UPTOWN HOUSTON

Pedestrian/Transit Master Plan

March 2007

Prepared for Uptown Houston

Prepared by The Goodman Corporation

The Goodman Corporation is a nationally recognized transportation and urban planning consulting firm possessing a wide range of planning skills complemented with a unique understanding of the governmental processes for funding and implementing complex publicly sponsored transportation and land use initiatives. For over 26 years TGC has specialized in assisting public and private clients in planning, funding, and implementing land use and mobility projects. In addition to a strong reputation in innovative planning, TGC is accomplished in leading multi-disciplinary teams to prepare various planning products to support successful development and redevelopment initiatives. Public involvement is the cornerstone of TGC's approach to transportation and urban planning. TGC is exceptionally adept at engaging elected leadership, staff, and the community-at-large to actively participate in the planning process. TGC is very aware of how strong community support can be a catalyst for securing available public funding resources.

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This project was funded in part through the Federal Transit Administration. The contents of this report reflect the analysis of The Goodman Corporation which is responsible for the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Transit Administration.

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Executive Summary

Uptown Houston is one of the region's largest employment centers, the largest retail center, and is rapidly becoming one of the highest density residential centers in the State of Texas. With major freeway facilities, such as US 59/Westpark Tollway and the IH 610 West at the district's boundaries, and major thoroughfares, such as Westheimer Road, Richmond Avenue, and Post Oak Boulevard, serving as lifelines through the district, Uptown Houston is committed to real world mobility solutions that will enhance transit accessibility, reduce traffic congestion, improve safety for pedestrians, and improve the quality of life for persons visiting, working, or living within the district. Westheimer Road and Richmond Avenue already host east-west Metropolitan Transit Authority of Harris County (METRO) bus services, and METRO high-capacity transit will be implemented along Post Oak Boulevard over the next several years. Uptown Houston has already worked with the Harris County Toll Road Authority (HCTRA), and the Texas Department of Transportation (TxDOT) to preserve right-of-way for the future Post Oak Boulevard transit to transition to IH 610 West, and a future Uptown Westpark Intermodal Transit Terminal site located between US 59 and the Westpark Tollway. In the *Westheimer Corridor Study (2002)*, the Houston-Galveston Area Council (H-GAC), TxDOT, Houston METRO, and Uptown Houston agreed that transformation of the district into an urban transit village concept was necessary to meet growing trip demand and traffic congestion. Uptown completed a district-wide transit shelter program in 2006, in cooperation with Houston METRO, that resulted in more than $5 million of distinct transit shelters throughout the district. This long-range commitment by Uptown Houston and its local project partners in realizing the plan's goals underscores the importance of these improvements to the community and the region. With the Houston-Galveston area anticipating an additional two million residents by 2020, entities such as the Uptown Development Authority (UDA) must be equipped with the resources required to meet the mobility demands of the entire region.

The *Uptown Houston Pedestrian/Transit Master Plan* has been developed in accordance with the Federal Transit Administration's (FTA) Livable Communities Initiative (LCI) guidelines and will act as a template for the comprehensive implementation of pedestrian-transit access streetscape improvements, to include the following types of elements along major roadway corridors and secondary streets:

- At least 5-ft. wide sidewalks
- ADA-compliant ramps at intersections
- Pedestrian-scale lighting
- Installation of landscape barriers/shade trees
- Pedestrian-friendly signalized intersections/crosswalks

A physical inventory of the existing conditions along priority transit corridors and secondary streets to determine the current and desired Pedestrian Levels of Service (PLOS) was completed early in the planning process. The plan includes a total of approximately $20 million in streetscape capital costs and $2.6 million for signalized intersection/crosswalk capital improvements. These projects have already been incorporated into the regional planning process through the metropolitan planning organization (H-GAC), and initial phases of work have received federal funding prioritization in the 2006-2008 Transportation Improvement Program (TIP), with additional funds being sought in the 2008-2011 TIP process. The plan includes the quantification of air quality benefits, which are anticipated to result from implementation of the recommended improvements.

Due to the total cost of the improvements required to accommodate transit and pedestrians adequately in Uptown Houston and the mixture of federal, state, and local funding resources to accomplish these goals, a phased approach will be taken during implementation. In order for local share values to be leveraged against federal funds and to allow flexibility over a multi-year period, Uptown Houston will request an FTA Letter of No Prejudice (LONP) "Pre-award Authority" to protect eligible improvements within the plan for up to five years. The plan includes an associated Categorical Exclusion document, which is a prerequisite for receiving approval of an LONP and receipt of federal funds through an FTA grant. Uptown Houston, as a political subdivision of the State of Texas, will be implementing the plan through the FTA grant process, which will ensure compliance with federal transit accessibility guidelines. Uptown Houston also will be working with the MPO (H-GAC), Houston METRO, TxDOT, the private sector, and the Uptown Houston Tax Increment Reinvestment Zone (TIRZ) throughout the implementation process.

Chapter 1 - Introduction

The Uptown District of Houston incorporates many land uses into a unique urban community that includes single-family residential neighborhoods and multi-family residential apartments, retail, commercial, hotels, schools, churches, and parks. Within the area is The Galleria shopping mall, the 5th largest retail complex in the country, 26 hotels, 30,000 Uptown residents, 2,000 commercial businesses, and a unique 64-foot Water Wall. Uptown is the 14th largest business district in the United States, and the 2nd largest in the Greater Houston area. The district accounts for approximately 14 percent of Houston's total office space and serves as a major tourist destination with more than 18 million visitors each year and the highest total hotel room revenue in the city.

There are two major urban freeways, US Highway 59 (Southwest Freeway) and Interstate Highway 610 West, and major east-west arterials that converge at this location. In 2002, the interchange at US Highway 59 and IH 610 West was ranked number three in the nation for "most congested interchanges." This interchange carries an estimated 550,000 vehicles daily. Due to this high concentration of traffic volume, Uptown can become very congested at peak periods. Therefore, the management of transportation is a primary concern of the Uptown Development Authority. This diverse activity center, coupled with high traffic activity, creates great potential for increased public transit use, connectivity of Uptown to major commuter origins around the Houston area, and increased inner-circulation within the community.

This *Uptown Houston Pedestrian/Transit Master Plan* describes the proposed transit projects that would relieve congestion problems, improve air quality, decrease Vehicle-Miles Traveled (VMT), improve pedestrian accessibility, and increase overall quality of life in Uptown Houston. Of all of these projects, increasing the use of public transit through improved pedestrian access to transit stops in Uptown will be the primary building block for all other future projects. Not only would the proposed capital improvements promote increased ridership along Houston METRO's existing bus routes (Westheimer, Richmond, and Post Oak), they also will enhance operations of future high-capacity transit that has been proposed for Post Oak Boulevard and the accessibility and functionality of a future intermodal bus terminal also to be located near the southern terminus of Post Oak Boulevard. In addition, pedestrian/transit accessibility improvements throughout the district would promote economic vitality of retail centers, and complement the numerous high-density residential properties that are either underway or planned for construction. These types of pedestrian amenities would allow residents and visitors easier access to The Galleria, Water Wall, Hidalgo Park, and would play an important role in reducing VMT and, therefore, the traffic congestion and pollution within the district.

Figure 1.1 depicts the diverse and intense land uses already located within the Uptown Management District.

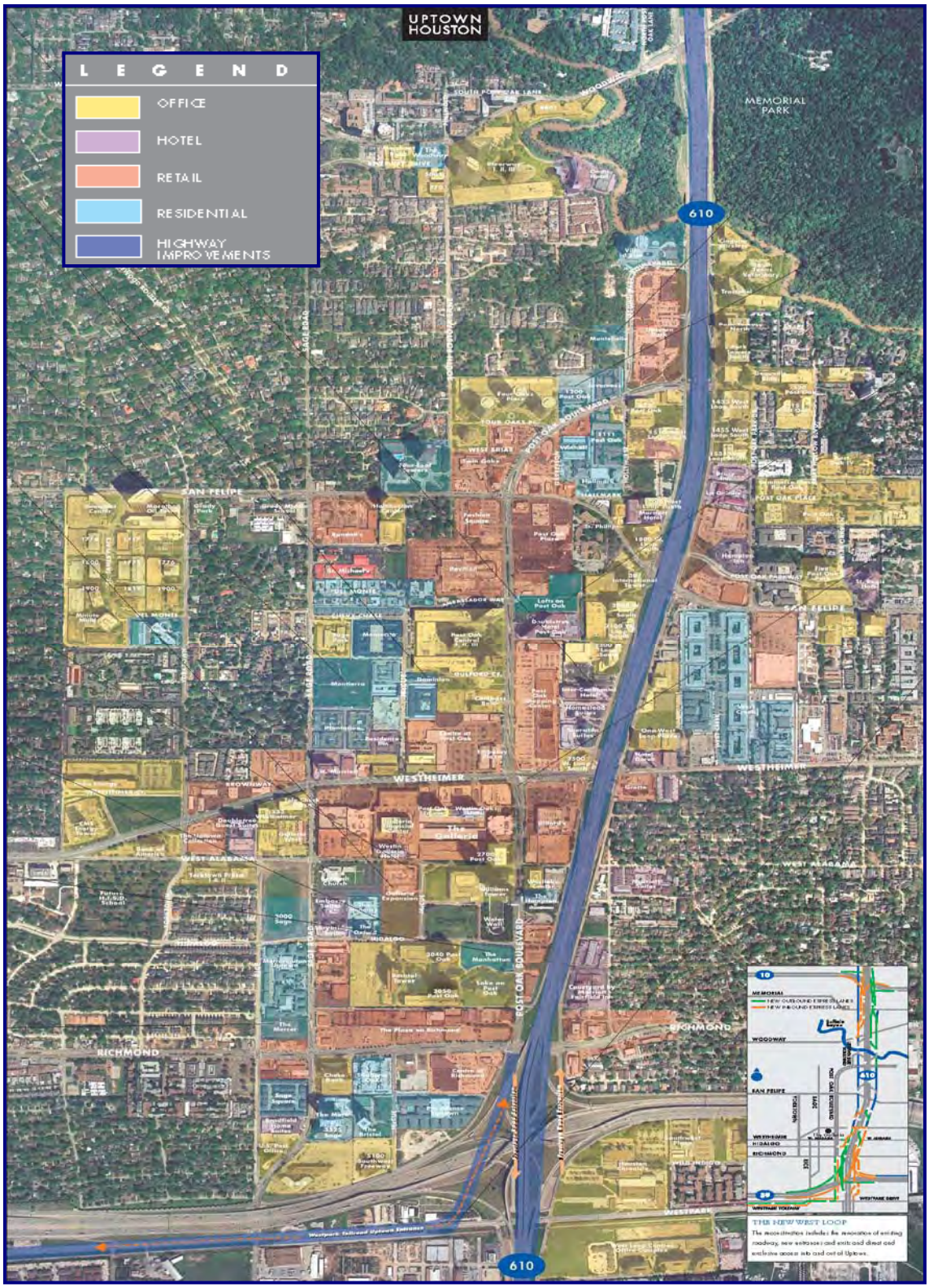


Figure 1.1 - Uptown Land Use Map

Study Corridors

Post Oak Boulevard and Sage Road are the principal north-south transit thoroughfares serving the study area in Uptown. Major east-west transit thoroughfares are Richmond Avenue, Westheimer Road, and San Felipe Street. Other important east-west streets include W. Alabama Street and Hidalgo Street. Many secondary streets, most which have no transit stops, feed into these major roadways and are an important part of improving pedestrian mobility and area connectivity. These streets include Ambassador Way, Garretson Lane, Guilford Court, Hallmark Drive, Hollyhurst Lane, and S. Post Oak Lane near San Felipe. Installation of new transit shelters throughout Uptown was completed in late 2005, but consistent and adequate pedestrian access to these transit stops remains a problem. Sidewalks and planting strips that enhance pedestrian safety are not consistent in width where they exist and pedestrian-scale lighting and signage are non-existent in most of the district. Much of the major employee, shopper, and resident activities within the study area occur along the major transit corridors; therefore, this master plan will focus on improving access to Westheimer Road, Richmond Avenue, and Post Oak Boulevard. The secondary roadways that feed into these streets are important connectors between complementary land uses. The connector streets to be included in the study corridor are San Felipe Street, Sage Road, W. Alabama Street, Hidalgo Street, Post Oak Lane, Uptown Park Boulevard, McCue Road, Ambassador Way, Garrettson Lane, Hollyhurst Lane, Guilford Court, and Hallmark Drive.

Both Skylark Lane and Post Oak Lane, proposed to be built in late 2007 or early 2008, will serve a new mixed-use development at the southwest corner of Post Oak Boulevard and San Felipe called Boulevard Place. These two streets will be dedicated to the public and connect to San Felipe and Post Oak Boulevard. Uptown has proposed to make streetscape improvements to these off-site streets. Ambassador Way also will be extended to connect to the southern end of this development.

Figure 1.2 illustrates the streets to be included in the *Uptown Pedestrian/Transit Master Plan.*

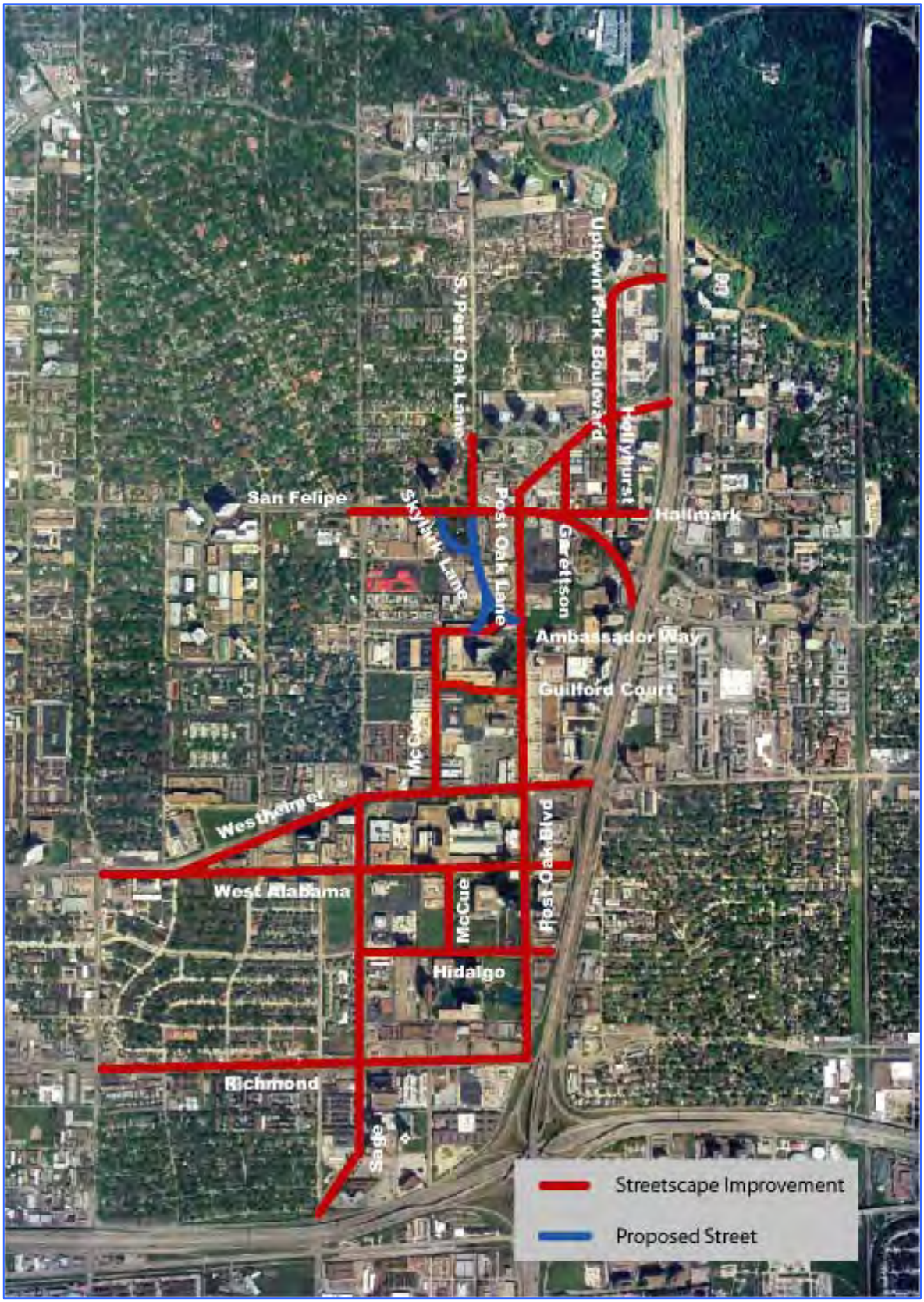


Figure 1.2 – Master Plan Corridors

FTA Livable Communities Initiative (LCI) Program

The Federal Transit Administration (FTA) Livable Communities Initiative (LCI) program guidelines provide a framework for the design of streetscape improvements that enhance transit and pedestrian user access to transit facilities and services. Quantifying the streetscape improvements and pedestrian user access to transit provides a comparative Pedestrian Level of Service (PLOS) for each corridor. Under the LCI program, transit-pedestrian access improvements are eligible within a 500-ft. radius of a transit stop and within 1,500 feet around a transit terminal. Improvements such as sidewalks, Americans with Disabilities Act (ADA) ramps, street trees, street furniture (benches and waste receptacles), transit shelters, and pedestrian lighting are considered eligible by FTA for inclusion within a capital grant, if they demonstrate improved transit-pedestrian access or PLOS.

The Uptown District lies wholly within the boundaries of Houston METRO and is served by local bus services. *Figure 1.3* depicts the number of bus stop locations within the Uptown District and these same bus stops within a 500-ft. radius as per FTA LCI guidelines.

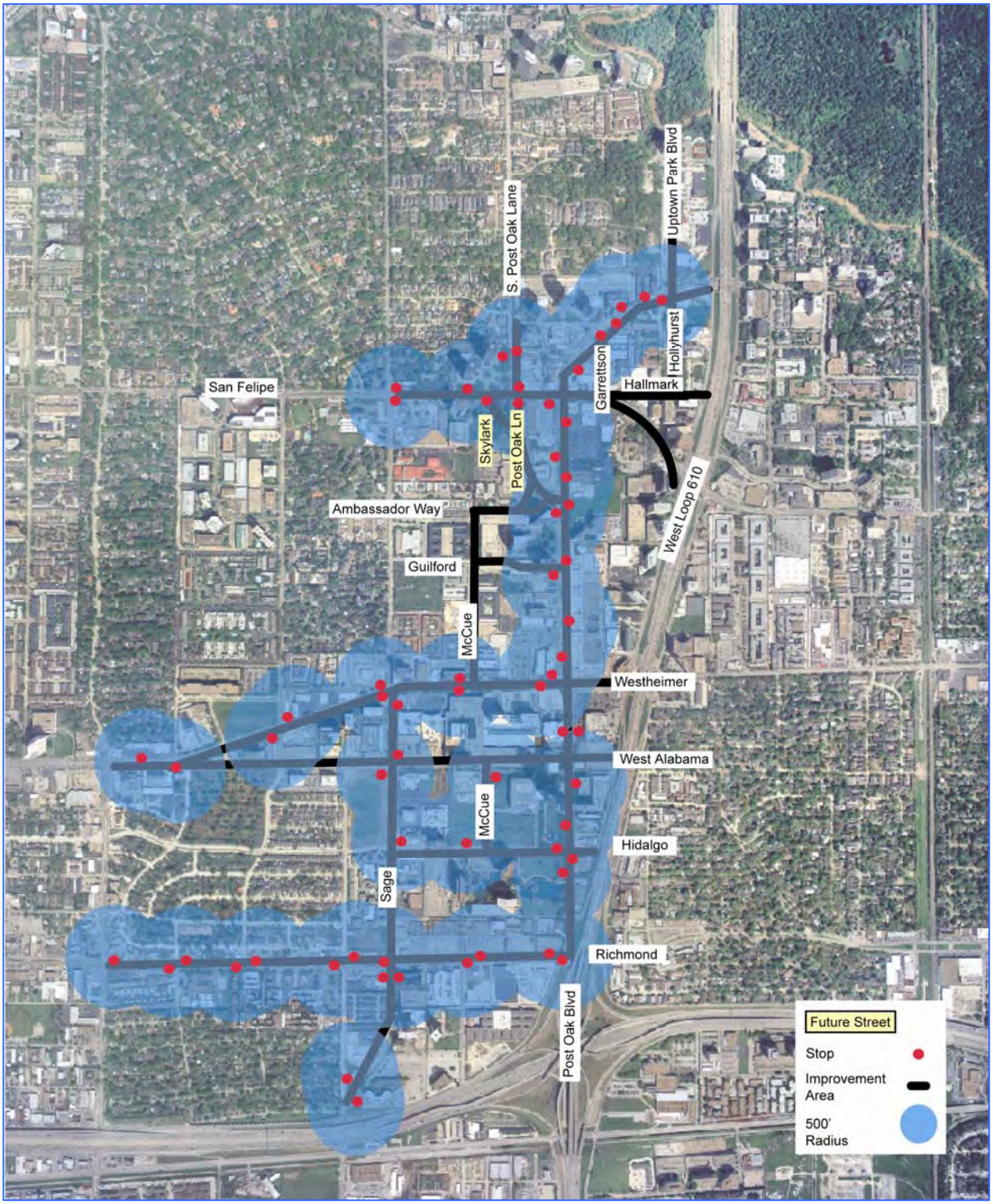


Figure 1.3 – Bus Stops and 500-ft. Radius

Existing Transit Activity

Uptown is an important destination for local transit services in the Houston region. Ten METRO bus routes serve the district directly and six routes travel along US Highway 59 (Southwest Freeway) that runs south along the district. *Table 1.1* shows the transit routes currently serving these corridors within the Uptown area and *Table 1.2* shows the top five streets in Uptown for bus boardings. *Tables 1.3 and 1.4* show the top ten bus stops for boardings and alightings throughout the District. All of these high transit activity corridors and bus stops are part of this study. *Figure 1.4* presents the existing transit routes serving the Uptown District. *Figures 1.5 to 1.7* present the ridership estimates for the key corridors in this study based on METRO ridership data.

Table 1.1 - METRO Existing Transit Routes and Ridership

Bus Route	***Uptown Corridor***	***Average Weekday Daily Ridership (Uptown area of route only)***
7 Tanglewood Road	Woodway, San Felipe, Bering	223
25 Richmond Avenue	Richmond Avenue	1,264
33 Post Oak Boulevard	Sage, Richmond, Post Oak Boulevard, S. Post Oak Boulevard, Woodway	4,296
35 Fairview Street	Chimney Rock, Augusta, San Felipe, Post Oak Boulevard	190
49 Chimney Rock Road	San Felipe, Richmond, Post Oak Boulevard, Chimney Rock, Sage	547
53 Westheimer Road	Post Oak Boulevard, Alabama, Westheimer, Sage, Hidalgo	969
73 Bellfort Street	Hidalgo, Sage, Westheimer, Post Oak Boulevard	233
82 Westheimer Road	Westheimer Road	2,517
283 Kuykendahl/Greenway-Uptown	Post Oak Boulevard	90
286 W. Little York Road-NWTC/Uptown-Greenway	Post Oak Boulevard	107

Source: METRO

Table 1.2 – Top Five Uptown Streets for Bus Boardings		
	Boardings	***Alightings***
1. Westheimer Road	1,257	1,276
2. Post Oak Boulevard	1,256	1,482
3. Richmond Avenue	684	678
4. Sage Road	456	358
5. S. Post Oak Lane	165	245
Subtotal	3,818	4,039
% of Total	85.0%	80.3%
* Excludes Northwest Transit Center		*Source: METRO*

Table 1.3 – Top Ten Uptown Bus Stops Customer Boardings			
	Direction	***Boardings***	***Alightings***
1. Westheimer Road and Post Oak Lane	EB	348	229
2. Post Oak Boulevard at Neiman Marcus	SB	242	162
3. Westheimer Road and Post Oak Lane	WB	239	268
4. Richmond Avenue and S. Post Oak	WB	168	164
5. Sage Road and Richmond Avenue	SB	168	31
6. Sage Road and Westheimer Road	NB	139	24
7. Richmond Avenue and Sage	EB	127	175
8. Post Oak Boulevard at 2929 Block	SB	117	119
9. Sage Road and Richmond Avenue	NB	109	255
10. Richmond Avenue and S. Rice	WB	109	43
Subtotal		1,766	1,470
% of Total		39.3%	29.2%
* Excludes Northwest Transit Center			*Source: METRO*

Table 1.4 – Top Ten Uptown Bus Stops Customer Alightings			
	Direction	***Boardings***	***Alightings***
1. Westheimer Road and Post Oak Lane	WB	239	268
2. Post Oak Boulevard at Dillard's	NB	105	265
3. Sage Road and Richmond Avenue	NB	109	255
4. Westheimer Road and Post Oak Lane	EB	348	229
5. Richmond Avenue and Sage Road	EB	127	175
6. Richmond Avenue and S. Post Oak	WB	168	164
7. Post Oak Boulevard at Neiman Marcus	SB	242	162
8. Post Oak Boulevard and Westheimer Road	SB	103	141
9. Post Oak Boulevard and Westheimer Road	NB	88	132
10. Westheimer Road and Yorktown	EB	81	132
Subtotal		1,610	1,923
% of Total		35.9%	38.2%
* Excludes Northwest Transit Center			*Source: METRO*

