NORTHSIDE - LIVABLE CENTERS STUDY

FINAL REPORT

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I. EXECUTIVE SUMMARY

A. THE VISION

The goal of the Livable Centers Study is to identify improvements that create neighborhoods that are compact and mixed use, designed to be walkable and connected and accessible within the Northside District. The future MetroRail through Northside provides an important public investment in the neighborhood that can help to initiate this goal. The Study seeks to build off of this resource with focused public and private improvements that guide short and long-term growth. The overall vision for the neighborhood is to create a place with a strong local identity that is safe, connected, walkable, vibrant and green while preserving and enhancing existing historic and cultural resources.

B. SUMMARY OF RECOMMENDATIONS

The Study recommends a number of key elements focused on overall neighborhood structure, connectivity and circulation, pedestrian and bicycle amenities, parks and open space, land use and urban form and design guidelines. These recommendations are summarized below:

- Identification and emphasis of the Quitman and Fulton Street area as the "heart" of Northside.
- Encourage mixed use retail development along North Main Street, Fulton Street, Quitman Street and Irvington Boulevard.
- Encourage new development within the southern section of the neighborhood including the Hardy Yards District, University of Houston - Downtown District and Warehouse District.
- Encourage the continuation of the regional open space network along the Little White Oak Bayou, including neighborhood connections.
- Encourage pedestrian and streetscape improvements along main north-south and east-west streets as well as streets within close proximity of new transit stations.
- Identification of key locations for smaller neighborhood parks and open spaces including transit plazas.
- Encourage lower density infill development opportunities within smaller vacant and underutilized properties throughout the neighborhood.
- Encourage medium density infill development opportunities within larger vacant and underutilized properties including near Fulton and Patton Streets, Burnett Street, and North Main Street.

Quitman and Fulton Street area as the "heart" of Northside.

C. NEXT STEPS - PRIORITY PROJECTS

The following steps should be taken by the Northside Management District, City and area stakeholders in the near (0-5 years) and medium (5-10 years) term in order to put the Study into action and ensure positive momentum and neighborhood change. These steps are prioritized based both on the planning team's expertise and on feedback gathered from the Northside community. All of these steps should be done with safety for all ages as the top priority. Please see section IV Implementation Roadmap for detailed information on each of the steps.

1. Create a stronger pedestrian connection at the Burnett / North Main Tunnel while implementing "Parkway" upgrades to Burnett Street
2. Support efforts to ensure existing businesses and residents benefit from the new transit service
3. Create "Festival Streets" at Fulton and Quitman; identify the best location for a "Better Block" Project
4. Create streetscape improvements along the east-west Hogan/Lorraine corridor
5. Establish plazas and small open spaces within publicly owned METRO remnant properties along the rail corridor
6. Establish a hike and bike trail along the Little White Oak Bayou, including connections into the neighborhood

"Festival Streets" along Quitman and Fulton can help to celebrate the neighborhood.

Hike and bike trail along the Little White Oak Bayou will create direct neighborhood connections

II. PROJECT OVERVIEW & EXISTING CONDITIONS

A. BACKGROUND

I. THE LIVABLE CENTERS PROGRAM

The Houston-Galveston Area Council's (H-GAC) Livable Centers program is part of a strategy designed to address expected regional growth of 3.5 million added people by 2035, combined with limited, already congested mobility infrastructure that is, for the most part, automobile dependent by improving access while reducing the need for mobility by Single-Occupant Vehicles (SOV). Harris County and other surrounding counties are classified as in severe nonattainment by the U.S. Environmental Protection Agency (EPA). This means the region is failing to meet emission requirements as old as 1997, the mobility infrastructure has not kept pace with current demand and, most likely, will not be able to accommodate future growth. Therefore, a new direction in improving transit access, enhancing quality of life, reducing emissions, and providing more efficient mobility alternatives is indicated. H-GAC Livable Centers program is designed, in part, to do so. H-GAC defines Livable Centers as safe, convenient, and attractive areas where people can live, work, and play with less reliance on their cars. The Goals of the Livable Centers Program seek to create neighborhoods that are:

- Compact and mixed use
- Designed to be walkable
- Connected and accessible

Livable Centers projects offer a number of benefits in terms of the community, mobility, environment, and economic development. These benefits are directly related to the following regional goals outlined in H-GAC's 2035 Regional Transportation Plan (RTP):

- Improve mobility and reduce congestion
- Improve access to jobs, homes, and services
- Increase transit options
- Coordinate transportation and land use plans
- Create a healthier environment

The Livable Centers Studies seek to improve mobility and reduce congestion in the region

New development in the Livable Centers should be compact, mixed use and walkable.

2. PROJECT OVERVIEW AND PROCESS

The Northside Livable Centers Study seeks to build off of previous planning efforts including the Northside Village Economic Revitalization Plan to provide a framework for future growth and improvements in the neighborhood.

Northside has very unique conditions and neighborhood character. Current residents could benefit greatly from new neighborhood services, retail, transit access and other amenities. The potential for infill development is great, and if done right can increase overall vibrancy without displacement. The Livable Centers Study seeks to preserve the quality of life in adjacent lower density residential neighborhoods, including minimizing the impacts of traffic and parking on local streets.

The Study focuses on maintaining the low and moderate income single family residences while enabling critical redevelopment along the transit corridor. The Study also seeks to create and support connected, walkable public spaces that will attract people to the area and encourage more transit usage.

The Study presents strategies to enhance the pedestrian realm and neighborhood connectivity of the future light rail stations within the neighborhood. The Planning team has coordinated with the Greater Northside Management District and community stakeholders in identifying quality design concepts to create a sense of shared identity. A strong community outreach approach will ensure that positive changes related to transit are brought to the neighborhood.

Current residents could benefit greatly from new neighborhood services, retail, transit access and other amenities

The Livable Centers Study will help to create a sense of shared identity and enhance civic pride across the study area.

3. LOCATION AND CONTEXT

The Northside neighborhood, located just north of Houston's downtown and connected through Main Street and the future San Jacinto Street, is easily accessible from I-45 and I-10. Northside is centrally located and bordered by major freeways. On the east the community is primarily an industrial area built along a railroad corridor. To the west is the Greater Heights, a residential area that has seen considerable redevelopment and property value increases in recent years. Areas to the north are largely moderate income residential. Although downtown Houston lies immediately to the south, the two-lane underpass on Main Street and the Hardy/Elysian overpass provide the only direct access to downtown presently. The San Jacinto Street extension, when completed, will provide another much needed connection between Northside and Downtown.

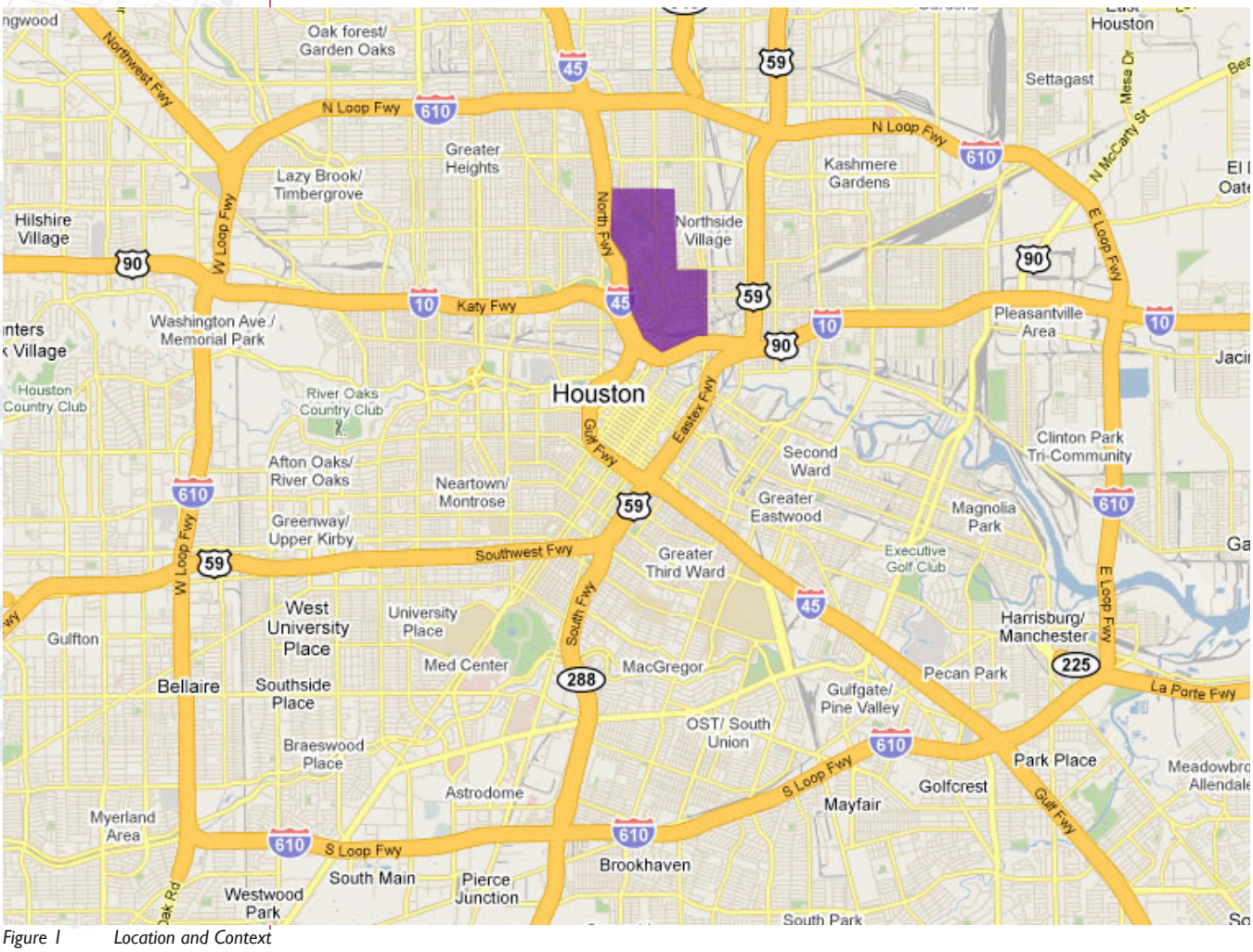


Figure 1 Location and Context
The Northside neighborhood lies just north of Downtown Houston adjacent to Interstate 45

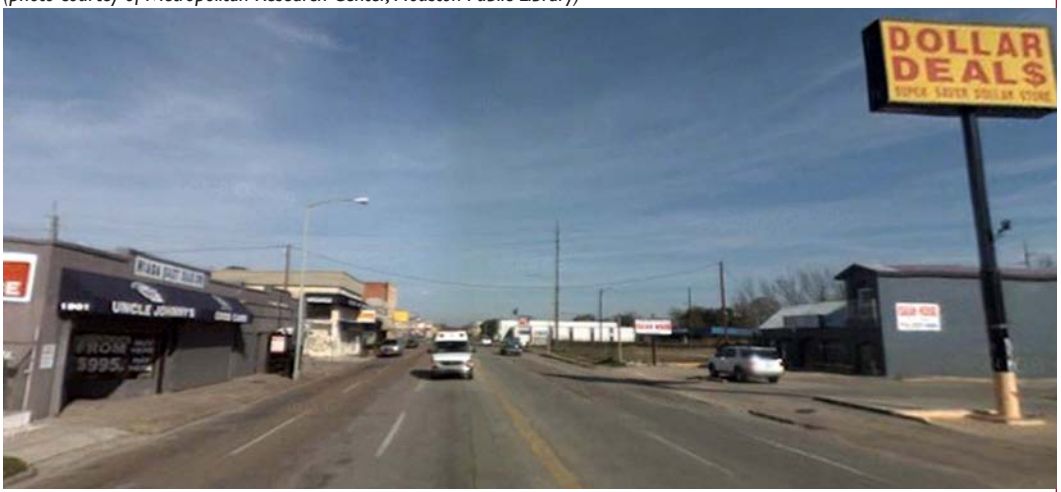
4. HISTORY OF RAIL IN NORTHSIDE

Development of the Northside neighborhood begun in the 1880s-1890s with the expansion of the nearby Hardy Rail Yards. With the decrease of rail traffic and increase in suburban development in Houston, the neighborhood began to decline after World War II. Northside was once part of the Fifth Ward, which was carved out of the First and Second wards north of Buffalo Bayou and east of White Oak Bayou.

The earliest public transportation in the Northside was a mule drawn car that crossed Buffalo Bayou at San Jacinto. Electric rail service along Montgomery (now North Main) began in 1892. The electric rail service allowed people to live farther from their work establishments. Motivation to provide service to the Northside was the Southern Pacific rail shops, for decades one of the City's largest industrial employers.

At its peak in the 1920's, the Houston Electric Co. Streetcar system encompassed two dozen routes operating over 90 miles of track. 1940 marked the last run of the Houston Electric Co. Rail transit returned to Houston with MetroRail 2004, a full 64 years after the previous streetcar system was shut down.

North Main Street and Hogan Street early 1900's - looking north. Buildings are oriented to the sidewalk and streetcar runs in center. (photo courtey of Metropolitan Research Center, Houston Public Library)



N. Main Street and Hogan Street today - looking north. Several historic structures remain on west side of street. MetroRail will run in center of street.

5. WHAT IS TOD AND SMART GROWTH

Transit-oriented developments (TODs) are compact, mixed-use developments situated at and around transit stops. TODs focus on creating a mix of land uses, such as residential, office, retail, civic uses and entertainment within easy walking and biking distance from a transit station (generally 1/4 mile to 1/2 mile, 5-10 minutes walking). This mix of uses, combined with thoughtfully designed community spaces, plazas and parks, form a vibrant village-like neighborhood where people can live, work and play. Transit-oriented developments provide an opportunity to encourage transit ridership, create greater densities in station areas, improve air quality and help to foster a sense of community for Houston residents. Studies conducted by the Urban Land Institute indicate that, in general, properties located within a quarter of a mile radius of a light rail station increase up to 25% in value more than other properties.

> *"Smart growth recognizes connections between development and quality of life. It leverages new growth to improve the community. The features that distinguish smart growth in a community vary from place to place. New smart growth is more [inter-connected] town-centered, is transit and pedestrian oriented, and has a greater mix of housing, commercial and retail uses. It also preserves open space and many other environmental amenities. Successful communities do tend to have one thing in common–a vision of where they want to go and of what things they value in their community–and their plans for development reflect these values."*
>
> - Smart Growth Network

The Livable Centers Studies seek to improve mobility and reduce congestion in the region

New development in the Livable Centers should be compact, mixed use and walkable.

B. ONGOING AND PREVIOUS STUDIES

I. METRO SOLUTIONS TRANSIT PROJECT

In development since 2001, METRO Solutions is a comprehensive transit system plan to help solve the Greater Houston region's traffic congestion and air quality problems. The plan was crafted with extensive input from the public, METRO's regional transportation partners and mobility experts nationwide. Phase II of the plan was adopted by the METRO Board of Directors in July 2003 and approved by voters in November 2003. The plan calls for major multimodal transit improvements across the region and extends through 2014 the General Mobility Program.

