East Port Area Subregional Plan

Houston-Galveston Area Council

Subregional Planning Initiative

East Port
Transportation-Land Use Vision Plan and Implementation Program

Prepared by

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SECTION I: INTRODUCTION

The Houston-Galveston region is one of the nation's most significant metropolitan areas and is crucial to the national and state economies. According to the Urban Land Institute (ULI), the Houston-Galveston region is likely to become the US fourth "global city" after New York City, Chicago, and Los Angeles. The region has experienced tremendous growth over the last several decades and that growth is projected to continue, with the population anticipated to reach almost nine million persons by 2035. Additionally, growth in the region's economic activities is also projected with its transportation, medical, petrochemical, energy, and educational sectors all forecasting growth and new development in the region during the next several years.

The Subregional Planning Initiative (SPI) Plan for the East Port area is the first of its kind in metropolitan Houston. The SPI Program is intended to bring multiple local jurisdictions in an area of the region (the subregion) to more closely link regional plans and investment priorities with local plans, initiatives, and investments. SPI Plans are planned for several portions of the Houston-Galveston region.

A. SPI Program Goals and Planning Process

The primary goal of the SPI Program is to enable the Houston-Galveston region and its local jurisdictions to continue to be successful in protecting its economic success, transportation assets, environmentally sensitive areas, green space, and quality communities that attract new people and businesses to the region. Recognizing the need for a more holistic, strategic approach to planning throughout the region, H-GAC developed an innovative, partnership approach to linking its regional planning initiatives with local government planning through its Subregional Planning Initiative (SPI).

Each Subregional Plan enables local communities and regional and state planners to work together to create a transportation and land use vision, as well as recommendations and priorities for multimodal transportation system investments and supportive public policies to achieve the agreed upon subregional vision. Local communities can explore how their local plans, regulations, and policies can help support regional goals and plans. Regional planners can work with local jurisdictions to see how regional transportation system improvements will contribute to and support local plans and priorities. Another goal of the SPI program is to provide a wide range of useful on-line information on land use, environmental, and transportation planning best practices for local governments, citizens, and community leaders to use in their respective communities.

SPI Plan Framework

While each subregion of the Houston-Galveston region is unique and the SPI Plans developed for each region will be customized, there is a common framework for each subregional plan with the following major elements:

- Assessment of Existing and Expected Future Land use, Environmental, and Transportation Conditions
- Definition and evaluation of multiple transportation/land use scenarios that represent "alternative futures" that could form the basis of the subregion's Transportation Land use Vision

- Selection of a preferred Subregional Transportation Land use Vision for the subregion, including opportunities for local and regional transportation investments and supportive land use, development, and environmental policies

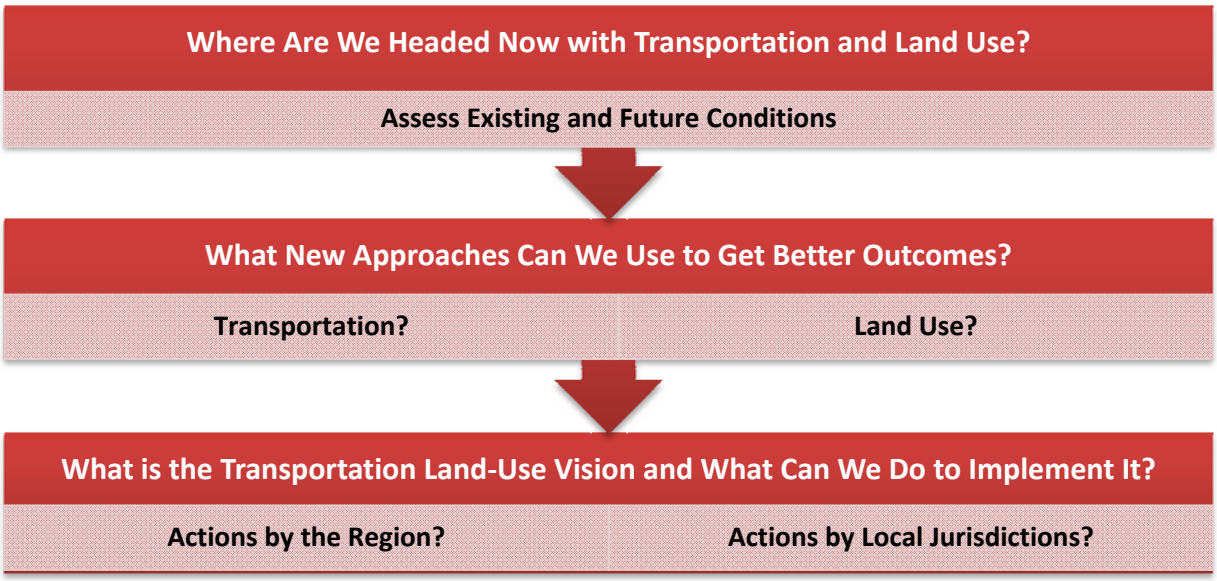
- Development of an implementation program for local governments and the region to use in prioritizing improvements and reinforcing the agreed-upon vision through public policies and related programs

- Method for assessing progress in implementing the SPI Plan through the actions of local jurisdictions and the region

Each subregional plan will be customized based on the unique needs and conditions of the area, including the plans, priorities, and interests of the affected local government jurisdiction, community stakeholders, and citizens.

Figure 1 illustrates the overall planning process for the East Port SPI. This process is intended to lead to the development of a SPI Plan that is embraced by the local jurisdictions as well as the region. As the graphic shows, the success of the SPI Plan relies on both actions at the regional level as well as active participation and support by the local jurisdictions.

Figure 1: SPI Planning Process



The major components of the East Port SPI include:

- Subregional Goals, Objectives, and Strategies

- Definition and Evaluation of Subregional Transportation and Land use Scenarios

- Identification of a Preferred Transportation and Land use Scenario

- Development of a Transportation – Land use Vision for the Subregion

- Recommended Projects, Programs, and Policies to Achieve the Vision
- Monitoring Tool to Gauge the Progress in Achieving the Subregional Vision

B. East Port Subregion Definition and Major Stakeholders

The East Port SPI study area includes 14 local communities and portions of two counties (Harris and Chambers Counties) in the eastern and southeastern sections of the Houston-Galveston metropolitan area, as shown below in Figures 2 and 3. Historically, the economic development and subsequent population growth of this area has been rooted in the region's status as a center for rail, port, roadway, and aviation connections as well as the location of major industrial, petrochemical, and energy facilities. The inter-relationship between the transport system, the economic activities based in the subregion, and the community character found in each of the local jurisdictions must be balanced to achieve both regional and local goals. An early activity in the SPI planning process for the East Port region included community leader interviews with each jurisdiction to understand the physical and functional nature of each city, its priorities, interests, and role in the East Port area and region.

Figure 2: East Port SPI Area Communities

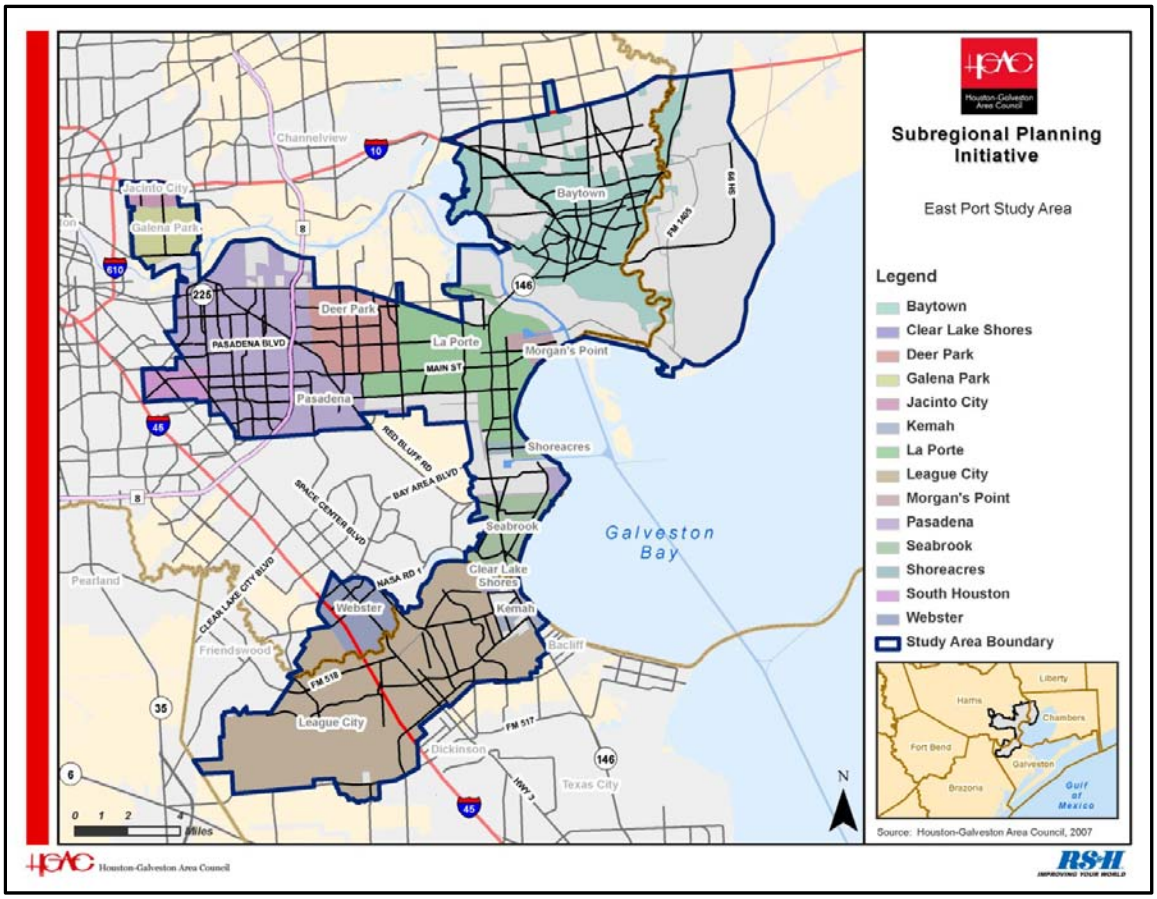
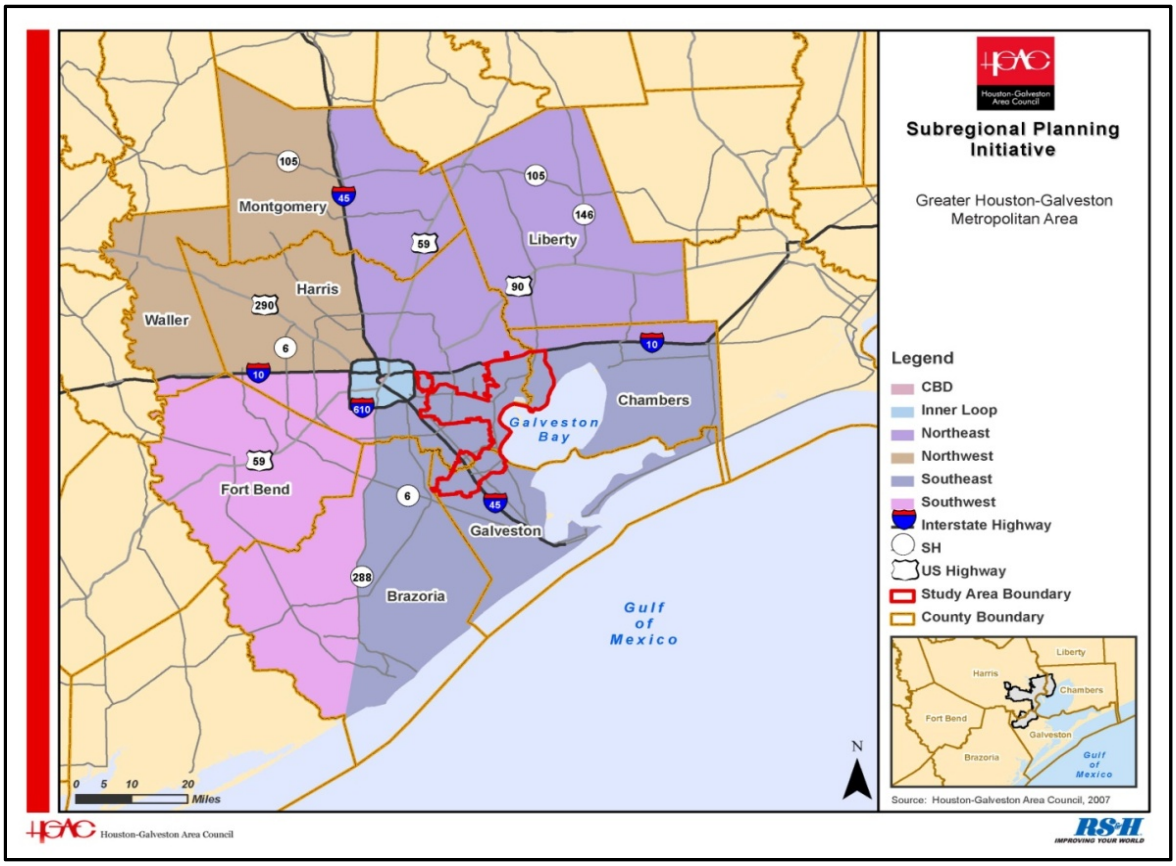


Figure 3: East Port SPI Study Area In Relation to the Greater Houston Region

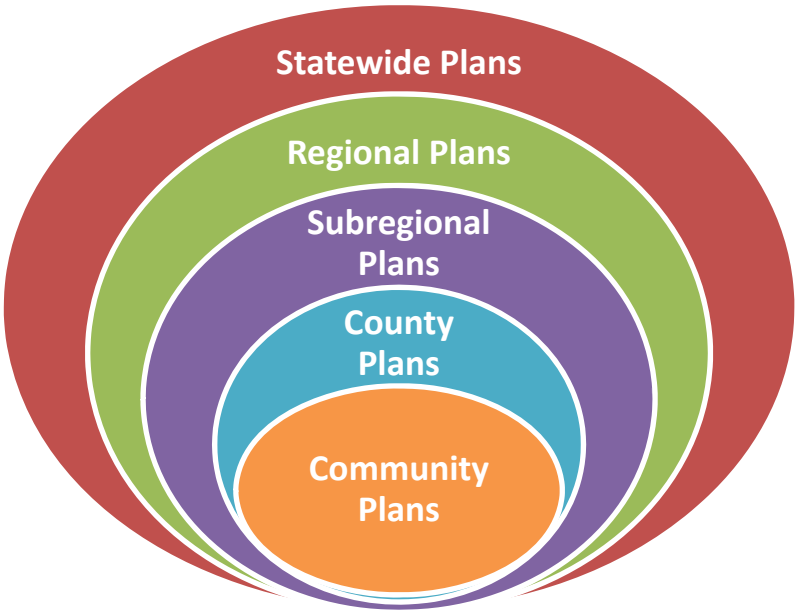


C. Relationship of the East Port SPI Plan to Statewide, Regional, and Local Plans

As mentioned previously, H-GAC's primary goal in launching the SPI Program is to provide opportunities to more closely coordinate statewide, regional, and local planning initiatives, primarily the linkage between the Regional Transportation Plan (RTP) and local community plans. One of the initial tasks of the East Port SPI Plan was to consult with key statewide, regional, and local stakeholders, including the Texas Department of Transportation (TxDOT), Harris and Chambers Counties, local government jurisdictions and key community stakeholders, such as the Port of Houston, the Economic Alliance of the Houston Port Region, and other interested parties. Listings of all the statewide, regional, and local planning documents reviewed for the East Port SPI Plan are included in the Appendix. Figure 4 illustrates the relationship between the SPI Plans and other regional and local community plans.

The East Port SPI Plan is intended to be an intermediate-level plan functioning for a geographic area smaller than the region as a whole (a subregional area of about 259 square miles) and across a geographic area that includes multiple local jurisdictions (14 cities and parts of two counties). This intermediate-level transportation and land use vision is intended to identify how regional transportation investments, local transportation investments, and land development initiatives can be mutually supportive and create synergies for creating livable centers, quality communities, and world-class transportation systems. The East Port SPI Plan has been focused on sharing key information and providing a collaborative setting for regional and local planners and decision-makers to see the possibilities for enhancing coordinated transportation, land use, economic development, and environmental planning for the East Port Subregion as a whole.

Figure 4: Relationship of Subregional Plans to Statewide, Regional, and Local Plans



D. Linkage to Local Government Initiatives

The East Port SPI study area includes portions of unincorporated Harris and Chambers Counties, along with the Cities of Baytown, Clear Lake Shores, Deer Park, Galena Park, Jacinto City, Kemah, La Porte, League City, Morgan's Point, Pasadena (part), Seabrook, Shoreacres, South Houston, and Webster. The levels of activity of local planning range in intensity depending on the degree of community build-out already achieved, local political priorities, and needs for community planning. Some communities are experiencing the need or desire to maintain the current level of community development, or even the need to recover to their pre-Hurricane Ike state (August 2008). Others are seeking a more active planning and development environment. The national economic slowdown which began in the fall of 2008 is continuing to impact the East Port SPI area, especially in terms of new non-residential development projects. Both residential and non-residential development has slowed considerably during this period. Among the communities seeking to increase their level of local planning and development or redevelopment at this time are the Cities of Baytown, Clear Lake Shores, Kemah, La Porte, League City, Pasadena, Seabrook, and Webster.

E. Linkage to H-GAC's Regional Transportation Plan (RTP)

At the present time, H-GAC's 2035 Regional Transportation Plan (RTP) is guiding the overall development of the region's transportation infrastructure program. Beginning in late 2009, H-GAC took initial steps to begin the process of updating the RTP to 2040. The transportation and land use visioning and technical analysis conducted for the East Port SPI Plan will be utilized by H-GAC in the development of the 2040 RTP. Now in its early phase, the 2040 RTP will be able to utilize the information developed for the East Port Subregion in terms of:

- Updated information on local land use, transportation, and economic development initiatives and priorities;

- Status of locally-funded transportation investment projects;
- Quantitative and qualitative data from the public on their preferences for various transportation concepts for the East Port Subregion;
- Potential location and composition of new livable centers in the East Port Subregion.

All of this information and data can be used by H-GAC to determine the funding priorities and supportive actions offered by the affected local jurisdictions to implement future transportation improvements in the East Port Subregion. It is envisioned that transportation system improvement projects identified in the East Port SPI Plan will be incorporated into the 2040 RTP when it is completed. The transportation projects currently programmed for implementation in the East Port Subregion are shown in Figure 8 - Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) Projects (to the year 2035) in Section II below.

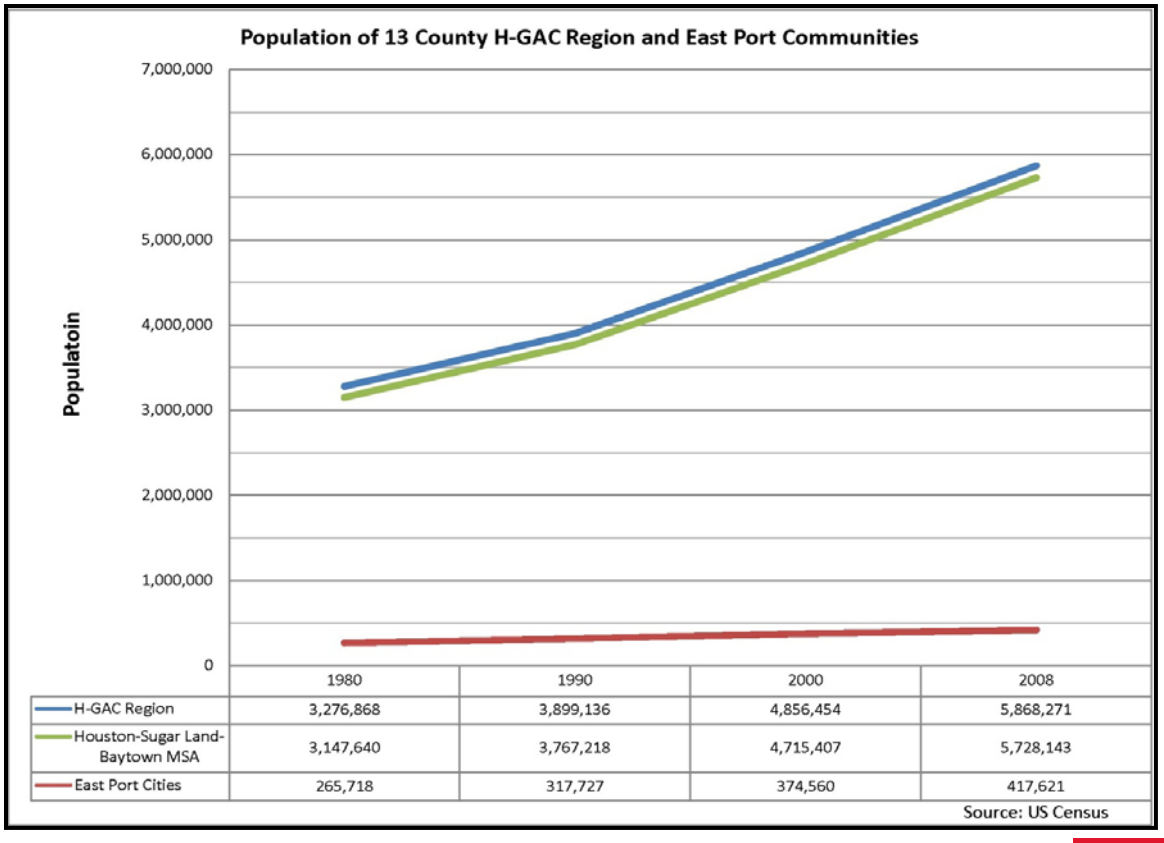
SECTION II: SUMMARY OF REGIONAL, SUBREGIONAL, AND LOCAL CONDITIONS

The East Port Subregion is very significant to the region because of the magnitude and range of important economic activities occurring there, as well as the presence of many local communities, each with its own unique assets, visions, and roles within the region. There are a variety of communities in the East Port region, ranging from predominantly bedroom communities to jurisdictions that house major industrial, transportation, bioscience research, petrochemical, health care, and aerospace facilities. This extraordinary mix of community settings and economic engines for the Houston-Galveston region make the East Port area unique and worthy of special planning efforts. Major economic drivers present within the East Port subregion are shown in Table 1.

A. Regional and Subregional Growth and Development Trends

While the Houston-Galveston region is among the most dynamic in the US – a region that continues to steadily grow both in population and jobs, the East Port Subregion historically has not enjoyed the same level of residential growth and development; however, the general area does include major concentrations of jobs, including the Port of Houston, energy and petrochemical facilities, the National Aeronautics and Space Administration (NASA) Johnson Space Center, and other entities. The East Port Subregion is centered around the Port of Houston and its related activities and is a nationally-significant industrial and energy center. Figure 5 illustrates the rate of population growth for the Houston-Galveston area as a whole and the East Port communities since 1980 and Figure 6 shows growth in employment for Harris and Chambers counties since 1969.

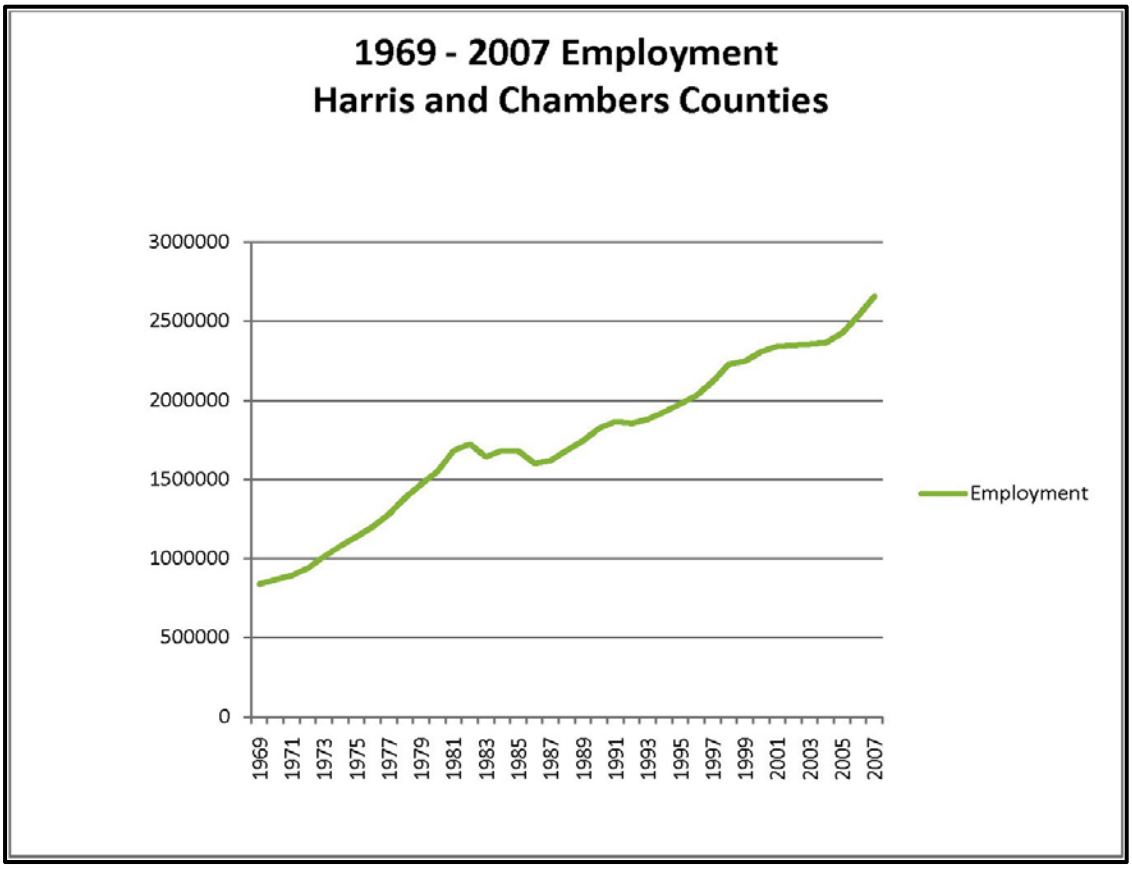
Figure 5 – Regional and Subregional Population Growth



	1980	1990	2000	2008
H-GAC Region	3,276,868	3,899,136	4,856,454	5,868,271
Houston-Sugar Land-Baytown MSA	3,147,640	3,767,218	4,715,407	5,728,143
East Port Cities	265,718	317,727	374,560	417,621

Source: US Census

Figure 6 – Regional Job Growth



Employment data for individual cities are not generally available. H-GAC has developed an estimate of employment for the East Port Subregion for the purposes of regional travel demand modeling based on the analysis of historical regional growth trends. It is estimated that the 2007 level of employment in the East Port Subregion was 180,376 jobs.

Table 1 – East Port Subregion – Major Economic Drivers

ECONOMIC SECTOR	KEY FEATURES
Ports and Shipping (Primarily the Port of Houston)	• The Port of Houston is one of the fastest growing ports in the US • Governing authority is the Port of Houston Authority • Houston Ship Channel is home to over 150 public and private port-related firms • Port of Houston has 43 general cargo wharves and two liquid cargo wharves • Bayport Container and Cruise Terminal will serve up to seven (7) ships simultaneously at build-out (2.3 million TEUs - twenty-foot equivalent units) • Includes 25-mile long complex of public and private facilities • Ranks # 1 in foreign waterborne tonnage • Ranks # 2 in total waterborne tonnage
Aerospace Sector	• NASA's Johnson Space Center (JSC) is adjacent to the City of Webster • About 3,000 federal workers and 14,000 contract workers are employed at the JSC • Major employers include Lockheed Martin, Boeing, and United Space • About 50 related firms are located near JSC • JSC carries out about $ 4 billion in federal aerospace contracts annually
Energy and Petrochemical Sector	• Bayport Industrial District (located in Harris County and the Cities of La Porte and Pasadena) is a 12 square-mile hub • About 8,700 people work at that location in 57 firms • Houston Ship Channel and surrounding area is one of largest energy complexes in the US • Major employers include Chevron Phillips, Albemarle Corp., Equistar Petrochemical, DuPont, Total Petrochemicals, Exxon Mobil, and Bayer
Tourism Sector	• NASA and the Kemah Boardwalk attract hundreds of thousands of visitors annually • City of Kemah is home to the 3rd largest fleet of recreational boats in the US • San Jacinto Battlefield and Monument is a major historic venue for visitors from throughout Texas and from other states and countries

B. Significance of the IH 10, SH 146, and SH 225 Corridors

There are three regionally-significant transportation corridors located in the East Port Subregion that serve critically important mobility functions, particularly for goods movement and port-related activities. While also serving passenger travel, these arteries are lifelines, not only for the East Port Subregion, but for the Greater Houston-Galveston region as well. IH 10 is an east/west interstate highway linking the Houston-Galveston region to states both east and west of Texas, thus having national significance. SH 146 and SH 225 serve large volumes of truck traffic destined for the Port of Houston and adjacent industrial areas. These two routes, along with IH 10, are designated evacuation routes in the event of natural or manmade disasters.

About 12% of Port of Houston cargo currently comes through the Panama Canal. The impact of the planned $5.3 billion expansion of the Panama Canal is having impacts on ports around the world, most particularly in the US. According to a study by the Texas Department of Transportation (TxDOT), the impacts from the Panama Canal expansion will be felt most heavily on and around the Port of Houston, including IH 10, SH 146, and SH 225. SH 146 is a major north-south artery connecting the Port of Houston and the East Port communities with IH 10 to the north and coastal areas to Texas City on the south. SH 225 is an east-west artery linking the Port and East Port communities with the City of Houston and adjacent cities, to Loop 8/Sam Houston Tollway, IH 610, and the Greater Houston region.

TxDOT's Statewide Freight Study identified freight forecasts and patterns between 1998 and 2025 for the Houston District and throughout Texas. Considering total distribution of tonnage between rail tons/year versus truck tons/year, the rail traffic will decrease from 19% to 15% of the total, while the truck traffic will increase from 81% to 85% of the total. Unless something happens to reverse this trend, highways throughout Texas, particularly in the Houston region, will need to support a substantial increase of truck traffic and tonnage and the Port of Houston Authority (PHA) will need to develop increasingly efficient means of maintaining freight traffic flows. ***This issue was of utmost concern to the East Port communities and the citizens living in the area.***

The PHA is predicting that the Bayport Container Terminal will be built out and reaching capacity in 2015. Additionally, the PHA has signed an agreement with the Port of Galveston to develop a container-handling facility on Pelican Island. Development will begin after 2015 when PHA's Bayport Container Terminal is fully built out. Construction of a new intermodal yard facility at the Bayport Container Terminal between Port Road and Red Bluff Road is also planned.

In 2010, the PHA is planning to begin the environmental analysis activities for a new rail line originating at the Bayport Container Terminal, paralleling SH 146, and terminating near Red Bluff Road. This new rail line will provide a new access point to the Bayport Container Terminal. In addition, TxDOT roadway improvements planned in the vicinity of the Port of Houston are:

- Adding one lane in each direction to SH146 from Kemah Road to SH 225
- Widening Port Road from two lanes to four lanes between SH146 and the Bayport Container Terminal
- Addition of direct ramps to and from the Bayport Container Terminal at the SH 146 and Port Road interchange
- Realignment of Toddville Road
- Grade separation (interchange) at SH 146 at Shoreacres Boulevard
- Grade separation (interchange) at SH 146 at Red Bluff Road

The grade separations of SH 146 at Port Road and Red Bluff Road also include improvements to the rail network in those areas which is intended to address truck circulation issues and safety in the corridor.

C. Local Jurisdiction Growth and Development Trends

Each of the local jurisdictions in the East Port Subregion has a distinct identity based on their historical context, geographic location, and priorities of the community leaders and citizens living and working there. The following section summarizes the key characteristics of each of the East Port communities, especially their population growth trends, economic drivers, community, and transportation planning priorities, and areas of interest.

City of Baytown

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
63,838	66,944	71,371	141,382*	11.8%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Baytown's major economic drivers include the Exxon Baytown Complex, Lee College, San Jacinto Mall, and the Cedar Crossing Distribution Center.

Community Development, Land Use, and Transportation Plans and Trends:
Baytown is involved with a variety of new planning initiatives and economic development strategies including:

- A Tax Increment Reinvestment Zone (TIRZ) for the Garth Road/San Jacinto Mall area
- Planning for the City's Cultural District Center near Lee University
- A tax abatement program to encourage economic development
- An ordinance that establishes impact fees for the provision of adequate facilities to serve new development
- A new Unified Land Development Code
- An update to the Future Land Use Plan

High priorities of the City include the preservation and revitalization of Downtown Baytown and the Alexander Street/Business 146 area in addition to preservation of the waterfront area adjacent to Goose Creek and Cedar Bayou. With respect to the City's downtown, the City has partnered with the Harris County Community Services Department – Transit Services Division and Harris County Commissioner Sylvia Garcia to develop a master plan to redevelop and revitalize the downtown area centered around Texas Avenue. This plan is based on the Federal Transit Administration's (FTA) Livable Communities Initiative and "smart growth" principles. Other concerns include the rapidly growing industrial area of Cedar Bayou, including the need for better transportation infrastructure to serve the area. In addition, the Garth Road Corridor is a major economic asset to the City and is in need of more attention in terms of land use and mobility systems.

City of Clear Lake Shores

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
1,096	1,187	1,284	2,973*	17.2%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers in Clear Lake Shores are the commercial enterprises located along SH 2094.

Community Development, Land Use, and Transportation Plans and Trends:
While much of the City is already developed, the community has developed a vision plan for a new Town Center at SH 2094 and Clear Lakes Drive that would serve as the focal point for the community. In addition, the City would like the SH 2094 corridor to be more walkable and is interested in new transit service in this area.

The City's residents are very environmentally aware and are interested in preserving green space and trees. As part of this environmental awareness, the City is implementing improved trail systems, including a new trail along Jarbo Bayou. The City also encourages citizens to use golf carts for mobility within the community.

City of Deer Park

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
27,652	28,392	30,270	38,052*	9.5%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers in Deer Park include the petrochemical and port-related industrial areas located north of SH 225.

Community Development, Land Use, and Transportation Plans and Trends:
Like the City of Clear Lake Shores, much of the City of Deer Park is already developed (85%). The City does not expect to see major changes in land use; however, the City completed a redevelopment plan for the Center Street Corridor from north of 13th Street to SH 225.

City of Galena Park

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
10,033	10,587	11,240	12,218*	12.0%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
The Clinton Drive corridor serves as the City of Galena Park's major economic driver, with many of the community's commercial and industrial activities located along the corridor.

Community Development, Land Use, and Transportation Plans and Trends:
A majority of land within the City of Galena Park is owned by the Port of Houston. In addition, a large part of the existing land is already developed in residential neighborhoods, with some commercial and

industrial uses along the major roads. The City Hall area currently serves as the community's major focal point.

The City does not expect to see major changes in development and land use at this time. The City is seeking federal funding for the improvement of Clinton Drive from the Washburn Tunnel to IH 610. In addition, Main Street south of Clinton Drive to the Port property is currently being widened to better accommodate truck traffic.

City of Jacinto City

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
9,343	10,169	10,627	12,462*	13.7%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Industrial areas located along IH 10 are the primary economic drivers in the Jacinto City area.

Community Development, Land Use, and Transportation Plans and Trends:
Jacinto City lies immediately north of the City of Galena Park and shares some of its characteristics. The City is mostly developed into residential neighborhoods, neighborhood commercial areas, and industrial activities. There is little available land for new development, but redevelopment opportunities do exist.

In regard to transportation, the City is very interested in the TxDOT project to expand the feeder road system of IH 10. City residents are also interested in transit service linking them with the City of Houston.

City of Kemah

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
1,094	2,448	2,623	5,216*	139.8%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers within the Kemah area include the Kemah Boardwalk and Lighthouse Entertainment Districts in addition to commercial activities located along the SH 146 corridor.

Community Development, Land Use, and Transportation Plans and Trends:
The City of Kemah suffered a significant amount of damage due to Hurricane Ike and is continuing its recovery. The City has a major visitor venue in the Kemah Boardwalk and Lighthouse Entertainment Districts which draw over five (5) million tourists and visitors from surrounding communities and locations within Texas and out-of-state year-round. The City is focused on protecting its waterfront orientation and its economic position. Large tracts of land remain in the City; however, no major plans for new development are underway at this time.

Due to the popularity of the Boardwalk and Lighthouse Districts, the City of Kemah experiences severe congestion and parking limitations during weekends and holidays. The City has recognized a need for the implementation of a circulator system for visitors between the Boardwalk and the SH 146 area. One potential system could include the use of perimeter parking and shuttles. The City is also evaluating the

implementation of hovercraft/water taxi service from Kemah to the City of Houston/NASA/Clear Lake areas.

City of La Porte

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
27,896	31,899	34,025	53,011*	22.0%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers within La Porte include the petrochemical and port-related industries located along the Houston Ship Channel and the SH 225 and SH 146 corridors.

Community Development, Land Use, and Transportation Plans and Trends:
The City of La Porte has been very active in developing plans for preserving and revitalizing its downtown area along Main Street and is concentrated on the implementation of plans at this time. Additionally, the City owns about 3.1 acres along the bayfront where Sylvan Park and Pavilion are located. This area is a high priority for redevelopment and is the City's major park and recreation area. The City did experience serious damage from Hurricane Ike and is continuing its recovery.

In regard to transportation, the City would prefer denser development patterns in the Broadway Street corridor and also seeks to implement access management strategies along Fairmont Parkway, west of SH 146 to the city limits of Pasadena.

City of League City

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
30,122	45,282	66,961	102,800*	122.3%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers within the City of League City include the commercial "power centers" at FM 646 and IH 45 and "Big League Dreams", a baseball-oriented entertainment/recreational area. Additionally, South Shore Harbour Resort and Conference Center also is important to the City's revenue stream and tax base. Potential new economic engines include the Tuscan Lakes commercial area, the City's historic district located along FM 518, and a new University of Texas Medical Branch (UTMB) specialty medical center.

Community Development, Land Use, and Transportation Plans and Trends:
The City of League City is focused on creating vibrant, successful places within the community that draw people and economic activity. It does not see itself as a bedroom community for Houston. The City is about 45% developed and large tracts of land and infill areas still exist. These areas are opportunities to create quality development that integrates multimodal transportation systems. Downtown revitalization and protection of the City's historic district are also important priorities. In addition, new Planned Unit Developments (PUDs) are proposed in southern portions of the City along the proposed Grand Parkway corridor. The City has approached H-GAC for livable centers funding and the City is located in the SH 3 corridor which is being considered for potential future rail service.

The City would like its downtown area along FM 518 between SH 3 and the unusual, existing intersection of FM 518, FM 270, and SH 2094, known locally as "Five Corners" to serve as the City's Main Street, where through auto traffic would be discouraged and pedestrians encouraged. The City's proposed FM 518 Bypass, funded through local bond funds, will use Louisiana Street from SH 96 to FM 518, cross FM 518 and bend to the northwest to connect to FM 270 and form an arc around Five Corners. In addition, a new Grand Parkway alignment through the southernmost part of the City will serve regional travel needs as well as three major PUDs.

City of Morgan's Point

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
355	332	340	2,323*	-4.2%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
The major economic driver within the City of Morgan's Point is the Port of Houston's Barbours Cut Container Facility located in the northern portion of the City.

Community Development, Land Use, and Transportation Plans and Trends:
The City is very interested in protecting its waterfront orientation, its largely residential character, and its recognition as an important historical place in Texas. The City does not have major plans for new development since vacant land is not plentiful in the City. A recent development proposal involved construction of over one million square feet of warehouse and distribution facilities due to the City's location adjacent to the Barbour's Cut Terminal.

The City is supportive of TxDOT's efforts to improve the SH 146 corridor, especially to better accommodate the significant truck traffic associated with the Barbours Cut Terminal. In addition, the City is planning to construct a citywide trails network, part of which has already been constructed along Main Street.

City of Pasadena

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
119,363	141,731	152,215	199,220*	27.5%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers within Pasadena are varied, including the petrochemical and Port-related industries along the Houston Ship Channel and SH 225 corridor, the Fairmont Parkway corridor, San Jacinto College's Central Campus, and the Bayshore Medical Center area.

Community Development, Land Use, and Transportation Plans and Trends:
The City suffered a significant amount of damage from Hurricane Ike and is continuing its recovery. New residential and commercial growth is occurring in southern portions of the City and primary concerns include protecting the economic viability of commercial areas and minimizing unnecessary truck traffic. Another important community priority is the redevelopment of northern portions of the City located between SH 225 and Spencer Highway.

The City is interested in measures to reduce truck volumes on city streets. The City's police department is monitoring truck volumes and enforcing truck routes. The City also supports improvements to the SH 225 corridor, as many of the City's residents work in the adjacent industrial areas. The City would also like to improve its bicycle and pedestrian networks.

City of Seabrook

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
6,699	9,095	11,509	31,683*	71.8%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers in the City of Seabrook include the SH 146 and NASA Parkway corridors, the Point waterfront area at the southern tip of the City, Old Seabrook (residential area with some boutique businesses), and the City's historic downtown.

Community Development, Land Use, and Transportation Plans and Trends:
The City's residents are very interested in maintaining the community's character as an historic fishing village and environmentally-conscious community. Prior to Hurricane Ike, the City completed its waterfront development plans and proposals for high-rise residential projects along the bay were discussed. With the national economic slowdown, major development plans are on hold; however, the City is still interested in restoring the Point area that was severely damaged by Hurricane Ike. An additional area of interest for the City is encouraging new non-residential development in the northern part of the City in the SH 146 Corridor to serve potential future passengers using the Bayport Cruise Terminal.

In regard to transportation, the City is interested in constructing a new four-lane divided roadway to the new Bayport Cruise Terminal that would connect to SH 146.

City of Shoreacres

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
1,316	1,538	1,623	2,567*	23.3%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
The City of Shoreacres is a nearly all-residential city and does not currently have any significant economic drivers.

Community Development, Land Use, and Transportation Plans and Trends:
The City's primary focus is to minimize the negative aspects of port-related activities on the community. Sustaining very serious hurricane damage in September 2008, the City is continuing its recovery. Hurricane Ike caused nearly half of the City's residents to temporarily or permanently relocate. As a result, young families are tending to locate in the City. New development is expected to be single-family residential uses. A potential opportunity to plan a livable center development at the extreme southern edge of the City across from the Bayport Terminal is being considered. This potential development could serve as a noise and light buffer between the Port of Houston and the City's neighborhoods.

In regard to transportation, the City is considering the widening of Broadway Street (which connects the City to La Porte on the north). The southern terminus of Broadway Street is located just north of and across the channel from the Bayport Terminal. An expanded roadway could serve the potential new mixed-use livable center development as well as provide more appropriate access for service vehicles to the Houston Yacht Club area.

City of South Houston

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
14,207	15,713	16,743	19,195*	17.9%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers within the City of South Houston primarily include commercial areas located in the Spencer Highway/College Avenue and SH 3 corridors. South Houston is located very near Hobby Airport.

Community Development, Land Use, and Transportation Plans and Trends:
The City is mostly developed at this time, and redevelopment of residential and commercial areas, especially in the SH 3 corridor, is important to the City. Potential rezoning is also important to the City to create larger available commercial tracts. In addition, the City is located near Hobby Airport, which is beneficial for future commercial redevelopment.