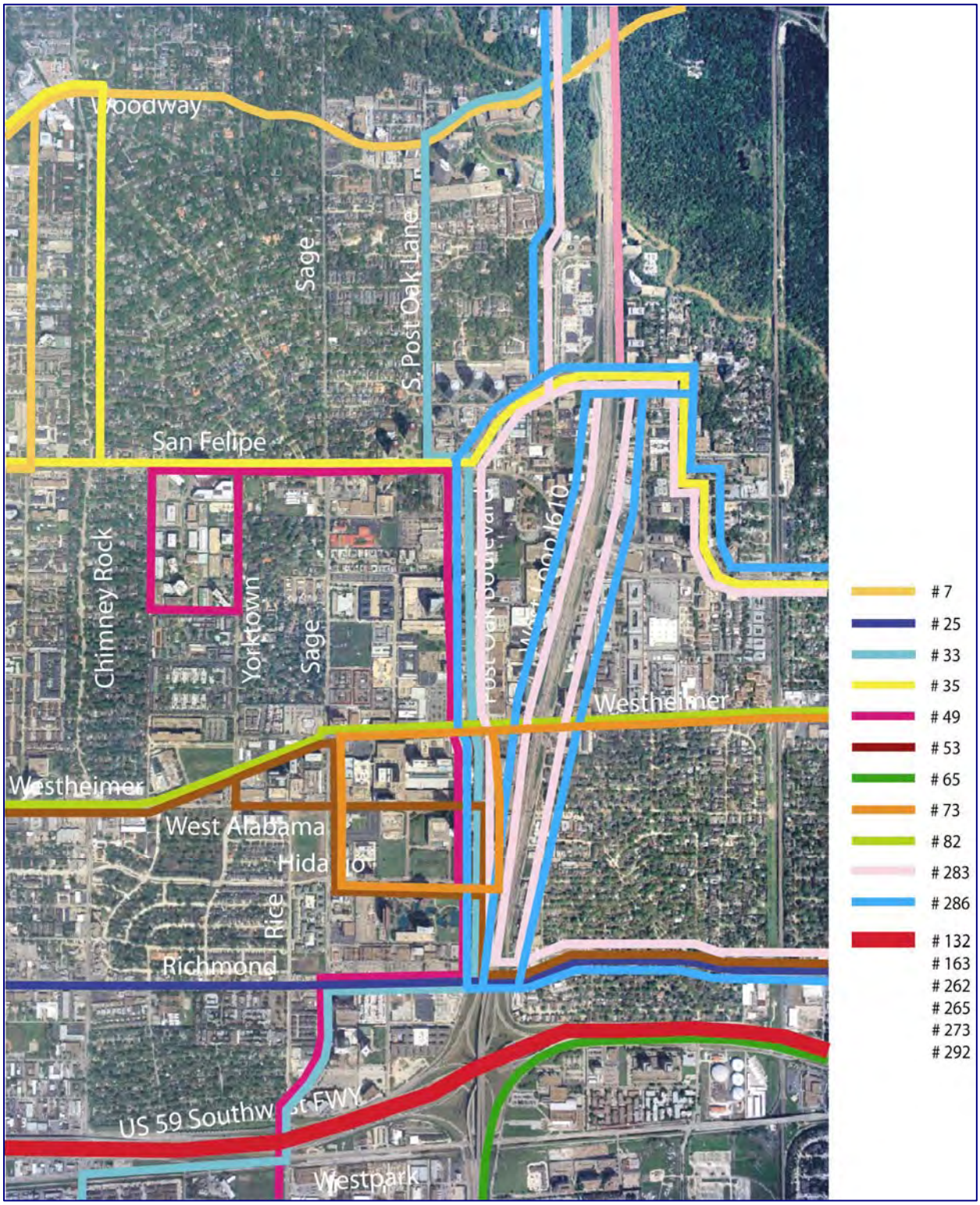


Figure 1.4 – METRO's Existing Transit Routes

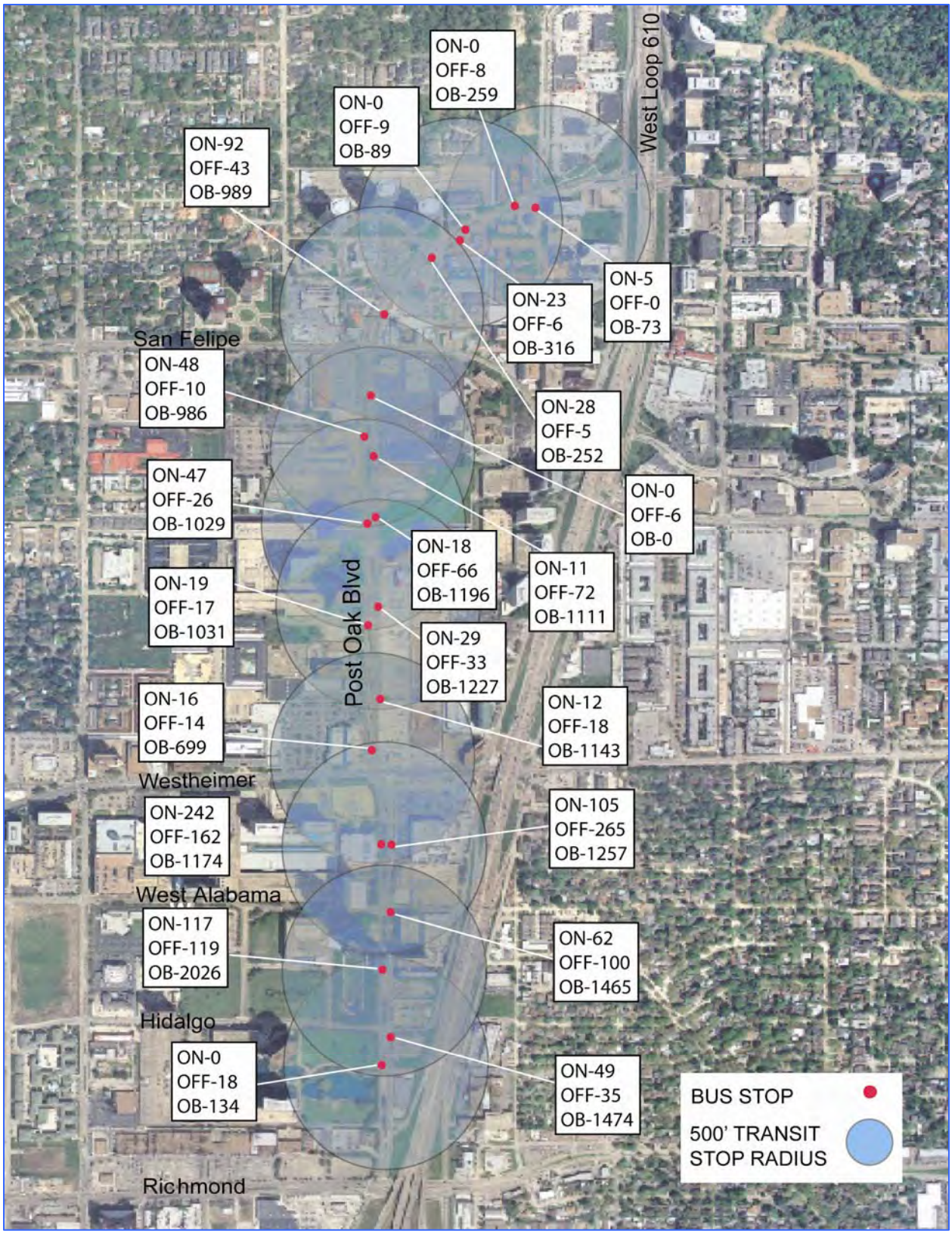


Figure 1.5 – Post Oak Ridership Counts and 500-ft. Radius

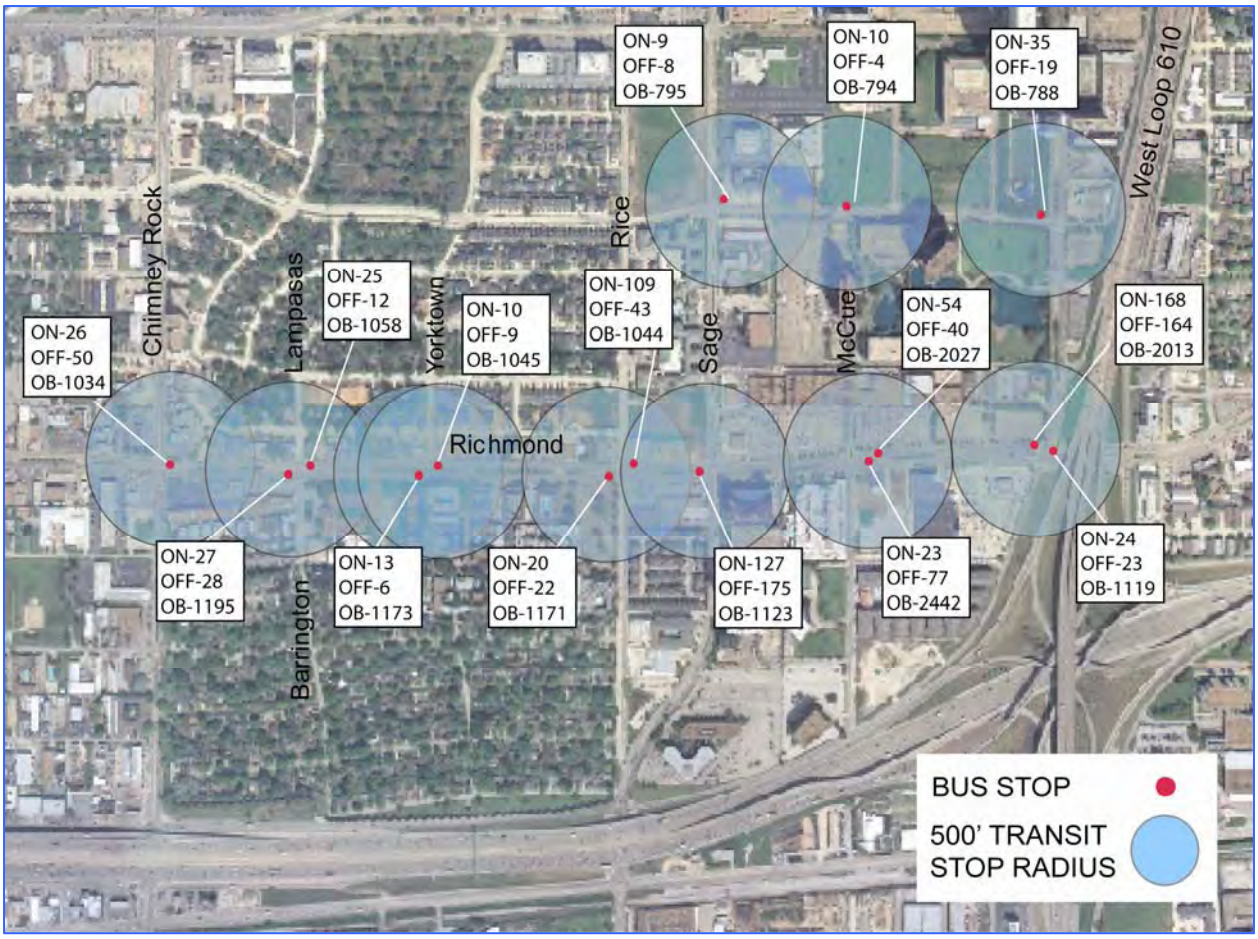


Figure 1.6 – Richmond and Hidalgo Ridership Counts and 500-ft. Radius

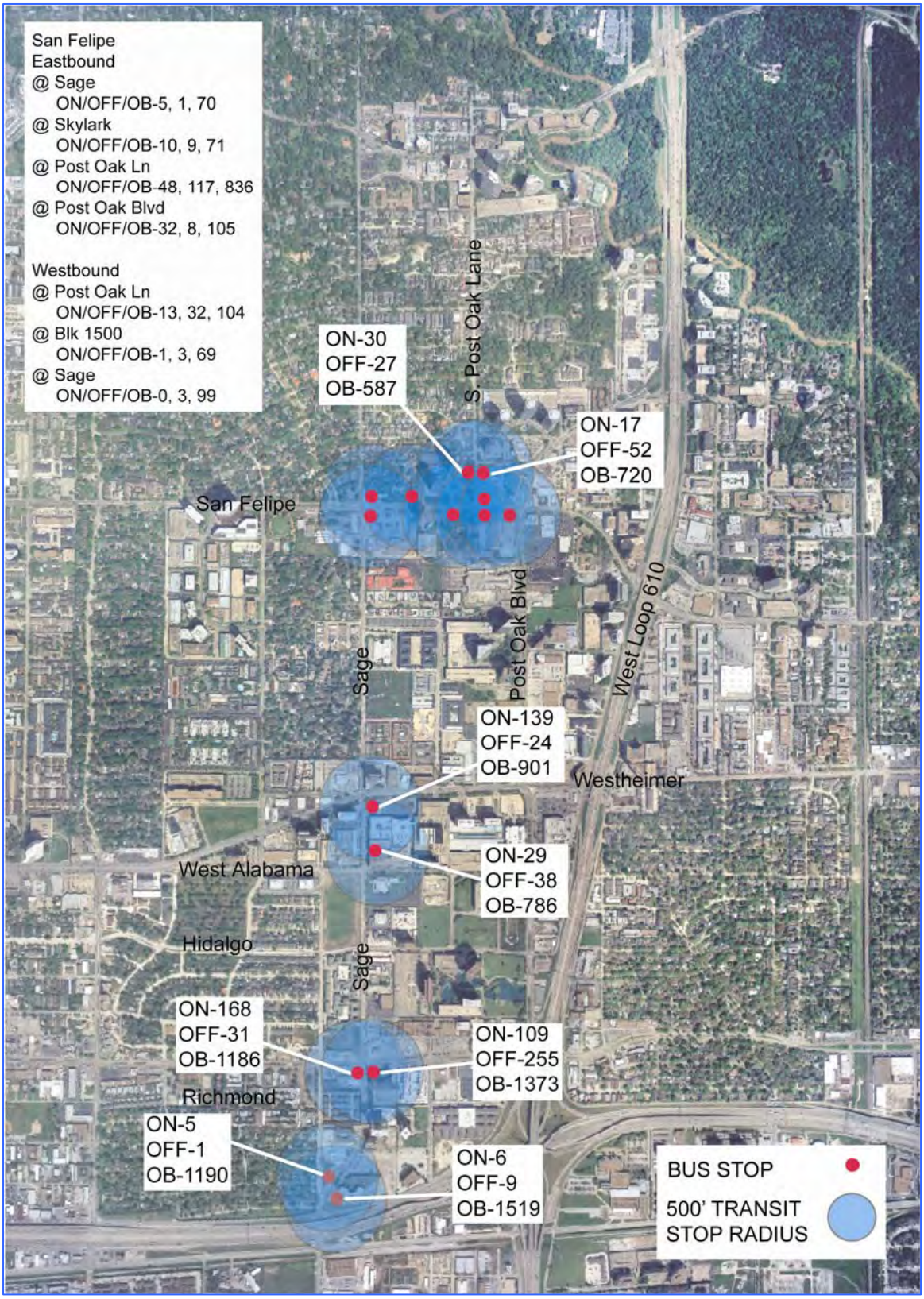


Figure 1.7 – Sage, San Felipe, and S. Post Oak Lane Ridership Counts and 500-ft. Radius

Future Transit Infrastructure and Services

The Uptown area has the land uses and current activity levels to support commuter transit services and high-capacity transit. The streetscape and signal/pedestrian crossing improvements that are included within this master plan will also complement these transit future services.

Figure 1.8 displays the various transit-related projects around the Uptown area, including a future transit terminal at the southeast corner of the District and METRO rapid transit line along the Post Oak Boulevard corridor. Both of these projects are described in more detail below.

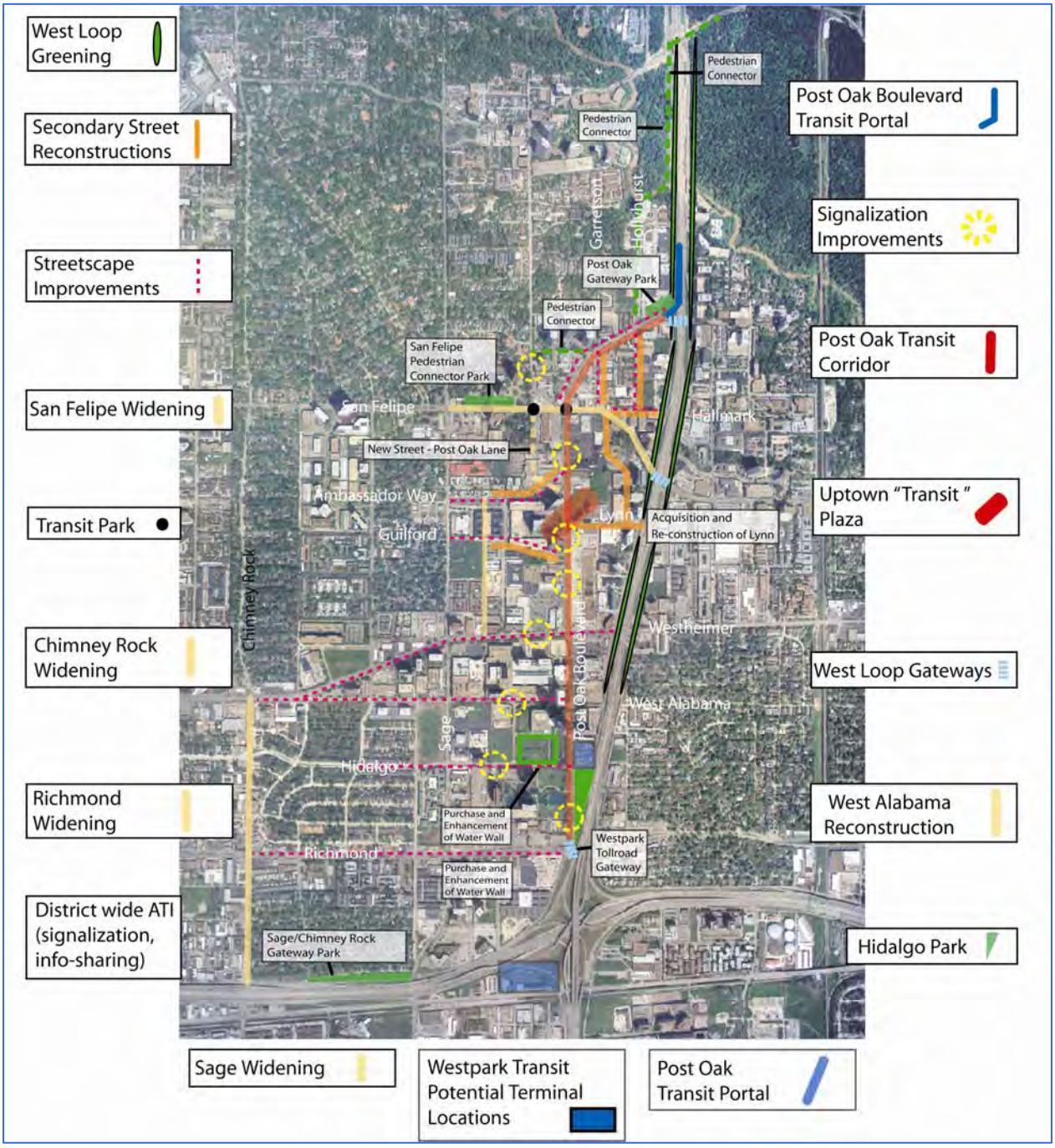


Figure 1.8 – District Transit Projects

Uptown Intermodal Transit Terminal

The Uptown Intermodal Transit Terminal and Park & Ride will serve as a major transit intercept and point of passenger transfer near the intersection of the busiest freeway in the nation, which will greatly enhance bus transit access to the Uptown area. The transit terminal site, currently planned to be located at the confluence of the US Highway 59, IH 610 West, the Westpark Tollroad, and Post Oak Boulevard, will include a modern passenger terminal, parking, and supporting retail spaces. Uptown Houston, despite its position as the region's second largest employment center and largest retail center, lacks adequate bus transit services. There currently are no Houston METRO commuter buses originating in the US Highway 59/Westpark Tollroad "Southwest Corridor" that serve Uptown Houston.

In addition to the potential impact of service from Houston METRO from existing park & ride facilities, such as Westwood, Bellfort, Hillcroft, Gessner, Westchase, and Mission Bend, there is another untapped market potential of transit users beyond the METRO service area. According to the *Fort Bend Transit Plan*, completed by H-GAC in 2005, in the year 2000 alone, more than 3,000 Fort Bend residents made daily work trips to Uptown Houston. The total number of employment trips to Uptown Houston and the average trip length will continue as Southwest Houston gains population and density and Fort Bend residential development continues to move westward. Construction of the transit terminal facility would include bus passenger transfer facilities, passenger waiting areas, a 1,500-space park & ride/garage facility, and the associated retail and commercial uses (restaurant, dry cleaners, coffee shop, etc.) that would complement the site.

The transit terminal will facilitate ease of transfers to employment destinations within Uptown via rubber-tire shuttle and bus rapid transit services. Additionally, the park & ride function of the garage will serve as a major parking intercept for commuters destined for Downtown, Texas Medical Center, and Greenway Plaza. Associated "direct connector" bridge infrastructure to facilitate the interface of the transit terminal with the adjacent US Highway 59 (Southwest Freeway) HOV lanes and the Westpark Tollroad corridors also will be required. Uptown Houston and Harris County will partner in the development of this site. Uptown Houston and Houston METRO will partner to deliver services to and from the transit terminal. A $1 million authorization has been included in the SAFETEA-LU Reauthorization Bill for preliminary engineering and design of the transit terminal.

Post Oak Boulevard Future High-Capacity Transit

Houston METRO has created an extensive expansion to their existing light rail transit project under their METRO Solutions plan. This plan includes four new high capacity transit lines for the North and Southeast areas, East End, and Uptown. These four lines will encompass nearly 20 miles of rapid transit. The plan includes an additional new transit terminal to connect numerous modes of transit.

The Post Oak Boulevard corridor is presently planned for this exclusive transit way through Uptown that will extend south of US Highway 59 to the Northwest Transit Center at the IH 610 and I-10 interchange. The Uptown line will be approximately 4.4 miles. As an extension to the Uptown line in the future, the high-capacity transit service will extend north along IH 610 to the Northwest Mall area for an additional distance of approximately 1.1 miles. The line will serve office, residential, and commercial land uses clustered along Post Oak Boulevard in Uptown, as

well as Uptown-area single-family and medium-density neighborhoods with the extension to the Northwest Mall area. *Figure 1.9* shows two cross-sections of the proposed Post Oak Boulevard with the exclusive transitway down the middle of the corridor. Under the planned high-capacity scenario, the total number of traffic lanes on Post Oak Boulevard will be retained, by expanding the total footprint of Post Oak Boulevard, with transit hosted in the middle 24', 10' on either side for platform construction, and three travel lanes in either direction, with 12' back of curb for pedestrian and transit access improvements.

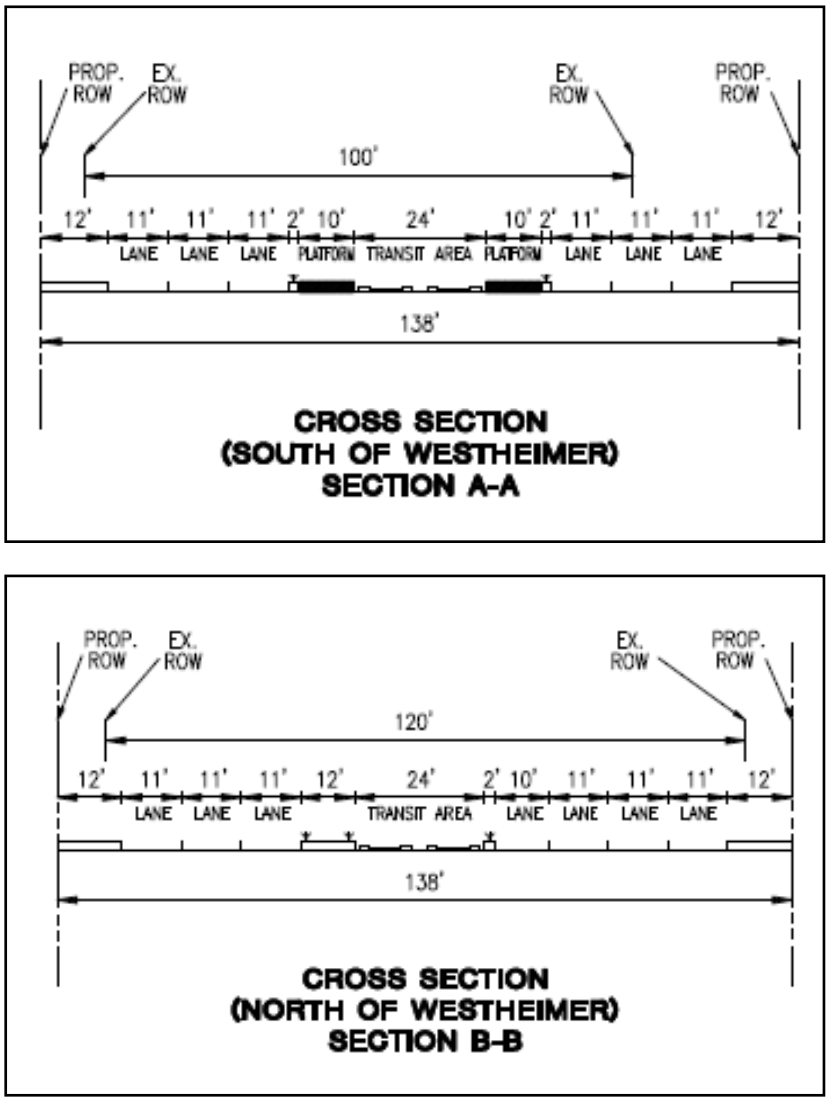


Figure 1.9 – Cross-section of Exclusive Transit Corridor along Post Oak Boulevard

As proposed by Houston METRO, Uptown Houston will be responsible for constructing pedestrian-transit access streetscape improvements adjacent to Post Oak Boulevard high-capacity transit, and perpendicular streets accessing Post Oak Boulevard, which host several high-density land uses and will be critical system conncectivity components for employees and residents to

access the line. Uptown's responsibility for providing the surface network for high-capacity transit users further underscores the need for the master plan.

Future Transit Ridership and Pedestrian Estimates

Transit ridership and pedestrian traffic in a corridor are functions of the level of transit service provided and the level of activity at key origins and destinations. Transit ridership and pedestrian traffic are expected to increase once access improvements have been made to better connect the land uses within Uptown to transit stops and between activity centers. In addition to streetscape improvements proposed in this master plan, additional transit-related projects mentioned later in this report will enhance the appeal of transit and pedestrian activity within the district.

Benefits

Chapter 3 of this report describes the relationship between enhancing the pedestrian environment and increasing transit ridership. By implementing a series of comprehensive transit-pedestrian access improvements in and around major bus transit corridors, an opportunity to increase ridership and decrease vehicle-miles traveled (VMT), congestion, and air pollution would occur. An additional benefit that also can occur through enhanced transit access is the realization of infill development.

Among the benefits to be derived from the proposed improvements is the revitalization of residential and commercial corridors that would result in improved quality of life for the residents of, employees in, and visitors to the Uptown District. In addition, VMT, Volatile Organic Compounds (VOC), and Nitrogen Oxides (NOx) would be reduced because of increased public transit ridership and reduced personal vehicle trips. Economic benefits would include increased property and sales tax income.

Transportation projects that improve both vehicular and pedestrian mobility in the Uptown District continue to be a top priority, with the recognition that pedestrian access within a mixed-use center is linked inextricably to pedestrian safety crossings across major arterials. The Uptown Development Authority (UDA) is planning the installation of eight new traffic signals as part of a newly initiated access management and pedestrian safety program. The proposed pedestrian crossings will be a vital part of a more complete pedestrian network serving to connect the mixed-use development contained with the Uptown District. New signals are planned for the following locations: Post Oak Boulevard and Boulevard Place (new roadway); Post Oak Boulevard and Guilford Court; Post Oak Boulevard and Canyon Café (driveway); Post Oak Boulevard and Fairview (private roadway); South Post Oak Lane and W. Briar; Westheimer Road mid-block pedestrian crossing between Post Oak and McCue Street); Hidalgo Street mid-block pedestrian crossing (between McCue and Sage); and W. Alabama Street and McCue Road/Galleria Garage.

The signalization/pedestrian crossing program will address access management issues, create shorter block lengths, provide direct and safe pedestrian connections, and create an internal roadway network that will increase the flow of secondary roadways onto the major arterials.

Summary of Costs

Table 1.5 presents a summary of the corridor cost, including contingency and signalization improvement cost. *Appendix D* includes the breakdown of treatment costs for streetscape along all the corridors in this study.

Table 1.5 – Summary of Costs	
Corridor	***Cost***
Westheimer	$2,356,480
Richmond	$1,612,305
W. Alabama	$860,614
Hidalgo	$792,968
Secondary Streets	$2,580,368
Sage	$692,549
Post Oak Boulevard	$10,183,360
San Felipe	$500,500
McCue	$511,500
8 Signals	$2,600,000
Total Cost	**$22,690,644**

Phasing

Chapter 6 presents the potential phasing plan as represented in *Table 1.6*. The phases were based on funding already made available for Westheimer Road streetscape improvements and the signalization/pedestrian improvement program, the amount of treatment required for each corridor, the impact of other roadway projects that will affect the proposed improvements, and the priorities of the UDA.

Table 1.6 – Phasing Schedule			
Phase	***Corridor***	***Description***	***Total Cost***
1a	Westheimer	Various Streetscape Improvements	$2,356,480
1b	Intersections - 8	Signal/Crosswalk Improvements	$2,600,000
2a	McCue	Pedestrian Lighting Only	$511,500
2b	San Felipe	Pedestrian Lighting Only	$500,500
3	W. Alabama, Sage, Hidalgo, Richmond	Various Streetscape Improvements	$3,958,436
4	Secondary Streets	Various Streetscape Improvements	$2,580,368
5	Post Oak Boulevard	Various Streetscape Improvements	$10,183,360
		Total	**$22,690,644**

Chapter 2 – Existing Conditions

An inventory of pedestrian existing conditions was conducted on all the streets within the study area. The corridors were inventoried and rated block by block according to existing conditions of sidewalk quality and width, Americans with Disabilities Act (ADA) ramps, street signage, pedestrian lighting, landscaping, planting strip width, and available pedestrian amenities, such as benches and waste receptacles.

The existing conditions of pedestrian infrastructure are vital to the selection of which blocks should receive priority treatment. There is a direct correlation between the quality of the pedestrian environment and the transit level of service, both of which effect ridership and the environmental benefits from reduced vehicle-miles traveled (VMT). By reducing emissions through a reduction in VMT through increased safety and accessibility improvements along pedestrian/transit corridors, a Federal Highway Administration (FHWA) grant in the form of Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds can be utilized. The quality of the pedestrian environment and the subsequent positive effects pedestrian improvements have on transit ridership are determined initially by conducting an inventory to determine the existing level of service (LOS). By improving the pedestrian LOS near transit stops, a factor can be used to determine the increase in ridership that can be expected to occur from these improvements.

The Pedestrian Level of Service (PLOS) is based on pedestrians' perceptions of the roadway and nearby roadside environment, either along the roadway lanes on a sidewalk or nearby shared-use path, or on a nearby exclusive pedestrian facility *(see Chapter 3 for the PLOS rankings for the study area corridors)*. Many variables combine to influence a pedestrian's sense of safety and comfort. The quality of service of transit and pedestrian systems is typically assessed by using six grade levels to identify the quality of an environment based on specified factors. A numerical LOS score, generally ranging from 0.5 to 6.5, is determined along with the corresponding LOS letter grade. The system of grades is given to the service or facility with "A" describing the highest quality and "F" describing the lowest quality. To determine the LOS for roadways, the Transportation Research Board's *2000 Highway Capacity Manual (HCM)* contains the most recognized and accepted analysis tool for calculating automobile and truck LOS. The Florida Department of Transportation (FDOT) has been a leader in developing and utilizing these LOS models in its transportation planning. FDOT's *Quality/Level of Service Handbook 2002* is nationally recognized as one of the leading planning applications of the *HCM* for the evaluation of automobile/truck LOS. The handbook contains a model created by FDOT related to PLOS that has been applied to cities in Florida and throughout the United States.

Background

An existing conditions survey was conducted on each study corridor. The following items were included in the survey:

- Sidewalks
- Signage
- Lighting
- Landscaping
- Pedestrian Amenities
- ADA-accessible Ramps
- Planting Strip

Methodology

After conducting the survey, existing conditions were tabulated by block and by corridor. An initial rating was given to each item indicating the required level of treatment.

2	=	**Maximum** Treatment Needed
1	=	**Moderate** Treatment Needed
0	=	**Minimum** Treatment Needed

In order to make recommendations for selecting the priority corridor or block, the initial ratings are summarized in two different ways, resulting in two summary tables:

- Rating Results and Recommendations by Block
- Livable Communities Initiative (LCI) Pedestrian Enhancement Rating by Criteria

Table 2.1 – Criteria Breakdown by Streetscape Component

Sidewalk	0	Good/Average condition and 5-ft. width or more on entire block
	1	Good/Average condition and at least 4-ft. width or some parts of block 5-ft.
	2	Entire block in bad condition or no sidewalk
Ramp	0	Both ramps good on either end of block
	1	One ramp ADA acceptable and one not
	2	Both ramps not ADA acceptable
Pedestrian Lighting	0	Yes
	2	None
Landscaping	0	Nice landscaping of planting strip
	1	Some attempt at landscaping
	2	Only grass cover or no landscaping
Planting Strip	0	Ample width for future landscaping (over 3 ft.)
	1	Narrow strip (1.5 ft.)/Some areas of block over 3 ft. and some under 3 ft.
	2	None

Pedestrian Amenities	0 1 2	Bench/bus shelter, waste receptacle Bench/bus shelter with no waste receptacle None
Pedestrian Signage	0 2	Yes None
Utilities	0 2	None as an obstruction Obstruction in sidewalk with less than 3 ft. on either side

Each item was given a **2** for **maximum** repair needed; **1** for **moderate** repair needed; or **0** for **minimum** or no repair needed and then summed to arrive at a total score as shown in *Table 2.2*, which presents the results of the existing conditions survey for the study corridor on Westheimer Road, *between Post Oak Boulevard and McCue*.

Table 2.2 – Example Survey Ratings

Westheimer Road – Post Oak Boulevard to McCue

Component	***Rating***	***Explanation***
Sidewalk Width	1	42 to 90 inches, good condition
ADA Compliance	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	2	None
Pedestrian Amenities	0	2 bus shelters and waste receptacles
Pedestrian Signage	2	None
Total Score	**9**	

Table 2.2 presents a total score of 9 for existing conditions along this segment of the corridor. Each segment of each corridor was rated in a similar fashion. *Table 2.3* presents the total inventory scores for each segment of each study corridor. *Appendix A* contains an item-by-item rating for each block in the study area.

Table 2.3 – Scoring Results for Individual Blocks by Corridor and LCI Criteria				
PRIMARY CORRIDORS				
Westheimer Corridor – IH 610 West to Chimney Rock	***North***	***Level of Treatment***	***South***	***Level of Treatment***
IH 610 West – Post Oak Boulevard	10	**maximum**	10	**maximum**
Post Oak Boulevard – McCue	9	moderate	5	minimum
McCue – Sage	9	moderate	5	minimum
Sage – Yorktown	7	minimum	6	minimum
Yorktown – Chimney Rock	8	moderate	9	moderate
Post Oak Boulevard Corridor – Richmond to IH 610 West	***East***		***West***	
Richmond – Hidalgo	10	**maximum**	9	moderate
Hidalgo – W. Alabama	10	**maximum**	7	minimum
W. Alabama – Westheimer	8	moderate	5	minimum
Westheimer – Ambassador Way	7	minimum	8	moderate
Ambassador Way – San Felipe	9	moderate	7	minimum
San Felipe – Four Oaks Place	7	minimum	7	minimum
Four Oaks Place – Uptown Park	7	minimum	7	minimum
Uptown Park Boulevard – IH 610 West	9	moderate	3	minimum
Richmond Corridor – IH 610 West to Chimney Rock	***North***		***South***	
IH 610 West – McCue*			7	minimum
McCue – Sage	8	moderate	8	moderate
Sage – Rice	6	minimum	9	moderate
Rice – Yorktown	8	moderate	8	moderate
Yorktown – Barrington	5	minimum	6	minimum
Barrington – Chimney Rock	5	minimum	6	minimum
* Street does not go all the way to IH 610 on the north side.				

