High quality of life including attractive parks and entertainment options
- ◯ Close to friends and family
- ◯ Safety
- ◯ Diversity of the population
- ◯ I do not live in Fort Bend
- ◯ Other (please specify)

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2012 Fort Bend Subregional Plan Survey

3. Study Goals

7. How important are each of the following goals for the Fort Bend Subregional Plan?

	1 - Strongly Unimportant	2 – Unimportant	3- Neutral	4 – Important	5 - Critical
Provide increased transit choices (e.g., bus & rail service)	◯	◯	◯	◯	◯
Support local economic development opportunities and new jobs	◯	◯	◯	◯	◯
Reduce roadway congestion and travel delays	◯	◯	◯	◯	◯
Improve quality of life and amenities such as parks and entertainment	◯	◯	◯	◯	◯
Improve level of safety for all travel modes	◯	◯	◯	◯	◯
Preserve the region's history and character	◯	◯	◯	◯	◯
Reduce energy consumption & emissions from transportation	◯	◯	◯	◯	◯
Encourage healthy/active travel options (e.g., walking or biking)	◯	◯	◯	◯	◯
Encourage increased open space, natural areas and parks	◯	◯	◯	◯	◯
Support increased variety in housing options	◯	◯	◯	◯	◯
Improve coordination between government agencies	◯	◯	◯	◯	◯

Other important goals (please specify)

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2012 Fort Bend Subregional Plan Survey

4. Vision

8. The team working on the plan has developed the following as the proposed Vision for the Fort Bend Subregional Plan:

Strengthen and grow Fort Bend County as the premier location in Texas to live, connect, prosper, learn, and enjoy an excellent quality of life while preserving the distinctive character, history and resources of the region

Do you support this as the Vision for the Plan?

- ◯ Yes
- ◯ No

9. (Optional) How would you improve on the vision as it had been defined?

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2012 Fort Bend Subregional Plan Survey

5. Mobility

10. Today, how effective is each of the following mobility factors in Fort Bend County?

	1 - Extremely Ineffective	2 - Ineffective	3 - Somewhat Ineffective	4 - Somewhat Effective	5 - Effective	6 - Extremely Effective
Roadway Network for Automobiles	◯	◯	◯	◯	◯	◯
Local Transit Service (Demand Response)	◯	◯	◯	◯	◯	◯
Commuter Transit and Park & Rides	◯	◯	◯	◯	◯	◯
Sidewalks	◯	◯	◯	◯	◯	◯
Bikeways	◯	◯	◯	◯	◯	◯
Freight & Goods Movement	◯	◯	◯	◯	◯	◯
Traffic Signal Timing & Technology	◯	◯	◯	◯	◯	◯

11. How important do you perceive improving the following elements is to maintaining good <u>future</u> mobility in Fort Bend County (for example in the year 2035)?

	1 - Strongly Unimportant	2 – Unimportant	3 - Somewhat Unimportant	4 – Somewhat Important	5 – Important	6 – Critical
Roadway Network for Automobiles	◯	◯	◯	◯	◯	◯
Local Transit Service (Demand Response)	◯	◯	◯	◯	◯	◯
Local Transit Service (Circulators & Fixed routes)	◯	◯	◯	◯	◯	◯
Commuter Park & Rides	◯	◯	◯	◯	◯	◯
Commuter Rail & Suburban Light Rail	◯	◯	◯	◯	◯	◯
Sidewalks	◯	◯	◯	◯	◯	◯
Bikeways	◯	◯	◯	◯	◯	◯
Freight & Goods Movement	◯	◯	◯	◯	◯	◯
Traffic Signal Timing & Technology	◯	◯	◯	◯	◯	◯
Coordinated Land Use Planning (New and Redevelopment)	◯	◯	◯	◯	◯	◯

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2012 Fort Bend Subregional Plan Survey

6. Perceptions - Mobility1

12. Please indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree
Fort Bend's transportation network effectively balances the needs for automobile travel with the needs of transit users, pedestrians and bicyclists	○	○	○	○	○	○
My commute time to work is currently acceptable	○	○	○	○	○	○
The existing roadway network needs to be expanded to provide more capacity	○	○	○	○	○	○
Improved mobility is critical to the long term success of Fort Bend County	○	○	○	○	○	○
Where I live, I have access to attractive transportation alternatives to driving a car	○	○	○	○	○	○
Fort Bend should have commuter rail linking residents to major destinations	○	○	○	○	○	○
Fort Bend should support an increase in the number of commuter park and rides	○	○	○	○	○	○
I would like to see more roadways connecting major destinations in Fort Bend	○	○	○	○	○	○
I would be willing to pay more in taxes for better mobility	○	○	○	○	○	○
I support more toll roads to improve the roadway system	○	○	○	○	○	○
Fort Bend has better transportation than other areas in the region	○	○	○	○	○	○
There are adequate roadway crossings over the Brazos River	○	○	○	○	○	○
Freight trains are a significant impediment to getting around Fort Bend County	○	○	○	○	○	○

2012 Fort Bend Subregional Plan Survey

7. Perceptions - Mobility2

13. Please indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree
More on-street bike lanes should be considered for area roadways	○	○	○	○	○	○
I would ride my bicycle more often if the bikeway network was improved	○	○	○	○	○	○
I would walk more often if the sidewalks were improved	○	○	○	○	○	○
I think bicycles are for recreational and exercise trips only	○	○	○	○	○	○
I would ride bus transit to destinations outside of Fort Bend County	○	○	○	○	○	○
I would ride rail transit to destinations outside of Fort Bend County	○	○	○	○	○	○
I would ride local transit to destinations within my city and Fort Bend County	○	○	○	○	○	○
I feel safe walking to destinations within 1 mile of my home	○	○	○	○	○	○
I feel safe riding a bicycle within 5 miles of my home	○	○	○	○	○	○
I feel safe driving my personal vehicle in Fort Bend County	○	○	○	○	○	○
I would like to reduce my personal level of energy consumption and carbon footprint	○	○	○	○	○	○
I would utilize transit more frequently if the price of gas increases significantly	○	○	○	○	○	○
I would utilize transit more frequently if the service were more frequent and reliable	○	○	○	○	○	○

2012 Fort Bend Subregional Plan Survey

8. Perceptions - Development and Growth

14. Please Indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree
More mixed use development (e.g., mixed residential, shopping, office) would be beneficial to my community	○	○	○	○	○	○
The Fort Bend area has excellent housing choices for young professionals	○	○	○	○	○	○
The Fort Bend area has excellent housing choices for the aging population and retirees	○	○	○	○	○	○
The Fort Bend area has excellent housing choices for families	○	○	○	○	○	○
It is important to supporting local housing options for people of mixed income levels	○	○	○	○	○	○
Continued rapid growth in Fort Bend is a positive for the County	○	○	○	○	○	○
I have access to good parks and open space	○	○	○	○	○	○
Local parks are well maintained and have attractive facilities	○	○	○	○	○	○
Preserving agricultural and ranching land in Fort Bend is important	○	○	○	○	○	○
Freight rail is a beneficial economic driver for Fort Bend	○	○	○	○	○	○
The Fort Bend region should work to bring more local jobs to the area	○	○	○	○	○	○
I have access to attractive job opportunities in Fort Bend County	○	○	○	○	○	○
I have access to attractive job opportunities in the greater Houston region	○	○	○	○	○	○
I would like to see more housing options within walking distance to destinations	○	○	○	○	○	○
The high level of diversity is a great strength of Fort Bend	○	○	○	○	○	○

2012 Fort Bend Subregional Plan Survey

9. Page 5 - Open Feedback

15. Are there any additional issues that you would like to comment on for the Fort Bend Subregional Plan?

16. (Optional) Please provide your email address if you would like to be added to our mailing list for future events or updates related to the Fort Bend Subregional Plan. Your email will not be linked with your answers on the survey nor provided to anyone not related to the distribution of project information for this study.

Email Address:

1. Where is your primary residence?

	Response Percent	Response Count
Arcola	0.0%	0
Meadows Place	27.8%	84
Missouri City	7.9%	24
Richmond	7.0%	21
Rosenberg	7.0%	21
Stafford	1.0%	3
Sugar Land	**30.8%**	**93**
Other City in Fort Bend County	2.6%	8
Unincorporated Fort Bend County	8.3%	25
Houston	5.3%	16
Other location outside Fort Bend County	1.7%	5
Prefer not to answer	0.7%	2
	answered question	**302**
	skipped question	**0**

2. What is your Zip Code?

	Response Percent	Response Count
ZIP:	**100.0%**	**302**
	answered question	**302**
	skipped question	**0**

3. Gender?

	Response Percent	Response Count
Female	**57.0%**	**172**
Male	41.4%	125
Prefer not to answer	1.7%	5
	answered question	**302**
	skipped question	**0**

4. Age?

	Response Percent	Response Count
Under 16	0.3%	1
16-24	3.3%	10
25-44	38.1%	115
45-64	**45.0%**	**136**
65+	11.9%	36
Prefer not to answer	1.3%	4
	answered question	**302**
	skipped question	**0**

5. Household size (Please enter the number of of people living in your household by age range)?

	Response Average	Response Total	Response Count
Adults (18+)	**2.17**	**648**	298
Children (0-18)	1.07	209	195
		answered question	**298**
		skipped question	**4**

6. The primary reason you chose to live in Fort Bend is..

	Response Percent	Response Count
Quality of the local schools	14.7%	44
Attractive housing options	13.0%	39
Low cost of living	5.3%	16
Desire to live in a master planned community	2.7%	8
Access to my (or my spouses) job	17.7%	53
High quality of life including attractive parks and entertainment options	9.0%	27
Close to friends and family	**19.7%**	**59**
Safety	4.3%	13
Diversity of the population	0.7%	2
I do not live in Fort Bend	6.7%	20
Other (please specify)	6.3%	19
	answered question	**300**
	skipped question	**2**

7. How important are each of the following goals for the Fort Bend Subregional Plan?

	1 - Strongly Unimportant	2 – Unimportant	3- Neutral	4 – Important	5 - Critical	Rating Average	Rating Count
Provide increased transit choices (e.g., bus & rail service)	14.2% (41)	16.3% (47)	18.3% (53)	**32.9% (95)**	18.3% (53)	3.25	289
Support local economic development opportunities and new jobs	3.1% (9)	2.1% (6)	7.6% (22)	**48.3% (139)**	38.9% (112)	4.18	288
Reduce roadway congestion and travel delays	2.1% (6)	2.8% (8)	9.4% (27)	**46.5% (134)**	39.2% (113)	4.18	288
Improve quality of life and amenities such as parks and entertainment	2.8% (8)	2.4% (7)	17.6% (51)	**57.9% (168)**	19.3% (56)	3.89	290
Improve level of safety for all travel modes	3.5% (10)	0.3% (1)	19.1% (55)	**50.0% (144)**	27.1% (78)	3.97	288
Preserve the region's history and character	2.1% (6)	5.5% (16)	27.0% (78)	**43.9% (127)**	21.5% (62)	3.77	289
Reduce energy consumption & emissions from transportation	5.9% (17)	6.3% (18)	30.7% (88)	**40.4% (116)**	16.7% (48)	3.56	287
Encourage healthy/active travel options (e.g., walking or biking)	5.2% (15)	5.2% (15)	25.3% (73)	**41.9% (121)**	22.5% (65)	3.71	289
Encourage increased open space, natural areas and parks	2.8% (8)	4.2% (12)	20.9% (60)	**46.0% (132)**	26.1% (75)	3.89	287
Support increased variety in housing options	13.2% (38)	20.1% (58)	**33.3% (96)**	24.3% (70)	9.0% (26)	2.96	288
Improve coordination between government agencies	3.5% (10)	4.2% (12)	31.1% (89)	**39.9% (114)**	21.3% (61)	3.71	286
					Other important goals (please specify)		20
					answered question		**290**
					skipped question		**12**

8. The team working on the plan has developed the following as the proposed Vision for the Fort Bend Subregional Plan: Strengthen and grow Fort Bend County as the premier location in Texas to live, connect, prosper, learn, and enjoy an excellent quality of life while preserving the distinctive character, history and resources of the region Do you support this as the Vision for the Plan?

	Response Percent	Response Count
Yes	**96.2%**	**276**
No	3.8%	11
	answered question	**287**
	skipped question	**15**

9. (Optional) How would you improve on the vision as it had been defined?

	Response Count
	37
answered question	**37**
skipped question	**265**

10. Today, how effective is each of the following mobility factors in Fort Bend County?

	1 - Extremely Ineffective	2 - Ineffective	3 - Somewhat Ineffective	4 - Somewhat Effective	5 - Effective	6 - Extremely Effective	Rating Average	Rating Count
Roadway Network for Automobiles	0.4% (1)	2.2% (6)	8.5% (23)	38.2% (104)	**46.0% (125)**	4.8% (13)	4.42	272
Local Transit Service (Demand Response)	7.4% (20)	22.1% (60)	27.6% (75)	**30.1% (82)**	11.4% (31)	1.5% (4)	3.21	272
Commuter Transit and Park & Rides	6.6% (18)	19.9% (54)	19.9% (54)	**36.8% (100)**	15.1% (41)	1.8% (5)	3.39	272
Sidewalks	5.1% (14)	10.7% (29)	15.8% (43)	**36.4% (99)**	28.3% (77)	3.7% (10)	3.83	272
Bikeways	10.7% (29)	22.1% (60)	27.2% (74)	**27.6% (75)**	11.8% (32)	0.7% (2)	3.10	272
Freight & Goods Movement	1.1% (3)	3.3% (9)	16.9% (46)	**43.0% (117)**	32.0% (87)	3.7% (10)	4.13	272
Traffic Signal Timing & Technology	4.4% (12)	6.3% (17)	18.8% (51)	**31.3% (85)**	30.5% (83)	8.8% (24)	4.04	272
							answered question	**272**
							skipped question	**30**

11. How important do you perceive improving the following elements is to maintaining good future mobility in Fort Bend County (for example in the year 2035)?