The City does not have any major roadway, intersection, or truck traffic issues at this time. The City is interested in transit service and has a large senior population which needs some mobility options. The City is located in the SH 3 corridor which is being considered for potential future rail service.

City of Webster

1990 Population	2000 Population	2007 Population	2035 TAZ Population	% Increase 1990-2007
4,678	8,822	10,653	23,007*	127.7%

*Note: Many traffic analysis zone (TAZ) boundaries do not match up with municipal boundaries or with study area boundaries.

Economic Drivers:
Major economic drivers in the City of Webster area include the National Aeronautics and Space Administration (NASA)/Johnson Space Center and associated aerospace firms, Clear Lake Regional Medical Center, Baybrook Mall, and nearby commercial centers.

Community Development, Land Use, and Transportation Plans and Trends:
The City of Webster's primary focus is the protection of its very active commercial corridors and activity centers. Major regional commercial centers, including Baybrook Mall and the IH 45/Bay Area Boulevard interchange area are major commercial nodes in the City. While new residential development and park areas have been approved in the City (which is largely developed already), the community's main focus is attracting new commercial development on its remaining land.

The City of Webster is involved with a variety of proposed transportation projects. The City is currently focused on building Rice Creek Lane, a locally-funded project that will extend to the IH 45 feeder road and will ring several hundred acres of new development into the City. A proposed Beamer Road

Extension, planned in conjunction with the Cities of Friendswood and League City, and a private developer, will be a four-lane divided road connecting NASA Parkway to Beamer Road and SH 528. This roadway will primarily serve commercial development. Other important priorities are access management improvements along Bay Area Boulevard to be constructed by TxDOT and a major grade separation project at Bay Area Boulevard and IH 45, planned for the longer-term. Finally, the City of Webster is located in the SH 3 corridor which is being considered for potential future rail service.

D. Major Activity Centers

Major activity centers within the subregion tend to be associated with the primary economic engines of the region. The East Port Subregion is generally characterized by four primary economic sectors and these sectors are generally tied to specific geographies within the subregion. These primary sectors include the Energy and Petrochemical Industries, Ports and Shipping, Aerospace, and Water Recreation/Tourism.

Energy and Petrochemical and Ports and shipping industries tend to be located along the Houston Ship Channel and the SH 225 and SH 146 corridors – generally areas north of the Port of Houston's Bayport Terminal. Aerospace and Water Recreation/Tourism industries and activity centers are generally located in southern portions of the subregion. Some of the major activity centers and corridors located within and near the subregion include the following:

- Houston Ship Channel
- SH 225 Petrochemical Corridor
- Barbour's Cut Container Terminal
- Bayport Container and Cruise Terminal
- Exxon Baytown Complex
- San Jacinto Mall
- Cedar Crossing Distribution Center
- Kemah Boardwalk and Lighthouse Entertainment District
- City of Webster Commercial District
- NASA Johnson Space Center and surrounding aerospace businesses
- San Jacinto Battlefield and Monument
- Baybrook Mall
- San Jacinto College
- Clear Lake Regional Medical Center
- Bayshore Medical Center
- Lee College

E. Existing Transportation Conditions

The East Port Study area is served by a number of major roadway, public transit, freight rail, shipping, and aviation facilities as well as bicycle, pedestrian, and trail networks in certain parts of the subregion. All of these networks, taken together, form the multimodal transportation system that supports both passenger and freight transport in the study area. This section provides a brief description of the existing and projected transportation conditions based on the assessment of existing conditions. A detailed description of the major components of the multimodal transportation network, including transportation demand, traffic operations, safety aspects of the system, and opportunities for improvement can be found in the Existing Conditions Assessment (in the Appendix).

Roadways

While various modes of transportation can be found in the East Port Subregion, the vast majority of personal travel and a significant share of freight transport occur on the roadway system. The subregion is served by two interstate highways (IH 10 and IH 610), one toll road (Loop 8/Sam Houston Tollway), nine state highways (SH), eight Farm-to-Market (FM) roads and many major collector roads that provide the main framework of the subregional transportation network.

Railroads

A majority of the existing rail network in the Houston region was constructed in the mid- to late-1800s, with a minor service expansion in the mid-1960s to reach the Port of Houston area. The City of Houston as well as neighboring municipalities literally grew up around the rail lines. Most of the original independent railroad lines constructed in the 1800s through 1950 have been bought, sold, and merged over the decades. Mergers that took place between 1980 and 2000 have left three Class I railroads operating within the Houston region: the Union Pacific Railroad (UPRR), BNSF Railway (BNSF), and the Kansas City Southern Railway (KCS). The KCS does not own any trackage within the Houston region, but maintains trackage rights across other railroads. The UPRR and BNSF have a total of 371.64 mainline track miles located in Harris and Chambers Counties in the East Port study area.

Aviation

Aviation facilities in and near the East Port Subregion include La Porte Municipal Airport, William P. Hobby Airport, and Ellington Field Airport.

Transit

The Metropolitan Transit Authority of Harris County (METRO) operates bus, light rail, and METROLift (paratransit) service in Harris County. METRO works together with TxDOT, H-GAC, and the Harris County Community Services Department to provide park-and-ride services for commuters. METRO operates 29 different park-and-ride locations, five of which are in the East Port Subregion. METRO does provide limited bus service within the northern part of the subregion in the vicinity of Jacinto City and Galena Park. In addition, via the Harris County Transit Services Department, limited transit service is provided in Baytown and a new park-and-ride is operated in Pasadena.

In addition to the current transit services operating in the East Port study area, regional commuter rail services are being considered for implementation in the future. In the East Port Subregion, the SH 3/IH 45 corridor is being considered for a commuter rail route.

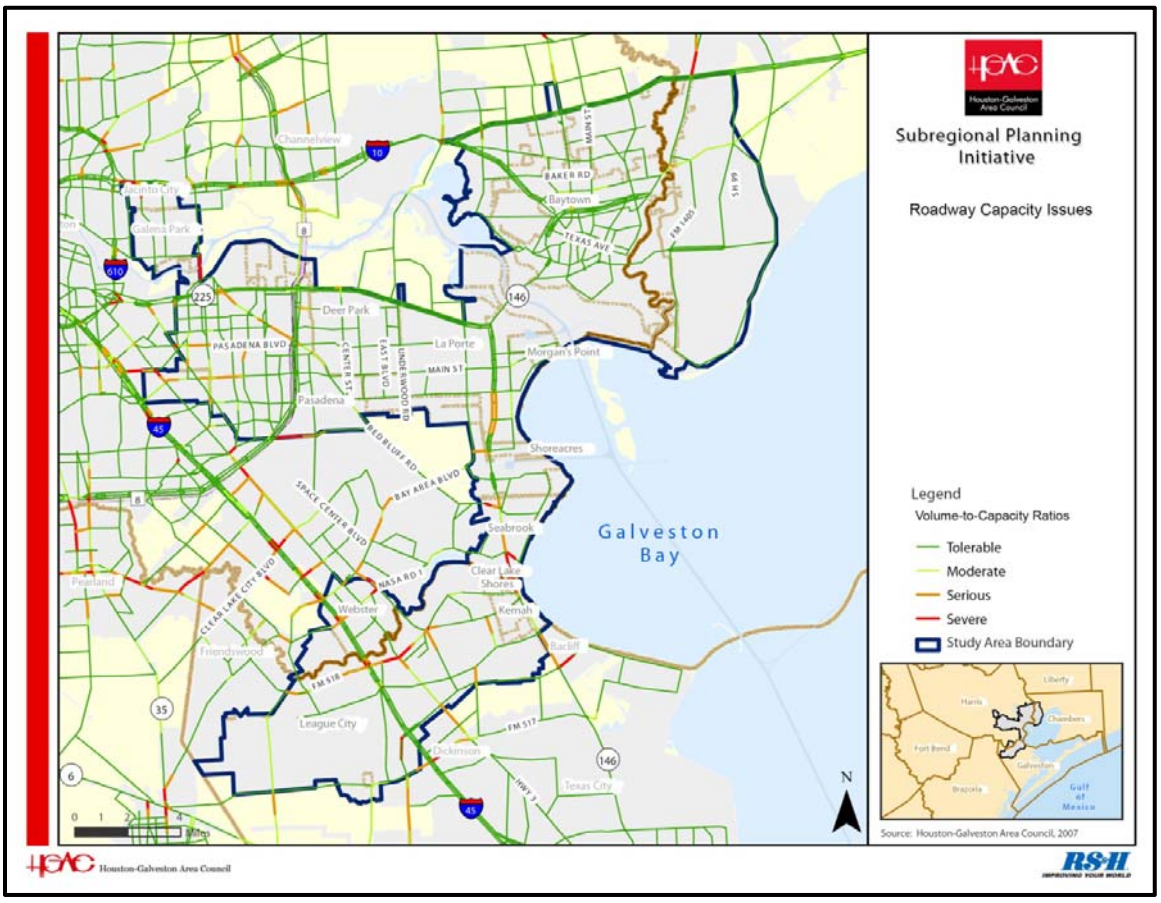
Bike, Pedestrian, and Trail Networks

In addition to the sidewalks and bike lanes provided along some of the major roadways in the East Port Subregion, off-system bikeway and pedestrian facilities have been developed and constructed. Based on current data, the East Port study area has approximately nine (9) miles of off-system bike lanes and shared use paths/trails.

Existing Transportation Demand

Based on the projected growth in population and employment in the coming decades, the East Port communities can expect to see increased demand on the multimodal transportation system, particularly on the roadway and rail networks. Figure 7 depicts roadway capacity issues based on volume-capacity ratios of major study area roadways within the context of the level of mobility criteria developed by H-GAC. The v/c ratios are based on 24-hour annual average daily traffic volumes on the roadway segments (vs. peak hour traffic volumes). The figure shows corridors with tolerable, moderate, serious, and severe levels of congestion.

Figure 7 - Roadway Capacity Issues



Summary of Traffic Operations

The interstate highways in the East Port Subregion, IH 10 and IH 45, operate at acceptable roadway levels-of-service (LOS) "A" through "D". Like school report cards, LOS designations are used by traffic professionals to indicate the level of traffic congestion with LOS "A" being the highest level of service with no congestion. Progressively worse levels of service are indicated with LOS "B", LOS "C", LOS "D", LOS "E", and LOS "F". In general, LOS in the range of "A" through "D" indicates acceptable levels of service. LOS "E" and "F" indicate very congested or gridlock conditions.

Most of the urban principal arterial highways in the East Port Subregion, such as SH 1, SH 3, SH 96, Grand Parkway/SH 99, SH 134, SH 146, SH 225, SH 330, Old Highway 146/SH 501, and the urban minor arterials such as, FM 517, FM 518, FM 270, FM 646, FM 2094, Bay Area Boulevard, Spencer/West Main Highway, West Fairmont Parkway, and Red Bluff operate at LOS "A", "B", or "C" which are acceptable. As mentioned previously, these LOS designations are based on 24-hour (daily) traffic volumes.

It should be noted that the LOS designations are assigned through the travel demand modeling process which uses 24-hour (daily volumes). The modeled LOS designations based on 24-hour traffic volumes do not account for the congestion that occurs on roads during the peak commute periods or for non-recurring congested conditions that can impact the roadway network as a result of weather, crashes, vehicle breakdowns, or other incidents.

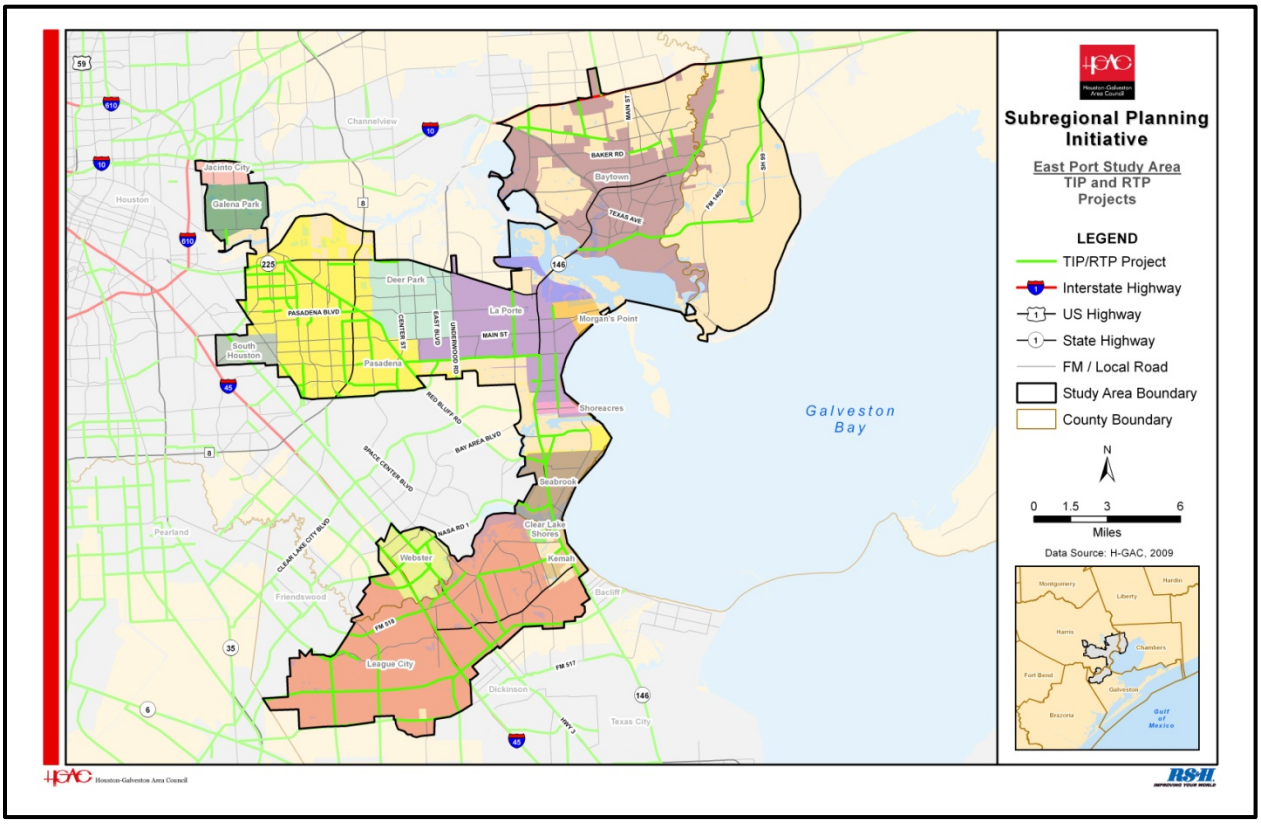
Evacuation Routes

Evacuation routes have been designated throughout the Greater Houston metropolitan area to handle the need to quickly transport individuals away from hurricanes and other natural and manmade emergencies. Designated major evacuation routes within the East Port study area are IH 10, IH 45, SH 146, SH 225, and SH 330. Feeder routes connecting evacuation routes include IH 610 and Loop 8/Sam Houston Tollway (BW 8).

F. Planned Transportation System Improvements

As part of its role as the Metropolitan Planning Organization (MPO) for the Houston-Galveston region, H-GAC has worked with local, regional, and state-level planning partners, including cities, counties, transportation and transit authorities, TxDOT, the Port of Houston, and others to identify funding for needed transportation system improvements, both in the short-term and long-term. H-GAC's Transportation Improvement Program (TIP) represents the near-term projects where sources of federal, state, local, and/or private funding have been identified and programmed for the various project phases for roadway and intersection improvements, bus and rail transit enhancements, and bicycle, pedestrian, and trail projects. Figure 8 illustrates the location of the TIP projects as well as the longer-term projects identified in the adopted 2035 H-GAC Regional Transportation Plan (RTP) within the East Port study area.

Figure 8 – Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) Projects



G. Subregional Planning Themes

As part of the East Port SPI planning process, a variety of key local, regional, and statewide stakeholders were consulted to solicit their ideas and concerns. Local community leaders were interviewed as well as other regional and state stakeholders such as Harris and Chambers Counties, the Port of Houston, the Economic Alliance of the Houston Port Region, and the Texas Department of Transportation (TxDOT).

Initial discussions with these stakeholders revealed a variety of common planning themes across the various jurisdictions. These common issues and concerns form the basis from which the East Port Subregional Plan can begin to take shape and move into subsequent phases. Common themes revealed by the various stakeholders are listed in Table 2 and grouped into transportation, economic development, and community planning and development issues.

Table 2 - East Port Subregional Planning Themes

TOPIC AREA	PLANNING THEME
Transportation	▪ Reduce traffic congestion ▪ Deliver transportation projects more quickly ▪ Improve connections between key places (Improve connectivity) ▪ Provide multimodal options (transit/bike/pedestrian/trail) ▪ Lessen the negative impact of trucks ▪ Facilitate freight movement ▪ Identify more resources for transportation
Economic Development	▪ Support local plans, help implement local plans ▪ More high wage jobs ▪ Keep the Port of Houston successful ▪ Leverage waterfront assets ▪ Protect local government revenues
Community Planning and Development	▪ Focus on high quality development ▪ Finish up Hurricane Ike recovery ▪ Strengthen intergovernmental coordination

H. Subregional Needs Assessment

The Existing Conditions Assessment for the East Port Subregion indicated there were a number of opportunities to improve the overall mobility, transportation service levels, travel choices, and quality of developed and redeveloped areas in the East Port Subregion. This section summarizes the nature of the needs and opportunities identified to improve the character of developed and redeveloped areas of the communities as well as regional and local mobility systems linking them.

Land use and development decisions are solely within the local authority of municipalities of the East Port study area. ***The East Port SPI Plan does not seek to amend or modify these local plans, rather to provide best practices information and sound technical analysis that is useful to local government planners and decision-makers as they explore their own individual land use and development options and decisions. The East Port Subregional Plan also provides an opportunity for the East Port Subregion to work collaboratively together on issues and opportunities of mutual benefit to the cities and the Greater Houston region as a whole, including the implementation of community development and mobility projects.***

More details on recommended land use and development strategies to enhance the subregional area as well as recommendations for multimodal transportation systems can be found in Section VI.

Multimodal Mobility Needs and Opportunities

An examination of the transportation network indicates a lack of connectivity in the area at the present time. Currently, there are pressures for improved north-south access improvements providing a greater level of connectivity within the subregion. This is especially true for communities east of IH 45. Substantial investment in the multimodal transportation system will be necessary to maintain existing levels of mobility for this increased population. The lack of travel alternatives (i.e. walking, biking, and transit) will inhibit mobility and community quality of life. Enhanced multimodal opportunities through

the introduction of new METRO park-and-ride facilities and possibly commuter rail service will also be important strategies to reduce roadway travel demand in the future.

Public Transit Needs and Opportunities

The transit needs in the East Port study area are currently met through bus, park-and-ride, and demand responsive paratransit service. These services are very limited in terms of geographic coverage and frequency of service. Some of the suggested transit enhancements include more commuter-oriented bus and/or rail transit services, special activity center circulator services, local fixed route - fixed and community circulator systems.

Regional Bicycle, Pedestrian, and Trail Needs and Opportunities

At the current time, there are approximately nine (9) miles of off-system bike lanes and shared use paths/trails in the subregion. There is considerable interest within several of the local jurisdictions in constructing new paths and connecting existing and proposed paths of those in other jurisdictions. These include the Cities of Morgan's Point, La Porte, Galena Park, Seabrook, Pasadena, and Clear Lake Shores.

Land Use and Rail Opportunities

As previously described, the Houston-Galveston region's rail infrastructure has been a key element in the development of the region as a hub of transportation, especially for freight activity, for many decades. Rail alignments have historically dictated development patterns within the region. As the communities within the East Port study area continue to experience growing population and employment, it is important to ensure that new and infill development is guided in a way that supports quality neighborhoods and communities as well as efficient mobility for freight and passenger transport. This will be increasingly challenging as the East Port Subregion will experience increases in land use intensities and densities in certain locations. It will also be important to examine the potential for new developments and redevelopments to take advantage of regional passenger rail opportunities as they evolve to provide critically needed sustainable transportation choices within the East Port Subregion as well as within the Greater Houston region as a whole.

Airport-Related Needs and Opportunities

The airports within the subregion, including Hobby Airport, La Porte Airport, and Ellington Field, have been an integral link within the freight transportation and logistics network which has served as a catalyst for the region's broader economic development.

Projected increases in population and employment within the East Port communities will likely result in increased demand on these aviation facilities as well as greater needs for roadway and transit access to these facilities as they evolve.

Intermodal Facilities Needs and Opportunities

The presence of intermodal facilities has been one of the primary drivers of the Houston-Galveston region's economic growth for decades. Its unique geographic location along the Gulf Coast and its investment in roadway, rail, port/maritime transport, trucking, and aviation facilities have generated

widespread and sustained economic growth for the entire region. As the region looks to the future, communities and intermodal facility operators must work together to ensure that transportation system investment meets industry needs, while preserving, protecting, and enhancing the quality of life for communities. Additional studies are underway by various entities, including the Economic Alliance of the Houston Port Region and the Port of Houston Authority, to address the needs for improved freight transport and intermodal activities, including the movement of containerized shipments.

Evacuation Planning Needs and Opportunities

While the designation of evacuation routes is not in the realm of the East Port SPI Plan, the consideration of improved connectivity, especially to major arterial roadways, leading to freeways and interstate highways will improve evacuation planning. Future updates to the evacuation system should reflect shifts in land use and development patterns and acknowledge and accommodate centers of population growth as the East Port Subregion grows and develops.

SECTION III: PLANNING CONTEXT FOR THE EAST PORT SUBREGION

The centerpiece of the East Port SPI Plan is the creation of a shared transportation and land use vision for the subregion that will be implemented through jointly coordinated regional, local government, and private sector actions. In order to begin to articulate this jointly-held subregional transportation and land use vision, it was necessary to engage both the key stakeholders as well as the public in a broad discussion of the desired transportation and land use elements in the East Port communities, including preferences and priorities for implementation actions.

This section will describe the overall process for exploring potential "alternative futures" in terms of land use and transportation for the East Port Subregion. By the use of technical analysis techniques as well as involvement by subregional stakeholders and citizens, these alternative futures can be best understood by the use of scenario definition and evaluation. The scenario development and analysis process is described in the next section of this report.

To begin to think about the future of the East Port Subregion, and ultimately to be able to articulate a long-term Transportation and Land Use Vision, it is necessary to understand the planning context, or the influences guiding planning decisions in the subregion. These influencing factors are described in more detail in this section. These influencing factors include overall guiding principles and best practices for community and transportation planning, such as multimodal transportation system development and sustainable community principles; regional policy direction emanating from H-GAC's plans and programs; policy direction from local community and transportation plans; and last, but not least, the preferences and aspirations of the citizens and stakeholders that live and work in the East Port Subregion. Beginning with best practices for community and transportation planning, and extending through regional plans and programs, the context also includes consideration of local community, transportation, and economic development planning. This section describes in more detail the first three factors. Sections V and VI describe the stakeholder and public input on various elements of the East Port Subregional Plan.

- Best Practices Guidance for Transportation and Community Planning
  - H-GAC Best Practices Toolbox
  - Multimodal Transportation System Principles
  - Quality Growth and Sustainability Principles
  - Public/Private Partnership Opportunities

- Regional Plans and Programs
  - 2035 Regional Transportation Plan (RTP) Goals
  - H-GAC's Livable Centers Initiative

- Local Jurisdiction Visioning Efforts, Plans, and Programs

All of these resources are described in more detail in this section.

A. Best Practices Guidance for Transportation and Community Planning

Planners and public officials often look to the experiences of their peers around the country and even around the world and seek information on "best practices" to keep their communities, regions, and

states on the leading edge of innovation and quality. The practice of planning incorporates a wide array of principles or "best practices" that can be incorporated into planning processes in individual settings.

H-GAC Best Practices Toolbox

H-GAC has been on the forefront of providing information and technical resources across the Greater Houston-Galveston region on a wide variety of planning-related issues. As a means to organize some of this information and to facilitate the exchange of information on best practices in community and transportation planning, finance, and capital improvement programming, sustainability, and other related topics, H-GAC has organized an on-line Best Practices Toolbox. As part of the East Port Subregional Plan, an initial step was compiling the technical content and organizing this website (www.h-gac.com/go/subregional) to help local community leaders and decision-makers, professional planners and engineers, and citizens to learn more about the current best planning practices. Examples of planning tools and strategies as well as resources for more information are also provided on line. Table 3 illustrates the wide range of best practices topics that are available to the East Port Subregion and other areas across the region to explore the possibilities for new approaches to local and subregional planning.

Multimodal Transportation System Principles

One of the primary principles underlying all regional planning for the Greater Houston-Galveston region is the importance of planning and implementing multimodal transportation systems. The concept of multimodal transportation is simple – providing more than one means of travel to and from major locations, wherever possible. While most of our travel in the Greater Houston-Galveston region and most other regions in the US is currently in made in private autos, relying exclusively on auto travel as our means of transportation would degrade both our community quality of life and economic prosperity because of the negative impacts of roadway congestion, wasted resources, and delay. A multimodal transportation system can improve mobility and quality of life simply by providing people more travel choices. A full range of travel choices, when integrated into the existing transportation system, can provide quality of life, environmental, and economic benefits. Some of these travel modes include:

- Bus and Rail Transit
- High Speed Rail Systems
- Bicycling
- Walking
- Freight Rail Systems
- Water Travel

Distributing travel trips over a number of these modes serves to reduce the number of automobile trips and thereby reduce congestion, improve travel times, and reduce pollution. Figure 9 shows the multimodal transportation principles are especially relevant to the East Port Subregion.

Table 3 - H-GAC's Best Practices Toolbox Topics

TOPIC AREA	PLANNING TOOL	TOPIC AREA	PLANNING TOOL
Comprehensive Planning	Comprehensive Plan	***Transportation and Mobility***	Complete Streets
	Zoning		Access Management
	Development Regulations		Traffic Impact Statement
	Scenario Planning		Thoroughfare Planning
	Master Planned Communities		Highway-Grade Crossings
			Multimodal Level of Service
Implementation Resources	Capital Improvement Programs (CIPs)		Bicycle Compatibility Measures
	Public/Private Partnerships (3P)		ARTPLAN Level of Service Tool
	Impact Fees		Safe Routes to School
	Concurrency Management Systems		Bicycle Suitability Maps
	Adequate Facilities Ordinances		Pedestrian-Friendly Design
	Public Improvement Districts		Bicycle Parking
	Municipal Utility Districts		Neighborhood Circulators
	Management Districts		Activity Center Transportation
	Special Assessment Districts		Special Services for Seniors
	Overlay District Ordinances		Commuter-Oriented Transit
	Economic Development Agreements		Campus Transportation Systems
	Land Acquisition		Truck Route Planning
	Local Government Corporations		Intermodal Facilities
	Neighborhood Empowerment Zones		Land Use Near Freight Facilities
	Federal and State Funding Sources		Parking Management
Air Quality	Greenhouse Gas Reduction Plans		Parking Pricing
Land Use Planning and Design	Transit-Oriented Development		Shared Parking
	Urban Design and Streetscape		Inter-Parcel Access
	Land Use and Public Value Capture		Transportation Demand Management
	Sustainable Development Principles		Car-Sharing Programs
	Context-Sensitive Solutions		Vanpool/Carpool Programs
	Livable Centers		Flextime
	LEED Certification – Buildings and Neighborhoods	***Environmental Resource Management***	Green Communities Plans and Programs
Regionalization of Facilities	Water/Wastewater Utility Authorities		Green Education Programs

Figure 9 – Multimodal Transportation Principles

EAST PORT SUBREGION – ROADWAY, TRANSIT, BICYCLE, PEDESTRIAN, TRAIL, AND FREIGHT TRANSPORT STRATEGIES

- An effective multimodal transportation network with a high quality environment for pedestrians, bicyclists, transit riders, and motorists is a necessary element of each livable center in the East Port Subregion.
- Roadways in the East Port Subregion should be planned and developed with "Complete Streets" concepts in mind so that all users of the roadway are appropriately accommodated, depending on the location, function, and operation of the roadway.
- The East Port Subregion should provide access to a wide variety of efficient, integrated, and connected transportation opportunities.
- Travel alternatives to the automobile which minimize congestion and pollution to improve transportation efficiency and quality of life should be planned and developed.
- The East Port Subregion should seek innovative freight-only transportation facilities to reduce the impact of freight shipments on highways which will improve the efficiency in moving goods and people and promote effective use of existing infrastructure.

Quality Growth and Sustainability Principles

Communities and regions across the US, including Texas communities, have developed public policies to encourage more efficient land use and development patterns, development of more travel choices through multimodal transportation systems, and planning and design strategies to create "greener", more sustainable communities. Though not explicitly part of this study, the project stakeholders and citizens participating in the East Port Subregion planning process, articulated preferences for their communities that reflect quality growth and sustainability principles. There were clear desires on the part of citizens and community stakeholders to improve the quality of the built environment and protect the natural environment in the East Port Subregion. Figure 10 illustrates some of the planning and development principles and themes articulated through the public involvement and stakeholder coordination process that relate to quality growth and sustainability.

Figure 10 – Quality Growth and Sustainability Themes

EAST PORT SUBREGION – STRATEGIES FOR CREATING QUALITY, ENVIRONMENTALLY-SUSTAINABLE COMMUNITIES

- There should be a focus on attracting high quality development, including the design of buildings, neighborhoods, and transportation systems.
- New growth should be focused toward existing communities or centers that are already served by infrastructure so open space can be conserved.
- The East Port Subregion should have a mix of residential areas that provide a choice in location, style, and price for citizens that is consistent with the desires of the community.

- East Port communities should strive to preserve open space in appropriate areas and protect the area's natural beauty and critical environmental assets.

- The East Port Subregion should foster distinctive, appealing communities with a sense of place.

- The Subregion should provide opportunities for a mix of land uses (i.e. residential, employment, retail, school, civic, park and recreational, etc.) that are connected to each other so that travel distances can be shortened and traffic congestion reduced.

- The East Port Subregion should implement livable centers that are connected by convenient, safe, and affordable transportation systems.

- Alternative transportation modes should be encouraged through planning and design so that efficient and safe transportation networks are provided for pedestrians, bicyclists, and transit riders.

- The East Port Subregion should leverage the waterfront area as an important environmental asset.

- The East Port Subregion should complete its Hurricane Ike recovery efforts.

- The East Port Subregion should improve its intergovernmental coordination efforts.

- Traffic congestion, especially the presence of heavy duty trucks, should be reduced in the East Port Subregion.

- The East Port Subregion should encourage "green building" techniques, such as compact design and energy-efficient systems, to eliminate the waste of important resources.

Public/Private Partnership Opportunities

In terms of infrastructure development, governments at all levels are facing funding shortfalls due to the global and national economic downturn, increasing populations to serve, and many competing needs for resources. This situation is causing public agencies and private sector firms to increasingly collaborate in joint opportunities to plan, develop, construct, and operate transportation infrastructure systems. In terms of land development, private sector entities with their own resources typically take the lead in pursuing opportunities in coordination with local plans and regulations. On the development side as well, public/private partnerships are growing in number as opportunities for the public and private sectors to partner on joint projects, including the development of livable centers. This type of partnering is an important element in the context of integrated transportation and land use planning and development in the East Port Subregion.

The transportation and land use strategies recommended for the implementation of the East Port Subregion's transportation-land use vision are described in more detail in Section VI. Various funding sources, including traditional federal, state, and local funding sources can be used to implement these recommendations along with potential opportunities for public/private partnerships (3P). Innovative funding approaches such as the use of special districts and other financing tools can also be used for

plan implementation activities. As the East Port Subregion seeks more opportunities to develop livable centers and their supporting transportation systems, public/private partnerships will be a key ingredient to bringing these types of developments to fruition. Additional information on potential 3P efforts are also described in Section VII – Implementation Program.

B. Regional Plans and Programs

As the regional planning agency for eight-county area of the Greater Houston-Galveston region, the Houston-Galveston Area Council (H-GAC) is the lead organization for working with state agencies and local government jurisdictions to forge an effective regional approach to economic development, mobility, and sustainability. Serving as the metropolitan planning organization (MPO) for the region, H-GAC is also at the forefront of short- and long-range planning for the entire region, spearheading innovative plans and programs to meet the region's goals. Two of the major elements of the regional planning framework are the Regional Transportation Plan (RTP) and the Livable Centers Program, both of which are led by H-GAC. Both of these elements serve as primary influences on the planning and development of the East Port Subregion.

2035 Regional Transportation Plan (RTP) Goals

The development of the East Port Subregional Transportation and Land Use Vision used the goals of H-GAC's 2035 Regional Transportation Plan as a starting point for discussion. These goals were created in response to a region-wide visioning exercise undertaken in 2005-2006 called Envision + Houston Region.

Visiting many of the region's local communities and inviting citizens to participate in discussions on the desired path for regional transportation planning, H-GAC engaged citizens and community stakeholders in a public dialogue on how the region should grow and accommodate new residents and jobs. Following this regional visioning effort, H-GAC established a set of regional goals reflecting the public's interests and aspirations, not only about transportation, but also land use, environmental sustainability, and economic prosperity. Figure 11 illustrates the goals of the 2035 RTP.

Figure 11 - 2035 Regional Transportation Plan (RTP) Goals

- **Improve Mobility; Reduce Congestion**
- **Improve Access to Jobs, Homes, and Services**
- **Increase Transit Opportunities**
- **Coordinate Transportation and Land Use Plans**
- **Create a Healthier Environment**

H-GAC's Livable Centers Program

Major cities and metropolitan regions throughout the US, including the Houston-Galveston area, are seeking ways to create more sustainable communities by encouraging more compact growth and creation of high performing roadway, transit, bicycle, and pedestrian (i.e. multimodal) networks to support them. One very successful strategy is H-GAC's Livable Centers Program.
Livable centers are places where people can live, work, and play with less reliance on their cars. The key features of these areas include (1) compact, mixed use development; (2) walkable environments; and (3)

places that are well connected and accessible to surrounding areas. Elements of livable centers can be found in high density areas; transit-oriented development; regional centers; town centers; special trip generators, such as universities or sports facilities; and "smart streets", corridors that link major development centers with transit facilities. Livable centers are intended to be comfortable, appealing places where walking, biking, and transit systems are convenient. They reflect a unique, identifiable destination and serve as an opportunity for public and private investment, often in partnership with one another.

H-GAC and several of its member jurisdictions are actively planning and implementing livable centers in key locations in the Houston-Galveston region, including some in the East Port Subregion. The communities of Baytown, Webster, and Seabrook are working on local plans to create mixed use areas served by multimodal transportation systems. It is likely that additional new centers will be planned in League City and La Porte. Figure 12 shows an example of a livable center visualized for the Westchase District of Houston.

Figure 12: Example of Livable Center – Westchase District – Houston

Source: H-GAC

C. Local Government Visioning Efforts, Plans, and Programs

A number of local communities, including several in the East Port Subregion, have elected to pursue community and transportation planning initiatives to protect and preserve quality of life and economic success. As part of the East Port Subregional Plan effort, a review of all community plans was conducted in order to ascertain the local community planning and development priorities and to identify planned areas of change, in terms of land use and transportation, in each city. This was valuable in terms of identifying where new development and redevelopment areas were likely in the short- and long-term and where potential new transportation system improvements would be needed to accommodate new growth and development. A complete listing of the local plans reviewed for the East Port Subregional Plan can be found in the Appendix to the Existing Conditions Assessment Report. Among the significant current local planning and economic development efforts underway are the following:

- Livable center development in the Garth Road Corridor and Cultural District area of the City of Baytown
- Downtown redevelopment planning in the City of La Porte
- Livable center planning and development in the City of Seabrook

- Citywide transportation planning and planning, planning for the Downtown/Historic District, and livable center planning in League City
- Livable center planning and redevelopment planning along the NASA Parkway corridor from west of the NASA Road 1 Bypass Extension to FM 270 in the City of Webster
- Redevelopment area planning in the City of Pasadena

SECTION IV: THE EAST PORT SUBREGION'S 2040 SCENARIO ANALYSIS

The primary means of examining the potential futures for the East Port Subregion and thus laying the foundation for a long-term Transportation – Land Use Vision for the East Port Subregion was through the definition and evaluation of two 2040 growth scenarios. The current 2035 RTP anticipates a certain level of growth and development distributed throughout the subregion, and includes an analysis of transportation system improvement needs to support that level and distribution of population and employment. The two alternative growth scenarios developed and analyzed for the East Port Subregion provided an opportunity to look at how the transportation system needs could change and bring new mobility opportunities to the subregion based on two different sets of assumptions about the distribution of population and employment in the study area by 2040. The discussions with stakeholders and citizens on these alternative futures and the processes used to conceptualize, define, evaluate and select a preferred scenario were essential to forming the foundation of the East Port Subregion's Transportation-Land Use Vision.

The formulation and analysis of these potential "alternative futures" for the East Port Subregion rest heavily on the analysis of data and information balanced with the insights and experience of key subregional stakeholders and involvement by citizens in the planning process. This section will describe why and how alternative growth scenarios were used to develop a shared vision for the East Port Subregion; the overall rationale and technical approach for defining them; the specific data and information used to develop the scenarios; and the performance measure framework used to compare them. Additionally, this section will describe how the consensus of the subregional stakeholders, together with the input from the public, framed the preferred growth scenario which became the East Port Subregional Transportation – Land Use Vision.

A. Value of Scenario Definition and Evaluation

Defining and evaluating scenarios is a method of determining which action out of a set of potential alternative actions will result in the "best" outcome. Planning scenarios can be created which describe alternative approaches to guiding future land use and development and planned transportation improvements in a defined area. Once the scenarios are defined and described, various analytic tools, including the regional travel demand model, are used to evaluate each alternative's overall performance against a set of established measures of effectiveness or performance measures. These measures of effectiveness are used to "test" scenario performance and allow comparisons and fuller understanding of each alternative scenario.

Typically two or more scenarios are defined and evaluated to meet goals and objectives set for the study area. Using this quantitative process as well as qualitative factors and input from subregional stakeholders and citizens, a "preferred" scenario can be identified. Once this evaluation is completed, the results of the analysis can be reviewed by stakeholders and citizens who can then comment on these differences and indicate their preferred scenario. For the East Port Subregion, two alternative scenarios were prepared, tested and discussed with the Stakeholder Advisory Committee (SAC) as well as citizens attending the public workshops in the study area. One scenario was called the "Subregional Centers Scenario" and the second alternative was called the "Regional Center Scenario". The following sections describe the scenario analysis process and its outcome.

B. Rationale and Approach for Scenario Concepts

A number of technical analysis activities as well as stakeholder coordination and public involvement activities provided the fundamental direction for developing the alternative future scenarios. Among the technical analysis, stakeholder, and public involvement activities related to scenario development were:

- Population and Employment Forecasts for the East Port Subregion
- Status of Local Planning Efforts and Priorities
- Community Choices Exercise
- Team Scenarios Workshop

Each of these activities involved the project team, H-GAC staff members, the Project Stakeholder Committee, and interested citizens.

- ***Population and Employment Forecasts*** **-** Official estimates of Year 2040 (the planning horizon year) population and employment estimates for the East Port Subregion were derived from H-GAC's official 2035 forecast data for the East Port area. In an effort to stay consistent with H-GAC's on-going update to its 2040 RTP, the anticipated population and employment forecast for the East Port Subregion was proportionally increased over the 2035 estimate by the current annualized forecast estimate amounts. The 2040 population estimate for the East Port area is 233,000 new residents and the 2040 employment projection is 140,000 new jobs, bring the total 2040 population to 652,811 and the total 2040 employment to 321,352 (for the modeled traffic analysis zones in the study area). These numbers are the same as the population and employment control totals established for the subregion by H-GAC for their regional planning efforts.

  In developing the two 2040 growth scenarios, the total 2040 population and employment estimate increases were maintained, although each scenario distributed the increase in population and employment across the study area somewhat differently. This allowed an "apples to apples" comparison of how changes in the distribution and concentration of population and employment would affect travel and congestion patterns.

- ***Status of Local Community Planning Efforts and Priorities*** **-** An important element in understanding the potential alternative futures for the East Port Subregion was the thorough understanding of the type, extent, and desired outcomes and priorities of the planning efforts of the local communities in the study area. Data and information on the locally managed planning efforts was obtained through the review of all available planning documents for each community as well as community leader interviews at the outset of the study and additional discussions with the communities as the scenarios were being developed. These activities included:

  - ***Review of Current Plans and Projects*** **-** A summary of the major growth and development plans provided by the local jurisdictions and stakeholders was developed for each community. These were summarized in the East Port Subregion Existing Conditions Assessment Report. A number of these plans suggested significant population or employment changes. The summaries also captured information on any major transportation improvements considered or pursued by the community that was not

already accounted for as part of the RTP. Additionally, major new development and redevelopment projects were summarized.

- ***Community Leader Interviews*** - In the spring of 2009, during the early stage of the project, individual interviews were conducted with community officials and other stakeholders regarding their planned or pending development plans and projects. Participants were also asked for their opinions on the community planning and transportation issues and opportunities challenging the East Port Subregion. Up until the major economic downturn beginning in the fall of 2008, many communities, including those in the East Port Subregion, had significant master development projects which have been stalled or retracted. Identifying these potential areas of growth was important in understanding the future growth areas in each community that could materialize once economic conditions improve.

- ***Community Choices Exercise*** - As part of a Stakeholder Advisory Committee meeting held in September, 2009, participants were invited to engage in a "place choice" exercise which allowed them to identify locations in their community and in adjacent communities where new forms of development would likely occur or should be encouraged. The participants were given a palette of land use and development types including residential (single- and multi-family; commercial, office, industrial, civic, and parks and recreational uses). They were permitted to assign these new development types to locations in the East Port Subregion. The range of choices for the exercise is described in more detail in the Land Use Palette section below.

- ***Team Scenarios Workshop*** - Finally, H-GAC staff and the consultant team participated in a two day workshop to summarize the results of the analysis of the population and employment data, results of the review of local community plans and interviews, and input from the Community Choices Survey and other stakeholder and public input. The focus of the session was to identify the opportunities for improving transportation and development conditions in the East Port Subregion and to identify a method for collectively representing these interests in distinct alternative scenarios. The overall outcome of the session was to focus the scenarios on easing roadway congestion, providing opportunities for alternative modes of travel, and providing for more diversified land uses within communities through the use of a livable centers approach to land use and development.

C. Land Use and Development Palette

To engage the representatives from the local communities as well as other subregional stakeholders in exploring potential new land use and development patterns, a palette of residential and non-residential land uses in varying forms, intensities, and densities was developed for the East Port Subregion. The development of this palette was used in the Community Choices exercise with the Stakeholder Advisory Committee to help participants visualize the possibilities and also help educate the stakeholders on the features of each land use type in the palette to assist with their decisions on where to place the land use in their community. The palette was also used during a similar Community Choices exercise at the September, 2009 public workshops. Workshop attendees were asked to "vote" for the land use type and features most appropriate for future development in the East Port Subregion. Participants were allowed to define "other" land use types that were viewed as being appropriate for new development. The only new type identified was a college campus. The results of the public workshop exercise indicated that a majority of the attendees favored mixed use, connected, appealing developments that

are appropriate for livable center development. Figures 13 and 14 show the land use types that were used for the Community Choices exercises.