W. Alabama – Post Oak to Westheimer	***North***	***Level of Treatment***	***South***	***Level of Treatment***
Post Oak Boulevard - McCue	7	minimum	9	moderate
McCue - Sage	7	minimum	6	minimum
Sage - Rice	8	moderate	8	moderate
Rice - Yorktown	9	moderate	9	moderate
Yorktown - Westheimer	9	moderate	10	**maximum**
Hidalgo - Post Oak to Rice	***North***		***South***	
Post Oak - McCue	10	**maximum**	10	**maximum**
McCue - Sage	9	moderate	10	**maximum**
Sage - Rice	10	**maximum**	10	**maximum**
Sage – Westheimer to US 59	***East***		***West***	
North of Westheimer to Westheimer	10	**maximum**	9	moderate
Westheimer to W. Alabama	4	minimum	8	moderate
W. Alabama to Hidalgo	7	minimum	6	minimum
Hidalgo to Richmond	8	moderate	7	minimum
Richmond to US 59	7	minimum	6	minimum
SECONDARY STREETS				
Ambassador Way	11	**maximum**	7	minimum
Garretson Lane	13	**maximum**	13	**maximum**
Guilford Court	10	**maximum**	14	**maximum**
Hallmark Drive	13	**maximum**	12	**maximum**
Hollyhurst Lane	12	**maximum**	11	**maximum**
S. Post Oak Lane – Near San Felipe	10	**maximum**	9	moderate

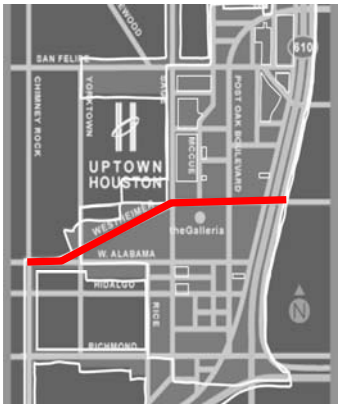
Existing Conditions Results

The major streets included in this plan that have existing public transit stops are presented next. These corridors include Westheimer Road, Richmond Avenue, Post Oak Boulevard, Sage Road, W. Alabama Street, Hidalgo Street, and S. Post Oak Lane. San Felipe Street also has bus stops and is a major corridor, but due to its future reconstruction, it is assumed only pedestrian lighting will be needed in the future along this corridor.

PRIMARY CORRIDORS

Westheimer Road Between IH 610 West and Chimney Rock Road

Existing conditions were inventoried for the north and south sides of the five major blocks of Westheimer Road, *between IH 610 West and Chimney Rock Road*. The scores are described below *(see Appendix A for complete inventory)*.



NORTH SIDE – Westheimer Road Between IH 610 West and Chimney Rock Road

IH 610 West to Post Oak Boulevard

Westheimer Road, *between IH 610 West and Post Oak Boulevard*, is approximately 686 ft. and land uses are office and retail. The block received a score of **10**. Maximum treatment is required due, in large part, to the lack of pedestrian amenities, narrow planting strip with no landscaping, and narrow sidewalk, although the block is enhanced by well-kept private landscaping near IH 610 West. The sidewalk and the curb ramps are in good condition; however, the sidewalk width is less than the 5-ft. ADA requirement *(Figure 2.1)*. Additions that could be made to this block include pedestrian signage and lighting. There are currently no bus stops along this block; therefore, pedestrian amenities, such as seating and waste receptacles, could be used to enhance the pedestrian environment. Future improvements could include landscaping in the narrow existing planting strip or widening it to plant trees.

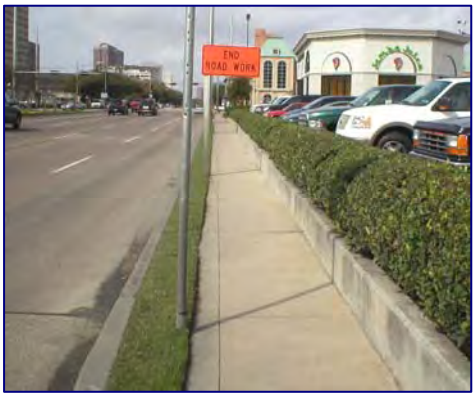


Figure 2.1 – Westheimer, IH 610 West to Post Oak Boulevard

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Post Oak Boulevard to McCue Road

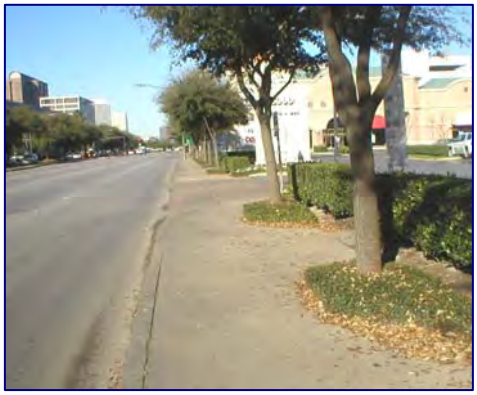


Figure 2.2 – Westheimer, Post Oak to McCue

Westheimer Road, *between Post Oak Boulevard and McCue Road* is approximately 1,003 ft. Major land uses are retail and office, including the Stanford Financial Building, which has attractive landscaping including a waterfall sculpture. This block received a score of **9**. This attractive block has well-maintained private landscaping *(Figure 2.2)*. There are two bus stops with shelters and waste receptacles at each. The sidewalk and the curb ramps are in good condition; however, some areas of the sidewalk are less than the five-ft. ADA requirement. Future improvements could include pedestrian signage and lighting and a landscaped planting strip. A planting strip would enhance the pedestrian environment by creating a sense of separation between on-coming traffic and pedestrians. An option to create more sidewalk space would be to add grates around the trees in place of the shrubs.

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

McCue Road to Sage Road

Figure 2.3 – McCue to Sage

Westheimer Road, *between McCue and Sage*, is 845 ft. with retail and office land uses, including the J.W. Marriott Galleria Hotel and Convention Center on the corner of Westheimer and Sage. This block received a score of **9**. This block has a diverse pattern of pavement as the sidewalk periodically changes from standard concrete to brick *(Figure 2.3)*. Most of the block lacks a planting strip, although there is a short strip in front of A. Taghi retail store with moderate landscaping and four bollard lights *(Figure 2.4)*. The sidewalk and the curb ramps are in good condition; however, the sidewalk width has a large range, with some areas narrower than the five-ft. ADA requirement. There are light pole bases in the sidewalk; however, they do not obstruct passing pedestrians. There is a bus stop with a shelter and a waste receptacle. Future improvements could include pedestrian signage and lighting, and a landscaped planting strip.

Figure 2.4 – Area Fronting A. Taghi

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Sage Road to Yorktown Street

Westheimer Road, *between Sage Road and Yorktown Street*, is 1,267 ft. and has retail land uses. This block received a score of **7**. The sidewalk is in average condition and does not meet the five-ft. ADA requirement *(Figure 2.5)*. The curb ramps are in good condition on this block; however, the turn lane from Brownway Street to Westheimer Road does not have an adequate ADA ramp on the west side *(Figure 2.6)*. The first portion of the block closest to Sage Road does not have a planting strip; however, after Brownway Street there is a planting strip that has ample room for future landscaping. Most of the strip is not landscaped; however, the section in front of Westheimer Court Shopping Center is landscaped with six trees. There are two bus stops on the block with shelters and waste receptacles at each. There are some light pole bases in the planting strip along the block. Future improvements could include pedestrian signage and lighting.

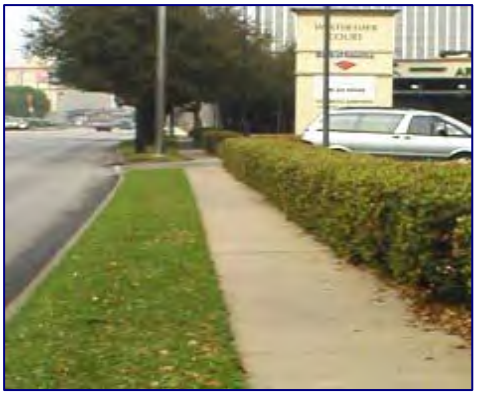


Figure 2.5 – Westheimer, Sage to Yorktown

Figure 2.6 – Westheimer at Brownway

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Yorktown Street to Chimney Rock Road

Westheimer Road, *between Yorktown Street and Chimney Rock Road*, is approximately 1,954 ft. and the land use is retail and office. This block received a score of **8**. The quality of the pedestrian environment varies greatly on either side of Westheimer Way, which separates the block midway *(Figure 2.7)*. The sidewalk is in average condition and there are areas along the eastern portion that have been repaired recently. The width varies along the block; therefore, some areas meet the ADA requirement and some do not. The curb ramps at both intersections are in very good condition, with a recently repaired ramp at Yorktown and Chimney Rock. The east and west ADA ramps on Westheimer Way are in need of improvement. The planting strip varies in width from 16 to 120 inches, landscaped only in a small area midway on the block with seven planted trees. Pedestrian amenities on this block include a bus shelter and waste receptacle. Beneficial additions include pedestrian signage and lighting. The east portion of the block before Westheimer Way has a large vacant lot that is the future site of the A.D. Players Theater *(Figure 2.8)*.

Figure 2.7 – Yorktown to Chimney Rock

Figure 2.8 – Westheimer at Westheimer Way

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

SOUTH SIDE – Westheimer Road Between IH 610 West and Chimney Rock Road

IH 610 West to Post Oak Boulevard

Westheimer Road, *between Post Oak Boulevard and IH 610 West*, is approximately 686 ft. and land uses are retail and parking for The Galleria mall. This block received a score of **10**.

The sidewalk is in good condition; however, it does not meet the five-ft. ADA requirement. The curb ramps are also in good condition *(Figure 2.9)*. One component of the block that could be improved is the 18-inch narrow planting strip that lacks landscaping. Pedestrian signage and lighting and amenities, such as seating and waste receptacles, could be installed. This block is the most unattractive and lacks many of the elements that create a safe and attractive pedestrian environment.

Figure 2.9 – Westheimer, IH 610 West to Post Oak Boulevard

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Post Oak Boulevard to McCue Road

Westheimer Road, *between McCue Road and Post Oak Boulevard*, is 1,003 ft. and land uses are retail and parking for The Galleria mall. This block received a score of **5**. The sidewalk is in average condition. It is, however, less than the ADA requirement *(Figure 2.10)*. The curb ramps are in good condition and pedestrian amenities include a bus shelter and a waste receptacle. The planting strip is 105 inches wide and landscaped with many large trees that provide shade. Pedestrian signage and lighting could be installed to enhance this block face.

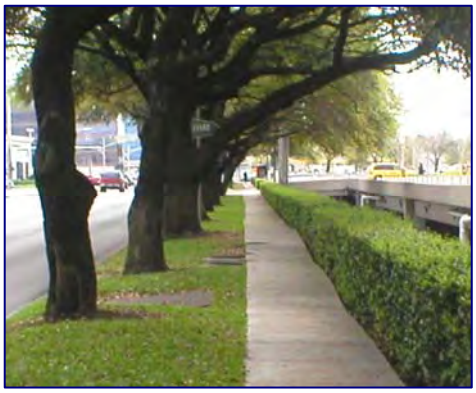


Figure 2.10 – Westheimer, Post Oak Boulevard to McCue

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

McCue Road to Sage Road

Westheimer Road, *between McCue and Sage*, is 845 ft. and consists of retail and parking for The Galleria mall. This block received a score of **5**. This block has a nice pedestrian environment and appears well maintained by The Galleria mall *(Figure 2.11)*. The sidewalk is in average condition; however, it does not meet the five-ft. ADA requirement. Curb ramps are in good condition and the planting strip along the entire block is 105 inches and nicely landscaped with large trees. Pedestrian amenities include two bus shelters and two trash receptacles. Areas of improvement would be the installation of pedestrian signage and lighting designed in the Uptown area theme.

Figure 2.11 – Westheimer, Near Sage

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Sage Road to Yorktown Street

Westheimer Road, *between Sage and Yorktown*, is 1,267 ft. and land uses are retail and office. This block received a score of **6**. This block has a nice pedestrian environment; however, there are components that could be added to improve the quality *(Figures 2.12 and 2.13)*. The sidewalk is in good condition; however, it does not meet the five-ft. ADA requirement. All curb ramps meet ADA standards and pedestrian amenities include a bus shelter and a waste receptacle. Planting strip width varies along the block from 45 to 118 inches, which is adequate for most landscaping improvement options. The strip adjacent to the Post Oak Boulevard Doubletree Hotel is lined with tall trees that provide ample shade and a sense of safety for pedestrians. Pedestrian signage and lighting would bring this block to a high level of pedestrian comfort and aesthetic appeal.

Figure 2.12 – Westheimer, Sage to Yorktown

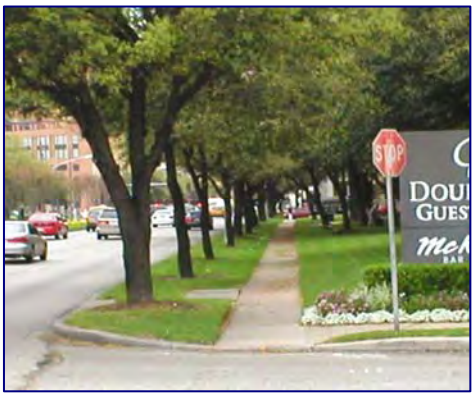


Figure 2.13 – Westheimer at Quarters Court Midway on Block

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Yorktown Street to Chimney Rock Road

Westheimer Road, *between Yorktown and Chimney Rock*, is 1,954 ft. and land uses are retail and office. The block received a score of **9**. The pedestrian environment varies greatly on either side of the W. Alabama exit *(Figures 2.14 through 2.16)*. Overall, the west portion is in worse condition than the east portion. The sidewalk is in average-to-poor condition, with the poorer quality areas closest to Chimney Rock. Sidewalk width varies with some areas meeting the five-ft. ADA requirement. The curb ramp at Chimney Rock does not meet ADA standards and there is no crosswalk access at the W. Alabama exit. There is no planting strip along the western portion; however, there is a 45-inch grass strip after the W. Alabama exit heading east. Pedestrian amenities include a bus shelter and a trash receptacle. Other improvements could include pedestrian signage and lighting, a shelter and a trash receptacle at the bus stop near the Southwest Freeway HOV exit, and a landscaped planting strip.

Figure 2.14 – Westheimer at Chimney Rock

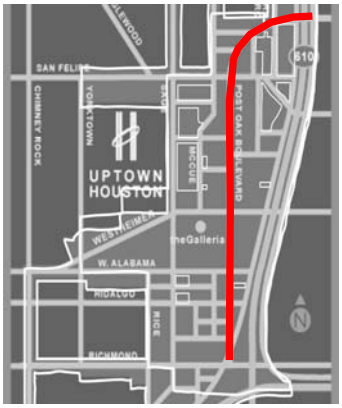
Figure 2.15 – Westheimer Midway on Block Near US 59 HOV Exit

Figure 2.16 – Sidewalk at Westheimer Midway on Block Near US 59 HOV Exit

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Post Oak Boulevard Between Richmond Avenue and IH 610 West

Existing conditions were inventoried on the east and west sides of the eight major blocks of Post Oak Boulevard, *between Richmond Avenue and IH 610 West*. The scores are described below.



EAST SIDE – Post Oak Boulevard Between Richmond Avenue and IH 610 West

Richmond Avenue to Hidalgo Street

Post Oak Boulevard, *between Richmond Avenue and Hidalgo Street*, is approximately 1,162 ft. The area is undeveloped property currently used for storing construction equipment. The entire length of Post Oak Boulevard has large stainless steel arches that mimic the Uptown "halo" street signs, making this corridor distinct and united. The arches begin near Hidalgo Street and continue to Four Oaks Place. This block received a score of **10**, which indicates that maximum treatment would be needed on this side. The area is in poor condtion due to the construction on IH 610 West. There is no sidewalk or planting strip on the first two blocks past Richmond heading north; however, there is a 44-inch sidewalk in poor-to-average condition closer to Hidalgo Street *(Figure 2.17)* that does not meet the five-ft. ADA requirement. The curb ramps are in good condition and the planting strip is 40 inches wide. There is no landscaping in the planting strip; however, it is wide enough to make improvements. There is a bus stop at Hidalgo Street that has a shelter and a waste receptacle. Enhancements to the pedestrian environment could include pedestrian lighting and signage.

Figure 2.17 – Post Oak Boulevard, Richmond to Hidalgo

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Hidalgo Street to W. Alabama Street

Post Oak Boulevard, *between Hidalgo Street and W. Alabama Street*, is approximately 898 ft. and land uses are retail and multi-family residential. The block received a score of **10**. This block appears well maintained *(Figure 2.18)*; however, some areas could be improved to enhance the pedestrian environment. The sidewalk is in good condition; however, it varies in width from less than the five-ft. ADA requirement to almost 100 inches in front of the Hampton Assisted Living Center *(Figure 2.19)*. The curb ramps are in good condition. The planting strip is 54 inches and not landscaped; however, there is adequate space for landscaping. If a planting strip were to be added to the area in front of the living center, tree grates could be used around the trees to create more sidewalk space. Other additions to improve the block are pedestrian lighting and signage, as well as pedestrian amenities, such as seating and waste receptacles.

Figure 2.18 – Post Oak Boulevard, Hidalgo to W. Alabama

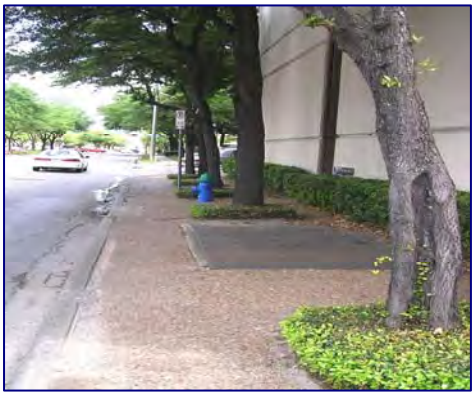


Figure 2.19 – Post Oak Boulevard at Hampton Assisted Living Center

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

W. Alabama Street to Westheimer Road

Post Oak Boulevard, *between W. Alabama Street and Westheimer Road,* is approximately 1,056 ft. and land uses are the Dillard's building and parking garage. The block received a score of **8**. Components could be improved to increase pedestrian safety and appeal. Overall, this block is attractive and well maintained. The sidewalk is in good condition, but the width does not meet the five-ft. ADA requirement *(Figure 2.20)*. The curb ramps are in good condition and there are pedestrian-friendly amenities such as a bus shelter and a trash receptacle. The planting strip is 54 inches wide, but narrows to 18 inches in front of The Galleria. It is not landscaped, but there is ample room along most of the southern portion of the block for future landscaping and minimal opportunity where the strip narrows. This block is used frequently by pedestrians using the parking lot and bus stop on the east side to access the Neiman Marcus mall entrance. There is a signalized light at this pedestrian crossing with a stainless steel arch overhead. Pedestrian signage and lighting would enhance this heavily used pedestrian environment.

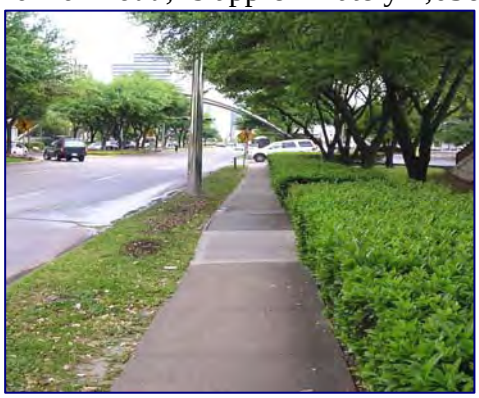


Figure 2.20 – Post Oak Boulevard, W. Alabama to Westheimer

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Westheimer Road to Ambassador Way

Post Oak Boulevard, *between Westheimer Road and Ambassador Way,* is approximately 2,112 ft. and land uses are a multi-family residential building, hotel, and a large number of retail businesses. This block received a score of **7**. This block is well manicured and uniform. The sidewalk is in good condition; however, it does not meet the five-ft. ADA requirement *(Figure 2.21).* The curb ramps are in good condition and the planting strip varies from 58 inches to 82 inches in width. Planting strip/landscaping could be added to improve the pedestrian environment, as well as pedestrian lighting and signage. There are two bus stops on this block; however, only one stop has a shelter and a trash receptacle. The large stainless steel arches that appear throughout the Uptown area appear on this block and have nicely landscaped areas at the base *(Figure 2.22).* There is construction on a new residential building at Ambassador Way that currently is fenced off. Future plans may include a driveway at the traffic signal. There currently is no planting strip or driveway.

Figure 2.21 – Post Oak Boulevard, Westheimer to Ambassador Way

Figure 2.22 – Stainless Steel Arches on Post Oak Boulevard, Westheimer to Ambassador Way

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Ambassador Way to San Felipe Street

Post Oak Boulevard, *between Ambassador Way and San Felipe Street,* is approximately 1,214 ft. and land use is retail. This block received a score of **9**. The sidewalk is in good condition; however, it does not meet the five-ft. ADA requirement *(Figure 2.23).* The curb ramps are in good condition and the planting strip is wide enough for future landscaping opportunities. This block lacks pedestrian amenities. There is a METRO bus/Uptown shuttle stop on the block; however, there is no shelter or trash receptacle. Future improvements could include pedestrian lighting and signage.

Figure 2.23 – Post Oak Boulevard, Ambassador Way to San Felipe

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

San Felipe Street to Four Oaks Place

Post Oak Boulevard, *between San Felipe Street and Four Oaks Place,* is approximately 898 ft. and land uses are retail. This block received a score of **7**. The sidewalk is in good condition; however, the width does not meet the five-ft. ADA requirement. The curb ramps are in good condition. The planting strip, which is not landscaped, varies in width along the block. Pedestrian amenities include a bus shelter and a waste receptacle. Most of the block is well maintained; however, improvements could be made. Pedestrian signage and lighting could be installed, as well as landscaping in the existing planting strip. There is a stainless steel arch over the street at Four Oaks Place.

Figure 2.24 – Post Oak Boulevard, San Felipe to Four Oaks Place

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Four Oaks Place to Uptown Park Boulevard

Post Oak Boulevard, *between Four Oaks Place and Uptown Park Boulevard,* is approximately 845 ft. and land uses are multi-family residential and retail. This block received a score of **7**. The sidewalk is in good-to-average condition; however, sidewalk width does not meet the five-ft. ADA requirement *(Figure 2.25)*. The curb ramps are in good condition. The planting strip is wide enough for future landscaping opportunities. Pedestrian amenities include two bus shelters and two waste receptacles. Future improvements could include pedestrian signage and lighting.

Figure 2.25 – Post Oak Boulevard, Four Oaks Place to Uptown Park Boulevard

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Uptown Park Boulevard to IH 610 West

Post Oak Boulevard, *between Uptown Park Boulevard and IH 610 West,* is approximately 581 ft. and land use is office. There is an undeveloped area of private property at the corner of Post Oak Boulevard and IH 610 West. This block received a score of **9**. This block has a new sidewalk and a short stretch of older concrete near IH 610 West; however, the entire sidewalk width is below the five-ft. ADA requirement *(Figure 2.26)*. The curb ramps are in good-to-average condition. The planting strip not landscaped; however, it is wide enough for future improvements that would create a pedestrian-friendly environment. Future improvements include pedestrian signage and lighting, as well as seating and waste receptacles.

Figure 2.26 – Post Oak Boulevard, Uptown Park Boulevard to IH 610 West

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

WEST SIDE – Post Oak Boulevard Between Richmond Avenue and IH 610 West

Richmond Avenue to Hidalgo Street

Post Oak Boulevard, *between Richmond Avenue and Hidalgo Street,* is 1,162 ft. and land uses are a multi-family residential building and the Lake on Post Oak Boulevard. This block received a score of **9**. This score is due, in large part, to the lack of pedestrian amenities, such as benches, trash receptacles, bike racks, and bollards, and a consistently landscaped planting strip. This block is an ideal location to enhance the pedestrian environment due to its park and residential uses. The curb ramps are in good condition. The sidewalk is in good-to-average condition; however, sidewalk width does not meet the five-ft. ADA requirement *(Figure 2.27)*. The planting strip along this block heading south changes from 48 inches to 192 inches, with average landscaping along the larger strip. There is no planting strip near Richmond Avenue *(Figure 2.28)*. Future improvements could include pedestrian signage and lighting, as well as seating and trash receptacles.

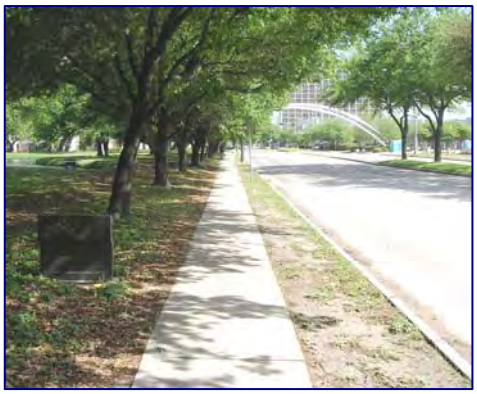


Figure 2.27 – Post Oak Boulevard, Richmond to Hidalgo

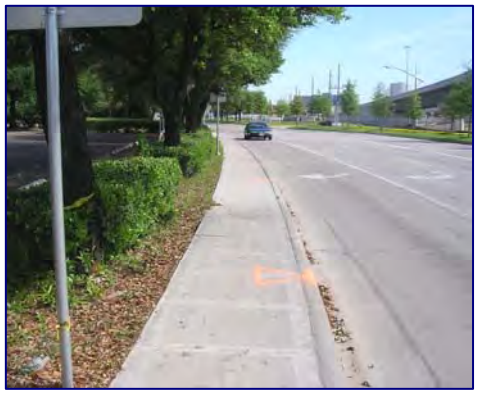


Figure 2.28 – Post Oak Boulevard Near Richmond

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Hidalgo Street to W. Alabama Street

Post Oak Boulevard, *between Hidalgo and W. Alabama*, is 898 ft. and land uses are office and the Water Wall area. This block received a score of **7**. The block is well maintained and the curb ramps and sidewalk are in good condition; however, the sidewalk width does not meet the five-ft. ADA requirement *(Figure 2.29)*. The planting strip is not landscaped; however, it has adequate width for future improvements. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting to enhance the safety and quality of the pedestrian environment. William's Tower and Water Wall, two landmarks of the Uptown area, are located on this block.

Figure 2.29 – Post Oak Boulevard, Hidalgo to W. Alabama

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

W. Alabama Street to Westheimer Road

Post Oak Boulevard, *between W. Alabama Street and Westheimer Road*, is 1,056 ft. and land uses are The Galleria mall retail and office. This block received a score of **5**. This block received this low score and, therefore, minimum treatment needed, due to the wide ADA-approved sidewalk and landscaped planting strip. This block consists mostly of The Galleria mall and parking. The curb ramps are in good condition. The sidewalk is in good-to-average condition; however, the width does not meet the five-ft. ADA requirement *(Figure 2.30)*. The planting strip varies from 72 inches to 96 inches and is nicely landscaped with mature trees. A portion of the block, between Westheimer Road and the first driveway, has no planting strip *(Figure 2.31)*. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian lighting and signage.

Figure 2.30 – Post Oak Boulevard, W. Alabama to Westheimer

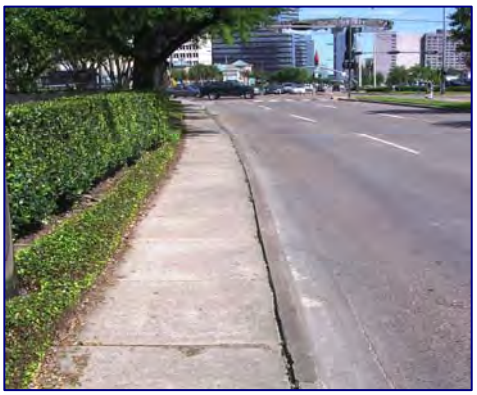


Figure 2.31 – Post Oak Boulevard, Westheimer to First Driveway

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Westheimer Road to Ambassador Way

Post Oak Boulevard, *between Westheimer Road and Ambassador Way*, is 2,112 ft. and land uses are retail, office, and park area. This block received a score of **8**. This block is very well maintained; however, improvements could be installed to enhance the pedestrian environment. The sidewalk is in good condition; however, it does not meet the five-ft. ADA requirement. The curb ramps are in good condition. The planting strip is not landscaped and varies in width from 102 inches near Ambassador Way to only 12 inches near Westheimer. There are two bus shelters and two trash receptacles near Ambassador Way and Guilford Court. Pedestrian signage and lighting are two priority improvements for this block. Stainless steel arches are located at the second driveway near north of Westheimer Road heading south and create a distinct crosswalk across Post Oak into The Center at Post Oak Boulevard shopping center. There are stainless steel arches overhead at the Post Oak Boulevard Central building complex to enhance the crosswalk connecting the buildings to the Doubletree Hotel.

Figure 2.32 – Post Oak Boulevard, Westheimer to Ambassador Way

Figure 2.33 – Post Oak Boulevard Near Westheimer

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Ambassador Way to San Felipe Street

Post Oak Boulevard, *between Ambassador Way and San Felipe Street*, is 1,214 ft. and land use is retail. This block received a score of **7**. This block is well-maintained with stainless steel arches at the crosswalk across Post Oak Boulevard near the third driveway. The sidewalk is in good-to-average condition; however, the width does not meet ADA requirements *(Figure 2.45)*. The curb ramps are in good condition. The planting strip varies from 70 inches to 102 inches and is not landscaped. There is one bus shelter and a waste receptacle. Future improvements could include pedestrian signage and lighting.

Figure 2.34 – Post Oak Boulevard, Ambassador Way to San Felipe

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

San Felipe Street to Four Oaks Place

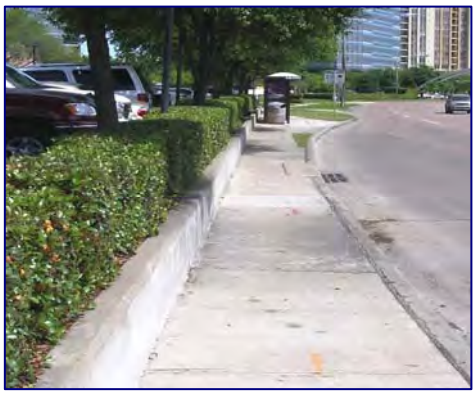


Figure 2.35 – Post Oak Boulevard, Four Oaks Place to San Felipe

Post Oak Boulevard, *between San Felipe Street and Four Oaks Place*, is 898 ft. and land use is retail. The block received a score of **8**. At Four Oaks Place, stainless steel arches cross over Post Oak Boulevard and are landscaped nicely at either end. The sidewalk is in good condition on most of the block, except near Four Oaks Place where it is in bad condition. Sidewalk width does not meet the five-ft. ADA requirement. The curb ramps are in good condition. The planting strip narrows from 174 inches to 24 inches. There is no planting strip in front of Mama Ninfa's Restaurant and a retaining wall runs along the retail side. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting, as well as landscaping in the planting strip.

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Figure 2.36 – Post Oak Boulevard, Uptown Park Boulevard to Four Oaks Place

Four Oaks Place to Uptown Park Boulevard

Post Oak Boulevard, *between Four Oaks Place and Uptown Park Boulevard*, is 845 ft. and land uses are multi-family residential and retail. This block received a score of **7**. This block is well maintained and has a very good pedestrian environment. The sidewalk and curb ramps are in good condition. The planting strip is wide and nicely landscaped with mature trees, although additional landscaping in bare areas could be considered. There are two METRO bus and Uptown shuttle stops along the block; however, both are in need of shelters and waste receptacles. Future improvements could include pedestrian signage and lighting.

A safety concern on this block is the bush at the corner of Uptown Park and Post Oak Boulevard that blocks the pedestrian's sight of oncoming cars turning south onto Post Oak Boulevard *(Figure 2.37)*.