	1 - Strongly Unimportant	2 – Unimportant	3 - Somewhat Unimportant	4 – Somewhat Important	5 – Important	6 – Critical	Rating Average	Rating Count
Roadway Network for Automobiles	1.8% (5)	0.0% (0)	1.8% (5)	10.7% (29)	33.1% (90)	**52.6% (143)**	5.31	272
Local Transit Service (Demand Response)	4.4% (12)	5.9% (16)	10.3% (28)	23.2% (63)	**38.2% (104)**	18.0% (49)	4.39	272
Local Transit Service (Circulators & Fixed routes)	4.4% (12)	4.4% (12)	9.2% (25)	23.9% (65)	**38.6% (105)**	19.5% (53)	4.46	272
Commuter Park & Rides	2.2% (6)	4.0% (11)	4.8% (13)	30.5% (83)	**39.0% (106)**	19.5% (53)	4.58	272
Commuter Rail & Suburban Light Rail	9.9% (27)	7.7% (21)	10.7% (29)	20.2% (55)	23.5% (64)	**27.9% (76)**	4.24	272
Sidewalks	0.7% (2)	2.2% (6)	5.9% (16)	21.3% (58)	**47.8% (130)**	22.1% (60)	4.79	272
Bikeways	2.2% (6)	4.4% (12)	14.3% (39)	24.3% (66)	**37.1% (101)**	17.6% (48)	4.43	272
Freight & Goods Movement	1.1% (3)	2.9% (8)	5.5% (15)	30.5% (83)	**42.6% (116)**	17.3% (47)	4.63	272
Traffic Signal Timing & Technology	0.4% (1)	0.4% (1)	1.5% (4)	12.9% (35)	**44.1% (120)**	40.8% (111)	5.22	272
Coordinated Land Use Planning (New and Redevelopment)	1.8% (5)	0.7% (2)	2.6% (7)	12.9% (35)	36.8% (100)	**45.2% (123)**	5.18	272
							answered question	**272**
							skipped question	**30**

12. Please indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree	Rating Average	Rating Count
Fort Bend's transportation network effectively balances the needs for automobile travel with the needs of transit users, pedestrians and bicyclists	10.8% (28)	15.8% (41)	20.5% (53)	**37.5% (97)**	15.1% (39)	0.4% (1)	3.31	259
My commute time to work is currently acceptable	4.2% (11)	8.1% (21)	8.9% (23)	20.1% (52)	**37.1% (96)**	21.6% (56)	4.42	259
The existing roadway network needs to be expanded to provide more capacity	1.9% (5)	6.6% (17)	10.8% (28)	29.7% (77)	**33.2% (86)**	17.8% (46)	4.39	259
Improved mobility is critical to the long term success of Fort Bend County	0.4% (1)	1.2% (3)	2.3% (6)	17.0% (44)	35.1% (91)	**44.0% (114)**	5.17	259
Where I live, I have access to attractive transportation alternatives to driving a car	**34.4% (89)**	29.0% (75)	15.8% (41)	9.7% (25)	8.9% (23)	2.3% (6)	2.37	259
Fort Bend should have commuter rail linking residents to major destinations	12.0% (31)	6.2% (16)	9.7% (25)	23.9% (62)	16.6% (43)	**31.7% (82)**	4.22	259
Fort Bend should support an increase in the number of commuter park and rides	4.2% (11)	5.4% (14)	12.4% (32)	**35.9% (93)**	25.1% (65)	17.0% (44)	4.23	259
I would like to see more roadways connecting major destinations in Fort Bend	3.1% (8)	9.3% (24)	18.5% (48)	**29.0% (75)**	23.9% (62)	16.2% (42)	4.10	259
I would be willing to pay more in taxes for better mobility	15.8% (41)	11.2% (29)	14.3% (37)	**32.4% (84)**	17.4% (45)	8.9% (23)	3.51	259
I support more toll roads to improve the roadway system	**24.7% (64)**	12.7% (33)	18.1% (47)	20.5% (53)	15.4% (40)	8.5% (22)	3.15	259
Fort Bend has better transportation than other areas in the region	3.9% (10)	6.9% (18)	15.1% (39)	**39.4% (102)**	27.8% (72)	6.9% (18)	4.01	259
There are adequate roadway crossings over the Brazos River	6.6% (17)	14.3% (37)	20.8% (54)	**34.0% (88)**	18.9% (49)	5.4% (14)	3.61	259
Freight trains are a significant impediment to getting around Fort Bend County	8.1% (21)	15.1% (39)	24.3% (63)	**26.3% (68)**	15.1% (39)	11.2% (29)	3.59	259
							answered question	**259**
							skipped question	**43**

13. Please indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree	Rating Average	Rating Count
More on-street bike lanes should be considered for area roadways	10.2% (26)	10.2% (26)	18.4% (47)	**30.9% (79)**	21.1% (54)	9.4% (24)	3.71	256
I would ride my bicycle more often if the bikeway network was improved	**20.7% (53)**	17.2% (44)	17.6% (45)	16.8% (43)	18.0% (46)	9.8% (25)	3.23	256
I would walk more often if the sidewalks were improved	8.6% (22)	12.9% (33)	16.0% (41)	**27.3% (70)**	21.5% (55)	13.7% (35)	3.81	256
I think bicycles are for recreational and exercise trips only	13.3% (34)	16.0% (41)	20.7% (53)	**22.7% (58)**	17.2% (44)	10.2% (26)	3.45	256
I would ride bus transit to destinations outside of Fort Bend County	19.9% (51)	18.0% (46)	12.9% (33)	**23.0% (59)**	16.8% (43)	9.4% (24)	3.27	256
I would ride rail transit to destinations outside of Fort Bend County	14.5% (37)	8.2% (21)	8.6% (22)	19.5% (50)	21.1% (54)	**28.1% (72)**	4.09	256
I would ride local transit to destinations within my city and Fort Bend County	15.6% (40)	15.6% (40)	16.0% (41)	18.4% (47)	**23.0% (59)**	11.3% (29)	3.52	256
I feel safe walking to destinations within 1 mile of my home	4.7% (12)	7.0% (18)	7.4% (19)	18.8% (48)	**31.6% (81)**	30.5% (78)	4.57	256
I feel safe riding a bicycle within 5 miles of my home	15.6% (40)	13.3% (34)	15.6% (40)	**19.9% (51)**	18.8% (48)	16.8% (43)	3.63	256
I feel safe driving my personal vehicle in Fort Bend County	0.8% (2)	1.6% (4)	2.0% (5)	11.3% (29)	41.8% (107)	**42.6% (109)**	5.20	256
I would like to reduce my personal level of energy consumption and carbon footprint	8.2% (21)	6.3% (16)	9.8% (25)	**28.5% (73)**	27.0% (69)	20.3% (52)	4.21	256
I would utilize transit more frequently if the price of gas increases significantly	10.2% (26)	14.8% (38)	16.0% (41)	**23.8% (61)**	20.7% (53)	14.5% (37)	3.73	256
I would utilize transit more frequently if the service were more frequent and reliable	10.9% (28)	10.2% (26)	9.8% (25)	21.1% (54)	**25.8% (66)**	22.3% (57)	4.07	256
							answered question	**256**
							skipped question	**46**

14. Please Indicate your level of agreement with each of the following statements (Range: 1-Strongly Disagree; 6: Strongly Agree)

	1 - Strongly Disagree	2 - Disagree	3 - Somewhat Disagree	4 - Somewhat Agree	5 - Agree	6 - Strongly Agree	Rating Average	Rating Count
More mixed use development (e.g., mixed residential, shopping, office) would be beneficial to my community	3.5% (9)	11.3% (29)	12.5% (32)	**28.9% (74)**	26.2% (67)	17.6% (45)	4.16	256
The Fort Bend area has excellent housing choices for young professionals	2.7% (7)	4.7% (12)	12.9% (33)	25.0% (64)	**38.3% (98)**	16.4% (42)	4.41	256
The Fort Bend area has excellent housing choices for the aging population and retirees	4.3% (11)	6.3% (16)	13.7% (35)	30.9% (79)	**34.0% (87)**	10.9% (28)	4.17	256
The Fort Bend area has excellent housing choices for families	0.0% (0)	0.4% (1)	1.6% (4)	14.8% (38)	**48.4% (124)**	34.8% (89)	5.16	256
It is important to supporting local housing options for people of mixed income levels	7.4% (19)	8.2% (21)	12.5% (32)	27.7% (71)	**30.5% (78)**	13.7% (35)	4.07	256
Continued rapid growth in Fort Bend is a positive for the County	3.9% (10)	3.9% (10)	11.7% (30)	29.3% (75)	**30.5% (78)**	20.7% (53)	4.41	256
I have access to good parks and open space	0.4% (1)	2.7% (7)	4.7% (12)	20.7% (53)	**44.5% (114)**	27.0% (69)	4.87	256
Local parks are well maintained and have attractive facilities	0.4% (1)	1.6% (4)	5.5% (14)	17.6% (45)	**45.3% (116)**	29.7% (76)	4.95	256
Preserving agricultural and ranching land in Fort Bend is important	1.6% (4)	2.0% (5)	10.9% (28)	19.5% (50)	**35.2% (90)**	30.9% (79)	4.77	256
Freight rail is a beneficial economic driver for Fort Bend	2.7% (7)	3.9% (10)	11.7% (30)	**33.2% (85)**	32.0% (82)	16.4% (42)	4.37	256
The Fort Bend region should work to bring more local jobs to the area	0.4% (1)	1.6% (4)	3.1% (8)	17.6% (45)	38.3% (98)	**39.1% (100)**	5.09	256
I have access to attractive job opportunities in Fort Bend County	2.0% (5)	5.5% (14)	15.2% (39)	30.5% (78)	**34.4% (88)**	12.5% (32)	4.27	256
I have access to attractive job opportunities in the greater Houston region	0.4% (1)	2.3% (6)	5.1% (13)	15.2% (39)	**50.0% (128)**	27.0% (69)	4.93	256
I would like to see more housing options within walking distance to destinations	4.3% (11)	8.2% (21)	18.8% (48)	**28.1% (72)**	27.0% (69)	13.7% (35)	4.06	256
The high level of diversity is a great strength of Fort Bend	2.0% (5)	4.7% (12)	10.2% (26)	24.6% (63)	**31.6% (81)**	27.0% (69)	4.60	256
							answered question	**256**
							skipped question	**46**

15. Are there any additional issues that you would like to comment on for the Fort Bend Subregional Plan?

	Response Count
	70
answered question	70
skipped question	232

16. (Optional) Please provide your email address if you would like to be added to our mailing list for future events or updates related to the Fort Bend Subregional Plan. Your email will not be linked with your answers on the survey nor provided to anyone not related to the distribution of project information for this study.

		Response Percent	Response Count
Email Address:		100.0%	78
		answered question	78
		skipped question	224

APPENDIX B INCLUDES THE FOLLOWING:

1. Summary statistics from the US Census for the seven city within the study area, as well as the City of Houston, Fort Bend County, Harris County, and the State of Texas

AB APPENDIX B - Study Area Summary Statistics

Statistics	Arcola	Meadows Place	Missouri City	Richmond	Rosenberg	Stafford	Sugar Land	Fort Bend County	Houston	Harris County	Texas
Total Population: Total	1,642	4,660	67,358	11,679	30,618	17,693	78,817	585,375	2,099,451	4,092,459	25,145,561
Households: Total	451	1,715	22,376	3,517	10,163	6,750	26,709	187,384	782,643	1,435,155	8,922,933
Households: Average household size	3.64	2.72	3.00	2.96	3.00	2.62	2.90	3.09	2.64	2.82	2.75
Median Household income	$44,750	$79,537	$81,854	$40,114	$43,120	$61,084	$101,611	$79,845	$42,962	$51,444	$49,646
Unemployed	5.10%	4.40%	4.70%	2.90%	4.50%	3.70%	3.40%	5.10%	8.00%	7.30%	7.00%
Below Poverty Level	19.10%	3.30%	9.10%	26.40%	17.60%	9%	5.30%	8.00%	21.00%	16.80%	16.80%
% Own	80%	85%	88%	57%	55%	44%	82%	80%	45%	54%	64%
% Rent	20%	15%	12%	43%	45%	56%	18%	20%	55%	43%	36%
Vacancy	11%	3%	4%	7%	9%	5%	4%	5%	12%	10%	11%
Single Family Detached	61%	95%	94%	53%	59%	50%	86%	84%	46%	57%	66%
Single Family Attached	1%	3%	3%	1%	2%	2%	3%	2%	5%	4%	3%
Apt 2-9	7%	0%	1%	9%	12%	8%	3%	3%	13%	10%	10%
Apt 10-49	1%	0%	1%	18%	12%	29%	5%	5%	24%	18%	10%
Apt 50+	0%	0%	0%	4%	4%	8%	4%	2%	11%	7%	4%
Other	30%	2%	0%	15%	11%	3%	0%	4%	1%	3%	8%
% Hispanic	62%	18%	15%	55%	60%	26%	11%	24%	43.80%	41%	38%
% White (non Hispanic)	8%	53%	25%	25%	25%	22%	44%	36%	25.60%	33%	45%
% Black (non Hispanic)	28%	9%	41%	17%	13%	27%	7%	21%	23.10%	18%	12%
% other (non Hispanic)	2%	20%	19%	2%	2%	25%	38%	19%	7.50%	8%	6%
% 17 or Under	36%	23%	26%	27%	31%	25%	25%	30%	25.90%	28%	27%
% 18-34	24%	16%	19%	27%	26%	30%	17%	20%	28.70%	26%	24%
% 35-64	35%	44%	46%	34%	34%	38%	48%	43%	36.40%	38%	38%
% 65+	5%	16%	9%	11%	10%	7%	10%	7%	9.00%	8%	10%
% No High School	15%	4%	4%	16%	14%	6%	3%	6%	14%	12%	10%
% Some High School	16%	2%	4%	16%	13%	6%	5%	6%	12%	10%	10%
% High School Graduate	36%	18%	17%	37%	36%	20%	13%	20%	23%	24%	26%
% Some College	9%	32%	25%	16%	19%	24%	18%	21%	18%	20%	22%
% Assoc. Degree	9%	5%	8%	5%	7%	8%	7%	7%	4%	6%	6%
% College Degree	13%	29%	26%	8%	8%	22%	34%	27%	18%	18%	17%
% Grad School	2%	10%	15%	3%	3%	13%	21%	14%	11%	10%	9%
% Drive Alone	82%	84%	83%	73%	81%	83%	81%	82%	74.2%	77%	79%
% Carpool	12%	5%	10%	19%	14%	11%	10%	11%	13.5%	13%	12%
%Transit	0%	2%	2%	0%	1%	2%	2%	2%	4.8%	3%	2%
%Bike	0%	0%	0%	0%	0%	0%	0%	0%	0.4%	0%	0%
%Walk	2%	0%	0%	1%	1%	1%	1%	1%	2.2.%	2%	2%
%Other	4%	10%	5%	7%	3%	3%	5%	5%	4.9%	5%	5%
% No Vehicle Available	3%	2%	1%	11%	7%	3%	2%	1%	5%	7%	6%
% 1 Vehicle Available	31%	22%	24%	36%	38%	36%	20%	14%	32%	37%	35%
% 2 Vehicles Available	42%	57%	47%	37%	38%	43%	54%	50%	41%	39%	41%
% 3 or more Vehicles Available	24%	19%	28%	15%	17%	17%	24%	35%	21%	16%	19%