As part of the "Community Choices" exercise at the Stakeholder Advisory Committee meeting in July, 2009, participants were asked to identify potential new land use and development types and assign them to one or more locations in their community or in any adjacent community. This limitation was made to assure that the placement of new land uses would be made in areas well known to each participant. Figure 15 illustrates the geographic placement of the land uses. Table 4 summarizes the number of new land use and development types selected by the group.

Figure 13 - Preliminary Palette of Land Use Types (1 of 2)

Preliminary Palette of Land Use Typologies

Symbol	Description	Design Features	Examples
TN	**Transit Node** • Intermodal exchange between two transportation modes – ie bus/ auto/ bike – light rail/ auto/ bike • Potential for a mixed use development near the station area	• Pedestrian friendly environment • Uses are transit dependent • Compact development within a quarter mile of the station • Structures can exceed 3-4 stories in height depending on the character of the area • Shared parking among public and private uses - often benefits from structured parking	
NC	**Neighborhood Centers** • Provides for daily retail, commercial service, and convenience living needs (small convenience store, cleaners, coffee shop, bank etc) • Could/should be mixed use in character including residential uses • Scale of retail land use (existing or planned) exceed that of a community scale center (+/- 25,000 sq. ft)	• Physically small and compact planned location • Tyically no more than two to three stories in height • Functions for both pedestrian and auto oriented access • Usually located at the intersection of collector/ minor arterial streets • Surface parking	
LC	**Livable Center** • Traditional downtown environment • Strong mixed-use, entertainment and residential living environment • Typical location of key community facilities, recreational and cultural venues • Scale of retail land use (existing or planned) exceed that of a community scale center (+ 250,000 sq. ft)	• Grid street system or development pattern supporting a rectilinear access pattern • Intensive vertically integrated mixed use development • Shared parking with a mix of on- and off-street parking with reliance on structured parking • Structures proximate to the right-of way creating a pedestrian street wall environment	
EC	**Employment Centers** • Subregional or regionally significant concentrations of employment uses • Includes manufacturing, office, warehouse, distribution, port, technology and related uses. • Typical scale of an area such as is approximately a quarter mile square or larger devoted to these uses	• Planned or unplanned concentrations of employment uses • Near or on major regional freight of highway corridors • High auto and truck traffic generators	

Figure 14 - Preliminary Land Use Palette – East Port Subregion (2 of 2)

Preliminary Palette of Land Use Typologies

Symbol	Description	Design Features	Examples
MU	**Mixed - Use Development** • Development of an area that represents a mix of uses commonly consisting of residential, retail, and office uses • The scale of mixed use development can vary but for this exercise is assumed to be more than 3 acres in area	• Place made and compact development • Walkable pedestrian area - multimodal emphasis • Can be either auto or transit dependent	
CR	**Community Residential** • Low - Single family residential areas with lots ranging from a quarter acre to an acre • Medium - a mix of detached and attached homes ranging from four to eight dwellings per acre • High - multiple family residential uses with densities greater than eight dwelling units per acre.	• Street network design can be either circuitous or grid connected • Lower densities can impede connectivity • Heavily auto oriented	
CC	**Community Commercial Area** • Represents a new or emerging commercial area. Unlike other areas, it need not be controlled under a united plan, but the area is, or is anticipated to be approximately 250,000 Sq. ft. in area of space or greater.	• Corridor frontage oriented access • Auto dependent high traffic generator	
WF	**Community Waterfront - Mixed-Use - Entertainment** • A range of entertainment, mixed-use and recreational, lodging and residential uses oriented to the waterfront • Often serves as community focal point or downtown community center	• Typically is intensive mixed use development • Use mix can be wither auto or transit dependent	

Table 4 - Land Use Typologies Selected by Stakeholder Advisory Committee

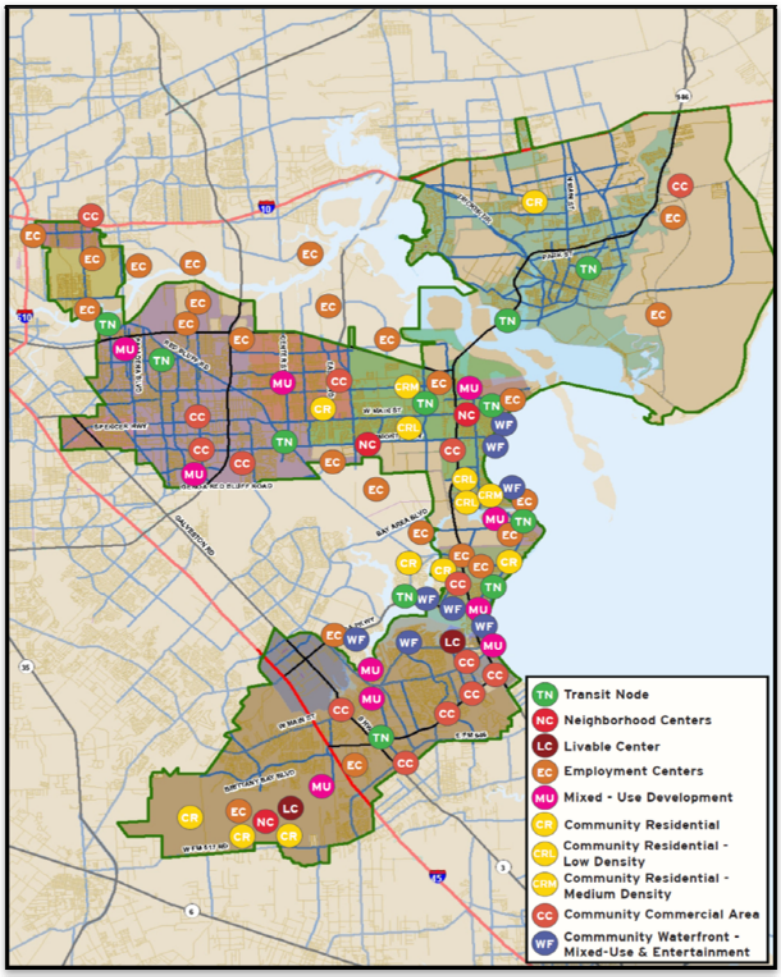
LAND USE TYPE	NO. OF SELECTIONS
Transit Node	11
Neighborhood Centers	3
Livable Center	2
Employment Center	24
Mixed Use Center	10
Community Residential (CR) Area (single-family units detached and attached units)	8
Community Residential – Low Density (1 to 4 units per acre)	3
Community Residential – Medium Density (4-8 units per acre)	2
Community Commercial	12
Community Waterfront	8
College Campus	1

A relatively significant number of land use typology selections were related to mixed-use environments, reflecting the presence of some existing mixed use developments existing already in the East Port

Subregion and a comfort level with this type of development. The results of the Community Choices exercise at the public workshop also reflected an interest in mixed use development types with the protection of established single-family residential areas being a priority as well.

A range of multimodal transportation options was also desired by the public as expressed through the Community Choices exercise at the public workshops. Thus, the overall direction that took shape for the East Port Subregion's Transportation and Land Use Vision was a strong interest in creating distinctive, high quality, mixed use place types that included a variety of living, working and entertainment options all in proximity to each other. These new development types are envisioned in appropriate locations in the East Port Subregion that do not conflict with the preservation of established neighborhoods. These land use types are envisioned to be connected to one another with multimodal transportation networks that serve pedestrians, bicyclists, transit riders, and motorists. These results point to the concept of "livable centers" serving as the new building blocks and prototype for the organization of land uses and transportation systems in the East Port Subregion. Already embraced by H-GAC and many of its constituent communities, this concept holds promise for the East Port Subregion as well based on the results of the technical analysis and input from subregional and local stakeholders and citizens.

Figure 15 - Stakeholder Advisory Committee Results – Community Choices Exercise



D. Performance Measures for Scenario Evaluation

As part of the scenario definition and evaluation process, establishing an agreed-upon set of performance measures against which the scenarios would be compared was necessary. In establishing them, it was important to link them with the stated goals of the study as well as enable meaningful comparisons across the scenarios. The Stakeholder Advisory Committee reviewed an initial set of performance measures which were subsequently used in the scenario evaluation activities. The measures included those that could be quantified using H-GAC's regional travel demand model and also included qualitative measures which could be assigned based on established criteria or thresholds and observations. The performance measures used for the evaluation of the East Port Subregion scenarios are shown in Table 5.

Table 5 - East Port Subregion – Performance Measures for 2040 Scenario Evaluation

QUANTITATIVE MEASURES FROM THE REGIONAL TRAVEL DEMAND MODEL:	QUALITATIVE MEASURES DERIVED FROM OFF-MODEL ANALYSIS:
▪ Volume-to-Capacity Ratios (Roadway Level of Service) ▪ Overall Travel Time Savings ▪ Change in Vehicle Hours of Travel (VHT) ▪ Change in Vehicle Miles of Travel (VMT) ▪ Lane-Miles Over Capacity ▪ Average Trip Length (Miles and Minutes) ▪ Average Speed Increase ▪ Mode Share Shift ▪ Percentage of Trips Under Two (2) Miles ▪ New Person Trips	▪ Number of Planned Livable Centers Connected ▪ Access to Existing and Planned Economic Centers ▪ New Travel Modes Introduced ▪ Number of Redevelopment Areas Served ▪ Street Network Density ▪ Ease of Implementation

The definition and meaning of each of these measures can be found in the Appendix. Differences in the measures between scenarios provide an indication of whether travel and quality of life goals are being met. H-GAC and the stakeholders can use the results of the scenario analysis to outline the infrastructure, development, and regulatory environment required to achieve the preferred scenario.

E. Definition of 2040 Growth Scenarios

Given the data and information analyzed for the subregion as well as the stakeholder and public input on the future issues and aspirations of the East Port Subregion's communities, it was determined that two (2) 2040 growth scenarios for the subregion would be defined and evaluated. While each scenario is focused around the concept of "Livable Centers", they differ dramatically in the number and scale of centers in the subregion. The intent in conceptualizing the alternatives in this way was to create an opportunity to examine distinct differences in land use and development scale to focus on their impacts and relevance to advancing East Port's goals. While guided by an understanding of aspirations for the area, the two scenarios show very different, but compelling mobility and land use solutions. The anticipated impacts and outcomes expected from these two 2040 growth scenarios were compared to the "baseline condition" – the adopted assumptions in terms of the location and distribution of population and employment and the transportation system improvements in place as described in H-GAC's 2035 RTP and regional forecast.

The 2040 East Port Subregion scenarios were framed around the number, types, and scales of centers, measured in terms of population and employment. While the center typology in the two scenarios is consistent, the number and scale of centers are differentiated to understand how their impacts on reducing congestion, improving multimodal mobility, and meeting other related community and regional goals. The two 2040 growth scenarios are described in more detail below.

- ***Scenario 1 – Subregional Centers Scenario*** **-** This concept builds directly off the Community Choices exercises conducted with the Stakeholder Advisory Committee in July, 2009. Participants were given the opportunity to place centers of growth (i.e., residential, mixed-use, commercial, employment, office, etc.) on maps to illustrate the type and location of expected future growth in the subregion. These maps were then refined by the project team to combine and "normalize" the centers identified by the committee, where appropriate, based on technical data and/or community interviews. The center pattern in this scenario for the most part follows the pattern provided by the committee members participating in the workshop. The scenario includes a total of 21 livable centers of various types. The scenario includes fourteen (14) Livable Centers (mixed use), six (6) Livable Employment Centers, and one (1) Livable Waterfront Center. Scenario 1 is illustrated in Figure 16.

- ***Scenario 2 – Regional Centers Scenario –*** In this scenario, the defined centers are larger in scale than subregional centers and are designed to attract a greater amount of development and thus a greater share of population and employment growth. Concentrating population and employment in this manner would have a very different effect on the travel network than subregional centers. This scenario includes seven (7) Livable Centers and one (1) Livable Employment Center. The location and definition of these centers was based on stakeholder input from the Community Choices exercise and from the results of community leader interviews and the review of local plans. Scenario 2, the Regional Centers Scenario, is illustrated in Figure 17.

F. Definition of Livable Centers

To further define the nature of the Subregional Center and Regional Center Scenarios, each center type was defined in terms of the land use mix and the number of new population and employment assumed for each center type. These characteristics are briefly described below. While the scale of a center is an important planning variable, the land mix and overall theme or orientation of the center (i.e. mixed use, employment, entertainment, etc.) is also an important consideration. From input from the public and stakeholder involvement, three basic forms of centers were developed.

- *Livable Center* – this center type reflects H-GAC's Livable Centers Initiative, striking a balance between population (residential uses) and employment (non-residential uses) in mixed-use centers of varying scale.

- *Livable Employment Center* – this center type can encompass nearly any form of employment use (office, distribution, retail, manufacturing, etc.), also includes a strong mix of residential uses (population) intended to provide housing close to jobs.

- *Livable Waterfront Center* – this center type reflects a variety of plans and community aspirations in the East Port Subregion focused on waterfront development. This center type included a combination of uses that meld entertainment, recreation, and tourism and located

these special use centers along the working and historic waterfronts in the subregion, embracing the existing port and production land uses.

Using the definition of the center types and the levels of new population and employment estimated to be located in the East Port Subregion by 2040, estimates of the levels of population and employment for each center type were determined. Tables 6 and 7 illustrate the assumptions made for each scenario of the shares of retail, office, industrial, and other uses within each center type. The percentages shown indicate the share of employment (number of jobs) assigned to that center type.

To further define each of the two scenarios, the future population and employment were distributed according to these percentages across the center types. The scenario assumptions consider the fact that not all population and employment gains will be located within the centers, and that the remaining portion of entire study area will also receive both population and employment growth. The assumptions made for the population and employment distribution by scenario and center type are shown in Tables 8 and 9. These assumptions distribute H-GAC's estimated population increase of 233,000 and its employment forecast of 140,000 new jobs through the Year 2040 across the subregion as defined by each scenario. More information regarding the assignment of population and employment to the centers scenarios can be found in the Appendix.

Table 6 - Distribution of Land Uses by Center Type - Subregional Centers Scenario

Center Type	Retail Uses	Office Uses	Industrial Uses	Other Uses[1]
Livable Center	10%	60%	15%	15%
Livable Employment Center	5%	40%	45%	10%
Livable Waterfront Center	10%	45%	35%	10%

[1] *Includes institutional, education, and public land uses*

Table 7 - Distribution of Land Uses by Center Type – Regional Centers Scenario

Center Type	Retail Uses	Office Uses	Industrial Uses	Other Uses[1]
Livable Center	10%	65%	10%	15%
Livable Employment Center	5%	50%	35%	10%
Livable Waterfront Center	10%	45%	35%	10%

[1] *Includes institutional, education, and public land uses*

Table 8 - Population and Employment Growth Assignment – Subregional Centers Scenario

Center Type	New Population Assigned	New Employment Assigned	Number of Centers	Total Population	Total Employment	Jobs/ Household
Livable Center	12,000	6,000	8	71,000	48,000	1.2
Livable Employment Center	8,000	6,500	7	15,000	45,500	6.1
Livable Waterfront Center	8,000	6,000	6	23,000	36,000	2.1

Remaining Population (to be distributed in the subregion outside the centers): *124,000*
Remaining Employment (to be distributed in the subregion outside the centers): *11,000*

Table 9 - Population and Employment Growth Assignment – Regional Centers Scenario

Center Type	New Population Assigned	New Employment Assigned	Number of Centers	Total Population	Total Employment	Jobs/ Household
Livable Center	25,000	15,000	4	100,000	60,000	1.2
Livable Employment Center	15,000	10,000	1	15,000	10,000	1.3
Livable Waterfront Center	15,000	10,000	3	45,000	30,000	1.3

Remaining Population (to be distributed in the subregion outside the centers): 75,000
Remaining Employment (to be distributed in the subregion outside the centers): 40,000

Figure 16 – Subregional Centers Scenario – Scenario # 1

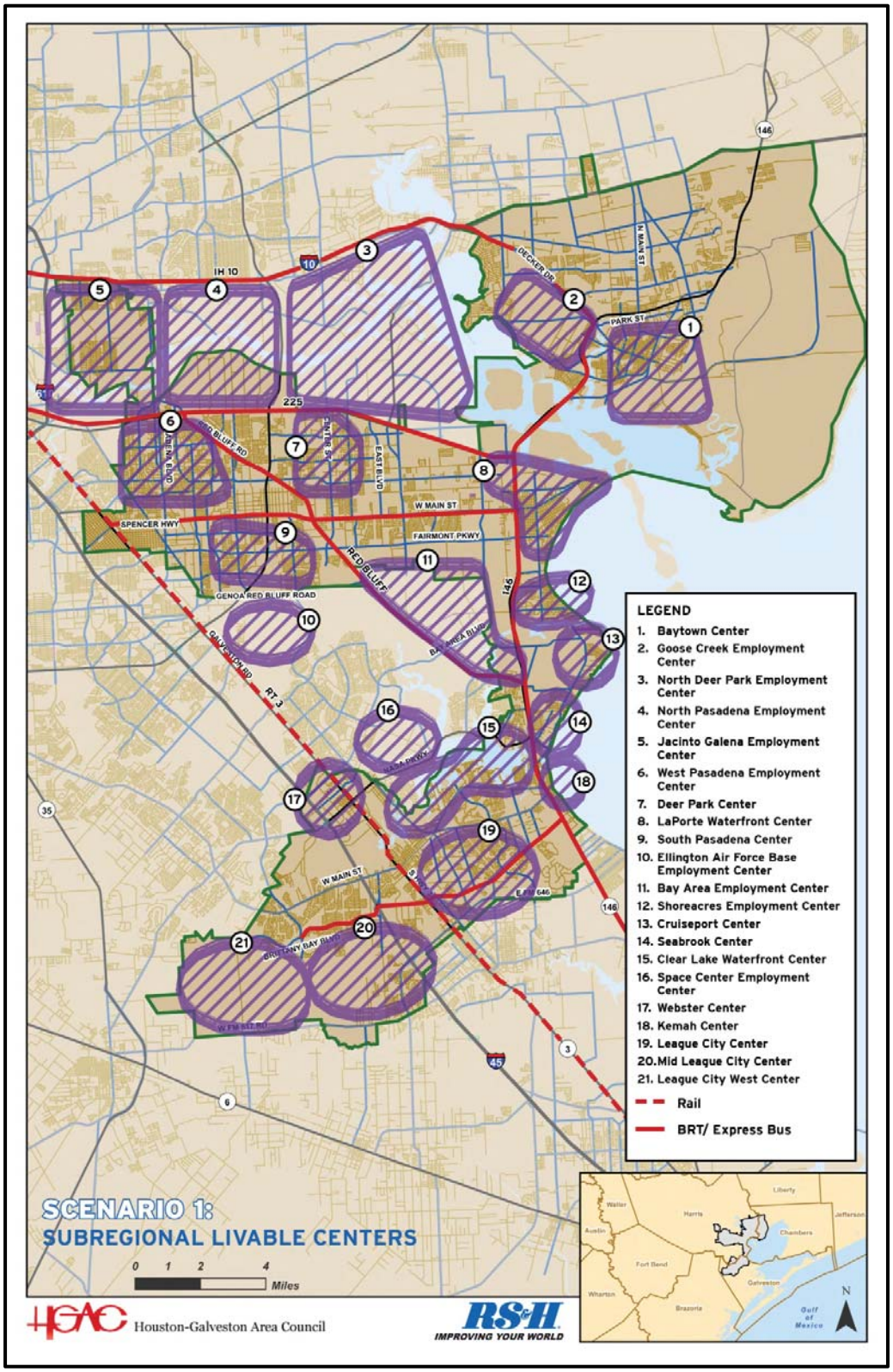
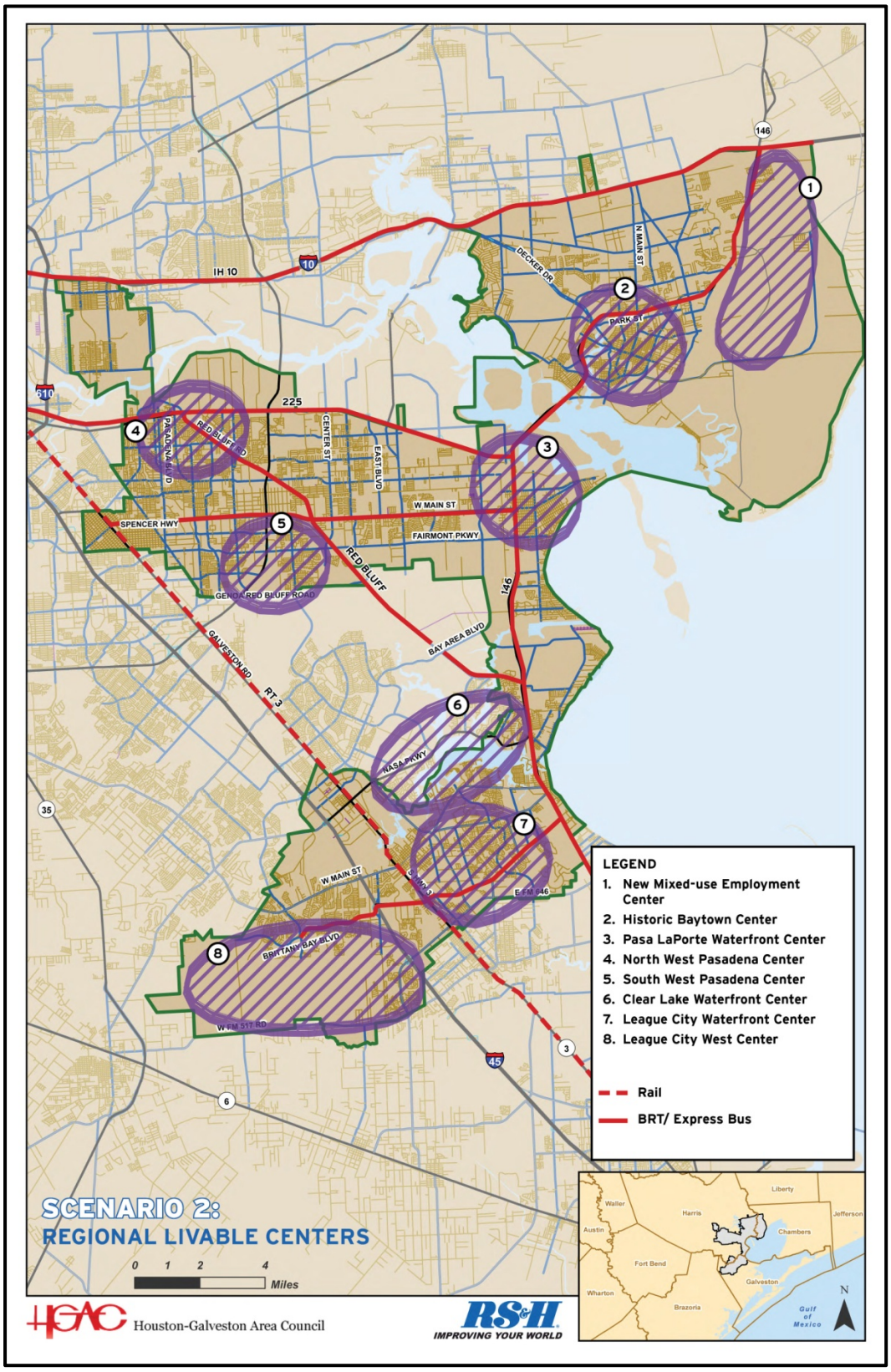


Figure 17 - Regional Centers Scenario – Scenario # 2



G. Scenario Assumptions Related to Public Transportation

As described previously, an important ingredient in the overall success of urban development, in general, and livable centers, in particular, is the presence of well-functioning a multimodal transportation system, including public transit services. In the case of the East Port Subregion, while not a major component of the transportation network now, transit can play an increasingly useful role in overall mobility and thus become an integral element to achieving the subregion's quality of life goals. By increasing the means by which people can travel within highly developed areas, the potential for improving connectivity and having a real impact on traffic congestion grows.

Little transit service exists within the East Port study area today. A fixed service bus route serves the northern part of the area in the Cities of Jacinto City and Galena Park, along with several park and ride facilities in other parts of the study area. Baytown also has a fixed route transit service operated by Harris County Transit Services. Although the service level is small at this time, several of the communities in the East Port Subregion, as well as citizens participating in the public workshops, indicated an interest in expanding public transportation options in their area, especially for commuting. ***It should be noted that the top-ranked transportation investment option from the perspective of citizens attending the public workshops was commuter-oriented transit services.***

H-GAC has studied the potential for introducing commuter rail service into the East Port Subregion and other locations in Greater Houston through its Regional Commuter Rail Connectivity Study (2008). In the plan, a potential commuter rail corridor has been identified which parallels the SH 3 corridor. Additional feasibility planning on this proposal is underway. For the purposes of scenario assessment, commuter rail transit service along the SH 3 corridor was included in each scenario to improve connectivity among planned centers in the subregion as link the subregion to other parts of Greater Houston.

Given the highly developed nature of the East Port area and the substantial investments already made and in the development process for highway and rail infrastructure, there is little opportunity for major new transportation corridor development. While establishing new corridors is not impossible in the subregion, the financial situation of state, county, and local jurisdictions to fund such efforts was unlikely at this time. Thus, the East Port Subregional Plan focused on the utilization of existing corridors, especially incorporating transit services into the existing street network within established corridors as a means of enhancing mobility throughout the area. As a result, six new bus rapid transit (BRT) routes were incorporated into both scenarios. It was assumed that the BRT lines in these corridors would operate in mixed traffic on existing streets (vs. a separate right-of-way), due to financial considerations. Utilizing the same BRT assumptions and configuration in both scenarios allowed a direct comparison of the scenarios in terms of ridership and reduction of overall vehicle miles traveled (VMT) in the subregion. The only major difference in the transit assumptions for the scenarios was the use of the SH 330 corridor for transit service in the Subregional Centers Scenario (Scenario 1) to provide better connectivity to the centers located in the Baytown area.

Figures 18 and 19 illustrate the six (6) BRT routes included in the scenarios. They were included in the following corridors: IH 10; SH 225; SH 146; Red Bluff Road; Spencer Highway/W. Main Street; and Brittany Bay. The entire BRT network is 340 miles in length with 103 stops. It was assumed that the system would operate on 20-minute headways from 8:00 AM to 7:00 PM each day. The system also included nine (9) bus and three (3) rail transit transfer locations. These system features were coded into H-GAC's regional travel demand model for scenario evaluation.

Figure 18 - Proposed Transit Lines – Subregional Centers Scenario - Scenario # 1

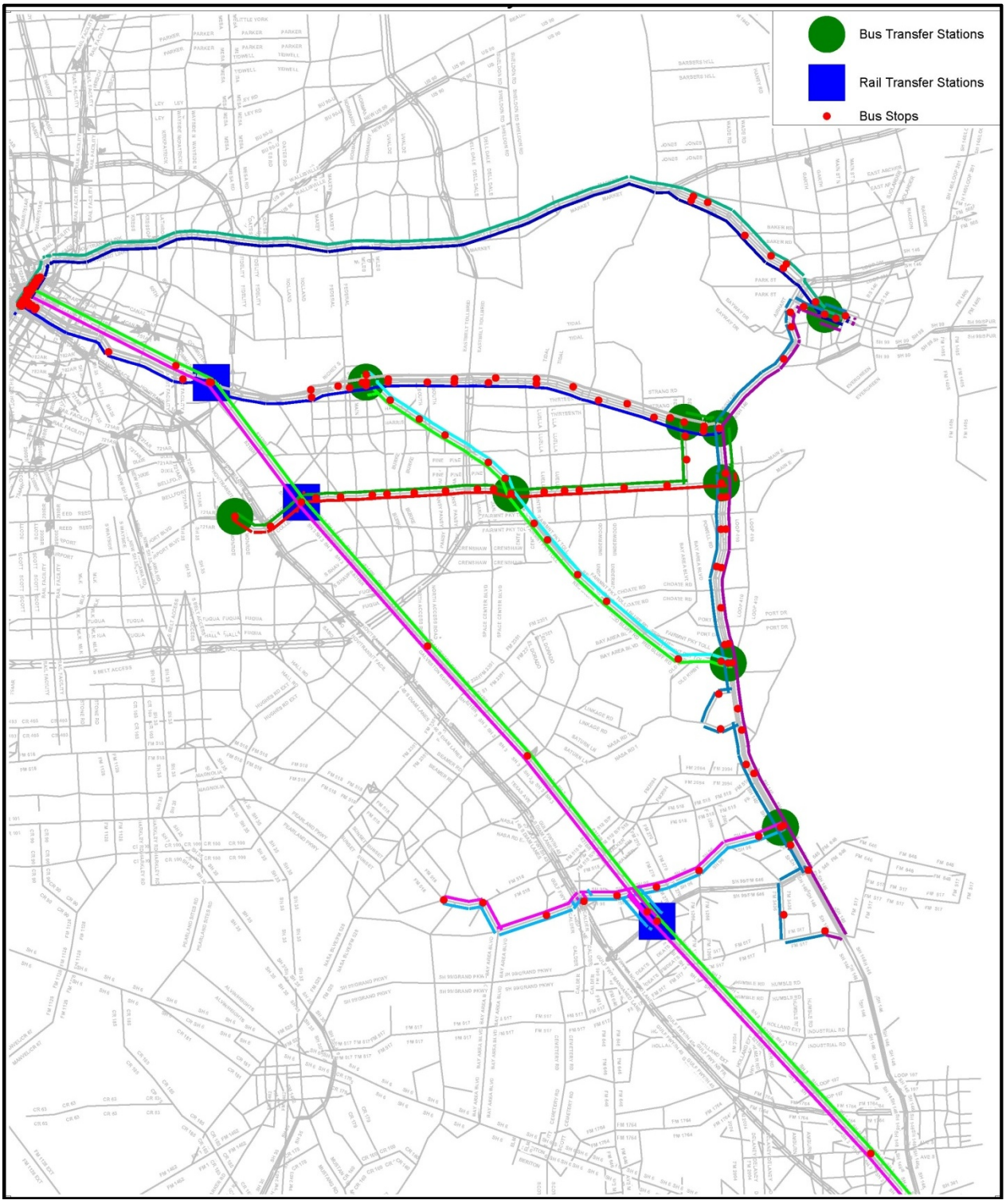
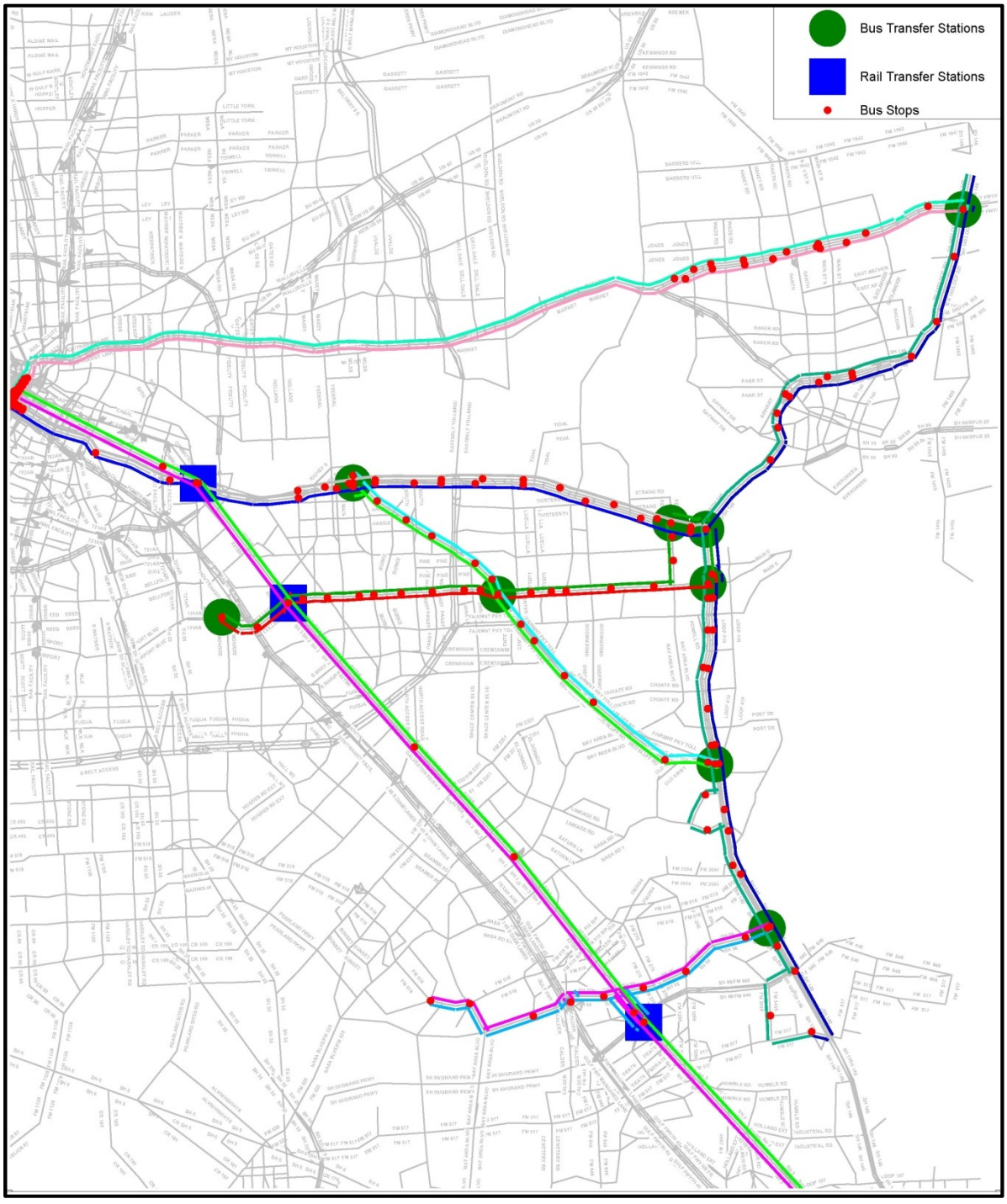


Figure 19 - Proposed Transit Lines – Regional Centers Scenario - Scenario # 2



H. Scenario Evaluation Process

Both the Subregional Centers Scenario and the Regional Centers Scenario were tested using H-GAC's regional travel demand model and off – model analysis conducted by the project team. Utilizing the performance measures previously described, the two scenarios were compared as shown in Table 10. The column shown as "2040 Baseline" refers to the results of testing H-GAC's current population and employment forecast for the East Port Subregion. This forecast uses past development patterns as a prediction of future patterns. Thus, growth is relatively evenly spread through the study area (as opposed to the two scenarios where growth is focused in centers), except for a few locations new concentrations of growth have been planned.

Table 10 - Scenario Performance – Model and Off-Model Measures

Performance Measure	2040 Baseline	Subregional Centers Scenario (Scenario 1)	Percent Over/ Under Baseline	Regional Centers Scenario (Scenario 2)	Percent Over/ Under Baseline
Model-Generated Performance Measures					
Vehicle Miles Traveled (VMT)	17,000,000	17,900,000	5.3%	19,400,000	14.1%
Vehicle Hours Traveled (VHT)	437,036	464,334	6.2%	517,761	18.5%
Total Lane Miles Over Capacity	132	159	20.5%	234	77.3%
Lane Miles Over Capacity – Serious Congestion	80	98	22.5%	118	47.5%
Lane Miles Over Capacity – Severe Congestion	52	61	17.3%	116	123.0%
Average Trip Length (in minutes)	37	25	-32.4%	26	-29.7%
Percent of Total Trips Under Two (2) Miles	4.8	11.94	148.8%	12.4	158.3%
Average Speed	30.6	30.0	-1.96%	30.1	-1.63%
Mode Shift to Transit	0.03	0.33	--	0.34	--
Percent of New Person Trips	NA	3.7	--	12.2	--
Off-Model Performance Measures					
Connected Activity Centers	No Change	Best	--	Better than Baseline	--
Access to Existing/New Economic Centers	No Change	Best	--	Better than Baseline	--
Safety "Hot Spots" Addressed	No Change	Best	--	Best	--
New Travel Modes Introduced	No Change	Best	--	Better than Baseline	--
Links to Redevelopment Areas	No Change	No Change	--	Better than Baseline	--
Street Network Density	No Change	Better than Baseline	--	Best	--
Ease of Implementation	No Change	Best	--	Better than Baseline	--

Table 11 shows the performance measures that weigh in favor of the 2040 Baseline scenario vs. the Subregional Centers Scenario (Scenario 1) and the Regional Centers Scenario (Scenario 2).

Table 11 - Favoring Performance Measures by Scenario

PERFORMANCE MEASURES FAVORING 2040 BASELINE SCENARIO	PERFORMANCE MEASURES FAVORING SCENARIOS 1 AND 2
▪ Vehicle Miles Traveled (VMT) ▪ Vehicle Hours Traveled (VHT) ▪ Total Lane Miles Over Capacity ▪ New Person Trips	▪ Average trip length ▪ Trips under two miles in length ▪ Average Speed ▪ Mode Shift to Transit ▪ Connected Activity Centers ▪ Access to New/Existing Economic Centers ▪ Safety Hot Spots Addressed ▪ New Modes Introduced ▪ Street Network Density ▪ Ease of Implementation

While it seems counterintuitive that the 2040 Baseline performs better than the "Centers" scenarios in the some of the performance measures, there is a fundamental reason for this outcome. Adding retail development as part of new development or redevelopment projects in the subregion results in a relatively higher trip generation rate compared to other land uses that could be added. This is the reason why there are a higher number of new person trips for each of the two center scenarios. That typically would be balanced against the number of new trips less than two miles which could be accomplished through walking or biking rather than driving. However, adjustments were not made to the H-GAC travel demand model to change the mode of travel for these trips. Thus, the result is a net gain in trips and vehicle miles traveled (VMT) and vehicle hours of travel (VHT) for the centers scenarios are overstated for this reason. The increase in trips less than two (2) miles emphasizes the benefits of network connectivity, providing safe and walkable routes for pedestrian, bicycle, and transit travel to increase the livability and multimodal options for the area.

The following figures illustrate the different resulting impacts from the Subregional Centers Scenario and the Regional Centers Scenario. Three sets of maps are provided as follows:

- Figure 20 and Figure 21 - **Travel Change Over Baseline Conditions** - these maps show the daily increase in vehicles per day (VPD) by roadway segment given the changes in land use in the subarea over the 2040 Baseline Scenario for each of the centers scenarios.

- Figure 22 and Figure 23 - **Roadway Congestion Level** - based on roadway volume to capacity ratios (V/C), the anticipated levels of roadway congestion based on the traffic resulting from the changes in land uses in the subarea. The volume-to-capacity (V/C) ratios over 1.00 reflect a level of congestion which most people do not like to tolerate.

- Figure 24 and Figure 25 - **Additional Lanes Needed** - these maps show the number of lanes (in each direction) required to reduce the roadway congestion to an acceptable level.

It should be noted that the Regional Centers Scenario (Scenario 2) results in a higher number of person trips generated due to the higher number of trips generated by the retail uses. This higher number of

trips results in higher increases in daily traffic, higher levels of congestion, and more lanes required to address the congestion.