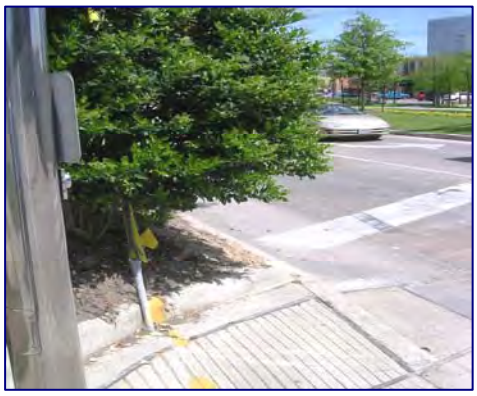


Figure 2.37 – Uptown Park at Post Oak Boulevard

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Uptown Park Boulevard to IH 610 West

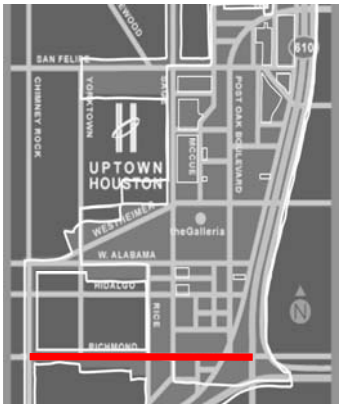
Figure 2.38 – Post Oak Boulevard, Uptown Park to IH 610 West

Post Oak Boulevard, *between Uptown Park Boulevard and IH 610 West,* is 581 ft. and land uses are retail and Post Oak Boulevard Park. This block received a score of **3**. The recently opened upscale shopping center with restaurants and retail is the primary influence for the high-quality pedestrian environment. The sidewalk meets the five-ft. ADA width acceptability and is in good condition. The same is true for the curb ramps. The planting strip is very wide and landscaped with new trees. Bus stop shelters are the only pedestrian amenities on the other blocks in this corridor. This particular block has specifically included more extensive treatments with pedestrian benches and attractive lighting on the retail side of the sidewalk. Pedestrian signage could be added. With the addition of signage, this block face could be used as a model for the Post Oak Boulevard streetscape improvements because of the safety, functionality, and aesthetic appeal it provides for pedestrians.

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Richmond Avenue Between IH 610 West and Chimney Rock Road

Existing conditions were inventoried on the north and south sides of the major blocks on Richmond Avenue, *between IH 610 West and Chimney Rock Road*. The scores are described below.



NORTH SIDE – Richmond Avenue Between IH 610 West and Chimney Rock Road

IH 610 West to Sage Road

Richmond Avenue, *between IH 610 West and Sage Road*, is approximately 1,795 ft. and land use is retail. This block received a score of **8**. The main reason this block reflected a high score is because the planting strip is narrow, whereas the remainder of the study area has a wide landscaped strip *(Figures 2.39 and 2.40)*. The sidewalk is in good-to-average condition, with the worst area near IH 610 West. Sidewalk width does not meet the five-ft. ADA requirement. The curb ramps are in good condition. There is a planting strip along most of the block that has enough width for minimal future landscaping. There is no planting strip near the service station at Sage Road. There are two bus shelters and two trash receptacles on this block. Future improvements could include pedestrian signage and lighting to enhance the quality of this block.

Figure 2.39 – Richmond, IH 610 West to Sage

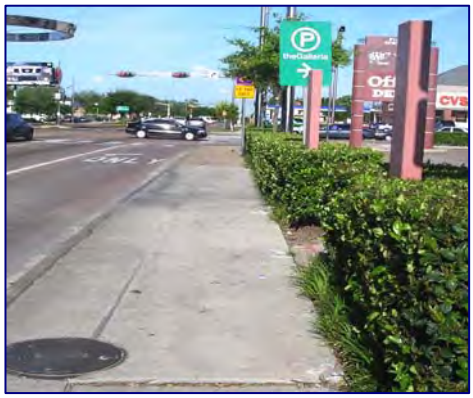


Figure 2.40 – Richmond, Near Sage

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Sage Road to Rice Avenue

Richmond Avenue, *between Sage Road and Rice Avenue*, is approximately 475 ft. and land use is retail. This block received a score of **6**. The sidewalk and the curb ramps are in good condition; however, sidewalk width does not meet the five-ft. ADA requirement. Pedestrian amenities include a bus shelter and a trash receptacle. This block begins a nicely landscaped planting strip with new trees that continues to Chimney Rock Road. There is one area on the corner of Rice Avenue in front of the service station that has no planting strip; however, there is ample room to extend the existing strip to the end of the block. Future improvements could include pedestrian signage and lighting.

Figure 2.41 – Richmond, Sage to Rice

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Rice Avenue to Yorktown Street

Richmond Avenue, *between Rice Avenue and Yorktown Street*, is approximately 1,056 ft. and land uses are single-family residential and retail. This block received a score of **8**. It received this high score because the block has no pedestrian amenities, such as benches, trash receptacles, bollards, or bike racks. Most of the sidewalk is in good condition; however, there is a small area in average condition that does not meet the five-ft. ADA requirement. The curb ramps are in good condition. The planting strip is nicely landscaped with trees. Future improvements could include pedestrian signage and lighting.

Figure 2.42 – Richmond, Rice to Yorktown

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Yorktown Street to Lampasas/Barrington

Richmond Avenue, *between Yorktown and Lampasa/Barringtons*, is approximately 634 ft. and land uses are retail, used car lots, daycare, and vacant property. This block received a score of **5**. Although this block currently has many of the components needed to be a high-quality pedestrian environment, it lacks the required maintenance. The sidewalk is in poor-to-average condition and does not meet the ADA required width. The curb ramps are in good condition and pedestrian amenities include a bus shelter and a trash receptacle. The planting strip is wide and landscaped; however, it is in need of upkeep to maintain the blocks aesthetic appeal. Future improvements could include pedestrian signage and lighting.

Figure 2.43 – Richmond, Yorktown to Lampasas

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Lampasas/Barrington to Chimney Rock Road

Richmond Avenue, *between Lampasas/Barrington and Chimney Rock Road*, is approximately 739 ft. and land use is retail. This block received a score of **5**. This block received the same low score as the previous block. The sidewalk is in good condition on most of the block; however, there are a few poor condition areas near Lampasas. The width does not meet the five-ft. ADA requirement. The planting strip is nicely landscaped. The curb ramps are in good condition. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting.

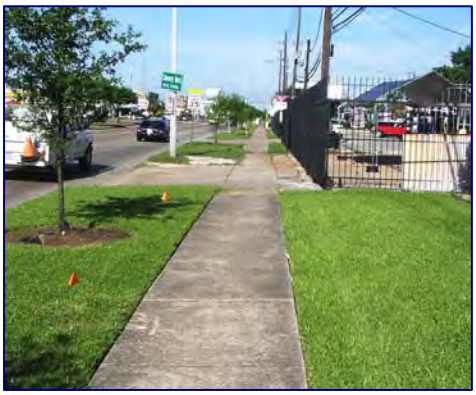


Figure 2.44 – Richmond, Lampasas to Chimney Rock

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

SOUTH SIDE – Richmond Avenue Between IH 610 West and Chimney Rock Road

IH 610 West to McCue Road

Richmond Avenue, *between IH 610 West and McCue Road*, is 950 ft. and land uses are retail and vacant property for sale at McCue Road. This block received a score of **7**.

The curb ramp at McCue Road is in adequate condition; the curb ramp at IH 610 West is in good condition. The planting strip is narrow and could be improved by adding landscaping to create a greater sense of safety between oncoming traffic and pedestrians. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting.

Figure 2.45 – Richmond, McCue to IH 610 West

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

McCue Road to Sage Road

Figure 2.46 – Richmond, McCue to Sage

Richmond Avenue, *between McCue and Sage roads*, is 739 ft. and land uses are multi-family residential and office. This block received a score of **8**. The curb ramps are in good condition. There is a wide planting strip on the west end of the block that has no landscaping. The east end has a nicely landscaped strip that runs in front of the multi-family residential buildings. Future improvements could include pedestrian signage and lighting, as well as pedestrian amenities such as benches, trash receptacles, bollards, and bike racks.

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Sage Road to Rice Avenue

Figure 2.47 – Richmond, Rice to Sage

Richmond Avenue, *between Sage Road and Rice Avenue*, is 475 ft. and land use is retail. This block received a score of **9**. The sidewalk is in good condition; however, there is no distinguishable sidewalk at the corner of Rice in front of a vacant service station. Sidewalk width does not meet the five-ft. ADA requirement. The curb ramp at Sage is in very good condition; the curb ramp at Rice is adequate. A narrow planting strip begins after the vacant service station at Rice and continues to the end of the block heading east. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting, as well as landscaping in the planting strip or installing bollards.

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Rice Avenue to Yorktown Street

Richmond Avenue, *between Rice Avenue and Yorktown Street,* is 1,056 ft. and land uses are multi-family residential and a future shopping center at the corner of Rice Avenue. This block received a score of **8**. The sidewalk is in average condition; however, sidewalk width does not meet the five-ft. ADA requirement. The curb ramps are in adequate condition. The planting strip is wide enough for ample landscaping; however, on the east side of the block, there are only short portions of strip between the numerous driveways into multi-family residential buildings. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting.

Figure 2.48 – Richmond, Yorktown to Rice

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Yorktown Street to Barrington/Lampasas

Richmond Avenue, *between Yorktown Street and Barrington/Lampasas,* is 634 ft. and has Pilgrim Elementary covering the entire block. This block received a score of **6**. The sidewalk is in average condition with some areas in need of improvement, while the width is less than the five-ft. ADA requirement. There is an 18-inch incline between the school property fence and the sidewalk that could be utilized for widening the sidewalk. The planting strip is wide and landscaped with mature trees planted periodically along the block. Pedestrian amenities include a bus shelter and a waste receptacle. Future improvements could include pedestrian signage and lighting.

Figure 2.49 – Richmond, Barrington to Yorktown

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Lampasas/Barrington to Chimney Rock Road

Richmond Avenue, *between Lampasas/Barrington and Chimney Rock Road*, is 739 ft. and land use is retail. This block received a score of **6**. Sidewalk quality varies greatly, from areas that are good to areas that are safety hazards for disabled pedestrians. Most of the block is currently in good condition, but the poorer portions are midway on the block and near Chimney Rock Road. Sidewalk width does not meet the five-ft. ADA requirement. The curb ramps are in good condition. The planting strip is well maintained and landscaped with young trees. Pedestrian amenities include a bus shelter and a trash receptacle. Future improvements could include pedestrian signage and lighting.

Figure 2.50 – Richmond, Chimney Rock to Barrington

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

W. Alabama Between Post Oak Boulevard and Westheimer Road

Existing conditions were inventoried on the north and south sides of W. Alabama Street. This is a one-way eastbound street. These blocks are approximately 4,646 ft. and land uses are office and retail, including The Galleria mall and the Double Tree Hotel. There are five blocks between Post Oak Boulevard and Westheimer. The north side of W. Alabama Street received scores of **7, 7, 8, 9, and 9** (east to west). Most of the sidewalks are in average condition along this corridor and most are four-ft. wide, with some areas in need of repair. The north side of W. Alabama has consistent planting strips; however, there are sections where additional landscaping is needed. All curb ramps are of average quality. A major improvement to this very busy corridor for retail shopping would be pedestrian lighting.

Figure 2.51 – W. Alabama, McCue to Sage

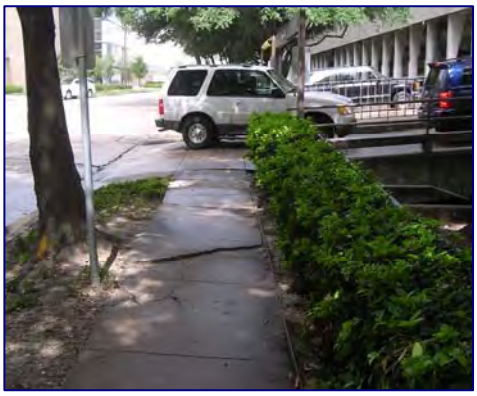


Figure 2.52 – W. Alabama, Post Oak Boulevard to McCue

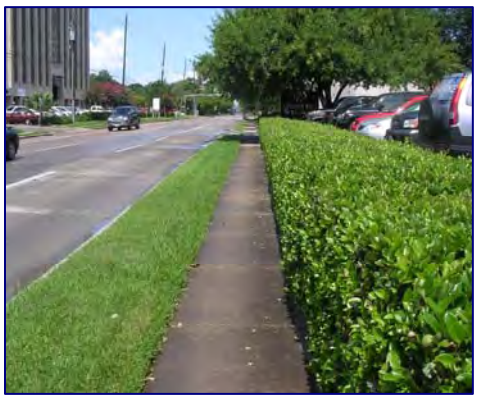


Figure 2.53 – W. Alabama, Rice to Yorktown

Figure 2.54 – W. Alabama, Yorktown to Westheimer

Land uses on the south side of W. Alabama Street are retail (including an expansion to The Galleria mall), office, church, and vacant properties. Scores for the south side are **9, 6, 8, 9,** and **10**. Sidewalks on the south side of W. Alabama are in average-to-good condition and range from four to five ft. wide, with a few very bad areas on the segment *between Westheimer and Yorktown*. The corridor has consistent planting strips, but is landscaped only in some areas. Pedestrian lighting along this entire corridor would greatly enhance the environment.

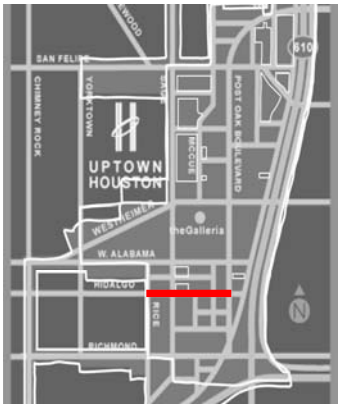
Figure 2.55 – W. Alabama, Westheimer to Yorktown

Figure 2.56 – W. Alabama, Yorktown to Rice

Figure 2.57 – W. Alabama, Sage to McCue

Figure 2.58 – W. Alabama, McCue to Post Oak Boulevard

Hidalgo Street Between Post Oak Boulevard and Rice Avenue



Existing conditions were inventoried on the north and south sides of Hidalgo Street. This is a one-way westbound roadway. These blocks are approximately 2,376 ft. and land uses are The Galleria mall, Water Wall and park, and multi-family residential. There are three blocks from Post Oak Boulevard to Rice. The north side of Hidalgo received scores of **10, 9, and 10**. The north side of Hidalgo has good sidewalks ranging from four to five ft. wide; however, there is an area near Sage that lacks sidewalks. Most of the corridor has no planting strip, except for a segment near Post Oak Boulevard. Pedestrian lighting is needed.

Land uses on the south side of Hidalgo Street are residential, office, and retail. All three blocks on the south side of Hidalgo received a score of 10. Where there are sidewalks along this corridor, they are four feet wide and in good condition; however, they are inconsistent. Most of the corridor has a planting strip; however, there is minimal landscaping when present. Pedestrian lighting is needed.

Figure 2.59 – Hidalgo, Post Oak Boulevard to McCue

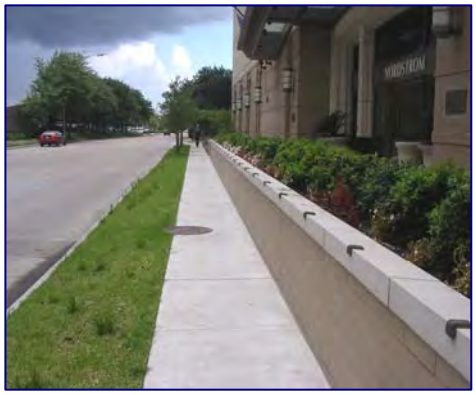


Figure 2.60 – Hidalgo, McCue to Sage

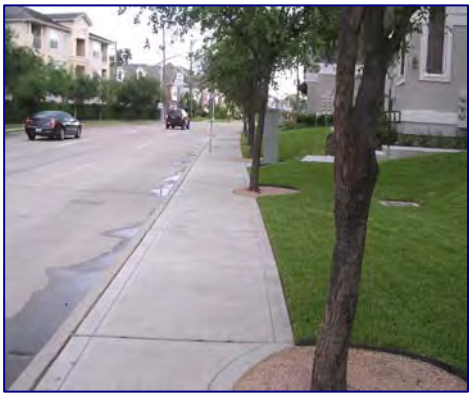
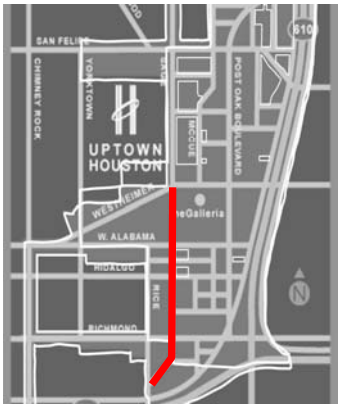


Figure 2.61 – Hidalgo, Sage to Rice

Sage Road Between Westheimer Road and US 59 Freeway



Existing conditions were inventoried on the east and west sides of the major blocks on Sage Road, between US 59 and just north of Westheimer Road. These blocks are 5,280 ft. and land uses are office, retail, and multi-family residential. There are four major blocks along this segment of Sage and the area just north of Westheimer was scored as an individual block face. The east side received scores of **7, 8, 7, 4, and 10** (US 59 North to just past Westheimer). Sidewalks range from four to five ft. wide and are in good-to-average condition, with a few bad areas along the east side, *between US 59 and Richmond*. All curb ramps are in good-to-average condition. There are planting strips along almost the entire corridor, some of which are landscaped. The west side received scores of **9, 8, 6, 7, and 6** (just north of Westheimer south to US 59). These are relatively good scores, although all of Sage needs pedestrian lighting.

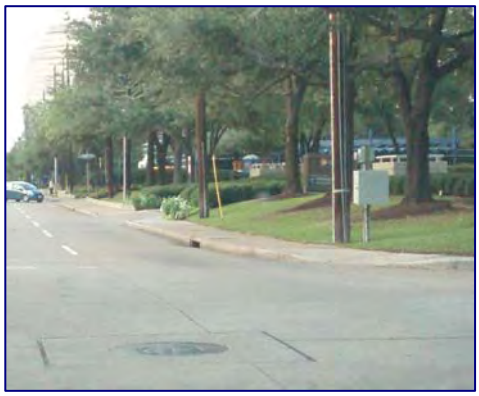


Figure 2.62 – S. Post Oak Lane Looking North

Secondary Street Existing Conditions

Existing conditions were inventoried on the secondary streets of opportunity in the 500-ft. coverage area around each transit stop as provided by Federal Transit Administration's (FTA) Livable Communities Initiative (LCI) guidelines. These roadways do not have direct public transit stops, but act as important feeders from the many land uses in Uptown to the major arterials. These roadways include Ambassador Way, Garretson Lane, Hollyhurst Lane, Guilford Court, and Hallmark Drive. McCue Road is a recently improved roadway that only requires pedestrian lighting. Uptown Park Boulevard was not inventoried for this plan, but will require modest pedestrian improvements because it is a newly constructed roadway through a major mixed-use development that includes two retail shopping centers and high-rise residential buildings.

SECONDARY STREETS

Ambassador Way Between Post Oak Boulevard and McCue Road

Existing conditions were inventoried on the north and south sides of Ambassador Way. This block is approximately 898 ft. and land uses are multi-family residential and retail. This block received a score of **11**. The south side has office land use and received a score of **7**. Ambassador Way has inconsistent pedestrian improvements. Most of the street has no sidewalks, but is well kept and landscaped. There is pedestrian lighting along the south side of the roadway, but the remainder needs pedestrian lighting.

Figure 2.63 – Ambassador Way Looking West

Figure 2.64 – Ambassador Way Looking East

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						Treatment Needed							Maximum

Garretson Lane Between Post Oak Boulevard and San Felipe Street

Existing conditions were inventoried on the east and west sides of Garretson Lane. This block is approximately 792 ft. and land uses are multi-family residential and retail. Both sides received a score of **13**. Garretson Lane is in need of many curb and pedestrian improvements. One half of the east side of the roadway lacks curbs and there are no existing sidewalks on either side. ADA ramps are needed at the intersections.

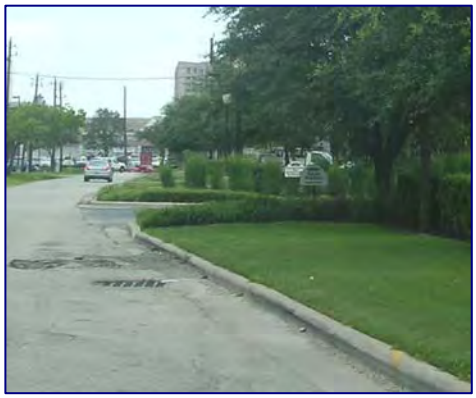


Figure 2.65 – Garretson Lane

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						**Treatment Needed**							**Maximum**

Guilford Court Between Post Oak Boulevard and McCue Road

Existing conditions were inventoried on the north and south sides of Guilford Court. This block is approximately 950 ft. and land uses are multi-family residential and retail. The north side received a score of **10** and the south side received a score of **14**. This street could be improved by constructing consistent sidewalks where there are none and allowing room for landscaped plantings strips. Pedestrian lighting is needed.

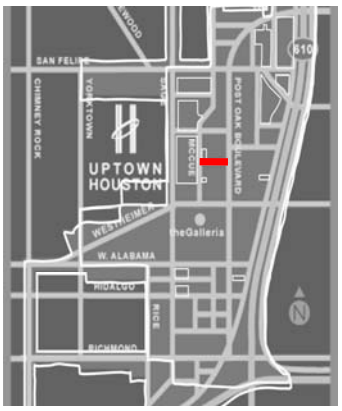


Figure 2.66 – Guilford Court

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Hallmark Drive Between San Felipe Street and IH 610 West

Existing conditions were inventoried on the north and south sides of Hallmark Drive. This block is approximately 898 ft. and land uses are office, retail, and residential. The north side received a score of **13** and the south side received a score of **12**. The existing pedestrian improvements are inconsistent and due, in part, to private developers improving their individual properties. Sidewalks on both sides of the street are inconsistent; however, where they do exist, they are in good condition, but four feet wide. ADA ramps are needed at the intersections. Landscaped plantings strips, consistent sidewalks, and pedestrian lighting are needed.



Figure 2.67 – Hallmark Drive

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						**Treatment Needed**							**Maximum**

Score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Minimum						**Treatment Needed**							**Maximum**

Hollyhurst Lane Between Post Oak Boulevard and Hallmark Drive

Existing conditions were inventoried on the east and west sides of Hollyhurst Lane. This block is approximately 1,162 ft. and land uses are multi-family residential and office. The east side received a score of **12** and the west side received a score of **11**. Similar to many of the other secondary roadways in the area, sidewalks are inconsistent; however, when sidewalks are present they are four-ft. wide and in good condition. One exception is the sidewalk on the southern portion of the east side of the street, which is in terrible condition and is only three feet wide. ADA ramps are needed at the Hallmark Drive intersection. Where sidewalks are present there is a very wide planting strip with no landscaping. There is no pedestrian lighting or other amenities on this street.

Figure 2.68 – Hollyhurst Lane

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

S. Post Oak Lane Near San Felipe Street

Existing conditions were inventoried on the east and west sides of S. Post Oak Lane near San Felipe Street. This block is approximately 528 ft. and land uses are retail, office, and residential. The east side of the block received a score of **10** and the west side received a score of **9**. Sidewalks are four feet wide and in average condition. There is a narrow planting strip with no landscaping on the west side and none on the east side. There is a bus stop on either side of the street; however, neither have any amenities. There is no pedestrian lighting along this corridor.

Figure 2.69 – Sage, W. Alabama to Hidalgo

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Score													
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Minimum						**Treatment Needed**							**Maximum**

Chapter 3 – Pedestrian Level of Service Improvements

Background

The existing conditions survey and rankings were converted to an existing Pedestrian Level of Service (PLOS) for each segment along each study corridor. *Table 3.1* presents the relationships between the existing conditions total ranking and the PLOS from A through F.

Table 3.1 – Existing Conditions Scores and PLOS

Existing Conditions Score	***PLOS***
1, 2, 3	A
4, 5, 6, 7	B
8, 9	C
10, 11	D
12, 13	E
14	F

A Florida Department of Transportation (FDOT) study, reported in the *Transportation Research Record 1773, Paper No. 01-0511*: *Modeling the Roadside Walking Environment – Pedestrian Level of Service*, 2001, was used to establish an appropriate PLOS model for Uptown. It required adapting the generic model contained in the paper. The paper identified the following list of measurements for a pedestrian's sense of safety and comfort within a roadway corridor:

1. Presence of pathway or sidewalk;
2. Architectural interest;
3. Pedestrian-scale lighting and amenities;
4. Presence of other pedestrians;
5. Barriers or buffers between pedestrians and motor vehicle traffic;
6. Conditions at intersections; and
7. Motor vehicle composition, volume, and speed.

The PLOS measurements have been selectively modified to fit into the uniqueness of the Uptown corridors existing conditions and proposed improvements.

The description that follows provides an overview of the existing conditions and the relationship between existing conditions and a suitable PLOS designation.

- **PLOS A and B *(Score 1-7)*:** Wide sidewalks (5 to 6 feet in commercial corridors and 4+ feet in neighborhood corridors); sidewalks and curbs are in good condition and PLOS B may need only minor repair; sidewalks and curbs meet ADA standards at driveways and intersections; sidewalks are lined with trees; planting strips or on-street parking are used as buffers to protect pedestrians from motor vehicles; and abundant pedestrian-scale lighting and amenities are present.
- **PLOS C and D *(Score 8-9)*:** Sidewalks are present (some areas may need to be widened if permitted); sidewalks and curbs need some repair; some ADA ramps need to be installed where there are none or they are broken; some landscaping needed; some planting strips or on-street parking needed; and insufficient pedestrian-scale lighting and amenities exist.
- **PLOS E and F *(Score 10+)*:** Sidewalks and curbs are in bad condition (some areas there are none); few or no ADA ramps exist; little to no landscaping or planting strips exist; little to no pedestrian-scale lighting and amenities exist.

The following photographs in *figure 3.1* demonstrate the correlation between existing conditions described in narrative above and level of treatment needed.

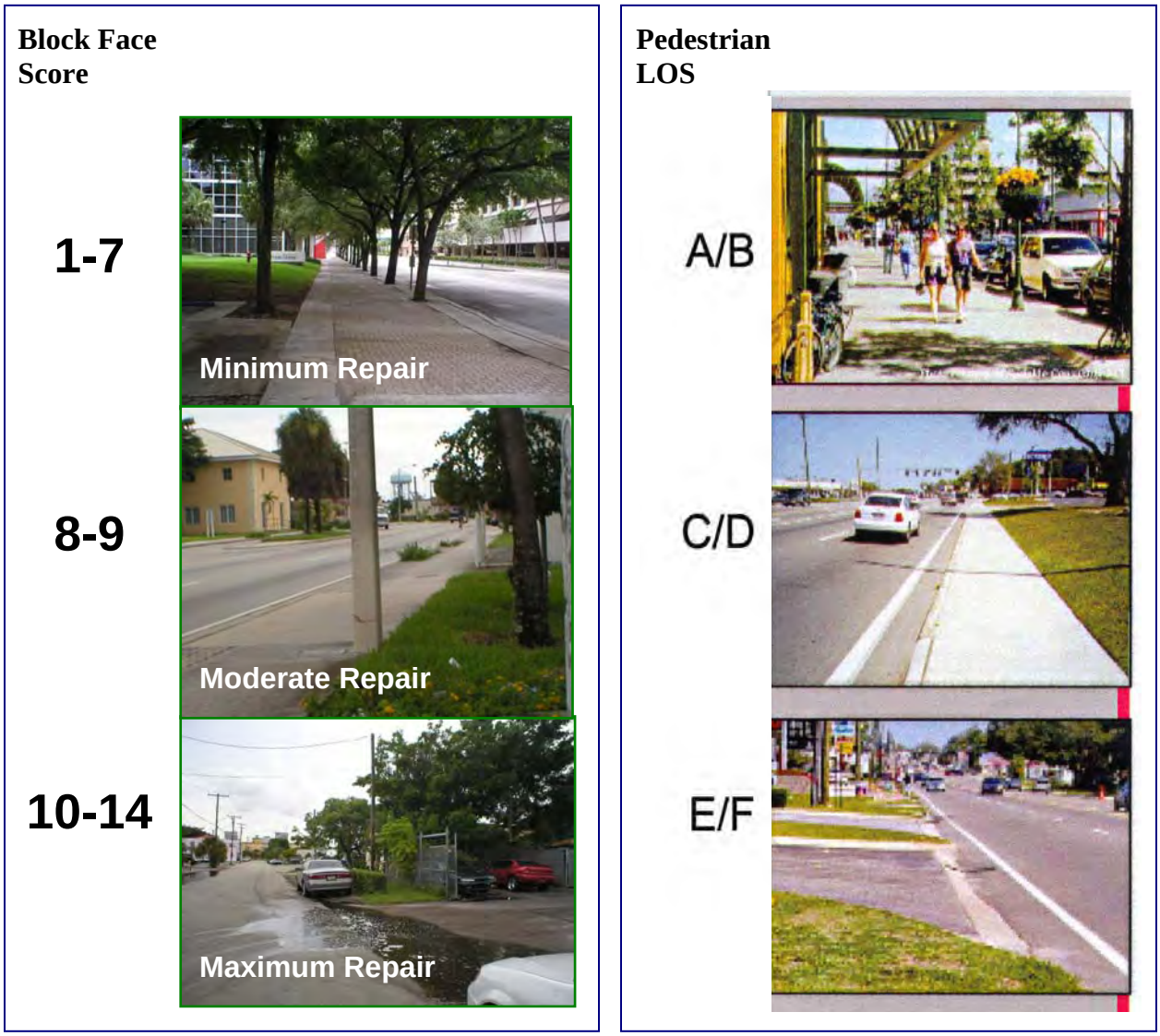


Figure 3.1 – Block Face Score and Pedestrian LOS

The PLOS measurements before and after the proposed improvements for the Uptown study corridors are shown in *Table 3.2*.

Table 3.2 - Existing PLOS and Future PLOS After Streetscape Improvements						
PRIMARY CORRIDORS						
Westheimer Corridor – IH 610 West to Chimney Rock	***North***	***Existing PLOS***	***Future PLOS***	***South***	***Existing PLOS***	***Future PLOS***
IH 610 West to Post Oak Boulevard	10	D	**B**	10	D	**B**
Post Oak Boulevard to McCue	9	C	**B**	5	B	**A**
McCue to Sage	9	C	**B**	5	B	**A**
Sage to Yorktown	7	B	**A**	6	B	**A**
Yorktown to Chimney Rock	8	C	**B**	9	C	**B**
Post Oak Boulevard Corridor – Richmond to IH 610 West	***East***	***Existing PLOS***	***Future PLOS***	***West***	***Existing PLOS***	***Future PLOS***
Richmond to Hidalgo	10	D	**B**	9	C	**B**
Hidalgo to W. Alabama	10	D	**B**	7	B	**A**
W. Alabama to Westheimer	8	C	**B**	5	B	**A**
Westheimer to Ambassador Way	7	B	**A**	8	C	**B**
Ambassador Way to San Felipe	9	C	**B**	7	B	**A**
San Felipe to Four Oaks Place	7	B	**A**	9	C	**B**
Uptown Four Oaks Place to Park Boulevard	7	B	**A**	7	B	**A**
Uptown Park Boulevard to IH 610 West	9	C	**B**	3	A	**A**
Richmond Corridor – IH 610 West to Chimney Rock	***North***	***Existing PLOS***	***Future PLOS***	***South***	***Existing PLOS***	***Future PLOS***
IH 610 West to McCue*				7	B	**A**
McCue to Sage	8	C	**B**	8	C	**B**
Sage to Rice	6	B	**A**	9	C	**B**
Rice to Yorktown	8	C	**B**	8	C	**B**
Yorktown to Barrington/Lampasas	5	B	**A**	6	B	**A**
Lampasas/Barrington to Chimney Rock	5	B	**A**	6	B	**A**
* Street does not go all the way to IH 610 on the north side.						