Source:
- US Census, 2010
- American Community Survey 5 Year Estimates, 2005-2010

APPENDIX C INCLUDES THE FOLLOWING:

1. Roadway profiles for major highways and major thoroughfares within the study area.

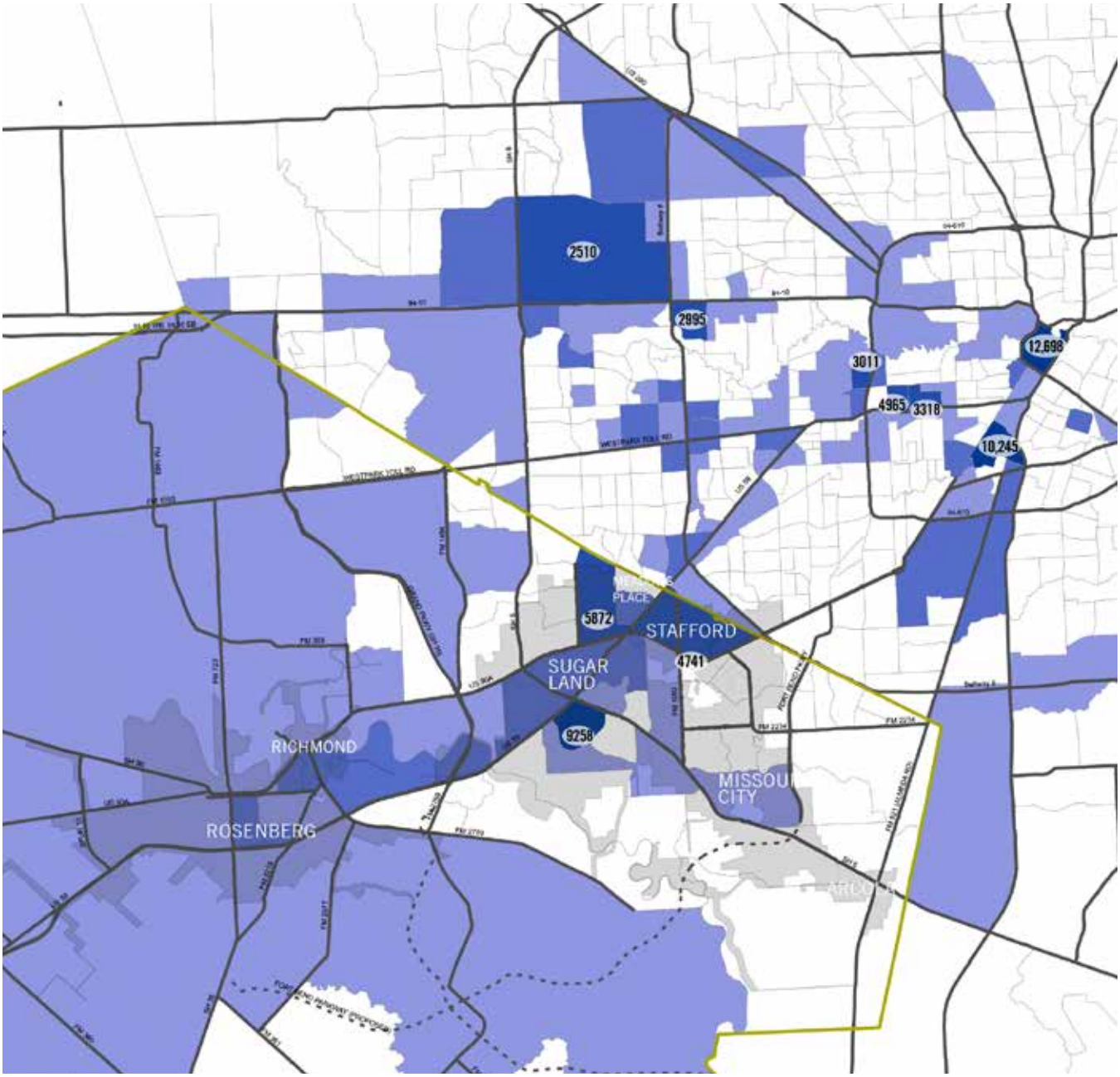
AC APPENDIX C - Study Area Roadway Profiles

	From	To	Number of Lanes	Roadway Width (Typical)	TxDot Volumes (2006 Sat. Counts)	Land Uses	Edge Type
US 90A	County Line	36/Avenue H - In Rosenberg	2	28	n/a	Rural	Open Ditch
	36/Avenue H - In Rosenberg	Millie Street - Rosenberg	4	48	n/a	Urban Commerical Retail - Rosenberg CL	Both
	Millie Street - Rosenberg	Lane Drive	4 - with TWLT	56	n/a	Urban Commerical Retail - Rosenberg CL	Open Ditch
	Lane Drive	South 3rd Street - Richmond	4	49	n/a	Urban Commerical Retail - Richmond	Curb and Gutter
	South 3rd Street - Richmond	SH 6	4 - Divided	110-130 (Typically 120-125)	2007 TxDOT Vehicle Classification Count at 3910 US 90 A: 24483	Rural Access to Suburban Single Family Res	Open Ditch
	SH 6	US 59	8 - Divided	132-134	US 90 at Brooks Street: 37350 8400 US 90A (between Savey and Capri) : 35670 10000 US 90A (between Century Square and Diary Ashland): 20610	Access to Single Family Res Commerical/Retail Light Industrial	Curb and Gutter
	US 59	FM 1092	8- Divided	122	n/a	Access to Single Family Res Commerical/Retail	Curb and Gutter
	FM 1092	Texas Parkway	8 - One Way Pairs	Westbound: 52 Eastbound: 52	n/a	Commercial/Retail	Curb and Gutter
	Texas Parkway	County Line	6 - Divided. Continuous Right Turn Lane on both Westbound and Eastbound	116-125	n/a	Rural/Vacant	Curb and Gutter
FM 2759	US 59	FM 762	2 lane with TWLT	46	1600 FM 2759: 25410	Suburban	Open Ditch
	Crabb/River Road/FM 762	Thompson Ferry/Champlin Road	2 lane	20-24	n/a	Rural	Open Ditch
State Highway 6	County Line	Hull Lane	6 - TWLT 10 foot shoulders	106	11200 S SH 6 (at West Airport): 19270	Commerical/Retail Access to Suburban Single Family Residential	Open Ditch
	Hull Lane	US 90	6 - Divided (I Think, Underconstruction in Google Earth)	110	12700 S SH 6 (between Hull and Terminal): 16150	Commerical/Retail Access to Suburban Single Family Residential	Open Ditch
	US 90	First Colonoy Blvd	7 - divided 3 North/Westbound 4 South/Eastbound	115-120	n/a	Commerical/Retail Access to Suburban Single Family Residential	Curb and Gutter
	First Colonoy Blvd	Oyster Creek Park Entrance	6 - Divided	105-108	3100 SH 6 (at Williams Trace): 50530	Commerical/Retail Access to Suburban Single Family Residential	Curb and Gutter
	Oyster Creek Park Entrance	County Line	6 - TWLT With 10 foot shoulders	108	4400 SH 6 (at Austin Parkway): 25500 7700 SH 6: 40790 2007 TxDOT Vehicle Classification Count at 11950 SH 6: 9097	Commerical/Retail Access to Suburban Single Family Residential East of Sienna Parkway: Rural	Open Ditch
US 99 (Grand Parkway)	County Line	Grand Corner Drive	4 Lane Divided Controlled Access	150	n/a	Access to Suburban Single Fam Res	Curb and Gutter
	Grand Corner Drive	West Airport Boulevard	4 Lane Divided Not Controlled Access	150-370	8600 GRAND PKWY (at Harlem Road): 20210	Access to Suburban Single Fam Res	Both
	West Airport Boulevard	US 90a	4 Lane Jersey Barrier Divided	64	11500 GRAND PKWY: 9150	Rural	Open Ditch
	US 90a	US 59	4 Lane Divided Not Controlled Access	170-370	n/a	Access to Suburban Single Fam Res Hospitals	Curb and Gutter
SH 36	County Line	US 90a	2 Lane 10 foot shoulders	46	n/a	Rural	Open Ditch
	US 90a	1st/US 36	4 Lane Urban	48	n/a	Commercial/Retail	Curb and Gutter
	1st/US 36	Avenue O	4 Lane Urban	48	n/a	Commercial/Retail/Residential	Curb and Gutter
	Avenue O	US 59	4 Lane - TWLT	64	n/a	Rural	Open Ditch
	US 59	County Line	4 Lane 10.5 foot shoulders	44-46	5000 SH 36 S (between J Meyer and Seabourne): 10210	Rural	Open Ditch
FM 762	US 90	FM 1640/Golfview Drive	4 Lane	44-46	6400 FM 762 (at FM 2759): 12030	Commercial/Retail/Residential	Open Ditch
	Golfview Drive	FM 2977 Road	4 Lane - TWLT	65	n/a	Rural Access to Suburban Single Family Res	Curb and Gutter
	FM 2977 Road	FM 2759/Crabb River Road	2 Lane 9-10 foot shoulders	42-44	n/a	Rural	Open Ditch
	FM 2759/Crabb River Road		2 Lane	25	n/a	Rural	Open Ditch
	Oak Lake Village Drive	FM 1462/Brown Woodrow Road	2 Lane	40-42	n/a	Rural	Open Ditch
FM 1092	County Line	Avenue E	6 Lane - TWLT	90	12300 MURPHY RD: 34550		
	Avenue E	SH 6	4 Lane - TWLT 10 foot shoulders	76-80	600 FM 1092 (between Staffor Run and County Place): 41070		
FM 521	County Line	Willow Street	2 Lane	42-46	15000 ALMEDA RD (just north of county line) : 20100	Rural	Open Ditch
	Willow Street	Jasmine Street	4 Lane	60	n/a	Rural	Open Ditch
	Jasmine Street	Glendale Lakes Drive	2 Lane	44	n/a	Rural	Open Ditch
	Glendale Lakes Drive	Sienna Point	2 Lane - TWLT	34	n/a	Rural	Open Ditch
	Sienna Point	County Line	2 Lane	42-44	8000 FM 521 (just south of County Line): 4920	Rural	Open Ditch
Fort Bend Parkway	County Line	Fondren	4 Lane - Jersey Barrier Divided Controlled Access 10 foot improved shoulders	80	n/a	Access to Suburban Single Fam Res	Curb and Gutter Highway Section
	Fondren	SH 6	4 Lane - Jersey Barrier Divided Controlled Access 10 foot unimproved shoulders	80	n/a	Access to Suburban Single Fam Res	Open Ditch
FM 1093/Front Street	FM 359/Fulshear	Cross Creek Ranch Blvd	2 lane with TWLT	46	n/a	Rural	Open Ditch
	Cross Creek Ranch Blvd	FM 723	2 lane	46	n/a	Rural	Open Ditch
	FM 723	Gaston Road	2 lane	26	n/a	Rural	Open Ditch
Westpark Tollway	Grand Parkway	County Line	4 lane divided highway access controlled	80	21800 FM 1093 (at Grand Corner Drive): 10,140	Suburban	Curb and Gutter Highway Section
FM 723	FM 1093/Front Street	FM 359	2 lane	26	n/a	Rural	Open Ditch
	FM 359	Brazos River	2 lane	42-44	n/a	Rural	Open Ditch
	Brazos River	SH 36	2 lane	44	n/a	Residential (Rosenberg CL)	Curb and Gutter
US 59	County Line	Grand Parkway	4 Lane Divided	170-245	2007 TxDOT Vehicle Classification Counts at 22400 US 59 between FM 762 and Crabb River Road: 39605	rural	Open Ditch
	Grand Parkway	County Line	8 lane Divided with 2 HOV. Highway	180-220	13600 S US 59 at Diary Ashford: 185200 US 59 at Corporate: 219640 US 59 between Kirkwood and West Airport: 222940	Suburban	Curb and Gutter Highway Section

APPENDIX D INCLUDES THE FOLLOWING:

1. Journey to Work Assessment for Fort Bend County: Figures AD.1 and AD.2
2. Journey to Work Assessment for Fort Bend County Central Region (Meadows Place and Sugar Land): Figures AD.3 and AD.4
3. Journey to Work Assessment for Fort Bend County Southeast Region (Arcola, Missouri City, and Stafford): Figures AD.5 and AD.6
4. Journey to Work Assessment for Fort Bend County West Region (Richmond and Rosenberg): Figures AD.7 and AD. 8

WHERE EMPLOYEES OF FORT BEND COUNTY WORK



LEGEND

- Fort Bend County
- Seven Cities' City Limits

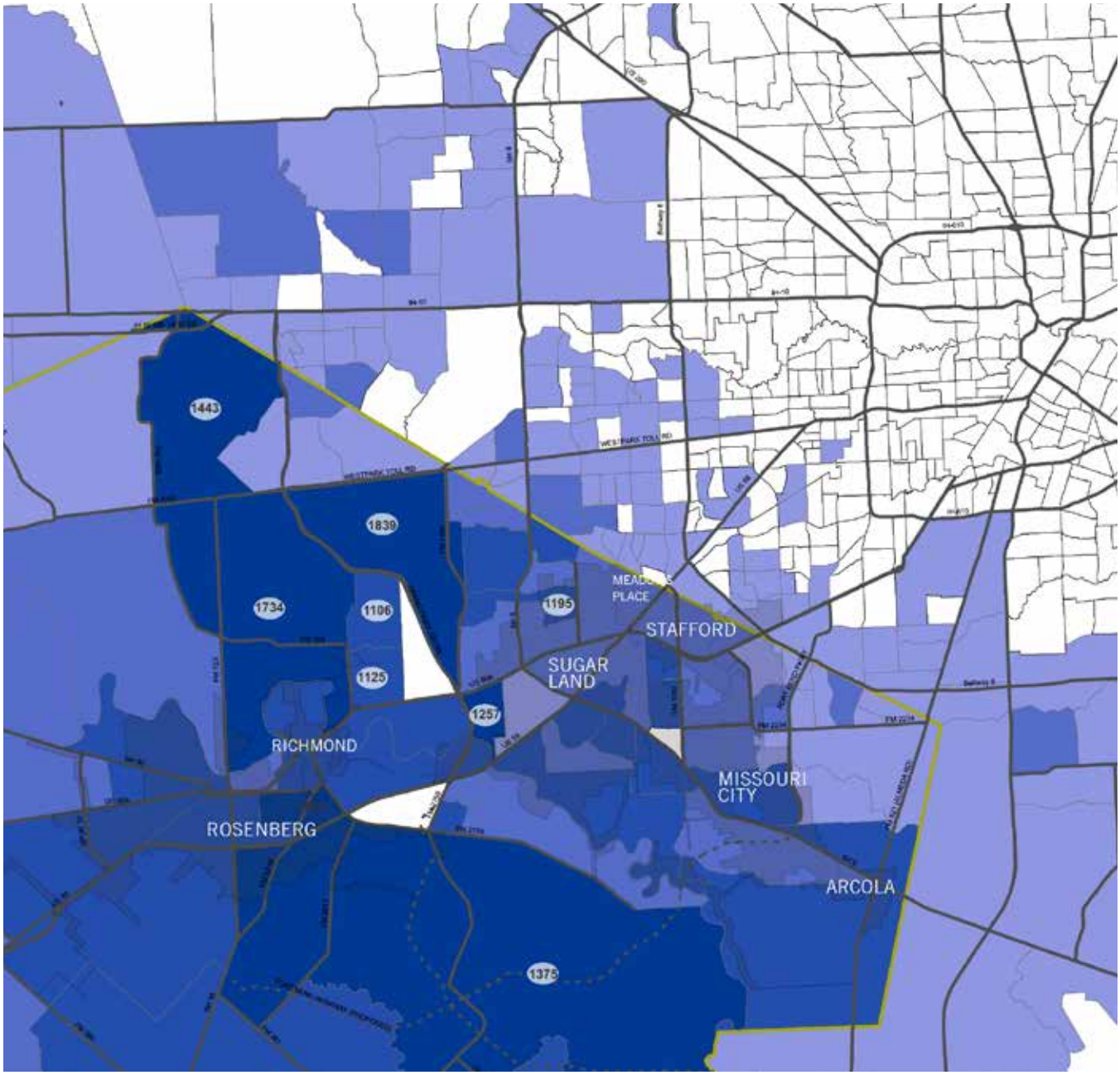
Work Track Flow:
Living in Fort Bend County

- 1 - 500
- 501- 1000
- 1001 - 2500
- 2501 - 6000
- 6000 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.1: Commute Trip Destinations for Employees Living in Fort Bend County

WHERE EMPLOYEES OF FORT BEND COUNTY LIVE



LEGEND

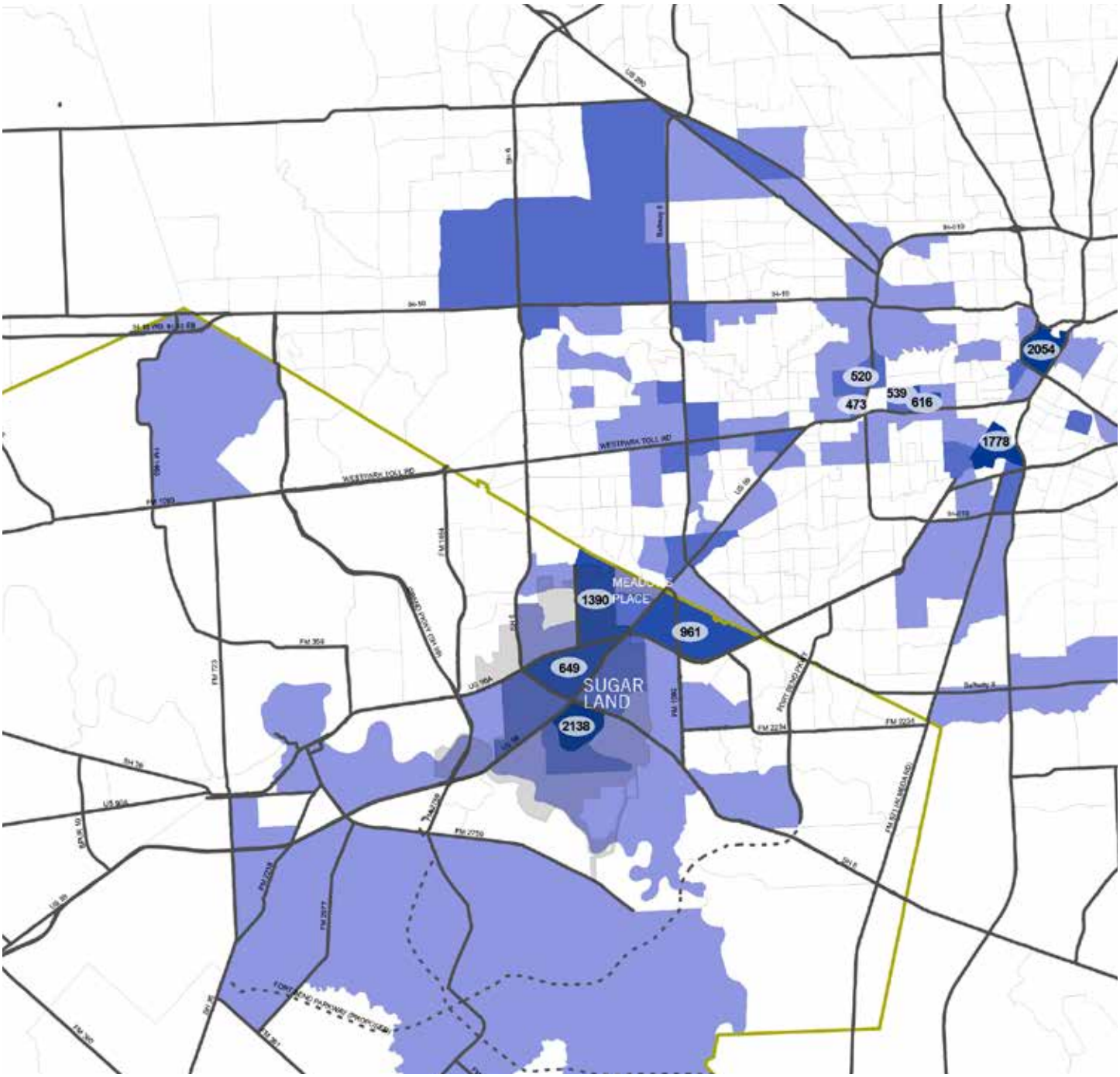
- Fort Bend County
- Seven Cities' City Limits

Work Track Flow:
Working in Fort Bend County

- 2 - 100
- 101 - 300
- 301 - 700
- 701 - 1200
- 1201+

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.2: Commute Trip Origins for Employees Working in Fort Bend County



LEGEND

- Fort Bend County
- Meadows Place and Sugar Land City Limits

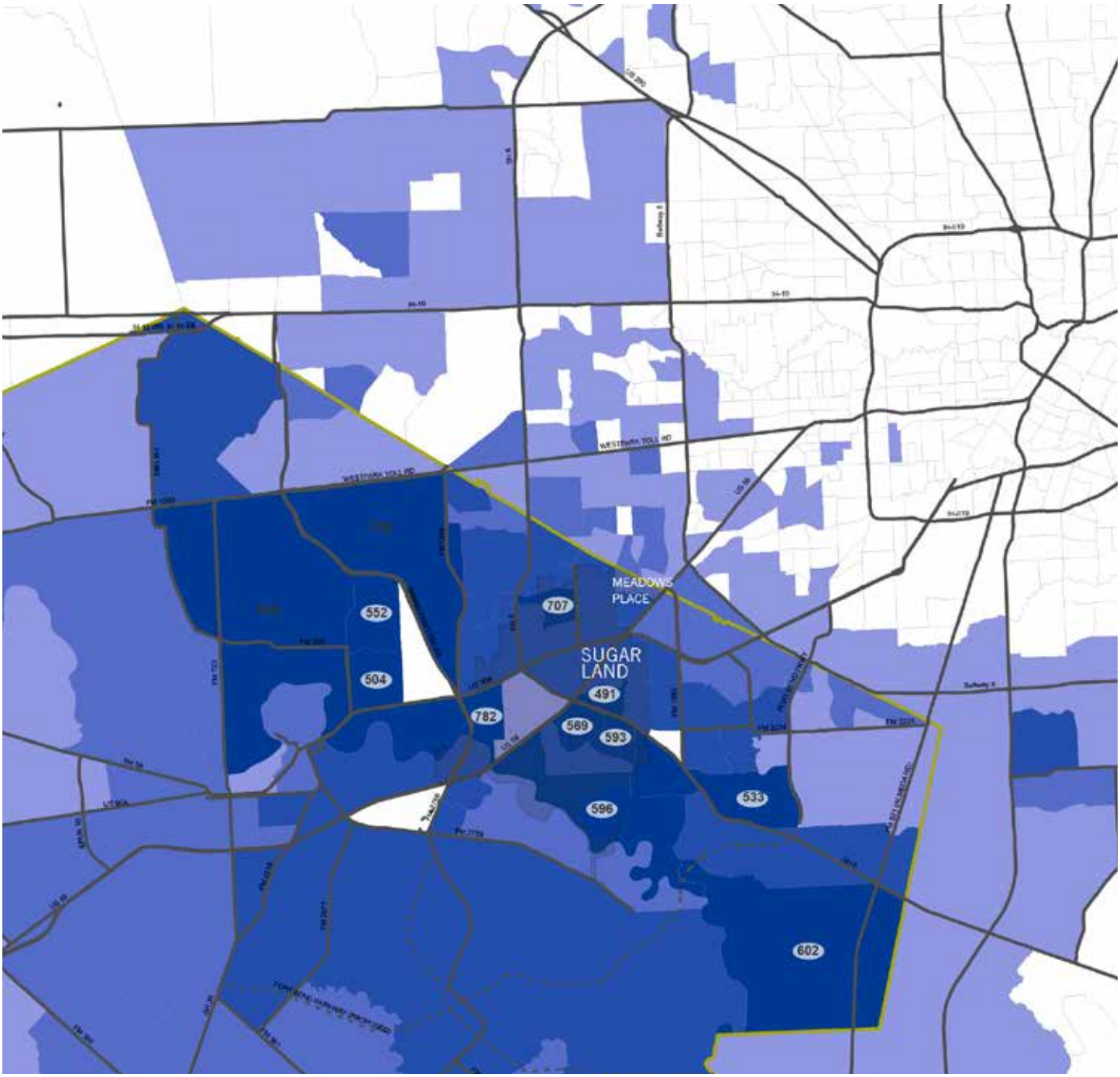
Work Track Flow: Living in Central Region

- 1 - 50
- 51 - 175
- 176 - 550
- 551 - 1525
- 1526 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.3: Commute Trip Destinations for Employees Living in Fort Bend County Central Region