Figure 20 - Travel Change Over 2040 Baseline Conditions For Subregional Centers Scenario Scenario # 1 (Changes in Vehicles per Day on Roadway Segments Compared to 2040 Baseline Conditions)

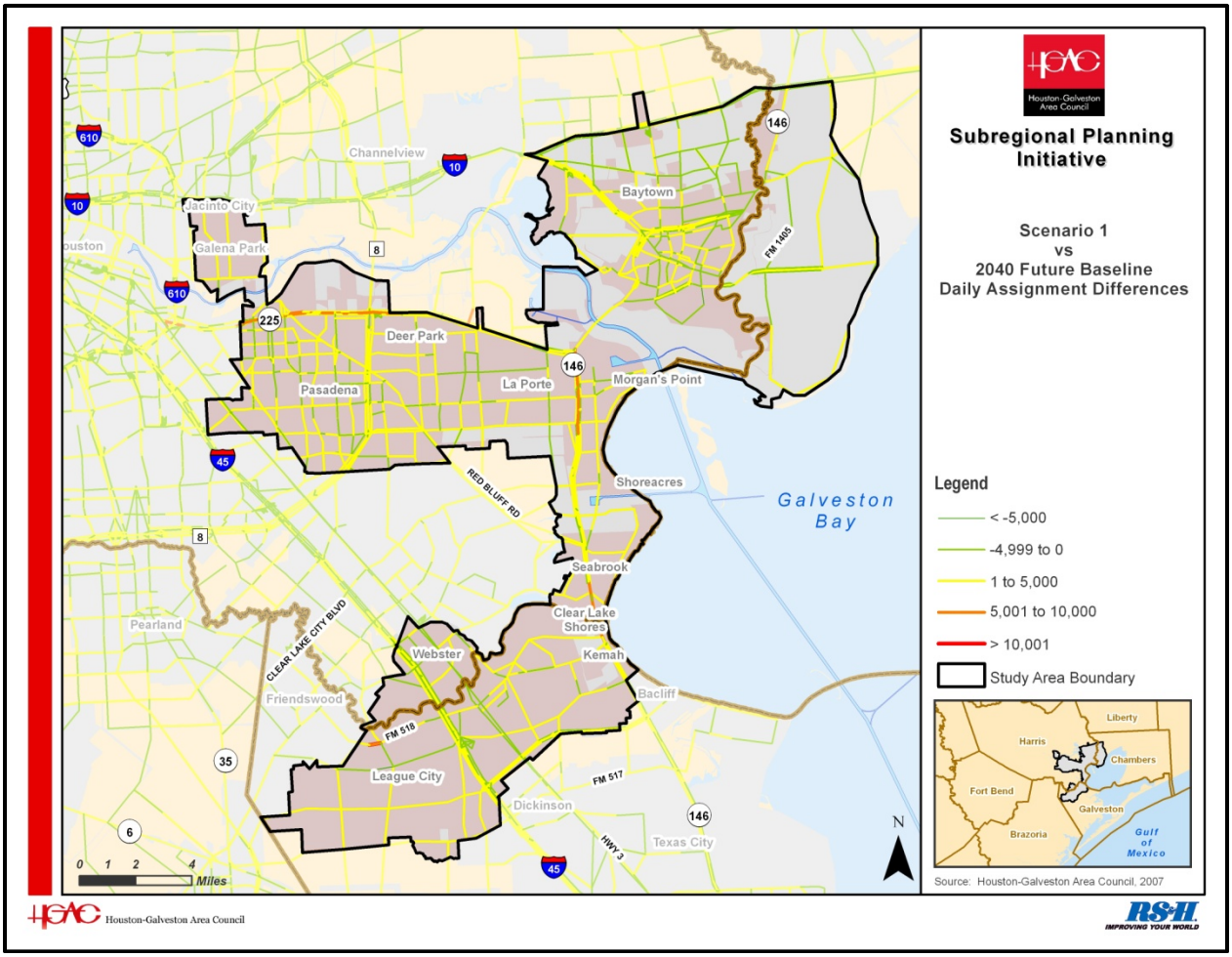


Figure 21 - Travel Change Over 2040 Baseline Conditions For Regional Centers Scenario – Scenario #2 (Changes in Vehicles per Day on Roadway Segments Compared to 2040 Baseline Conditions)

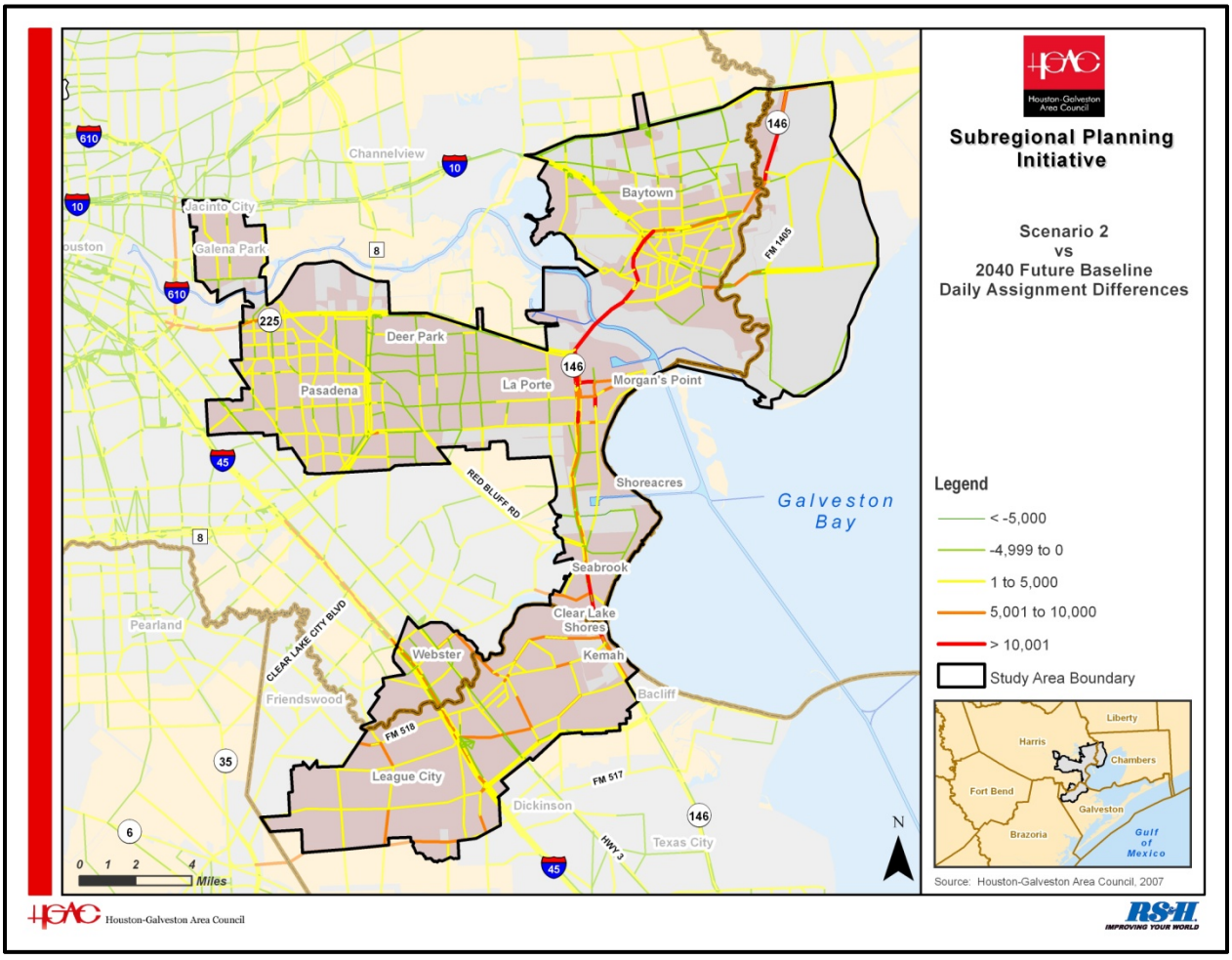


Figure 22 - Roadway Congestion Level- Subregional Centers Scenario – Scenario # 1 (Based on Volume-to-Capacity Ratios)

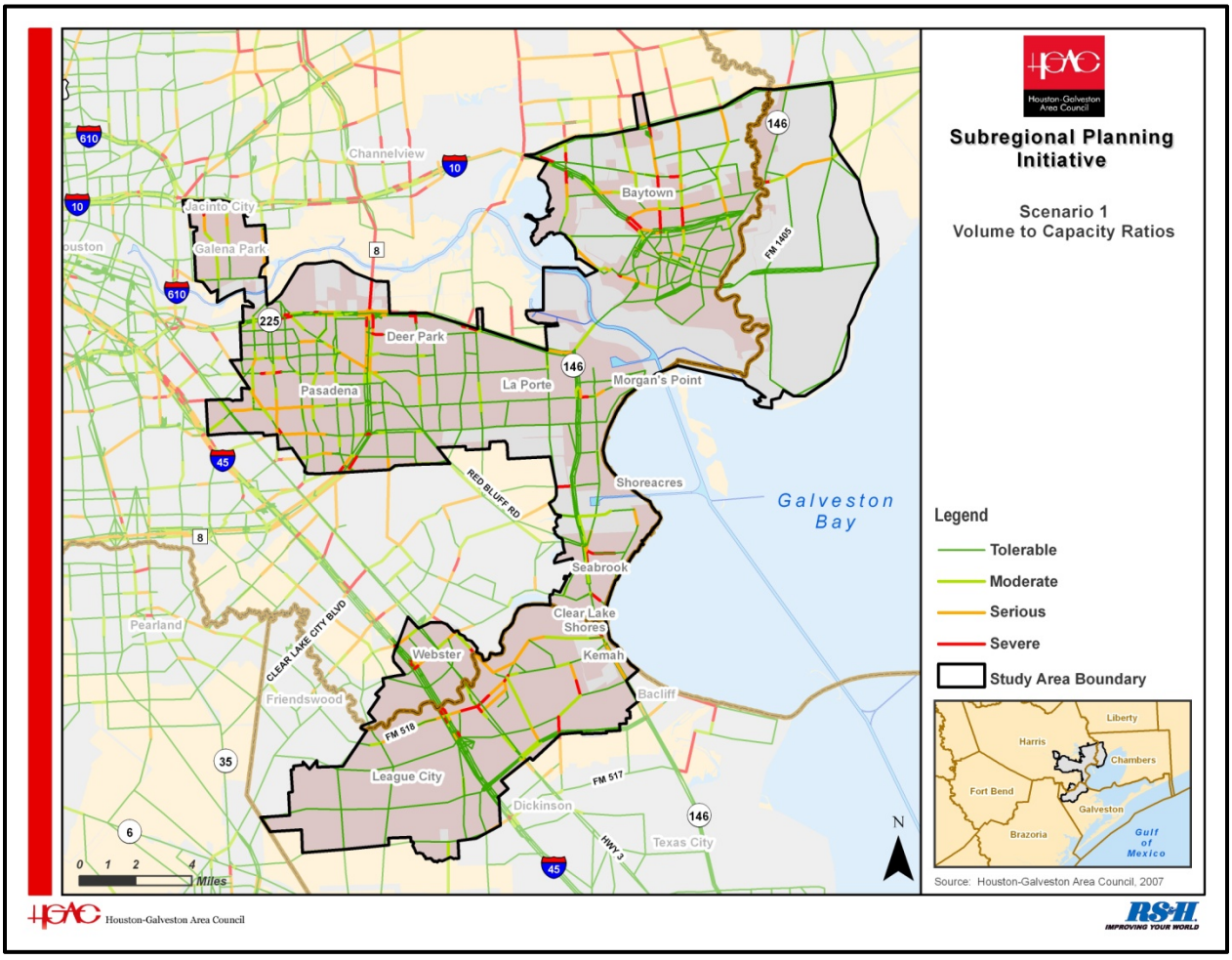


Figure 23 - Roadway Congestion Level - Regional Centers Scenario – Scenario # 2 (Based on Volume-to-Capacity Ratios)

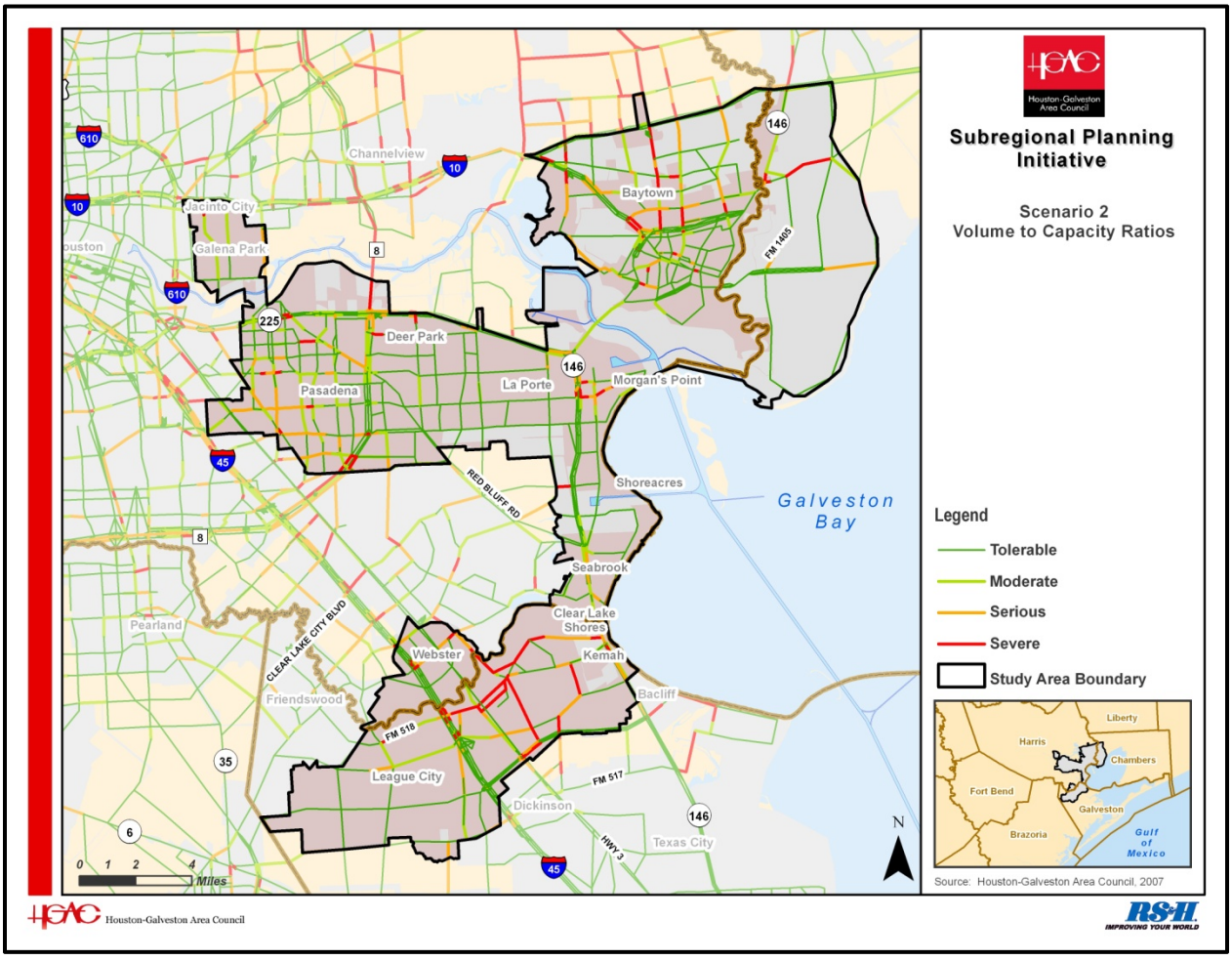
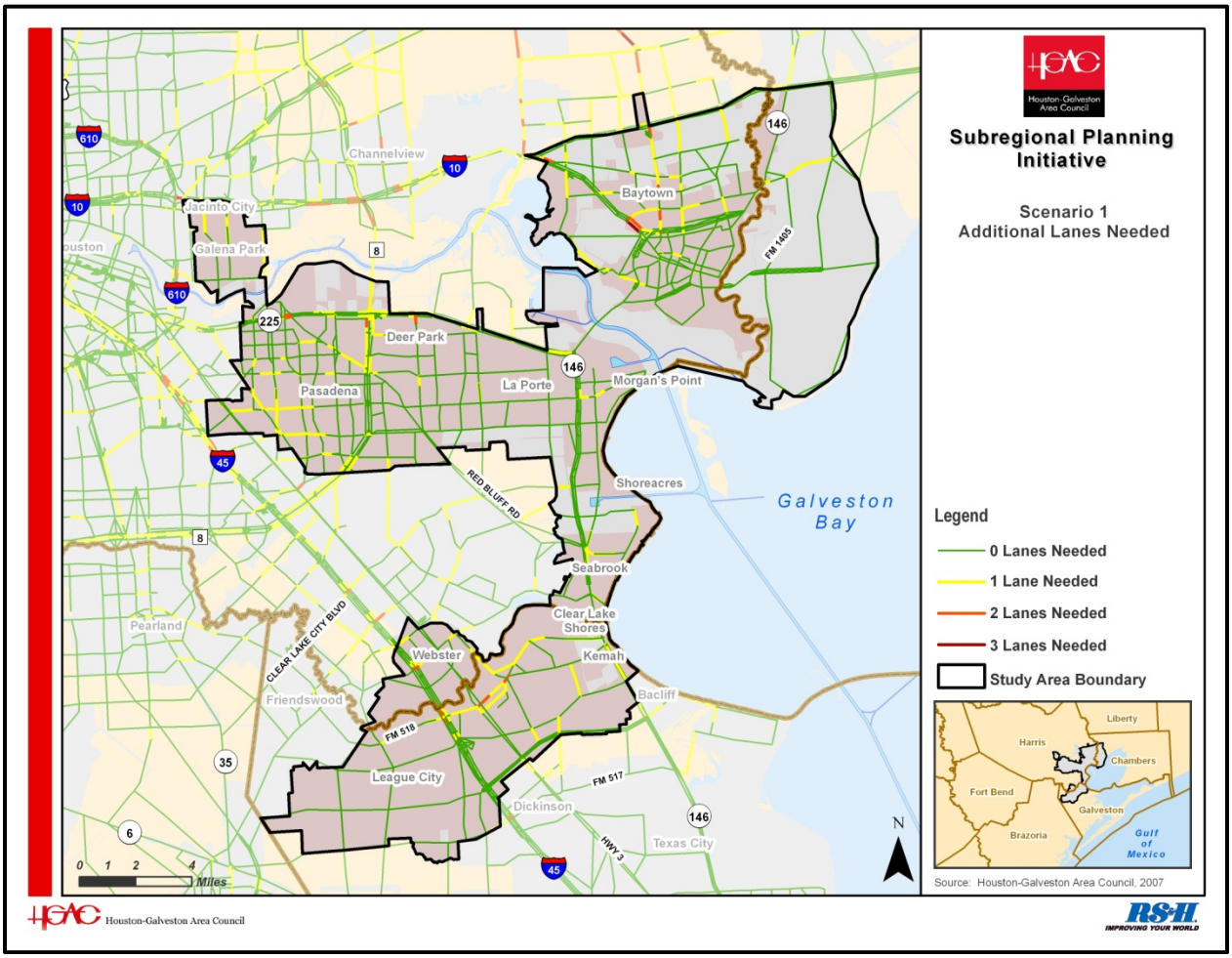
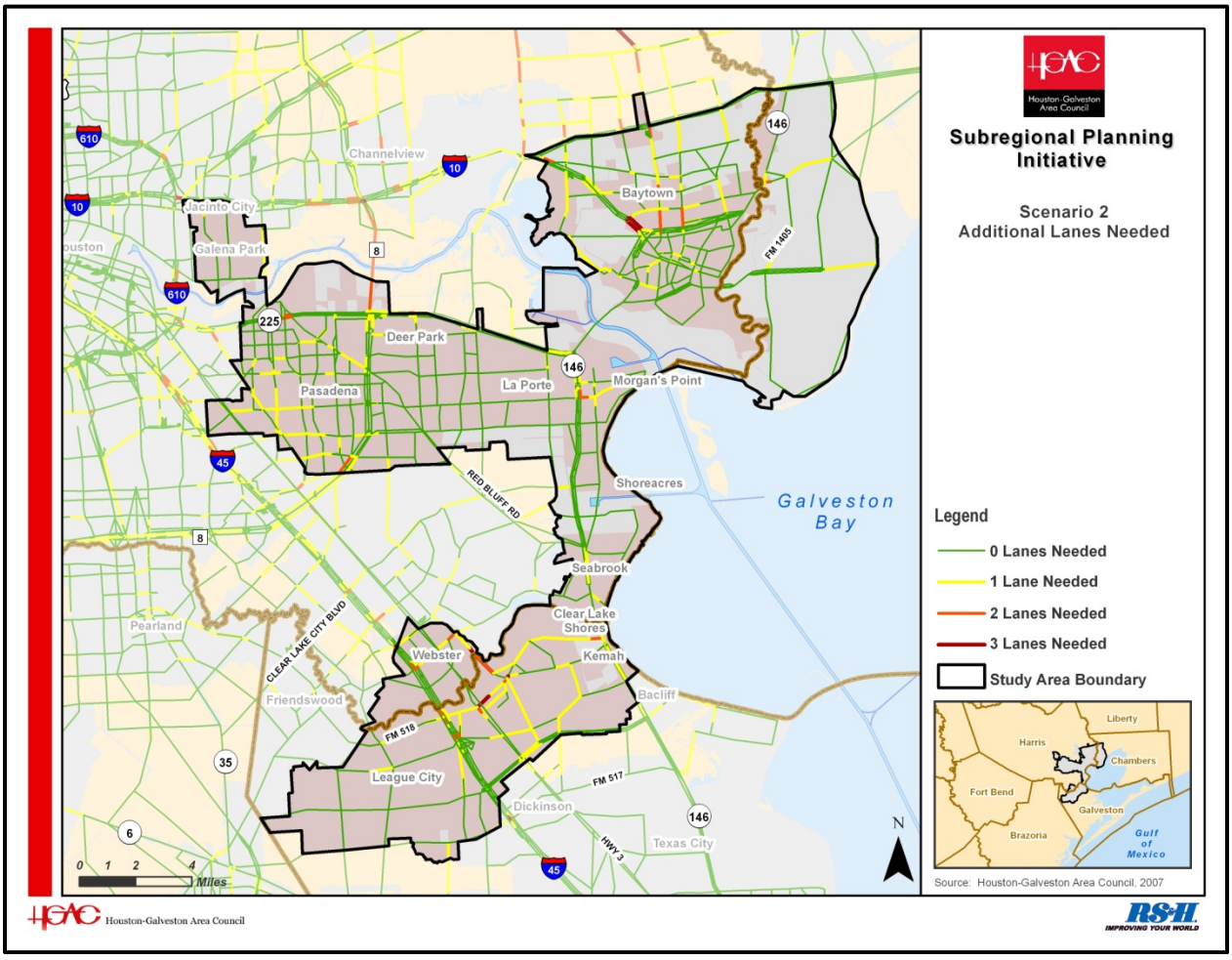


Figure 24 - Additional Lanes Needed - Subregional Centers Scenario – Scenario # 1



Note: This figure indicates the number of additional roadway lanes needed in excess of the number of lanes already programmed as part of H-GAC's 2035 Regional Transportation Plan.

Figure 25 - Additional Lanes Needed - Regional Centers Scenario – Scenario # 2



Note: This figure indicates the number of additional roadway lanes needed in excess of the number of lanes already programmed as part of H-GAC's 2035 Regional Transportation Plan.

I. Scenario Analysis Findings

The process of defining and evaluating the two 2040 alternative growth scenarios for the East Port Subregion provided an opportunity for the local communities, H-GAC, and key stakeholders to examine a set of potential land use and transportation futures beyond the assumptions currently included in the 2035 RTP. The analysis activities have provided data and information for the municipalities and stakeholders to absorb, ask questions about, and formulate preferred outcomes for the subregion. As indicated in Table 10, the performance of the two alternative scenarios did not differ hugely. Among the performance criteria, there were some distinct similarities as well as differences between the two options compared with the current 2035 baseline condition.

As mentioned previously, the introduction of more retail activities as part of the livable centers concepts in both scenarios increased the level of travel. This result is magnified in the Regional Livable Centers Scenario (Scenario #2) due to the centers being defined to be larger with more intense land uses and densities.

Given the analysis assumptions, the Subregional Scenario performs better than Regional Scenario in the following performance categories compared to the 2035 Baseline Condition:

- Vehicles Miles Traveled (VMT)
- Vehicles Hours Traveled (VHT)
- Total Lanes Over Capacity
- Total Lanes Over Capacity – Serious Congestion
- Total Lanes Over Capacity – Severe Congestion
- Average Trip Length (in Minutes)
- Average Speed
- Connections to Activity Centers
- Access to New/Existing Economic Centers
- Ease of Implementation

The Subregional Scenario performed the same as the Regional Scenario in two performance criteria:

- Safety “Hot Spots” Addressed
- New Travel Modes Introduced

The opinions of the SAC members were very nearly evenly split in terms of preferences between the Subregional and Regional Scenarios. Only one stakeholder preferred the 2035 Baseline alternative. In discussions with the committee, it was the consensus that the Regional Livable Centers Scenario may be the “ideal” long-term scenario to pursue; however, there was concern that a more practical, implementable scenario was needed to serve as the foundation for the subregion plan. Therefore, the Subregional Scenario was selected as the recommended scenario as the centerpiece of a collaborative effort among H-GAC, the East Port communities, and other key stakeholders to accomplish the transportation and land use vision for the subregion. The SAC stated that if market opportunities materialize to create larger and more intense centers in appropriate locations, the East Port communities, in cooperation with H-GAC and affected local jurisdictions in the subregion could pursue those, if desired.

SECTION V: STAKEHOLDER COORDINATION AND PUBLIC INVOLVEMENT

Throughout the East Port Subregional Plan development process, a number of project activities and events have been undertaken to assure that the Plan developed for the subregion reflects the priorities, interests, and goals, not only of the H-GAC region as a whole, but also the local communities in the East Port area. Additionally, activities were conducted to engage citizens in information-sharing about the project and interactive exercises to help on elements of the Plan, such as goal-setting, transportation investment priorities, and potential Plan implementation strategies. This section will describe the overall strategies and mechanisms for involving stakeholders and citizens in the East Port Subregional Planning process. Additional details on the citizen and stakeholder input received on individual elements of the Plan can be found in Section VIII – the East Port Transportation – Land Use Vision.

A. Public and Stakeholder Engagement Strategies and Tools

Throughout the development of the East Port Subregional Plan, a number of public involvement and stakeholder engagement strategies and tools were used to exchange information about the project, allow interested persons to monitor the status of the project, and participate in activities and exercises that were directly used to develop the East Port Subregional Plan. Among the strategies and tools used were:

- **Stakeholder Advisory Committee (SAC) -** All of the local communities and counties located in the study area were invited to participate on the Stakeholder Advisory Committee which guided the overall direction of the Plan. Four stakeholder meetings were held during the planning process. The following local jurisdictions as well as statewide, regional, and local stakeholders were represented on the Stakeholder Advisory Committee.

    - City of Baytown
    - City of Clear Lake Shores
    - City of Deer Lake
    - City of Galena Park
    - City of Jacinto City
    - City of Kemah
    - City of La Porte
    - City of League City
    - City of Morgan's Point
    - City of Pasadena (part)
    - City of Seabrook
    - City of Shoreacres
    - City of South Houston
    - City of Webster
    - Chambers County
    - Port Authority of Houston (PAH)
    - Harris County – Precinct 2
    - Harris County – Community Services Office
    - Texas Department of Transportation (TxDOT)
    - Economic Alliance of the Houston Port Region

The SAC served as an important resource for the project team in providing detailed local knowledge on the state, regional, and local stakeholder priorities for the East Port area; helping to frame major elements of the Plan; reviewing and commenting on the study findings; assisting with strategies to engage citizens in the planning process; and serving as a sounding board for the Plan's recommendations.

- **Public Workshops -** Two sets of public workshops were held in the East Port Subregion to enable citizens to learn about, ask questions and express opinions about the study. Due to the size of the study area, the workshops were held in two locations for the convenience of the public. The first set of workshops was held in September, 2009 to learn about the existing transportation and land use conditions in the subregion and provide input on the Plan's goals, preferred transportation system investments, and desired community design elements. One workshop was held at the City of Webster and the second workshop was held at the Pasadena Convention Center.

  The second set of public workshops was held in February 2010. This set of workshops provided an opportunity for citizens to comment on the individual elements of the Transportation-Land Use Vision, individual illustrative examples of livable centers in the East Port Subregion, and potential Plan implementation strategies. Summaries of all of the public workshops were developed and are available at H-GAC's website: http://www.h-gac.com/go/subregional. Details on the public feedback received at the workshops which guided the plan development follow in this section.

- **Project Website -** As part of its Subregional Planning Initiative (SPI), H-GAC developed and maintained a project website, including the documentation of the East Port Subregional Plan development as well its Best Transportation and Land Use Planning Toolbox, a collection of over 50 strategies for community and transportation planning. Interested persons can access the website: www.h-gac.com/go/subregional.

- **Media Relations -** From time to time, requests for information about the SPI Program in general and the East Port Subregional Plan, in particular, have been received by H-GAC. These requests have been handled by H-GAC leadership and project team members. A collection of East Port Subregional Plan-related media articles, etc. has been compiled by H-GAC.

B. Stakeholder Advisory Committee Involvement in Plan Development

The SAC participated in important study activities throughout the study process and actively guided the development of the Plan. The following key milestones were accomplished by the SAC.

- ***First SAC Meeting (May 5, 2009)*** - The SAC members participated in a group exercise to identify and rank in importance the proposed East Port Subregional Plan goals and objectives. The group also reviewed the results of the community leader interviews conducted at the cities in the study area and the common themes resulting from the interview activities. The group was also introduced to the 2040 scenario development and evaluation process and the on-going work on the SPI Best Practices Toolbox.

- ***Second SAC Meeting (July 21, 2009)*** - During this meeting, the SAC members reviewed the results of the Existing Conditions Assessment, including information concerning the current and

Year 2035 transportation system deficiencies, transit system availability, etc. The attendees also participated in an interactive exercise to identify the specific areas of transportation change and the areas of land use changed desired or expected in their respective communities. These areas were mapped by the project team.

- Third SAC Meeting (December 14, 2009) - The SAC members reviewed the results of the public workshops held in October, 2009, including the citizen input on priority goals for the Plan and priority.

- Fourth SAC Meeting (March, 2010) - The SAC reviewed the draft Plan and its proposed recommendations and provided comments on them for the final refinement of the documents.

C. Additional Stakeholder Interviews

Four critically important stakeholders in the East Port Subregion are Harris County, the Port of Houston Authority (PHA), the Economic Alliance of the Houston Port Region, and TxDOT. In addition to their role as members of the SAC, individual interviews with each of these organizations were held in the early phase of the project to obtain information on:

- Previous and on-going plans that could affect or be affected by the East Port Subregional Plan

- Programming of capital projects that could be related to the Plan

- Agency priorities or interest areas that are relevant to the East Port Subregional Plan development

The key areas of focus during the TxDOT discussion was the list of planned/programmed projects for the East Port Subregion as of the Spring of 2009 and the agency's continuing challenges in terms of insufficient federal and state revenues. TxDOT encouraged the consideration of public/private partnerships and/or locally-funded projects, where possible, to implement the elements of the Plan.

The discussion with the Port of Houston Authority (PHA) representatives resulted in a great deal of useful information about the Port's expansion plans and capital programming activities. The Port of Houston is one of the largest in the US and one of the fastest growing in terms of container traffic. The SH 146 corridor, the East Port Subregion's primary north/south artery, and its planned improvements by TxDOT are of utmost importance to the Port.

Harris County is extremely active and involved with the local jurisdictions in terms of providing direct services, such as contracted transit services in certain locations, as well as the development of short- and long-range plans, including the recently completed *"Harris County Precinct 2 Transportation Master Plan"* (July 2009). Commissioner Sylvia Garcia, Precinct 2, and her staff were engaged in the planning process and contributed data and information as well as County perspectives on the subregional planning process.

In collaboration with Harris County Precinct 2, the Economic Alliance of the Houston Port Region has teamed up with local communities in a long-term economic development project called "Project Stars". A master plan was developed for the project, which focuses on identifying and marking historical assets

in the region. Twenty-six historic "Stars" were identified for commemoration, including recommended enhancements ranging from epic art to landscaping and other improvements.

All of these discussions were fruitful in bringing data and information forward related to the on-going and future initiatives underway by TxDOT, the Port of Houston, Harris County, and the Economic Alliance that could relate to future planning for the East Port Subregion.

D. Public Involvement in the East Port Subregional Plan

Citizens living and/or working in the East Port Subregion had several opportunities to learn about, monitor the progress of, and contribute ideas and opinions to the Plan. These opportunities included the use of the project website (www.h-gac.com/go/subregional), as well as public workshops at key points in the study. Interested persons were also invited to send questions and/or comments on the Plan via telephone, e-mail, or fax to H-GAC's Project Manager.

E. Public Workshops

Two sets of public workshops were held for the project. The first set was held in September, 2009 and the second set was held in February, 2010. The September, 2009 workshops were held at the City of Webster's Government Center and the City of Pasadena's Convention Center. The primary topics for discussion included an overview of the project and its purpose; the plan development process and its schedule; the formulation of a set of prioritized planning goals for the East Port Subregion; the determination of a priority list of transportation system improvements (using an interactive exercise); and an exercise to identify the preferred community design and transportation elements that should be incorporated into East Port communities in the future. The project team documented all of the public input received at the workshops for use in the Plan's development.

The second set of public workshops were held in February, 2010 to provide an opportunity for citizens and stakeholders to learn about the central part of the subregional Plan and its draft recommendations. One workshop was held at the City of Baytown's Community Center located near the City Hall, and the second workshop was held at one of the City of La Porte's community centers, located centrally within the community. The topic areas for these workshops included the Draft Transportation – Land Use Vision for the subregion; three illustrative examples of potential livable centers which could be located in the East Port area; and a list of recommended roadway, pedestrian, bicycle, trail and transit improvement projects; and potential Plan implementation strategies. Citizens were also briefed on the scenario analysis process and its findings. The Subregional Scenario was described as the best performing scenario and citizens were asked for their comments on both scenarios. No major objections were voiced by citizens and stakeholders attending the workshops on either scenario. The session was very interactive and invited public comment on a number of important aspects of the East Port Subregional Plan. The following section describes the public input obtained on these topics in more detail. The project team documented all of the public input received at the workshops for use in finalizing the recommendations of the Plan.

The project website (www.h-gac.com/go/subregional) is the repository for all documents on the project, including elements of the Plan, meeting summaries for the Stakeholder Advisory Committee, and the results of all the public workshops.

SECTION VI: EAST PORT SUBREGION TRANSPORTATION-LAND USE VISION AND PLAN

Up until the advent of this project, planning at the subregional level in the Greater Houston-Galveston region did not exist. This project has provided a mechanism for conceptualizing planning approaches at an intermediate level positioned between planning done at a regional level across the very large Greater Houston-Galveston area and the individual local community planning done by cities and counties. The East Port Subregional Plan is intended to bridge that gap and strengthen the quality of both levels of planning. It is also meant to identify opportunities for strategic investments in community planning and transportation infrastructure that is mutually supportive and can achieve both regional and local community goals and objectives. Lastly, the East Port Subregional Plan is meant to be a strong catalyst for plan implementation at both the regional and local levels.

The fundamental basis for creating this new level of subregional plan is the formulation of a "Subregional Transportation – Land Use Vision" that reflects a shared long-range blueprint for carrying out community and economic development, and transportation infrastructure planning and delivery by a wide array of implementing agencies. Communicating the elements of this shared vision to key stakeholders and the public is essential to the long-term commitment to Plan implementation. In the case of the East Port Subregion, the key stakeholders include the 12 local jurisdictions, two (2) counties, H-GAC, TxDOT, Harris County, the Port of Houston, and the Economic Alliance of the Houston Port Region, at a minimum.

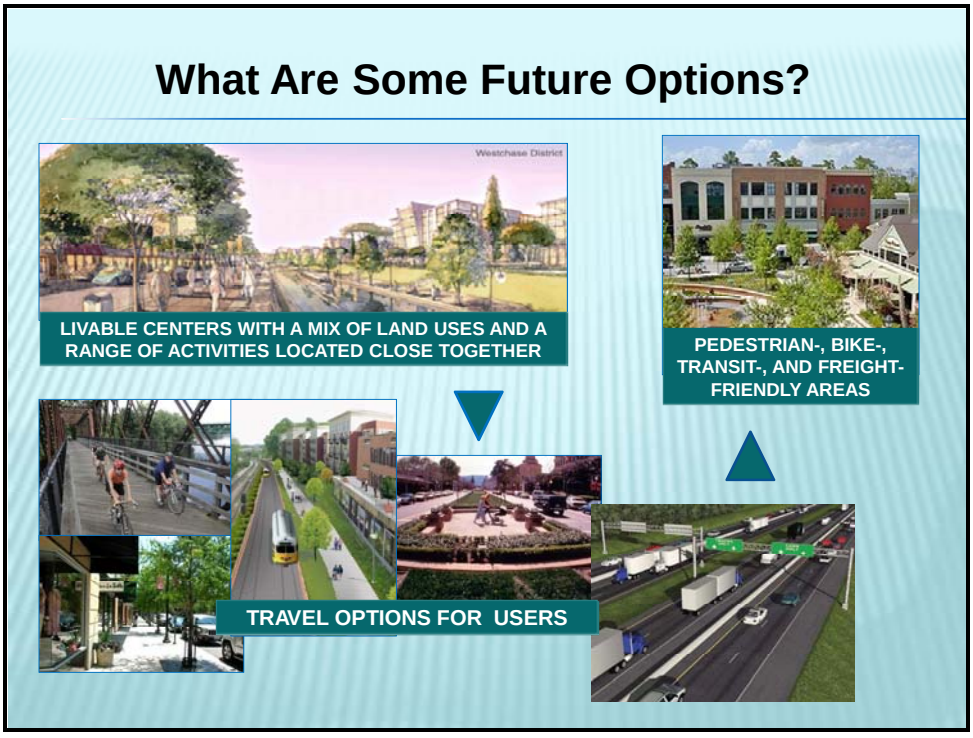
A. Setting the Stage for the Subregional Vision

To begin to formulate the subregional vision, a number of project activities involving the Stakeholder Advisory Committee, citizens, and the project team were focused on learning more and understanding what the current issues and future aspirations for land use and development, economic development, and transportation and mobility are for the subregion. Among the primary issues of concern to East Port communities are the (1) impacts of Port-related traffic on local communities and commercial corridors; (2) the need for better connectivity to key places within the subregion; (3) addressing traffic congestion during commute periods; (4) providing more travel options, such as transit service, bicycle, pedestrian, and trail networks to give alternatives to auto travel; and (5) assuring that future growth is accommodated in quality development with quality transportation systems.

Several of these issues relate to the disconnection between land uses that is prevalent in Sunbelt cities in the US and the difficulty in providing public transit options in low-density areas. By creating clustered areas of urban development in livable centers, more travel options, such as walking, bicycling, and transit, can be created and roadway capacity preserved for longer, higher speed regional trips. Figures 26 and 27 illustrate some of the land use and transportation challenges facing the East Port Subregion and potential options for the future.

Figure 26 - Transportation and Land Use Challenges in the East Port Subregion

Figure 27 - Potential Future Transportation and Land Use Options for the East Port Subregion



In this section, the overall shared vision for the East Port area will be described as well as key elements of the vision, along with the results of the stakeholder and public involvement process that influenced its development. Some of the key elements of the vision that were developed were:

- East Port Subregional Vision Statement
- Priority Goals for the East Port Subregion
- Perspectives on Transportation System Investments
- Perspectives on Livable Centers and Community Design Elements
- Potential Livable Centers in the East Port Subregion
- Financial Implications and Strategies for Potential Livable Centers
- Future Direction for the East Port Subregion

An initial step in formulating the East Port Subregion's Transportation and Land Use Vision was the articulation of shared goals. During the development of the East Port Subregional Plan, citizens and stakeholders were given opportunities to interact with the project team and help develop elements of the subregional vision and its resulting Plan in a "hands on" manner. Key elements of the Plan were the development of subregional goals, the definition and evaluation of the alternative growth scenarios, identification of key community design elements and forms of transportation infrastructure needed for the future, and implementation actions to accomplish the Plan. All of these major elements are discussed in this section as they collectively form the shared Transportation – Land Use Vision for the East Port Subregion. Supporting public policies and transportation infrastructure investments necessary to achieve this vision are also described. Section VII will summarize the Plan Implementation Strategies and methods for tracking the progress in plan implementation and the measurement of effects resulting from the plan.

B. East Port Subregional Vision Statement

Through the efforts of the Stakeholder Advisory Committee and the project team an initial vision statement was drafted building largely on stakeholder and public input on the issues of concern and discussions about the subregion's overall role in the Greater Houston-Galveston region and its potential future role. An initial part of the study was focused on understanding the primary issues facing the East Port area. In short, the East Port Subregion's transportation infrastructure is insufficient in some places, due to underinvestment, particularly for freight movement, and also due to rapid growth in some areas, where development has outstripped the available transportation capacity. Additionally, few travel options, other than auto travel, are available in the subregion for residents, employees, and visitors.

This draft vision statement was later presented to the citizens at public workshops who expressed overall support for this future direction. Figure 28 expresses the final Transportation – Land Use Vision Statement for the East Port Subregion. Figures 29 illustrates the component land use, community design, and multimodal transportation elements that comprise the vision.

Among the most important elements of the East Port Subregional Vision as expressed in surveys during public workshops held in February, 2009 were:

- Parks and Open Space
- Pedestrian-Bike-Transit Friendly Mixed Use Developments
- Safe Walking Paths
- Major Highways in Defined Corridors

- Mixed Land Uses – Vibrant Economies-Green Travel Choices
- Special Rail Lines for Freight
- Express Bus Service

Figure 28 - East Port Subregion Transportation – Land Use Vision Statement

The future vision for the East Port Subregion is based on the creation of a number of Livable Centers, Livable Employment Centers, and Livable Waterfront Centers, connected to each other and the rest of the region by a safe, convenient, and interconnected transportation network that serves people of all ages and the movement of goods. This network includes:

- ***Major Highways***
- ***Arterial and Local Roads***
- ***Freight Rail Lines***
- ***Bus and Rail Transit Services***
- ***Sidewalks, Bike Paths, and Hike/Bike Trails***

This vision is dependent on:

- ***Market Opportunities***
- ***Local Plans and Priorities***
- ***Availability of Public and Private Funding***

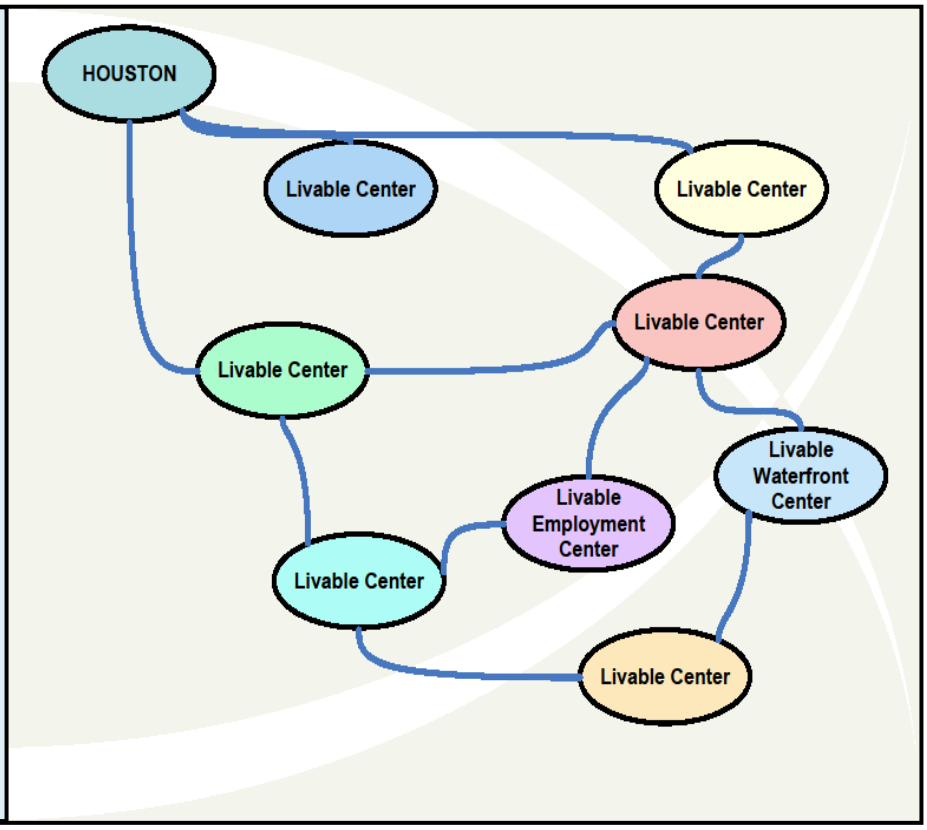
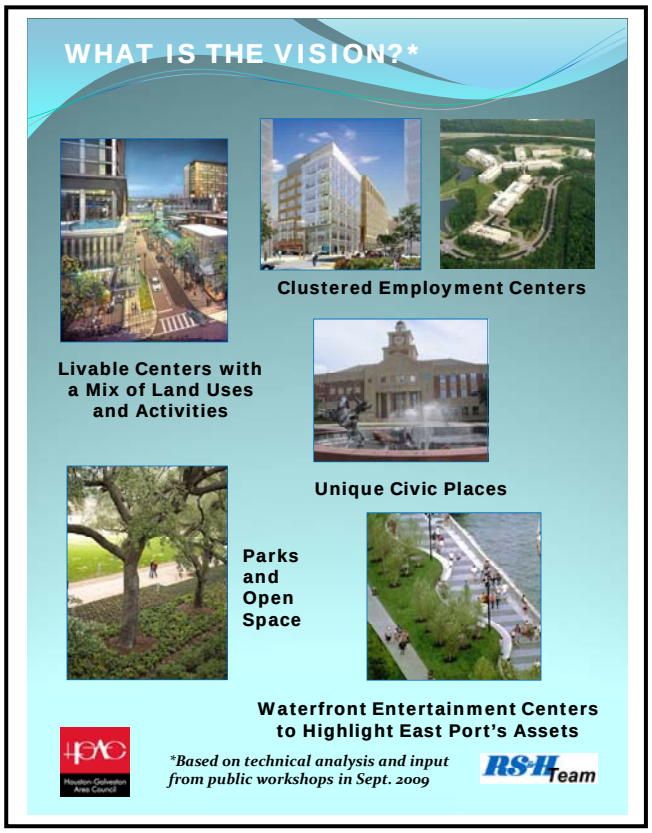


Figure 29 - East Port Subregion – Vision Elements



C. Priority Goals for the East Port Subregion

Using the 2035 RTP goals as a starting point, the SAC members, representing the local jurisdictions and key stakeholders, identified and refined a set of subregional goals for the Plan. These goals were drafted by the project team, capturing the input from the community leader interviews and feedback from the SAC members. The goals were also reviewed by citizens at public workshops who were asked to comment on and suggestion modifications to the goal statements. No objections to the draft subregional goals were expressed by the SAC members or the public. Citizens and SAC members were subsequently asked to rank each goal statement to reflect its importance to the future of the East Port Subregion. The results of the goal-setting activities for the East Port Subregion are shown in Figure 30. All of these goals are consistent with and help advance the overall RTP goals for the Greater Houston-Galveston region.