W. Alabama - Post Oak Boulevard to Westheimer	***North***	***Existing PLOS***	***Future PLOS***	***South***	***Existing PLOS***	***Future PLOS***
Post Oak Boulevard to McCue	7	B	**A**	9	C	**B**
McCue to Sage	7	B	**A**	6	B	**A**
Sage to Rice	8	C	**B**	8	C	**B**
Rice to Yorktown	9	C	**B**	9	C	**B**
Yorktown to Westheimer	9	C	**B**	10	D	**B**
Hidalgo – Post Oak Boulevard to Rice	***North***	***Existing PLOS***	***Future PLOS***	***South***	***Existing PLOS***	***Future PLOS***
Post Oak to McCue	10	D	**B**	10	D	**B**
McCue to Sage	9	C	**B**	10	D	**B**
Sage to Rice	10	D	**B**	10	D	**B**
Sage Corridor – Westheimer to US 59	***East***	***Existing PLOS***	***Future PLOS***	***West***	***Existing PLOS***	***Future PLOS***
North of Westheimer to Westheimer	10	D	**B**	9	C	**B**
Westheimer to W. Alabama	4	B	**A**	8	C	**B**
W. Alabama to Hidalgo	7	B	**A**	6	B	**A**
Hidalgo to Richmond	8	C	**B**	7	B	**A**
Richmond to US 59	7	B	**A**	6	B	**A**
SECONDARY STREETS						
Ambassador Way – Post Oak Boulevard to McCue	11	D	**B**	7	B	**A**
Garretson` Lane – Post Oak Boulevard to San Felipe	13	E	**B**	13	E	**B**
Guilford Court – Post Oak Boulevard to McCue	10	D	**B**	14	F	**B**
Hallmark Drive – San Felipe to IH 610 West	13	E	**B**	12	E	**B**
Hollyhurst Lane – Post Oak Boulevard to Hallmark	12	E	**B**	11	D	**B**
S. Post Oak Lane – Near San Felipe	10	D	**B**	9	C	**B**

Chapter 4 – Signalization/Pedestrian-Crossing Program

The Uptown Development Authority (UDA) continues to implement transportation projects to improve vehicular and pedestrian mobility in the Uptown District, with the recognition that pedestrian access within a mixed-use center is inextricably linked to pedestrian safety crossings across major arterials. Uptown is currently planning the installation of eight new traffic signals as part of a newly initiated access management and pedestrian safety program with Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds provided by the metropolitan planning organization (MPO). The proposed pedestrian crossings are a vital part of a more complete pedestrian network serving to connect the mixed use development contained in Uptown. The new signals are planned for the following locations:

- Post Oak Boulevard and Boulevard Place (new roadway)
- Post Oak Boulevard and Guilford Court
- Post Oak Boulevard at Canyon Café (driveway)
- Post Oak Boulevard and Fairview Street (private roadway)
- S. Post Oak Lane and W. Briar
- Westheimer Road mid-block pedestrian crossing between Post Oak Boulevard and McCue Road)
- Hidalgo Street mid-block pedestrian crossing (between McCue and Sage roads)
- W. Alabama Street and McCue Road/Galleria Garage

Figure 4.1 illustrates the proposed streetscape improvement and signal/pedestrian crossing locations.

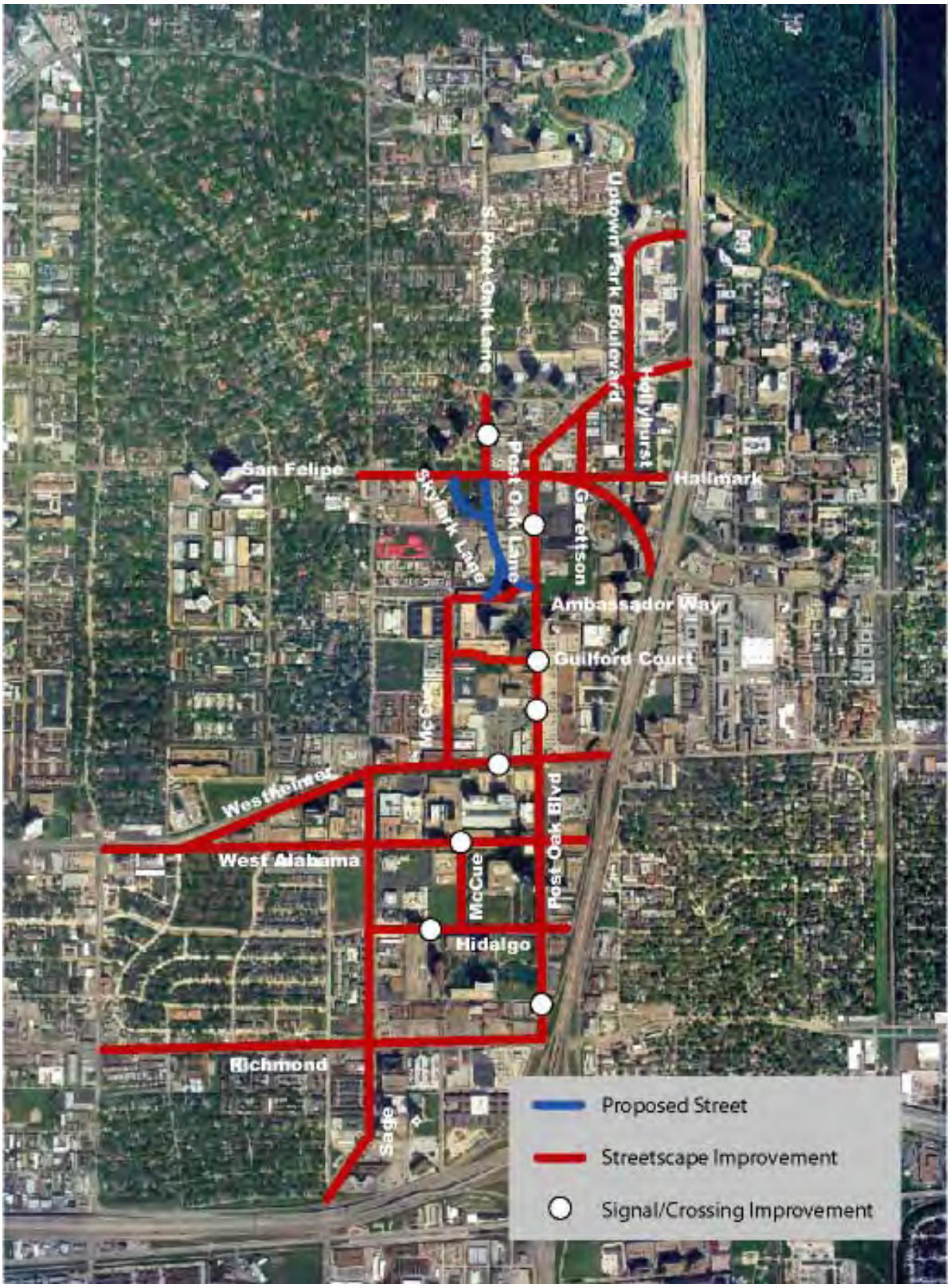


Figure 4.1 - Proposed Pedestrian Streetscape Improvements and New Signals

Program Needs and Benefits

The Uptown District has a long, successfully history of implementing transportation infrastructure improvements that benefit employees, residents, patrons, and visitors in the area. Known for its retail and office development, Uptown has had a significant growth in residential development in the last several years. Many new residential units have been constructed recently with more units planned in the future. Residential property value in the Uptown area soon will account for over one-third of the total property value in the Uptown District. As development continues in the area, the mix of land-use types in the area changes and the transportation needs and conditions also change. The changes in the land use mix have caused a resulting increase in pedestrian traffic and a reverse commute. The Uptown transportation plan must also evolve to meet changing needs. Further, continued discussions regarding high-capacity transit on Post Oak Boulevard would introduce many additional pedestrians to the Uptown District.

The UDA envisions a transit system that efficiently serves the needs of all employees, residents, patrons, and visitors. This vision includes a comprehensive network of roadways, pedestrian and transit corridors, and parking facilities, all set in a unique and inviting urban environment that is managed and monitored.

To fulfill its transportation vision, the Uptown District must continue to transform its transportation system by addressing specific transportation system needs. These needs include the following:

- **Access Management** – Post Oak Boulevard is the premier north/south boulevard within the Uptown District and a future corridor for high capacity transit services, as identified by METRO and Uptown. Multiple uncontrolled median openings and driveways impact vehicular operation and pedestrian movements. Access management along Post Oak Boulevard will improve roadway efficiency through the closing of several uncontrolled median openings and the consolidation of left ingress and egress movements to signalized intersections. Expected access management actions include the following (subject to further analysis):
    - Closure of the Post Oak Boulevard/W. Briar median opening
    - Closure of two median openings between Ambassador Way and San Felipe and the consolidation of left turn ingress and egress from adjacent properties to a new signalized intersection at Post Oak Boulevard and Boulevard Place (new Roadway). The new signal and Boulevard Place will support planned new development along the west side of Post Oak Boulevard. The closure of existing median opening will also allow the extension of the dual left turn lanes (northbound to westbound) at Post Oak Boulevard and San Felipe.
    - Closure of three uncontrolled median openings on Post Oak Boulevard between Ambassador Row and Westheimer Road and the consolidation of left-turn ingress and egress to and from adjacent properties to two new signalized intersections at Guilford Court and Canyon Café. The closure of the existing median north of Westheimer Road will allow the lengthening of the southbound to eastbound dual left turn lanes at Westheimer.
    - At least one median closure on Post Oak south of Westheimer Road also is anticipated as new development is planned. A new signalized intersection at Post Oak and Fairview Street is planned to support new development along the

corridor and provide pedestrian access to the planned public space under construction on the east side of Post Oak Boulevard.

- The signalization of the Post Oak Lane/W. Briar intersection will provide controlled access to Post Oak Lane from The Four Leaf Development. This new controlled access will support the elimination of an uncontrolled driveway from the development onto Post Oak Lane that is frequently blocked by vehicle queues from the signal at Post Oak Lane and San Felipe. The new signal also will support the new development planned along W. Briar, as well as pedestrian movements between residential and commercial land uses within the Uptown District.
- The signalization of the W. Alabama Street/McCue Road intersection will provide controlled access from the Williams Tower and Galleria garages. Currently, egress from each of these garages to W. Alabama Street, a major egress route to W. Loop 610 during the PM peak hour, is through uncontrolled driveways. The proposed access actions for this location will include the realignment of The Galleria Garage exit to align with McCue Road.

- **Shorter Block Lengths** – The long block lengths between signalized intersections limit the ability to create multiple, safe pedestrian crossings. For example, block lengths on Post Oak Boulevard between Westheimer Road and Ambassador Way and Ambassador Row and San Felipe are approximately 2,100 feet and 1,275 feet, respectively. Pedestrians currently must cross Post Oak at uncontrolled and/or unmarked locations along these roadways segments. As a result, employees and Uptown patrons are more inclined to use their vehicles to cross Post Oak rather than walk and cross at uncontrolled locations. Shortening block lengths by introducing new signalized intersections provides an opportunity for multiple, safe pedestrian crossings. In conjunction with the access management actions, the new signalized intersections at Boulevard Place, Guilford Court, Canyon Café, and Fairview Street, will create multiple opportunities for safe, controlled pedestrian crossings. The new controlled pedestrian crossings will connect a developing pedestrian network parallel and perpendicular to major arterials.

- **Direct Pedestrian Connections** – As pedestrian and transit activity increases in Uptown, the need for direct connections between primary pedestrian generators (i.e., residential uses, transit stations) and pedestrian attractors (i.e., retail, employment centers) also will increase. Pedestrians most often elect to travel a direct path to their destinations even when it involves crossing an arterial at an uncontrolled/unmarked pedestrian crossing. The need for two such direct connections currently exists. The proposed mid-block pedestrian crossing on Westheimer Road between Post Oak and McCue Road connects The Galleria and retail shopping to existing bus stops on Westheimer. Similarly, the planned mid-block pedestrian crossing on Hidalgo Street, west of McCue Road, will provide a direct pedestrian connection between employment centers south of Hidalgo Street to The Galleria. Pedestrians currently elect to cross at the proposed mid-block locations rather than walk to the nearest signalized intersection. A pedestrian/vehicular accident already has occurred at the proposed Hidalgo Street crossing. The signalization of these existing pedestrian crossings will allow safe and controlled crossing of these critical arterials.

- **Internal Roadway Network** – As traffic volumes increase on major arterials within Uptown, the need to create a secondary network of public roadways will become critical. These secondary roadways will serve to collect from and distribute to the major arterials at signalized intersections. The planned signalization of Post Oak Boulevard and Guilford Court, Post Oak Lane and W. Briar, and Post Oak Boulevard and Fairview Street will begin development of this secondary network and the transformation of the streets to secondary arterials and pedestrian corridors.

Analysis, Design, and Implementation Process

The Uptown Houston Traffic Signalization Program will be implemented though a defined process of analysis, design, and construction. The process will include the following major activities:

- **Conduct Traffic Signal Warrant Studies** - A traffic signal warrant study, as defined in the Texas Manual of Traffic Control Devices (MUTCD), will be conducted at each of the planned traffic signal installations. The evaluation of traffic conditions and intersection characteristics will vary from location to location, but may include some or all of the following data:
    - Traffic volumes (vehicular and pedestrian);
    - Travel speeds;
    - Physical condition diagrams (intersection geometrics, channelization, grades, sight-distance restrictions, pavement markings, etc.). This should include information about nearby facilities and activity centers that serve the young, elderly, and/or persons with disabilities;
    - Accident history and collision diagrams (showing crash experiences by type, location, direction of movement, etc.);
    - Gap studies (vehicular traffic on the major street); and
    - Delay studies (vehicle-hours of stopped time and pedestrian delay time).

  MUTCD suggests that traffic control signals should **not** be installed unless one or more of the 11 signal warrants are met. However, satisfaction of a warrant or warrants is not in itself justification for a signal. Every situation is unique and warrant guidelines must be supplemented by the effects of specific site conditions and the application of good engineering judgment.

- **Define Design Guidelines** – Working with traffic engineers and urban architects, a set of design guidelines will be defined to guide subsequent design activities. The design guidelines will form the necessary combination of engineering and urban architecture that defines Uptown's uniqueness. Design guidelines also will cover the following elements:
    - Traffic Signal Communication
    - Pedestrian Crosswalk Enhancements
    - Crosswalk Treatments (i.e., pavers or stamped concrete)
    - Pedestrian Lighting
    - Countdown Pedestrian Signals

- Signing
- Traffic Signal Hardware
- Street Signs
- Landscaping
- Construction Phasing

- **Analyze Access Management Actions** – Each proposed access management action will be analyzed to determine it benefits to vehicular and pedestrian movements as well as its impact to adjacent properties.
- **Perform Traffic Signal Progression Analysis** – Progression analysis will be performed along each of the affected corridors to determine the optimal signal locations (within given location parameters). New timing plans will be implemented in the Uptown District to optimize progressive traffic flow while providing adequate time for pedestrian crossings and turning movements.
- **Verify Left-turn Vehicle Storage Requirements** – Left-turn storage requirements will be calculated at each existing and planned signalized intersection. Storage requirements will be calculated to accommodate the 85th percentile volume.
- **Development of Plans, Specifications, and Estimates (PS&E) -** Construction plans will be developed for each construction phase of the program's implementation.

Environmental Benefits

The proposed crossings are an important component of the overall Uptown pedestrian plan that will create a safer environment for pedestrians, encourage pedestrian facility use, and most importantly remove internal trips that would otherwise be made outside the district. The Institute of Transportation Engineers (ITE) *Transportation Handbook* (March 2001), an ITE recommended practice, presents a methodology for estimating the reduction of two-way vehicle trips associated with mixed-use developments. The basis for trip reductions is "while the trip generation rates for individual uses on such sites may be the same as similar to what they are for free-standing sites, there is potential for interaction among the uses within the multi-use site, particularly where trips making can be made by walking" (ITE *Trip Generation Handbook*).

Uptown development access is achieved via automobile access on several major multi-lane arterials exhibiting high daily traffic volumes per day. These arterials present major obstacles to safe and convenient pedestrian crossings because of these high traffic volumes and the width of the right of way utilized by traffic lanes. In short, the ability for a person to make a trip between land uses located on the opposite side of these arterials is so severely restricted that they will not make the pedestrian trip. This reduces the number of internal trips made by pedestrians.

The methodology employed reflects the circumstances exhibited by the development served by each proposed pedestrian crossing. In addition, the complexity of the patterns of pedestrian access is accounted for in adjustments (reductions) in the specific benefits associated with each particular situation. For example, the variety of choices available is accounted for in completing a pedestrian trip between two land uses within the area served by a proposed crossing (the capture area). Human factors, such as walking distances between the origin and desired

destination, are incorporated in the analysis used. The methodology used to derive estimated reductions in vehicle trips due to pedestrian crossings is outlined below.

Methodology for Environmental Benefits Derived from Pedestrian Crossings

The environmental benefits are calculated by first determining the area to be served by the proposed intersection. The Federal Transit Administration (FTA) recognizes 1,500 feet as an acceptable capture area for pedestrian trips arriving and departing from a transit terminal. This methodology uses 1,500 feet as the maximum capture area (area served). The specific distance between origins and destinations will, in turn, dictate the percent of trips that will be accomplished by walking. The capture area for the proposed pedestrian crossings is presented in *Figure 4.2 (see Appendix C for pedestrian crossing calculations).*

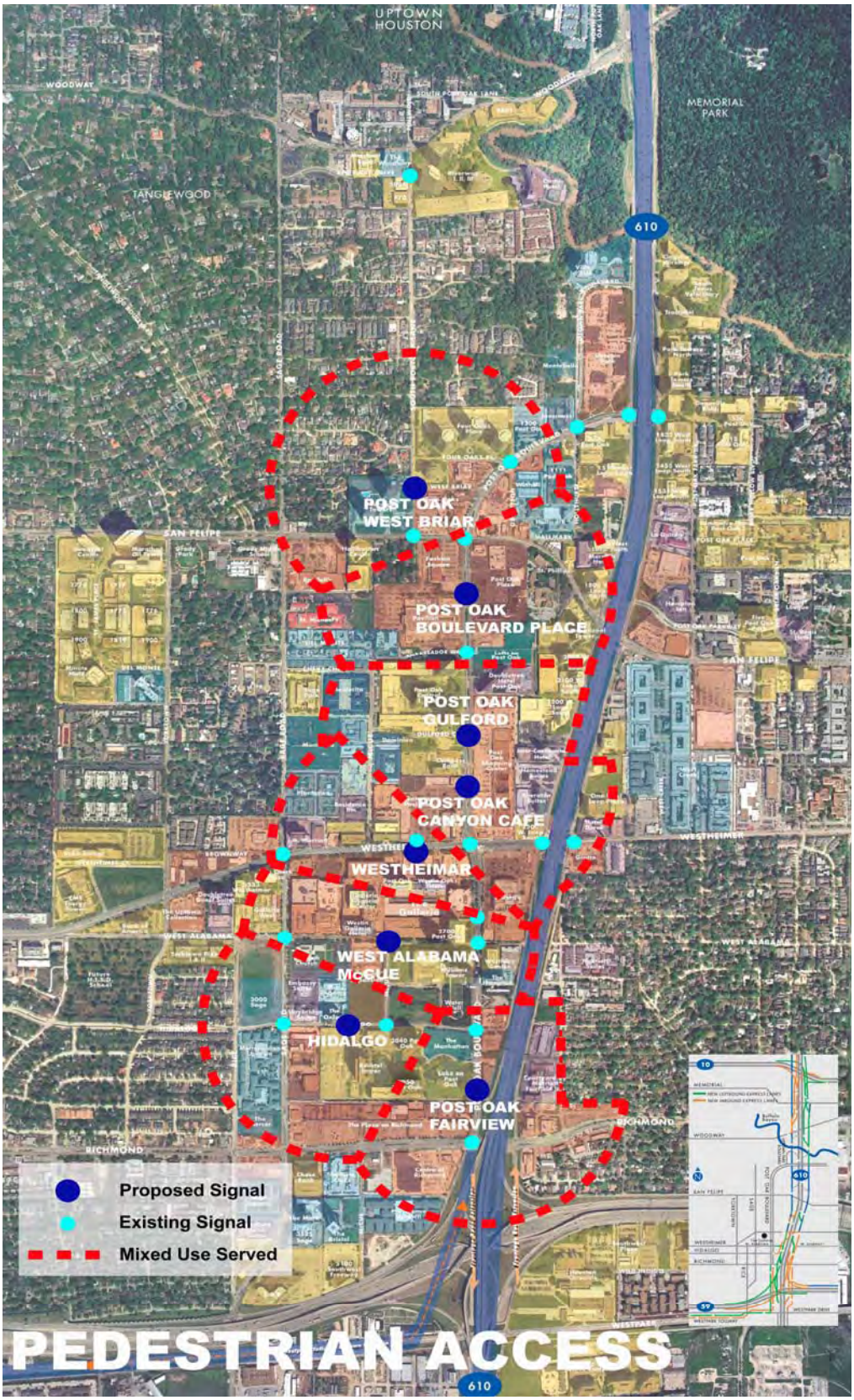


Figure 4.2 – Capture Area for Proposed Pedestrian Crossings

- Determine the types and amounts of each land use within the service area for each crossing. For example, the number of square feet of retail or office and the number of dwelling units is determined in anticipation of the next steps.
- Calculate the number of two-way automobile trips generated by the land uses in the capture area of each crossing. The trip generation factors are those published by the ITE and each specific source is referenced in each of the tables employed.
- Calculate the person trips generated by each land use. This calculation is accomplished by multiplying the automobile trips by a 1.25 persons per vehicle (PPV) occupancy factor employed by the Houston-Galveston Area Council (H-GAC).
- Calculate the number of internalized person trips (trips with both the origin and destination within the capture area of each crossing) using *Figure 4.3* (ITE Handbook).

Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	P.M. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
from OFFICE	to Office	2%	1%	2%
	to Retail	20%	23%	22%
	to Residential	0%	2%	2%
from RETAIL	to Office	3%	3%	3%
	to Retail	29%	20%	30%
	to Residential	7%	12%	11%
from RESIDENTIAL	to Office	N/A	N/A	N/A
	to Retail	34%	53%	38%
	to Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A — Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

Figure 4.3 – Internalized Person Trips Table - ITE Transportation Handbook

- Determine the percentages of internalized person trips (destinations) generated by each building (origins).
- Calculate the number of person trips that must cross the street based on the locations of the origins and destinations.
- Calculate the percent of person trips that will be made as pedestrians based on the length of the walk between the origins and destinations (refer to *Figure 4.4* for a copy of the table from the ITE Handbook).

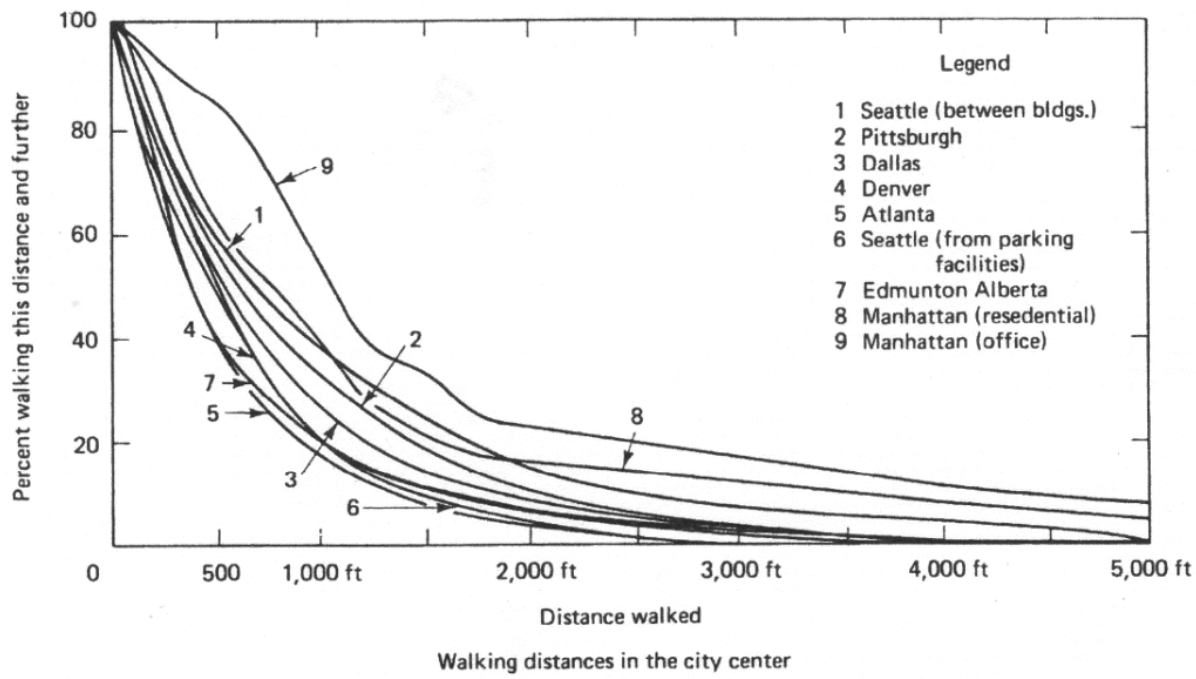


Figure 10.19. Walking distance in the city center. SOURCE: Parking surveys in Atlanta, Dallas, Denver, Pittsburgh. Pedestrian Surveys in Seattle, as reported in *Urban Transportation Concepts Center City Transportation Project*, Wilbur Smith & Associates, 1970. Edmonton: D. Hill, J. Bakkar, and B. L. Akens, *An Evaluation of the Needs of the Pedestrian in Downtown*, Traffic Research Corporation, 1964. New York: Regional Plan Association, as reported in B. Pushkarev and J. Zupan, *Urban Space for Pedestrians, A Report of the Regional Plan Association*, MIT Press, Cambridge, Mass., 1975.

Figure 4.4 – Percent of Person Trips Based on Origin & Destination Location – ITE Transportation Handbook

- Estimate the number of crossing pedestrian trips that will use the proposed crossing due to its location in comparison to other alternative pedestrian crossing that currently exist.

Tables 4.1 through 4.9 present the air quality and VMT reduction calculations based on the total pedestrian users estimated at each new crossing. The pedestrian users have been converted to vehicle trips, assuming a vehicle trip would be taken as opposed to the use of pedestrian facilities. The assumption was 1.25 passengers per vehicle, reducing the number of vehicle trips compared to pedestrian trips.

Table 4.1 – S. Post Oak Lane and W. Briar

Daily VMT Reductions and Air Quality Impacts

Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction VMT***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
			VOC	***CO***	***NOx***	***VOC***	***CO***	***NOx***
636	8.6	5,469.6	0.1377975	4.9480842	0.5452244	754	27,064	2,982
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	2572.738818	9279.979624	432.5971576
					Total Grams Per Mile	**3,326**	**36,344**	**3,415**

[1] Assuming 1.25 Auto Occupancy Factor
[2] *Source:* H-GAC

Table 4.2 – Post Oak Boulevard and Boulevard Place

Daily VMT Reductions and Air Quality Impacts

Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction VMT***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
			VOC	***CO***	***NOx***	***VOC***	***CO***	***NOx***
847	8.6	7,284.2	0.1377975	4.9480842	0.5452244	1,004	36,043	3,972
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	3426.273237	12358.715	576.1160259
					Total Grams Per Mile	**4,430**	**48,402**	**4,548**

[1] Assuming 1.25 Auto Occupancy Factor
[2] *Source:* H-GAC

Table 4.3 – Post Oak Boulevard and Guilford Court

Daily VMT Reductions and Air Quality Impacts

Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction VMT***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
			VOC	***CO***	***NOx***	***VOC***	***CO***	***NOx***
296	8.6	2,545.6	0.1377975	4.9480842	0.5452244	351	12,596	1,388
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	1197.375299	4318.984228	201.3345262
					Total Grams Per Mile	**1,548**	**16,915**	**1,589**

[1] Assuming 1.25 Auto Occupancy Factor
[2] *Source:* H-GAC

Table 4.4 – Post Oak Boulevard at Canyon Café								
Daily VMT Reductions and Air Quality Impacts								
Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
		VMT	***VOC***	***CO***	***NOx***	***VOC***	***CO***	***NOx***
246	8.6	2,115.6	0.1377975	4.9480842	0.5452244	292	10,468	1,153
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	995.1159577	3589.426081	167.3253157
					Total Grams Per Mile	**1,287**	**14,058**	**1,321**
[1] Assuming 1.25 Auto Occupancy Factor [2] *Source:* H-GAC								

Table 4.5 – Westheimer Road Between Post Oak Boulevard and McCue Road								
Daily VMT Reductions and Air Quality Impacts								
Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
		VMT	***VOC***	***CO***	***NOx***	***VOC***	***CO***	***NOx***
1,258	8.6	10818.8	0.1377975	4.9480842	0.5452244	1,491	53,532	5,899
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	5088.84502	18355.68297	855.6717362
					Total Grams Per Mile	**6,580**	**71,888**	**6,754**
[1] Assuming 1.25 Auto Occupancy Factor [2] *Source:* H-GAC								

Table 4.6 – W. Alabama Street and McCue Road								
Daily VMT Reductions and Air Quality Impacts								
Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
		VMT	***VOC***	***CO***	***NOx***	***VOC***	***CO***	***NOx***
1,347	8.6	11584.2	0.1377975	4.9480842	0.5452244	1,596	57,320	6,316
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	5448.866647	19654.29646	916.2081309
					Total Grams Per Mile	**7,045**	**76,974**	**7,232**
[1] Assuming 1.25 Auto Occupancy Factor [2] *Source:* H-GAC								

Table 4.7 – Hidalgo Street Between McCue and Sage Roads								
Daily VMT Reductions and Air Quality Impacts								
Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction VMT***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
			VOC	***CO***	***NOx***	***VOC***	***CO***	***NOx***
950	8.6	8,170	0.1377975	4.9480842	0.5452244	1,126	40,426	4,454
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	3842.927479	13861.60478	646.1749995
					Total Grams Per Mile	**4,969**	**54,287**	**5,101**

[1] Assuming 1.25 Auto Occupancy Factor
[2] *Source:* H-GAC

Table 4.8 – Post Oak Boulevard and Fairview Street								
Daily VMT Reductions and Air Quality Impacts								
Daily Vehicle Trips[1]	***Average Trip Distance[2]***	***Reduction VMT***	***Emission Factor (EF)[2]***			***Reduction (grams/mile)***		
			VOC	***CO***	***NOx***	***VOC***	***CO***	***NOx***
196	8.6	1,685.6	0.1377975	4.9480842	0.5452244	232	8,340	919
			Trip-End Emission Factor					
			0.4703706	1.6966469	0.0790912	792.8566167	2859.867935	133.3161052
					Total Grams Per Mile	**1,025**	**11,200**	**1,052**

[1] Assuming 1.25 Auto Occupancy Factor
[2] *Source:* H-GAC

Table 4.9 summarizes the total air quality benefits for all eight intersections/crossings.