NORTH CORRIDOR

The North Corridor, which runs through the Northside neighborhood, is approximately 5.2 miles long and extends from the existing MetroRail University of Houston-Downtown Station. The alignment continues north on the Main Street Bridge and passes under I-10 and continues on an aerial structure passing over the Union Pacific Railroad at the proposed Intermodal Terminal. The aerial structure comes down to grade south of Hogan Street, continues at-grade in the median of Main Street, turns east onto Boundary Street and then turns north onto Fulton Street. The alignment continues at-grade in the median of Fulton and then passes under I-610. North of I-610 the corridor continues on an aerial structure north of Melbourne Street and crosses the Houston Belt and Terminal Railway. The aerial structure comes down to grade into the median of Fulton Street south of Dorchester Avenue, and terminates adjacent to the existing Northline Transit Center.

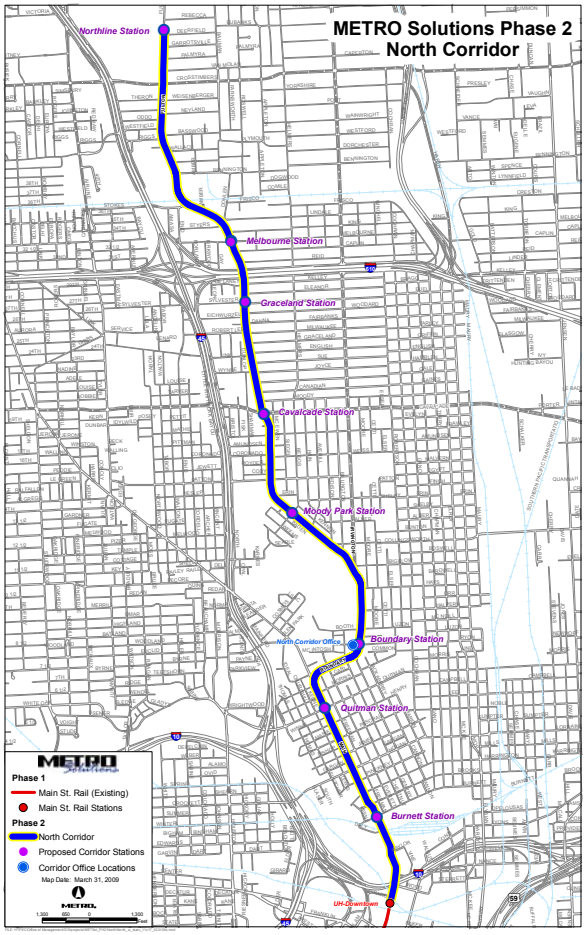


Figure 2 Metro Solutions - Phase 2 North Corridor

The North Corridor includes eight stations along the alignment that will consist of a combination of split side and center platforms. The stations will be equipped with passenger information and fare collection systems. The projected ridership of the North Line is approximately 29,000 average weekday boardings.

The introduction of rail transit to this neighborhood provides a major new amenity for both current and future residents, workers and visitors.

The North Corridor of the MetroRail system will provide a major new amenity for Northside.

2. HOUSTON URBAN CORRIDOR PLANNING

In June 2006, the City of Houston embarked on a major initiative, Urban Corridor Planning. This initiative will change how the City regulates development and designs its streets and other infrastructure in order to create a high quality urban environment in areas along METRO's light rail corridors: Main Street, Uptown, East End, North, Southeast and University. The Corridor Ordinance regulates new development along transit corridor streets (TCS) and intersecting streets (Type "A") by providing standards and guidelines for sidewalks, landscape, entries and building design.

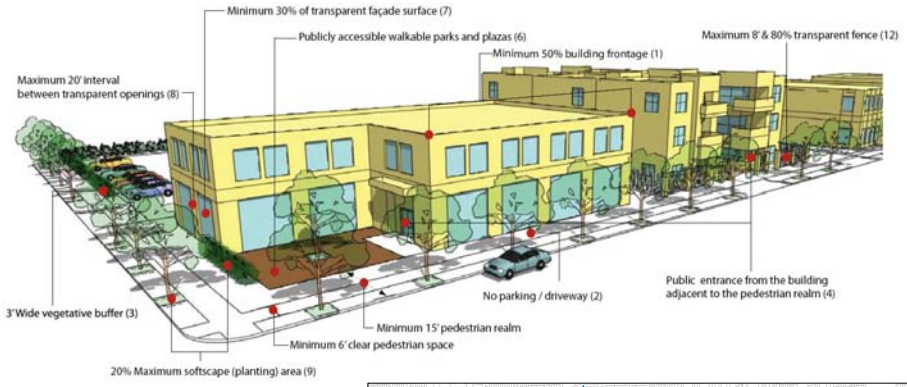


Figure 3 Corridor Ordinance
The Corridor Ordiance sets standards and guidelines along the University transit corridors

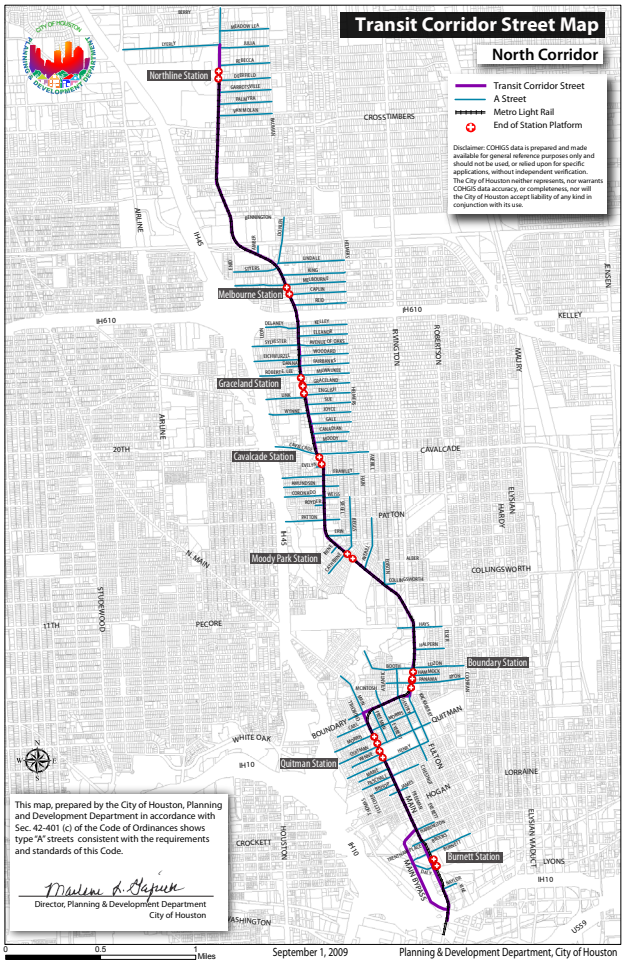


Figure 4 Transit Corridor Street Map - North Corridor

3. NORTHSIDE VILLAGE ECONOMIC REVITALIZATION PLAN

The Northside Village Economic Revitalization Plan, created in 2002, creates a "roadmap" to address the future and to establish its identity as a vital urban, inner-city neighborhood. The Plan reflects the community's goals and visions about its future and charts a course of action.

The Plan contains recommendations on the following key topics:

- Urban Design Guidelines: A set of design guidelines for new development and revitalization were developed as part of the Plan. These guidelines identify development practices through which the community's desired character can be reinforced and maintained.
- Major Economic Nodes and New Development Opportunities: The Plan identifies opportunities for economic development and infill potential. These areas can become the focus of new, neighborhood-oriented, pedestrian-friendly development while making the area more inviting, convenient, and livable.
- Strategies for Implementation: Land use, economic development, physical improvements, housing and historic preservation are addressed through various strategies and actions.

The ultimate goal of the Plan is to capture, emphasize, formalize and glorify the key aspects that make Northside Village the community its citizens enjoy. The strategies developed will become their roadmap for the future. The Economic Revitalization Plan represents an important starting point from which the Livable Centers Study will depart. Much of the existing conditions information summarized in this Needs Analysis comes from the Economic Revitalization Plan.

The Economic Revitalization Plan identifies opportunities for development and infill potential.

New development on vacant and underutilized sites should reinforce and maintain community character

4.HARDY YARDS REDEVELOPMENT

Located in the southern portion of Northside, Hardy Yards is a 47 acre brownfield (former industrial) site near the railyards of Union Pacific. The redevelopment offers an exciting opportunity to create a vibrant urban development with a mix of uses, services and amenities that link to downtown Houston and enhance the existing Northside neighborhood. The site provides direct access to downtown and offers exceptional views of the Houston skyline. Hardy Yards and the surrounding industrial facilities are well-positioned to foster redevelopment into a high-density urban residential district.

The Hardy Yards Plan developed by Cypress Real Estate Advisors includes approximately 3,000 residential units in townhomes, mid rise and high rise buildings; around 120,000 sf or retail space and approximately 500,000 sf of office space. This proposed new development will incorporate the future intermodal station at Burnett and Main Street and will act as a significant anchor for redevelopment in Northside.

Hardy Yards will contain approximately 5,000 new residential units

Hardy Yards will act as a significant anchor for redevelopment in the Northside neighborhood

C. PLANNING AREA OVERVIEW

I. PLAN PRINCIPLES

The following Plan Principles build off of the goals and strategies of the Northside Village Economic Redevelopment Plan:

- Redevelop Industrial and semi-industrial properties as single-family residential, neighborhood oriented commercial and community facilities.
- Where possible, develop mixed-use complexes that integrate with transit and encourage multi-family and townhouse development to locate near transit stations.
- Create vibrant community gathering places, Improve community parks and develop additional parks and community facilities
- Use light rail to improve overall transit network and to attract economic development
- Improve the pedestrian network and create bikeways throughout the community
- Improve the visual appearance of commercial corridors and nearby residential areas while preserving historic housing stock and commercial structures.

The Study seeks to improve the visual appearance of commercial corridors and nearby residential areas while preserving historic housing stock and commercial structures

2. EXISTING LAND USE

Like many older Houston neighborhoods, Northside contains a wide mix of land uses from residential to industrial. In general, commercial and service uses are concentrated along major streets including the North Main Street, Quitman Street, Fulton Street, Irvington Boulevard and Patton Street Corridors. These streets contain the day-to-day goods and services that are mostly positioned for the local market and used by neighborhood residents. The development along the commercial corridors contains several vacant or underutilized parcels and is heavily auto-oriented with most buildings set far back from the street with surface parking in front. In a number of instances, bars/cantinas and auto-related businesses conflict with surrounding residential uses.

Adjacent to the commercial corridors, Northside is made up of predominantly single-family homes, many which were built before 1950. These homes are in various states of repair and provide convenient and affordable housing. Several larger multi-family developments are scattered through the neighborhood including a large affordable housing complex adjacent to Moody Park. These multi-family homes are typically newer than the surrounding single-family residences and provide opportunities for different income groups, ages and household sizes in the neighborhood. Transit-oriented development will provide new opportunities for higher density multi-family development within walking distance of stations.

Industrial uses and vacant industrial sites constitute a relatively small amount of the total land area and are generally warehousing and shipping facilities located on the south side of the neighborhood near the old Southern Pacific yards. Some areas that are predominately residential contain large industrial warehouses which generate considerable truck traffic.

Institutional uses such as schools and churches are generally focused along commercial corridors while Moody Park, in the northern section of the neighborhood, provides the major open space amenity for residents.

Northside has the potential for new development, especially within walking distance of new MetroRail stations. Many existing buildings, especially along commercial corridors are also prime for redevelopment and adaptive reuse, meaning the restoration of buildings to fit new uses.

Auto-oriented uses line commercial corridors in the neighborhood.