CENTRAL REGION - WHERE EMPLOYEES LIVE



LEGEND

- Fort Bend County
- Meadows Place and Sugar Land City Limits

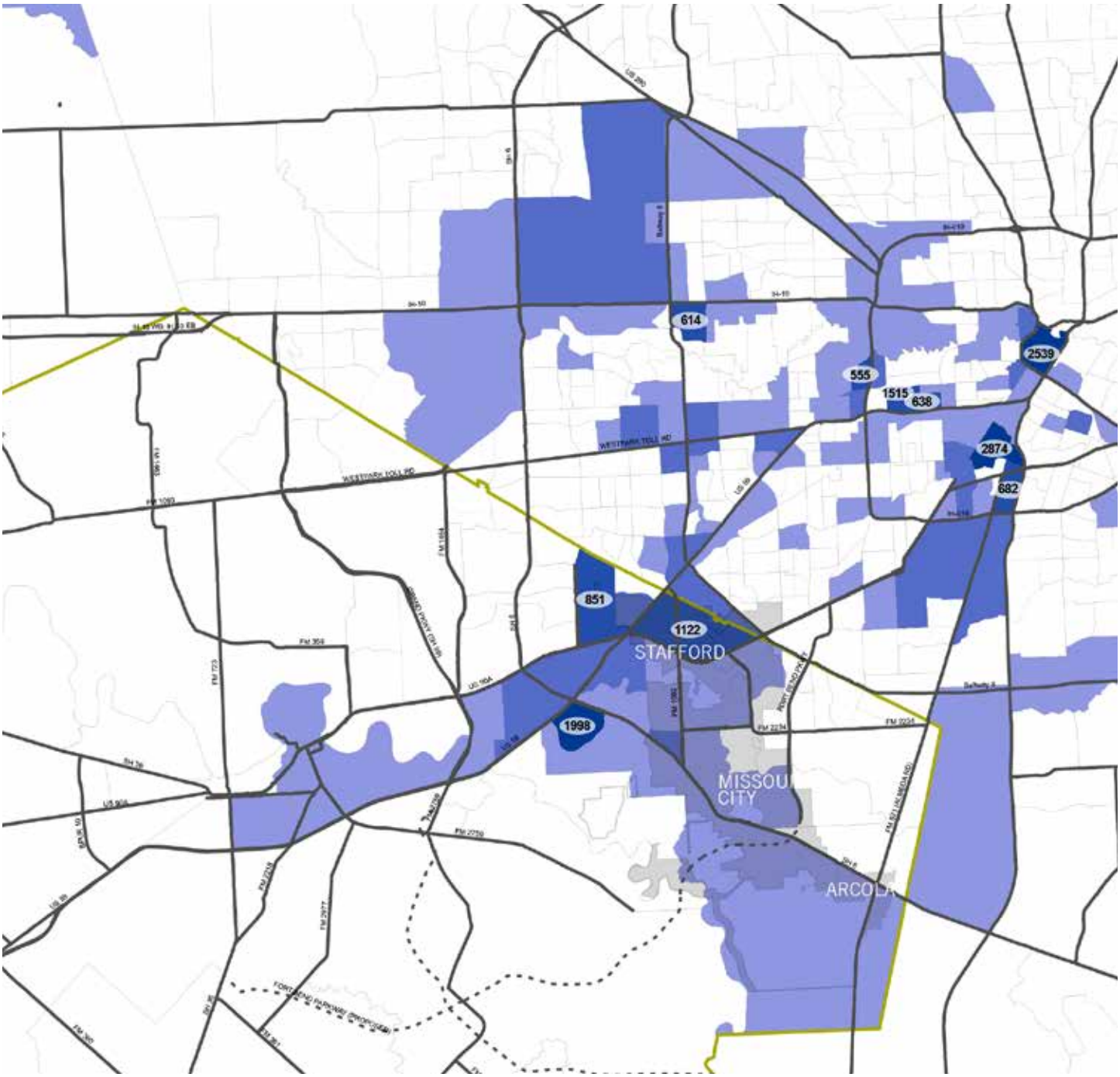
Work Track Flow:
Working in Central Region

- 1 - 40
- 41 - 100
- 101 - 250
- 251 - 475
- 475 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.4: Commute Trip Origins for Employees Working in Fort Bend County Central Region

SOUTHEAST REGION - WHERE RESIDENTS WORK



LEGEND

- Fort Bend County
- Arcola, Missouri City, and Stafford City Limits

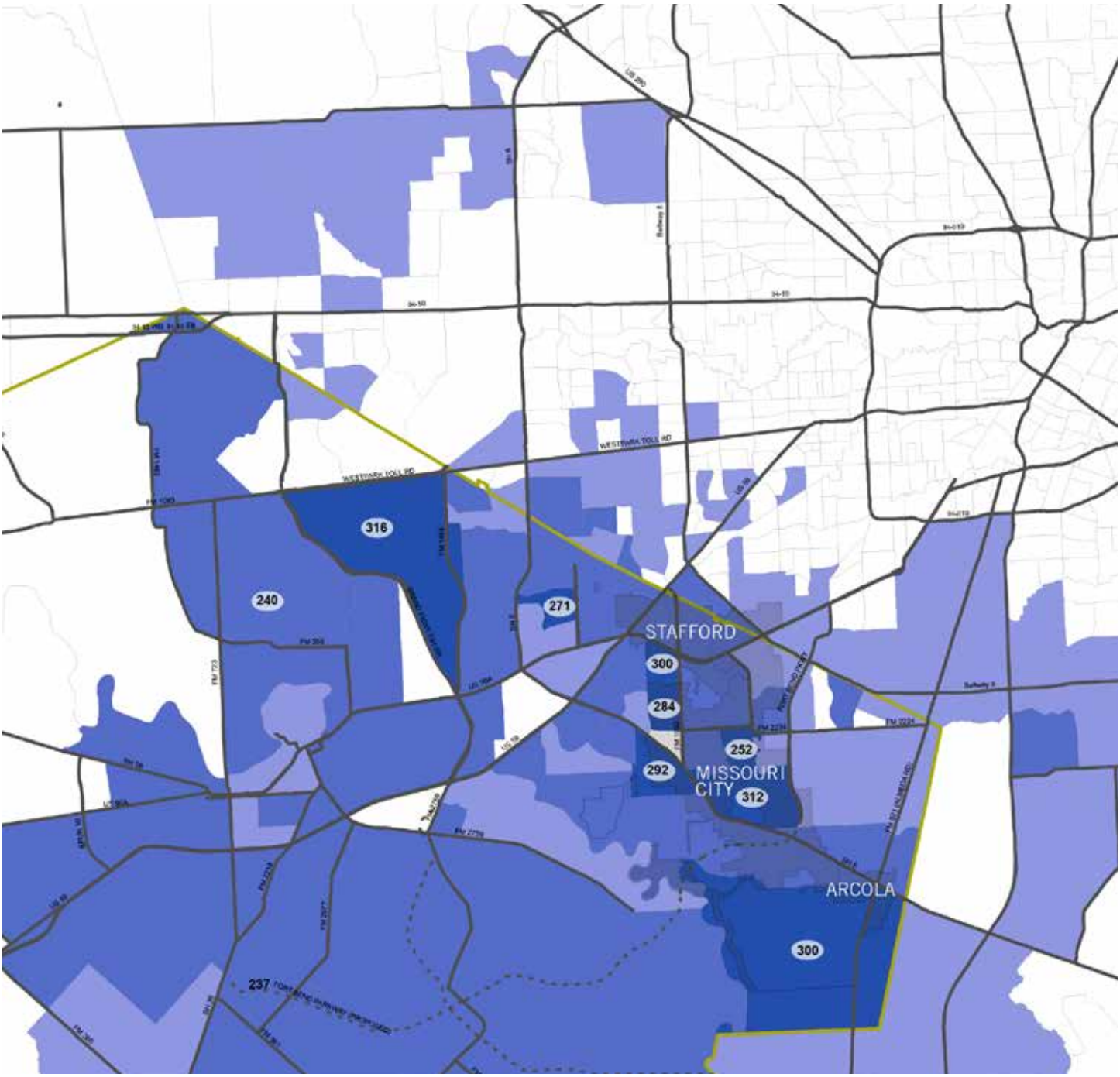
Work Track Flow:
Living in Southeast Region

- 1 - 50
- 51 - 175
- 176 - 550
- 551 - 1525
- 1526 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.5: Commute Trip Destinations for Employees Living in Fort Bend County Southeast Region

SOUTHEAST REGION - WHERE EMPLOYEES LIVE



LEGEND

- Fort Bend County
- Arcola, Missouri City, and Stafford City Limits

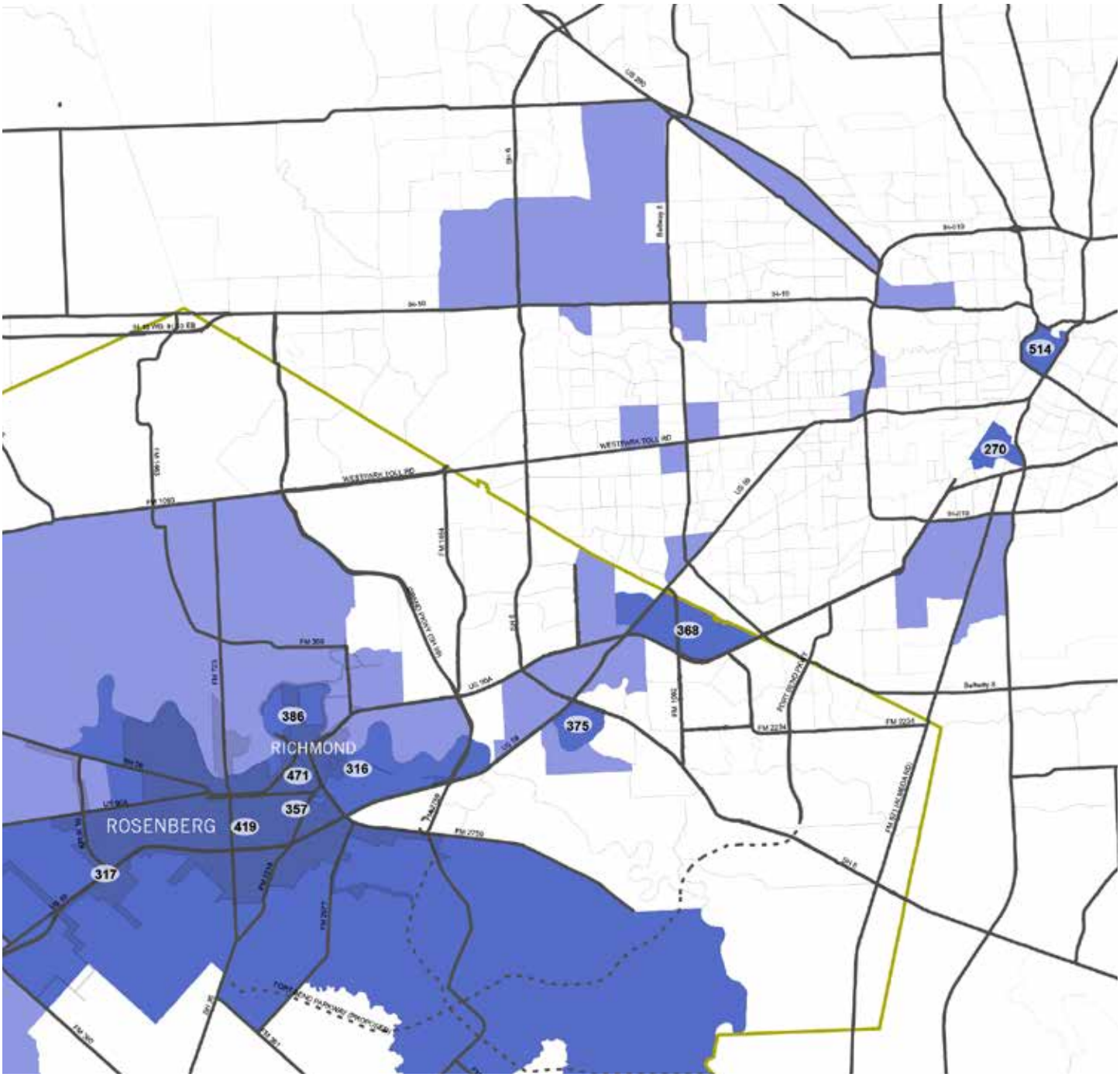
Work Track Flow:
Working in Southeast Region

- 1 - 40
- 41 - 100
- 101 - 250
- 251 - 475
- 475 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.6: Commute Trip Origins for Employees Working in Fort Bend County Southeast Region

WEST REGION - WHERE RESIDENTS WORK



LEGEND

- Fort Bend County
- Richmond and Rosenberg City Limits

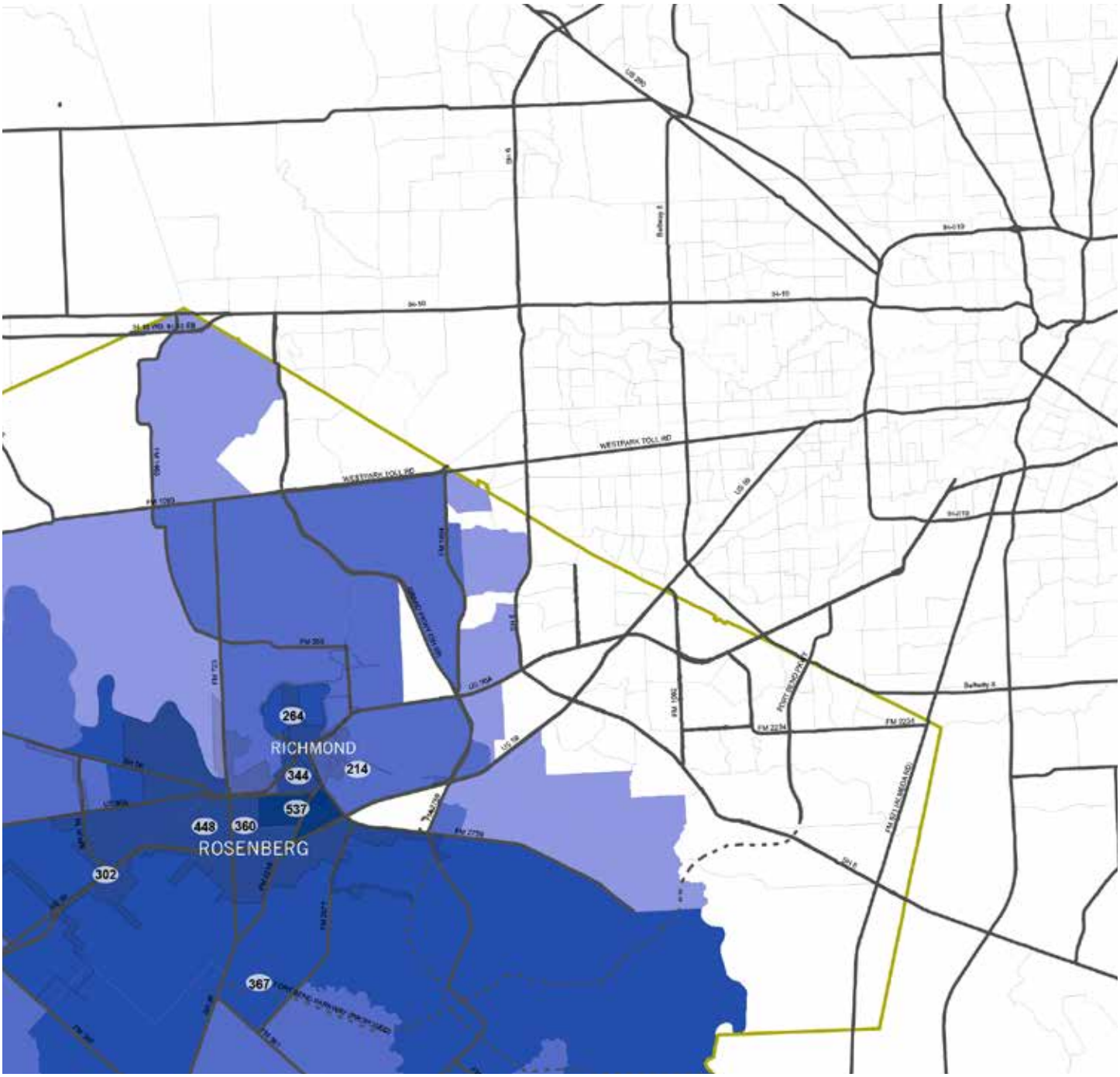
Work Track Flow: Living in West Region

- 1 - 50
- 51 - 175
- 176 - 550
- 551 - 1525
- 1526 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.7: Commute Trip Destinations for Employees Living in Fort Bend County West Region