Figure 30: Priority Goals for the East Port Subregion

GOALS RANKED IN IMPORTANCE BY CITIZENS
Address the Impacts of Higher Levels of Truck Traffic and Port-Related Activity
Support Local Redevelopment and Economic Development Initiatives
Reduce Traffic Congestion
Protect Environmental and Waterfront Assets
Encourage Quality Growth, Development, and Community Design

D. Perspectives on Transportation System Investments

Another key element affecting the development of the overall Transportation – Land Use Vision was the articulation of future transportation needs for the East Port Subregion. SAC members and citizens were asked to weigh in on the question of how transportation resources should be expended in the future to create a high quality transportation system for the East Port Subregion that best served passenger travel needs and goods movement. An interactive exercise was conducted with citizens at the public workshops to obtain quantitative data on their transportation system preferences. They were given "play money" and were asked how available transportation funding should be spent "….***with the goal of providing the best future transportation system for the East Port Subregion***". The participants were given 16 options for spending their money as shown in Table 12. No limits in terms of the amount of money that could be spent or the number of options they could choose.

The results of the exercise indicate a substantial interest in expanding the range of travel choices in the East Port Subregion beyond auto travel. Among the top five (5) ranked investment options were initiatives to introduce more commuter-oriented transit services, special corridors and facilities for freight traffic, improving and adding to the sidewalk, bicycle, and trail networks. Investments in the SH 146 corridor to handle passenger and freight travel needs were a top citizen priority. This coincides with its high priority with community leaders across the subregion.

Table 12 - Transportation System Investment Options

PRIORITY RANKING BY CITIZENS			
1	Commuter-Oriented Transit (i.e. Express Bus, Commuter Rail, Etc.)	9	Transportation Demand Management (i.e. Carpool, Vanpool, and Teleworking Programs, etc.)
2	Special Roads or Rail Lines for Freight Only	10	Transportation Services for Seniors and Disabled Persons
3	Widen/Add Service Roads to SH 146	11	New Bypass Routes (tied with # 12)
4	New/Improved Sidewalks in Commercial Areas, Town Centers, Near Schools, etc.	12	New Multi-Lane Arterial Roads (tied with # 11)
5	Regional Hike/Bike Trails	13	New Interchanges
6	Widen Existing Roads/Expressways	14	Other Improvements (see list below)
7	Local Transit Circulators	15	New Multi-Lane Expressways
8	Improve Intersections (i.e. Add Turn Lanes, New Traffic Signals, etc.)	16	Widen/Add Service Lanes to the SH 225 Corridor

Among the "other improvements" suggested by citizens are shown below.

- Parks and open space
- Landscaping
- Noise reduction
- Dust and airborne particle reduction
- Roundabouts

These were ranked lower than the other 16 investment types.

E. Perspectives on Livable Centers

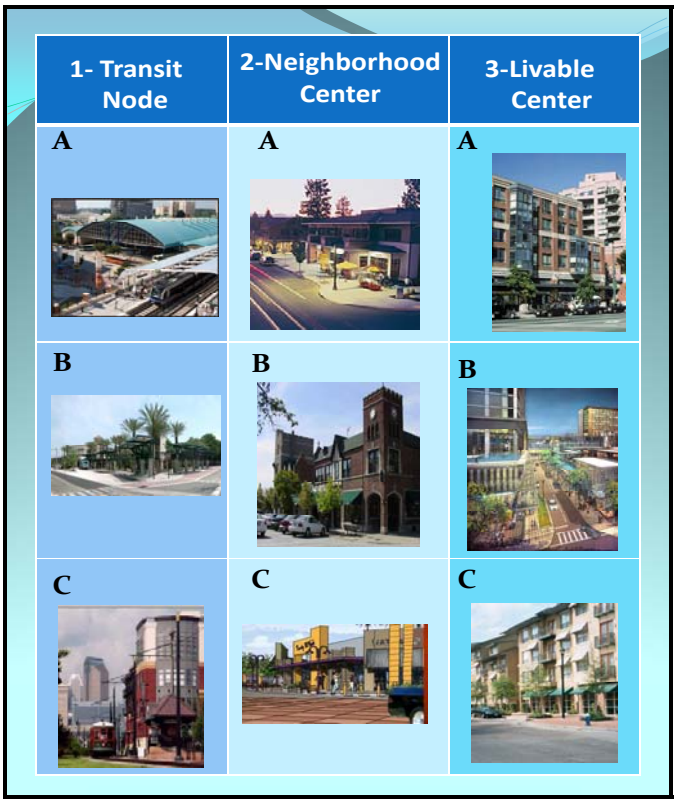
In order to create a shared vision for the subregion, a common understanding of the existing growth patterns and urban forms present in the East Port area was needed. Additionally, the exploration of potential new forms of land use and development, appropriate to the subregion, was also necessary to round out a future vision for the area. As in previous elements of the Plan development, the SAC members, other community stakeholders, and citizens played an important role in fleshing out in visual and quantitative terms how these new land development concepts could be encouraged and accommodated in appropriate locations in the subregion. Extensive discussions were held with the SAC members individually and together as a group to formulate concepts of development that would be acceptable and achievable in the subregion and in respective communities. While the subregion plan does not and will not dictate these changes, it does provide information to local decision-makers on the nature of these new development types (as described previously in Section III) and their implications for mobility, sustainability, and community quality of life factors.

Consistent with the SAC discussions, an opportunity for the public to review and comment on potential future land use types and intensities and various concepts for multimodal transportation systems were provided at the public workshops held in September 2009. Participants were asked to view a set of three (3) images for each of 14 major types of community design features. Figure 31 (five sets of

images) show those that were viewed by the participants. Citizens were also asked to provide any additional comments on the community design elements. The results of the Community Choices Survey were tallied and are shown next to each set of images. The highest scoring image in each category is shaded. Additional public comments on the Community Choices Survey are also summarized in Table 13.

The survey results indicate that the citizens participating in the survey are very comfortable with the concept of livable centers and creating a transportation network that meets the needs of motorists, pedestrians, bicyclists, and transit riders. The types of land development concepts and transportation features that received the highest score are indicative of livable centers-oriented development patterns that cluster a mix of land uses, including residential, commercial, office, and public uses within close proximity to each other, thereby facilitating travel for the daily needs of residents. Improved commute options, particularly involving bus and rail transit, also received high scores from the participants.

Figure 31 - Community Choices Survey Results (1 of 5)



COMMUNITY CHOICES SURVEY

Community Element	A	B	C
Transit Node	8	**27**	6
Neighborhood Center	**17**	10	14
Livable Center	2	**27**	12

Figure 31 - Community Choices Survey Results (2 of 5)

COMMUNITY CHOICES SURVEY

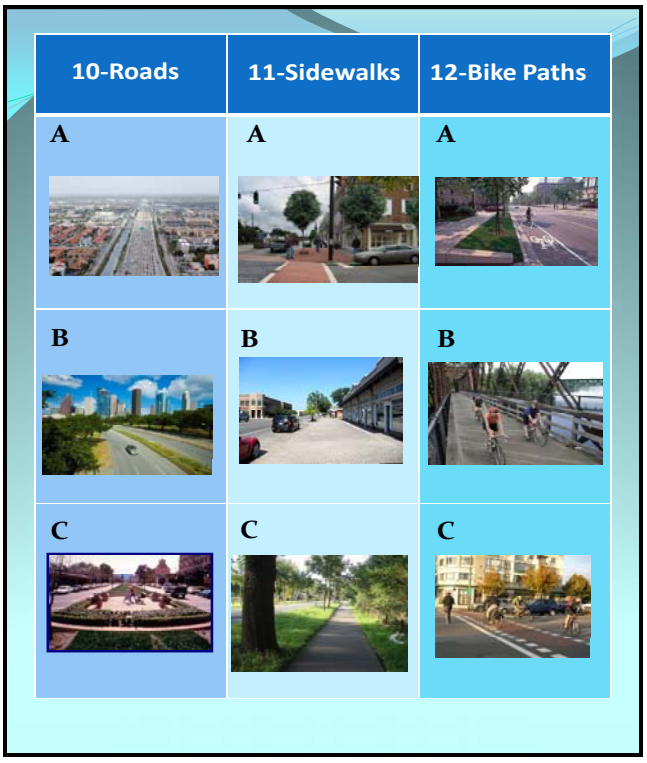
Community Element	A	B	C
Employment Center	**17**	7	**17**
Mixed Use Development	**20**	2	19
Government/ Institutional	9	**25**	7

Figure 31 - Community Choices Survey Results (3 of 5)

COMMUNITY CHOICES SURVEY

Community Element	A	B	C
Community Commercial	**33**	4	4
Waterfront Mixed Use	7	**20**	14
Community Residential	13	**19**	9

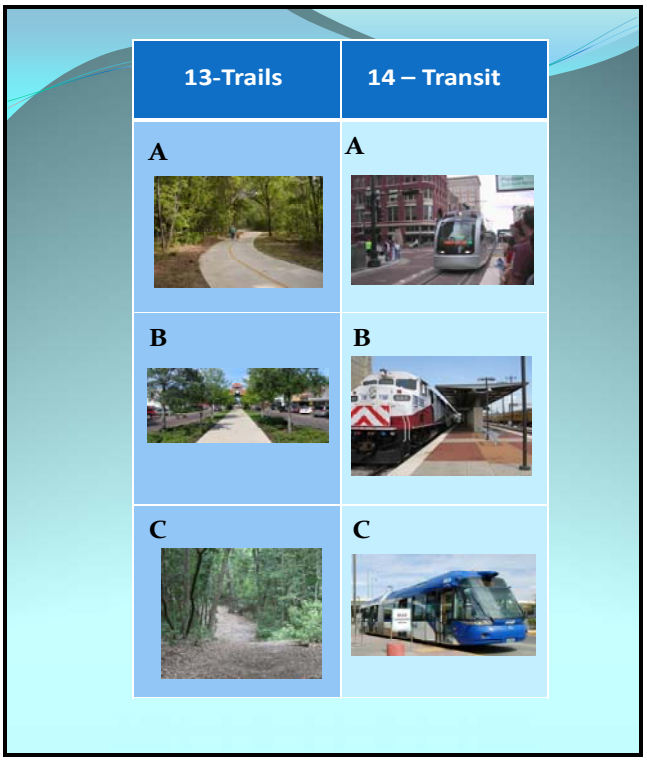
Figure 31 - Community Choices Survey Results (4 of 5)



COMMUNITY CHOICES SURVEY

Community Element	A	B	C
Roads	3	14	**24**
Sidewalks	**24**	4	13
Bike Paths	8	**18**	15

Figure 31 - Community Choices Survey Results (5 of 5)



COMMUNITY CHOICES SURVEY

Community Element	A	B	C
Trails	**22**	6	13
Transit	**20**	6	15

Table 13 - Additional Public Comments – Community Choices Survey

TOPIC	COMMENT
Environment	• Planning should protect the environment. • Make provision for open spaces for future development. • There should be more green space.
Transportation and Mobility	• Multimodal transportation approach is the best, especially a greater emphasis on transit options, specifically commuter rail service. • Make the railroads go into Bayport and Morgan's Point to lessen truck traffic. • Need more emphasis on the NASA Parkway and Fairmont/Spencer Highway corridors and less emphasis on SH 146 and SH 225. • Would like to see more bike/pedestrian-friendly paths. Need better bike and pedestrian paths connecting I-45 retail centers to other areas of Webster. • Would like to see more attention on creating a pedestrian-friendly area – need more rails-to-trails projects to help with congestion. • Synchronizing traffic signals would help the truck traffic problem. • Incorporate METRO, the regional transit system, into the East Port area. • Getting to important medical centers is very difficult from this area or plan. • Improve and develop all modes of transportation. • Plan for the future increase in truck traffic. • Put sidewalks along main roads extending at least ½ mile from grocery stores. • Increase bus service to waterfront communities. • Considering limiting the time that trucks can travel in the area. • Concern about expanding SH 146.
Land Use	• Land use plans should be in place before transportation decisions. • Need more screening between industrial/commercial areas and residential neighborhoods and also along major roads. • North Pasadena needs economic development. • Promote mixed use land development. • Need to make sure that low income people are not squeezed out. • Look at renovation and rehabilitation, not just new development.
General Comments	• Some of the survey choices depend on the community – in some places, high rises are effective. • Need bi-lingual outreach.

F. Potential Livable Centers in the East Port Subregion

As mentioned previously, H-GAC has developed a very successful program working with local communities and the private sector to plan and create walkable, bike- and transit-friendly developments that offer a mixed of residential, commercial, office, and civic land uses that provide residents a wide range of opportunities to live, work, and play. Several of these developments are in the planning stages and some have been constructed already in the Houston area, including the Uptown/Galleria area of Houston and the Town Center area in Sugar Land.

Section III describes the process used to identify potential areas in the East Port Subregion where future livable centers could be located, including varying types of centers that focus on employment or waterfront activities. The results of the analysis of both livable center scenarios described in Section IV indicate that the primary stakeholders in the East Port Subregion, including the cities and counties, TxDOT, Harris County, the Port of Houston, and the Economic Alliance of the Houston Port Region are comfortable with the concept of livable centers and support their planning and development in appropriate locations. Connecting these centers together with a network of efficient and effective roadway, transit, freight, and bicycle, pedestrian, and trail systems serves as a workable model and vision for the future.

In order to understand the nature of livable centers, their characteristics, and potential funding and implementation strategies, three (3) illustrative examples of centers were developed in some detail for the East Port Subregion Plan. ***It should be noted that these illustrative examples are not recommended development concepts that supersede local government land use decisions.*** They are offered as practical examples of the type, scale, and extent of livable centers that could be viable in the subregion in the future. ***The private sector development costs for each of these centers have been estimated using current unit costs from the Greater Houston area (primarily on a per-square foot basis).*** The three example centers are located in the Cities of Baytown, Seabrook, and Webster. Each example is described in this section.

Baytown Cultural Center

The City of Baytown has a long and storied history of recreating and revitalizing itself to meet changing times. From its early ferry industry to oil and gas production, to becoming a center of industrial refining, Baytown has been a leader in constructive change. In recent decades there has been a migration of investment away from the traditional "main street" model of early Baytown toward more residential subdivisions and suburban-style retail. This is a trend generally affecting the entire East Port region, and many locales nationwide.

This illustrative example of a livable center examines the opportunity to restore the traditional "Main Street" attributes of Baytown's West Texas Avenue. The revitalization of retail, restaurants, and entertainment activity to the area between Market Street and South Commerce represents a unique opportunity for the East Port Subregion. The current land values along West Texas Avenue are just above $ 9 million. A traditional, walkable, Main Street-type redevelopment is estimated to require $41.6 million in development costs as shown in Table 14.

Table 14 - Baytown Cultural Center – Estimated Development Costs*

PROJECT ELEMENT	SIZE/UNITS	COST PER UNIT	TOTAL COSTS
Restaurants	15,000 sq. ft.	$ 160 per sq. ft.	$2, 400,000
Retail	30,000 sq. ft.	$ 130 per sq. ft.	$3,900,000
Office	30,000 sq. ft.	$ 110 per sq. ft.	$3,300,000
Residential	210,000 sq. ft.	$ 100 per sq. ft.	$21,000,000
Hotel	100,000 sq. ft.	$ 110 per sq. ft.	$11,000,000
TOTAL			**$ 41,600,000**

**Reflects private sector development costs.*

Based on this analysis, an incentive package of $10 million to cover public realm improvements, infrastructure, and parking facilities would make this development an attractive endeavor. The financial analysis included in this scenario details how such an incentive may be based on the performance of the development, thereby shielding the City of Baytown from potential negative financial impacts. Details on the financial analysis can be found in the Appendix.

In order to finance the necessary incentives, a Tax Increment Reinvestment Zone (TIRZ) is the recommended implementation vehicle. A TIRZ is a tool designed to help a City or County partner with private sector developers to finance the cost of redevelopment or infill development in an area that would otherwise not attract significant private investment in the near future. Within a TIRZ, any increases in taxable value from new development over and above the "base year" value generates tax revenue that is placed in a TIRZ fund to finance public improvements in the zone.

In short, the incentive would be paid for by capturing some of the new property tax value added by the new development. The developer would be rebated a portion of the new property tax revenue generated by the project, while the City of Baytown would receive the remaining property taxes, sales taxes, and hotel occupancy taxes. Over the 20-year projected window, the preliminary financial analysis indicates the City of Baytown would see a return of $23.4 million on the $13.5 million principal and interest paid for by the incentive. These results equate to a 58% profit margin over the life of the incentive. The Baytown Cultural Center assumes a phased project over a seven -year build-out period with only a modest 2% annual appreciation in assessed property values thereafter. No sales tax or hotel occupancy tax capture is factored into the 20-year retirement of the receivable or bond issuance to cover the cost of the incentive. Figure 32 shows the general land use mix and layout of the proposed center. Figures 33 and 34 illustrate some potential design features that are consistent with livable centers.

Figure 32 - Baytown Cultural District Center – Development Concept

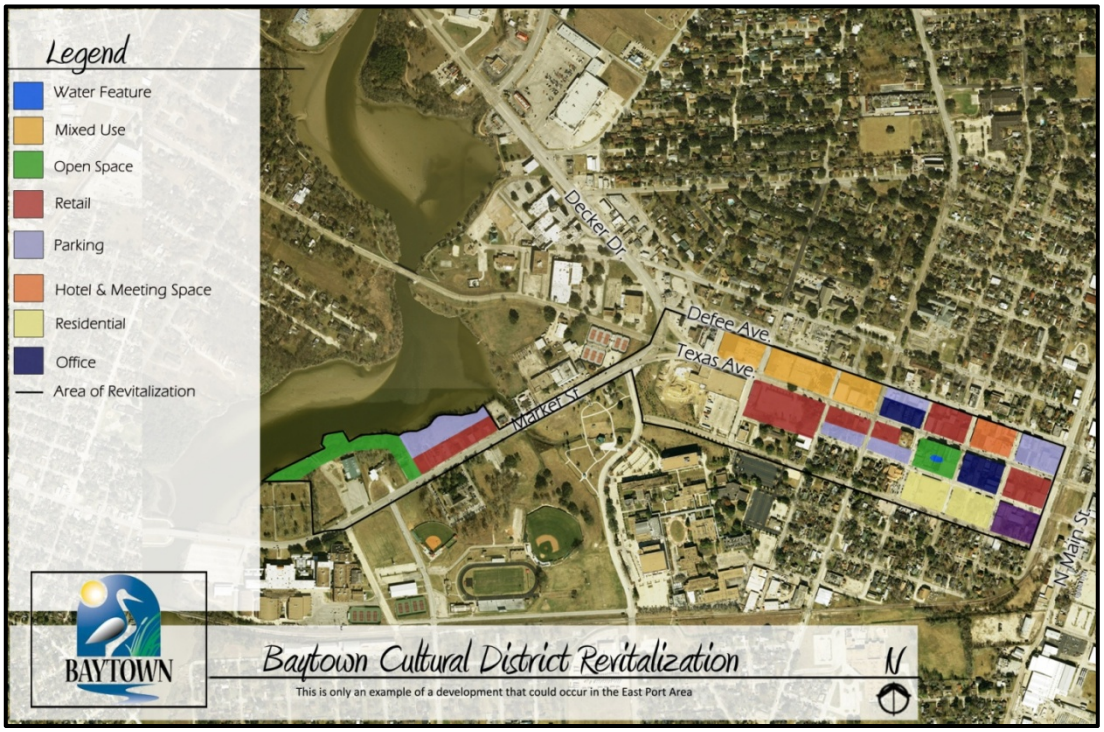


Figure 33 - Baytown Cultural District Center – Design Features

Figure 34 - Baytown Cultural District Center – Design Features

Seabrook Point Beach and Pier Center

The second illustrative example of a potential livable center has been created in the City of Seabrook. The economic redevelopment of the City is inextricably linked to its waterfront. The charming bayside character of Seabrook is evident to its many longtime residents and visitors, but may not be readily visible to those seeking an obvious entertainment or recreation destination. This livable center concept explores what is possible as a viable "destination catalyst" to spark new economic activity and sales tax generation on Seabrook's "Point", its southernmost area along Galveston Bay.

Historically, the development at the Point has not provided the sales tax generation that the City needs. Achieving financial success will require increased infrastructure capacity and capital improvements to roads and bridges to accommodate expanded retail and restaurant activity. The current national trends in the financing of private development strongly suggest that the next several years will not see as many large-scale projects funded without some form of public/private partnership to incentivize private investment.

To that end, this scenario envisions a compact entertainment district targeting a demographic of middle/high income visitors in the 25 - 65 years old range. The Point Beach and Pier Center would offer casual and fine dining, upscale retail shops, live music bars/clubs, a white sand beach with cabanas, and an open amphitheater in contrast to the boardwalk, mix of restaurants, and carnival rides and associated family-oriented activities located across the channel in the City of Kemah.

With current land values on The Point assessed at $13 million, the preliminary estimate of development costs is roughly $ 53.1 million to complete the program described previously. Table 15 provides details on the project elements and their estimated costs.

Table 15 - The Point Beach and Pier Center – Estimated Development Costs*

PROJECT ELEMENT	SIZE/NO. OF UNITS	COST PER UNIT	TOTAL COST
Restaurants	60,000 sq. ft.	$ 140 per sq. ft.	$ 8,400,000
Retail	140,000 sq. ft.	$ 120 per sq. ft.	$16,800,000
Amphitheater	50,000 sq. ft.	$ 500/seat	$5,000,000
Pier	1,000 Lft	$2,600 per lineal ft.	$2,600,000
Beach	1,200 Lft (17,500 tons of sand)	$20 per ton	$350,000 (fully landscaped)
Cabanas	50 units	$1,000/unit	$50,000
Parking	1,300 spaces	$15,000/space	$19,500,000
Open Space	2 acres	$3.50 per sq. ft.	$305,000
Wet Detention	2 acres	$50K per acre-ft.	$100,000
TOTAL			**$ 53,105,000**

**Reflects private sector development costs.*

Based on the analysis, an incentive package of $10 million to cover public streets, infrastructure, and visual improvements would make this development an attractive endeavor. The financial analysis included in this example details how such an incentive may be based on the performance of the development; thereby shielding the City from potential financial exposure should an unforeseen eventuality arise.

In order to finance the necessary incentives, a Tax Increment Reinvestment Zone (TIRZ) is the recommended vehicle. As described previously a TIRZ can be used by a City or County to partner with private sector developers to finance the cost of redevelopment or infill development in an area that would otherwise not attract significant private investment in the near future. Within a TIRZ, any increases in taxable value from new development over and above the "base year" value generates tax revenue that is placed in a TIRZ fund to finance public improvements in the zone.

In short, the incentive would be paid for by capturing some of the new property tax value added by the development in The Point Beach and Pier Center. The developer would only have available a portion of the new revenue generated by the project. Over the 20-year projected window, the preliminary financial analysis indicates the City would see a return of $52.6 million on the $19.4 million principal and interest paid for by the incentive. These results equate to a 36.78% annual profit margin.

The Point Beach and Pier Center assumes a phased project over a seven-year build-out period with only a modest 2% annual appreciation in assessed property values thereafter. Further, no sales tax capture is factored in the 20-year retirement of the receivable or bond issuance to cover the cost of incentive.

The Point Beach and Pier Center could offer a unique entertainment experience - one that locals and visitors would be drawn to again and again as a great place to unwind, savor, and relax. Figure 35 shows the general layout and land use mix for the center. Figures 36 and 37 show design features for the center.

Figure 35 – Point Beach and Pier Center – Development Concept

Figure 36 - The Point Beach and Pier Center – Design Features

Figure 37 - The Point Beach and Pier Center – Design Features

Webster Centre

Due to its close proximity to the Johnson Space Center, the City of Webster has the opportunity to become synonymous with the "Space City" designation of the Houston Region. The low-density retail, older apartment complexes, and vacant tracts that currently occupy NASA Road 1 provide an excellent opportunity to develop/redevelop a project of regional significance. This center example explores the opportunity to create a "destination center" to capture new sales tax revenues, hotel tax revenues, conventions and meetings, and more households with high disposable income to the City.

The center site is located one and one-half miles from Baybrook Mall. The mall is one of the largest of its kind in Houston. Proximity to a major mall is a positive for the City of Webster. Its real property tax rate for 2009 is only $ 0.22 per $ 100 of assessed valuation. This low property tax rate is a direct result of the sales tax revenues collected by the City. The City collected just over $11 million in 2008, but due to the national economic downturn, it has projected an 8.1% decrease in sale tax collections or a projected $10.13 million in sales tax revenue for 2009/2010. Proximity to Houston, NASA, and a growing population along I-45 South has allowed the City of Webster to capitalize on its growth in a very strategic manner.

Developers in the City are building more contemporary centers including mixed-use projects. The current national trends in the development of retail "lifestyle centers" strongly suggest that the era of shoppers utilizing large, enclosed shopping malls is quickly fading. Well-planned mixed-use projects that create a sense of place are catalyzing growth in suburban cities all over America. Baybrook Mall, while slow to execute, has plans to develop the adjacent 400 acres of vacant land and reinvent the current mall into a more contemporary lifestyle center. This revitalized mall is a critical component to the continued success of retail sales for the City.

Webster Centre demonstrates the economic effect of the development of 30+ acres of currently vacant land, and the redevelopment of a dense and aging apartment complex. Webster Centre would offer the living, retail, dining, entertainment, and recreation experiences that characterize the lives of quality-conscious consumers. It also provides a vehicle to mitigate the negative fiscal effect that deteriorating multi-family housing has on economic corridors. Table 16 shows the project elements and their estimated development costs. Figure 38 shows the development concept, including the mix of uses and configuration of the project. Figures 39, 40, and 41 illustrate some of the design features.

It should be noted that the private sector development costs for the parking structure are higher than shown in the previous examples. The higher cost per parking space for the Webster Centre reflects a higher level of façade treatment in the garage parking area.

Table 16 - Webster Centre – Estimated Development Costs*

PROJECT ELEMENT	SIZE/UNITS	COST PER UNIT	TOTAL COST
Hotel	210,000 sq. ft.	$ 250 per sq. ft.	$ 52,500,000
Conference Center	50,000 sq. ft.	$ 100 per sq. ft.	$ 5,000,000
Restaurants	25,000 sq. ft.	$ 140 per sq. ft.	$ 3,500,000
Retail	116,000 sq. ft.	$ 110 per sq. ft.	$ 12,760,000
Cinema	75,000 sq. ft.	$ 120 per sq. ft.	$ 9,000,000
Class "A" Apartments	220,000 sq. ft.	$ 120 per sq. ft.	$ 26,400,000
Garage Parking	1,079 spaces	$ 18,000 per space	$ 19,422,000
Open Space	6 acres	$ 3 per sq. ft.	$ 784,080
Wet Detention	3 acres	$ 50,000 per acre-ft	$ 150,000
TOTAL			**$ 129,516,080**

**Reflects private sector development costs*

Figure 38 - Webster Centre – Development Concepts

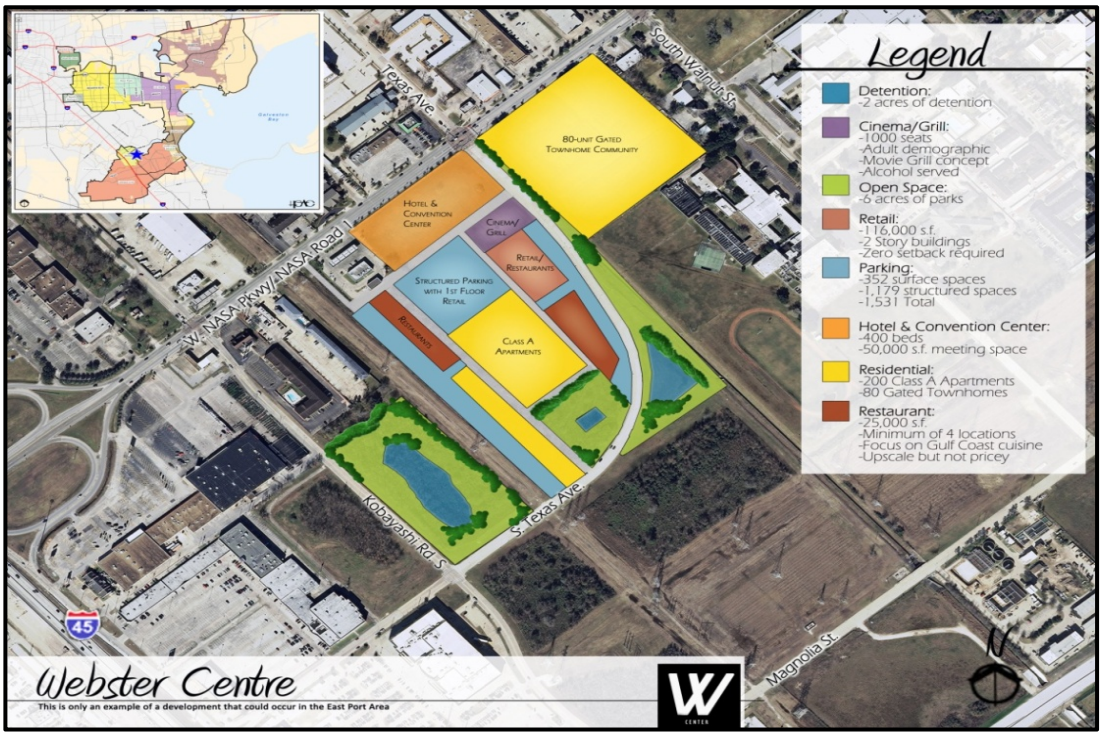


Figure 39 - Webster Centre – Design Features

Figure 40 - Webster Centre – Design Features

Figure 41 - Webster Centre – Design Features

Understanding that nearly $ 130 million is a substantial investment, especially in today's conservative lending environment, there is a market for this type of project in Webster, provided there are incentives and financing strategies to make this development an attractive endeavor. The financial analysis in this center example details how such an incentive may be based on the sales and hotel tax performance of the development, thereby shielding the City from potential financial exposure associated with bonded indebtedness or other forms of public payables. Details on the financial analysis for Webster Centre can be found in the Appendix.

It is recommended that a combination of public/private partnerships be utilized to develop this center. Federal Housing Administration (FHA) financing should be explored for the multi-family aspect. Chapter 380 of the Texas Local Government Code can be used for the developer incentive on new sales and use taxes. The City could consider a rebate, less service demand coverage, to the developer for all (or a portion) of sales tax and hotel tax generated within the Webster Centre. In addition, using tax exempt interest rates should be explored to provide an incentive for development financing.

There are other tools that could be explored as well, but with the size, cost, and complexity of this center in current economic times, multiple financial incentives are necessary. However, in any economic development program it is critical that a market analysis be conducted prior to initiating any project. The developer should advance the funds and be paid out of performance of the project. Crafting a clear agreement on reimbursement, the developer and the City should meet with lenders on the private financing needed. Every economic development incentive should also outline the expectations of the City.

This should be reflected in the development plan and should include additional incentives where the developer is assisting the City to carry out additional public initiatives such as new park land and

important public safety and aesthetic improvements such as placing the overhead power lines underground along the site's NASA Parkway frontage.

Over the 20-year projected window, the preliminary financial analysis indicates the City could see a return of $112.3 million in new ad valorem property taxes on the $39.7 million in sales and hotel tax receipts as a result of this leveraged incentive. Webster Centre assumes a phased project over a seven-year build out period with only a modest 2% annual appreciation in assessed property values thereafter. No sales tax capture is considered following the 20-year maximum term of the incentive.

Webster Centre can create another attractive destination in the East Port Subregion as well as continue to create the sense of place that will drive more and more discerning consumers to live, shop, dine, and play in the City. The judicious use of tax revenues in a strategically negotiated public/private partnership can give the City the tools necessary to craft the landscape of its future.

G. Public Reaction to the Livable Centers

At the February 2010 public workshops, citizens and stakeholders were given an opportunity to view the three potential livable centers developments and provide their comments on them. The participants were also asked to complete a survey on their views of livable centers and to assess the desirability of individual elements of the livable center concepts. Strong support from the public was offered in the survey responses; however, there was a good deal of uncertainty whether such developments would likely be approved under current local development policies. Most participants in the survey indicated that these types of developments should be encouraged; however, opinions were more mixed on whether public investments should be made to support them. A list of 18 community design features which are typically part of livable center developments was shown to the workshop attendees. They were asked to vote "yes" or "no" on whether the design features should be part of possible future livable centers in the East Port Subregion. These features included:

- Wide Sidewalks
- Local Trams or Shuttle Services
- Mix of Residential, Retail, and Office Land Uses
- Multi-Use Paths Separated from the Street
- Park Areas with Activities
- Bike Lanes Along Streets
- Buildings Set Back a Short Distance from the Curb
- Special Lighting Fixtures
- Connections to Regional Transit Services
- Seating Areas, i.e. Benches
- Buildings with a Maximum of 8-10 Stories
- Open Green Space
- Sign Restrictions (i.e. Height, Colors, Lighting, etc.)
- Narrow Streets
- Parallel Parking Along the Streets
- Buildings with a Maximum of 4-6 Stories
- Pay Parking Garages

The results of the citizen survey indicated that of these features, the following features were objected to:

- Narrow Streets
- Buildings with a Maximum of 4-6 Stories
- Pay Parking Garages
- Parallel Parking Along the Streets

Buildings with a maximum of eight to ten (8-10) were slightly more favored. The results indicate that more discussion with the public on why certain design features, including narrower streets, more intense land uses, and parking structures are essential to the success of livable centers could be productive.

SECTION VII: EAST PORT SUBREGION PLAN AND IMPLEMENTATION PROGRAM

As the communities in the East Port Subregion continue to plan and develop their communities consistent with local objectives and priorities, it is also important to create opportunities for keeping the subregion's needs and opportunities in focus as well. Recent activity at the federal level indicates that the continued focus on supporting economically successful, environmentally sustainable communities across the US is an important national objective as well.

> *"Our strategy to build economically competitive, environmentally sustainable, opportunity-rich communities that serve as the backbone for our long-term growth and prosperity…creating more livable and environmentally sustainable communities . . . neighborhoods of opportunity."*
> President Barack Obama, US Conference of Mayors, White House, January 21, 2010

This section will describe a framework for the East Port communities as well as H-GAC and its major stakeholders, TxDOT, Harris County, the Port of Houston Authority, and the Economic Alliance of the Port Houston Region as they work together on a collaborative effort to implement the East Port Subregional Plan. This framework includes (1) institutional roles and relationships; (2) data and information-sharing opportunities; (3) priority goals and implementation strategies, and (4) joint planning initiatives, where appropriate, to advance the goals of both the local communities and the subregion. All of these elements are discussed in this section.

A. Recommended Transportation System Improvements

As part of the modeling of the 2040 alternative growth scenarios, an analysis was done to identify roadway improvement needs, especially locations where additional capacity is needed to handle future travel volumes. As part of this analysis, a list of recommended roadway projects was developed**.** In addition to the project needs identified in the East Port Subregional Plan analysis, additional projects included in 2035 RTP as well as the recently released Harris County Precinct 2 Master Transportation Plan, published in 2009, are included. Finally, public transportation, bicycle, pedestrian, and trail project needs were identified through the Stakeholder Advisory Committee, interviews with local jurisdictions, and input from the public. A list of all recommended transportation projects can be found in the Appendix (Table A-1).

Short-Term, Medium-Term, and Long-Term Investments

One of the considerations in the programming of transportation improvements for the East Port Subregion is the staging of projects such that investments are made as the facility improvements are needed. The roadway improvement projects have been identified, including projects already identified in the H-GAC Regional Transportation Plan (RTP) and the Harris County Precinct 2 Master Transportation Plan. All of the planned and programmed transportation projects for the East Port Subregion can be found in Table A-1, which is included in the Appendix. For this analysis, the 2035 RTP improvements are assumed to be in place by 2040.

Short-Term Improvements from East Port Subregional Plan

A roadway improvement is classified as a short-term improvement if the existing base year model indicates that the facility has a LOS of "Severe" or "Serious" according to the travel demand model.

Medium-Term Improvements from East Port Subregional Plan

A medium-term improvement is an improvement that is needed by the year 2020-2025 timeframe. A facility that requires a medium-term improvement has a LOS of "moderate" in the existing base year travel demand model, and the future year 2040 model indicates the facility will function at a LOS of "Severe".

Long-Term Improvements from East Port Subregional Plan

A long-term improvement is an improvement that is not needed in the short-term or medium-term, but the future year model indicates that the improvement is needed in the period from 2025 through 2040.

Roadway facilities that require long-term improvements are classified into two categories:

- They include long-term improvements that need to be undertaken in the 2030-2035 timeframe. For purposes of this analysis, such a facility has a LOS of "Moderate" according to the existing base year travel demand model and the future year 2040 travel demand model indicates that the roadway functions with a LOS of "Serious". Alternatively, a facility which requires a long-term improvement to be undertaken in the 2030-2035 timeframe has a LOS of "Tolerable" in the existing base year travel demand model and the future year 2035 model shows a LOS of "Severe".

- Long-term improvements also include those that need to be undertaken by the year 2040. All "Serious" and "Severe" improvements that have not been already addressed by 2035 come under this category.

Level of Service Criteria

Table 17 summarizes the roadway level of service (LOS) criteria upon which the three types of improvements were based. These suggested timeframes are for planning purposes only. For more details, a travel demand analysis should be conducted for each improvement year to identify the LOS for each facility at that particular year.

Table 17 - Roadway Level of Service Criteria

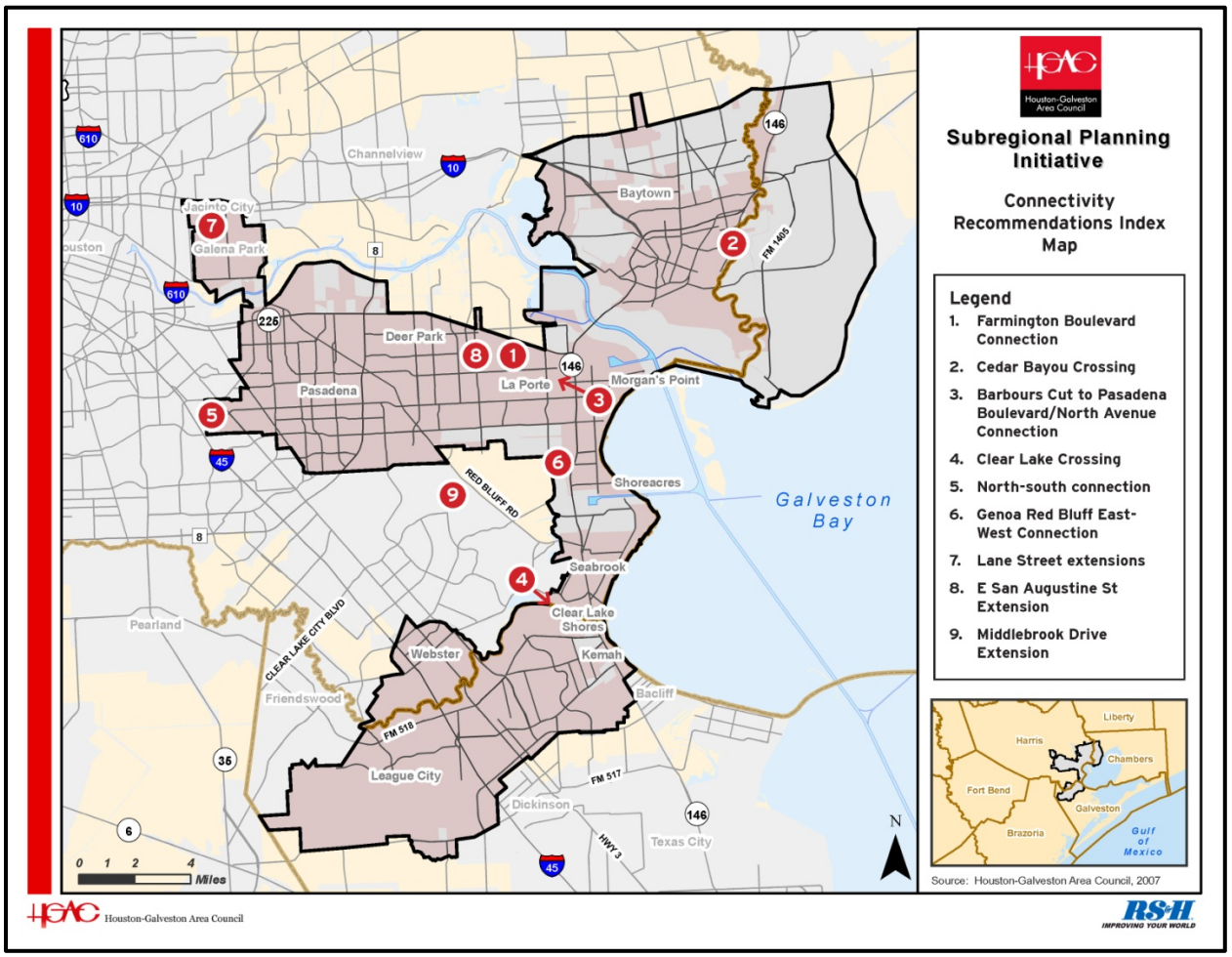
TYPE OF IMPROVEMENT	IMPROVEMENT YEAR	LOS CRITERIA
Short-Term	2010	"Severe" in Existing Base Year Model
	2015	"Serious" in Existing Base Year Model
Medium-Term	2020 – 2025	"Moderate" in Existing Base Year Model and "Severe" in Future Model (2040)
Long-Term	2030 – 2035	" "Moderate" in Existing Base Year Model and "Serious" in Future Model (204) OR "Tolerable" in Existing Base Year Model and "Severe" in Future Model (2040)
	2040	Any Future "Serious" or "Severe" condition not already addressed as a short-, medium- or long-term (2030-2035) improvement

B. New Connectivity Opportunities

Figure 42 shows the location of key corridors where additional roadway connectivity within the East Port Subregion can be enhanced. These proposed projects were identified during the regional travel demand modeling activities. They reflect opportunities to connect missing gaps that could more efficiently distribute traffic in the area. These improvements are in addition to improvements identified in H-GAC'S 2035 RTP, the Harris County Precinct 2's Master Transportation Plan, as well as recommended transportation projects identified through the modeling analysis for the East Port Subregion. These connectivity enhancements are also included in Table A-1 (see Appendix). While many new connections could be potentially identified, the following proposed new connections were identified to accomplish the following purposes:

- Provide support to the anticipated arrangement of sub-regional centers
- Increase major street network connectivity options
- Reduce projected traffic on parallel facilities
- Improve access to larger scaled development and redevelopment locations

Figure 42 - Location of New Connectivity Opportunities



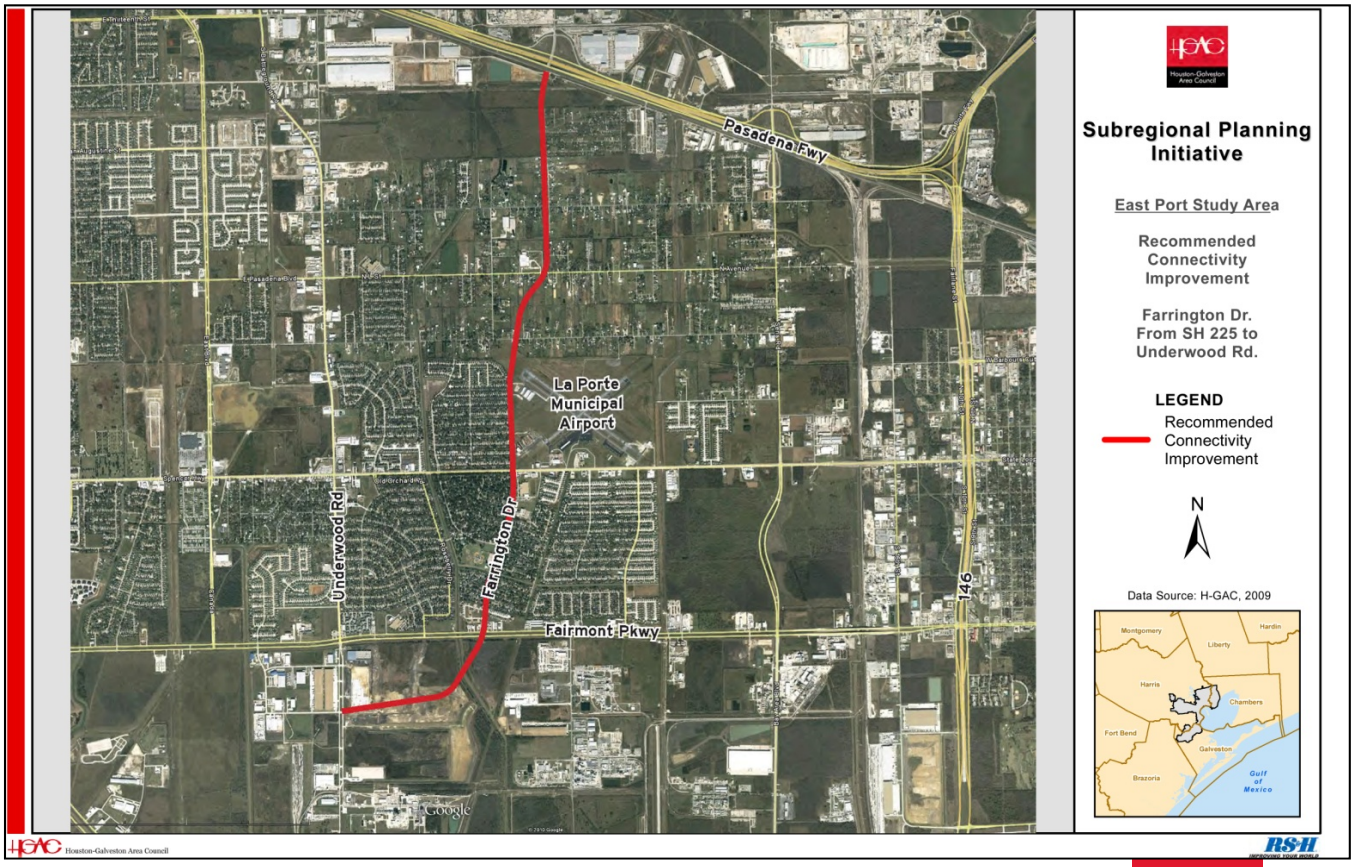
Proposed Farrington Boulevard/Drive Connection

This project would extend Farrington Drive in the City of La Porte to the southwest to intersect with the planned Underwood Road extension to Red Bluff Road and also extend Underwood Road to connect with Clear Lake City Boulevard. Further, it would extend Farrington Drive to the north to the Miller Cut off Road interchange with the SH 225 corridor. This connection would provide the following benefits:

- It would provide direct access between Red Bluff Road and SH 225
- It would serve as north-south access from SH 225 to La Porte Municipal Airport
- It would provide north-south access from SH 225 to the chemical industries south of the West Fairmont Parkway
- It would link development opportunities south of SH 225
- It would provide a connection between proposed Subregional Centers # 3 (North Deer park Employment Center) and # 11 (Bay Area Employment Center)
- It would serve to relieve the moderately congested Underwood Road corridor, including the congested interchange at SH 225. Underwood Road volumes and capacities are both anticipated at 26,000 vehicles per day (VPD)

It should be noted that improving this connection would provide the mobility benefits described above; however, potential negative impacts to nearby residential areas would need to be addressed. Figure 43 shows an aerial view of the Farrington Drive Connection.