Many Northside single-family homes are historic in character

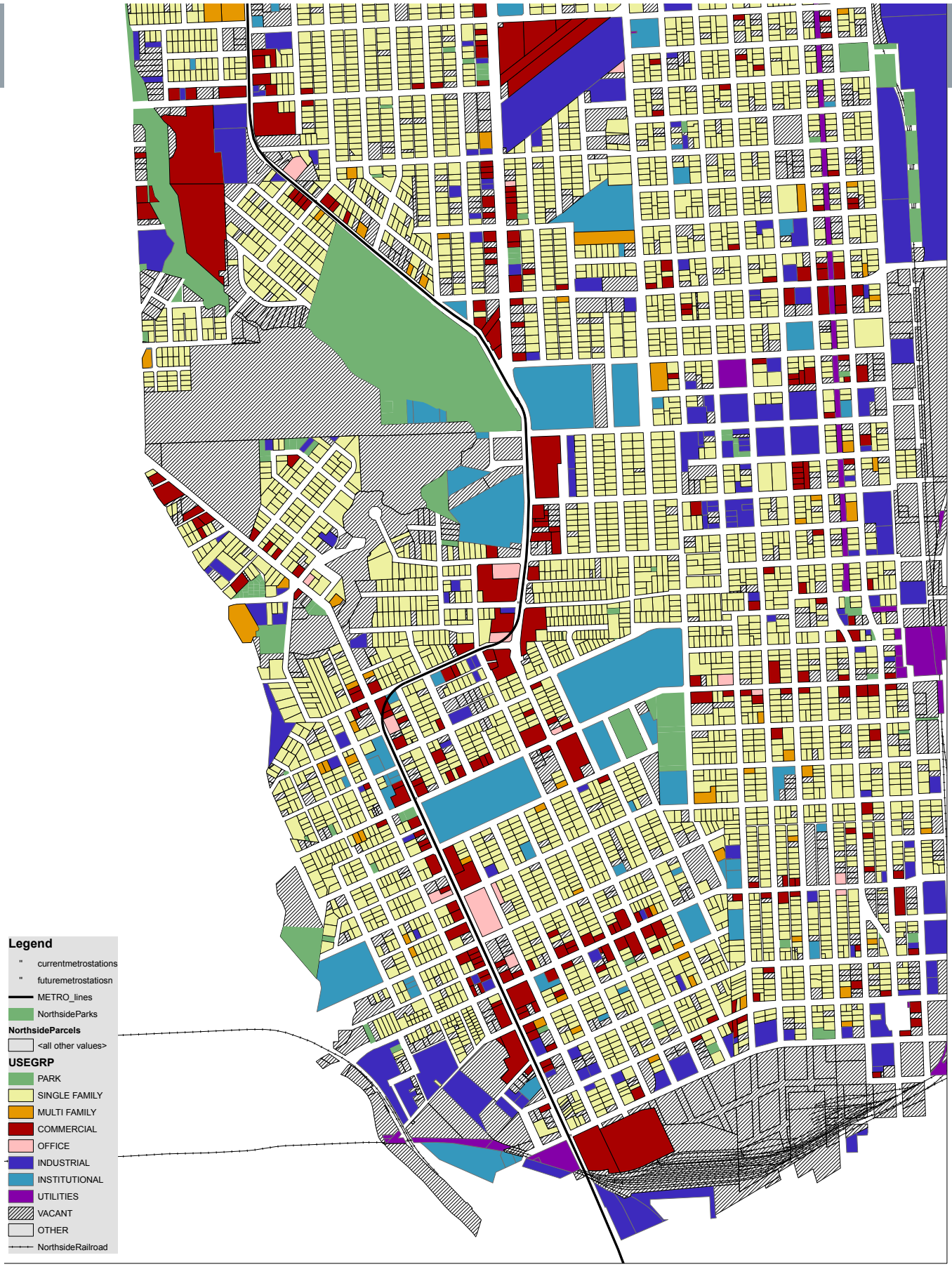


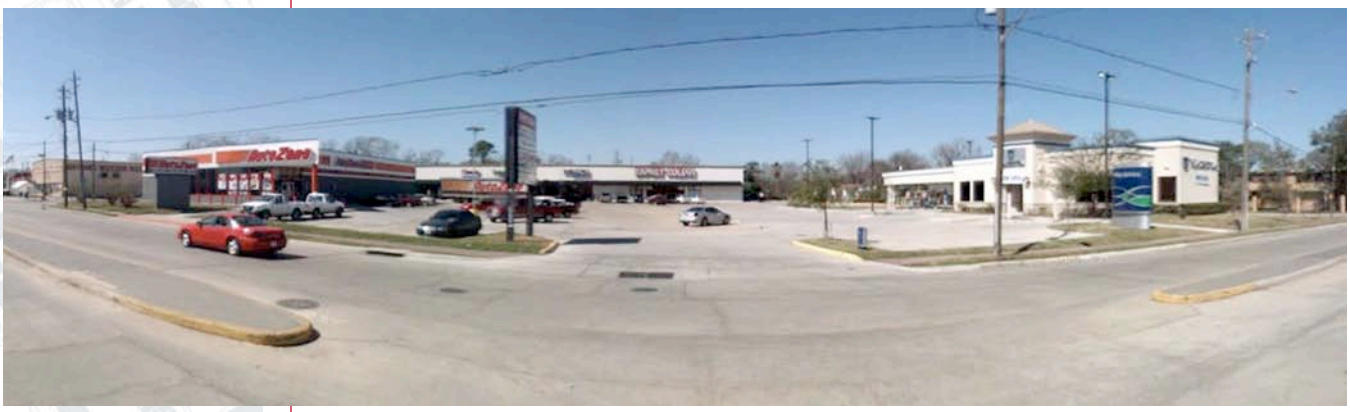
Figure 5 Existing Land Use Map
Existing Land Use Map (source: Harris County Appraisal District)

5. ISSUES AND OPPORTUNITIES

COMMERCIAL CORRIDORS - AUTO ORIENTED

The commercial corridors of Northside function as the main shopping and transportation routes through the community. They are also where the MetroRail expansion is planned and the largest amount of change is likely to occur. Though historically walkable and urban in nature, in the past 50 years these corridors have been transformed into an auto-oriented environment. Along these corridors newer one-story buildings are set back from the street with surface parking lots in front. This orientation creates a pedestrian-unfriendly suburban character throughout the neighborhood. Signage is typically characterized by large pole-signs that are designed to be seen at high speeds. Pedestrian infrastructure is limited and in need of improvement and connections through parking lots from the sidewalk are often missing. Large curb-cuts create conflict between pedestrians and autos.

Auto-oriented buildings on East side of North Main Street at Hogan Street

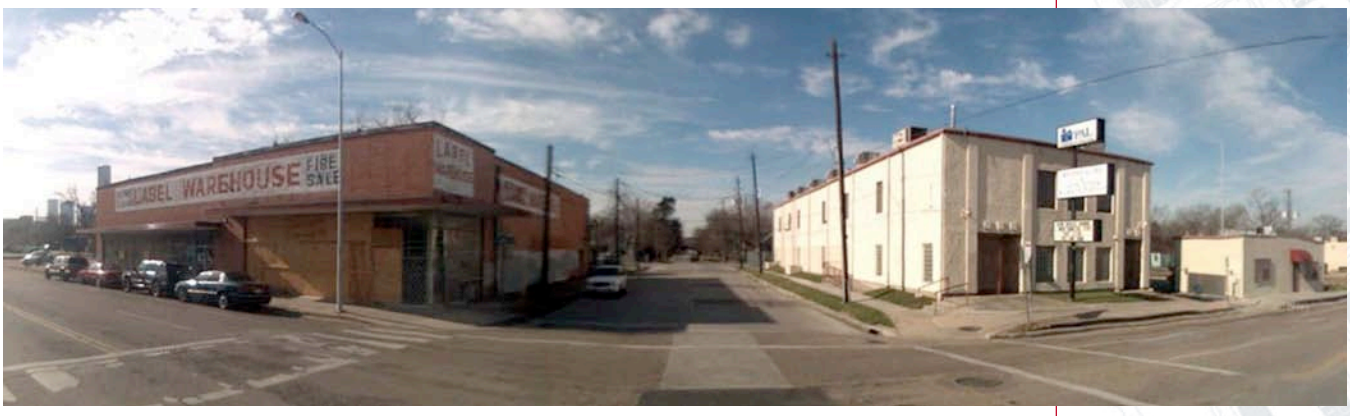


Auto-oriented buildings on Fulton Street and Luzon Street

COMMERCIAL CORRIDORS - PEDESTRIAN ORIENTED

The Northside neighborhood retains pockets of commercial and mixed-use buildings that are pedestrian-scaled and adjacent to the sidewalk. The most significant clusters of these buildings are found at North Main and Harrington, North Main and James, North Main and Quitman, Hogan and Common, Quitman and Fulton, and Lorraine and Gano. These areas help to create a village-like scale and should be preserved and enhanced where ever possible. Throughout the country, areas with historic and walkable urban form, especially near transit stations, have been revitalized with new uses, building renovations and private investment. Many of these areas in Northside have the potential to become vibrant local centers providing much needed services for both new and existing residents.

Pedestrian-oriented buildings on North Main Street at Quitman Street



Pedestrian-oriented buildings on North Main Street at Paschall Street

DISTRICTS

The Northside neighborhood is a very large area made up of a number of Districts. Generally, Districts are single-use neighborhoods that are bounded by commercial corridors such as North Main Street and Quitman Street. The residential Districts in the northern 3/4 of the study area contain the majority of "areas of preservation" and are likely to see much less redevelopment than properties along commercial corridors closer to stations. For the purposes of this study, the following Districts have been identified on the Districts/Connections Diagram, from north to south:

MAJOR DESTINATIONS

- North Moody Park District
- Northeast Fulton District
- Northeast Irvington District
- Central Fulton District
- Triangle District
- South Moody Park District
- Southeast Fulton District
- Northwest Quitman District
- Northeast Quitman District
- Hogg Park District
- Northwest Hogan District
- Northeast Hogan District
- South Hogan District
- South Industrial District
- Hardy Yards District
- University of Houston District

Major destinations within the Northside neighborhood include the University of Houston's Downtown Campus, local public schools and parks. Existing retail and services along commercial corridors are also major destinations for workers and shoppers. These destinations are likely to draw a variety of transit riders and should be a focus of circulation improvements.

Connecting residents to transit and services is a major goal of the Livable Centers Program. The Districts/Connections Diagram shows important pedestrian connections to the Major destinations in the area. Streetscape improvements can help to create a safer, more attractive walking experience. Commercial corridors, especially within a 1/4 mile of transit stations, should be prioritized for improvements due to the highest anticipated volume of walkers and bikers.

Jefferson Davis High School is a major destination along Quitman Street

University of Houston buildings are major destinations along North Main Street

GATEWAYS

Gateways represent the entrances into the Northside neighborhood, typically on the edges of the overall district. The most noticeable gateway into Northside is coming north from Downtown Houston along North Main Street. Traveling under Interstate 10 and then below the rail tracks represents a clear entry point into the neighborhood. Other distinct gateways occur at Patton Street and Interstate 45, North Main and Interstate 45, at Quitman Street and Interstate 45, at Hogan Street and Interstate 45 and at Interstate 10 and Elysian Street.

These gateway areas are typically the first thing a visitor sees when entering Northside and should be attractive and welcoming. With the completion of the light rail line, new gateways will occur at stations along North Main and Fulton Streets. These stations will be the major points of entry for transit riders into the neighborhood.

BLOCK STRUCTURE

Because of its historic nature, the Northside neighborhood has an urban block pattern that is ideal for circulation of bicycles, pedestrians and autos. The blocks in the area south of Hogan Street are typically 200' x 300.' Blocks between Hogan Street and Boundary Street are typically 200' x 400'. Block sizes generally get larger in the northern portions of the neighborhood up to about 200' x 600'. New development within the Northside neighborhood should fit within the existing block pattern to ensure a high degree of connectivity and walkability.

Southern gateway at North Main Street and Interstate 10

Western gateway at Quitman Street and Interstate 45

6. EXISTING OPEN SPACES

PARKS

The heart of the Northside neighborhood is Moody Park, located along Fulton Street just north of Hays Street. Moody Park contains an active recreation center, swimming pool, ballfields and passive recreation areas. Adjacent to Moody Park are the Hollywood and Holy Cross Cemeteries, which provide additional open space between the Park and Interstate 45. A new rail station will be located just one block to the north of Moody Park at Fulton and Beggs Street providing convenient non-auto access for park users. The pedestrian connection from the station to the Park and recreation center should be a key priority of the Livable Centers Study.

Hogg Park is a smaller open space in the western portion of the neighborhood just south of Quitman Street and adjacent to Interstate 45. Hogg Park surrounds the historic Sunset Hospital and is primarily passive in nature with no dedicated ballfields or other facilities. A John Castillo Park is located adjacent to Jefferson Davis High School and the public library and contains playground space, ballfields and passive recreational areas. Hennesy Park is a small, neighborhood oriented green space in the southern portion of the study area at the intersection of Providence and Maury Street. Hennesy primarily consists of a baseball diamond and seating areas.

BAYOUS

The Little White Oak Bayou runs through the western portion of the study area providing drainage and wildlife habitat along its length. The Bayou is currently underutilized as a recreational area and open space connection within Northside. The City of Houston Bikeway Program recently opened a section of the Little White Oak Bayou Trail from Sylvester Road south to Cavalcade Street, stopping just short of the northern border of the Study Area. There is tremendous potential to extend the existing trail through Northside, helping to weave the North Moody Park, South Moody Park, Triangle and NW Quitman Districts together while creating an alternative route to Downtown Houston.

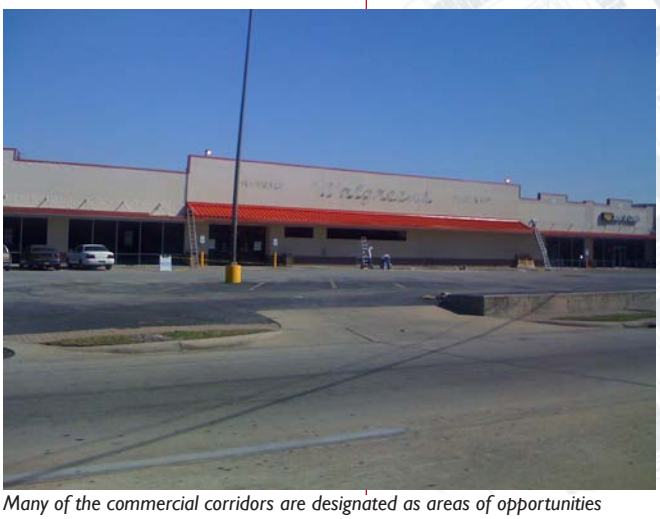
The Little White Oak Bayou is an underutilized open space corridor

Moody Park is a regional draw and central open space for the Northside neighborhood

6. AREAS OF OPPORTUNITY

"Areas of Opportunity" are defined as vacant and underutilized properties that have potential for redevelopment. The Districts that have the largest areas of opportunities include the Hardy Yards District, the University of Houston District, the South Industrial District and the North Moody Park District. A large amount of property along the major commercial corridors of North Main Street, Hogan Street, Quitman Street, Fulton Street, Collingsworth Street and Irvington Boulevard. The Livable Centers Study will focus proposed changes and neighborhood improvements on these areas of opportunities. The parts of Districts that are not designated as areas of opportunities are primarily single-family and/or historic in nature. These areas are not likely to change in character though they may have recommended pedestrian improvements. More than 50% of the buildings in the planning area were built in 1935 or earlier. The concentration is greater closer to Hardy Yards.