WEST REGION - WHERE EMPLOYEES LIVE



LEGEND

- Fort Bend County
- Richmond and Rosenberg City Limits

Work Track Flow: Working in West Region

- 1 - 40
- 41 - 100
- 101 - 250
- 251 - 475
- 475 +

Source: United States Census Bureau's Longitudinal Employer-Household Dynamics (LEHD), 2010

Figure AD.8: Commute Trip Origins for Employees Working in Fort Bend County West Region

APPENDIX E INCLUDES THE FOLLOWING:

1. A table of all future **capacity enhancing** roadway projects in the Fort Bend SPI Study Area included in the 2035 RTP Updated. Capacity enhancing projects include **access management improvements**, **added capacity projects**, and **traffic engineering projects**.
2. A table of all future **capital** (transit) projects in the Fort Bend SPI Study Area included in the 2035 RTP Updated
3. A table of all future **pedestrian** and **bicycle** projects in the Fort Bend SPI Study Area included in the 2035 RTP Update
4. A table including all **system preservation** and other non capacity enhancing projects in the Fort Bend SPI Study Area included in the 2035 RTP Update

CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
ACCESS MANAGEMENT IMPROVEMENT												
Access Management Improvements		15418	FM 1092	Missouri City City Limit	Hampton Drive	2014 TIP	Construction Of Access Management (Medians) Consisting Of Grading, Drainage, Signing, and Pavement Markings	4	4	City Of Missouri City	10/1/2013	$1,859,949
Access Management Improvements		15421	FM 2234	US 90A	Turtle Creek Drive	2013 TIP	Intersection Improvements: Signal System Upgrade And Reconfiguration	2	2	City Of Missouri City	8/1/2013	$2,752,386
ADDED CAPACITY												
Added Capacity	Grade Separation	15562	SH 99/Grand Parkway	Morton Road/West Bellfort	South of Peek Drive	2013 TIP	Construct 2-Lane NB Frontage Road And U-Turn At Morton Rd/W Bellfort	0	2	Fort Bend County	9/1/2012	$5,136,768
Added Capacity	New Roadway Construction	7741	10th Street	Brazos River North Bank	US 90A	2020 RTP	Construct 2-Lane Concrete Divided W/ Curb & Gutter (In Sections)	2	4	City Of Richmond	1/1/2020	$10,939,400
Added Capacity	New Roadway Construction	6	Bellaire Boulevard	FM 1464	San Pablo	2017 RTP	Construct New 4-Lane Road	0	4	Fort Bend County	1/1/2017	$3,854,686
Added Capacity	New Roadway Construction	7	Bellaire Boulevard	SH 99	FM 1464	2018 RTP	Construct 4-Lane Blvd (In Sections)	0	4	Fort Bend County	1/1/2018	$40,503,077
Added Capacity	New Roadway Construction	13586	Cash Road	Trinity Road	Kirkwood Road at Wright Road	2013 TIP	Construct New 4-Lane Concrete Blvd from Existing Termini at Trinity Rd to Kirkwood, Includes Intersection Modifications on Kirkwood	0	4	City Of Stafford	9/1/2012	$1,076,411
Added Capacity	New Roadway Construction	11183	East/West Arterial	Burney Rd	SH 6	2012 LET	Construct 4-Lane Boulevard with Sidewalks	0	4	City Of Sugar Land	9/1/2011	$4,500,000
Added Capacity	New Roadway Construction	634	Fondren Road	Hillcroft	FM 2234 / McHard Road	2013 TIP	New Location 4-Lane Curb & Gutter Boulevard with Storm Sewer	0	4	City Of Houston	1/1/2013	$11,226,000
Added Capacity	New Roadway Construction	919	Fort Bend Parkway Toll Road	Sienna Pkwy	SH 99	2025 RTP	Construct 4-Lane Toll Road and Brazos River Bridge	0	4	FBCTRA	9/1/2024	$240,861,162
Added Capacity	New Roadway Construction	15563	Fort Bend Parkway Toll Road	SH 6	Sienna Parkway	2012 TIP	Construct 4-Lane Toll Road	0	4	Fort Bend County	8/1/2012	$18,000,000
Added Capacity	New Roadway Construction	400	Independence Boulevard	320' E Of GCWA Canal	Staffordshire Rd	2015 TIP	Construct New 4-Lane Roadway (In Sections)	0	4	City Of Missouri City	1/1/2015	$6,700,000
Added Capacity	New Roadway Construction	13740	Knight Road	Watts Plantation	McKeever Rd	2023 RTP	Extend 2-Lane Roadway	0	2	City Of Missouri City	9/1/2022	$4,400,000
Added Capacity	New Roadway Construction	652	Lake Olympia Parkway	Fort Bend Parkway Toll Road	FM 521	2018 RTP	Construct 4-Lane Undivided Road	0	4	Fort Bend County	1/1/2018	$35,935,457
Added Capacity	New Roadway Construction	7809	Lamar Drive	FM 1640	FM 2218	2016 TIP	Construct 4-Lane Roadway on New Location	0	4	City Of Richmond	1/1/2016	$366,376
Added Capacity	New Roadway Construction	437	Lexington Drive	University Blvd	Oxbow Dr	2011 LET	Construct the 1/2 Bridge over Ditch H	0	4	City Of Sugar Land	4/1/2011	$2,446,171
Added Capacity	New Roadway Construction	15560	Mason Road	SH 99	Skinner Ln	2014 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2014	$6,500,000
Added Capacity	New Roadway Construction	11182	Meadowcroft Boulevard	University Blvd	First Colony Blvd	2013 TIP	Construct Roadway Extension (Sugar Land to Fund 50% of the Bridge and 100% of the Roadway Section)	0	4	City Of Sugar Land	10/1/2012	$2,281,292

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CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	New Roadway Construction	266	SH 99/Grand Parkway	FM 762	Brazoria County Line	2017 RTP	Seg C-2: Construct 4-Lane Tollway with Non-Continuous Two 2-Lane Frontage Roads and Interchanges	0	4	FBCTRA	3/1/2017	$279,800,000
Added Capacity	New Roadway Construction	10128	SH 99/Grand Parkway	US 59	FM 762	2017 RTP	Seg C-1: Construct 4-Lane Tollway With Non-Continuous Two 2-Lane Frontage Roads And Interchanges	0	4	FBCTRA	1/1/2017	$217,600,000
Added Capacity	New Roadway Construction	11378	SH 99/Grand Parkway	At FM 1093 (Westpark Tollway) Interchange		2019 RTP	Construct 4 Tolled DC'S (SB-WB,WB-SB,NB-WB,EB-SB)	2	2	FBCTRA	9/1/2018	$78,800,000
Added Capacity	New Roadway Construction	15224	SH 99/Grand Parkway	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000
Added Capacity	New Roadway Construction	12380	Sienna Parkway	Waters Lake Blvd	FM 521	2020 RTP	Extend 4-Lane Roadway	0	4	City Of Missouri City	1/1/2020	$36,700,000
Added Capacity	New Roadway Construction	13719	Sienna Ranch Road	SH 6	West of Sienna Parkway	2015 LET	Extend 4-Lane Roadway	0	4	City Of Missouri City	9/1/2011	$7,414,853
Added Capacity	New Roadway Construction	13744	Sienna Spring Road	Hagerson Rd	Sienna Parkway	2015 LET	Extend 4-Lane Roadway	0	4	City Of Missouri City	9/1/2011	$7,546,212
Added Capacity	New Roadway Construction	464	Spur 10	Waller County Line	SH 36	2018 RTP	Extension of 2-Lane Roadway	0	2	Fort Bend County	1/1/2020	$14,317,318
Added Capacity	New Roadway Construction	15572	Spur 529	FM 1640	US 90A	2017 RTP	Realign and Widen to 4 Lanes	2	4	TxDOT Houston District	9/1/2016	$1,919,000
Added Capacity	New Roadway Construction	475	Stadium Drive	N of Oyster Creek	Burney Road	2015 LET	Construct 4-Lane Roadway	0	4	City Of Sugar Land	1/1/2015	$17,000,000
Added Capacity	New Roadway Construction	408	Trammel Fresno Rd	Vicksburg Blvd	Fort Bend Parkway	2014 TIP	Construct 4-Lane Concrete Divided w/ Storm Sewers, Esplanades, Curb & Gutter, Street Lights & Landscaping, and Construct 2-Lane Concrete Roadways to Existing Interchange at Fort Bend Pkwy	2	4	City Of Missouri City	2/1/2014	$8,933,357
Added Capacity	New Roadway Construction	431	University Blvd	US 90A	Current Terminus S Of Ditch-H	2011 TIP	Construct 4-Lane Roadway	0	4	City Of Sugar Land	1/1/2011	$4,665,115
Added Capacity	New Roadway Construction	7051	University Blvd	US 59	Commonwealth Blvd	2023 RTP	Phase 2: Widen to 6 & 8-Lane Divided Roadway (In Sections)	4	8	City Of Sugar Land	1/1/2023	$4,500,000
Added Capacity	New Roadway Construction	7052	University Blvd	Commonwealth Blvd	SE Corner Of Brazos Landing Subdivision	2011 LET	Construct New 4-Lane Curb & Gutter Section	0	4	City Of Sugar Land	6/1/2011	$23,581,900
Added Capacity	New Roadway Construction	15431	University Blvd	N of Oyster Creek	US 90A	2018 RTP	Construct 4-Lane Roadway	0	4	City Of Sugar Land	8/1/2018	$4,000,000
Added Capacity	New Roadway Construction	15558	US 90A	Spur 529	Millie Street	2015 LET	WB One-way Pair, Criss-cross, Intersections and 1.5" Overlay	4	4	TxDOT Houston District	3/1/2015	$2,620,000
Added Capacity	New Roadway Construction	13728	Waters Lake Boulevard	Sienna Pkwy	Brazoria County Line	2023 RTP	Construct 4-Lane Roadway	0	4	City Of Missouri City	1/1/2023	$18,900,000
Added Capacity	New Roadway Construction	13742	Waters Lake Boulevard	Existing Terminus	South of Sienna Parkway	2020 RTP	Extend 4-Lane Boulevard	0	4	City Of Missouri City	1/1/2020	$5,550,000
Added Capacity	New Roadway Construction	13739	Watts Plantation Road	Knight Rd	SH 6	2024 RTP	Extend 2-Lane Roadway	0	2	City Of Missouri City	1/1/2024	$4,550,000