Table 4.9 – Summary of Total Air Quality Benefits			
Location	*VOC*	*CO*	*NOx*
S. Post Oak Lane and W. Briar	3,326	36,344	3,415
Post Oak Boulevard and Boulevard Place	4,430	48,402	4,548
Post Oak Boulevard and Guilford Court	1,548	16,915	1,589
Post Oak Boulevard at Canyon Café	1,287	14,058	1,321
Westheimer Road (between Post Oak Boulevard and McCue)	6,580	71,888	6,754
W. Alabama Street and McCue Road	7,045	76,974	7,232
Hidalgo Street (between McCue and Sage)	4,969	54,287	5,101
Post Oak Boulevard and Fairview Street	1,025	11,200	1,052
Total Grams Per Mile	**30,210**	**330,068**	**31,012**

Chapter 5 – Air Quality Benefits

Previous chapters have introduced the existing conditions survey and existing conditions ranking, the existing and potential future Pedestrian Level of Service (PLOS), and the costs for the treatments Uptown has adopted with the assistance of their design team to improve pedestrian access to transit. A major benefit from these improvements, in light of the competitive funding source (Congestion Mitigation and Air Quality [CMAQ] Improvement Program) that has already been successfully obtained for a part of the project, is a reduction of air pollution due to increased transit ridership, enhanced in part with improved pedestrian access. There is also the benefit of a reduction in traffic congestion and related air pollution, as well as economic benefits created through property and sales tax income based on an improved and continuous streetscape along roadways.

Ridership, Vehicle-Miles Traveled (VMT) Savings, and Air Quality Benefits

Knowing the existing conditions of the pedestrian infrastructure is important in selecting priority projects (both pedestrian and transit) because of the relationship between the pedestrian infrastructure and the transit level of service, both of which affect ridership and environmental benefits. A report[1] prepared for the Transit Coordination Research Program, Transportation Research Board, and National Research Council, in association with the Texas Transportation Institute, states the following:

> *The passenger point of view or quality of service, directly measures passengers' perception of the availability, comfort, and convenience of transit service. There are a number of factors that measure pedestrian and transit quality of service:*

- *Service coverage (near one's origin and destination)*
- *Pedestrian environment*
- *Scheduling: Frequency of service*
- *Amenities*
- *Transit information*
- *Transfers*
- *Total trip time*
- *Cost*
- *Safety and security*
- *Passenger loads*
- *Appearance and comfort*
- *Reliability*

[1] *Transit Capacity and Quality of Service Manual*, Kittelson and Associates, Inc., in association with the Texas Transportation Institute

Of the factors listed above, the following items address pedestrian quality of service.

- ***Pedestrian Environment*** - Even if a transit stop is located within a reasonable walking distance of one's origin and destination, the areas around the transit stops must provide a comfortable walking environment in order for transit to be available.
- ***Amenities*** - The facilities that are provided within the walking distance of transit stops and stations help make transit more comfortable and convenient for transit users. Typical amenities include benches, shelters, informational signing, trash receptacles, and telephones.
- ***Safety and Security*** - Passengers' perceptions of safety must be considered in addition to actual conditions. Transit corridors and stops must be well lit. Planting strips, bollards, or on-street parking can provide barriers between pedestrians and vehicles.
- ***Appearance and Comfort*** - Having clean transit stops with pedestrian lighting and some landscaping improves transit's image, especially when attracting choice riders.

The close relationship between an improved pedestrian environment and its contribution to a better transit service and increased ridership has been documented in several other studies nationwide. The most recent research addressing the relationship between the pedestrian environment, which is measured in Pedestrian Level of Service (PLOS), and the bus service performances, which is measured in BLOS, is contained in the 2002 *Quality and Level of Service Handbook*, prepared by the Florida Department of Transportation (FDOT). The handbook presents compelling evidence of a relationship between the quality of the pedestrian environment as PLOS, and the quality of the bus service as BLOS.

Additional studies address the relationship between pedestrian conditions and transit utilization. A study of 400 Portland neighborhoods indicate that "households in pedestrian-friendly neighborhoods make over three times as many transit trips and nearly four times as many walk and bicycle trips as households located in neighborhoods with poor pedestrian environments."[2] "Households in the highest pedestrian-friendly areas drive half as much as those in the least pedestrian-friendly areas."[3] "The analysis suggests that VMT per household in pedestrian-hostile neighborhoods would be reduced by as much as 10% with a significant improvement in the pedestrian environment."[4]

Similarly, the proposed pedestrian-oriented streetscape improvements along the study corridors will enhance overall pedestrian environment and bus access from adjacent land uses to bus stops, thereby increasing bus ridership, improving BLOS, and reducing VMT.

[2] Source: 1000 Friends of Oregon, 1994.
[3] Source: Sierra Club.
[4] Source: 1000 Friends of Oregon, 1994.

The Houston-Galveston planning region has adopted a method for calculating air quality benefits for projects that compete in the TIP funding process for competitive CMAQ Improvement Program funds. The UDA has been successful in receiving this source of funding in past cycles for the streetscape improvement and signalization projects. *Table 5.1* represents the air quality benefits derived from the streetscape improvement program using this adopted method to calculate a reduction in pollutants.

Table 5.1 - Bicycle/Pedestrian Lanes or Paths for Facility Parallel to Existing Roadway (Bicycle/Pedestrian Programs) (AADT*PMS*L*EF = Daily Emission Reduction)

Pollutant	***Average Annual Daily Traffic[(1)] (Vehicles/Day)***	***Percentage Mode Shift[(2)]***	***Length of Facility (Miles)[(3)]***	***Emission Factor[(4)]***	***Daily Emission Reduction (Grams/Day)***
NOx	74,490	0.05	7	1.039	27,088.289
VOC	74,490	0.05	7	0.891	23,229.707
CO	74,490	0.05	7	7.957	207,450.926

(1) Average for major arterials to be improved.
(2) Shift from driving to bike/pedestrian, assumed 5% based on increased pedestrian circulation and facilities.
(3) Approximate distance of all streets to be improved.
(4) Speed-based running exhaust emission factor for participant's trip before participating in bike/ped. program (grams per mile), 24-hour fleet composite, 30 mph arterial.

The air quality benefits attributed to the signalization program and accepted by the Houston-Galveston planning region were discussed in Chapter 4.

Chapter 6 – Funding and Implementation Strategy

Since Uptown Houston will actively lead the implementation and maintenance of capital infrastructure projects to enhance transit access within the district, it is essential for Uptown to have the financial tools necessary for ultimate program success. A sound capital plan must incorporate all potential expenditures and the scheduling of such improvements. Similarly, a reliable source of revenue must be available to support these anticipated costs. This chapter provides an overview of project costs, phasing of capital improvements, and potential sources of revenue. This chapter also is particularly focused on maximizing the impact of Uptown taxpayer expenditures by leveraging local dollars against available state and federal funding resources. The net result is a comprehensive and flexible financial plan that can assist Uptown in implementing its vision for a pedestrian- and transit-friendly environment.

FTA LCI Program's Relationship to Federal Funding

As discussed in the Introduction, the *Uptown Houston Pedestrian/Transit Master Plan* has been developed in accordance with the Federal Transit Administration's (FTA) Livable Communities Initiative (LCI) program, which provides a framework for the design of streetscape improvements that enhance pedestrian and transit user access to transit facilities and services. Under the LCI program, pedestrian/transit access improvements are eligible within a 500-ft. radius of a transit stop and within 1,500 feet around a transit terminal. Improvements such as sidewalks, Americans with Disabilities Act (ADA) ramps, street trees, street furniture (benches and trash receptacles), transit shelters, and pedestrian lighting are considered eligible by FTA for inclusion within a capital grant, if they demonstrate improved pedestrian/transit access. Although the LCI program does not have any specific funding source *attached* to it, the development of project components and qualification of costs in accordance with the program greatly enhances the fundability of a transit access-based urban revitalization effort. Within the LCI framework, funding for capital improvements could come from the Section 5309 Discretionary, Congestion Mitigation and Air Quality (CMAQ) Improvement Program, or Statewide Transportation Enhancement Program (STEP).

Federal and State Funding Resources

There are a variety of federal, state, and regional (Metropolitan Planning Organization [MPO]) resources available to provide a significant portion of project funds (typically 80%) to support implementation of the *Uptown Houston Pedestrian/Transit Master Plan (see Appendix A for detail)*. In terms of program eligibility, the most logical federal funding resources for the plan to be funded from include the following:

- **Congestion Mitigation and Air Quality (CMAQ) Improvement Program** selected by the MPO (H-GAC) through the Transportation Improvement Program (TIP) selection process.

- **Congressional Discretionary Funding** (selected by Congress in its annual Appropriations process, and every six years during transportation reauthorization)
- **Statewide Transportation Enhancement Program** (STEP) selected by the Texas Transportation Commission, and administered by the Texas Department of Transportation (TxDOT).

Uptown has been actively involved in the pursuit of federal funding resources and has obtained funding in the following (federal) amounts from the resources identified below:

- **$1,178,240** in CMAQ funds from the MPO for pedestrian/transit access improvements.
- **$1,471,400** in CMAQ funds from the MPO for signalization improvements, including crosswalks, and bus priority signal pre-emption.

These advanced federal funds will allow Uptown to begin design as early as FY2006, and file its initial grant by FY 2007. Subsequent phases of work on the Transit Access Plan would require Uptown to additional submit project requests to Congress, TxDOT, and the MPO as project calls occur.

Local Share Funding

Within its own capital improvement program, Uptown should plan on participating in each project phase at a 20 percent minimum level, to ensure local commitment to the Masterplan. However, there are some other alternatives, which may be available for Uptown to meet its commitment to the plan by minimizing additional local cash outlay. These include the following:

- Capturing the value of Uptown CIP infrastructure improvements within an FTA Letter of No Prejudice (LONP);
- Capturing "other" local value within an LONP, including eligible activities such as sidewalk and landscaping improvements by developers, or the value of right-of-way donation for pedestrian pathways.
- State Transportation Development Credits (formerly known as State Toll Road Credits)

Additional details on each of these local share funding alternatives are included in *Appendix A*, Federal and State Funding Programs.

Project Phasing and Costs

The *Uptown Houston Pedestrian/Transit Master Plan* will be implemented in five phases as federal and local share funding becomes available. *Table 6.1* depicts a proposed project phasing plan, and also includes details where federal funding has already been secured.

[Note that the project phasing plan is intended to be flexible, in order to accommodate the timing of other capital projects within Uptown, prevailing local priorities that result from public meetings, and input from elected officials and the board of directors.]

Table 6.1 - Estimated Project Costs for Uptown Houston Pedestrian Streetscape/Signal Improvements

Phase	*Corridors*	*Description*	*Total Cost*	*Federal/Local Share*
FUNDED (2006-2008 TIP - CMAQ)				
I	Westheimer	Streetscape Improvements	$2,356,480	50/50
I	8 Intersections	Signal/Crosswalk Improvements	$2,600,000	57/43
		Total	**$4,956,480**	
UNFUNDED				
II	McCue	Streetscape Improvements	$511,500	TBD
II	San Felipe	Streetscape Improvements	$500,500	TBD
III	W. Alabama, Sage, Hidalgo, Richmond	Streetscape Improvements	$3,958,436	TBD
IV	Secondary Streets	Streetscape Improvements	$2,580,368	TBD
V	Post Oak Boulevard	Streetscape Improvements	$10,183,360	TBD
		Total	**$22,690,644**	

A breakdown of detailed costs for each corridor is included as *Appendix D*.

FTA Federal Letter of No Prejudice: Pre-Award Authority

In some instances, capital improvements already planned by a local government, the county, a Tax Increment Reinvestment Zone (TIRZ), a management district, or even private developers may also qualify as "local share match," provided that such eligible improvements are included in an FTA LONP. Once issued by FTA, an LONP protects specific investments related to transit infrastructure for up to five years, provided that federal procurement procedures are followed for the phases of work for which future reimbursement is sought. This tool has been utilized effectively to protect local investment in infrastructure in advance of the receipt of federal funds within Houston's Midtown Management District, The Woodlands, Galveston, El Paso, and several other transit-oriented communities where urban development/redevelopment has been a priority. As the LONP is a practical tool for protecting local share value, it is therefore recommended that the entire *Uptown Houston Pedestrian/Transit Master Plan* be included within an approved FTA LONP.

Joint Development Provisions

Significant opportunities exist within the federal transit administration framework for "joint development" of capital facilities such as a transit terminal or a park & ride to occur, through a partnership between the county, local governments, a TIRZ, and private developers to create an environment conducive to successful pedestrian and transit usage. For example, a developer, private property, TIRZ, or local government could donate land in lieu of cash local share match for a transit terminal. A long-term lease (30 years or more) could also serve as a local share contribution to a capital project. Under current FTA guidelines, federal funds can also be utilized to construct complementary uses within a park and ride site or terminal facility, including, but not limited to, a laundry, daycare, banking, retail, or restaurant space. Profits derived from leases of such uses can be utilized to cover the operating and maintenance cost of the facility. Although the federal government will construct the shell for supporting uses, they will not fund the internal "buildout" of the space. The underlying premise of such joint-use development is that when complementary uses are housed within the same facility as transit services, it enhances the services available to transit users, and thus increases and retains transit ridership. The proposed Uptown-Westpark Transit Terminal would be an ideal site for joint use development within the district.

Uptown's Role in Project Implementation

It is recommended that Uptown remain active in the project implementation process by becoming an additional FTA grantee for the Houston Urbanized Area (UZA). This action will allow Uptown to directly file grants with FTA for funding obtained from Congressional and MPO resources. As a result, Uptown will exercise greater control of the project implementation process, so long as federal procurement procedures are followed. This provides an alternative to utilizing the TxDOT project implementation process, which can typically be more time consuming and costly due to review fee requirements, which can range from 10 to 20% of the project cost. Houston METRO, as the designated recipient of FTA Formula funds for the Houston UZA, must concur with establishment of Uptown as an additional FTA grantee. However, there is recent precedent, including the establishment of the Midtown Management District as an additional grantee. Midtown has already been successful in completing construction of a $1.5 million Phase I streetscape improvement project along Elgin, *between Main Street and Hamilton*.

Conclusion

Transit is an effective tool for improving mobility, enhancing accessibility to employment, spurring economic development, and promoting community aesthetics. As the lead agency in constructing and maintaining capital improvements within the district, Uptown Houston can bring multiple parties together to bring the ultimate vision of a high-tech, high density residential and office district served effectively by transit to fruition. There are several tools in the FTA LCI program and joint development provisions to implement capital improvements in a reasonable timeframe by maximizing the impact of local investments, and leveraging them against available federal funds. These improvements might not otherwise be pursued without Uptown's pro-active involvement in bringing multiple entities from both the public and private sectors to the table for a common purpose. Area-wide pedestrian/transit access enhancements,

signalization and crosswalk improvements, and a multimodal terminal for commuter and local transit to interface will all greatly compliment the surface transportation system within Uptown, to make it more accessible, safer, and less congested. These types of projects can help promote additional residential and commercial densities, more efficient land use, higher property values, and long-term community sustainability and neighborhood cohesion.

Existing Conditions Inventory

Westheimer Road Between IH 610 West and Chimney Rock Road – NORTH SIDE		
Component	***Rating***	***Explanation***
Westheimer Road – IH 610 West to Post Oak Boulevard		
Sidewalk Width	1	Varies from 46 inches to 48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	18 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Westheimer Road – Post Oak Boulevard to McCue Road		
Sidewalk Width	1	42 inches to 90 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	2	None
Street Amenities	0	2 bus shelters and 2 waste receptacles
Pedestrian Signage	2	None
Score	**9**	
Westheimer Road – McCue Road to Sage Road		
Sidewalk Width	1	Varies from 47 inches to 162 inches in front of Marriott Hotel, average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	2	None, short 48-inch strip in front of A. Taghi retail store (shrubs, 4 poles, bollards)
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**9**	
Westheimer Road – Sage Road to Yorktown Street		
Sidewalk Width	1	Varies from 47 inches to 48 inches, average condition
ADA Ramps	1	No ADA ramp near Sage
Pedestrian Lighting	2	None
Landscaping	1	Mostly grass only, 6 trees in planting strip near west end
Planting Strip	0	Varies from 56 inches to 90 inches
Street Amenities	0	2 bus shelters and 2 waste receptacles
Pedestrian Signage	2	None
Score	**7**	

Westheimer Road – Yorktown Street to Chimney Rock Road		
Sidewalk Width	1	Varies from 44 inches to 60 inches, average condition
ADA Ramps	1	Good condition, 1 ramp not sloped
Pedestrian Lighting	2	None
Landscaping	1	120-inch strip with 7 trees midway in front of office buildings
Planting Strip	1	Varies from 16 inches to 120 inches
Street Amenities	0	1 shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**8**	

Westheimer Road Between IH 610 West and Chimney Rock Road – SOUTH SIDE		
Component	***Rating***	***Explanation***
Westheimer Road – IH 610 West to Post Oak Boulevard		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	18 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Westheimer Road – Post Oak Boulevard to McCue Road		
Sidewalk Width	1	48 inches, average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Nicely landscaped trees in planting strip
Planting Strip	0	105 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**5**	
Westheimer Road – McCue Road to Sage Road		
Sidewalk Width	1	48 inches, average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Nicely landscaped trees
Planting Strip	0	105 inches
Street Amenities	0	2 bus shelters and 2 waste receptacles
Pedestrian Signage	2	None
Score	**5**	
Westheimer Road – Sage Road to Yorktown Street		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	1	Grass only, except trees planted in front of Double Tree Hotel
Planting Strip	0	Varies from 45 inches to 118 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**6**	

Westheimer Road – Yorktown Street to Chimney Rock Road		
Sidewalk Width	1	Varies from 46 inches to 92 inches, average-to-poor condition
ADA Ramps	1	Chimney Rock not ADA-accessible, no crosswalks at W. Alabama exit
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	None to 45 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**9**	

Post Oak Boulevard Between Richmond Avenue and IH 610 West – EAST SIDE		
Component	***Rating***	***Explanation***
Post Oak Boulevard – Richmond Avenue to Hidalgo Street		
Sidewalk Width	2	44 inches, poor-to-average condition, no sidewalk 2 blocks past Richmond (under construction)
ADA Ramps	1	4 corners without ADA ramps, ramp at Hidalgo in good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	40 inches, no planting strip in areas
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**10**	
Post Oak Boulevard – Hidalgo Street to W. Alabama Street		
Sidewalk Width	1	48 inches, 100 inches in front of Hampton Assisted Living Center, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	54 inches, none in front of Hampton Center
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Post Oak Boulevard – W. Alabama Street to Westheimer Road		
Component	***Rating***	***Explanation***
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	54 inches, narrows to 18 inches in front of The Galleria
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**8**	
Post Oak Boulevard – Westheimer Road to Ambassador Way		
Sidewalk Width	1	44 inches, good-to-average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	Varies from 58 to 82 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	

Post Oak Boulevard – Ambassador Way to San Felipe Street		
Sidewalk Width	1	44 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	0	58 inches to 82 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	
Post Oak Boulevard – San Felipe Street to Four Oaks Place		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	48 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – Four Oaks Place to Uptown Park Boulevard		
Component	***Rating***	***Explanation***
Sidewalk Width	1	48 inches, good-to-average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	55 inches
Street Amenities	0	1 bus shelter, 1 bench at bus stop, and 2 waste receptacles
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – Uptown Park Boulevard to IH 610 West		
Sidewalk Width	1	48 inches, good-to-average condition
ADA Ramps	0	Good-to-average condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	55 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	

Post Oak Boulevard Between Richmond Avenue and IH 610 West – WEST SIDE		
Component	***Rating***	***Explanation***
Post Oak Boulevard – Richmond Avenue to Hidalgo Street		
Sidewalk Width	1	48 inches, good-to-average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	1	Midway on block the planting strip has some landscaping
Planting Strip	1	48 inches to 192 inches, area near Richmond has no planting strip
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	
Post Oak Boulevard – Hidalgo Street to W. Alabama Street		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	42 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – W. Alabama Street to Westheimer Road		
Sidewalk Width	0	60 inches to 72 inches, good-to-average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Landscaped trees in planting strip
Planting Strip	1	72 inches to 96 inches, no planting strip between Westheimer and first Galleria driveway
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**5**	
Post Oak Boulevard – Westheimer Road to Ambassador Way		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	Varies from 12 to 102 inches
Street Amenities	0	2 bus shelters and 2 waste receptacles
Pedestrian Signage	2	None
Score	**8**	

Post Oak Boulevard – Ambassador Way to San Felipe Street		
Sidewalk Width	1	48 inches, good-to-average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	Varies from 70 to 102 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – San Felipe Street to Four Oaks Place		
Sidewalk Width	1	48 inches, good condition, bad condition in area closest to Four Oaks Place
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	Varies from 174 to 24 inches, area in front of Mama Ninfa's Restaurant has no planting strip
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – Four Oaks Place to Uptown Park Boulevard		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Planting strip landscaped with mature trees
Planting Strip	0	168 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**7**	
Post Oak Boulevard – Uptown Park Boulevard to IH 610 West		
Sidewalk Width	0	72 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	0	8 pedestrian lights along retail side
Landscaping	0	Newly planted trees
Planting Strip	0	114 inches and landscaped
Street Amenities	1	2 benches
Pedestrian Signage	2	None
Score	**3**	

Richmond Avenue Between IH 610 West and Chimney Rock Road - NORTH SIDE		
Component	***Rating***	***Explanation***
Richmond – IH 610 West to Sage Road		
Sidewalk Width	1	48 inches, good to average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	24 inches, none near Sage Road
Street Amenities	0	2 bus shelters and 2 waste receptacles
Pedestrian Signage	2	None
Score	**8**	
Richmond – Sage Road to Rice Avenue		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good to average condition
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in planting strip
Planting Strip	1	115 inches, no strip at Rice Avenue in front of service station
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**6**	
Richmond – Rice Avenue to Yorktown Street		
Sidewalk Width	1	48 inches, good-to-average condition
ADA Ramps	1	Adequate condition at Rice, in need of repairs, good condition at Yorktown
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in planting strip
Planting Strip	0	116 inches, good condition
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	
Richmond – Yorktown Street to Lampasas Street		
Sidewalk Width	1	48 inches, average-to-poor condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in planting strip
Planting Strip	0	116 inches
Street Amenities	0	1 bus shelter, 1 waste receptacle
Pedestrian Signage	2	None
Score	**5**	

Richmond – Lampasas Street to Chimney Rock Road		
Sidewalk Width	1	48 inches, good condition, a few poor areas
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in plantings strip
Planting Strip	0	116 inches
Street Amenities	0	1 bus shelter, 1 waste receptacle
Pedestrian Signage	2	None
Score	**5**	

Richmond Avenue Between IH 610 West and Chimney Rock Road - SOUTH SIDE		
Component	***Rating***	***Explanation***
Richmond – W. Loop 610 to McCue Road		
Sidewalk Width	0	70 inches, good condition, poor condition near McCue
ADA Ramps	0	Average ADA ramp at McCue, good ramp at W. Loop 610
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	30 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**7**	
Richmond – McCue Road to Sage Road		
Sidewalk Width	1	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	1	Nicely landscaped planting strip at east end, no landscaping in planting strip at west end
Planting Strip	0	118 inches
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	
Richmond – Sage Road to Rice Avenue		
Sidewalk Width	1	48 inches, good condition, no sidewalk near Rice
ADA Ramps	1	Adequate condition at Rice, good condition at Sage
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	1	30 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**9**	
Richmond – Rice Avenue to Yorktown Street		
Sidewalk Width	1	48 inches, average condition
ADA Ramps	1	Adequate condition, in need of repair
Pedestrian Lighting	2	None
Landscaping	2	None in planting strip
Planting Strip	0	118 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**8**	

Richmond – Yorktown Street to Barrington Road		
Sidewalk Width	1	48 inches, average condition
ADA Ramps	1	Adequate condition, in need of repairs
Pedestrian Lighting	2	None
Landscaping	0	Landscaped trees in planting strip
Planting Strip	0	118 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**6**	
Richmond – Barrington Road to Chimney Rock Road		
Sidewalk Width	1	48 inches, good to poor condition
ADA Ramps	1	Adequate condition, in need of repairs
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in planting strip
Planting Strip	0	114 inches
Street Amenities	0	1 bus shelter and 1 waste receptacle
Pedestrian Signage	2	None
Score	**6**	

W. Alabama Between Westheimer and Post Oak Boulevard – NORTH SIDE		
Component	***Rating***	***Explanation***
W. Alabama – Post Oak Boulevard to McCue		
Sidewalk Width	1	4 ft. good to average condition, some repairs in front of parking garage needed
ADA Ramps	0	Good condition at Post Oak Boulevard, driveway at McCue
Pedestrian Lighting	2	None
Landscaping	0	None from Post Oak Boulevard to mall parking garage, at garage sandy, little grass, mature trees
Planting Strip	0	5 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**7**	
W. Alabama – McCue to Sage		
Sidewalk Width	1	4 ft. and good-to-average condition, Macy's store-5 ft. average condition
ADA Ramps	0	Good condition at Sage, driveway at McCue
Pedestrian Lighting	2	None
Landscaping	0	Mature trees
Planting Strip	0	5 ft., changes to 6 ft. in front of Macy's
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**7**	
W. Alabama – Sage to Rice		
Sidewalk Width	1	4 ft., good condition
ADA Ramps	0	Good condition at Sage, driveway at Rice
Pedestrian Lighting	2	None
Landscaping	1	Mature trees midway near Rice, none near Sage
Planting Strip	0	4 ft., expands in front of parking lot to 12 ft. with trees, then narrows again to 4 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	
W. Alabama – Rice to Yorktown		
Sidewalk Width	1	4 ft., good-to-average condition with repairs needed near Yorktown
ADA Ramps	0	Good condition at Yorktown, driveway at Rice
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	0	Varies 3 to 4 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	

W. Alabama – Yorktown to Westheimer		
Component	***Rating***	***Explanation***
Sidewalk Width	1	4 ft good, a few areas in need of repair
ADA Ramps	0	Good condition on both
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	0	4 ft
Street Amenities	2	None
Pedestrian Signage	2	None
Utilities	0	None in way
Score	**9**	

W. Alabama Between Westheimer and Post Oak Boulevard – SOUTH SIDE		
Component	***Rating***	***Explanation***
W. Alabama – Post Oak Boulevard to McCue		
Sidewalk Width	1	4 ft. average condition
ADA Ramps	0	Both good
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	0	3 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	
W. Alabama – McCue to Sage		
Sidewalk Width	1	5 ft. good condition, past The Galleria 4 ft. in good condition
ADA Ramps	0	Good condition on both
Pedestrian Lighting	1	None except under The Galleria crosswalk
Landscaping	0	Newly planted trees in strip before and after The Galleria crosswalk
Planting Strip	0	4 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**6**	
W. Alabama – Sage to Rice		
Sidewalk Width	1	4 ft. good condition
ADA Ramps	0	Good condition on both
Pedestrian Lighting	2	None
Landscaping	0	Newly planted trees in strip
Planting Strip	1	5 ft. narrows to 2 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	
W. Alabama – Rice to Yorktown		
Sidewalk Width	1	4 ft. average condition
ADA Ramps	0	Good condition on both
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	0	4 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Utilities	0	None in way
Score	**9**	

W. Alabama – Yorktown to Westheimer		
Sidewalk Width	2	4-ft. average-to-poor condition with one very bad dip, no sidewalk 10 ft. near Yorktown
ADA Ramps	0	Good condition at both McCulloch and Yorktown
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	0	4 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Utilities	0	None in way
Score	**10**	

Hidalgo Between Post Oak Boulevard and Rice – NORTH SIDE		
Component	***Rating***	***Explanation***
Hidalgo – Post Oak Boulevard to McCue		
Sidewalk Width	1	4 ft. average condition, near McCue 5-ft. sidewalk
ADA Ramps	0	Both good
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	1	3 ft., no strip near McCue
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Hidalgo McCue to Sage		
Sidewalk Width	1	4 ft. good condition, widens to 5-ft. sidewalk, no sidewalk near Sage
ADA Ramps	0	Both good
Pedestrian Lighting	2	None
Landscaping	1	Newly planted trees on half of block, none on other half
Planting Strip	1	4-5 ft., no strip near Sage
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	
Hidalgo – Sage to Rice		
Sidewalk Width	0	5 ft. good condition
ADA Ramps	0	Good condition at Sage
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	

Hidalgo Between Post Oak Boulevard and Rice – SOUTH SIDE		
Component	***Rating***	***Explanation***
Hidalgo – Post Oak Boulevard to McCue		
Sidewalk Width	1	5 ft. good condition, approx. 20-ft. area of no sidewalk near McCue
ADA Ramps	0	Good condition at Post Oak Boulevard
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	1	2 ft. only on half the block (sandy with little grass) and other half none
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Hidalgo – McCue to Sage		
Sidewalk Width	1	4 ft. good condition, near Sage bad condition, no sidewalk in front of parking garage but approx. 8 ft. of landscaping, no planting strip past garage and 5-ft. sidewalk
ADA Ramps	0	Good condition at Sage
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	1	1½ ft. most of segment, none at parking garage and none past parking garage to McCue
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Hidalgo – Sage to Rice		
Sidewalk Width	1	4 ft., good condition
ADA Ramps	0	Both good
Pedestrian Lighting	2	None
Landscaping	2	None in strip
Planting Strip	1	1 ft.
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	

S. Post Oak Lane Near San Felipe – EAST SIDE		
Component	***Rating***	***Explanation***
S. Post Oak Lane – North of San Felipe Street		
Sidewalk Width	0	48 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	Bus stop, but no shelter, bench, or waste receptacle
Pedestrian Signage	2	None
Score	**10**	
S. Post Oak Lane Near San Felipe – WEST SIDE		
S. Post Oak Lane – North of San Felipe Street		
Sidewalk Width	0	48 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	1	1 foot narrow planting strip with grass only
Street Amenities	2	Bus stop but no shelter, bench, or waste receptacle
Pedestrian Signage	2	None
Score	**9**	

Sage Road Between US 59 and Westheimer – EAST SIDE		
Component	***Rating***	***Explanation***
Sage – Westheimer to North of Westheimer		
Sidewalk Width	0	48 inches to 60 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Sage – Westheimer to W. Alabama		
Sidewalk Width	0	48 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	0	Developed trees in planting strip
Planting Strip	0	Adequate planting strip
Street Amenities	0	2 bus stops – 1 with new amenities and 1 with bench only
Pedestrian Signage	2	None
Score	**4**	
Sage – W. Alabama to Hidalgo		
Sidewalk Width	0	60 inches, average condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Shade trees on adjacent property
Planting Strip	1	Approx. 1-ft. planting strip with grass
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**7**	
Sage – Hidalgo to Richmond		
Sidewalk Width	0	48 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	1	Some shade trees on adjacent property
Planting Strip	1	Approx. 1-ft. planting strip with grass
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	

Sage – Richmond Avenue to US 59		
Component	***Rating***	***Explanation***
Sidewalk Width	1	60 inches, average condition, some areas in bad condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	0	Adequate planting strip with grass
Street Amenities	0	2 bus stops with amenities
Pedestrian Signage	2	None
Score	**7**	