Hardy Yards is designated as a major area of opportunity



Many of the commercial corridors are designated as areas of opportunities

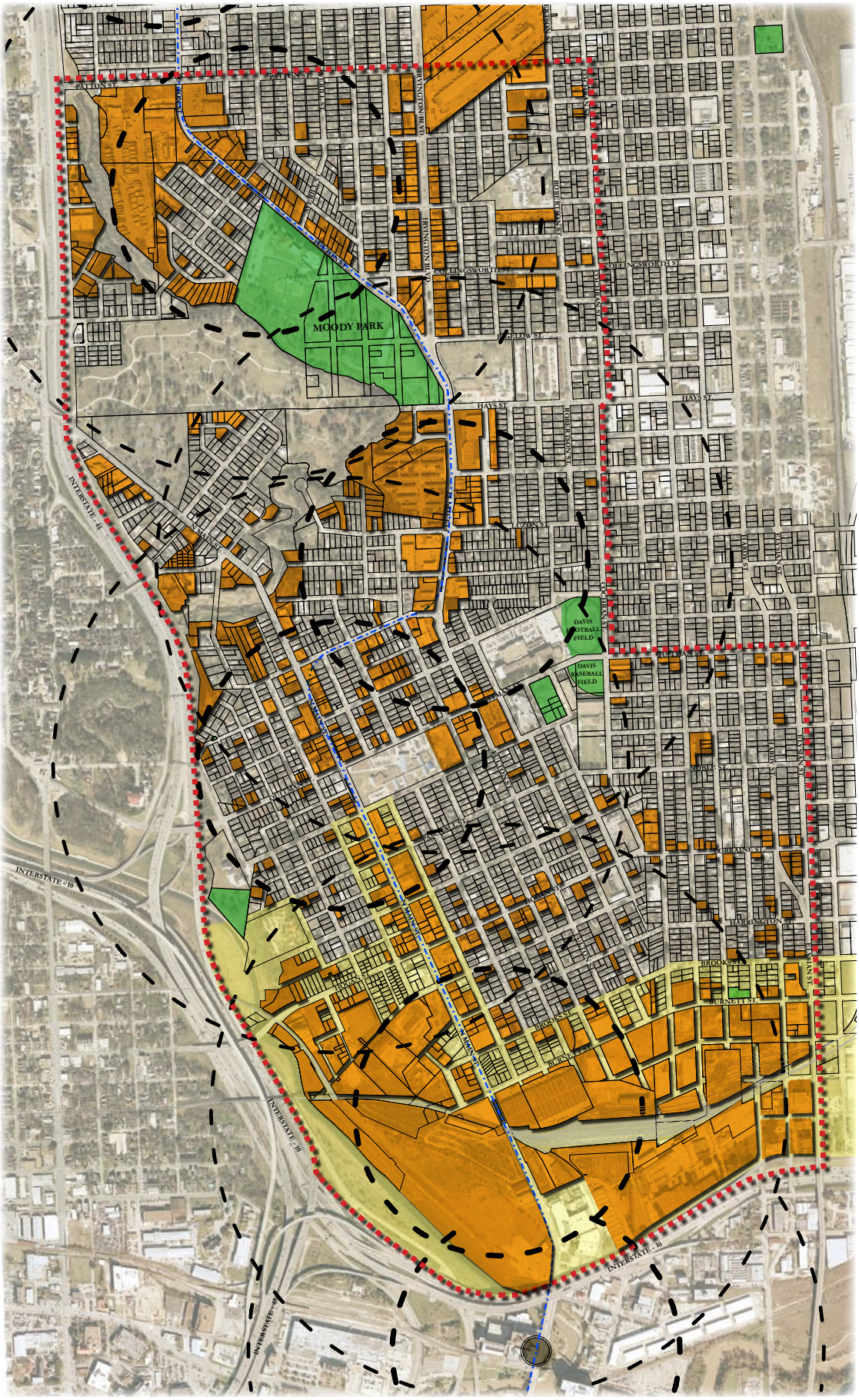


Figure 6 - Areas of Opportunity

D. TRANSPORTATION CONDITIONS

I. NORTHSIDE GROWTH TRENDS

Population and employment in the study area are expected to experience at least moderate, and in some cases, rapid growth. Population is expected to grow rapidly in the rail yard areas north of IH-10, exceeding 3.5% through 2035. This is consistent with this being a large expanse of developable land near Downtown. Areas along IH-45 are expected to grow at a slower pace, between 0.5 to 1.5% annually through 2035. Most of the population growth is expected to occur in the first forecasted time period of 2009 – 2025. Beyond the 2025 horizon, only the rail yard areas are expected to keep growing rapidly. Population is expected to remain stable or decrease in the remainder of the study area.

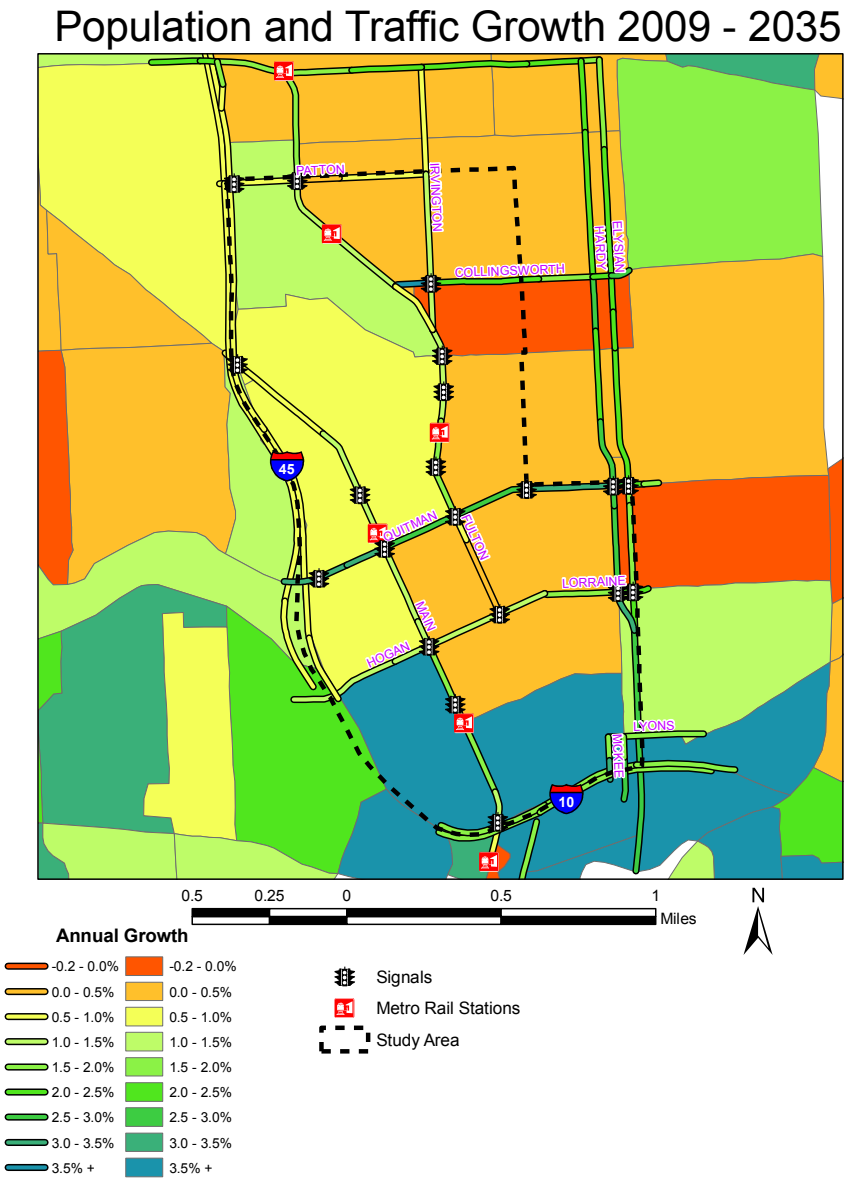


Figure 7 Population and Traffic Growth 2009 - 2035
Source: H-GAC Socioeconomic Forecast

Employment is expected to grow throughout the study area, averaging a moderate pace of between 1% and 3% per year, out to 2035. Traffic growth is predicted to be significant overall throughout the study area. Traffic on the east-west corridors of Quitman and Collingsworth is expected to grow rapidly through 2025 and moderately out towards 2035. Traffic on the Elysian – Hardy corridor is expected to grow moderately out to 2035 as well.

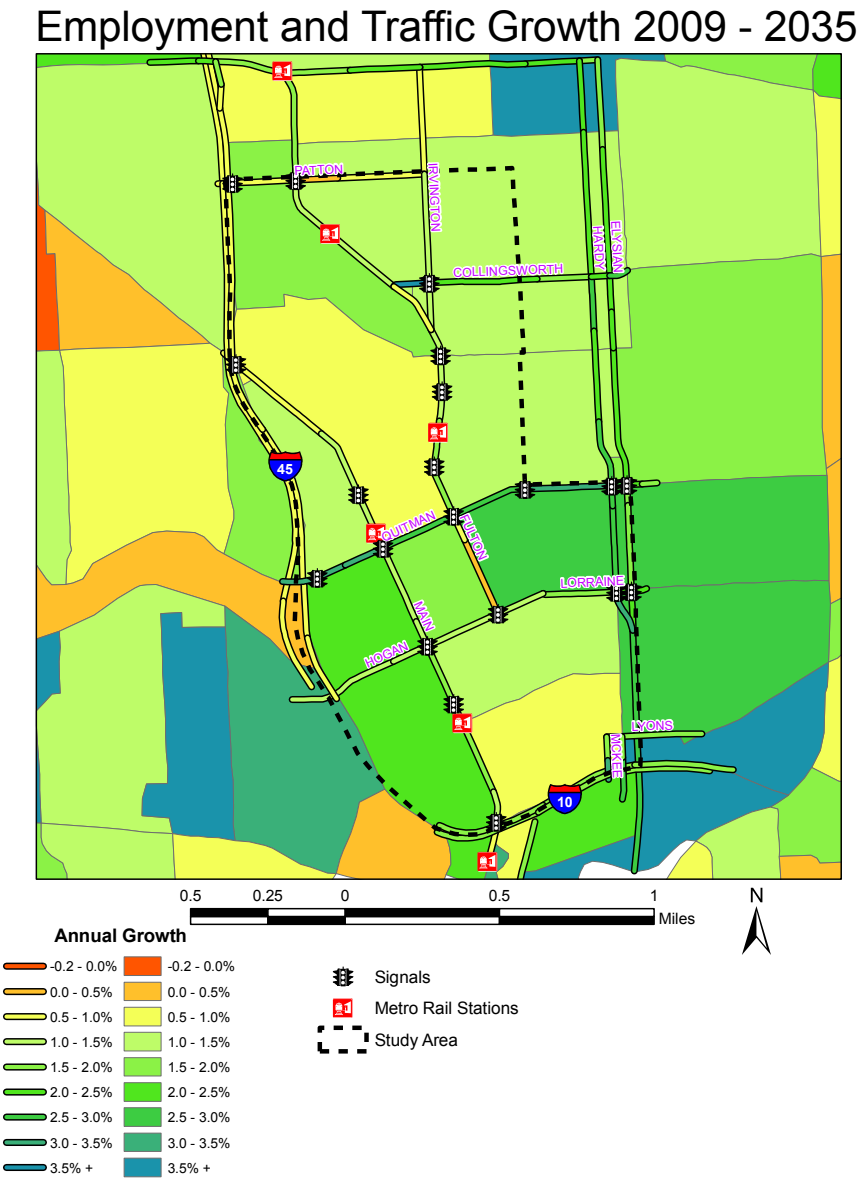


Figure 8 Employment and Traffic Growth 2009 - 2035
Source: H-GAC regional traffic demand model

2. EXISTING TRANSIT SERVICE

Currently a large number of local bus routes travel down North Main into Downtown. It is expected that these routes may be reduced or truncated when the light rail extension begins operating on this route. This includes the #9 and #24 which enter the Northside from across IH-45. Similarly, the #15 on Fulton Street and possibly the #78 on Irvington Blvd. will likely be curtailed. Other local bus routes operate as follows:

- #60: North-south on Hardy/Elysian
- #5: East-West on Hogan/Lorraine
- #37 and #52: East-West on Quitman

Except for the #37, which crosses the Hogan/Crockett bridge into the First Ward, all these routes use North Main to enter Downtown.

Figure 9 Existing Transit Service in Northside

3. SIDEWALK CONDITIONS

Sidewalks in all areas are deemed to be either in good condition, poor condition or non-existent; "good condition" means there are no noticeable problems with the sidewalk and "poor condition" means that the sidewalks were cracked, uneven, had tilted/upended concrete, or were mostly covered by surrounding landscaping. Sidewalks along the streets where the light rail will be constructed are of low priority for improvements as part of this Livable Centers project, because those sidewalks are going to be replaced when the street is reconstructed to install rail.

The sidewalks near the proposed station at Main and Burnett are mostly non-existent or in poor condition. The sidewalks on Main Street, on the south side of Brooks, and near the University of Houston Downtown are the only area sidewalks in good condition. The streets east of Main Street are in a neighborhood that has many poorly maintained sidewalks that seem to be difficult to travel upon. The streets west of Main Street have no noticeable sidewalks.

The sidewalks near the proposed station at Main and Quitman exhibit a wide variety of conditions depending on exact location. The sidewalks along Main and Quitman themselves are in good condition. Southwest of the intersection of Main and Quitman, the sidewalks are mostly in poor condition. Some construction sites in this neighborhood had removed or blocked sidewalks at the time of the field survey. In the vicinity of the school near Quitman and South, west of the station, sidewalks are in generally good condition. Southeast of the intersection of Main and Quitman, the sidewalks are in good condition surrounding the (new) school bounded by Main, Quitman, Gentry, and Henry. South of the school, however, the neighborhood sidewalks are in poor condition. Northeast of the intersection of Main and Quitman, the sidewalks show a combination of poor and good conditions. Near schools and commercial areas the conditions are good, but the sidewalks further into the residential areas are in poor condition. Northwest of the intersection of Main and Quitman, sidewalks are mostly non-existent or in extremely poor condition. The exceptions are the sidewalks near the commercial area, which are in good condition, and along Fletcher and Morris Streets, which have sidewalks in good to very good condition.

Encouraging walking is a main goal of the Livable Centers Program

Many residential streets lack sidewalks in the Northside neighborhood

Near the proposed station at Fulton between Luzon and Panama, existing sidewalks are mostly in good condition, but in many places they are non-existent. The sidewalks existing near commercial or industrial areas and major streets such as Fulton, Boundary, Hays, Halpern, and Cochran are mainly in good condition. Residential areas near this station have either no sidewalks or poor sidewalks, with only a few exceptions along the south side of Luzon and the west side of Cetti. West of Fulton Street, the Irvington Village development has sidewalks in good condition throughout the complex.

The sidewalks surrounding the proposed station at Fulton south of Catherine are mainly non-existent. Where sidewalks do exist, they are mostly in poor condition. The few exceptions with sidewalks in good condition include south of Erin and east of Averill, as well as the residential area west of Fulton. Fulton Street itself has sidewalks in good condition on the west side of the road and sidewalks in poor condition on the east side of the road.