Figure 43 - Proposed Farrington Boulevard Connection



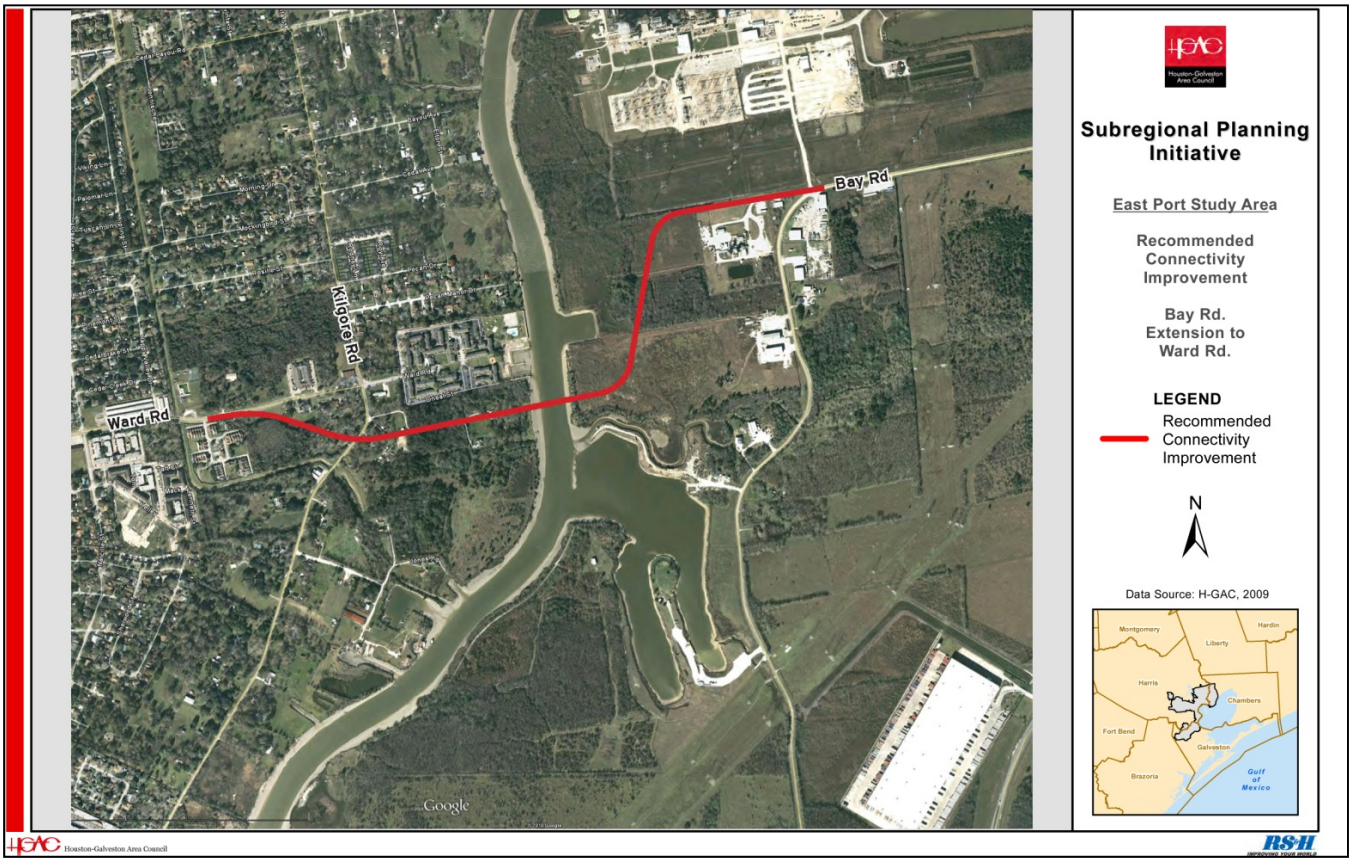
Proposed Cedar Bayou Crossing – Bay Road Extension to Ward Road

This project would develop a new crossing of Cedar Bayou east of Baytown to link West Bay Road and Ward Road. This corridor could provide the following benefits:

- It could serve as a non-truck facility
- It would provide access between the proposed Regional Centers # 1 (Baytown Center) and # 2 (Goose Creek Employment Center)
- It would provide access to the existing residential areas located west of the bayou in Baytown
- It would provide an alternative crossing to the congested SH 146/FM 565 crossing to the north, which has access management concerns. FM 565 daily volumes are anticipated to reach 16,000 VPD, with capacity at 10,000 VPD

Baker Road, located north of Ward Road in the City of Baytown, is scheduled to be extended east of Main Street. The design of the Baker Road improvement should be underway in 2010, with the construction beginning in 2011. The location of the ultimate crossing of Cedar Bayou has not yet been determined. Figure 44 shows an aerial view of the proposed connection.

Figure 44 - Proposed Cedar Bayou Crossing - Bay Road Extension to Ward Road



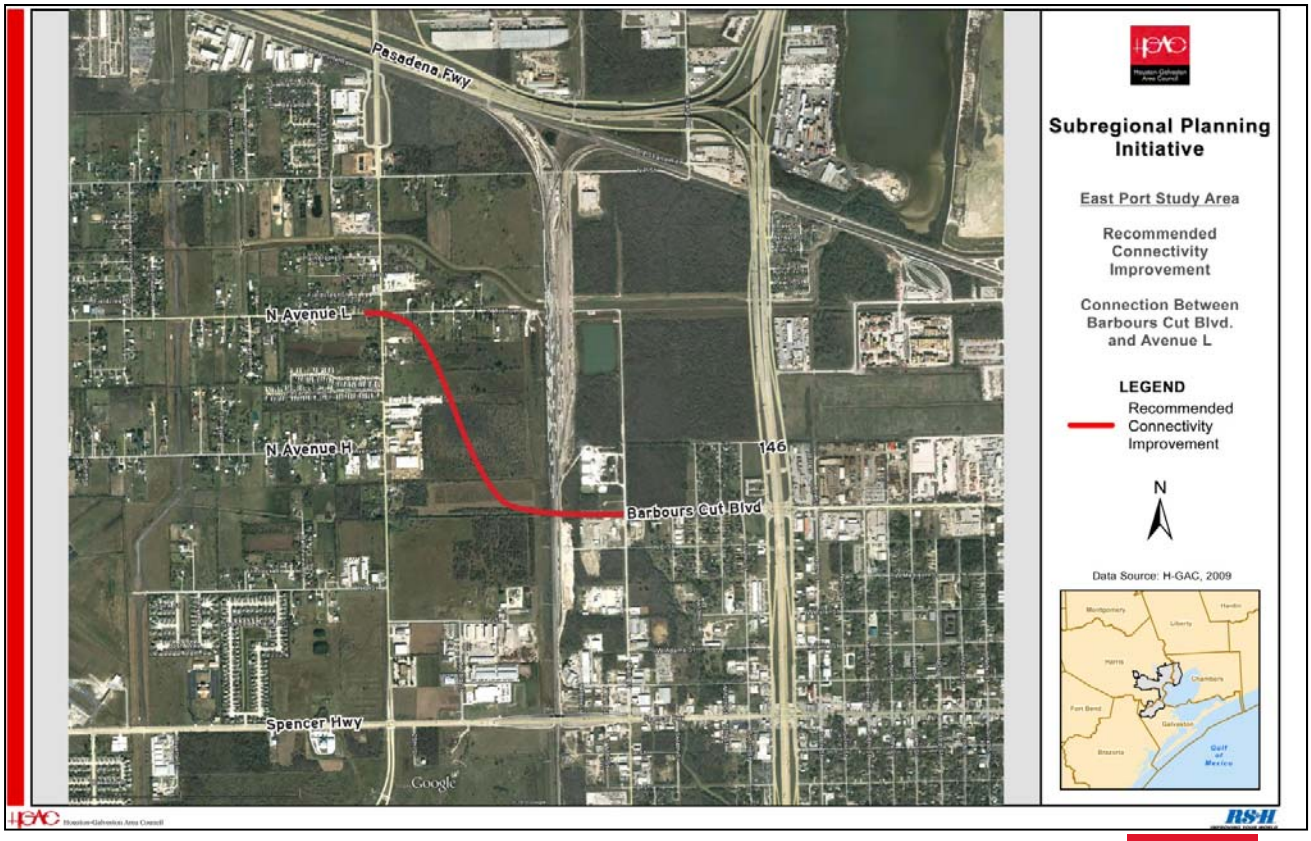
Proposed Barbours Cut to Pasadena Boulevard/North Avenue L Connection

This project would connect East Barbours Cut Boulevard east of SH 146 with Pasadena Boulevard, via North Avenue L, including a grade-separated crossing of the railroad. This connection would provide the following benefits.

- It would directly link Pasadena Boulevard with SH 146 at the existing interchange at Barbours Cut Boulevard
- It would provide an efficient alternative route to Spencer Highway's connection to SH 146 via Main Street. The TX 146/Main Street interchange will experience moderate to severe congestion due to developments planned in Morgan's Point area to the east. Daily traffic volumes on Main Street are anticipated at 30,000 VPD with capacity at about 26,000 VPD. The traffic volumes on the frontage road are anticipated at 15,000 VPD northbound and 13,000 VPD southbound, with capacities at 13,000 VPD respectively
- It would improve the value of the parcels along the east end of the Pasadena Boulevard corridor and North Avenue L
- It would connect the Morgan's Point area with the Industrial complex northwest of the SH 225/SH146 interchange

A new connection involving North Avenue L has been previously examined in the past; however, the current location of rail facilities and the new dispatch and bus barn facility complicate this proposal. Additional analysis is needed at the local level to determine the best connectivity solution in this area. Figure 45 shows an aerial view of the proposed connection.

Figure 45 - Proposed Barbours Cut to Pasadena Boulevard/North Avenue L Connection



Proposed Clear Lake Crossing – Extension of Space Center Boulevard

This project would develop a new Clear Lake crossing, connecting Space Center Boulevard with Enterprise Avenue. Although this project is located in an area with potential environmental concerns, the connectivity benefits could be important to this very congested area. Its benefits could include:

- An alternative route to both the moderate to severely congested TX 270 corridor and the SH 146 corridor to the east. The TX 270 Bridge over Clear Lake is projected to carry about 52,000 VPD, with a capacity of 41,000 VPD. The SH 146 Bridge is projected to carry nearly 100,000 VPD, with a capacity of 106,000 VPD
- It could provide potential transit and non-motorized options for connecting the NASA employment center with Main Street/Marina Bay Drive, a minor arterial south of Clear Lake
- It would serve as alternate north-south access to Lyndon B. Johnson Space Center, thereby relieving some traffic on NASA Road 1, which is anticipated to carry up to 76,000 VPD, with a capacity of 74,000 VPD
- It would connect proposed Regional Centers # 6 and # 7, and Subregional Centers # 15, # 16 and # 19
- It would relieve FM 2094, which is anticipated to carry up to 35,000 VPD, with a capacity of 28,000 VPD

A new proposed crossing of Clear Lake would be very expensive and have significant environmental constraints. Additionally, the design for the FM 270 and FM 518 Bypass by the City of League City is nearly complete and another crossing of Clear Lake has been addressed with the citizens. This bypass will help vehicular traffic with direct access from FM 270 to FM 2094.

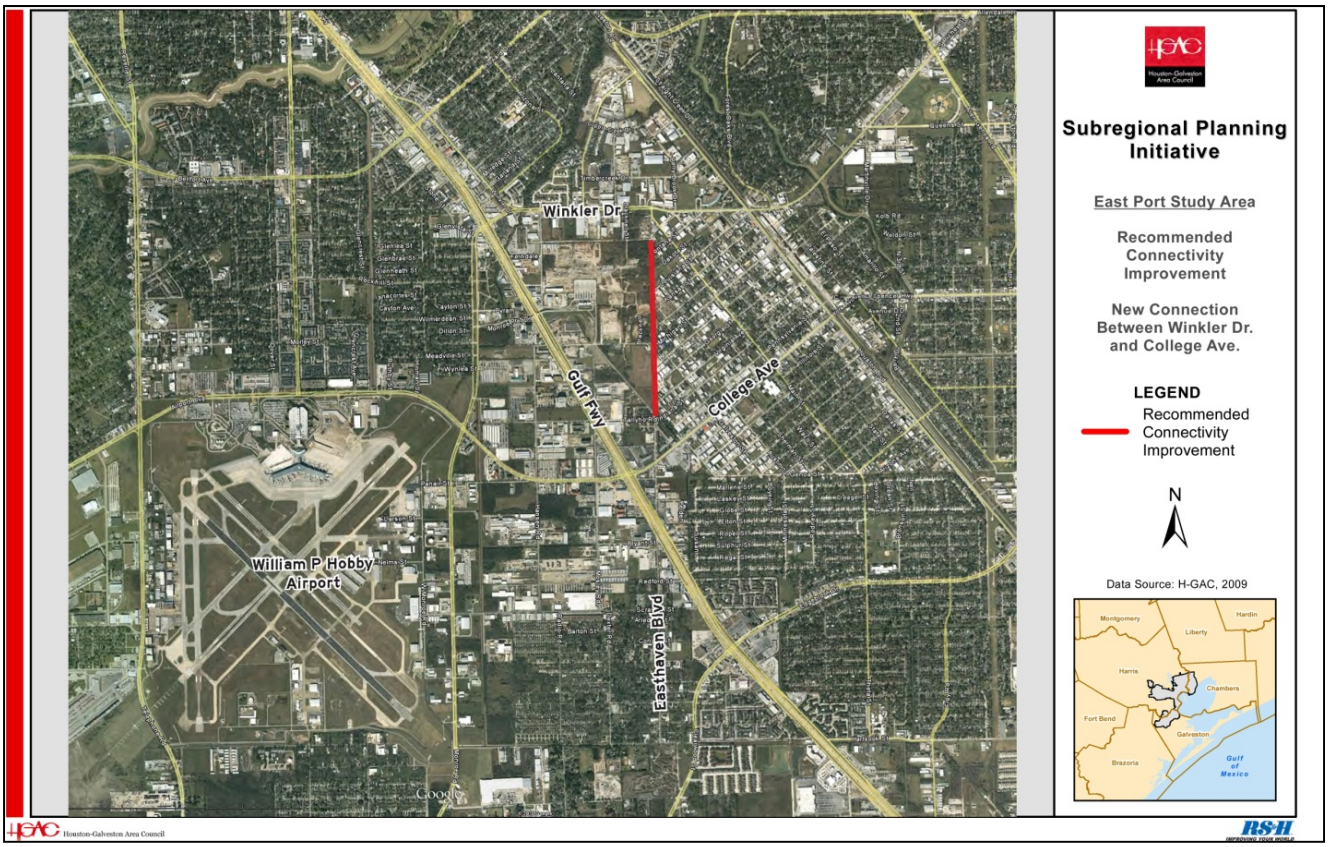
Proposed North-South Connection – Winkler Drive to College Avenue

This project would create a north-south corridor on the far western edge of South Houston by connecting Easthaven Boulevard with Canniff Road. This new corridor would provide the following benefits:

- It would provide a direct link between College Avenue and Monroe Road (Winkler Drive)
- It would improve neighborhood access to the nearby METRO Park and Ride Lot
- It would reduce traffic in the SH 3 corridor and on Main Street and would provide an alternative route to avoid the severely congested Main Street interchange with I-45. Main Street is anticipated to carry up to 69, 000 VPD, with a capacity of about 44,000 VPD. SH 3 is anticipated to carry up to 73,000 VPD between Main Street and College Avenue, with a capacity of 74,000 VPD. The I-45 frontage road is anticipated to carry between 20,000 and 22,000 VPD, with capacities of about 19,000 VPD
- It would provide the adjacent neighborhood with another local access route to Hobby Airport

This potential connection is offered to the City of South Houston for their consideration. Figure 46 shows an aerial view of the proposed connection.

Figure 46 - Proposed North-South Connection – Winkler Drive to College Avenue



- ***Proposed Genoa Red Bluff East-West Connection***

  As part of this project, it was determined there was a need for improved connectivity linking Genoa-Red Bluff Road to SH 146. Through discussions with the Stakeholder Advisory Committee, it was noted that Harris County is extending Genoa-Red Bluff Road east of Red Bluff Road and ultimately tying into Fairmont Parkway, west of SH 146. Due to the size of the graphic illustrating the alignment of these improvements, an aerial photo can be found in the Appendix (Figure A-1).

- ***Proposed Lane Street Extension – New Connection across Main Street and Holland Road***

  This project in the Jacinto City area would extend Lane Street to Fidelity Street to the west and to Federal Road via Mylla Street to the east. This connection will provide the following benefits:

  - It would serve as an alternative route to congested Market Street, providing access to the neighborhood north of Lane Street. Market Street is anticipated to carry up to 28,000 VPD with a capacity of 26,000 VPD
  - It would also be a neighborhood connection to the Pyburn Elementary School to the east

  This proposed connection should be analyzed in more detail by the City. Figure 47 shows an aerial view of the proposed connection.

Figure 47 - Proposed Lane Street Extension – New Connection across Main Street and Holland Road

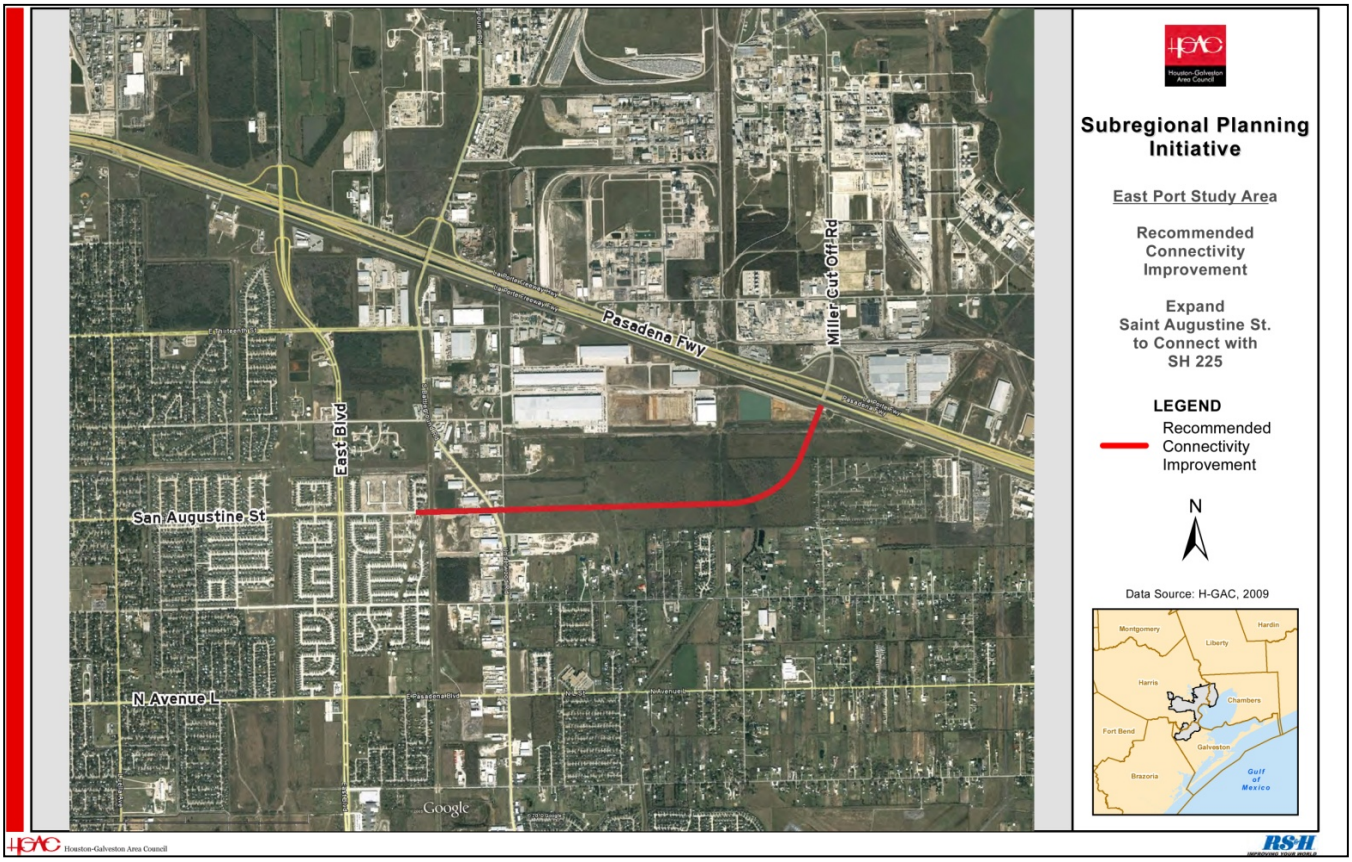
Proposed East San Augustine Street Extension to Connect with SH 225

The project would extend East San Augustine Street east to the Robinson Road/Houston Drive intersection (and north to SH 225) and west to connect to Red Bluff Road. This link would provide the following benefits:

- It would serve as an alternate east-west link to East Pasadena Boulevard
- It would provide relief to several of the area's congested corridors. These include Pasadena Boulevard, 13th Street (with projected traffic volumes of 22,000 VPD and a capacity of 14,000 VPD); Red Bluff Road (with traffic volumes of 57,000 VPD and a capacity of 56,000 VPD); and the Loop 8 frontage road (with volumes of between 19,000 and 22,000 VPD, and a capacity of 18,000 VPD)

While the project could result in additional connectivity benefits as described above, it should be analyzed in more detail to address any potential negative impacts to adjacent properties. Figure 48 shows an aerial view of the proposed connection.

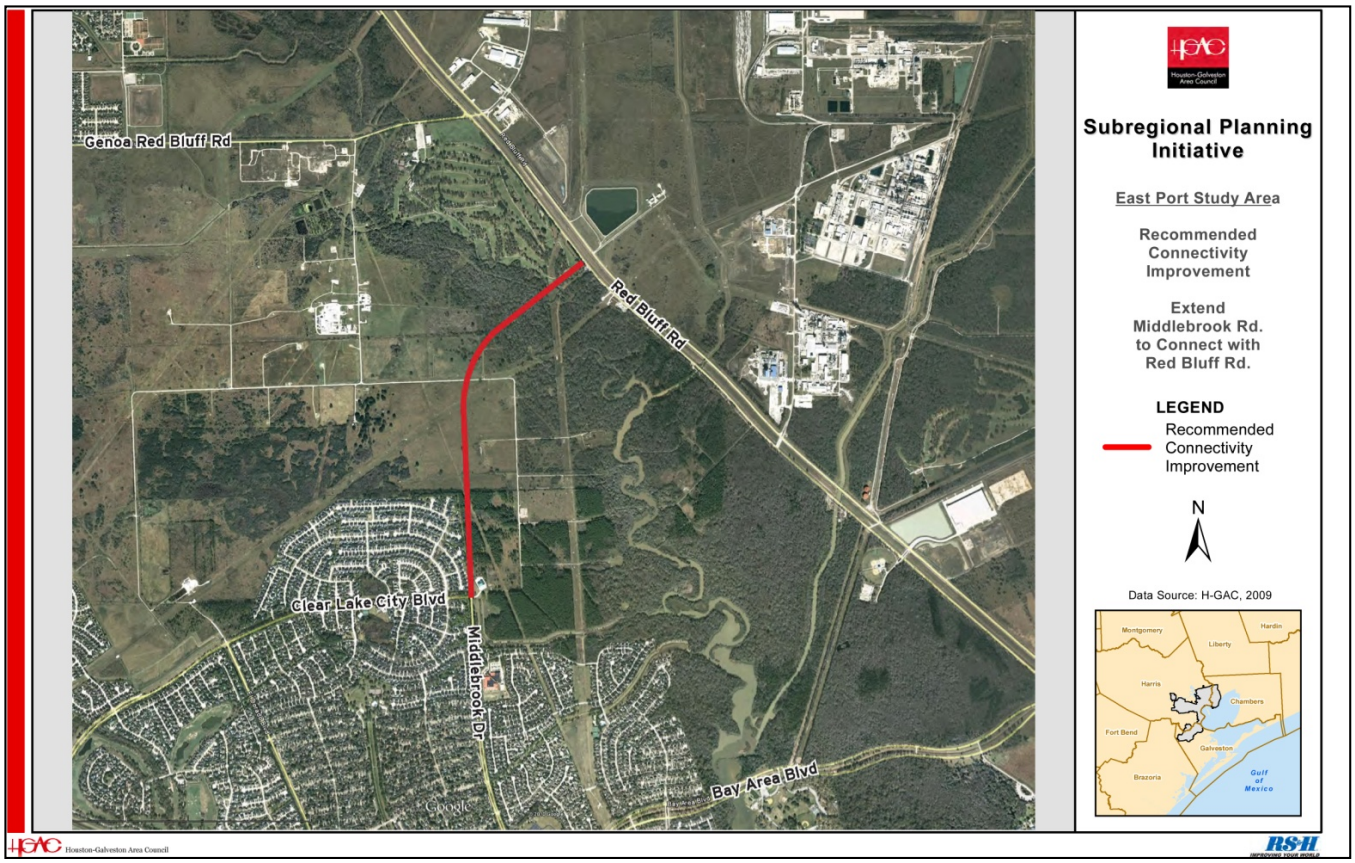
Figure 48 - Proposed East San Augustine Street Extension to Connect with SH 225



Proposed Middlebrook Drive Extension to Connect with Red Bluff Road

As part of the regional travel demand modeling process for the East Port area, it was determined that additional connectivity was needed between Bay Area Boulevard and Red Bluff Road. ***Through discussions with the Stakeholder Advisory Committee, it was learned that the Cities of Houston and Pasadena have identified a new north-south connection, which is located west of Middlebrook Drive that would extend El Dorado Boulevard to Center Street. If this connection is implemented, the proposed Middlebrook Drive extension may not be necessary.*** Figure 49 shows an aerial view of the proposed Middlebrook Drive extension.

Figure 49 - Proposed Middlebrook Drive Extension to Connect with Red Bluff Road



C. Recommended Subregional Land Use and Development Initiatives

It is recognized that local jurisdictions are responsible for land use planning and development decisions within their respective boundaries. The East Port Subregional Plan is not intended to supersede or supplant these decisions; rather it is intended to complement and facilitate local plans and integrate them with larger-scale regional plans, such as the RTP. During the course of the East Port Subregional Plan, local jurisdictions discussed planned or on-going land use and development strategies in their respective jurisdictions. Most of these related directly to regional plans and planning goals. Some of them are initial phases in creating livable centers or similar developments as discussed in previous sections of this report. Table 18 summarizes some of these key activities. Since planning programs at all levels are continuous evolving, new initiatives may be underway as well in the East Port communities.

Table 18 - Key Local Development Initiatives in the East Port Subregion

COMMUNITY	LAND USE AND DEVELOPMENT INITIATIVE
City of Baytown	Garth Road Corridor revitalization and transportation improvements (access management strategies and enhanced public transit)
	Cultural District Center (Livable Center) Revitalization
City of Clear Lake Shores	Development of a Town Center (along the north side of SH 2094)
City of Deer Park	Center Street revitalization (under consideration by the City Council)
City of Galena Park	Seeking federal funding for port-related transportation improvements (i.e. Clinton Drive from the Washburn Tunnel to IH 610) and Main Street south of Clinton Drive)
City of Kemah	Collaborating with neighboring jurisdictions on the potential for a water taxi service in the Clear Lake area
	Exploring parking, shuttle, and traffic circulation solutions to serve the Kemah Boardwalk and Lighthouse Districts.
City of La Porte	Implementing redevelopment/revitalization/streetscape projects in the Broadway Street Corridor and Downtown La Porte.
	Working on redevelopment/revitalization plans for Sylvan Beach Area.
City of League City	Downtown/Five Corners Plan to create a "Main Street" District.
	Working on implementation of the SH 518 Bypass to Improve connectivity and reduce congestion at the SH 518/270/2094 intersection.
	Considering a new connection to the Baybrook Mall to improve traffic circulation.
	Exploring the potential of a new transit circulator serving the City and the NASA area.
	City is also very interested in future rail service in the SH 3 Corridor.
City of Pasadena	City created a plan for the redevelopment of a portion of the community between SH 225 and Spencer Highway. The City would like to reduce truck impacts on commercial corridors and expand its bicycle and pedestrian networks.
City of Seabrook	Advancing its citywide planning and development initiative, including redevelopment of The Point. Planning and developing a new four-lane roadway connecting SH 146 to the Bayport Cruise Terminal.
City of Shoreacres	City is focusing on Hurricane Ike recovery. Is considering the potential for a possible livable center development at the southernmost tip of the City.
City of Webster	Extension of Rice Creek Lane to extend to the I-45 frontage road and connect to new areas for development Beamer Road Extension.
	City is also very interested in future rail service in the SH 3 Corridor.
	Future grade separation project at I-45 and Bay Area Boulevard.
Economic Alliance of the Houston Port Region, Harris County Precinct Two, and Multiple East Port Communities	"Project Stars" is a long-term economic development project. A master plan has been developed which focuses on identifying and marking historical assets in the region. Twenty-six historic "Stars" were identified for commemoration, including recommended enhancements ranging from epic art to landscaping and other improvements.

D. Institutional Roles and Relationships

The East Port implementation program is based on the vision of the citizens and stakeholders in the East Port Area and the existing relationships and processes of the local governing bodies, service providers, infrastructure system owners, and the development and design communities. Community, subregional, and regional plans are all implemented through a variety of actions at all levels of government as well as by the private sector and the non-profit sector. The major categories of entities involved in the planning, development, and delivery of transportation infrastructure and land use and development decisions are shown in Table 19.

In general, the local communities are responsible for establishing the land development and transportation policies under which private development projects must be reviewed and approved. The private sector typically takes the lead in identifying market opportunities that are consistent with local plans and regulations, and make the major investments in terms of community development projects. For major infrastructure projects, public agencies generally take the lead in identifying project needs and opportunities, many times with the support of private sector investments. Joint development opportunities are realized in the arena of community development projects as well. Private-non-profit organizations serve as community resources, advocates, facilitators, and the providers of services to support the planning and development of quality communities and successful business enterprises.

H-GAC serves as a technical resource and lead agency for regional and subregional planning processes to support all levels of planning. TxDOT, the Port of Houston Authority, and Harris County, all as infrastructure system owners, must work closely with local governments to plan, develop, operate, and maintain critical mobility systems for people and goods. Additionally, private sector interests, including those associated with the Port of Houston and other major economic sectors of the East Port Subregion maintain a continued interest in the planning and development decisions affecting the area.

E. New Institutional Strategies for the East Port Subregion

One of the most critical pieces of any planning effort is the framework for coordinating its implementation. The East Port Subregional Plan recognizes the importance of having an on-going mechanism for the East Port communities and H-GAC to work together to move the subregion forward in meeting its goals. This collaboration must include a focus on the coordination of planning and development activities in all of the jurisdictions along with the private sector and the appropriate state, local, and federal agencies.

This implementation framework is organized around the following primary activities – all necessary elements for the on-going success of the implementation program and for bringing more resources and attention to the regional importance of the East Port area. The following actions are recommended to create this on-going framework.

- Create the East Port Round Table
- Publish the Annual State of the Subregion Report and Presentations
- Continue the Electronic Database and Best Practices Toolbox Activities
- Create and Use Plan Implementation Strategy Workbooks

Each of these strategies is explained in more detail in this section.

Table 19 - Participating Entities in Subregional Planning, Development, and Infrastructure

ORGANIZATION/ AGENCY	MEMBERS	RESPONSIBILITIES
Public Sector Organizations		
Local Jurisdictions	Cities of Baytown, Clear Lake Shores, Deer Park, Galena Park, Jacinto City, Kemah, La Porte, League City, Morgan's Point, Pasadena, Seabrook, Shoreacres, South Houston, and Webster	Responsible for local planning and review and approval of land development projects; local project delivery; operation and management of municipal infrastructure systems.
	Harris County and Chambers County	Responsible for countywide planning and the review and approval of land development projects in unincorporated areas; infrastructure project delivery; operation and management of infrastructure systems.
Regional	H-GAC	Responsible for regional planning for the 8-county region, and the federally established responsibilities for metropolitan planning organizations (MPOs); responsible for the development of the Houston-Galveston Region's Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP), among other planning and programming responsibilities.
	Houston METRO	Responsible for planning, development, and project delivery for regional transit system within the METRO service area.
	Port of Houston Authority	Responsible for planning, development, project delivery, and operations of PHA facilities.
State	TxDOT	Responsible for statewide planning, project development, project delivery; and operations and management of infrastructure systems.
Private Sector Organizations		
Development Companies	Various private firms engaged in residential and non-residential land development projects	Lead role in pursuing market opportunities in development; also participates in contributions to public infrastructure systems.
Service Providers	Firms providing a variety of services to support land development and infrastructure	Various companies, including providers of transportation services.
Infrastructure Owners	Includes railroads, intermodal facility operators, etc.	Responsible for planning, development, and project delivery within their respective jurisdiction.
Private Non-Profits	Economic Alliance of the Houston Port Region and other business alliances and special interest advocacy groups	Responsible for planning, marketing, advocacy, etc. for individual regions, industries, interest groups, etc.

East Port Subregion Round Table

To encourage local, regional and state jurisdictions to coordinate land use, development strategies, capital investment, and service provision, an East Port Round Table should be formed and should meet at least quarterly to share information and data on current and future planning and development activities, especially those affecting or benefiting multiple jurisdictions. The East Port Round Table (EPRT) could be organized to be a portable discussion managed by one of the key stakeholders, such as the Economic Alliance of the Houston Port Region or have the meetings rotated and hosted by individual East Port communities. The membership of the Round Table could include both elected and appointed public officials as well as business and community leaders, and key state, regional, and local resource persons.

The host organization would work with H-GAC and the other local jurisdictions to develop an annual State of the Subregion Report to highlight the successes and challenges of the East Port communities including a list of joint projects and service needs. This would also serve as a useful regional planning tool for H-GAC's development of the annual Transportation Improvement Program (TIP) and its Unified Planning Work Program (UPWP). It would also be an important coordination process for documenting important accomplishments in the subregion, accomplishing inter-governmental project coordination, serving as a means of documenting historical accomplishments of the East Port area.

The affected and responsible entities in the East Port Subregion include 14 cities as well as portions Harris and Chambers Counties, along with regional, state, and federal agencies and the stakeholders in the private and non-profit sectors. Many of these entities are also represented on H-GAC's Transportation Policy Council (TPC) and its Technical Advisory Committee (TAC). Including individuals in the East Port Subregion Round Table who also have leadership roles in the H-GAC regional planning structure, important issues and opportunities available to the East Port Subregion could be supported within the overall H-GAC regional planning structure. Table 20 shows the list of proposed participating entities in the East Port Subregion Round Table and their respective representatives in the other H-GAC committees. A regularly updated directory of East Port Subregion Round Table participants is critical and could be maintained through their quarterly meetings.

Proposed Round Table Schedule

The quarterly meetings will be keyed to the local, regional and federal planning cycles to maximize the flow of timely information and needed coordination of projects. Typically, local governments are required by the Texas Local Government Code to have completed budgets by June of each year. Local bond elections are normally held in May and November. The federal budget cycle is October 1 through September 30 and the State of Texas' budget cycle is July 1 through June 30. Table 21 illustrates a proposed schedule and topics for the set of quarterly meetings. These agendas can be adjusted as needed to meet local and regional needs.

Depending on the available resources and level of interest on the part of the participating entities, the East Port communities, including representatives from federal, state, regional, and county agencies and representatives from the private sector could also hold an annual or bi-annual retreat. This retreat would allow for strategic planning discussions and sessions focused on how to align subregional advocacy efforts to bring joint benefits to the area; potential joint public/private partnership opportunities involving multiple stakeholders, potential legislative issues, and other high-level strategy topics.

Table 20 - Proposed Participants - East Port Subregion Round Table

Organizations	Proposed Round Table Representatives*	Represented on H-GAC's 2010 Transportation Policy Council (TPC)	Represented on H-GAC's 2010 Technical Advisory Committee (TAC)
CITIES			
City of Baytown	TBD	Yes	Yes
City of Clear Lake Shores	TBD	No	No
City of Deer Park	TBD	No	No
City of Galena Park	TBD	No	No
City of Jacinto City	TBD	No	No
City of Kemah	TBD	No	No
City of La Porte	TBD	No	No
City of League City	TBD	No	No
City of Morgan's Point	TBD	No	No
City of Pasadena	TBD	Yes	Yes
City of Seabrook	TBD	No	No
City of Shoreacres	TBD	No	No
City of South Houston	TBD	No	No
City of Webster	TBD	No	No
COUNTIES			
Chambers County	TBD	Yes	Yes
Harris County	TBD	Yes	Yes
Harris County Transit	TBD	No	Yes
OTHER KEY MEMBERS			
Port of Houston Authority	TBD	Yes	Yes
Economic Alliance of the Houston Port Region	TBD	No	No
H-GAC	TBD	Yes	Yes
TxDOT	TBD	Yes	Yes

**Organizations will identify their own representatives. City/County representatives could include, but not be limited to, the City/County Manager, and heads of the Planning, Economic Development, Engineering, and Public Transit Department, if any. Other key stakeholders, such as universities, other special authorities, major medical facilities, environmental groups, and other subregional stakeholder groups could also be represented, if desired.*

Table 21 - Suggested Round Table Schedule and Agendas

MONTH	LOCATION	AGENDA
January	TBD	▪ Annual Schedule ▪ TIP Update ▪ Calls for Projects/Legislative Update ▪ Reports/Quarterly Accomplishments
April	TBD	▪ State of the Subregion Report ▪ UPWP Update ▪ Calls for Projects/Legislative Update ▪ Reports/Quarterly Accomplishments
July	TBD	▪ Review of Data/Information Needs ▪ TIP Update ▪ Calls for Projects/Legislative Update ▪ Reports/Quarterly Accomplishments
October	TBD	▪ Year-End Review ▪ TIP Update ▪ Calls for Projects/Legislative Update ▪ Reports/Quarterly Accomplishments

Annual State of the Subregion Report

The State of the Subregion Report will be published annually by the East Port Round Table in cooperation with H-GAC and will include updates of the community profiles, a description of major economic development, transportation, and land use/development activities; a major project status report; summary listings of available data; the accomplishments of the participating entities (based on tracking of strategic actions list); profiles of key organizations and/or individuals advancing the East Port Subregional Plan; and opportunities for the near, mid-term and long-term future. The Annual State of the Subregion report will be published each year and attempt to coincide with the updates of the TIP and the UPWP. The Annual State of the East Port Subregion Report could also be coordinated with the annual planning cycle for regional, state and federal monies and could publicize calls for projects to further facilitate project coordination and public information.

In addition to the Annual State of the East Port Subregion Report, if resources allow, a quarterly newsletter, (perhaps *"The East Port Round Table Quarterly"*) could be published to improve communications across communities, levels of government, and industries/ economic sectors. The newsletter could be a sponsorship opportunity for private sector entities to contribute to the overall advancement of the East Port area.

F. Subregional Data and Information-Sharing

In addition to maintaining its Best Practices Toolbox, H-GAC could serve as the central clearinghouse for electronic databases of land use, transportation, environmental, economic, and demographic data and information pertaining to the East Port Subregion. This data will also include geographic information system (GIS) data that can be used by local and regional planners, interested public and private sector entities, and citizens engaged in planning and development opportunities in the subregion. Typical on-line resources, in addition to the data clearinghouse, would include East Port Subregion Round Table meeting agendas and summaries, and other publications by the East Port Round Table.