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CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	New Roadway Construction	487	Westpark Tollway	SH 99	West of FM 723/ Spring Greek Drive	2018 RTP	Construct 4 Toll Lanes and One Direct Connector	0	4	Fort Bend County	8/1/2018	$75,018,639
Added Capacity	New Roadway Construction	8014	Westpark Tollway	West of FM 723/ Spring Green Drive	West of Cross Creek Ranch Boulevard	2020 RTP	Construct 4 Toll Lanes	0	4	Fort Bend County	8/1/2020	$44,712,495
Added Capacity	New Roadway Construction	7806	Williams Way Boulevard	US 59	FM 762	2016 TIP	Widen to 4-Lane Divided Roadway and Extend 4-Lane Divided Roadway in New Location	2	4	Fort Bend County	1/1/2016	$10,956,369
Added Capacity	Roadway Widening	972	Beechnut Street	Addicks Clodine Rd	Harris County County Line	2018 RTP	Widen To 6-Lane Divided	4	6	Fort Bend County	1/1/2018	$6,173,526
Added Capacity	Roadway Widening	13754	Beechnut Street	SH 99	FM 1464	2019 RTP	Widen from 2-Lane to 4-Lane Rural Roadway	2	4	Fort Bend County	12/1/2018	$35,090,118
Added Capacity	Roadway Widening	977	West Bellfort	FM 1876	Harris County County Line	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$7,700,455
Added Capacity	Roadway Widening	13747	Benton Road	FM 762	Meyers Road	2017 RTP	Reconstruct Existing 2-Lane Rural Roadway to 4-Lane Curb & Gutter Boulevard with Storm Sewer	2	4	City Of Rosenberg	1/1/2017	$1,345,706
Added Capacity	Roadway Widening	13585	Brand Lane	US 90A	Avenue E	2013 TIP	Widen 2-Lane Asphalt Roadway to a 4-Lane Concrete Undivided Roadway with Underground Storm Sewer	2	4	Fort Bend County	8/1/2013	$3,500,000
Added Capacity	Roadway Widening	13748	Bryan Road	FM 2218	Spacek Street	2012 TIP	Reconstruct Existing 2-Lane Rural Roadway to 3-Lane Curb & Gutter with Storm Sewer	2	3	City Of Rosenberg	6/1/2012	$1,695,124
Added Capacity	Roadway Widening	9	Burney Road	Old Richmond Rd	West Airport Boulevard	2013 TIP	Reconstruct from 2-Lane To 4-Lane Divided Concrete Section with Storm Sewer	2	4	Fort Bend County	1/1/2013	$4,650,880
Added Capacity	Roadway Widening	13749	Clodine Reddick Road	FM 1464	Old FM 1464	2023 RTP	Reconstruct 2-Lane Roadway To 4-Lane Curb & Gutter with Storm Sewer	2	4	Fort Bend County	1/1/2023	$7,457,363
Added Capacity	Roadway Widening	973	Dairy Ashford Road	Harris County County Line	West Airport Boulevard	2018 RTP	Widen to 6-Lane Divided Roadway	4	6	Fort Bend County	1/1/2018	$3,804,156
Added Capacity	Roadway Widening	12624	Dairy Ashford Road	Julie Rivers Dr	US 59	2014 TIP	Widen from 4 To 6-Lanes	4	6	City Of Sugar Land	8/1/2014	$2,570,000
Added Capacity	Roadway Widening	13641	FM 1092/Murphy Road	US 90A	Lexington Boulevard	2020 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts and Bridge Widening	4	6	City Of Missouri City	1/1/2020	$10,100,000
Added Capacity	Roadway Widening	13642	FM 1092/Murphy Road	Lexington Blvd	Cartwright Road	2020 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts	4	6	City Of Missouri City	1/1/2020	$10,100,000
Added Capacity	Roadway Widening	13643	FM 1092/Murphy Road	Cartwright Rd	SH 6	2022 RTP	Reconstruct 4-Lane Divided Roadway to 6-Lane Divided Curb & Gutter Roadway with Closed Storm Drains and Cross-Drainage Culverts and Bridge Widening	4	6	City Of Missouri City	1/1/2020	$9,914,231
Added Capacity	Roadway Widening	14738	FM 1093	James Ln	FM 1093/FM 359	2014 TIP	Widen To 4 Lanes Arterial, Non-Toll	2	4	Fort Bend County	10/1/2013	$3,978,303
Added Capacity	Roadway Widening	14739	FM 1093	SH 99	FM 1463/FM 359	2013 TIP	Construct Two 2-Lane Frontage Roads	0	4	Fort Bend County	10/1/2012	$30,175,693
Added Capacity	Roadway Widening	15	FM 2234	Fort Bend Parkway Toll Road	FM 521	2025 RTP	Widen 2 Lanes to 4-Lane Divided Rural Section	2	4	TxDOT Houston District	8/1/2025	$47,483,555
Added Capacity	Roadway Widening	980	FM 2234	US 90A	Lexington Boulevard	2020 RTP	Widen From 4 to 6-Lanes Undivided	4	6	City Of Missouri City	1/1/2020	$11,350,000
Added Capacity	Roadway Widening	15419	FM 2234	FM 3345	Fort Bend Parkway	2013 TIP	Reconstruct and Widen from 2 Lanes to 4-Lane Divided Rural Section (Raised Median)	2	4	TxDOT Houston District	6/1/2013	$12,746,000

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CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	14711	FM 2759	US 59	FM 762/FM 2759 on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748
Added Capacity	Roadway Widening	14736	FM 359	FM 1463/FM 359	West of Cross Creek Ranch Boulevard	2014 TIP	Construct Two 2-Lane Frontage Roads	2	4	Fort Bend County	10/1/2013	$15,322,479
Added Capacity	Roadway Widening	14737	FM 359	West of Cross Creek Ranch Blvd	FM 1093/FM 359	2014 TIP	Widen to 4 Lanes Arterial, Non-toll	2	4	Fort Bend County	10/1/2013	$11,956,255
Added Capacity	Roadway Widening	803	FM 762	US 59	Crabb River Road	2034 RTP	Widen 2-Lane to 4-Lane Divided Suburban Arterial	2	4	TxDOT Houston District	9/1/2033	$57,491,183
Added Capacity	Roadway Widening	14710	FM 762	FM 762/FM 2759	South of LCISD School on Crabb River Road	2013 TIP	Widen to 4-Lanes Divided	2	4	Fort Bend County	5/1/2013	$10,950,748
Added Capacity	Roadway Widening	12622	Harlem Rd	SH 99	US 90A	2020 RTP	Widen from 4 to 6 Lanes with Bridges	4	6	Fort Bend County	6/6/2020	$33,892,128
Added Capacity	Roadway Widening	14753	Harlem Rd	SH 99	Plantation Drive	2013 TIP	Reconstruct Existing 2-Lane to 4-Lane Curb & Gutter with Open Ditch Drainage.	2	4	Fort Bend County	4/1/2013	$5,948,800
Added Capacity	Roadway Widening	11658	Mason Rd	Skinner Ln	FM 359	2012 TIP	Construct 4-Lane Concrete Curb&Gutter Roadway Partially in New Location	2	4	Fort Bend County	1/1/2012	$4,000,000
Added Capacity	Roadway Widening	7732	McKeever Road	SH 6	Sienna Parkway	2023 RTP	Widen from 2 To 4-Lanes and Realignment	2	4	City Of Missouri City	1/1/2023	$19,300,000
Added Capacity	Roadway Widening	11197	New Territory Blvd	LID 17	University Boulevard	2019 RTP	Widen to 6-Lane Blvd (Phase II)	4	6	City Of Sugar Land	1/1/2019	$1,105,105
Added Capacity	Roadway Widening	11644	Palmetto Road/CR 59	FM 521	Brazoria County Line	2020 RTP	Widen to 4-Lane Divided	2	4	City Of Pearland	1/1/2020	$1,962,973
Added Capacity	Roadway Widening	13760	Post Oak Rd S	BW 8	FM 2234	2013 TIP	Design and Construction of Two Additional Lanes within Existing Right-Of-Way	4	6	City Of Houston	1/1/2013	$3,076,842
Added Capacity	Roadway Widening	18	Scenic River Dr	Commonwealth Blvd	University Boulevard	2020 RTP	Reconstruct & Widen to 4-Lane Blvd	2	4	City Of Sugar Land	9/1/2019	$3,000,000
Added Capacity	Roadway Widening	15383	SH 6	Lexington Blvd	Brooks Street	2015 TIP	Widen From 6 to 8-Lanes	6	8	City Of Sugar Land	2/1/2015	$7,590,000
Added Capacity	Roadway Widening	14239	SH 99	At FM 1093/ Westpark Tollway		2018 RTP	Construct 2 Direct Connectors (Toll) (WB-NB, NB-EB) (Seg. D)	2	4	FBCTRA	8/1/2018	$38,400,000
Added Capacity	Roadway Widening	10005	Staffordshire Rd	5th Street	Lexington Blvd/ Scanlin Rd	2013 TIP	Widen 2-Lane Roadway to 4-Lane Blvd Section with Curb And Gutter	2	4	City Of Stafford	8/1/2013	$3,930,576
Added Capacity	Roadway Widening	13637	Texas Parkway/FM 2234	Lexington Blvd	Cartwright Road	2020 RTP	Widen 4 to 6-Lanes Divided	4	6	City Of Missouri City	1/1/2020	$9,550,000
Added Capacity	Roadway Widening	656	Trammel Fresno Rd	Sienna Pkwy	SH 6	2018 RTP	Construct 4-Lane Undivided Road	2	4	City Of Missouri City	1/1/2018	$2,737,939
Added Capacity	Roadway Widening	7803	Trammel Fresno Rd	Fort Bend Pkwy	FM 521	2014 TIP	Widen Existing Roadway from 2 To 4-Lanes Rural Roadway	2	4	Fort Bend County	9/1/2013	$25,435,300
Added Capacity	Roadway Widening	7053	University Blvd	Commonwealth Blvd	SH 6	2025 RTP	Widen To 5-Lane & 6-Lane (Phase 2)	4	6	City Of Sugar Land	1/1/2025	$8,600,000
Added Capacity	Roadway Widening	11196	University Blvd	US 59	SH 6	2026 RTP	Widen 4-Lane to 6-Lane (Phase 2)	4	6	City Of Sugar Land	1/1/2026	$4,300,000
Added Capacity	Roadway Widening	13803	University Blvd	SE Corner of Brazos Landing Subdivision	Scenic River Drive	2015 LET	Extend 4-Lane Roadway	0	4	City Of Sugar Land	9/1/2014	$14,591,259

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CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Added Capacity	Roadway Widening	6049	US 59 S	W of SH 36	W of FM 762	2018 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS & TMS with Grade Separation	4	6	TxDOT Houston District	9/1/2017	$173,254,000
Added Capacity	Roadway Widening	6050	US 59 S	W of SP 10	W of SH 36	2031 RTP	Widen to 6-Lane Rural Freeway, Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$285,238,958
Added Capacity	Roadway Widening	6051	US 59 S	W of SP 10	West of Hamlick Road	2031 RTP	Widen to 6-Main Lanes, Grade Separations, 2-Lane Frontage Roads, ITS &TMS	4	6	TxDOT Houston District	9/1/2030	$100,582,927
Added Capacity	Roadway Widening	6052	US 59 S	W of FM 360	West of Hamlick Road	2032 RTP	Widen to 6 Main Lanes, W/ 2-Lane Frontage Roads, Grade Separations, ITS &TMS	4	6	TxDOT Houston District	9/1/2031	$157,035,324
Added Capacity	Roadway Widening	6053	US 59 S	W of Darst Road	W of FM 360	2031 RTP	Widen to 6-Mainlane Freeway W/ 2-Lane Frontage Roads, Grade Separations, ITS & TMS	4	6	TxDOT Houston District	9/1/2030	$139,952,507
Added Capacity	Roadway Widening	6063	US 59 S	CR 227 in Wharton County	West of Darst Road	2034 RTP	Widen to 6-Main Lanes, W/ 2-Lane Frontage Roads, Grade Separations, ITS &TMS	4	6	TxDOT Houston District	9/1/2033	$216,002,591
Added Capacity	Roadway Widening	275	US 90A	SH 99/Grand Parkway	0.3 MI W of SH 6	2019 RTP	Widen from 4 to 6-Lanes	4	6	TxDOT Houston District	9/1/2018	$6,557,000
Added Capacity	Roadway Widening	978	Williams Trace Blvd	US 59	Oyster Creek	2025 RTP	Widen to 6-Lane Divided	4	6	City Of Sugar Land	8/1/2025	$22,314,000
Added Capacity	Roadway Widening	7740	Williams Way Blvd	Hillcrest Dr	Ransom Road	2013 TIP	Widen from 2-Lane to 4-Lane Divided Urban Section	2	4	Fort Bend County	1/1/2013	$8,334,000
Added Capacity	Roadway Widening & HOV	6048	US 59 S	W of FM 2759	W of FM 762	2017 RTP	Widen to 8 MI, Frontage Roads, ITS & TMS	4	8	TxDOT Houston District	8/1/2017	$117,386,000
Added Capacity	Roadway Widening & HOV	9912	US 59 S	W of FM 762	W of FM 2759	2017 RTP	Construct 2-Way HOV Lanes	4	8	TxDOT Houston District	8/1/2017	$12,265,000
TRAFFIC ENGINEERING												
Traffic Engineering	Grade Separation	15224	SH 99	IH 10 W	US 59 S	2012 TIP	Seg D: Construct Overpasses and Approaches at Major At-Grade Intersections	4	4	FBCTRA	4/1/2012	$145,000,000
Traffic Engineering	Grade Separation	9637	US 90A	At West City Limits of Richmond	The Northern & Santa Fe Railroad	2021 RTP	Replace Railroad Underpass	4	4	TxDOT Houston District	8/1/2021	$41,483,000
Traffic Engineering	Grade Separation	13591	Dairy Ashford Rd	At US 90A		2025 RTP	Grade Separation Over RR	4	4	City Of Sugar Land	10/1/2025	$39,197,398
Traffic Engineering	Grade Separation	13590	Eldridge Road	At US 90A		2020 RTP	Underpass at Us 90A and Eldridge Rd	4	4	City Of Sugar Land	8/1/2020	$25,043,130
Traffic Engineering	Grade Separation	15382	FM 2759	1000FT N of Sansbury Boulevard to 1000FT S	1000Ft N of BNSF RR to 1000Ft S	2019 RTP	Phase 2: Construct 4-Lane Underpass of Crabb River Road @ Sansbury Blvd and Elevated Intersection of Crabb River Road and Thompson's Highway Over BNSF RR	4	4	Fort Bend County	4/1/2019	$30,918,888
Traffic Engineering	Grade Separation	12855	FM 359	At US 90A and UP RR		2025 RTP	Railroad Grade Separation (Elevated T)	2	2	TxDOT Houston District	12/1/2024	$25,799,147
Traffic Engineering	Grade Separation	9430	SH 36	At UP RR in Rosenberg		2017 RTP	Replace Railroad Underpass	2	2	TxDOT Houston District	9/1/2016	$18,510,000
Traffic Engineering	Grade Separation	6088	US 90A	At UP RR in Rosenberg		2017 RTP	Replace Railroad Underpass	4	4	TxDOT Houston District	9/1/2016	$41,019,000
Traffic Engineering	Intersection Improvements	15422	FM 2977	EB at Fairchilds Longpoint/FM 361	NB at Bryan and NB at Koeblen	2012 TIP	Install Left Turn Lanes	2	2	TxDOT Houston District	8/1/2012	$939,900
Traffic Engineering	Interchange Improvements	14247	SH 99	At US 59 S		2030 RTP	Construct 4 Direct Connectors (Toll) (Segment C)	2	2	FBCTRA	8/1/2017	$104,000,000