Sidewalk Conditions: Burnett Station

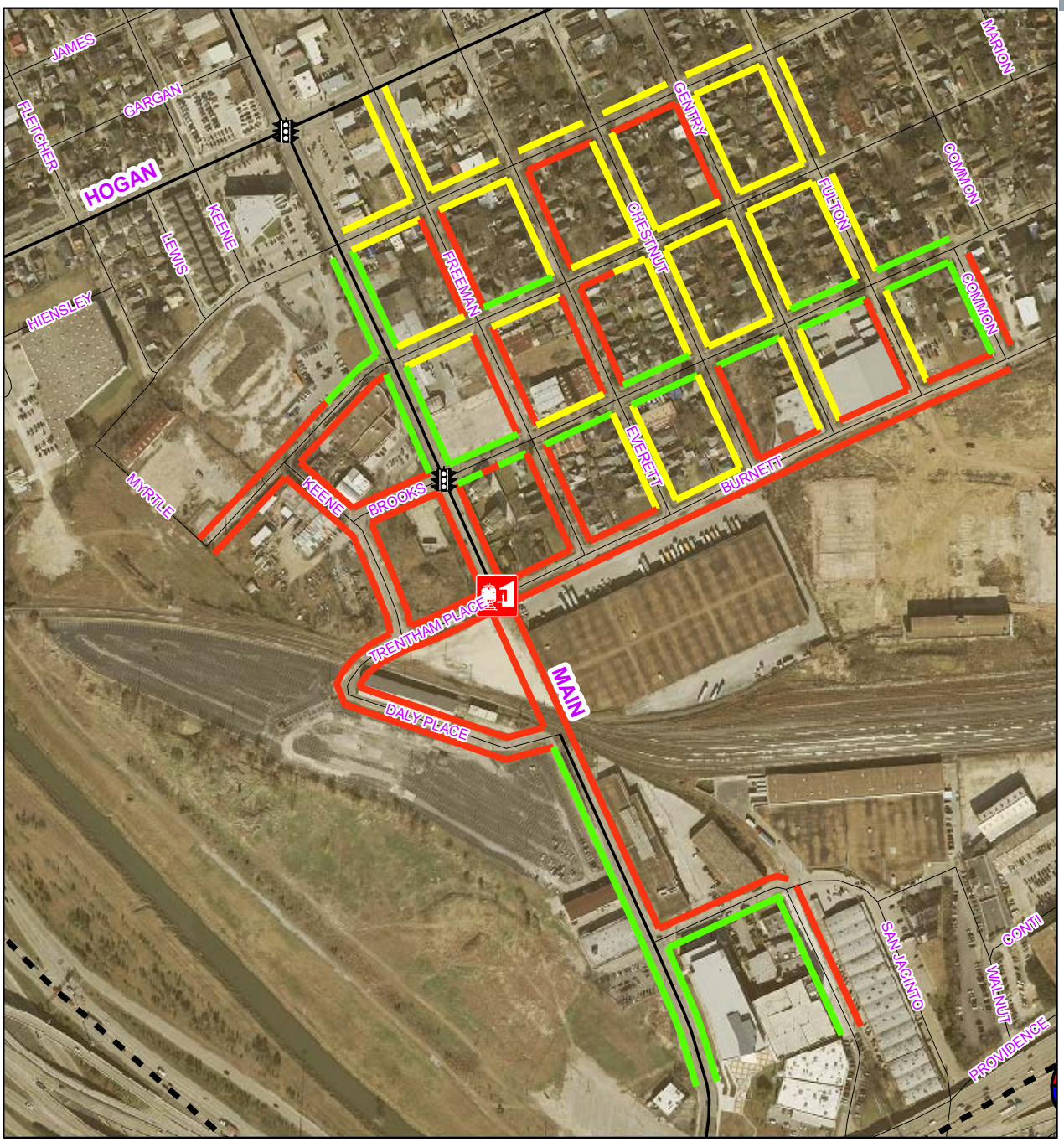
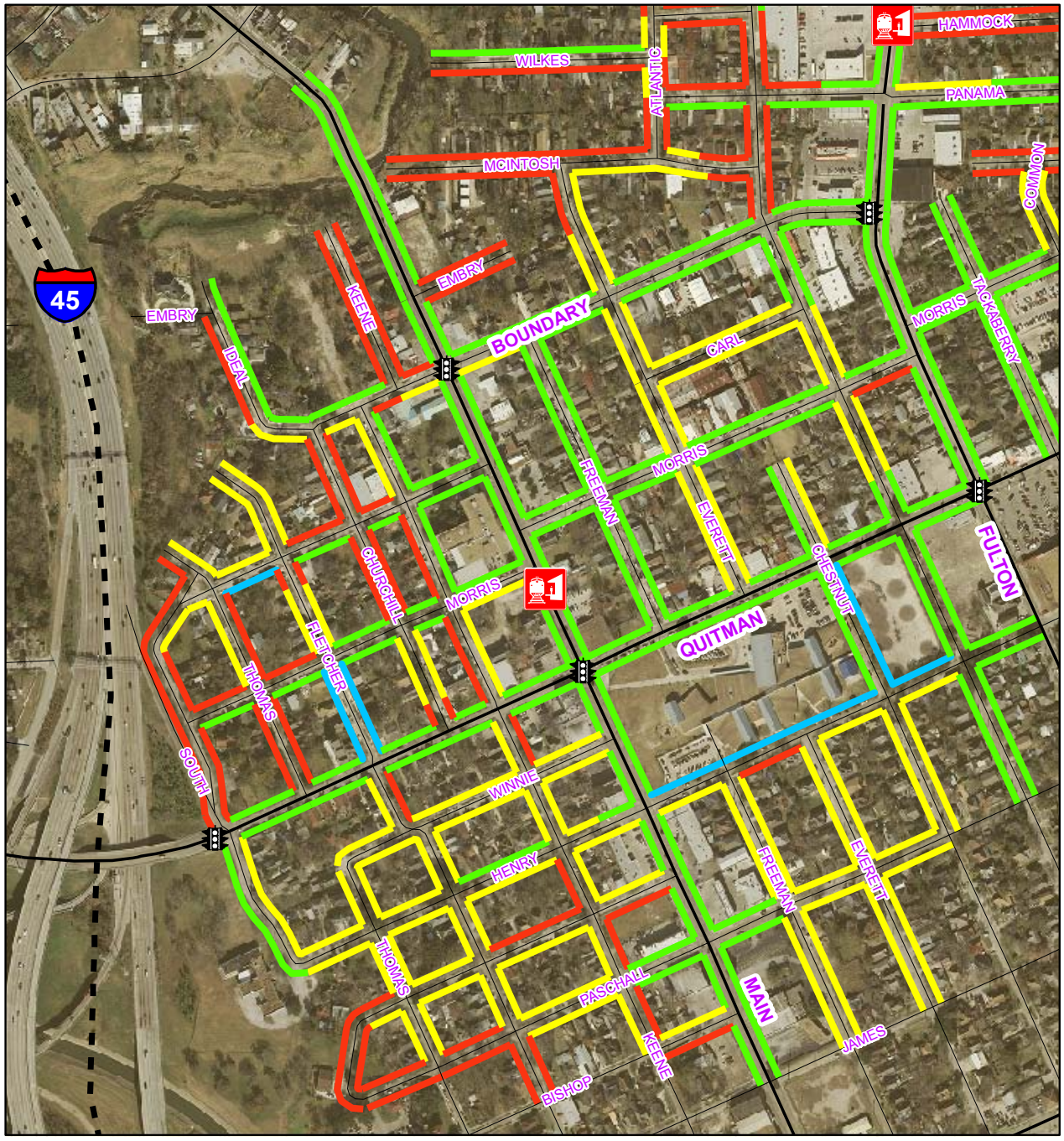


Figure 10 Sidewalk Conditions: Burnett Station
Source: LAN field observations

Sidewalk Conditions: Quitman Station



1,000 500 0 1,000 Feet

N

Condition

- Excellent
- Fair
- Poor
- No sidewalk

- Signals
- Metro Rail Stations
- Study Area

Figure 11 Sidewalk Conditions: Quitman Station
Source: LAN field observations

Sidewalk Conditions: Boundary Station

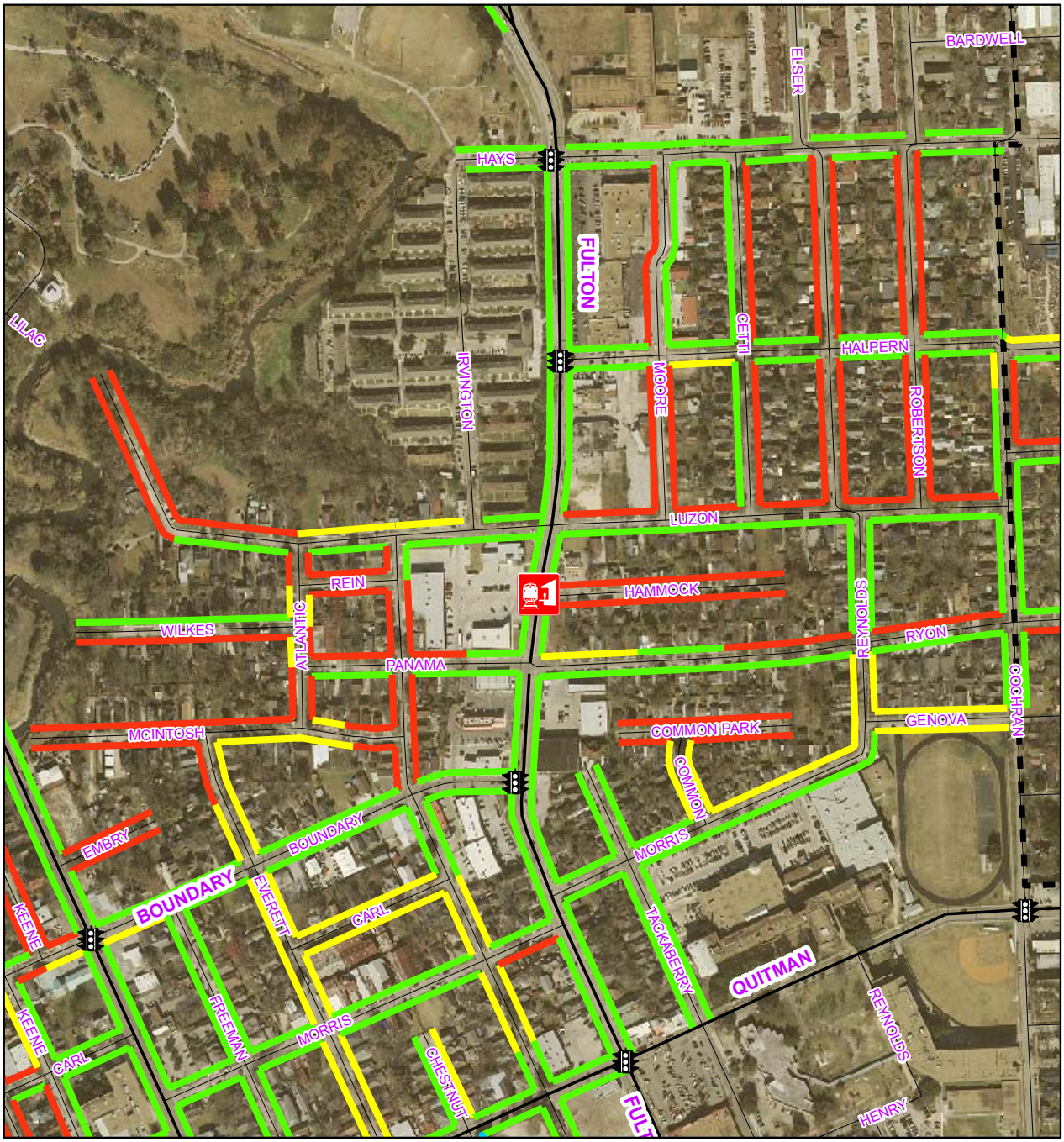


Figure 12 Sidewalk Conditions: Boundary Station
Source: LAN field observations

Sidewalk Conditions: Moody Park Station

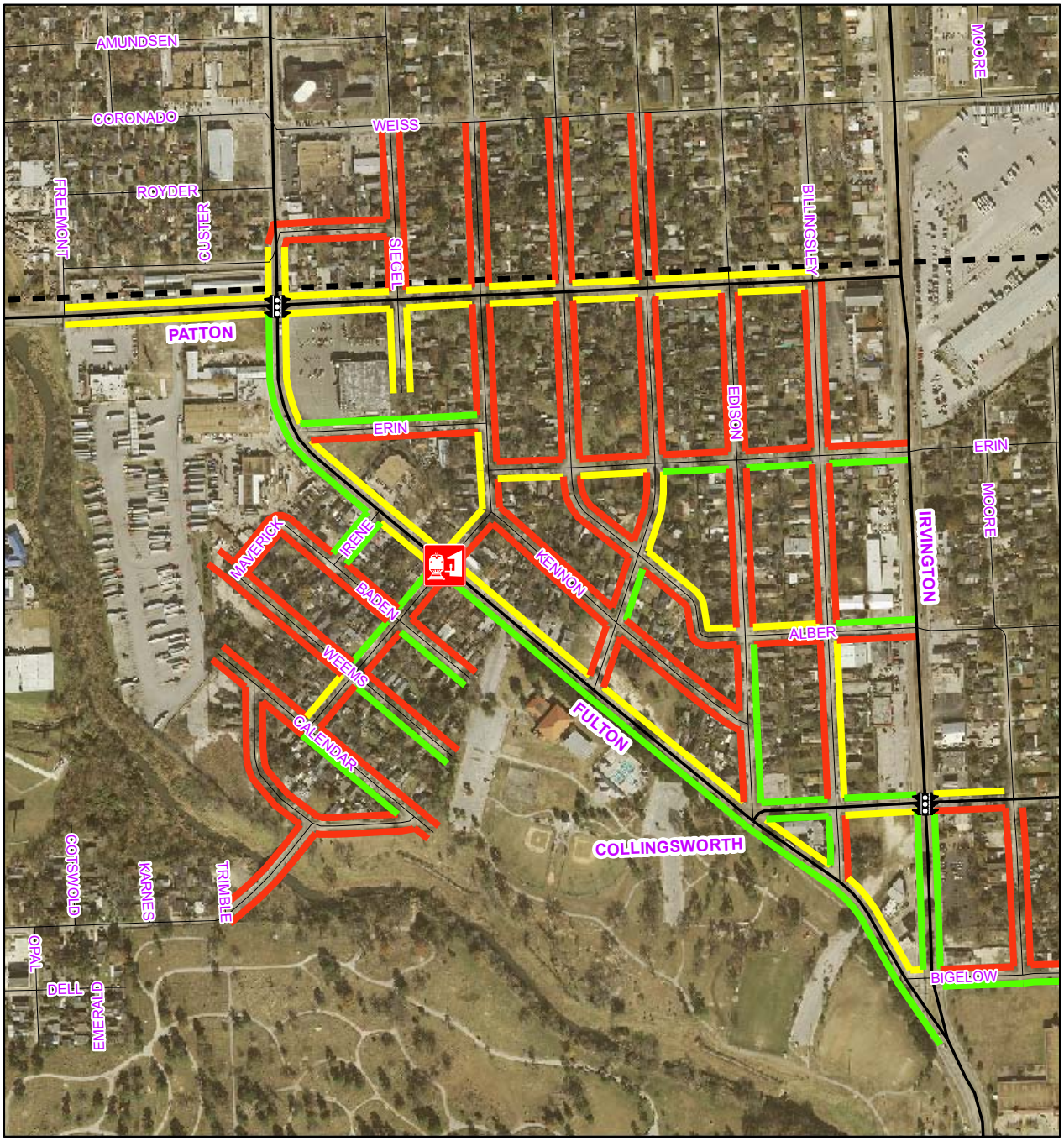


Figure 13 Sidewalk Conditions: Moody Park Station
Source: LAN field observations

4. SIGNAL INVENTORY

The majority of traffic signals in the Northside study area have all the recommended pedestrian elements, the notable exceptions being Main at Brooks and Main at Boundary. These recommended elements include crosswalk striping, pedestrian call buttons, "walk/don't walk" signal heads with countdown timers, and ADA-compliant curb ramps. Since these intersections are along the route of the light rail, it is anticipated that METRO will reconstruct these signal to current standards. In some cases along the freeway frontage roads, where there are pedestrian signal heads and countdowns but no call buttons, these are likely pre-timed signals with a pedestrian phase programmed in. The most pressing issue is the curb ramps which, while provided in almost all cases, do not meet ADA standards for contrasting color and detectable pavement edge (truncated domes).