The East Port electronic database and the best practices toolbox will be updated annually in cooperation with H-GAC. This data and information will be incorporated into the development and production of the annual State of the East Port Subregion Report and will be used to support the individual entities in tracking the East Port Subregional Plan implementation activities.

G. Financing Strategies for Subregional Plan Implementation

As part of the Existing Conditions Assessment, one element discussed the current funding and financing tools available to the local jurisdictions and the region as a whole to implement its respective parts of the East Port Subregional Plan. For ease of reference on implementation strategies, some of that information is replicated here.

The local governments, regional, and state agencies involved in planning and infrastructure development and operations in the East Port Subregion rely on a range of funding sources, each with particular constraints on the type of eligible project or project phase, permissible project activities, funding cycle time frames, local financial commitments, and other related factors. From traditional federal and state fuel tax proceeds to innovative public/private partnerships to economic development financing tools, the financial support for implementation of the East Port SPI Plan must be strategic in nature to leverage as many funding opportunities as possible. This section will describe the sources of funding and other resources and implementation tools that are currently available in the East Port Subregion's communities.

Federal Funding for Multimodal Transportation

Federal transportation funding has historically come from the Highway Trust Fund, which was established in 1956 and is funded by a federal gasoline tax (18.4 cents per gallon) and a federal diesel tax (24.4 cents per gallon). The Highway Trust Fund is divided into three parts: 1) the Highway Account (15.44 cents per gallon of gasoline and 21.44 cents per gallon of diesel), 2) the Mass Transit Account (2.86 cents per gallon each of gasoline and diesel), and 3) the Leaking Underground Storage Tank Trust Fund (0.1 cents per gallon of gasoline). These funds are distributed to the states based on formulas, depending on the individual USDOT program requirements.

All transportation projects that are federally funded must be included in the Federal Transportation Improvement Program (FTIP). To be included in the FTIP, a project must be in the local/regional TIP (developed by the Houston-Galveston Area Council for the East Port study area and the rest of the region) and also the State TIP (STIP). The current (2005-2009) federal surface transportation program is known as the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). This program authorizes the expenditures from the federal Highway Trust Fund and is scheduled for reauthorization in the 2009-2010 time frame.

Federal transportation funding is obtained on a project-by-project basis. Eligibility for federal highway funds also depends on the ownership of roadway (i.e. facility) within the federal-aid system. Federal funds for other transportation projects (i.e. public transit, bicycle, pedestrian, and trail projects, etc.) depends on the specific requirements associated with the numerous types of federal funding programs. More detail on each of these types of funding can be found at the US Department of Transportation's website (www.dot.gov).

SAFETEA-LU offered guaranteed funding for highways and public transportation totaling $ 244.1 billion, and was the largest surface transportation investment in our Nation's history. A majority of programs in

the Act are funded by the Highway Trust Fund (HTF), which receives the majority of its income from federal motor fuel taxes (Federal Highway Administration, 2009). Additional funds are provided to the Mass Transit Trust Fund which supports formula and discretionary transit grants to states, regional transit authorities, and local government transit operations. A variety of federal programs fund highway, bus and rail transit, bicycle, pedestrian, and trail projects, and other transportation-related enhancements.

Federal funding for transportation and infrastructure is currently facing a crisis many years in the making. Growing demands for more, expanded, and rehabilitated transportation infrastructure nationally are advancing far beyond the resources to implement it at all levels of government. Much of the nation's infrastructure is in need of repair, and the National Surface Transportation Infrastructure Financing Commission ("The Commission") characterized the current system as in a state of "physical and financial crisis" (TxDOT, 2008). Communities, regions, and states are exploring non-traditional transportation strategies to deal with the shortage of federal funding for transportation. The State of Texas is on the forefront of using public/private partnerships, and roadway pricing concepts to address the federal funding gap, especially in major metro areas. As part of the East Port SPI Plan, specific strategies are identified to use various US DOT funding programs for transportation system improvements.

American Recovery and Reinvestment Act (ARRA) of 2009

A significant amount of new roadway and transit funding from the federal government was made available as part of the American Recovery and Reinvestment Act (ARRA), also referred to as the "Economic Stimulus Package", approved in 2009. Approximately $ 48.1 billion was made available for the nation's transportation system, with $ 27.5 billion going to highway programs and $ 8.4 billion to public transit systems. Additional funding was also made available to Amtrak, the nation's intercity rail system ($ 1.3 billion); a national program to develop high speed rail service ($ 8.0 billion) and additional discretionary grants ($ 1.5 million).
Of the total AARA funding, about $ 2.25 billion was dedicated to the State of Texas for highway programs and nearly $ 375 million for transit system improvements. Even with the additional ARRA funding, our federal fuel taxes are proving to be inadequate to fund the majority of the nation's growing transportation needs. The next federal reauthorization is expected to identify new sources of federal transportation funding.

Federal Funding for Community Development

The US Department of Housing and Urban Development (HUD) is the primary agency that administers federal funds for community development, through Community Development Block Grants (CDBG) and the HOME Investment Partnership Program. CDBG grants and HOME grants are similar in the type of projects they fund, but CDBG funds benefit low- to moderate-income individuals and families, while HOME funds benefit very low- to low-income individuals and families (according to HUD CDBG and HOME income limits).

In Texas, these grants are distributed in two ways. Urban counties (and cities therein) and certain large cities are typically considered entitlement communities. Entitlement communities receive CDBG funding directly from HUD and implement projects via a community development plan. Rural counties, and the cities therein, are considered non-entitlement communities and compete for CDBG funds

through a Regional Review Committee administered by the State's Office of Rural Community Affairs (ORCA) and the applicable Council of Government (in the case of the East Port study area, this is H-GAC).

The purpose of CDBG funding is to "develop viable communities by providing decent housing and suitable living environments, and expanding economic opportunity principally for persons of very low- to moderate-income." CDBG funds can be used for a wide range of community improvements. For entitlement communities, typical project types include street paving, park improvements, demolition and clearance, rehabilitation of private homes owned by low-income families, and subsidized child care and adult day care. Project priorities for non-entitlement communities are established by Governor-appointed Regional Review Committees within each Council of Government.

For the East Port study area, this review occurs at the Houston-Galveston Area Council (H-GAC). Historically, project priorities in the East Port study area have included wastewater, sewer, drinking water, road and drainage projects. Projects chosen to potentially receive grants must meet at least one of the following three CDBG national objectives: (1) benefit to low- and moderate-income persons; (2) aid in the prevention or elimination of slums or blight; or (3) address an urgent need to mitigate an immediate threat to the health and safety of residents.

State Transportation (TxDOT) Funding

Similar to the federal system of fuel taxes, state transportation departments also depend on motor fuel taxes for a large percentage of their revenues. The Texas Department of Transportation (TxDOT) receives federal reimbursements that are derived from federal fuel taxes in addition to revenues from state fuel taxes via the State Highway Fund. State transportation funds for the State of Texas come from the state motor fuels tax (20 cents per gallon), vehicle registration fees, the Texas Mobility Fund, bond proceeds, and local participation.

TxDOT, like many other State DOTs, relies on state fuel taxes to a large degree to fund its infrastructure programs. Similar to other State DOTs in high growth states, TxDOT suffers from increased travel demands on its transportation system, increasing the needs to maintain, replace, and build new facilities. According to the *TxDOT 2009-2013 Strategic Plan* (2008b), traditional, tax-based methods of financing projects are no longer sufficient to handle the State's transportation needs. Accordingly, the Strategic Plan recommends some innovative financing measures that can be used to supplement the methods that have been used to date. Descriptions of some of these traditional and innovative financing options are described below:

- ***Motor Fuel Tax Revenues***
  State and federal motor fuel taxes are used for the majority of TxDOT's programming, administration, and project development financing.

- ***Registration Fees***
  Vehicle registration fees are required of all vehicles in Texas. Counties in Texas assess these fees as well for their local transportation projects.

- ***Debt Financing***
  This financing option involves TxDOT's borrowing funds to accelerate projects, which is possible when construction costs are rising faster than interest rates. The use of debt financing results in cost savings to the State of Texas, which can be used for other needed projects.

- ***Pass-Through Financing***
  This type of financing is a partnership between TxDOT and a private sector developer (firm). Under this arrangement, TxDOT pays for the construction of a project via a per-vehicle or per-vehicle mile fee paid to the developer. This financing option is like a toll road, but the cost is "passed-through" to TxDOT instead of individual drivers paying a toll. TxDOT avoids large initial investments, and the public enjoys more timely transportation system improvements.

- ***Toll Equity***
  This type of financing allows toll roads to be built by combining state highway funding with other funds. TxDOT issues loans and grants, and road-building entities (i.e. counties, special authorities, etc.) issue debt to finance the remainder of the project's cost. In this way, state highway funds can be combined with other monies, such as bond proceeds, to fill the funding gap and construct a project.

- ***Public/Private Partnerships***
  These partnerships provide additional monies that allow TxDOT to complete projects more quickly and encourage innovation by the private sector. These projects can take many forms depending on the roles and responsibilities of each party.

All of these techniques and approaches are considered for the various Plan implementation strategies in the latter part of this section.

Local Funding Sources and Implementation Tools

A number of regulatory approaches to financing and implementing community development improvements and infrastructure systems by local governments have been created in the State of Texas. These include (1) special districts, such as municipal utility districts (MUDs), public improvement districts (PIDs), municipal management districts (MMDs), local government corporations, and tax increment reinvestment zones (TIRZs), among others. Additionally, a variety of public/private partnership arrangements can be established to implement community and transportation improvements. Other related statutes provide opportunities for local governments to make community and transportation system improvements locally. Table 22 lists the major local government implementation and fiscal tools available at the present time to local jurisdictions in Texas, including those in the East Port SPI area. Table 23 identifies regulatory tools which can be used at the local level to create opportunities for new development, redevelopment, and public infrastructure systems. This section will briefly summarize these approaches. Subsequent phases of the project will address implementation tools at the local level. Additionally, more information can be found in H-GAC's Subregional Planning Initiative (SPI) On-line Best Practices Toolbox.

Figure 50 illustrates the location of special districts, including municipal management districts, tax increment reinvestment zones (TIRZs), local government corporations, public improvement districts (PIDs), etc. that exist currently in the East Port study area.

Local Government Capital Improvement Programs

Local cities and counties in the Greater Houston-Galveston region have several major sources of funding for transportation-related projects. Some initiatives are funded with general revenue or property tax proceeds and another major source is bond programs for major transportation system improvements.

Depending on the tax rate for each municipality, the annual resources available for transportation varies substantially from jurisdiction to jurisdiction. However, often city and/or county governments fund street and intersection improvements; bicycle, pedestrian and trail projects; and transit services and other capital projects each year. The list of capital projects is typically published in the Capital Improvement Program (CIP) for each jurisdiction. Often, local funds leverage other state and federal funding resources for these capital projects.

- **Developer Contributions for Transportation**
  As part of proposed development projects, in some cases, private developers pay for some types of infrastructure improvements, such as streets, intersection improvements, sidewalks, bike paths, etc. as part of new development or redevelopment projects. This concept of private funds being provided for infrastructure to be used by the public is a form of a public/private partnership.

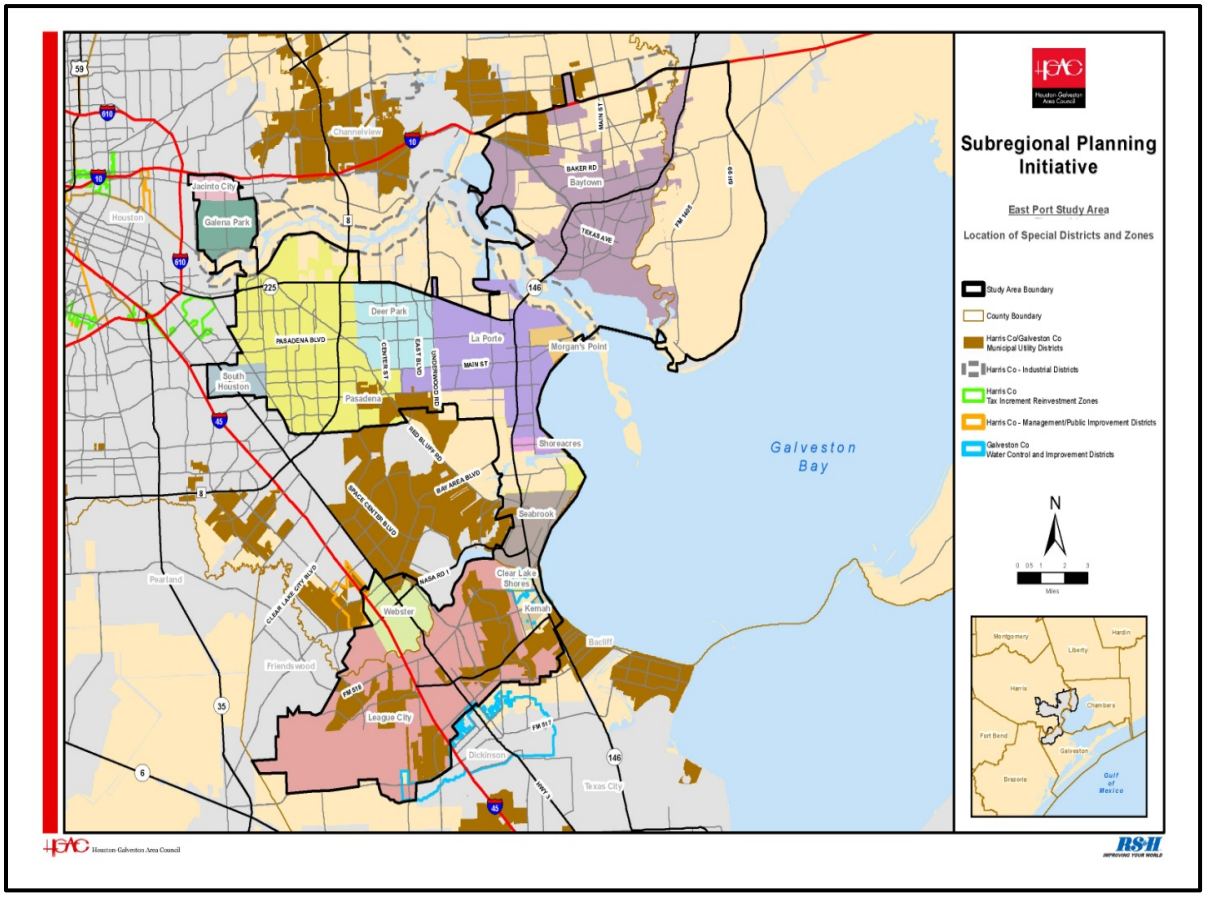
Table 22 - Major Local Government Implementation and Financing Tools

IMPLEMENTATION AND FISCAL TOOLS	ELIGIBLE PROJECT TYPES
Tax Increment Reinvestment Zone (TIRZ)	Public improvements to promote new or redevelopment of specifically designated areas.
Public Improvement Districts (PID)	Public infrastructure (i.e. roads, drainage improvements, etc.) in a specifically designated area.
Municipal Management Districts (MMD)	Public infrastructure (i.e. roads, drainage improvements, etc.) in a specifically designated area.
Tax Abatement	New business generation and retention through the reduction or deferral of taxes for a specified period under specified conditions
4A and 4B Sales Tax Proceeds	For projects promoting job creation or quality of life.
Neighborhood Empowerment Zones (NEZ)	For community revitalization, relocation, job creation and retention, and affordable housing.
Community Development Block Grant (CDBG) Program	Funds public infrastructure, social programs, affordable housing, and economic development programs in areas with low- and moderate-income populations
Municipal Economic Development Grants and Loans	Programs to promote business development and commercial activity to promote local economic development
Crime Control Districts	Funding to support law enforcement activities, crime control, and prevention programs in designated areas
Hotel Occupancy Taxes	Proceeds can be used for programs and projects that promote tourism and hotel/convention business
Local Government Corporations	Enterprises that facilitate public ownership of infrastructure etc.; not subject to public bidding requirements.

Table 23: Local Government Regulatory Tools

REGULATORY TOOLS	POWERS
Comprehensive Plan Change	Changes to the Local Government Comprehensive Plan can address zoning, urban design, housing, transportation, and other elements of the Plan to reflect new long-term goals
Zoning District Change	Enabling legislation allowing municipalities to regulate land use, density, building bulk, building location on a parcel of land, etc.
Overlay District	Allows for additional zoning requirements in addition to those identified in the existing zoning ordinance for a specified area
Planned Unit Development (PUD)	Allows for deviation from local development regulations in exchange for provisions that will produce higher quality development
Change in Building Code	Allows for changes to the local building code to protect public health, safety, etc.
Design Ordinance	Allows for local jurisdictions to specify the characteristics of certain building features, such as facades, signs, lighting, streetscapes, and other community design aspects.

Figure 50 - Location of Special Districts and Zones



- ***Special Districts***

  Special Districts are created in certain designated areas to help finance infrastructure improvements that would not otherwise occur in a given area or under a certain timeframe using traditional funding sources. Special Districts are implementation tools for local governments to finance specific improvements that support new development or redevelopment. They help local governments develop a community vision, or provide a catalyst to accomplish community's vision and goals. Special Districts are considered an economic development tool to encourage quality development in a community, especially development that brings new jobs and economic opportunities. There are four primary types of Special Districts in Texas:

- ***Municipal Management Districts (MMDs) and Municipal Utility Districts (MUDs)***

  In Texas, management districts may only be created in eligible areas. Eligibility criteria include areas with primarily commercial/business activity with a (a) population of at least 25,000 or (b) that includes a nearby territory with at least 25,000 in population if the assessed value of the areas is at least $500 million. Management districts have been authorized by Chapter 375 of the Texas Local Government Code.

Management districts, which exist in various forms throughout the US, are similar to public improvement districts and Municipal Utility Districts (MUDs). These districts may impose ad valorem taxes and issue bonds to fund improvements and services for the betterment of the community, such as water and sewer infrastructure and transportation improvements. In the State of Texas, management districts are created through acts of the Texas Legislature.

A management district provides an avenue for long-term, dedicated funding for improvements; given a recent shortages of infrastructure funding on every government level, dedicated funding sources are key to ensuring the implementation of projects. Moreover, these improvements benefit the economy of a region, through development, business diversification, increasing employment, and expanding transportation and commerce. A management district allows the costs of improvements to be spread equally among the property owners. However, benefiting property owners have an overlapping assessment in addition to city, county and school district taxes. Eligible project activities include:

- Landscaping
- Fountains, distinctive lighting and signs
- Sidewalks and streets
- Pedestrian malls and art
- Off-street parking
- Transit facilities
- Water, wastewater and drainage facilities
- Parks and recreational facilities
- Real property acquisition
- Promotion and advertising
- Public safety and security

Chapter 375 of the Texas Local Government Code specifies the procedures by which management districts must be established. A petition must be submitted to the local government stating:

- The boundaries of the district
- The specific purpose of the district

- The general nature of the work/projects/services proposed, need for these services, and the estimated costs of the services
- A name for the district
- Proposed list of initial directors, including the directors' experience and initial terms of service
- A resolution by the local government that supports the creation of the district

The petition must also be signed by at least 50% of property owners in the proposed district, or owners of at least 50% of the land area. Before establishment of the district, a public hearing must be held to advise the community of the nature of the district. Other than the conditions and procedures described above, there are no special requirements or considerations for using this tool in the State of Texas.

- ***Public Improvement Districts (PIDs)***

A Public Improvement District (PID) is a special district that is created by a local government to fund services and improvements beyond those normally provided by the municipality. The district is funded by special property assessments paid by taxpayers. This tool allows the costs of improvements to be spread equally among the property owners. However, benefitting property owners experience an overlapping assessment in addition to city, county and school district taxes. These funds are subsequently managed and distributed by the local government to the designated agency in charge of the PID. Eligible activities include:

- Water, wastewater and drainage improvements
- Health and sanitation improvements
- Supplemental safety services (such as public safety and security services)
- Supplemental business-related services (such as advertising, business recruitment and development)
- Park, recreational, and cultural improvements
- Landscaping and other aesthetic improvements
- Art installation
- Creation of pedestrian malls or similar improvements
- Mass transit improvements
- Parking Improvements
- Library improvements
- Street and sidewalk improvements

A PID is beneficial in providing dedicated funding towards specific improvements in communities. It is most beneficial when the affected property owners have the financial ability to pay the special assessments that will go toward the public improvements. A majority of taxpayers must petition the local government to form a PID. Chapter 372 of the Texas Local Government Code specifies the procedures by which PID must be established.

- ***Tax Increment Reinvestment Zones (TIRZ)***

Local governments can use the designation of Tax Increment Reinvestment Zones (TIRZs) for a variety of purposes to improve overall conditions in designated portions of the community. A TIRZ can be created through the action of the Texas Legislature. An area can be considered for a TIRZ designation according to the following criteria; however, the creation of a TIRZ should also reflect municipal and county policies and public expectations.

- Presence of a substantial number of sub-standard or deteriorating structures
- Predominance of defective or inadequate sidewalk or street layouts
- Faulty lot layout in relation to size, adequacy, accessibility or usefulness
- Unsanitary or unsafe conditions
- Tax or special assessment delinquency exceeding fair market value of the land
- Defective or unusual conditions of title
- Conditions which endanger life or property by fire or anything else

In a TIRZ, the property owners pay taxes based on the assessed value of their property. Incremental increases in taxable value from new development within the zone over and above a "base year" generate tax revenue that is placed in a TIRZ fund for public improvements in the zone. The municipality and County continue to receive the same property tax revenue received before the improvements were made; however, the TIRZ proceeds are used for infrastructure and other approved purposes. Following the termination of the zone, the municipality and County receive property tax revenue based on full appraised value of the improved area. The proceeds from the TIRZ can be used for:

- Paving
- Drainage
- Sanitary Sewer
- Water
- Public Buildings
- Parks and Recreation Facilities
- Land Acquisition
- TIRZ Creation and Operation Costs

According to Texas statutes, there are requirements for the use of TIRZ revenues:

- One third (1/3) of the TIRZ revenues must be set aside for low income housing
- Low-income housing can be located within the TIRZ or at another location in the City
- Housing policy can also dictate increment distribution

Several of these financing and implementation strategies and tools have been used in the East Port Subregion.

H. Plan Implementation Workbooks

As a tool to assist the East Port cities, counties, and other important stakeholders in the implementation of the subregional plan, an organized method of identifying and tracking progress of accomplishing the actions steps in the Plan Implementation Program was needed. Once individual organizations begin tracking their progress, a comprehensive effort to compile data on the progress of Plan implementation is also necessary. To assist in these efforts, two technical tools have been developed as part of the Plan, including:

- Implementation Strategy Workbooks (for each participating agency in the East Port Subregion)
- A Summary Report to track the progress of plan implementation across the subregion

The Implementation Strategy Workbooks incorporate all of the tools for each entity to fully partner with each other and H-GAC to achieve the highest possible annual yield in meeting the goals of the Plan to

create benefits for the public. The workbooks incorporate each city's/entity's profile and an action plan template based on the priority goals and strategies developed in the East Port Subregional Plan. The workbooks also highlight the development, adoption, and implementation of supportive public policies, recommended infrastructure investments, partnership opportunities, and collaborative funding and financing strategies to be used to implement the Plan.

The result of the on-going implementation process will be a more connected and collaborative process at all levels. This process will also provide an easy-to-use method for focusing resources on the specific efforts to implement the Plan across jurisdictional boundaries. Finally, it will provide avenues for closer coordination of transportation and community development projects, planning processes, community efforts, and land use and development strategies.

I. Priority Goals and Implementation Strategies

Incorporated within the Implementation Strategy Workbook for each community and participating entity are the East Port Subregion's priority goals and implementation strategies. The format of this material allows for easy tracking of the progress of each action. As each participating entity works on its own respective actions during the year, the summary spreadsheet for the entire spectrum of implementing agencies can be summarized and published as part of the East Port Round Table's Annual Report. This data and information can also be reported to H-GAC for analysis purposes and use in future regional plans.

To meet the needs of all sectors of the East Port communities, implementation strategies were developed to be used at the appropriate levels of government and the private sector to accomplish the recommended actions resulting from the Plan. At the outset of the development process for the subregional plan, stakeholders and citizens helped frame the overall Plan goals. As a part of the December, 2009 stakeholder meeting and the last set of public workshops in February, 2010, these goals were reaffirmed and proposed implementation strategies were presented and shown in Figure 51. The goals and strategies stated below represent a consensus of the overall policy direction that local jurisdictions in the East Port Subregion as well as other stakeholders, such as TxDOT, Harris County, and the Port of Houston should consider as community plans, transportation initiatives, and economic development projects advance in the East Port Subregion. Individual implementation strategies for each local jurisdiction as well as a set of regional implementation strategies were developed and are included in the Appendix.

Figure 51 – East Port Subregion Priority Goals and Implementation Strategies

Priority Goal # 1: Address Impacts of Higher Levels of Truck Traffic and Port-Related Activity

Implementation Strategies

- Identify and map high truck traffic corridors and areas with high levels of truck and freight rail traffic and make them available to the public.
- Develop truck-friendly design standards for roads, driveways, and signs for major truck corridors.
- Develop policies to manage roadway access in corridors with high levels of truck traffic.
- Develop programs to enforce local ordinances relating to truck travel.

Priority Goal # 2: Support Local Redevelopment and Economic Development Initiatives

Implementation Strategies

- Encourage all East Port Local governments to identify and map desired redevelopment and growth corridors and centers.

- Encourage all local governments to develop and maintain a capital investment plan to guide infrastructure investments to support redevelopment and growth corridors and centers.

- Encourage communities to develop and maintain a plan to incorporate alternatives modes of transportation into redevelopment and growth corridors and centers, including bus and rail transit, hike/bike paths, carpool and vanpool programs, flexible work schedules, and other strategies to reduce the number of single-occupant vehicles and to reduce congestion.

- Encourage local jurisdictions to plan, develop, and maintain a connected network of streets and pedestrian and bike paths in a grid pattern that provides alternative routes for all travelers**.**

Priority Goal # 3: Reduce Traffic Congestion in the East Port Area

Implementation Strategies

- Encourage local jurisdictions to work cooperatively with one another, Harris County, and TxDOT on projects of common interest and identify funding for priority subregional transportation corridors.

- Develop new or expanded programs to manage access along major corridors that connect centers and initiate new concepts such as adding sidewalks, bike paths, and transit services to provide more travel choices and better connections to local and regional centers.

- Improve the efficient operation of the transportation system, including roads, bridges and transit systems by use of intelligent “smart” technologies to communicate travel conditions to motorists, trucks, transit riders, and others.

- Allocate sufficient funds to preserve our transportation system in a state of good repair.

- Encourage local to consider the impacts on the transportation system of new development and identify strategies to reduce the negative impacts.

Priority Goal # 4 - Protect Environmental and Waterfront Assets

Implementation Strategies

- Encourage local jurisdictions to identify and map their natural and environmentally sensitive areas as amenities to enhance the redevelopment and new development in corridors and centers and incorporate them into local plans.

- Encourage development patterns that protect environmentally sensitive lands and showcase waterfront assets in the East Port area.

- Develop public education and awareness programs to increase knowledge of the links between environmental protection and economic and public health.

Priority Goal # 5 - Encourage Quality Growth, Development and Community Design

Implementation Strategies

- Create future land use maps and policies reflecting higher residential densities and non-residential intensities in appropriate areas to create mixed use activity centers connected by existing and future public transportation corridors.

- Develop parking plans and ordinances to maximize the use of existing parking spaces for mixed use centers, campuses, downtowns, convention centers, and other large traffic generators.
- Require traffic impact studies for major new developments or redevelopments to determine whether transportation system improvements are needed to accommodate the changing land uses.
- Create community design guidelines to influence the location, type, and nature of public spaces within regional and local centers and corridors.

Priority Goal # 6 - Create More Affordable, Environmentally Sustainable, and Healthy Travel Choices

Implementation Strategies

- Link land use and transportation plans by identifying neighborhood, community and regional activity centers connected by corridors that are easy and safe to use by motorists, pedestrians, cyclists, and transit riders.

- Develop local design standards for livable centers that use wide sidewalks, street trees and furniture, on-street parking, narrow street lanes, transit stops, prominent crosswalks, building setbacks, and traffic signal timing to achieve more modest average car speeds in the range of 25-35 MPH in appropriate areas to create a more livable street system rich in travel choices.

- Require traffic impact studies for major new developments or redevelopments to determine whether transportation system improvements are needed to accommodate the changing land uses.

- Create community design guidelines to influence the location, type, and nature of public spaces within regional and local centers and corridors.

Priority Goal # 7 - Increase Resources for New Infrastructure and Community Development Projects

Implementation Strategies

- Encourage local governments in the East Port area to identify federal, state, regional, and local funds to implement the East Port Subregional Plan.

- Identify and invest in roadway and rail improvements that meet major trucking and commercial freight needs while protecting neighborhoods and other sensitive areas from the negative impact of truck traffic.

- Identify and promote transportation investments that provide new and improved travel choices (i.e. walk, bike, transit) to employment centers, educational institutions, shopping, cultural, recreational, and entertainment activities.

Priority Goal # 8 - Ensure Coordination of Planning and Development Activities in Jurisdictions Throughout the East Port Subregion

Implementation Strategies

- Encourage local jurisdictions (cities, Harris County, etc.) to form the East Port Subregion Roundtable and meet quarterly to discuss and coordinate planning and development activities to implement the East Port Centers and Corridors Plan.

- Prepare an annual State of the Subregion Report to highlight the successes and challenges of the East Port communities including a list of joint projects and service needs.

- Create and maintain an electronic database of land use, transportation, environmental, and economic information and data for use by local jurisdictions, private sector organizations, and the citizens of the East Port Subregion.

J. Joint Planning Initiatives

One of the opportunities open to the communities and the counties in the East Port Subregion and H – GAC is the pursuit of joint planning initiatives, involving two or more local jurisdictions (cities or counties) in the subregion. Typically, each individual community pursues its own planning work program and coordinates, if necessary, with adjacent jurisdictions. This city-by-city or city-county approach to planning is sometimes problematic because planning issues and development issues often do not respect city limits or county boundaries. Another positive result from the East Port Subregional Plan is the identification of opportunities where multi-city and/or county planning efforts could produce value. Some of these potential examples include:

- Small area plans for locations where high levels of freight activity are present – these areas could benefit from detailed plans for traffic circulation, truck-friendly street designs, and separation of truck traffic from neighborhoods and other sensitive areas.

- Corridor plans involving two or more jurisdictions, to examine the potential for new local transit service or inter-community connectors, especially to major job sites.

- Efforts involving multiple jurisdictions to explore the potential for transportation demand management activities, i.e. carpool, vanpool, flex-time or other measures, could help in managing commute period congestion near major employment sites.

K. Summary Plan Implementation Matrix

Given the multitude of public and private sector agencies involved in land use and development and transportation infrastructure activities in the East Port Subregion, development of a summary matrix to track progress in accomplishing the Plan's goals and implementation actions was helpful. One method of tracking the progress of Plan implementation that could be used by the East Port communities, H-

GAC, and key stakeholders is the use of an electronic spreadsheet. Such a matrix can be revised, as desired, by the user organizations; however, it is recommended that key data and information are tracked consistently across jurisdictions and agencies to assure a meaningful summary can be developed each year. The following data fields in the Summary Plan Implementation Matrix are recommended:

- Organization/Agency Name
- Implementation Action
- Start Date
- Date Action Accomplished
- Partner Agencies/Organizations
- Programmed Costs
- Expenditures
- Comments/Remarks on Significance of the Action
- Related Next Steps
- Measurement of Plan Effects

L. Measurement of Plan Effects

An important element in monitoring the implementation of the East Port Subregional Plan is the extent to which the Plan's implementation achieves the desired positive impacts or effects. The East Port Subregional Plan's overall goals is to facilitate travel, including providing more travel choices and reducing congestion, as well as supporting sound land use, development, and environmental planning. While these measurements can serve as a starting point for assessing the Plan's effects, they should not be viewed as a constraint or an obstacle in the Plan's implementation monitoring. The East Port communities, working together with their stakeholders, including H-GAC, should create, modify, add to, or refine the set of suggested performance metrics shown below so they are useful in both local and regional land use and development and transportation decision-making.

- **Goal:** Create more affordable, environmentally sustainable, and healthy travel choices.

  The desired effects of this goal can be assessed by measuring:
  - Change in the number of hours of transit service provided
  - Change in the size of the transit service area
  - Change in the number of park and ride lot spaces
  - Change in the number of miles of bicycle, pedestrian, and trail facilities

- **Goal:** Address Port-Related Traffic Impacts on Communities

  The desired effect of this goal can be assessed by measuring:
  - Number of actions implemented to direct truck traffic on appropriate streets via truck routing plans and maps;
  - Number of small area plans conducted to address location-specific truck circulation issues;
  - Level of enforcement of local truck ordinances (i.e. number of citations, etc.);
  - Number of cities using site plan review process to address truck movement issues

- **Goal:** Support Local Redevelopment and Economic Development Initiatives

The desired effect of this goal can be assessed by measuring:

- The number of local development and redevelopment initiatives completed by local jurisdictions
- The associated levels of transportation investments from local, regional, state, and federal sources.

Goal: Reduce Traffic Congestion in the East Port Area

The desired effect of this goal can be assessed by measuring:

- Number of participants involved in transportation demand management activities (i.e. carpool, vanpool, flex-time programs, etc.)
- The number of roadway connection projects implemented by local jurisdictions to provide alternative routes to already congested facilities
- Change in the number of people using public transportation services in the East Port area

Goal: Protect environmental and waterfront assets.

The desired effect of this goal can be assessed by measuring:

- The number of plans, "green" initiatives, or educational campaigns by local jurisdictions to protect or enhance environmental or waterfront features in the East Port area
- Level of funding obtained from federal, state, regional, local, and private sources to protect environmental and waterfront assets
- Change in number of persons visiting key waterfront areas in the subregion

Goal: Encourage quality growth, development, and community design.

The desired effect of this goal can be assessed by measuring:

- The number of new local government plans, programs, guidelines, and ordinances to create quality growth and community design
- Number of LEED-certified buildings located in the East Port Subregion
- Number of livable center initiatives underway in the East Port area

Goal: Increase resources for new infrastructure and community development projects.

The desired effect of this goal can be assessed by measuring:

- Change in the number and value of major new private development initiatives in the subregion.

Goal: Ensure coordination of planning and development activities throughout the East Port Subregion.

The desired effect of this goal can be assessed by measuring:

- Number of East Port Round Table activities and presentations to others to increase the visibility of the East Port Subregion to state and regional leaders
- Number of articles or other special materials published on planning and development activities in the East Port area

Care should be given to the initial choice of performance measures so they are relatively constant over time. This will allow ease of data collection and analysis and will facilitate long-term tracking of trends and progress in achieving the East Port Subregion's goals.

APPENDIX

Table A-1: Proposed East Port Subregion Transportation Projects

Figure A-1: Proposed Genoa-Red Bluff Road Corridor Improvements – Harris County

TABLE A-1: PROPOSED EAST PORT SUBREGION TRANSPORTATION PROJECTS

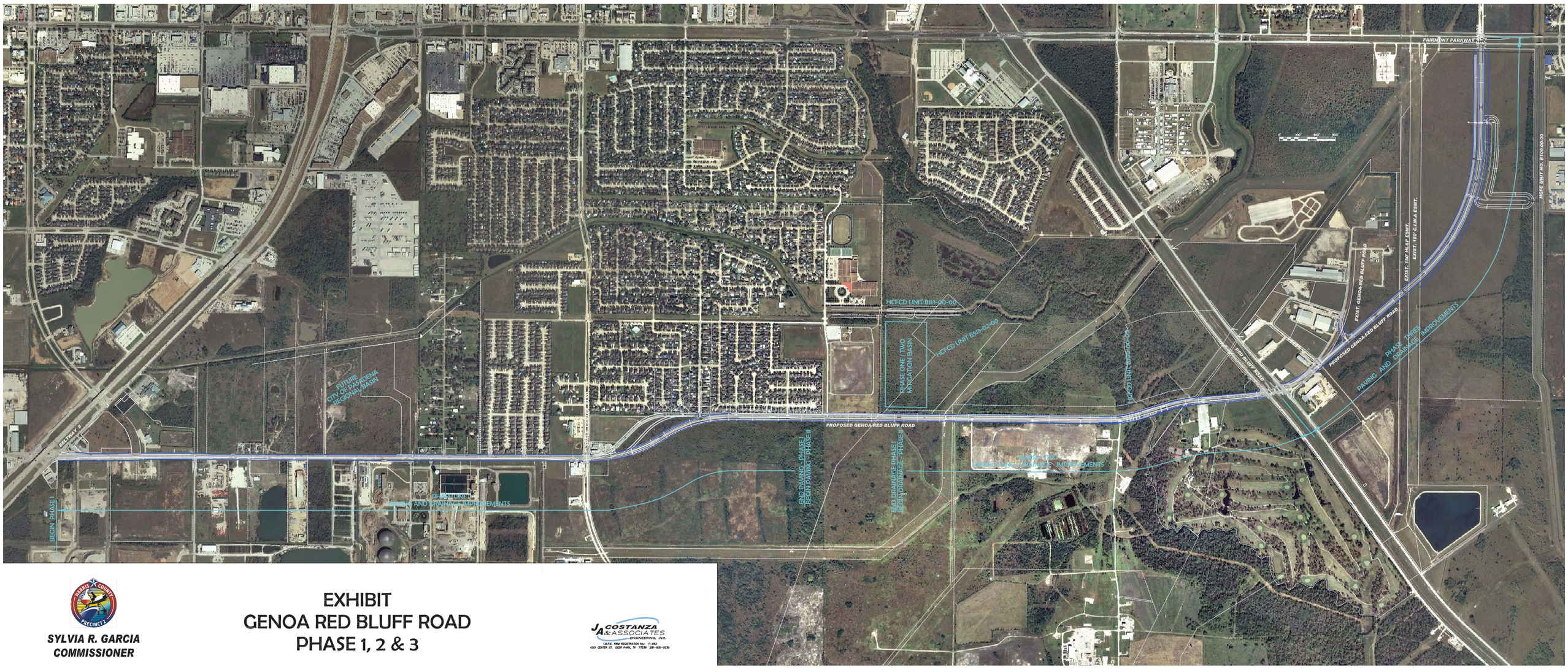
Lead Agency	Project Status	County	Street	From Location	To Location	Total Cost	Date of Const.	Project Description
Completed Projects								
CITY OF LEAGUE CITY	COMPLETE	GALVESTON	BAY AREA BLVD	LEAGUE CITY PKWY	APPROX 1.0 MI S	$1,135,331	12/25/2002	EXTENSION OF BAY AREA BLVD
CITY OF LEAGUE CITY	COMPLETE	GALVESTION	LEAGUE CITY PKWY	MAPLE LEAF DR	MAGNOLIA CREEK	$1,000,000	9/1/2004	CONSTRUCT 4-LANE DIVIDED
CITY OF PASADENA	COMPLETE	HARRIS	STRAWBERRY RD	HOUSTON ST	CHERRYBROOK	$5,668,000	10/1/2007	OVERLAY
CITY OF PASADENA	COMPLETE	HARRIS	STRAWBERRY RD	FAIRMONT PKWY	GENOA-RED BLUFF	$7,884,000	10/31/2007	DESIGN AND CONSTRUCT 2-LANE SOUTHBOUND ROADWAY
HARRIS COUNTY	COMPLETE	HARRIS	GARTH RD	IH 10	WALLISVILLE RD	$8,655,324	7/26/2005	WIDEN TO 5-LANE CONCRETE PAVEMENT WITH STORM SEWER
HARRIS COUNTY	COMPLETE	HARRIS	BAY AREA BLVD	SPENCER HWY	FAIRMONT PKWY	$4,864,324	11/9/2004	CONSTRUCT 4-LANE CONCRETE DIVIDED CURB & GUTTER STORM SEWER
HARRIS COUNTY	COMPLETE	HARRIS	SPACE CENTER BLVD	SPENCER HWY	FAIRMONT PKWY	$3,959,825	4/1/2002	CONSTRUCT 4-LANE CONCRETE BLVD (IN SECTIONS) W/ STORM SEWER
TXDOT BEAUMONT DISTRICT	COMPLETE	CHAMBERS	SH 99	0.378 MI S OF FM 565	FM 1405	$28,970,289	8/1/2003	SEG I-2: CONSTRUCT 4-LANE DIVIDED RURAL HIGHWAY (POSSIBLE TOLL ROAD)
TXDOT BEAUMONT DISTRICT	COMPLETE	CHAMBERS	IH 10 E	E OF SH 146	W OF FM 565	$15,894,588	3/1/2003	ADD 2 NEW LANES AND RECONSTRUCT EXIST ML SH 146 TO SH 99
TXDOT BEAUMONT DISTRICT	COMPLETE	CHAMBERS	IH 10 E	0.993 MI E OF HARRIS C/L	0.549 MI W OF FM 3180	$13,569,203	3/1/2003	BUILD 6 LANE O/P AND RECONSTRUCT FRONTAGE ROADS AT SH 99
TXDOT HOUSTON DISTRICT	COMPLETE	CHAMBERS	SH 99	IH 10 E	S OF FM 565	$18,969,630	8/1/2003	SEG I-2: CONSTRUCT 4-LANE DIVIDED RURAL HIGHWAY WITH INTERCHANGES
Let for Construction								
CITY OF PASADENA	LET	HARRIS	PASADENA BLVD	STRAWBERRY	BURKE RD	$5,544,000	1/1/2007	RECONSTRUCT 4-LANE ROADWAY TO INCL TURNING LANES
CITY OF PASADENA	LET	HARRIS	CRENSHAW RD	ALLEN-GENOA	STRAWBERRY	$3,600,000	11/1/2007	IMPROVE DRAINAGE, SEWER, WATER AND ADD LEFT TURN LANE
CITY OF PASADENA	LET	HARRIS	PANSY	OLD VISTA	CRENSHAW	$5,600,000	10/1/2007	WIDENING FROM OLD VISTA TO KEITH & EXTEND FROM KEITH TO CRENSHAW
HARRIS COUNTY	LET	HARRIS	FAIRMONT PKWY	16TH ST	SH 146	$4,200,000	3/1/2008	WIDEN EXISTING 4-LANE ROADWAY TO 6-LANE CONCRETE BLVD SECTION
HARRIS COUNTY	LET	HARRIS	JACKSON ST	SCARBOROUGH	PASADENA BLVD	$2,700,000	9/1/2001	WIDEN FROM 2-LANE TO 3-LANE (IN SECTIONS) CONCRETE UNDIVIDED
HARRIS COUNTY	LET	HARRIS	RACCOON DR	LYNCHBURG-CEDAR BAYOU	MASSEY TOMPKINS	$5,076,244	9/12/2006	RECONSTRUCT 3-LANE CONCRETE, CURB & GUTTER W/ STORM SEWER
PORT OF HOUSTON AUTHORITY	LET	HARRIS	MAIN ST	CLINTON DR	END OF MAIN ST	$5,817,632	5/9/2007	WIDEN TO 4-LANE AND CONSTRUCT TRUCK QUEUING AREA
TXDOT HOUSTON DISTRICT	LET	HARRIS	NASA RD 1 BYPASS	IH 45	0.6 MI E OF FM 270	$38,716,000	4/1/2004	CONSTRUCT 4-LANE DIVIDED, ACCESS CONTROLLED FACILITY
TXDOT HOUSTON DISTRICT	LET	GALVESTON	FM 518	FM 1266	SH 146	$6,186,249	6/1/2005	WIDEN TO 4-LANE DIVIDED CURB & GUTTER INCLUDES 10-FT WIDE BIKEWAY
TXDOT HOUSTON DISTRICT	LET	GALVESTON	FM 518	FM 2094	FM 1266	$11,732,012	6/1/2005	WIDEN TO 4-LANE DIVIDED CURB & GUTTER INCLUDES 10-FT WIDE BIKEWAY
TXDOT HOUSTON DISTRICT	LET	HARRIS	IH 10 E	HOLLAND	FEDERAL RD	$3,384,143	11/1/2007	CONSTRUCT AUXILIARY LANES, MILLING AND OVERLAY ON FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	LET	HARRIS	IH 45 S	MEDICAL CENTER BLVD	0.48 MI S OF NASA 1	$30,509,142	5/1/2007	WIDEN TO 10 MAIN LANES, TWO 3-LANE FRONTAGE ROADS & ONE HOV LANE
TXDOT HOUSTON DISTRICT	LET	GALVESTON	FM 646	IH 45	FM 517	$15,859,795	9/1/2008	WIDENING FROM 2 LANES TO 4-LANE DIVIDED (PTF)
Transportation Improvement Program (TIP)								
CITY OF BAYTOWN	TIP	HARRIS	BAKER RD	N MAIN ST	SJOLANDER RD	$8,500,000	1/1/2011	CONSTRUCT 5-LANE PAVEMENT WITH CURB, GUTTER & STORM SEWERS
CITY OF LA PORTE	TIP	HARRIS	SENS RD	N H ST	SPENCER HWY	$8,300,000	9/1/2008	WIDEN TO 5-LANE CONCRETE PAVEMENT W/STORM SEWER DRAINAGE
CITY OF LEAGUE CITY	TIP	GALVESTON	FM 518 BYPASS	FM 518	FM 270	$14,400,000	9/1/2009	CONSTRUCT 4-LANE DIVIDED HIGHWAY BYPASS AROUND INTERSECTION
CITY OF PASADENA	TIP	HARRIS	WASHINGTON ST	PRESTON	BW 8	$4,300,000	1/1/2009	WIDEN FROM 3-LANES TO 4-LANES
CITY OF PASADENA	TIP	HARRIS	ALLENDALE RD	OAKS	JUDY	$9,955,575	9/1/2010	CONSTRUCT 4 NEW LANES
CITY OF PASADENA	TIP	HARRIS	PRESTON	BW 8	GENOA RED BLUFF RD	$1,254,656	8/1/2009	CONSTRUCT 4-LANE DIVIDED THOROUGHFARE
CITY OF PASADENA	TIP	HARRIS	PASADENA BLVD/STRAWBERRY RD	SH 225	JACKSON	$5,100,000	9/12/2006	DESIGN, ACQUIRE ROW & WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	TIP	HARRIS	CRENSHAW RD	BW 8	SPACE CENTER BLVD	$5,900,000	12/1/2008	CONSTRUCT 5800 LF OF 4-LANE DIVIDED STREET
HARRIS COUNTY	TIP	HARRIS	W RAILROAD ST	SH 225 EB FR EXIT	CENTER ST IN DEER PARK	$1,622,400	9/1/2008	RECONSTRUCT AND WIDEN TO 3 LANES
HARRIS COUNTY	TIP	HARRIS	GENOA-RED BLUFF RD	BAYWOOD	RED BLUFF RD	$6,200,000	9/1/2009	WIDEN TO 5-LANE CONCRETE PAVEMENT W/ STORM SEWER
HARRIS COUNTY	TIP	HARRIS	GENOA-RED BLUFF RD	BW 8	BAYWOOD	$11,000,000	9/1/2008	WIDEN TO 5-LANE CONCRETE PAVEMENT W/ STORM SEWER
HARRIS COUNTY	TIP	HARRIS	SOUTHMORE ST	RICHEY RD	500' E OF JOHNSON	$6,800,000	12/1/2009	RECONSTRUCT AND WIDEN 4-LANE ROADWAY TO 5-LANE
HARRIS COUNTY	TIP	HARRIS	SOUTHMORE ST	500' E OF JOHNSON RD	STRAWBERRY RD	$5,300,000	12/1/2008	RECONSTRUCT AND WIDEN 4-LANE ROADWAY TO 5-LANE
HARRIS COUNTY	TIP	HARRIS	THOMPSON RD	ELLIS SCHOOL RD	SH 330	$7,100,000	12/1/2008	CONSTRUCT 5-LANE CONCRETE SECTION
HARRIS COUNTY	TIP	HARRIS	SENS RD	SH 225	N H ST	$2,700,000	6/1/2008	WIDEN TO 5-LANE CONCRETE PAVEMENT W/STORM SEWER DRAINAGE
HCTRA	TIP	HARRIS	FAIRMONT PKWY	BW 8	SH 146	$205,000,000	1/1/2009	CONSTRUCT 4-LANE (2 DIRECTIONS) TOLLWAY IN MEDIAN
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	PORT RD	SH 146	TODVILLE RD	$31,631,446	8/1/2009	WIDEN TO 4-LANES W/ CURB & GUTTER, STORM SEWER AND APPURTENANCES
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	PORT RD	SH 146	TODVILLE RD	$11,305,592	1/1/2009	WIDEN TO 6-LANE DIVIDED
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	PTRA RAILROAD TRACK	STRANG YARD	RED BLUFF RD	$38,695,162	4/1/2011	CONSTRUCT SECOND RAIL TRACK
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	RAILROAD TRACK	BAYPORT	N/A	$36,395,837	4/1/2011	CONSTRUCT INTERMODAL RAIL YARD
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	SOUTHERN ACCESS RD	OLD SH 146	PORT RD	$4,887,285	10/1/2012	CONSTRUCT 2-LANE ROAD WITH RAISED MEDIAN
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	SOUTHERN ACCESS RD	OLD SH 146	PORT RD	$4,452,608	10/1/2017	WIDEN 4 LANE DIVIDED WITH RAISED MEDIAN
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	PTRA RAILROAD TRACK	MAINLINE	INTERMODAL YARD	$15,775,321	4/1/2011	CONSTRUCT DOUBLE TRACK RAIL LINES W/ RUNAROUND TRACK TO BAYPORT TERMINAL
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	SH 146	PORT RD	ACCESS RD & OLD SH 146	$2,870,740	10/1/2009	CONSTRUCT EB EXIT
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	SPENCER RD	MAINLINE DOUBLE TRACK	N/A	$6,723,010	10/1/2009	CONSTRUCT GRADE SEPARATION OVER MAINLINE DOUBLE-RAIL TRACK
PORT OF HOUSTON AUTHORITY	TIP	HARRIS	PORT RD	SH 146	TODDVILLE RD	$37,027,226	N/A	RR SIGNALS & CROSSING AT PRIVATE SPURS ON TOTAL IND. & POLY ONE IND. TRACKS