Sage Road Between US 59 and Westheimer – WEST SIDE		
Component	***Rating***	***Explanation***
Sage – North of Westheimer Road to Westheimer Road		
Sidewalk Width	0	60 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	1	Shade trees on adjacent property
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**9**	
Sage – Westheimer Road to W. Alabama		
Component	***Rating***	***Explanation***
Sidewalk Width	0	48 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	1	None in planting strip, shade trees on adjacent property
Planting Strip	1	Approx. 1-ft. planting strip with grass
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**8**	
Sage – W. Alabama to Hidalgo		
Sidewalk Width	0	60 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	0	Trees
Planting Strip	0	Adequate planting strip with trees
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**6**	
Sage – Hidalgo to Richmond Avenue		
Sidewalk Width	0	60 inches, good condition
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	1	Some shade trees on adjacent property
Planting Strip	0	Approx. 2-ft. planting strip with grass
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**7**	

Sage – Richmond Avenue to US 59		
Sidewalk Width	0	48 inches to 60 inches, average condition
ADA Ramps	0	Average condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	0	Adequate planting strip with grass
Street Amenities	0	Bus stop with new amenities
Pedestrian Signage	2	None
Score	**6**	

Ambassador Way – Post Oak Boulevard to McCue Road **NORTH SIDE**		
Sidewalk Width	2	None
ADA Ramps	0	Good condition
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	1	Commercial business signage
Score	**11**	
Ambassador Way – Post Oak Boulevard to McCue Road **SOUTH SIDE**		
Sidewalk Width	1	None except near Post Oak Boulevard in front of building that is in good condition and 6 ft.
ADA Ramps	0	Good condition
Pedestrian Lighting	1	Pedestrian-scale lights along parking lot and commercial building on Post Oak Boulevard
Landscaping	1	Small area of strip landscaped
Planting Strip	1	Only near Post Oak Boulevard along commercial building that is 8.5 ft.
Street Amenities	2	None
Pedestrian Signage	1	Commercial business signage
Score	**7**	

Garretson Lane – Post Oak Boulevard to San Felipe Street ***EAST SIDE***		
Sidewalk Width	2	None
ADA Ramps	1	Good condition at Post Oak Boulevard, no ramp at San Felipe
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**13**	
Garretson Lane – Post Oak Boulevard to San Felipe Street ***WEST SIDE***		
Sidewalk Width	2	None
ADA Ramps	1	Good condition at Post Oak Boulevard, no ramp at San Felipe. No curb on half of block.
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**13**	

Guilford Court – Post Oak Boulevard to McCue Road **NORTH SIDE**		
Sidewalk Width	1	None, 6-ft. sidewalk in good condition in front of One Post Oak Boulevard Central. Narrows to 5 ft. past building and ends mid-block
ADA Ramps	1	Good condition at Post Oak Boulevard, no ramp at McCue
Pedestrian Lighting	2	None
Landscaping	1	Landscaped where there is a planting strip
Planting Strip	1	None except 6-ft. strip in front of One Post Oak Boulevard Central
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**10**	
Guilford Court – Post Oak Boulevard to McCue Road **SOUTH SIDE**		
Sidewalk Width	2	None
ADA Ramps	2	Ramp area at McCue under construction, none at Post Oak Boulevard
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	2	None
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**14**	

Hallmark Drive – San Felipe Street to W. Loop 610 **NORTH SIDE**		
Sidewalk Width	1	4 ft. on western end of block in excellent condition, none mid-block and eastern half
ADA Ramps	2	None
Pedestrian Lighting	2	None
Landscaping	2	None where there is a planting strip
Planting Strip	1	4 ft. planting strip on western end of block
Street Amenities	2	None
Pedestrian Signage	2	None
Utilities	1	In the way of continuing the sidewalk to San Felipe
Score	**13**	
Hallmark Drive – San Felipe Street to W. Loop 610 **SOUTH SIDE**		
Sidewalk Width	1	Eastern half of block has 4 ft. sidewalk in good condition, none on western half
ADA Ramps	2	None
Pedestrian Lighting	2	None
Landscaping	2	No landscaping where there is a strip
Planting Strip	1	4 ft. where there is sidewalk
Street Amenities	2	None
Pedestrian Signage	2	None
Utilities	0	None in way
Score	**12**	

Hollyhurst Lane – Hallmark Drive to Post Oak Boulevard **EAST SIDE**		
Sidewalk Width	2	Southern portion of block in bad condition and 3 ft., there is no sidewalk along commercial building, at Post Oak Boulevard excellent condition and 4 ft.
ADA Ramps	1	None at Hallmark, excellent condition at Post Oak Boulevard
Pedestrian Lighting	2	None
Landscaping	2	No landscaping where there is a strip
Planting Strip	1	6 ft. where there is sidewalk
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**12**	
Hollyhurst Lane – Post Oak Boulevard to Hallmark Drive **WEST SIDE**		
Sidewalk Width	1	4 ft. excellent condition, no sidewalk on southern end
ADA Ramps	1	Excellent condition at Post Oak Boulevard, none at Hallmark
Pedestrian Lighting	2	None
Landscaping	2	None
Planting Strip	1	10-ft. strip near Post Oak Boulevard, none along the rest of block
Street Amenities	2	None
Pedestrian Signage	2	None
Score	**11**	

Federal and State Funding Programs

Capital Improvement Funding Strategies

There are several categories of federal and state funds for the implementation of the transit-pedestrian corridors within the Master Plan that Uptown-Houston should be considered during the pursuit of funds to support both transit services and transit capital improvements. These include:

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

The purpose of the CMAQ program is to fund transportation projects or programs that contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone and carbon monoxide (CO). The construction of transit facilities such as park and rides and terminals are eligible for up to three years of federal assistance under the CMAQ program. In addition, the construction of bicycle and pedestrian facilities also are eligible under the CMAQ program. CMAQ-funded projects are selected on a competitive basis by the MPO (H-GAC) on a semi-annual basis, in conjunction with the development of the three-year Transportation Improvement Program (TIP). The MPO reviews and ranks CMAQ project requests and recommends selection based on a variety of factors, including the air quality benefits (cost per pound of pollutant reduced), system connectivity, environmental justice, regional significance. Project readiness, which includes prior inclusion in the Regional Transportation Plan (RTP), local share commitment, completion of preliminary engineering, environmental analysis, and right-of-way acquisition also are prerequisites for full consideration. The CMAQ program is traditionally funded on an 80 percent federal/20 percent local basis. However, sponsors are able to improve project scores by increasing the percentage of local share participation. Note: Uptown has already been prioritized for the first phase of streetscape improvements through MPO selected CMAQ funds.

FTA Section 5307 Urbanized Program

Capital and planning activities are eligible under the FTA 5307 Formula Program at an 80% federal, 20% local. An example of capital expenditure would be the purchase of new transit vehicles, shelters, or other capital items that supports transit services. Houston METRO is the designated recipient for Houston UZA funds, but could provide financial support for specific 5307 funded improvements in cooperation with Uptown.

FTA Section 5309 Discretionary Program

FTA's Section 5309 Discretionary Program provides funding on an 80 percent federal/20 percent local share basis to fund eligible transit capital needs, including transit access and streetscape improvements developed in accordance with the LCI program. Congress selects the FTA Discretionary funds during its annual Transportation Appropriations process and also every six years under the Transportation Reauthorization process. Applicants must be eligible FTA grantees, such as a county, municipality, a municipal management district, or a transit authority.

FHWA Transportation and Community and System Preservation (TCSP) Program

The TCSP program provides funding for grants and research to investigate and address the relationship between transportation and community and system preservation. Local governments are eligible for discretionary grants to plan and implement strategies that improve the efficiency of the transportation system, reduce environmental impacts of transportation, reduce the need for costly future public infrastructure investments, ensure efficient access to jobs, services, and centers of trade, examine development patterns, and identify strategies to encourage private sector development patterns that achieve these goals. Projects eligible for federal highway and transit funding or other activities determined by the Secretary of Transportation to be appropriate also are eligible for TCSP funding.

Statewide Transportation Enhancement Program (STEP)

The goal of the program is to encourage diverse modes of travel, increase the community benefits to transportation investment, strengthen partnerships between state and local governments and promote citizen involvement in transportation decisions. To be eligible for consideration, all projects must demonstrate a relationship to the surface transportation system through either function or impact, go above and beyond standard transportation activities; and incorporate one of the following 12 categories:

- Provision of facilities for pedestrians and bicycles
- Provision of safety and education activities for pedestrians and bicyclists
- Acquisition of scenic easements and scenic and historic properties
- Scenic or historic highway programs (including providing tourist and welcome center facilities)
- Landscaping and other scenic beautification
- Historic preservation
- Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals)
- Preservation of abandoned railway corridors (including the conversion and use for pedestrian and bicycle facilities)
- Control and removal of outdoor advertising
- Archaeological planning and research
- Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity
- Establishment of transportation museums

STEP is a statewide competitive program and is administered in accordance with applicable federal and state rules and regulations. Projects are submitted to TxDOT and the MPO for review, and selected for funding by the Texas Transportation Commission. The funds provided by this program are on a cost reimbursement basis and is not a grant. Projects undertaken with enhancement funds are eligible for reimbursement of up to 80 percent of allowable costs. The

governmental entity nominating a project is responsible for the remaining cost share, including all cost overruns.

Surface Transportation Program (STP)

Purpose: The STP provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors. STP is the largest FHWA flexible funds program. Funding is at 80 percent Federal share and may be used for all projects eligible for funds under current FHWA and FTA programs.

Eligible Activities: A State may obligate funds apportioned to it for the surface transportation program only for the following:

- Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for highways (including Interstate highways) and bridges (including bridges on public roads of all functional classifications), including construction or reconstruction necessary to accommodate other transportation modes, and including the seismic retrofit and painting of and application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and de-icing compositions on bridges and approaches thereto and other elevated structures, mitigation of damage to wildlife, habitat, and ecosystems caused by a transportation project funded under this program.
- Capital costs for transit projects eligible for assistance, including vehicles and facilities, whether publicly or privately owned, that are used to provide intercity passenger service by bus.
- Carpool projects, fringe and corridor parking facilities and programs, bicycle transportation and pedestrian walkways, and the modification of public sidewalks to comply with the Americans with Disabilities Act of 1990.
- Highway and transit safety infrastructure improvements and programs, hazard eliminations, projects to mitigate hazards caused by wildlife, and railway-highway grade crossings.
- Highway and transit research and development and technology transfer programs.
- Capital and operating costs for traffic monitoring, management, and control facilities and programs.
- Surface transportation planning programs.
- Transportation enhancement activities.
- Transportation control measures listed under the Clean Air Act.
- Development and establishment of management systems.
- Participation in natural habitat and wetlands mitigation efforts related to projects funded by this program, which may include participation in natural habitat and wetlands mitigation banks; contributions to statewide and regional efforts to conserve, restore, enhance, and create natural habitats and wetlands; and development of statewide and regional natural habitat and wetlands conservation and mitigation plans, including any

banks, efforts, and plans authorized pursuant to the Water Resources Development Act of 1990.

- Infrastructure-based intelligent transportation systems capital improvements.
- Environmental restoration and pollution abatement projects (including the retrofit or construction of storm water treatment systems) to address water pollution or environmental degradation caused or contributed to by transportation facilities, which projects shall be carried out when the transportation facilities are undergoing reconstruction, rehabilitation, resurfacing, or restoration.

Responsible Governmental Agency: FHWA/MPO

Web Address: http://www4.law.cornell.edu/uscode/23/133.html

Local Share Match Funding Alternatives

There are several alternatives that exist to assist Uptown in meeting its local share funding requirements, as follows.

Uptown Bond or General Funds – Uptown may choose to include local share match within a bond program. For example, if a $5 million capital program is desired, Uptown would include $1 million within a future bond sale to meet local share match requirements. If the Uptown is already planning to expend local funds on sidewalks in the proposed project area, these expenditures can be captured and credited toward the overall federal project, as long as an approved FTA LONP has previously been obtained and the project is bid subject to federal requirements.

Land Value – For capital projects such as transit terminals, the value of land donated to the project can satisfy local share requirements. Land donations to a project could come from a developer, or other governmental entities.

State Transportation Development Credits – A state may use toll revenues that are generated and used by public, quasi-public, and private agencies to build, improve, or maintain highways, bridges, or tunnels that serve the public purpose of interstate commerce as credit toward the non-federal share requirement for any funds made available to carry out eligible Department of Transportation-related capital projects. A transit authority or municipality may apply to TxDOT-Public Transportation Division for Transportation Development Credits in lieu of local share cash for eligible transit capital facilities projects. The Texas Transportation Commission is responsible for awarding State Transportation Development Credits.

Capturing and Protecting Local Value: FTA Letter of No Prejudice (LONP)

A tool of great value to a Federal Transit Administration grantee is the LONP federal pre-award authority mechanism. Under an approved LONP, an eligible capital project can be "protected" for federal reimbursement for up to five years. This tool allows local governments and transit authorities to advance project activities with local funds, building "local share" credit toward the overall project, and allowing for subsequent federal reimbursement should discretionary, CMAQ, STEP or other funds be made available. Examples of successful projects within the Houston-Galveston region that utilized the LONP mechanism include The Woodlands Town Center Pedestrian/Transit Corridor; the Midtown Pedestrian-Transit Masterplan; the Galveston Island Rail Trolley; and the Galveston LCI Program. In order to receive an LONP and protect its

local investments, a project sponsor must meet FTA environmental clearance and advanced/preliminary engineering planning requirements, obtain approval of the LONP by the FTA Regional Office, and procure all bids for design, engineering, and construction in accordance with federal requirements.

FTA Livable Communities Initiative Program: A framework for urban design

The FTA LCI guidelines provide a framework for the design of streetscape improvements that enhance transit and pedestrian user access to transit facilities and services. Under the LCI program, transit-pedestrian access improvements are eligible within a 500-ft. radius of a transit stop and within 1,500 feet around a transit terminal. Improvements such as sidewalks, Americans with Disabilities Act (ADA) ramps, street trees, street furniture (benches and trash receptacles), transit shelters, and pedestrian lighting are considered eligible by FTA for inclusion within a capital grant, if they demonstrate improved transit-pedestrian access. Although the LCI program does not have any specific funding source "attached" to it, the development of project components and qualification of costs in accordance with the program greatly enhances the fundability of a transit access-based urban revitalization effort.

Purpose: The objectives of the initiative are to improve mobility and the quality of services available to residents of neighborhoods by:

- Strengthening the link between transit planning and community planning, including land use policies and urban design supporting the use of transit and ultimately providing physical assets that better meet community needs;
- Stimulating increased participation by community organizations and residents, minority and low-income residents, small and minority businesses, persons with disabilities and the elderly in the planning and design process;
- Increasing access to employment, education facilities and other community destinations through high quality, community-oriented, technologically innovative transit services and facilities; and
- Leveraging resources available through other Federal, State and local programs.

Eligible Activities: Eligible project planning activities include the following:

- Preparation of implementation plans and designs incorporating LCI elements;
- Assessment of environmental, social, economic, land use and urban design impacts of projects;
- Feasibility studies;
- Technical assistance;
- Participation by community organizations, and the business community, including small and minority owned businesses, and persons with disabilities,
- Evaluation of best practices; and
- Development of innovative urban design, land use and zoning practices.

Eligible capital activities or capital project enhancements of demonstration projects include the following:

- Property acquisition, restoration or demolition of existing structures, site preparation, utilities, building foundations, walkways, and open space that are physically and functionally related to mass transportation facilities;
- Purchase of buses, enhancements to transit stations, park & ride lots and transfer facilities incorporating community services such as daycare, health care, and public safety;
- Safety elements such as lighting, surveillance and community police and security services;
- Site design improvements including sidewalks, aerial walkways, bus access, and kiss & ride facilities; and
- Operational enhancements such as transit marketing and pass programs, customer information services, and advanced vehicle locating, dispatch, and information systems.

[Note that Congress has established independent financial appropriation to support the LCI program. Funding can be drawn from all SAFETEA-LU resources to meet LCI objectives.]

Responsible Governmental Agency: FTA

Web Address: http://www.fta.dot.gov/library/planning/livbro.html

Calculations for Signal Project Air Quality Reductions

Pedestrian Crossings

Location Post Oak at Briar

Land Use From	Land Use To	Direction W	Direction E	Size (1) S.F. or DU	Trips (2) (vehicular)	Trips (3) (pedestrian) 1.25	Percent (4) (Internal)	Trips (internal)	Percent (destination)	Trips Crossing	Distance (feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	80,000	3,546	4,432	30	1,330	70	931	1,700	15	140	25	35
Retail	Retail	<	<	80,000	3,546	4,432	30	1,330	30	399	1,700	15	60	75	45
Residence	Retail	>	>	600	3,516	4,395	38	1,670	100	1,670	1,500	20	334	100	334
Residence	Retail	<	<	0	0	0	38	0	0	0			0		0
Office	Retail	>	>	560,000	6,166	7,707	22	1,696	100	1,696	1,000	30	509	75	381
Office	Retail	<	<	0	0	0	22	0	0	0					0
Total					16,773	20,966		6,025		4,695			1,042		795

Data Required

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard.

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Post Oak and Boulevard Place

Land Use From	Land Use To	Direction W	Direction E	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian)	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
						1.25									
Retail	Retail	>	>	148,060	6,562	8,203	30	2,461	30	738	800	35	258	90	233
Retail	Retail	<	<	148,060	6,562	8,203	30	2,461	70	1,723	800	35	603	90	543
Residence	Retail	>	>	230	1,348	1,685	38	640	30	192	1,500	20	38	50	19
Residence	Retail	<	<	485	2,842	3,553	38	1,350	70	945	600	40	378	25	94
Office	Retail	>	>	0	0	0	22	0		0			0		0
Office	Retail	<	<	1,602,508	17,644	22,055	22	4,852	70	3,396	1,500	20	679	25	170
Total					34,958	43,697		11,764		6,994			1,957		1,059
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two-way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two-way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two-way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Post Oak and Guilford

Land Use From	Land Use To	Direction W	Direction E	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	5,165	229	286	30	86	90	77	600	40	31	25	8
Retail	Retail	<	<	5,165	229	286	30	86	10	9	600	40	3	25	1
Residence	Retail	>	>	265	1,553	1,941	38	738	90	664	1,200	25	166	75	124
Residence	Retail	<	<	0	0	0	38	0		0			0		0
Office	Retail	>	>	313,665	3,453	4,317	22	950	90	855	800	35	299	75	224
Office	Retail	<	<	286,315	3,152	3,940	22	867	10	87	1,500	20	17	75	13
Total					8,617	10,771		2,726		1,691			517		370
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Post Oak and Canyon Café

Land Use From	Land Use To	Direction W	Direction E	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	5,165	229	286	30	86	90	77	600	40	31	75	23
Retail	Retail	<	<	5,165	229	286	30	86	10	9	600	40	3	75	3
Residence	Retail	>	>	265	1,553	1,941	38	738	90	664	1,200	25	166	75	124
Residence	Retail	<	<	0	0	0	38	0		0			0		0
Office	Retail	>	>	313,665	3,453	4,317	22	950	90	855	800	35	299	50	150
Office	Retail	<	<	286,315	3,152	3,940	22	867	10	87	1,500	20	17	50	9
Total					8,617	10,771		2,726		1,691			517		308
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two-way vehicular trips) — 44.32

Office = 11.01/1,000 GLA page 1158 (two-way vehicular trips) — 11.01

Residential = 5.86/DU page 367 (two-way vehicular trips) — 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Westheimer between McCue and Post Oak

Land Use From	Land Use To	Direction N	Direction S	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	194,921	8,639	10,799	30	3,240	75	2,430	800	35	850	90	765
Retail	Retail	<	<	194,921	8,639	10,799	30	3,240	25	810	800	35	283	90	255
Residence	Retail	>	>	480	2,813	3,516	38	1,336	75	1,002	1,200	25	251	90	225
Residence	Retail	<	<	0	0	0	38	0		0			0		0
Office	Retail	>	>	242,717	2,672	3,340	22	735	75	551	800	35	193	90	174
Office	Retail	<	<	749,921	8,257	10,321	22	2,271	25	568	1,000	30	170	90	153
Total					31,020	38,774		10,821		5,360			1,748		1,573
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two-way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two-way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two-way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location West Alabama and McCue

Land Use From	Land Use To	Direction N	Direction S	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	338,579	15,006	18,757	30	5,627	25	1,407	1,200	25	352	75	264
Retail	Retail	<	<	338,579	15,006	18,757	30	5,627	75	4,220	1,200	25	1,055	75	791
Residence	Retail	>	>	149	873	1,091	38	415	25	104	1,000	30	31	25	8
Residence	Retail	<	<	0	0	0	38	0		0			0		0
Office	Retail	>	>	760,923	8,378	10,472	22	2,304	25	576	1,000	25	144	90	130
Office	Retail	<	<	1,733,120	19,082	23,852	22	5,247	75	3,936	1,000	25	984	50	492
Total					58,344	72,930		19,220		10,242			2,566		1,684
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two-way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two-way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two-way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Hidalgo between McCue and Sage

Land Use From	Land Use To	Direction N	Direction S	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	338,579	15,006	18,757	30	5,627	60	3,376	1,500	20	675	90	608
Retail	Retail	<	<	338,579	15,006	18,757	30	5,627	40	2,251	1,500	20	450	90	405
Residence	Retail	>	>	388	2,274	2,842	38	1,080	60	648	1,000	30	194	25	49
Residence	Retail	<	<	402	2,356	2,945	38	1,119	40	448	1,200	25	112	10	11
Office	Retail	>	>	0	0	0	22	0		0			0		0
Office	Retail	<	<	1,079,568	11,886	14,858	22	3,269	40	1,307	800	35	458	25	114
Total					46,527	58,159		16,722		8,030			1,889		1,187
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two way vehicular trips) — 44.32

Office = 11.01/1,000 GLA page 1158 (two way vehicular trips) — 11.01

Residential = 5.86/DU page 367 (two way vehicular trips) — 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Pedestrian Crossings

Location Post Oak and Fairview

Land Use From:	Land Use To:	Direction W	Direction E	Size (1) S.F. or DU	Trips (2) (Vehicular)	Trips (3) (Pedestrian) 1.25	Percent (4) (Internal)	Trips (Internal)	Percent (Destination)	Trips Crossing	Distance (Feet)	Percent (5) Pedestrian	Pedestrian Trips Crossing	Percent (6) Location	Trips Location
Retail	Retail	>	>	123,870	5,490	6,862	30	2,059	60	1,235	1,000	30	371	25	93
Retail	Retail	<	<	123,870	5,490	6,862	30	2,059	40	823	1,000	30	247	25	62
Residence	Retail	>	>	138	809	1,011	38	384	60	230	1,200	25	58	75	43
Residence	Retail	<	<	0	0	0	38	0		0			0		0
Office	Retail	>	>	174,000	1,916	2,395	22	527	60	316	1,500	20	63	75	47
Office	Retail	<	<	0	0	0	22	0		0			0		0
Total					13,704	17,130		5,028		2,605			738		245
	Data Required														

(1) Size of smallest contributor either origins or destinations

(2) Source: Retail = 44.32/1,000 GLA page 1338 (two-way vehicular trips) 44.32

Office = 11.01/1,000 GLA page 1158 (two-way vehicular trips) 11.01

Residential = 5.86/DU page 367 (two-way vehicular trips) 5.86

(3) Automobile occupancy = 1.25, Source Houston-Galveston Area Council (H-GAC) Standard

(4) Source: Trip Generation, 7th Edition, Recommended Practice, page 87, ITE

(5) Source: Transportation and Traffic Engineering Handbook, 2nd Edition, page 293, ITE

(6) Proportion of crossing trips at location compared to other crossing alternatives

Streetscape Cost Estimates by Corridor and Block Face (FTA-Eligible)

	Block Length (miles)	*Unit Cost*	*Quantity Needed*	*Total Cost*
Westheimer Corridor - Funded with 2006-2008 FTA CMAQ Funds				
WESTHEIMER TOTAL				**$2,356,480**
Richmond Corridor - Westbound				
West Loop 610 - Sage	0.34			
Pedestrian Lighting		$5,000	30	$150,000
Block Total				**$150,000**
Sage - Rice	0.09			
Pedestrian Lighting		$5,000	8	$40,000
Block Total				**$40,000**
Rice – Yorktown				
Pedestrian Lighting		$5,000	18	$90,000
Block Total				**$90,000**
Yorktown - Lampasas	0.12			
Sidewalk Repair (including demolition)		$77/lf	476	$36,652
Pedestrian Lighting		$5,000	11	$55,000
Block Total				**$91,652**
Lampasas - Chimney Rock	0.14			
Sidewalk Repair (including demolition)		$77/lf	30	$2,310
Pedestrian Lighting		$5,000	13	$65,000
Block Total				**$67,310**
Richmond Corridor - Eastbound				
Chimney Rock - Barrington	0.14			
Sidewalk		$35/lf	60	$2,100
Pedestrian Lighting		$5,000	13	$65,000
Block Total				**$67,100**
Barrington - Yorktown	0.12			
Pedestrian Lighting		$5,000	11	$55,000
Block Total				**$55,000**
Yorktown - Rice	0.2			
Pedestrian Lighting		$5,000	18	$90,000
Block Total				***$90,000***
Rice - Sage	0.09			
Pedestrian Lighting		$5,000	8	$40,000
Block Total				**$40,000**
Sage - McCue	0.14			
Pedestrian Lighting		$5,000	13	$65,000
Block Total				**$65,000**
McCue - West Loop 610	0.18			
Sidewalk Repair (including demolition)		$77/lf	238	$18,326
Pedestrian Lighting		$5,000	16	$80,000
Block Total				**$98,326**

Richmond Subtotal				**$854,388**
Landscaping		$30/lf	9,504	**$285,120**
Street Corners		$7,000	22	**$154,000**
Driveway Aprons		$5,760	20	**$115,200**
Site Furnishings		$6/lf	9,504	**$57,024**
Subtotal				**$1,465,732**
Contingency 10%				**$146,573**
RICHMOND TOTAL				**$1,612,305**

W. Alabama - Westbound				
Post Oak Boulevard - McCue	0.19			
Pedestrian Lighting		$5,000		0
Sidewalk Repair (including demolition)		$77/lf	30	$2,310
Block Total				**$2,310**
McCue - Sage	0.21			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
Sage - Rice	0.1			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
Rice - Yorktown	0.16			
Pedestrian Lighting		$5,000		0
Sidewalk Repair (including demolition)		$77/lf	50	$3,850
Block Total				**$3,850**
Yorktown - Westheimer	0.22			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
W. Alabama - Eastbound				
Westheimer - Yorktown	0.22			
Pedestrian Lighting		$5,000		0
Sidewalk Repair (including demolition)		$77/lf	20	$1,540
Block Total				**$1,540**
Yorktown - Rice	0.16			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
Rice - Sage	0.1			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
Sage - McCue	0.21			
Pedestrian Lighting		$5,000		0
Block Total				**$0**
McCue - Post Oak	0.19			
Pedestrian Lighting		$5,000		0
Block Total				**$0**

W. Alabama Subtotal				**$7,700**
Pedestrian Lighting		$5,000	90	**$450,000**
Landscaping		$30/lf	3,562	**$106,860**
Street Corners		$7,000	10	**$70,000**
Driveway Aprons		$5,760	20	**$115,200**
Site Furnishings		$6/lf	5,436	**$32,616**
Subtotal				**$782,376**
Contingency 10%				**$78,238**
ALABAMA TOTAL				**$860,614**

Hidalgo - Westbound				
Post Oak - McCue	0.17			
Pedestrian Lighting		$5,000	15	$75,000
Block Total				**$75,000**
McCue - Sage	0.19			
Pedestrian Lighting		$5,000	17	$85,000
Block Total				**$85,000**
Sage - Rice	0.09			
Pedestrian Lighting		$5,000	8	$40,000
Block Total				**$40,000**
Hidalgo - Eastbound				
Rice - Sage	0.09			
Pedestrian Lighting		$5,000	8	$40,000
Block Total				**$40,000**
Sage - McCue	0.19			
Pedestrian Lighting		$5,000	17	$85,000
Block Total				**$85,000**
McCue - Post Oak	0.17			
Pedestrian Lighting		$5,000	15	$75,000
Block Total				**$75,000**
Hidalgo Subtotal				**$0**
Pedestrian Lighting		$5,000	80	**$400,000**
Landscaping		$30/lf	4,980	**$149,400**
Street Corners		$7,000	12	**$84,000**
Driveway Aprons		$5,760	10	**$57,600**
Site Furnishings		$6/lf	4,980	**$29,880**
Subtotal				**$720,880**
Contingency 10%				**$72,088**
HIDALGO TOTAL				**$792,968**

Secondary Streets				
Ambassador Way - Westbound	0.17			
Sidewalk (no demolition)		$35/lf	898	$31,430
Block Total				**$31,430**
Ambassador Way - Eastbound	0.17			
Sidewalk (no demolition)		$35/lf	674	$23,590
Block Total				**$23,590**
Subtotal				
Pedestrian Lighting		$5,000 ea	16	**$80,000**
Street Trees		$2,000 ea	17	**$34,000**
Landscaping		$30 lf	1,100	**$33,000**
Driveway Aprons		$5,760 ea	3	**$17,280**
Site Furnishings		$16.5 lf	1,100	**$18,150**
Subtotal				**$237,450**

Guilford Court - Westbound	0.18			
Pedestrian Lighting		$5,000	16	$80,000
Sidewalk (no demolition)		$35/lf	475	$16,625
Shade Trees		$2,000	32	$64,000
Landscaping		$30	950	$28,500
Site Furnishings		$16.5	950	$15,675
Block Total				**$204,800**
Guilford Court - Eastbound	0.18			
Pedestrian Lighting		$5,000	16	$80,000
Sidewalk (no demolition)		$35/lf	475	$16,625
Shade Trees		$2,000	32	$64,000
Landscaping		$30	950	$28,500
Site Furnishings		$16.5	950	$15,675
Block Total				**$204,800**
Subtotal				**$409,600**
Hallmark Drive - Westbound	0.17			
Pedestrian Lighting		$5,000	15	$75,000
Sidewalk (no demolition)		$35/lf	600	$21,000
Shade Trees		$2,000	30	$60,000
Landscaping		$30	898	$26,940
Site Furnishings		$16.5	898	$14,817
Block Total				**$197,757**
Hallmark Drive - Eastbound	0.17			
Pedestrian Lighting		$5,000	15	$75,000
Sidewalk (no demolition)		$35/lf	450	$15,750
Shade Trees		$2,000	30	$60,000
Landscaping		$30	898	$26,940
Site Furnishings		$16.5	898	$14,817
Block Total				**$192,507**
Subtotal				**$390,264**

Garretson Lane - Northbound	0.15			
Curbs		$7/lf	396	$2,772
Pedestrian Lighting		$5,000	14	$70,000
Sidewalk (no demolition)		$35/lf	792	$27,720
Shade Trees		$2,000	28	$56,000
Landscaping		$30	792	$23,760
Site Furnishings		$16.5	792	$13,068
Block Total				**$193,320**
Garretson Lane - Southbound	0.15			
Pedestrian Lighting		$5,000	14	$70,000
Sidewalk (no demolition)		$35/lf	1,584	$55,440
Shade Trees		$2,000	28	$56,000
Landscaping		$30	792	$23,760
Site Furnishings		$16.5	792	$13,068
Block Total				**$218,268**
Subtotal				**$411,588**
Hollyhurst Lane - Northbound	0.23			
Pedestrian Lighting		$5,000	21	$105,000
Sidewalk (no demolition)		$35/lf	911	$31,885
Shade Trees		$2,000	42	$84,000
Landscaping		$30	1,214	$36,420
Site Furnishings		$16.5	1,214	$20,031
Block Total				**$277,336**
Hollyhurst Lane - Southbound	0.23			
Pedestrian Lighting		$5,000	21	$105,000
Sidewalk (no demolition)		$35/lf	50	$1,750
Shade Trees		$2,000	42	$84,000
Landscaping		$30	1,214	$36,420
Site Furnishings		$16.5	1,214	$20,031
Block Total				**$247,201**
Subtotal				**$524,537**

S. Post Oak Lane from San Felipe to 500'	0.18			
Pedestrian Lighting		$5,000	32	$160,000
Shade Trees (30' o.c.)		$2,000	62	$124,000
Landscaping		$30	1,900	$57,000
Site Furnishings		$16.5	1,900	$31,350
Subtotal				**$372,350**
Uptown Park Boulevard from POB to 610				
Crosswalks		$25,000	1	$25,000
Pedestrian Lighting		$5,000	66	$330,000
Landscaping		$30	700	$21,000
Uptown Street Corners		$14,000	3	$42,000
Site Furnishings		$3,940	6	$23,640
Subtotal				**$441,640**
SECONDARY STREETS SUBTOTAL				**$2,345,789**
Contingency 10%				**$234,579**
SECONDARY STREETS TOTAL				**$2,580,368**
San Felipe (610 to Sage)				
Pedestrian Lighting		$ 5000	91	$455,000
Contingency 10%				**$45,500**
SAN FELIPE TOTAL				**$500,500**

Post Oak Boulevard (610 to Richmond)	3.32			
Demolition		$14,400 lf	42	$604,800
New Walkways		$14,400 lf	96	$1,382,400
Driveway Aprons		$5,760 ea	65	$374,400
Pedestrian Lighting		$6,250 ea	200	$1,250,000
Planting		$30	14,400	$432,000
Street Trees		$5,000 ea	960	$4,800,000
Uptown Street Corners		$7,000 ea	18	$126,000
Site Furnishings		$14,400 lf	20	$288,000
Subtotal				**$9,257,600**
Contingency 10%				**$925,760**
POB TOTAL				**$10,183,360**
Sage from 59 Freeway to Westheimer				
Driveway Aprons		$5,760 ea	22	$126,720
Pedestrian Lighting		$5,000 ea	68	$340,000
Planting		$30 lf	4,231	$126,930
Site Furnishings		$5,990	6	$35,940
Subtotal				**$629,590**
Contingency 10%				**$62,959**
SAGE TOTAL				**$692,549**
McCue from Westheimer to Chevy Chase				
Pedestrian Lighting	5,000	$5,000 ea	65	$325,000
Subtotal				**$325,000**
Contingency 10%				**$32,500**
TOTAL				**$357,500**
McCue from Hidalgo to West Alabama	0.16			
Pedestrian Lighting	5,000	$5,000 ea	28	$140,000
Subtotal				**$140,000**
Contingency 10%				**$14,000**
TOTAL				**$154,000**
McCUE TOTAL				**$511,500**
TOTAL STREETSCAPE PROGRAM COST				**$20,090,644**

Categorical Exclusion Documentation

A. PROJECT DESCRIPTION. The Uptown Development Authority (UDA) Pedestrian/Transit Streetscape Improvements and Signalization/Pedestrian Crossing Program consists of streetscape improvements in the Uptown District of Houston that would enhance existing pedestrian/transit access and increase pedestrian accessibility to bus transit routes and transit facilities. Projects would include preliminary engineering, design, and construction of street enhancements along Westheimer Road, Richmond Avenue, Post Oak Boulevard, and other secondary roadways of opportunity in the 500-ft. coverage area around each transit stop in the Uptown District as provided by the Federal Transit Administration's (FTA) Livable Communities Initiative (LCI) guidelines. A coverage area of 500-ft. around each bus stop is shown in *Figure 1* along project corridors indicating active public transit activity. Improvements to these areas would unify the streetscape and enhance the pedestrian/transit environment of the Uptown District. Proposed improvements would include the following:

- Widen or construct 5-ft. sidewalks that are compliant with Americans with Disabilities Act (ADA) standards and install or repair curbs and wheelchair ramps at intersections;
- Install pedestrian/transit wayfinding signage and/or information kiosks;
- Construct transit shelters;
- Construct and widen landscape buffers, including irrigation systems to support new plant growth; and
- Install street amenities such as benches, waste receptacles, pedestrian lighting, and bollards.