Traffic Signals - Northside

Street1	Street2	Crosswalks?	Ped Buttons?	Ped Heads?	Countdowns?	Ramps?	ADA-OK?
Fulton	Patton	Yes	Yes	No	No	Yes	No
Fulton	Collingsworth	Yes	Yes	Yes	Yes	Yes	No
Collingsworth	Irvington	Yes	Yes	Yes	Yes	Yes	No
Fulton	Irvington	Yes	Yes	Yes	Yes	Yes	No
Fulton	Hays	Yes	Yes	Yes	Yes	Yes	No
Fulton	Halpern	Yes	Yes	Yes	Yes	Yes	No
Fulton	Boundary	Yes	Yes	Yes	Yes	Yes	No
Fulton	Quitman	Yes	Yes	Yes	Yes	Yes	No
Fulton	Hogan	Yes	No	Yes	Yes	Yes	No
Main	IH-45	Yes	No	Yes	Yes	Yes	No
Main	Boundary	Yes	No	No	No	Yes	Old Standard
Main	Quitman	Yes	Yes	Yes	Yes	Yes	No
Main	Hogan	Yes	Yes	Yes	Yes	Yes	No
Main	Brooks	No	No	No	No	Yes	No
Main	IH-10	Yes	No	Yes	Yes	Yes	No
Lorraine	Hardy	Yes	Yes	Yes	Yes	Yes	No
Lorraine	Elysian	Yes	Yes	Yes	Yes	Yes	No
Quitman	Cochran	Yes	Yes	Yes	Yes	Yes	No
Quitman	Hardy	Yes	Yes	Yes	Yes	Yes	No
Quitman	Elysian	Yes	Yes	Yes	Yes	Yes	No
Quitman	South	Yes	Yes	Yes	Yes	Yes	No

Figure 14 Traffic Signals Inventory
Source: LAN field observations

E. ECONOMIC CONDITIONS

1. TOD MARKET OVERVIEW

This section describes the market for new development in the Northside neighborhood and the likely impact of the future light rail extension on the market. The extension is planned to be completed by 2012 and will link the Northside neighborhoods directly to downtown, the Texas Medical Center, and other major regional destinations. A variety of studies illustrate that the introduction of transit can have a significant impact on property values and development activity – however this impact varies widely among station areas, and can be difficult to predict.

Three main factors influence the potential for new development and neighborhood change near new transit stations:

- Market demand: Transit alone is rarely enough to "make" a market for development where it does not otherwise exist. Places that are already experiencing development activity or other kinds of investments are more likely to experience market impacts from new transit. Similarly, in urban locations, the introduction of transit does not typically fundamentally alter the kinds of land uses in the station area. Neighborhoods such as the Northside neighborhood that are primarily residential in character do not typically become employment centers, nor do employment centers change to become primarily residential neighborhoods.
- The nature of development opportunity sites: In growing regions such as Houston, larger infill development sites in central locations can be very desirable development opportunities. Larger sites (at least two to three acres) allow developers to achieve "economies of scale", and are typically more profitable and financially feasible for developers to undertake than smaller infill projects.
- Accessibility and transit connections: Fundamentally, the value of new transit is the improved access it provides to places in the transit system. When transit connects a residential area to a major retail, employment, or entertainment cluster, these amenities can influence market activity in the linked housing market. In cases where a major activity center such as downtown Houston is only a few stops down a transit line, the impact of the connection on the housing market can be strong. However, the more distant the two areas are from each other, and the greater the time-savings associated with driving as opposed to transit, the less influence the transit connection will have.

In evaluating the likely impact of transit on existing neighborhoods, it is also important to consider the impact that the new transit may have on the travel patterns of existing residents and workers. For employment centers, the type, mix, and growth rate of jobs can play a key role. Workers in certain jobs, including those in professional, technical, or financial services or in insurance, universities, government, or quasi-public agencies, tend to make use of transit at a much higher rate than those who work other industries. The degree to which the employment opportunities found in these activities centers match the skill-base of existing neighborhood residents, the more existing residents be able to make use of the transit investment to expand their employment access; to the degree that there is a mismatch between these jobs and the skills needed, the neighborhood may be vulnerable to a change in its demographic character. The following sections outline the market conditions in the Northside and describe the likely impact of new transit.

OVERVIEW OF THE MARKET FOR RESIDENTIAL TOD

Nationally, there has been a growing interest among households in living in more transit-oriented and walkable communities, which has been evidenced by the tens of thousands of new condominiums and apartments built near rail systems throughout the United States over the last ten years. While in 2000, only 6 million households lived near transit, the Center for Transit-Oriented Development (CTOD) forecasts that over 15 million households nationally will have an interest in living near transit by 2030, based on recent trends. Figure 15 shows that, while this demand is primarily among single person households, nonfamily households, and married couples without children, one-fifth of demand is among households with children. The diversity of this TOD demand across numerous household types, age groups, and income levels suggests that there is no one-size-fits-all solution to building near transit. Transit oriented development needs to occur with different densities, mix of land uses, and affordability levels in order to accommodate the full range of households interested in living near transit.

The presence of a rail station may draw households that would not otherwise consider living in the Northside neighborhood, provided the station area can offer the amenities of an urban lifestyle, including the potential to walk to shopping, services, and entertainment uses.

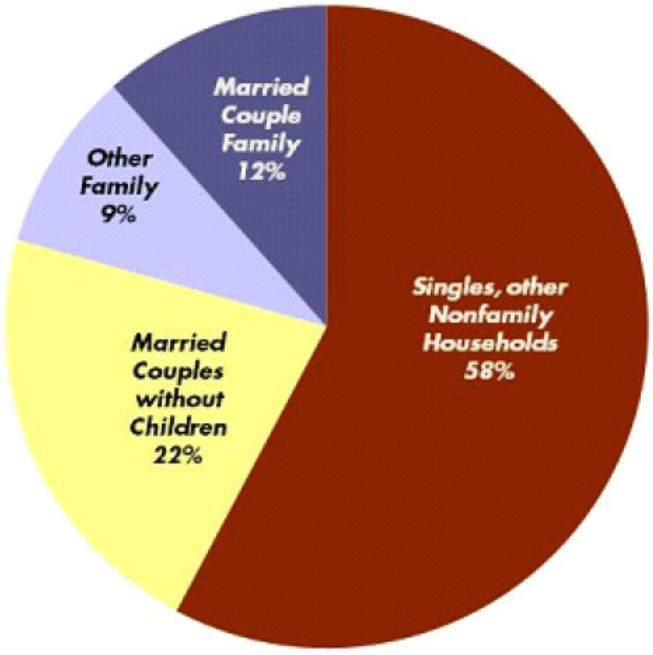


FIGURE 15: Distribution of National Demand for TOD by Household Type, 2030.
Source: Center for Transit-Oriented Development, 2006

2. EXISTING CONDITIONS

While the Northside has some employment-generating uses along its commercial corridors and within the industrial area at its southern edge, the neighborhood is primarily residential in character. The commercial uses that do exist along the corridor are in the form of small-scale, community-serving uses and restaurants. Many of these are underutilized and represent opportunities for potential redevelopment.

In 2009, the area had approximately 14,191 residents living in 3,914 households (Table 1). The following analysis is a summary of the key characteristics of the neighborhood's residential population.

HOUSEHOLDS IN NORTHSIDE ARE LARGER THAN AVERAGE FOR HOUSTON

Whereas the average household size in Houston is 2.7 persons and in the Houston metro area is 2.8 persons, the households in the Northside average 3.5 (Table 1 and Figure 16). Consequently, in order for potential new housing construction to meet the needs of existing residents, it would need to include 3- and 4-bedroom units, in addition to the smaller bedroom units that are more typical for multifamily housing. (For the purposes of this demographic analyses, the Northside is defined as the area within the following US Census block groups: Tract 2103, Groups 1, 2, 3, 4, and 5; Tract 2104, Groups 2, 3, and 4; and Tract 2105, Groups 4, 5, and 6.)

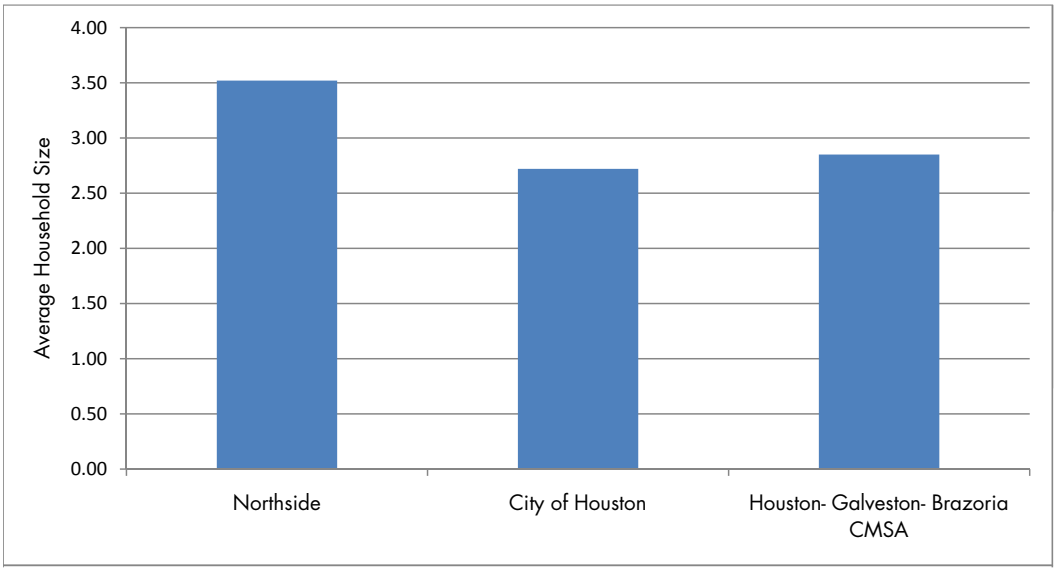


FIGURE 16: Average Household Size.
Source: Claritas, 2009, Strategic Economics, 2009

LITTLE HOUSING DEVELOPMENT OCCURRED BETWEEN 2000 AND 2009

In the midst of the housing bubble, which was accompanied by a dramatic 24 percent increase in housing construction in Houston, the housing stock only increased by five percent in the Northside. Over this period, the number of households in the neighborhoods increased by an even smaller margin (two percent), leading to a slight increase in the vacancy rate (Table 2 and Figure 17). Given that pressures for new housing construction have diminished since the peak of the market, this suggests that the demand for new housing will be limited in the near-term. However, the implementation of light rail may cause this to change over a longer time horizon.

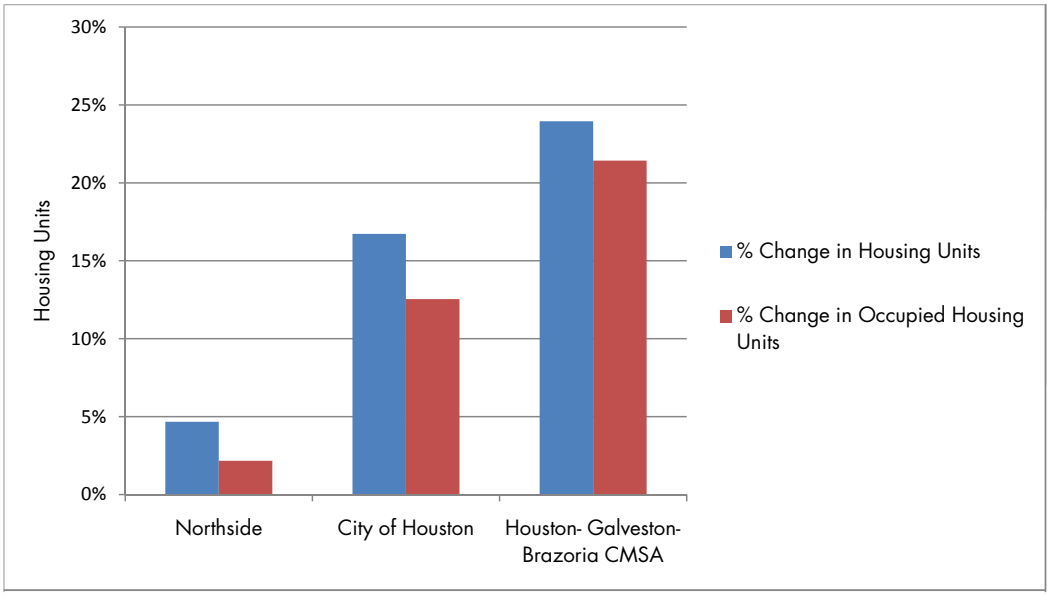


FIGURE 17: Change in Housing Units, 2000-2009.
Source: U.S. Census; Claritas, 2009, Strategic Economics, 2009

MORE THAN 2/3 OF RESIDENTS OVER THE AGE OF 24 LACKED A HIGH SCHOOL DIPLOMA IN 2009

This is more than double the rate for Houston as a whole. Similarly, less than five percent of these residents earned a bachelors degree or higher, compared to 27 percent for the city as a whole. The extent to which the light rail improves jobs accessibility for residents will depend in part on the kinds of jobs located along the light rail corridors (Table 3 and Figure 18).

MORE THAN 90 PERCENT OF RESIDENTS IDENTIFY AS LATINO/A

In comparison, in 2009 only half that number (44 percent) identified as Latino/a in Houston; even fewer (34 percent) identified as Latino/a in the Houston metro area. This strong neighborhood ethnic identity may serve as an asset or as a barrier for new development in the area (Table 4 and Figure 19).