Lead Agency	Project Status	County	Street	From Location	To Location	Total Cost	Date of Const.	Project Description
TXDOT BEAUMONT DISTRICT	TIP	CHAMBERS	SH 99	HARRIS C/L	SH 99 @ FM 1405	$38,571,820	7/1/2011	SEG I-2: WIDEN TO 4-LANE TOLLWAY WITH TWO 2-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	TIP	GALVESTON	SH 99	IH 45 S	BRAZORIA C/L	$266,875,580	3/1/2011	SEG B: CONSTRUCT 4-LANE TOLLWAY
TXDOT HOUSTON DISTRICT	TIP	HARRIS	SH 99	BS 146-E	CHAMBERS C/L	$22,513,348	7/1/2011	SEG I-2: WIDEN TO 4-LANE TOLLWAY
TXDOT HOUSTON DISTRICT	TIP	HARRIS	IH 45 S	NYACK	MEDICAL CENTER BLVD	$93,930,000	7/1/2009	WIDEN TO 10 MAIN LANES, TWO 3-LANE FRONTAGE ROADS AND 2 HOV LANES
TXDOT HOUSTON DISTRICT	TIP	GALVESTON	FM 646	BENSON GULLY	IH 45	$10,112,960	4/1/2009	WIDENING FROM 2 LANES TO 4-LANE DIVIDED
TXDOT HOUSTON DISTRICT	TIP	GALVESTON	FM 646	FM 517	FM 1764	$27,559,168	4/1/2009	WIDEN FROM 2-LANES TO 4-LANE DIVIDED (PTF)
Short-Term Projects in RTP								
CITY OF BAYTOWN	SHORT	HARRIS	JOHN MARTIN RD	CEDAR BAYOU-LYNCHBURG	IH 10	$11,000,000	9/1/2011	WIDEN TO 4 LANES WITH CONTINUOUS LEFT TURN LANE
CITY OF BAYTOWN	SHORT	HARRIS	CEDAR BAYOU-LYNCHBURG RD	GARTH RD	DECKER DR/ SP 330	$24,306,800	9/1/2011	WIDENING TO 4-LANES WITH CLTL
CITY OF BAYTOWN	SHORT	HARRIS	SH 146	W ELVINTA	FERRY RD	$45,090,000	8/1/2012	CONSTRUCT 6 MAINLANES AND GRADE SEPARATION
CITY OF BAYTOWN	SHORT	CHAMBERS	SH 146	FERRY RD	IH 10 E	$26,753,400	9/1/2011	WIDEN AND UPGRADE TO 6 LANE FREEWAY
CITY OF LA PORTE	SHORT	HARRIS	WHARTON WEEMS BLVD	POWELL RD	SH 146	$6,180,000	9/1/2011	CONSTRUCT NEW 4-LANE DIVIDED & UNDERGROUND STORM SEWER
CITY OF LEAGUE CITY	SHORT	GALVESTON	FM 270	FM 518	FM 646	$5,320,000	9/1/2011	WIDEN TO 4-LANE DIVIDED
CITY OF LEAGUE CITY	SHORT	GALVESTON	LEAGUE CITY PKWY	FM 528	MAPLE LEAF DR	$6,363,964	1/1/2013	CONSTRUCT 4-LANE DIVIDED
CITY OF PASADENA	SHORT	HARRIS	STRAWBERRY RD	PASADENA BLVD	HARRIS	$7,814,748	9/1/2015	DESIGN, ACQUIRE ROW & CONSTRUCT 4-LANE UNDIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	ALLEN GENOA	FAIRMONT PKWY	GENOA-RED BLUFF	$1,493,000	9/1/2011	DESIGN, ACQUIRE ROW & WIDEN TO 4-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	CRENSHAW RD	HOLLY BAY CT	CENTER ST	$1,191,123	10/1/2013	DESIGN, ACQUIRE ROW & EXTEND 4-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	CHOATE RD	RED BLUFF RD	BAY AREA BLVD	$5,887,672	1/1/2017	DESIGN, ACQUIRE ROW & CONSTRUCT 4-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	PANSY	PINE	SPENCER HWY	$4,089,995	5/1/2015	DESIGN AND WIDEN TO 4-LANE UNDIVIDED
CITY OF PASADENA	SHORT	HARRIS	RANDOLPH (JANA)	SPENCER HWY	RED BLUFF RD	$22,125,000	9/1/2011	DESIGN AND CONSTRUCT EXTENSION OF 4-LANE DIVIDED
CITY OF PASADENA	SHORT	HARRIS	PINE	BW 8	RANDOLPH (JANA)	$1,978,000	9/1/2011	DESIGN & WIDEN TO 4-LANE UNDIVIDED W/ DRAINAGE & SIGNALS
CITY OF PASADENA	SHORT	HARRIS	JASMINE	PASADENA BLVD	SAN AUGUSTINE	$1,644,941	10/1/2013	DESIGN AND WIDEN TO 4-LANE UNDIVIDED
CITY OF PASADENA	SHORT	HARRIS	RED BLUFF RD	BW 8	SPENCER HWY	$7,875,897	10/1/2014	DESIGN, ACQUIRE ROW AND WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	PINE	PRESTON	BW 8	$2,544,000	9/1/2011	DESIGN AND WIDEN TO 4-LANE UNDIVIDED
CITY OF PASADENA	SHORT	HARRIS	RED BLUFF RD	SPENCER HWY	CENTER ST	$3,636,908	1/1/2015	DESIGN, ACQUIRE ROW AND WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	SCARBOROUGH	SOUTHMORE	ALLENDALE	$1,259,117	1/1/2015	DESIGN, ACQUIRE ROW AND CONSTRUCT 4-LANE UNDIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	CENTER	FAIRMONT PKWY	GENOA-RED BLUFF	$5,859,599	1/1/2015	DESIGN, ACQUIRE ROW & CONSTRUCT 4-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	RED BLUFF RD	SOUTH	BW 8	$3,164,650	1/1/2012	DESIGN, ACQUIRE ROW AND WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	RED BLUFF RD	SH 225	BEARLE	$3,146,000	9/1/2011	DESIGN, ACQUIRE ROW AND WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	RED BLUFF RD	BEARLE	SOUTH	$2,793,000	9/1/2011	DESIGN, ACQUIRE ROW AND WIDEN TO 6-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	GENOA-RED BLUFF RD	RED BLUFF	FAIRMONT PKWY	$346,635	1/1/2017	DESIGN & CONSTRUCT EXTENSION OF 4-LANE DIVIDED ROADWAY
CITY OF PASADENA	SHORT	HARRIS	CRENSHAW RD	SPACE CENTER BLVD	HOLLY BAY CT	$1,551,165	1/1/2012	DESIGN & CONTRUCT WESTBOUND ROADWAY
CITY OF PASADENA	SHORT	HARRIS	PASADENA BLVD	SOUTHMORE	STRAWBERRY	$5,955,616	8/1/2015	DESIGN, ACQUIRE ROW, RECONSTRUCT & WIDEN TO 4-LANE
HARRIS COUNTY	SHORT	HARRIS	BEAMER RD	WEST BAY AREA BLVD	FM 528	$10,000,000	9/1/2011	PHASE III: CONSTRUCT 4-LANE DIVIDED
HARRIS COUNTY	SHORT	HARRIS	UNDERWOOD RD	FAIRMONT PKWY	RED BLUFF	$5,611,162	1/1/2013	DESIGN, ACQUIRE ROW AND CONSTRUCT 6-LANE ROADWAY
PORT OF HOUSTON AUTHORITY	SHORT	HARRIS	BROADWAY	BARBOURS CUT BLVD	L ST N	$2,632,382	10/1/2013	WIDEN TO 4-LANE ROAD
PORT OF HOUSTON AUTHORITY	SHORT	HARRIS	SH 146	SH 146 SB	SOUTHERN ACCESS RD	$11,517,000	10/1/2017	CONSTRUCT DIRECT CONNECTOR FROM SB LANES OF SH 146
PORT OF HOUSTON AUTHORITY	SHORT	HARRIS	SOUTHERN ACCESS RD	WB SOUTHERN ACCESS RD	NB SH 146	$10,870,000	10/1/2017	CONSTRUCT DIRECT CONNECTOR WB SOUTHERN ACCESS RD 146 TO NB SH 146
PORT OF HOUSTON AUTHORITY	SHORT	HARRIS	RAILROAD TRACK	AT BAYPORT	N/A	$36,747,000	10/1/2017	CONSTRUCT INTERMODAL RAIL YARD
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	SH 146	FM 518	FM 1764	$319,934,900	9/1/2015	WIDEN TO 6-LANES
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	FM 517	FM 646	BRAZORIA C/L	$51,000,000	9/1/2012	WIDEN TO 4-LANE DIVIDED
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	SH 3	FM 518	FM 517	$43,650,426	10/1/2016	RECONSTRUCT AND WIDEN TO 4 MAIN LANES WITH RAISED MEDIANS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 146	WHARTON WEEMS BLVD	FAIRMONT PKWY	$17,376,150	9/1/2011	WIDEN TO 6-LANES WITH TWO 3-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 146	CHOATE RD	RED BLUFF RD	$56,867,400	9/1/2011	WIDEN TO 6 LANES WITH TWO 3-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 146	CHOATE RD	WHARTON WEEMS BLVD	$25,274,400	9/1/2011	WIDEN TO 6-LANES WITH TWO 3-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 146	RED BLUFF	S OF THE GALV/HARRIS CL	$180,669,120	9/1/2015	WIDEN TO 8-LANE ARTERIAL WITH GRADE SEPARATIONS
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	SH 146	S OF HARRIS/GALVESTON C/L	FM 518	$75,278,800	9/1/2015	WIDEN TO 6-LANES WITH 4-LANE EXPRESS LANES
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	SH 3	CLEAR CREEK	FM 518	$4,000,000	9/1/2012	RECONSTRUCT AND WIDEN TO 6 MAIN LANES WITH RAISED MEDIANS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 3	EL DORADO BLVD	CLEAR CREEK	$44,000,000	9/1/2012	RECONSTRUCT AND WIDEN TO 6 MAIN LANES WITH RAISED MEDIANS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	BS 146D	FAIRMONT PKWY	SH 146	$9,526,197	9/1/2012	WIDEN TO 4-LANE DIVIDED
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	BS 146D	FAIRMONT PKWY	SH 146	$9,526,197	9/1/2012	WIDEN TO 4-LANE DIVIDED
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	IH 45 S	0.452 MI S OF FM 518	N OF FM 517	$138,056,128	9/1/2016	WIDEN TO 8 MAIN LANES AND TWO 2-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	IH 45 S	HARRIS C/L	0.452 MI S OF FM 518	$39,942,240	9/1/2016	WIDEN TO 10 MAIN LANES, TWO 3-LANE FRONTAGE ROADS
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	SH 99	BS 146 W	SH 146	$9,692,914	9/1/2012	CONSTRUCT 4-LANE TOLL WAY
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	FM 646	EDMUNDS WAY	FM 1266	$35,200,000	9/1/2011	WIDEN FROM 2 LANES TO 4-LANE DIVIDED
TXDOT HOUSTON DISTRICT	SHORT	GALVESTON	FM 646	FM 3436	FM 1266	$14,000,000	11/1/2012	WIDEN TO 4 LANE DIVIDED RURAL ROAD

Lead Agency	Project Status	County	Street	From Location	To Location	Total Cost	Date of Const.	Project Description
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	IH 45 S	0.210 MI S OF NASA 1 BYPASS	GALVESTON C/L	$41,631,718	9/1/2015	WIDEN TO 10 MAIN LANES, TWO 3-LANE FRONTAGE ROADS & TWO HOV LANES
TXDOT HOUSTON DISTRICT	SHORT	HARRIS	NASA RD 1 BYPASS	IH 45	FM 528	$10,500,000	1/1/2013	CONSTRUCT 4-LANE DIVIDED ROADWAY ON NEW LOCATION
UNSPONSORED (TBD)	SHORT	HARRIS	OATES RD	IH 10	MARKET ST	$1,515,360	9/1/2013	WIDEN TO 4-LANE UNDIVIDED
Long-Term Projects in RTP								
CITY OF LEAGUE CITY	LONG	GALVESTON	BAY AREA BLVD	LEAGUE CITY PKWY	FM 517	$9,832,888	1/1/2018	CONSTRUCT 4-LANE DIVIDED ROADWAY IN SECTIONS
CITY OF LEAGUE CITY	LONG	GALVESTON	MAPLE LEAF DR	FM 518	FM 517	$13,438,281	1/1/2018	CONSTRUCT 4-LANE DIVIDED (IN SECTIONS)
CITY OF PASADENA	LONG	HARRIS	HARRIS AVE	SCARBOROUGH	PASADENA BLVD	$8,273,170	1/1/2019	DESIGN, ACQUIRE ROW & WIDEN TO 4-LANE UNDIVIDED ROADWAY
HARRIS COUNTY	LONG	HARRIS	RED BLUFF RD	CENTER ST	SH 146	$22,372,090	1/1/2023	WIDEN/CONSTRUCT TO 6 LANE CONCRETE CURB & GUTTER
HARRIS COUNTY	LONG	HARRIS	FAIRMONT PKWY	BW 8	16 TH	$80,080,747	9/1/2020	RECONSTRUCT & WIDEN FROM 4 & 6-LANE DIVIDED TO 8 LANE RADIAL FRWY
TXDOT HOUSTON DISTRICT	LONG	GALVESTON	SH 99	IH 45 S	SH 146	$180,000,000	9/1/2019	SEG A: CONSTRUCT 4-LANE TOLLWAY
TXDOT HOUSTON DISTRICT	LONG	GALVESTON	FM 518	SH 146	FM 270	$33,133,153	1/1/2023	WIDEN FROM 2 TO 6-LANES W/BRIDGE
TXDOT HOUSTON DISTRICT	LONG	CHAMBERS	IH 10 E	SH 146	FM 563	$271,745,450	1/1/2023	WIDEN FROM 4 TO 8 LANES W/ BRIDGES
TXDOT HOUSTON DISTRICT	LONG	HARRIS	SH 225	BROADWAY	RED BLUFF	$42,254,186	1/1/2023	WIDEN FROM 6 TO 8 LANES W/BRIDGES
TXDOT HOUSTON DISTRICT	LONG	HARRIS	NASA PKWY	IH 45	SH 146	$33,558,136	1/1/2023	WIDEN TO 6 & 8 LANES
TXDOT HOUSTON DISTRICT	LONG	MULTIPLE	FM 528	IH 45	SH 35	$42,506,972	1/1/2023	WIDEN TO 6-LANES IN SECTIONS
TXDOT HOUSTON DISTRICT	LONG	GALVESTON	FM 518	BRAZORIA C/L	IH 45	$38,032,554	1/1/2023	WIDEN TO 6-LANES IN SECTIONS
TXDOT HOUSTON DISTRICT	LONG	HARRIS	SH 3	WINKLER	GALVESTON C/L	$60,404,645	1/1/2023	WIDEN TO 6 & 8 LANES
UNSPONSORED (TBD)	LONG	HARRIS	GARTH RD	FM 1942	WALLISVILLE	$6,504,960	1/1/2023	WIDEN FROM FROM 2 TO 4 LANES W/BRIDGES
UNSPONSORED (TBD)	LONG	GALVESTON	ALGOA-FRIENDSWOOD RD	FM 518	SH 6	$26,388,600	1/1/2020	WIDEN TO 4-LANE DIVIDED AS CONNECTING LINK
Harris County Projects - From Project Prioritization Plan - July 2008								
HARRIS COUNTY	NA	HARRIS	DELL DALE ROAD	WOODFOREST BOULEVARD	WALLISVILLE ROAD	$10,180,000	NA	WIDEN TO 4-LINE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	SHELDON/S. SHELDON ROAD	MARKET STREET	JACINTOPORT BOULEVARD	$14,310,000	NA	WIDEN TO CONTINUOUS 4-LANE THOROUGHFARE
HARRIS COUNTY	NA	HARRIS	CHOATE ROAD	BAY AREA BOULEVARD	SH 146	$11,140,000	NA	WIDEN TO 5-LANE WITH CENTER TURN LANE, CONCRETE C& G, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	REPSDORPH ROAD	TRAFFIC CIRCLE	SH 146	$4,850,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	SENS ROAD	SPENCER HIGHWAY	NORTH H STREET	$12,440,000	NA	WIDEN TO 5-LANE WITH CENTER TURN LANE, CONCRETE CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	CRENSHAW ROAD	SOUTH SHAVER ROAD	STRAWBERRY ROAD	$9,570,000	NA	WIDEN TO 4-LANE DIVIDED WITH BOULEVARD SECTION, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	FAIRMONT PARKWAY	SH 146	NORTH 16TH STREET	$5,100,000	NA	WIDEN TO 6-BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	GENOA-RED BLUFF ROAD	BELTWAY 8	BAYWOOD DRIVE	$17,460,000	NA	WIDEN TO 4-LANE CONCRETE BEOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	GENOA-RED BLUFF ROAD	BAYWOOD DRIVE	RED BLUFF ROAD	$21,920,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	GENOA-RED BLUFF ROAD	RED BLUFF ROAD	FAIRMONT PARKWAY	$8,630,000	NA	CONSTRUCT 4-LANE DIVIDED ON NEW LOCATION
HARRIS COUNTY	NA	HARRIS	WOODFOREST BOULEVARD	HAYMARKET LANE	FREEPORT STREET	$4,980,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	CLINTON DRIVE	IH 610	FEDERAL ROAD	$26,961,000	NA	RECONSTRUCT EXISTING 4-LANE DIVIDED IN CONCRETE WITH CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	SENS ROAD	NORTH H STREET	SH 225	$8,170,000	NA	WIDEN TO 5-LANE WITH CENTER TURN LANE, CONCRETE CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	CRENSHAW ROAD	BELTWAY 8	SPACE CENTER BOULEVARD	$8,987,000	NA	WIDEN TO 4-LANE DIVIDED WITH BOULEVARD SECTION, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	N. L STREET/PASADENA BLVD.	UNDERWOOD ROAD	SENS ROAD	$22,500,000	NA	WIDEN TO 5-LANES, CONCRETE, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	REPSDORPH ROAD	NASA PARKWAY	TRAFFIC CIRCLE	$8,170,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	FEDERAL ROAD	WASHBURN TUNNEL	BIRDIE LANE	$16,340,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	GELLHORN DRIVE	IH 610	MCCARTY DRIVE	$15,523,000	NA	CONSTRUCT 4-LANE DIVIDED ON NEW LOCATION
HARRIS COUNTY	NA	HARRIS	PORT ROAD	SH 146	TODVILLE ROAD	$16,340,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	RAILROAD STREET	CENTER STREET	SH 225	$7,700,000	NA	WIDEN TO 3-LANE UNDIVIDED (ONE-WAY)
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	BEARLE ROAD	SOUTH STREET	$8,987,000	NA	WIDEN TO 6-LANE BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	THOMPSON ROAD	SPUR 330 (DECKER ROAD)	ELLIS SCHOOL ROAD	$9,804,000	NA	WIDEN TO 5-LANE WITH CENTER TURN LANE, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	MAIN/CROSBY-LYNCHBURG ROAD	HIGHLANDS-WALLISVILLE RD	CROSBY FREEWAY (US 90)	$35,948,000	NA	WIDEN TO 5-LANE CONTINUOUS REINFORCED CONCRETE
HARRIS COUNTY	NA	HARRIS	FAIRMONT PARKWAY	PRESTON ROAD	BELTWAY 8	$8,000,000	NA	WIDEN TO 6-LANE BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	PANSY STREET	CRENSHAW ROAD	OLD VISTA ROAD	$11,438,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	CLINTON DRIVE	N. WAYSIDE DRIVE	IH 610	$17,974,000	NA	RECONSTRUCT EXISTING 4-LANE DIVIDED IN CONCRETE WITH CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	EL CAMINO REAL	NASA PARKWAY	BAY AREA BOULEVARD	$8,170,000	NA	RECONSTRUCT EXISTING 4-LANE DIVIDED IN CONCRETE WITH CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	SH 225	BEARLE ROAD	$10,000,000	NA	WIDEN TO 6-BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	SOUTH STREET	BELTWAY 8	$12,000,000	NA	WIDEN TO 6-LANE BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	BELTWAY 8	SPENCER HIGHWAY	$20,000,000	NA	WIDEN TO 6-LANE BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	SCARBOROUGH STREET	SOUTHMORE AVENUE	SH 225	$4,400,000	NA	BASE REPAIR, ASPHALT OVERLAY, DRAINAGE IMPROVEMENTS
HARRIS COUNTY	NA	HARRIS	UVALDE ROAD	WALLISVILLE ROAD	CROSBY FREEWAY (US 90)	$13,072,000	NA	RECONSTRUCT EXISTING 4-LANE DIVIDED IN CONCRETE WITH CURB & GUTTER
HARRIS COUNTY	NA	HARRIS	BURKE ROAD	RED BLUFF ROAD	SOUTHMORE AVENUE	$4,902,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, C&G, STORM SEWER
HARRIS COUNTY	NA	HARRIS	FAIRMONT PARKWAY	AT ARMAND BAYOU		$1,020,000	NA	CONSTRUCT BRIDGE
HARRIS COUNTY	NA	HARRIS	GARTH ROAD	E. WALLISVILLE ROAD	BARBERS HILL RD (FM 1942)	$15,300,000	NA	WIDEN TO 5-LANE CONTINUOUS REINFORCED CONCRETE
HARRIS COUNTY	NA	HARRIS	NORMANDY STREET	WALLISVILLE ROAD	CROSBY FREEWAY (US 90)	$16,340,000	NA	CONSTRUCT 4-LANE DIVIDED ON NEW LOCATION

Lead Agency	Project Status	County	Street	From Location	To Location	Total Cost	Date of Const.	Project Description
HARRIS COUNTY	NA	HARRIS	SHAVER STREET	SH 225	SOUTHMORE AVENUE	$9,800,000	NA	RECONSTRUCT 3-LANE CONCRETE, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	SPENCER HIGHWAY	CENTER STREET	$8,000,000	NA	WIDEN TO 6-LANE BOULEVARD SECTION
HARRIS COUNTY	NA	HARRIS	FEDERAL ROAD	PTRA RAILROAD		$2,692,800	NA	CONSTRUCT OVERPASS
HARRIS COUNTY	NA	HARRIS	FREEPORT STREET	EAST FREEWAY (IH-10)	UVALDE ROAD	$16,340,000	NA	WIDEN TO 4-LANE DIVIDED WITH CONTINUOUS LEFT-TURN LANE
HARRIS COUNTY	NA	HARRIS	JOHN MARTIN ROAD	CEDAR BAYOU-LYNCHBURG	IH-10	$12,255,000	NA	WIDEN TP 4-LANE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWER
HARRIS COUNTY	NA	HARRIS	JACINTOPORT BOULEVARD	BELTWAY 8	SHELDON ROAD	$11,438,000	NA	WIDEN TO CONTINUOUS 4-LANE THOROUGHFARE
HARRIS COUNTY	NA	HARRIS	MAIN STREET/PASADENA	SH 225	SOUTHMORE AVENUE	$9,800,000	NA	RECONSTRUCT 3-LANE CONCRETE, CURB & GUTTER, STORM SEWER
HARRIS COUNTY	NA	HARRIS	NORTH BROADWAY	BARBOURS CUT BOULEVARD	NORTH L STREET	$4,500,000	NA	RECONSTRUCT 5-LANE CONCRETE, CURB & GUTTER, STORM SEWER
HARRIS COUNTY	NA	HARRIS	SOUTHMORE AVENUE	RICHEY STREET	JOHNSON STREET	$7,200,000	NA	RECONSTRUCT 5-LANE CONCRETE CURB & GUTTER, STORM SEWER
HARRIS COUNTY	NA	HARRIS	SOUTHMORE AVENUE	JOHNSON STREET	STRAWBERRY ROAD	$7,200,000	NA	RECONSTRUCT 5-LANE CONCRETE CURB & GUTTER, STORM SEWER
HARRIS COUNTY	NA	HARRIS	EL DORADO BOULEVARD	HORSEPEN BAYOU	FM 2351	$13,889,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	PENINSULA BOULEVARD	AT JACINTOPORT BOULEVARD		$1,000,000	NA	REALIGN INTERSECTION
HARRIS COUNTY	NA	HARRIS	WALLISVILLE ROAD	GARTH ROAD	NORTH MAIN STREET	$8,170,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWERS
HARRIS COUNTY	NA	HARRIS	PASADENA BOULEVARD	SOUTHMORE AVENUE	RED BLUFF ROAD	$900,000	NA	ADD TURNING LANES AT SIGNALIZED INTERSECTIONS/IMPROVE GEOMETRY
HARRIS COUNTY	NA	HARRIS	NORTH MAIN STREET	IH 10	WALLLISVILLE ROAD	$8,987,000	NA	WIDEN TO 4-LANE CONCRETE BOULEVARD, CURB & GUTTER, STORM SEWERS
East Port Subregion Plan - Roadways with Need for Additional Lanes (beyond 2035 Plan)								
HARRIS COUNTY	NA	HARRIS	HOLLAND ROAD	E. FREEWAY EB SERVICE RD	MARKET STREET	$2,697,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	HOLLAND ROAD	MARKET STREET	19TH STREET	$14,322,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MERCURY DRIVE	E. FREEWAY WB SERVICE RD.	MARKET STREET	$4,464,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MERCURY DRIVE	MARKET STREET	LANE STREET	$7,161,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MARKET STREET	MERCURY DRIVE	GELLHORN DRIVE	$12,741,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SPENCER HIGHWAY	BURKE ROAD	SPENCER HWY AND SH 3	$27,807,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	ALLEN GENOA ROAD	FAIRMONT PARKWAY	SHAVER ROAD	$2,325,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	ALLEN GENOA ROAD	SPENCER HIGHWAY	HOUSTON ROAD	$6,045,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SHAVER ROAD	FAIRMONT PARKWAY	ALLEN GENOA ROAD	$2,418,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SHAVER ROAD	ALLEN GENOA ROAD	QUEENS ROAD	$12,927,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FAIRMONT PARKWAY	WATTERS ROAD	ALLEN GENOA ROAD	$14,601,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	GARNER STREET	MERLE STREET	SHAVER ROAD	$2,604,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	ALLENDALE ROAD	SHAVER ROAD	OAKS DRIVE	$4,185,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	E. BELTWAY 8	NEAR JACINTOPORT BLVD.	PASADENA FWY	$26,784,000	2020-2025	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	E. BELTWAY 8 ACCESS ROAD SB	PASADENA FWY	BENNETT DRIVE	$20,060,000	2030-2040	ADD 4 LANES
HARRIS COUNTY	NA	HARRIS	E. BELTWAY 8 ACCESS ROAD SB	BENNETT DRIVE	RED BLUFF ROAD	$6,510,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	E. BELTWAY 8 ACCESS ROAD NB	RED BLUFF ROAD	PASADENA FWY	$18,414,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	E. BELTWAY 8	CRENSHAW ROAD	IH-45	$31,062,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	GARTH ROAD	WALLISVILLE ROAD	IH-10	$9,579,000	2030-2040	ADD 4 LANES
HARRIS COUNTY	NA	HARRIS	GARTH ROAD	IH-10	CEDAR BAYOU-LYNCHBURG	$17,949,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	GARTH ROAD	CEDAR BAYOU-LYNCHBURG	LOOP 201	$31,620,000	2010-2015	ADD 4 LANES
HARRIS COUNTY	NA	HARRIS	DECKER DRIVE	ROLLINGBROOK DRIVE	LOOP 201	$10,800,000	2030-2040	ADD 6 LANES
HARRIS COUNTY	NA	HARRIS	DECKER DRIVE	LOOP 201	ROLLINGBROOK DRIVE	$9,180,000	2030-2040	ADD 4 LANES
HARRIS COUNTY	NA	HARRIS	ROLLINGBROOK DRIVE	DECKER DRIVE	GARTH ROAD	$10,602,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MAIN STREET	CEDAR BAYOU DRIVE	CEDAR BAYOU-LYNCHBURG	$10,974,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MAIN STREET	E. ARTHCER	FM 1942	$35,898,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 565	LOOP 201	FM 2354	$25,203,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SJOLANDER STREET	IH-10	E. ARCHER	$12,648,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MAIN STREET	LEE DRIVE	PARK STREET	$9,393,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	MAIN STREET	LOBIT STREET	SH 146	$12,090,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SH 99/SH 146 FRONTAGE NB	REPSDORPH ROAD	RED BLUFF ROAD	$7,998,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SH 99/SH 146 NB	REPSDORPH ROAD	RED BLUFF ROAD	$7,998,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	RED BLUFF ROAD	SH 99/SH 146	TODVILLE ROAD	$14,229,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 2094	SH 146	FM 270	$39,153,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 518	FM 270	GALVESTON ROAD	$24,990,000	2010-2015	ADD 4 LANES
HARRIS COUNTY	NA	HARRIS	FM 518	GALVESTON ROAD	BAY AREA BOULEVARD	$34,410,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 1266	SH 96	FM 517	$24,459,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 1266	FM 518	SH 96	$10,416,000	2010-2015	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	FM 270	FM 518	NASA ROAD	$23,250,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	SH 146	FM 96	FM 518	$13,392,000	2030-2040	ADD 2 LANES

Lead Agency	Project Status	County	Street	From Location	To Location	Total Cost	Date of Const.	Project Description
HARRIS COUNTY	NA	HARRIS	FEDERAL DRIVE	INDUSTRIAL DRIVE	CLINTON DRIVE	$15,996,000	2030-2040	ADD 2 LANES
HARRIS COUNTY	NA	HARRIS	WASHBURN TUNNEL	CLINTON DRIVE	RICHEY STREET	$15,130,000	2010-2015	ADD 4 LANES
Potential Connectivity Projects*								
* These projects in general are new alignment projects. Additional local analysis is needed to determine the design concept (i.e. number of needed lanes, right-of-way costs, other associated costs).								
LA PORTE/HARRIS COUNTY	NA	HARRIS	FARRINGTON BOULEVARD/DRIVE	SH 225	UNDERWOOD RD	NA	NA	NA
BAYTOWN/HARRIS COUNTY	NA	HARRIS	CEDAR BAYOU CROSSING - BAY ROAD EXTENSION TO WARD ROAD	WARD RD/HAPPY VALLEY DR	BAY RD/OLD FM RD 1405	NA	NA	NA
LA PORTE/HARRIS COUNTY	NA	HARRIS	BARBOURS CUT BLVD - PASADENA BLVD/NORTH AVE L CONNECTION	BARBOURS CUT/N 16TH ST	N AVE L/SENS RD	NA	NA	NA
LEAGUE CITY/NASSAU BAY/ GALVESTON & HARRIS COUNTIES	NA	GALVESTON & HARRIS	CLEAR LAKE CROSSING - EXTENSION OF SPACE CENTER BOULEVARD	SPACE CENTER BLVD/NASA RD 1	SOUTH SHORE BLVD	NA	NA	NA
SOUTH HOUSTON/HARRIS COUNTY	NA	HARRIS	NORTH-SOUTH CONNECTION - WINKLER DR TO COLLEGE AVE	CANIFF RD/DAKOTA ST	EASTHAVEN BLVD/TALLYHO RD	NA	NA	NA
HARRIS COUNTY	NA	HARRIS	GENOA RED BLUFF EAST-WEST CONNECTION	GENOA RED BLUFF RD/RED BLUFF RD	W FAIRMONT PKWY/CANADA ST	NA	NA	NA
JACINTO CITY/HARRIS COUNTY	NA	HARRIS	LANE ST EXTENSION - NEW CONNECTION ACROSS MAIN & HOLLAND	FIDELITY ST	MYLLA ST/HILLER ST	NA	NA	NA
LA PORTE/HARRIS COUNTY	NA	HARRIS	E SAN AUGUSTINE ST EXTENSION	ST ELMO'S FIRE RD	SH 225	NA	NA	NA
PASADENA/HARRIS COUNTY	NA	HARRIS	MIDDLEBROOK DR EXTENSION	CLEAR LAKE CITY BLVD	RED BLUFF RD	NA	NA	NA
New Transit Projects - East Port Plan								
HARRIS COUNTY	NA	HARRIS	GARTH ROAD CORRIDOR			NA	2010-2015	IMPROVE SERVICE (IN COOPERATION WITH CITY OF BAYTOWN)
HARRIS COUNTY	NA	HARRIS	SH 2094 CORRIDOR			NA	2010-2015	INTRODUCE NEW SERVICE (IN COOPERATION WITH CITY OF CLEAR LAKE SHORES)
HARRIS COUNTY	NA	HARRIS	SYLVAN BEACH AREA			NA	2010-2015	INTRODUCE NEW SERVICE (IN COOPERATION WITH CITY OF LA PORTE)
HARRIS COUNTY	NA	HARRIS	PARK & RIDE SVC - LA PORTE			NA	2015-2020	INTRODUCE NEW PARK AND RIDE SERVICE - CITY OF LA PORTE
HARRIS COUNTY	NA	HARRIS	FM 518 CORRIDOR			NA	2015-2020	INTRODUCE NEW COMMUTER AND CIRCULATOR SVC- CITY OF LEAGUE CITY
HARRIS COUNTY	NA	HARRIS	SOUTH HOUSTON SERVICE			NA	2010-2015	INTRODUCE NEW ROUTES - CITY OF SOUTH HOUSTON
HARRIS COUNTY	NA	HARRIS	JACINTO CITY SERVICE			NA	2010-2015	IMPROVED SERVICE - CITY OF JACINTO CITY
HARRIS COUNTY	NA	HARRIS	KEMAH PKG/TRANSIT CIRCULATOR			NA	2010-2015	FEASIBILITY STUDY
HARRIS COUNTY	NA	HARRIS	CLEAR LAKE WATER TAXI			NA	2010-2015	FEASIBILITY STUDY
HARRIS COUNTY	NA	HARRIS	NEW PARK & RIDE SVC - IH-10			NA	2010-2015	FEASIBILITY STUDY
HARRIS COUNTY	NA	HARRIS	NEW PARK & RIDE SVC - SH 225			NA	2010-2015	FEASIBILITY STUDY
New Bike/Ped/Trail Projects - East Port Plan								
CITY OF CLEAR LAKE/KEMAH	NA	HARRIS	JARBO BAYOU TRAIL			NA	2010-2015	MULTI-USE TRAIL CONNECTING CITIES OF CLEAR LAKE SHORES AND KEMAH
CITY OF CLEAR LK/LEAGUE CITY	NA	HARRIS	SH 2094 CORRIDOR			NA	2015-2020	NEW SIDEWALKS IN CLEAR LAKE SHORES AND LEAGUE CITY
CITY OF LA PORTE	NA	HARRIS	SYLVAN BEACH AREA			NA	2015-2020	IMPROVE/ADD SIDEWALKS - SYLVAN BEACH AREA - CITY OF LA PORTE
CITY OF LA PORTE/PASADENA	NA	HARRIS	TRAIL CONNECTION			NA	2010-2015	CONNECT EXISTING TRAIL SYSTEMS IN CITIES OF LA PORTE AND PASADENA
CITY OF MORGAN'S POINT	NA	HARRIS	EXPAND CITYWIDE TRAIL SYSTEM			NA	2010-2015	CONSTRUCT REMAINDER CITYWIDE TRAIL SYSTEM
CITY OF PASADENA	NA	HARRIS	EXPAND TRAIL SYSTEM			NA	2010-2020	EXPAND TRAIL SYSTEM IN CENTRAL PASADENA
CITY OF SEABROOK	NA	HARRIS	CITYWIDE BIKE/PED SYSTEM			NA	2010-2010	IMPROVE CITYWIDE BIKE/PEDESTRIAN SYSTEM
CITY OF LEAGUE CITY	NA	HARRIS	CITYWIDE PATH/TRAIL SYSTEM			NA	2010-2020	ENHANCE CITYWIDE SHARED USE PATH/TRAIL NETWORKS



SYLVIA R. GARCIA
COMMISSIONER

EXHIBIT
GENOA RED BLUFF ROAD
PHASE 1, 2 & 3

JA COSTANZA & ASSOCIATES ENGINEERING, INC.
T.B.P.E. FIRM REGISTRATION No.: F-452
4201 CENTER ST. DEER PARK, TX 77536 281-930-9339