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CAPACITY ENHANCING 2035 RTP UPDATE ROADWAY PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
Traffic Engineering	Intersection Improvements	11184	Dulles Ave	US 90A	SH 6	2011 LET	Intersection Improvements Including Turn Lanes From SH 6 To Lexington and Full Reconstruction at 4 Lanes From Avenue E to Just South of Us 90	4	4	City Of Sugar Land	3/1/2011	$15,379,500
Traffic Engineering	Intersection Improvements	13721	Murphy Road/FM 1092	At 5th Street		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$403,015
Traffic Engineering	Intersection Improvements	13724	Murphy Road/FM 1092	At El Dorado Boulevard		2020 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$393,070
Traffic Engineering	Intersection Improvements	13730	Murphy Road/FM 1092	At Hampton Drive		2015 RTP	Addition of One NB And One SB Through Lane	6	6	City Of Missouri City	1/1/2020	$383,371
Traffic Engineering	Intersection Improvements	13723	Sienna Parkway	At Sienna Spring Boulevard		2020 RTP	Addition of NB and SB Left Turn Lanes	6	6	City Of Missouri City	1/1/2020	$393,070
Traffic Engineering	Intersection Improvements	13727	Sienna Parkway	At Bee's Passage		2020 RTP	Addition of NB and SB Left Turn Lanes	4	4	City Of Missouri City	1/1/2020	$383,371
Traffic Engineering	Intersection Improvements	13729	Sienna Parkway	At Watts Plantation		2020 RTP	Addition of NB And SB Left Turn Lane; Addition Of WB Turn Lane On Watts Plantation	4	4	City Of Missouri City	1/1/2020	$720,273
Traffic Engineering	Intersection Improvements	13733	Texas Pkwy/FM 2234	At Independence Boulevard		2015 TIP	Addition of One NB Right Turn Lane	4	4	City Of Missouri City	1/1/2015	$328,588
Traffic Engineering	Intersection Improvements	13735	Texas Pkwy/FM 2234	At Court Road		2012 TIP	Addition of One EB Left Turn Lane	4	4	City Of Missouri City	2/1/2012	$290,000
Traffic Engineering	Intersection Improvements	13736	Texas Pkwy/FM 2234	At Cartwright		2012 TIP	Addition of On SB Through Lane	4	4	City Of Missouri City	2/1/2012	$290,000
Traffic Engineering	Other	15559	FM 1640	Spur 529	Millie Street	2015 TIP	EB One-Way Pair, Criss-Cross, Intersections and 1.5" Overlay	4	4	TxDOT Houston District	3/1/2015	$2,068,000
Traffic Engineering	Other	975	Kirkwood Dr S	Harris County County Line	City of Meadows Place City Limit	2013 TIP	2-Lane Roadway with Roundabouts	4	2	City Of Meadows Place	1/1/2013	$1,872,000
Traffic Engineering	Other	13732	Sienna Parkway	At Trammel Fresno		2020 RTP	Addition Of NB and SB Left Turn Lanes. Addition of WB Left Turn Lane On Trammel-Fresno.	4	4	City Of Missouri City	1/1/2020	$702,500
Traffic Engineering	Other	13738	Sienna Parkway	At Sienna Ranch		2020 RTP	Addition of NB Dual Left Turn Lane and Channelized EB Right Turn Lane with Acceleration Lane on Sienna Ranch Road	4	4	City Of Missouri City	1/1/2020	$620,000

***Updated, where applicable, with 2012 RTP Update - 2012 Amendment values**

CAPITAL (TRANSIT) 2035 RTP UPDATE PROJECTS

Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Sponsor	Estimated Let Date*	Total Cost*
Bus	11532	FM 521 P&R	At SH 6		2024 RTP	Acquire 6 Large Transit Vehicles (Phase 2) for Express Services from FM 521 P&R from Arcola-Sienna P&R	Fort Bend County	8/1/2023	$6,855,684
Bus	11533	Westpark Tollway P&R	At SH 99		2015 TIP	Acquire 6 Additional Large Transit Vehicles (Phase 1) for Express Services from Westpark P&R	Fort Bend County	1/12015	$549,566
Bus	11534	Westpark Tollway P&R	At SH 99		2023 RTP	Acquire 6 Additional Large Transit Vehicles (Phase 2) for Express Services from Westpark P&R	Fort Bend County	8/1/2023	$1,252,156
Commuter Rail	11940	US 90A Commuter Line	City of Rosenberg	Harris County County Line	2025 RTP	Southwest Commuter Rail Line	Unsponsored (TBD)	1/1/2025	$345,000,000
O&M Facility	11540	Fort Bend O&M Facility	At Fort Bend Fairgrounds		2015 TIP	Construct Transit O&M Facility Adjacent to The Fort Bend County Fairgrounds P&R To Support Express Bus, Vanpool, Circulator, Connector, & Social Services Vehicles Operations	Fort Bend County	1/31/2015	$3,000,000
O&M Facility	11541	Fort Bend O&M Facility	Sugar Land Area Site TBD		2025 RTP	Construct a Second Fort Bend County Transit Operations and Maintenance Facility to Support Expanded Transit Services	Fort Bend County	1/1/2025	$3,000,000
Park & Ride	15308	Missouri City P&R	SH 6	At Fort Bend Parkway	2011 TIP	Missouri City Park And Ride - FY 2011	METRO		$50,000
Park & Ride	15309	Missouri City P&R	Near SH 6 and Fort Bend Parkway		2012 TIP	Missouri City Park And Ride	METRO	1/0/1900	$19,530,391
Park & Ride	11536	Missouri City P&R	Near SH 6 and Fort Bend Parkway		2023 RTP	Construct Additional 500 Parking Spaces (Ultimate Lot Size to Include 1,000 Spaces)	METRO	8/1/2023	$3,130,391
Park & Ride	11537	Westpark Tollway P&R	At SH 99/Grand Parkway		2013 TIP	Westpark Tollroad Park & Ride	Fort Bend County	9/1/2012	$3,130,219
Park & Ride	11538	Westpark Tollway P&R	At SH 99/Grand Parkway		2023 RTP	Construct 2nd 500 Spaces of P&R to Serve Express Bus and Vanpool Services to the Energy Corridor, Greenway-Galleria, Downtown and Other Employment Centers. Ultimate Lot Size to Include 1,000 Spaces	Fort Bend County	8/1/2023	$3,209,590

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PEDESTRIAN AND BICYCLE 2035 RTP UPDATE PROJECTS

Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Sponsor	Estimated Let Date*	Total Cost*
BICYCLE AND PEDESTRIAN									
Bicycle and Pedestrian	14658	City of Sugar Land Town Center	Various	Various	2014 TIP	City of Sugar Land Pedestrian/Bicycle Improvements	City Of Sugar Land	8/1/2014	$3,701,420
On-Street	2270	FM 2234	US 90A	Turtle Creek Drive	2015 TIP	Restripe Roadway For On-street Bike Lane	City Of Missouri City	9/1/2014	$52,562
Off-Street	15317	US 59 South	Williams Trace Blvd	Fort Bend City (Ditch H)	2014 TIP	10' Wide Shared-Use Path North And South Bound Within Frontage Road Row With Ped/Bike Crossing Improvements	City Of Sugar Land	8/1/2014	$3,445,000

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SYSTEM PRESERVATION AND OTHER NON CAPACITY ENHANCING 2035 RTP UPDATE PROJECTS

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
SYSTEM PRESERVATION												
System Preservation	Bridge Replacement	2366	Beasley Rd	At Snake Creek		2023 RTP	Replace Bridge, 41 Ft	2	2	Fort Bend County	1/1/2023	$244,601
System Preservation	Bridge Replacement	7163	Braxton Rd	At Brooks Branch		2012 TIP	Replace Bridge	2	2	TxDOT Houston District	10/1/2011	$340,601
System Preservation	Bridge Replacement	2370	Briscoe Rd	At Flewellen Creek		2023 RTP	Replace Bridge, 44 Ft	2	2	Fort Bend County	1/1/2023	$335,581
System Preservation	Bridge Replacement	15017	Fenske Ln	At Fairchilds Creek		2013 TIP	Replace Bridge And Approaches (NBI# 12080Aa0962002)			TxDOT Houston District	5/1/2013	$358,000
System Preservation	Bridge Replacement	15016	Foster School Rd	At Fairchilds Creek		2013 TIP	Replace Bridge and Approaches			TxDOT Houston District	10/1/2013	$247,800
System Preservation	Bridge Replacement	2381	Gubbels Rd	At Waters Lake Bayou		2023 RTP	Replace Bridge	2	2	Fort Bend County	1/1/2023	$554,827
System Preservation	Bridge Replacement	15013	King Rd	At Brooks Branch		2013 TIP	Replace Bridge and Approaches (NBI# 12080Aa0893001)	2	4	TxDOT Houston District	10/1/2013	$384,300
System Preservation	Bridge Replacement	15019	Meyer Rd	At Snake Creek Tributary		2013 TIP	Replace Bridge and Approaches (NBI# 12080Aa0970002)	2	2	TxDOT Houston District	12/1/2013	$343,350
System Preservation	Bridge Replacement	2392	Sawmill Rd	At Waters Lake Bayou		2023 RTP	Replace Bridge	2	2	Fort Bend County	1/1/2023	$184,942
System Preservation	Bridge Replacement	15018	Tierra Grande Dr	At Snake Creek		2014 TIP	Replace Bridge and Approaches (NBI# 12080Aa1100001)	2	2	TxDOT Houston District	10/1/2013	$793,800
System Preservation	Bridge Replacement	2394	Trinity Rd	At Big Creek		2023 RTP	Replace Bridge	2	2	Fort Bend County	1/1/2023	$86,132
System Preservation	Bridge Replacement	13974	Walker Rd	At Turkey Creek		2013 TIP	Replace Bridge and Approaches (NBI# 12080Aa0905001)	2	2	TxDOT Houston District	5/1/2013	$300,716
System Preservation	New Roadway Construction	9692	SP 10	US 59 S	SH 36	2013 TIP	Construct 2-Lane Rural Facility on a New Location and Remove Existing 2-Lane on SP 10/ Hartledge Road (Phase 1)	2	2	TxDOT Houston District	8/1/2013	$37,171,000
System Preservation	Road Rehabilitation	12785	Airport Ave	Graeber St	FM 2218	2013 TIP	Reconstruct Existing 2-Lane Roadway to 2-Lane with CLTL Curb & Gutter with Storm Sewer	2	2	City of Rosenberg	1/1/2013	$2,450,000
System Preservation	Road Rehabilitation	976	Airport Blvd W	Kirkwood	US 59	2011 TIP	Reconstruction of West Airport	4	4	City of Meadows Place	8/1/2011	$5,434,090
System Preservation	Road Rehabilitation	2979	Dulles Ave	US 90A	The American Canal	2011 LET	Reconstruct To 4-Lane Divided Concrete Blvd	4	4	City of Sugar Land	8/1/2011	$6,517,688
System Preservation	Road Rehabilitation	10335	Golfview Rd	FM 762	Williams Way Blvd	2013 TIP	Reconstruct Existing 2-Lane Roadway to 2-Lane with Two-Way Left Turn Lane, Curb & Gutter And Storm Sewer	2	2	City of Richmond	10/1/2012	$3,193,667
System Preservation	Road Rehabilitation	2387	Old Needville Fairchild Rd	SH 36	FM 361	2023 RTP	Upgrade 2-Lane Roadway	2	2	Fort Bend County	1/1/2023	$5,816,743
System Preservation	Road Rehabilitation	13757	Old Richmond Rd	FM 1464	SH 6	2011 TIP	Rehab Existing 2-Lane Rural Roadway And Add Shoulders	2	2	Fort Bend County	8/1/2010	$6,550,000
System Preservation	Road Rehabilitation	15115	US 59 S	0.4 mi S of SH 99	1.1 mi S of SH 99	2012 TIP	Base Repair & Overlay	2	2	TxDOT Houston District	9/1/2012	$2,000,000

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SYSTEM PRESERVATION AND OTHER NON CAPACITY ENHANCING 2035 RTP UPDATE PROJECTS, continued

Category	Sub Category	MPOID	Street	From Location	To Location	Project Status *	Description	Existing Lanes	Proposed Lanes	Sponsor	Estimated Let Date*	Total Cost*
INTELLIGENT TRANSPORTATION SYSTEMS												
Intelligent Transportation Systems		13623	City of Sugar Land	VA	VA	2017 RTP	City Traffic Management Center Re-Tool Master Plan Update And Design			City of Sugar Land	8/1/2017	$5,000,000
Intelligent Transportation Systems		15176	US 59 S	SH 6	SH 99	2013 TIP	Install CTMS	4	4	TxDOT Houston District	12/1/2013	$1,250,000
OTHER												
Other	Detention Pond	15412	FM 1464	At Pumpkin Lake		2012 TIP	Construct 1 Detention Pond	2	2	TxDOT Houston District	8/1/2012	$1,362,600
Other	Detention Pond	14745	FM 1464	Oyster Creek	Bullhead Slough	2012 TIP	Construct One Detention Ponds And One Flood Plain Mitigation Site	2	2	TxDOT Houston District	12/1/2011	$369,084
Other	Landscaping	15325	US 59 And FM 762	FM 762 EB	FM 762 WB	2013 TIP	Landscape 44 acres with native and natural vegetation, install solar irrigation, sidewalks, Traffic Rail and upgrade pedestrian signals			Fort Bend County	11/1/2012	$1,605,106

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