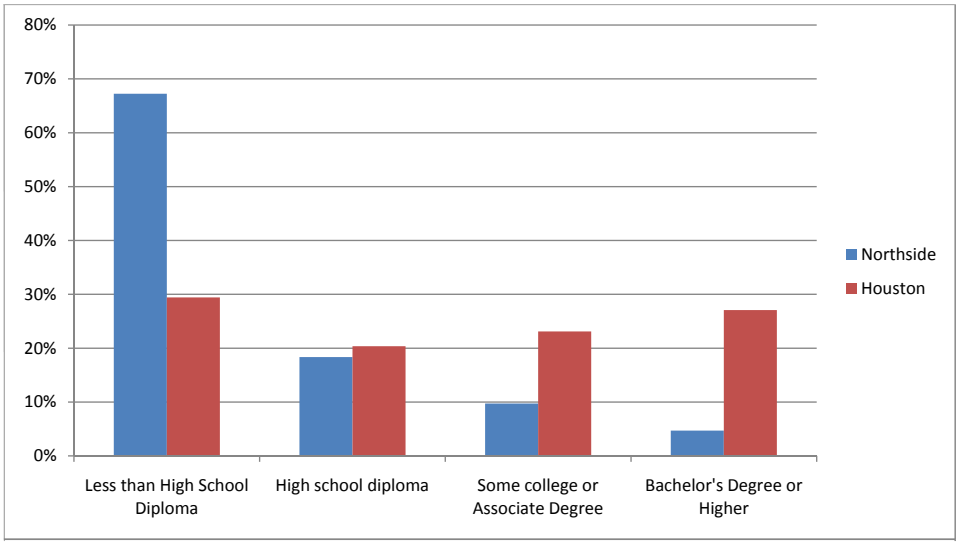


FIGURE 18 Educational Attainment, 24 Years and Older, 2009.
Source: Claritas, 2009, Strategic Economics, 2009

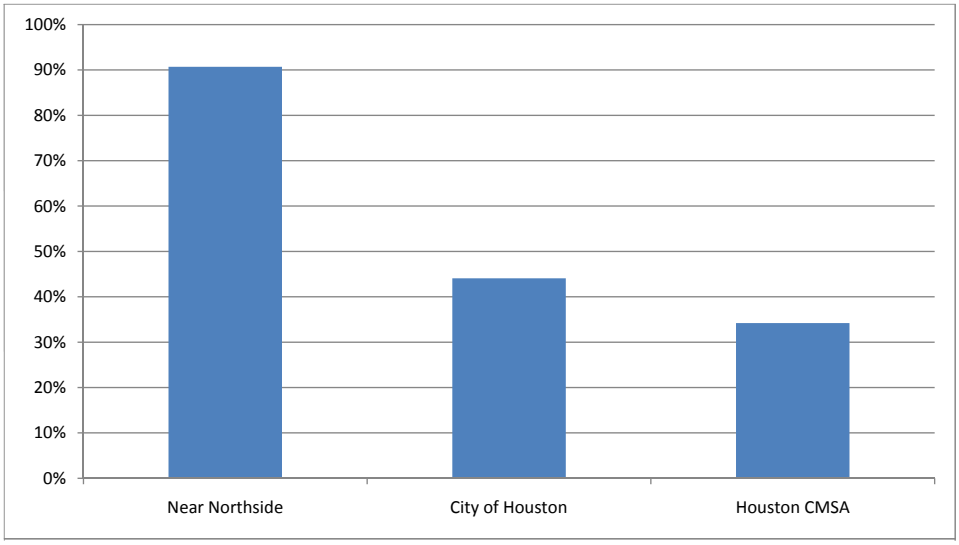


FIGURE 19: Share of Population that is Latino/a or Hispanic (any race), 2009.
Source: Claritas, 2009, Strategic Economics, 2009

NEARLY HALF OF NEIGHBORHOOD HOUSEHOLDS OWN THEIR OWN HOMES

As shown in Table 2 (Appendices), 43 percent of occupied housing units in the neighborhood are owner-occupied. This is comparable to the overall rate of owner-occupancy in Houston as a whole. It is generally true that the more northerly districts have higher rates of homeownership than those further to the south- all the districts areas north of Hays Street have more owners than renters, while all those south of that line have more renters than owners. This, coupled with the proximity of the southern portion of the study area to downtown and the concentration of subsidized units to the north, suggests that the southern districts may be more vulnerable to gentrification than the northern ones.

NEARLY HALF OF WORKING RESIDENTS ARE EMPLOYED IN BLUE COLLAR OCCUPATIONS

In 2009, 23 percent of neighborhood workers were employed in Construction, Extraction, and Maintenance and another 21 percent were employed in Production, Transportation, and Material Moving. In comparison, in the metro area as a whole, these jobs accounted for 11 percent and 12 percent of all jobs, respectively (Table 5 and Figure 20).

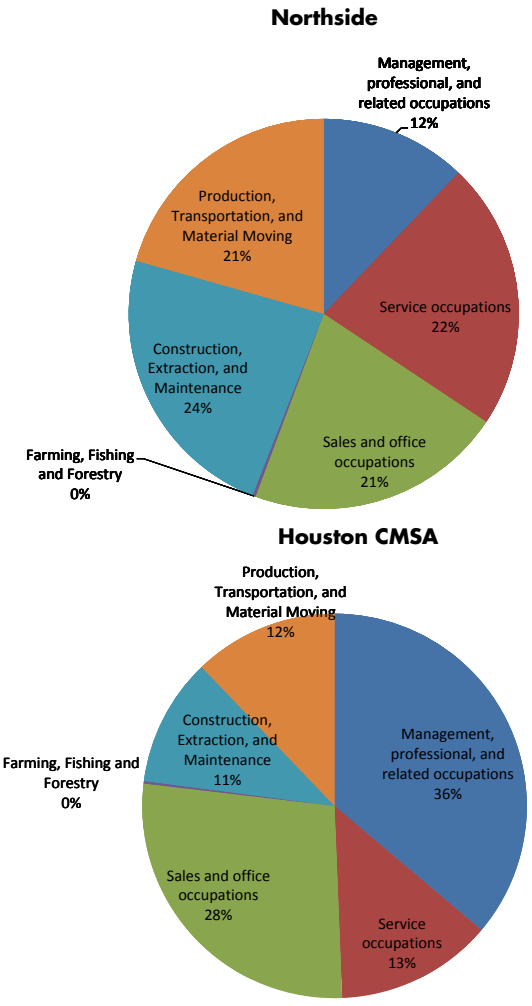


FIGURE 20: Occupations of Residents, 2009.
Source: Claritas, 2009, Strategic Economics, 2009

HOUSEHOLDS IN NORTHSIDE HAVE BELOW-AVERAGE INCOMES

In 2009, the median household income for the neighborhood was $32,367, well below the metro area median household income of $55,113. 23 percent of households had incomes of less than $15,000, compared to 11 percent of households in the region (Table 6 and Figure 21).

HOUSING UNITS IN NORTHSIDE ARE MORE LIKELY TO BE OVERCROWDED

In 2000, 30 percent of housing units in the neighborhood were overcrowded, meaning that there was more than one resident per room (Figure 22). This was nearly twice the rate in the rest of the city and three times the rate in the region as a whole. It is likely that this reflects a large number of multi-generational households, as well as unrelated individuals that share housing to reduce their rent burden. These households are likely to be vulnerable to increases in housing costs.

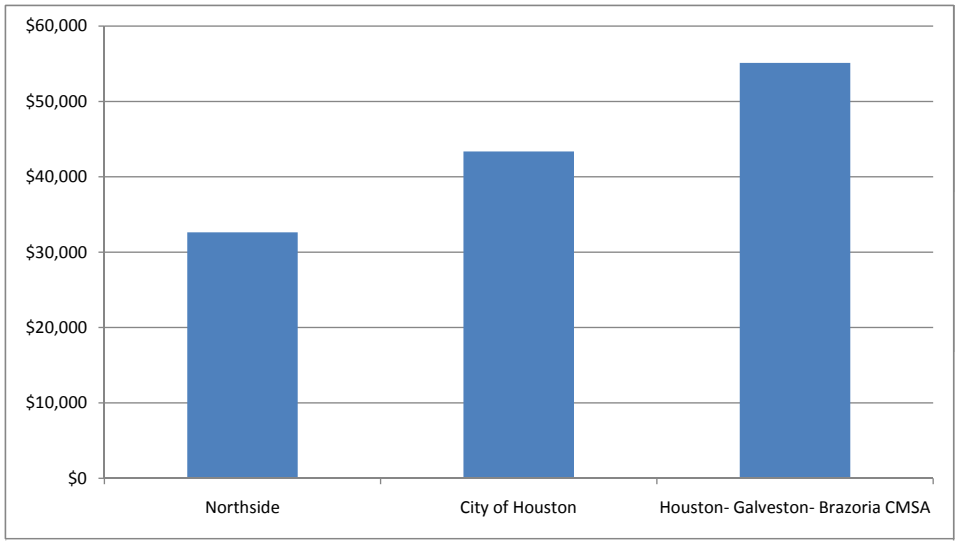


FIGURE 21: Median Household Incomes, 2009.
Source: Claritas, 2009, Strategic Economics, 2009

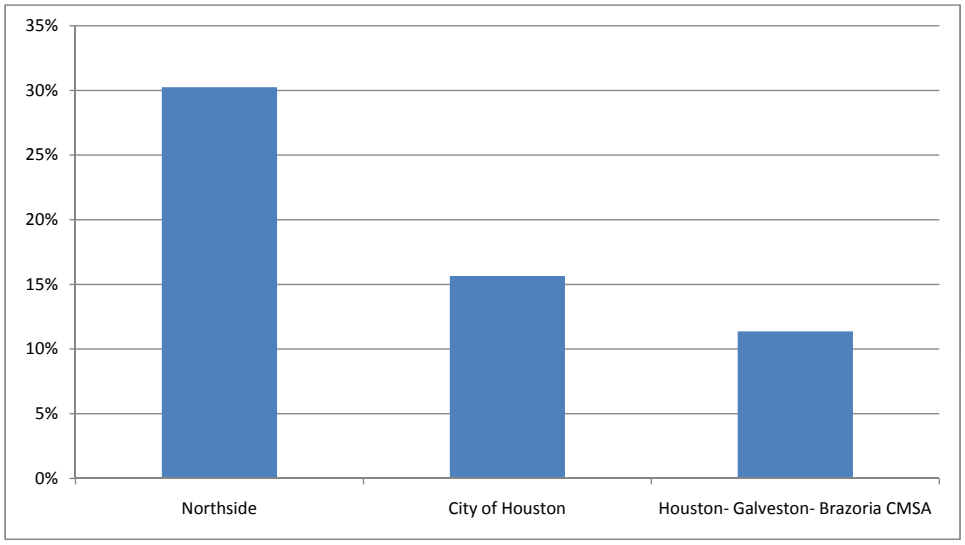


FIGURE 22: Housing Units with One or More Persons per Room, 2000.
Source: 2000 U.S. Census; Claritas, 2009, Strategic Economics, 2009

CURRENTLY, COMMUTE PATTERNS FOR NORTHSIDE RESIDENTS ARE WIDELY DISPERSED THROUGHOUT THE HOUSTON REGION

Although many residents work destinations in downtown, Greenway Plaza, or the Texas Medical Center, no single zipcode accounts for a high percentage of jobs held by Northside residents (Figure 23 and Tables 7-9). A quarter of workers who live in the neighborhood work outside of the city of Houston, including more than 10 percent who commute to destinations outside of Harris County. This dispersed commute pattern is difficult to serve by mass transit and suggests that, for most current residents, the light rail may not significantly improve accessibility to jobs.

Once built, the Red Line extension will run along one of the Northside's primary commercial corridors. Consequently, in addition to providing a transit service for the neighborhoods residential population, it will also serve people who work and shop in Northside. As of 2006, the neighborhood was home to 3,203 jobs. Nearly half of these were either in Retail Trade (23 percent) or Wholesale Trade (23 percent) (Table 10). Other major sectors included Transportation and Warehousing (16 percent), Construction (9 percent), and Health Care and Social Assistance (6 percent). These workers come from all over the region (Figure 16). Although 6 percent of Northside workers are also residents, no other zip code is home to more than 3 percent of the labor force (Tables 11-13). As with the commuting pattern for residents, this will limit the usefulness of light rail service for existing workers.

Given the low intensity of these commercial uses and the fact that neighborhood workers commute from across the region (see Figure 23), new light rail stations in the neighborhood are expected to primarily serve the residential population. The enhanced transit service in the area will make employment in one of the job clusters and entertainment centers on the existing Red Line corridor (including downtown, the Texas Medical Center, Rice University, and Reliant Park) more accessible to residents. It will also make the area a more appealing place for people with jobs in these employment centers to live.

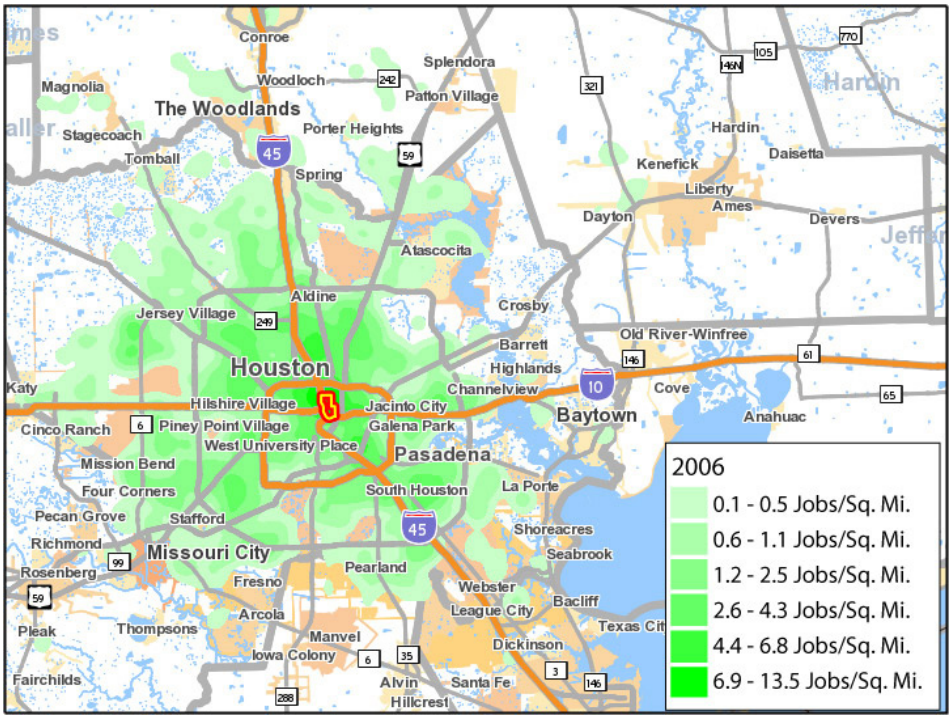


FIGURE 23:Workplace Locations of Northside Residents.
Source: LEHD 2006, Strategic Economics, 2009

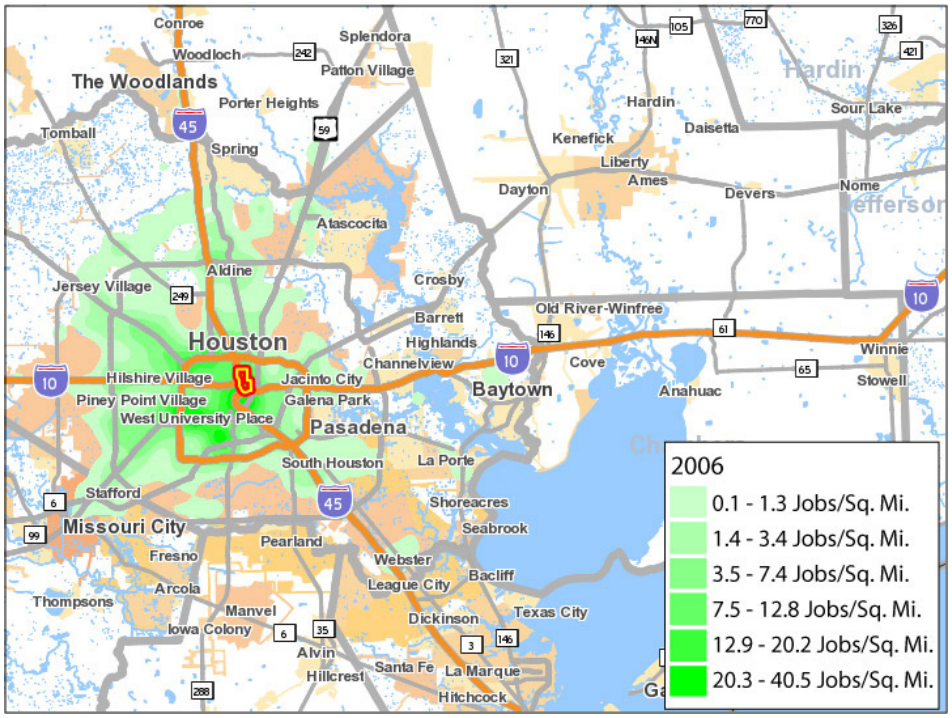


FIGURE 24: Residences of Northside Workers.
Source: LEHD 2006, Strategic Economics, 2009

3. RECENT DEVELOPMENT ACTIVITY AND TRENDS

In recent years, the vast majority of new development in the Northside has been in the form of subsidized housing. In 2002, Fulton Village, a 108-unit mixed income tax-credit project was opened by the Houston Housing Authority. This new development lies two blocks from a 308-unit Public Housing complex, Irvington Village, which was originally constructed in 1941, but has been undergoing modernization since 2008. Since 2000, the Avenue Community Development Corporation has helped to develop 49 single family homes, and 10 apartments in the neighborhood, most of which are income-restricted. This organization is also currently developing Fulton Gardens, a 49-unit retirement community for low-income seniors and Avenue Place, a major development that will include 144 apartments (of which 115 will be mixed-income affordable and 29 will be market rate) and 96 detached homes for low- and moderate-income families. While these affordable and mixed-use projects serve a critical need for the neighborhood and region, market-rate residential and commercial investment in the area has been limited and small in scale.