UDA also will be implementing a signalization/pedestrian-crossing program consisting of eight new signalized intersections that will have pedestrian crossing paths and signals.

The proposed projects will provide significant increases in the pedestrian quality and safety around the Uptown District, thereby promoting more pedestrian travel and transit usage. Benefits would include helping reduce traffic congestion, reduced pollutants from single occupant vehicles (SOV), improved access to transit, increased beautification and unifying design themes for the area, promotion of economic development, and increased pedestrian safety within the incredibly busy mixed-use Uptown District area. These proposed improvements have been identified in the *Uptown TIRZ Mobility Implementation Plan (2003)*. Additional recommendations for improvements were contained in the *Westheimer Corridor Study (2002)* conducted by the Metropolitan Planning Organization in the region.

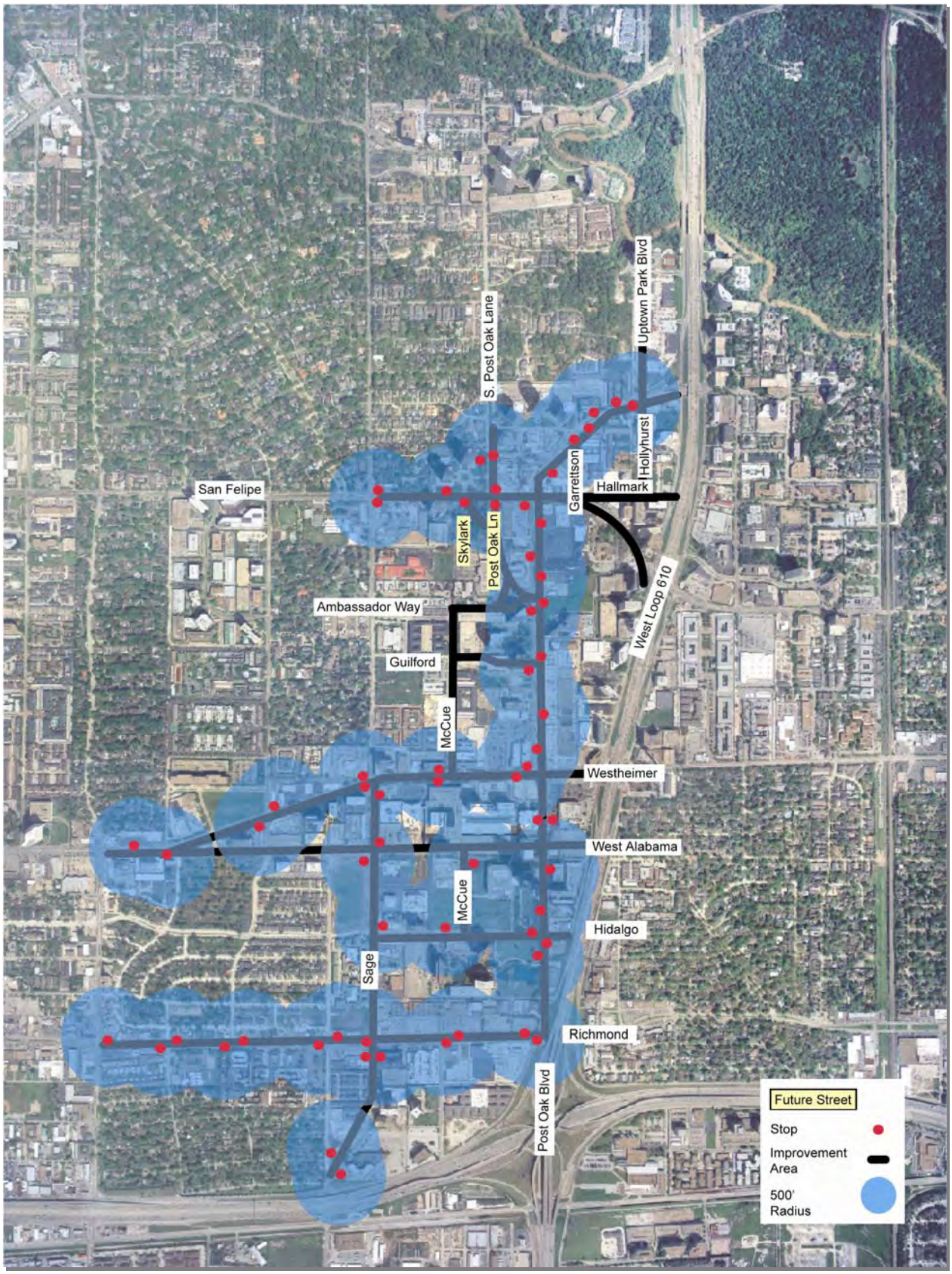


Figure 1 – 500-ft. Coverage Area Around Bus Stops

B. PROJECT LOCATION. Uptown Houston is the 14th largest business district in the United States and accounts for 15.7 percent of Houston's total office space. The mixed-use area comprises a variety of commercial, retail, entertainment, and multi- and single-family residential developments. As a major tourist destination, the area serves more than 18 million visitors each year and is the largest hotel district in the city with the highest total hotel room revenue. Eleven Metropolitan Transit Authority of Harris County (METRO) bus routes serve the district directly and six others run just south of the Uptown District on U.S. Highway 59 (Southwest Freeway). Many of the major employee, shopper, and resident activities within the study area occur along the major transit corridors; therefore, the major corridors that serve as the backbone of this program are Westheimer Road, Richmond Avenue, and Post Oak Boulevard. The secondary roadways that feed into these streets are important connectors between complementary land uses. The connector streets to be included in the project area are San Felipe Street, Sage Road, W. Alabama Street, Hidalgo Street, Post Oak Lane, Uptown Park Boulevard, McCue Road, Ambassador Way, Garrettson Lane, Hollyhurst Lane, Guilford Court, and Hallmark Drive.

The new signal/pedestrian crossing locations will be located at the following locations:

- Post Oak Boulevard and Boulevard Place (new roadway);
- Post Oak Boulevard and Guilford Court/Lynn (private roadway);
- Post Oak Boulevard and Canyon Café (driveway);
- Post Oak Boulevard and Fairview (private roadway);
- S. Post Oak Lane and West Briar;
- Westheimer Road mid-block pedestrian crossing between Post Oak and McCue Street);
- Hidalgo Street mid-block pedestrian crossing (between McCue and Sage); and
- W. Alabama Street and McCue Road/Galleria Garage.

Figure 2 shows the project locations for streetscape and signal improvements.

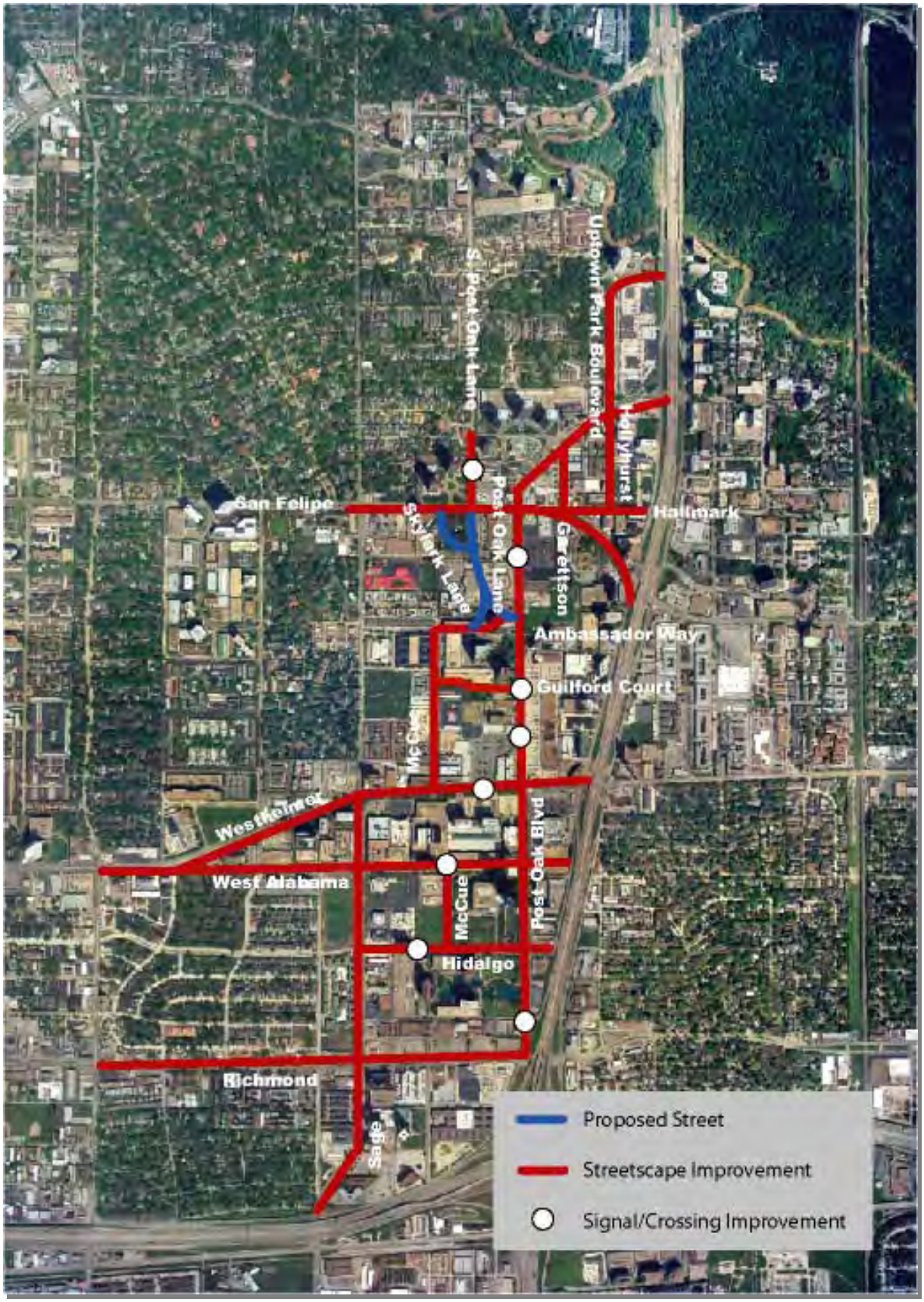


Figure 2 – Project Locations

C. METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY. The streetscape improvement project is one part of a grouping of projects included in the *Uptown TIRZ Mobility Implementation Plan* (*2003*). The project is also part of the Uptown TIRZ Capital Improvements Program and the *Westheimer Corridor Mobility Study (2002)* conducted jointly by the Metropolitan Planning Organization (MPO), Texas Department of Transportation (TxDOT), Uptown Houston District, and Westchase District. The proposed improvements are part of the *Post Oak Connector Study* (LRT/BRT) and the *Uptown-West Loop Corridor Study (2004)* conducted by Houston METRO.

The Metropolitan Planning Organization (MPO) has selected both the pedestrian and signalization projects for Federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds in the 2006-2008 Transportation Improvement Program (TIP).

The 2006-2008 TIP for the Houston-Galveston Transportation Management Area has conformed to air quality standards in accordance with the Statewide Implementation Plan (SIP) as outlined in the Clean Air Act (CAA) and approved on June 5, 2002.

The proposed project also has been included in the Draft 2025 RTP which must conform to the U.S. Environmental Protection Agency's (EPA) air quality standards by showing that vehicle emissions associated with improvements to the transportation system will not exceed those required to attain the standard. The 2025 RTP is developed with the goal of addressing conformity.

The streetscape program in its entirety has been 'pre-selected" for Federal CMAQ Improvement Program funding again in the 2008-2011 TIP. The TIP is still in the selection process and awaiting approval by the MPO at this time.

D. ZONING. The City of Houston does not have an adopted zoning ordinance. The improvements to the pedestrian environment through streetscape and new pedestrian-oriented signals will complement adjacent land uses and make them more accessible and safe for pedestrians, transit users, and the disabled *(see Figure 3)*.

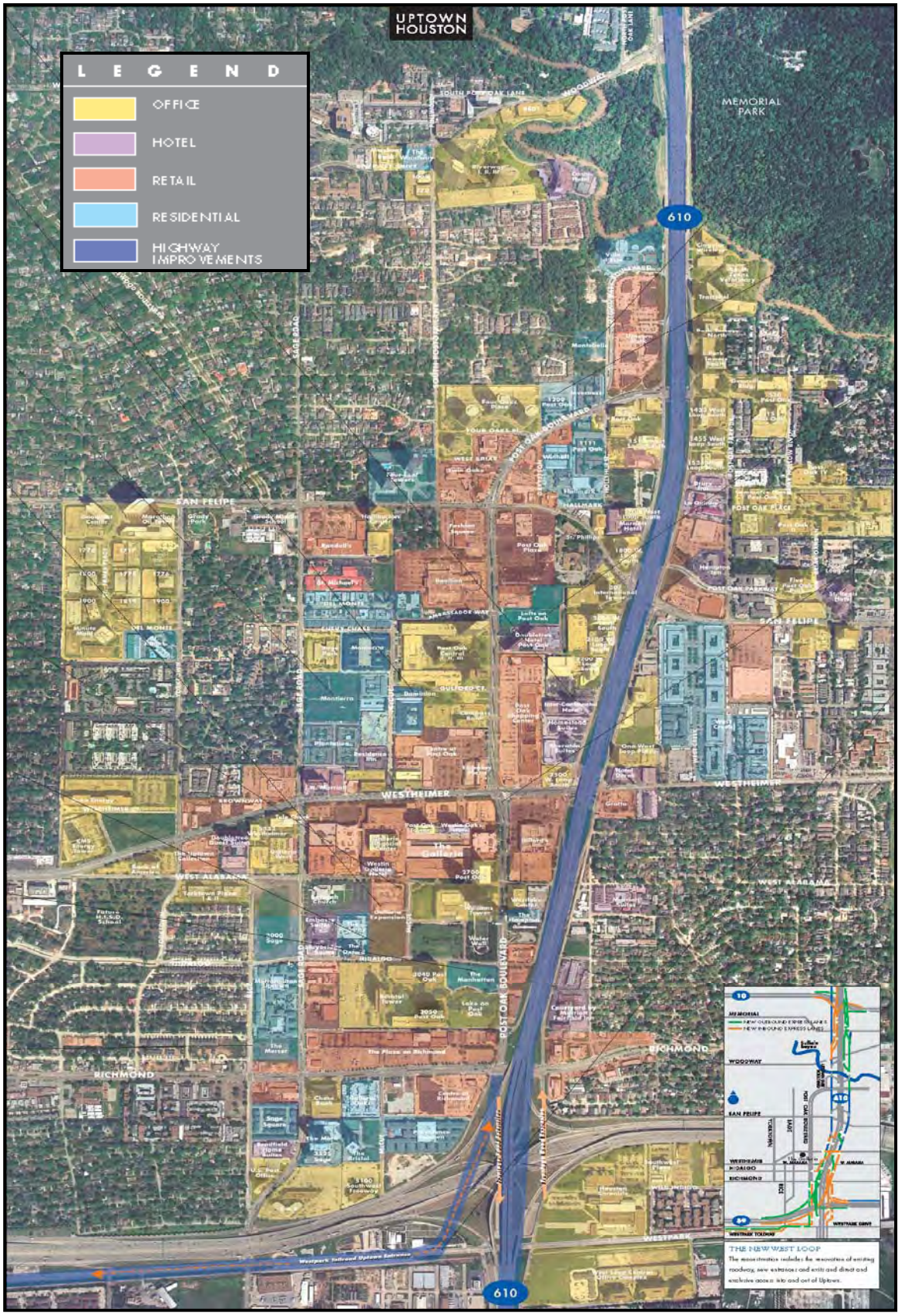


Figure 3 – Uptown Land Use Map

E. TRAFFIC IMPACTS. The proposed streetscape improvements are limited to the right-of-way between the curb and the private property line; therefore, the proposed project will have no impacts on traffic. Provisions included in the proposed project that will enhance pedestrian safety and bus access include pedestrian lighting, additional buffer area, safer pathways, and ADA access. The signalization project will involve some temporary re-routing of traffic while pedestrian pathways are laid and signals installed. Uptown Houston is very familiar with re-routing techniques and will ensure that traffic flow is maintained during this brief construction period.

F. CO HOT SPOTS. The streetscape improvements and new signals installation will not contribute to CO hot spots or create new traffic impacts at intersections. Instead, the proposed project will help to mitigate vehicle-miles traveled (VMT) by making bus transit more accessible and encouraging the use of pedestrian facilities. All of these will contribute to a reduction in nitrogen oxides and volatile organic compounds, which are the major pollutants that contribute to ground level ozone. Traffic delay will be slightly increased due to the eight new signal locations around the district, but it is anticipated to be minimal. The assumption is that there will be a far greater benefit to increased safety for pedestrians and an increase in internal trips by foot and transit.

G. HISTORIC RESOURCES. There are no cultural, historical, or archaeological resources listed on the National Register of Historic Places located in the immediate vicinity of the proposed project. The proposed improvements will take place in the pubic right-of-way and will not affect any historical structures. The Uptown Houston area is a high-density, urbanized center with not sensitive historical resources that will be disturbed by the proposed improvements.

H. NOISE. The proposed project will not contribute to community noise levels or impact the noise levels in the project area to merit a noise analysis. The proposed improvements are pedestrian-oriented and will make the streetscape more user-friendly. There are noise-sensitive receptors in the project area including hotels, schools, and churches. Uptown is currently a mixed-development center with high traffic volumes. The cumulative noise level would not increase due to the proposed project, but the reduction in VMT by the proposed project may reduce overall vehicle noise in the area by encouraging greater public transit use and internal pedestrian trips.

I. VIBRATION. The proposed project does not involve new or existing steel tracks; therefore, vibration is not an issue for new signals or streetscape improvements.

J. ACQUISITIONS AND RELOCATIONS REQUIRED. The right-of-way is currently owned by the City of Houston and TxDOT. No land will need to be acquired or residences and businesses relocated for the proposed project.

K. HAZARDOUS MATERIALS. Streetscape construction activity will be limited to installation of plant materials, irrigation systems, sidewalks, waste receptacles, benches, pedestrian lighting, and proper electrical connections. The signalization improvements will be confined to the eight project areas and include no hazardous materials to install signals or construct pathways. The community will not be endangered by any contamination to soil or groundwater because of the construction.

L. COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE. The community will not be negatively disrupted during the proposed project. Corridors under construction will have adequate alternative walkways and amenities provided for the continual flow of pedestrians and transit users during that time period. In fact, the proposed project fulfills the intent of Environmental Justice and Title VI requirements by providing greater inter-community connectivity through streetscape enhancements that increase aesthetic beautification, enhance pedestrian/transit user security, and increase connectivity for employment and personal uses entering in and out, as well as within the Uptown area. The proposed improvements will not create or adversely effect social and economic disparities among minority and low-income populations, but ensure an increase in pedestrian quality and transit access for all of those traveling in Uptown. The streetscape improvements along major corridors and secondary streets will unify the area and enhance its mixed-use potential by connecting multi-residential buildings, employment, retail, hotels, entertainment/recreational venues, schools, and The Galleria, Houston's largest shopping mall. The signal locations were determined mostly because they are areas of high pedestrian activity due to surrounding land uses and the concentration of busy transit stops. The new signals will increase safety where transit access is important and current pedestrian activity is high.

M. USE OF PUBLIC PARKLAND AND RECREATION AREAS. No public parkland or recreation areas will be negatively impacted due to these improvements. One benefit of the proposed project would be an increase in pedestrian activity and safety, thereby increasing the use of public parks and recreational areas within the Uptown Houston area.

N. IMPACTS ON WETLANDS. Wetlands will not be impacted during the proposed project. The proposed corridors for improvements are located in a developed urban area and construction will be limited to the public right-of-way and some street location for signals. There are no wetlands in the vicinity.

O. FLOOD PLAIN IMPACTS. The proposed project is not within the 100-year flood plain or the 500-year flood plain. Any streetscape improvements and signal additions will not affect adjacent flood plain areas surrounding the project boundaries.

P. IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, AND COASTAL ZONES. The proposed project will not impact water quality and there are no navigable waterways or coastal zones in the vicinity. The proposed project is located approximately 45 miles inland of West Galveston Bay and approximately half a mile from Buffalo Bayou, which drains storm water from the Houston area. The proposed pedestrian improvements and new signals will not increase runoff or alter existing drainage patterns.

Q. IMPACTS ON ECOLOGICALLY SENSITIVE AREAS AND ENDANGERED SPECIES. The improvements being proposed are located in a fully developed urban area; therefore, the proposed project will not impact any ecologically sensitive areas or endangered species and none have been identified in the area.

R. IMPACTS ON SAFETY AND SECURITY. The proposed project will enhance the safety and security of pedestrians and bus transit users in the project area. The proposed improvements include safety measures such as 5-ft. sidewalks, provision of ADA-compliant wheelchair ramps at intersections, and installation of pedestrian lighting.

New signals will promote safety by better access management for vehicles, shorter block lengths, direct pedestrian connections, and an improved internal roadway network for vehicles and pedestrians.

Post Oak Boulevard is the premier north/south boulevard within the Uptown District and a future corridor for high capacity transit services. Multiple uncontrolled median openings and driveways impact vehicular operation and pedestrian movements. Access management along Post Oak Boulevard will improve roadway efficiency through the closing of several uncontrolled median openings and the consolidation of left ingress and egress movements to signalized intersections. The long block lengths between signalized intersections limit the ability to create multiple, safe pedestrian crossings. The new controlled pedestrian crossings will connect a developing pedestrian network parallel and perpendicular to major arterials.

Pedestrians most often elect to travel a direct path to their destination even when it involves crossing an arterial at an uncontrolled and unmarked pedestrian crossing. The need for two such direct connections currently exists. The proposed mid–block pedestrian crossing on Westheimer between Post Oak and McCue connects The Galleria and retail shopping to existing bus stops on Westheimer. Similarly, the planned mid-block pedestrian crossing on Hidalgo, just west of McCue will provide a direct pedestrian connection between employment centers south of Hidalgo to The Galleria. Pedestrians currently elect to cross at the proposed mid-block locations rather than walk to the nearest signalized intersection. A pedestrian/vehicular accident has already occurred at the proposed Hidalgo crossing. The signalization of these existing pedestrian crossings will allow safe and controlled crossing of these critical arterials.

S. IMPACTS CAUSED BY CONSTRUCTION. The streetscape construction plan involves the construction of 5’ sidewalks, provision of ADA-compliant wheelchair ramps at intersections, installation of pedestrian lighting, as well as the installation of plant materials, irrigation, and landscaping support. The signal construction plan involves new pedestrian crossings, pedestrian signals, and traffic signals. The impact of the construction, which will take place during the day, should be minimal with regard to noise. No major utility relocations are anticipated from the streetscape improvements and signal improvements will be coordinated with the City of Houston. Debris and spoil disposal will be minimal. Water quality will not be affected. Safety and security will not be adversely affected during the construction phase because the construction areas will be well marked. Minimal traffic disruptions will occur and will be for a short period only. Access to property along the roadway will be coordinated prior to construction with the property owners to minimize adverse effects.

Date _____

Grant No. _____

Grant Applicant _____

INFORMATION REQUIRED FOR PROBABLE CATEGORICAL EXCLUSION

(SECTION 771.117(d))

_____A. ***DETAILED PROJECT DESCRIPTION***

_____B. ***LOCATION (INCLUDING ADDRESS):*** Attached site map or diagram that identifies the land uses and resources on the site and the adjacent or nearby land uses and resources. This is used to determine the probability of impact on sensitive receptors (such as schools, hospitals, residences) and on protected resources.

_____C. ***METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY:*** Is the proposed project "included" in the current adopted MPO plan, either explicitly or in a grouping of projects or activities? What is the conformity status of that plan? Is the proposed project, or are appropriate phases of the project included in the TIP? What is the conformity status of the TIP?

_____D. ***ZONING:*** Description of zoning, if applicable, and consistency with proposed use.

_____E. ***TRAFFIC IMPACTS:*** Description of potential traffic impacts; including whether the existing roadways have adequate capacity to handle increased bus and other vehicular traffic.

_____F. ***CO HOT SPOTS:*** If there are serious traffic impacts at any affected intersection, and if the area is in nonattainment for CO, demonstrate that CO hot spots will not result.

_____G. ***HISTORIC RESOURCES:*** Description of any cultural, historic, or archaeological resource that is located in the immediate vicinity of the proposed project and the impact of the project on the resource.

_____H. ***NOISE:*** Comparison of distance between the center of the proposed project and the nearest noise receptor to the screening distance for this type of project in

FTA's guidelines. If the screening distance is not achieved, attach a "General Noise Assessment" with conclusions.

_____I. ***VIBRATION:*** If the proposed project involves new or relocated steel tracks, a comparison of distance between the center of the proposed project and the nearest vibration receptor to the screening distance for this type of project in FTA's guidelines. If the screening distance is not achieved, attach a "General Vibration Assessment" with conclusions.

_____J. ***ACQUISITIONS AND RELOCATIONS REQUIRED:*** Description of land acquisitions and displacements of residences and businesses.

_____K. ***HAZARDOUS MATERIALS:*** If real property is to be acquired, has a Phase I site assessment for contaminated soil and groundwater been performed? If a Phase II site assessment is recommended, has it been performed? What steps will be taken to ensure that the community in which the project is located is protected from contamination during construction and operation of the project? State the results of consultation with the cognizant State agency regarding the proposed remediation?

_____L. ***COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE:*** Provide a socioeconomic profile of the affected community. Describe the impacts of the proposed project on the community. Identify any community resources that would be affected and the nature of the effect.

_____M. ***USE OF PUBLIC PARKLAND AND RECREATION AREAS:*** Indicate parks and recreational areas on the site map. If the activities and purposes of these resources will be affected by the proposed project, state how.

_____N. ***IMPACTS ON WETLANDS:*** Show potential wetlands on the site map. Description of the project's impact on on-site and adjacent wetlands.

_____O. ***FLOOD PLAIN IMPACTS:*** Is the proposed project located within the 100-year flood plain? If so, address possible flooding of the proposed project site and flooding induced by proposed project due to its taking of flood plain capacity.

_____P. ***IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, AND COASTAL ZONES:*** If any of these are implicated, provide detailed analysis.

_____Q. ***IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES:*** Description of any natural areas (woodlands, prairies, wetlands, rivers, lakes, streams, designated wildlife or waterfowl refuges, and geological formations) on or near the proposed project area. If present, state the results of consultation with the state department of natural resources on the impacts to these

natural areas and on threatened and endangered fauna and flora that may be affected**.**

_____R. ***IMPACTS ON SAFETY AND SECURITY:*** Description of measures that would need to be taken to provide for the safe and secure operation of the project after its construction.

_____S. ***IMPACTS CAUSED BY CONSTRUCTION:*** Description of construction plan and identify impacts due to construction noise, utility disruption, debris and spoil disposal, air and water quality, safety and security, and disruptions of traffic and access to property.

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance with 23 CFR Part 771.117.

_____

Title _____

Applicant's Environmental Reviewer **Date**_____

_____

Title _____

FTA Grant Representative **Date** _____