Hardy Yards, a 50-acre former rail yard at the southern-most edge of the neighborhood is poised to host a transformative development that may include as many as 3,000 new homes, in the form of townhouses and mid- and high-rise buildings. In addition, up to 120,000 square feet of retail and 500,000 square feet of office is planned. Since the downturn of the housing market, however, this project has been on hold. An extension of San Jacinto Street, connecting from the site to downtown, is necessary for the project's success. The extension has been approved under the 2009 Major Thoroughfare Plan, but currently has no allocated funding.

4. KEY MARKET FINDINGS

NEW MARKET-RATE HOUSING IS NOT FEASIBLE IN THE SHORT TERM - DEMAND MAY GROW WITH RAIL

The lack of recent market rate construction in the Northside suggests that there is little existing market for new housing. It is reasonable to believe that the light rail will increase demand for new market-rate housing, especially among downtown or Texas Medical Center workers. In the near-term (10-15 years), this will mostly be manifested in the rehabilitation and repair of existing homes. However, a pattern often observed in similar markets is that this initial wave of rehabilitation eventually encourages new small-scale development, which in turn helps build the market for larger, higher-density projects. It is likely that development activity will be slow in the near term, and may require one or more smaller projects to demonstrate the demand for mid-to-high density housing in the neighborhood. Because sites along commercial corridors are typically better suited for higher-density, mixed-use development, they typically are not the first to redevelop, and developers will instead wait until the market is stronger and can support higher development costs.

THE FUTURE OF HARDY YARDS WILL HAVE A MAJOR IMPACT ON THE REST OF NORTHSIDE

If constructed as planned, the Hardy Yards development will represent the first major addition of market-rate housing in the neighborhood in recent years. It would also include a major retail and office component, bringing a large number of people to the area both for shopping and for work. This would likely have two sets of outcomes on the broader Northside market. Although the market for a large-scale, internally-focused project of this type would be somewhat distinct from that of more infill-type development along the corridor, this major addition of housing and commercial space would discourage other major projects in the near-term. Only after the project is largely occupied would developers be confident of additional unmet demand for these uses in the neighborhood. In the long-term, however, if the development were successful, it could serve to extend the market northward, with workers in the Hardy Yards commercial spaces increasing demand for housing along the transit corridor.

If current development plans are abandoned, the vacant Hardy Yards site will serve as an impediment to infill development within the neighborhood, forming a major physical and psychological barrier to the linkage of the downtown and Northside markets.

WITHOUT FINANCIAL EDUCATION AND OTHER ASSISTANCE, EXISTING BUSINESSES MAY NOT BE ABLE TO TAKE ADVANTAGE OF THE FULL BENEFITS OF RAIL SERVICE

Contacts have reported that business-owners and other landowners along the light rail line have begun to try to sell their properties, partly out of fear that they will be negatively affected by construction and partly out of lack of knowledge to the potential increase in land value associated with enhanced transit service. This has the potential to result in the unnecessary loss of long-standing neighborhood businesses and residents, who would stand to benefit from transit if they could remain in place. Other cities have addressed this issue by directing Community Development Block Grant and transit mitigation funding toward grant and loan programs that help businesses survive the construction impacts of new transit. These programs, coupled with education about long-term benefits of holding property can help ensure that the neighborhood maintains its unique character than that profits associated with transit accrue to community-members rather than land speculators.

LIGHT RAIL SERVICE HAS THE POTENTIAL TO LINK NEIGHBORHOOD RESIDENTS TO JOBS, BUT WILL IMPROVE THE ACCESSIBILITY OF CURRENT EMPLOYMENT FOR A MINORITY OF NEIGHBORHOOD RESIDENTS AND WORKERS

A large proportion of neighborhood workers are employed either in construction or in manufacturing. These jobs tend not to be in locations located near transit. Indeed, while more residents work in one of the three central Houston office complexes (each of which are, or will be, served by light rail) than anywhere else, and many will be able to make use of the light rail for quicker access to other transit connections, current commute patterns are widely dispersed throughout the metro area. Through workforce development, however, a larger portion of existing residents be able to access the white collar jobs that are tightly clustered around the current and future light rail stations.

WHILE THE POTENTIAL FOR GENTRIFICATION IS A MAJOR CONCERN AMONG RESIDENTS, WIDESPREAD NEIGHBORHOOD CHANGE IS UNLIKELY IN THE NEAR TERM

As noted above, in the near-term, it is unlikely that the introduction of light rail service will induce significant increases in development activity or in housing prices. Over the course of time, especially if additional jobs and retail opportunities are provided at Hardy Yards, the properties near stations may become more attractive to new residents. Even if development activity were to increase due to new jobs and retail, there are two factors that will limit rapid widespread gentrification: the neighborhood has homeownership rates that are comparable to the city as a whole and has a substantial supply of subsidized housing. Consequently, as property values and housing prices increase, many residents will have some protection against unwanted displacement. Financial education can help ensure that homeowners have access to financial tools (such as equity lines and reverse mortgages) that allow them to stay in place as long as they wish. It is nonetheless likely that as a consequence of these higher land values some neighborhood change will occur, with homeowners and landlords electing to sell their homes to new residents.

III. PLAN OVERVIEW

A. INTRODUCTION

This section describes the key elements of the Preferred Conceptual Plan in terms of overall focus topic. Many of these elements are identified for public improvements within section IV Implementation Roadmap and section V. Public Improvements. These elements, when taken as a whole, create the overall community vision of Northside as a place with a strong local identity that is safe, connected, walkable, vibrant and green while preserving and enhancing existing historic and cultural resources.

- Elements that are "Planned" have been developed outside the Livable Centers Study
- Elements that are "Proposed" are recommendations of the Livable Centers Study

Current residents could benefit greatly from new neighborhood services, retail, transit access and other ammenities.

The Livable Centers Study will help to create a sense of shared identity and enhance civic pride.

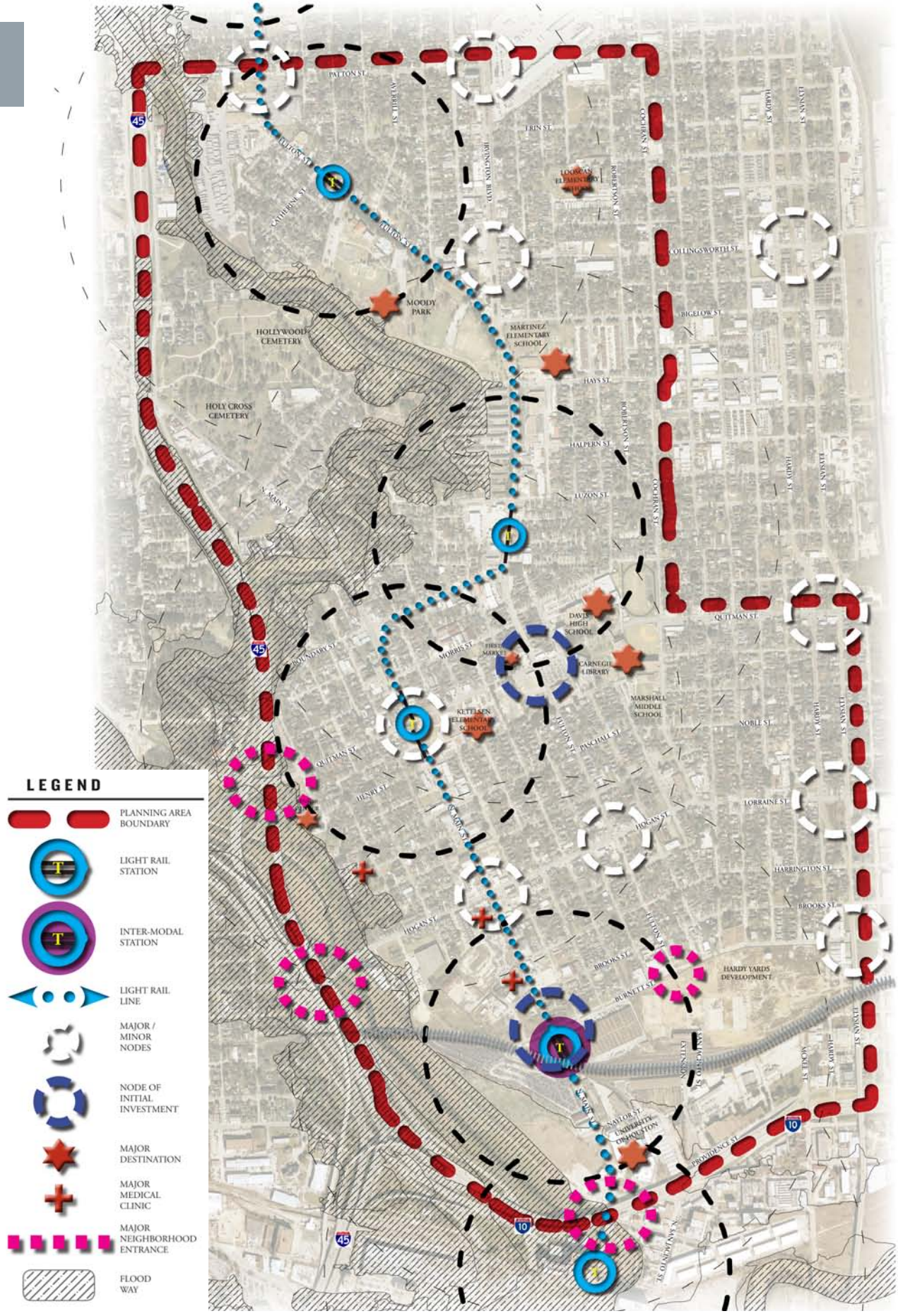


Figure 25 Overall Structure

B. OVERALL STRUCTURE

1. METRORAIL

The new MetroRail corridor along North Main, Boundary and Fulton Streets is the "backbone" for the Livable Centers Study. Improved transit access will help to weave together the various sections of the Northside neighborhood as well as create stronger connections to Downtown Houston and the region as a whole. The Livable Study aims to encourage safe, vibrant transit-oriented development in key locations within walking distance of the four stations.

Improved transit access will help weave together the Northside neighborhood.

Rail will create stronger connections to Downtown Houston and the Northside region as a whole.

2. MAJOR AND MINOR NODES

Nodes are defined as centers of activity, with active functions that are primary junctions, places of crossing and the convergences of paths. Nodes within Northside are currently defined by major intersections. These nodes, many of which have potential mixed-use development opportunities include the following:

- North Main and Hogan Streets: This minor node currently contains the ___ Clinic and may become a hub of public uses along with mixed-use development in the future. The North Main and Hogan Street node is just over ¼ mile away from two planned transit stations along the METRO line.
- North Main and Quitman Streets: This major node will contain a new MetroRail station and is an important gateway to the central portion of the Northside neighborhood.
- Fulton and Hogan Streets: This minor node sits in the center of a historic residential area with strong east-west bus access and opportunities for smaller neighborhood-scaled redevelopment.
- Fulton and Patton Streets: This major node lies within ¼ mile of a new MetroRail station as well as Interstate 45 and the proposed Little White Oak Bayou open space and trail. Mixed-use redevelopment potential exists at this node.
- Irvington and Patton Streets: This minor node is currently seeing redevelopment in the form of a new affordable housing development being created by Avenue CDC. Smaller mixed-use development could occur in this area to serve both new and existing residents.
- Irvington and Collingsworth Streets: Irvington and Collingsworth is a minor node at the southern entrance to the Irvington retail corridor. Its proximity to Martinez Elementary School and Moody Park make it a key neighborhood crossroads.
- Elysian and Burnett Streets, Elysian and Lorraine Streets and Elysian and Quitman Streets: These three minor nodes act as eastern entrances to the Northside neighborhood from the Elysian corridor and downtown Houston to the south. Minimal development potential other than lower density housing is likely to occur in these areas.

Create Transit Plaza as an important gateway to the central portion of the Northside neighborhood

MIxed-use potential development at Fulton and Patton Streets

3. NODES OF INITIAL INVESTMENT

Important Nodes of initial investment are identified at the intersection of Fulton and Quitman Streets and North Main and Burnett Streets. These two areas are key centers for the current neighborhood as well as locations for future growth and placemaking:

- Fulton and Quitman Streets: This major node has been identified as the "heart of Northside" by stakeholders and residents through the community process. The area around Fulton and Quitman holds tremendous historical and cultural significance and is in close proximity to major neighborhood destinations such as Jefferson Davis High School and the Carnegie Library. Smaller, infill mixed-use development potential exists in the areas as well as possibilities to enhance the sense of place through streetscape improvements and public artwork as described in section V. Public Improvements.
- North Main and Burnett Street: This major node is a key connection point where the existing Northside neighborhood, the future Hardy Yards development and the University of Houston - Downtown campus converge. This area will also be the future location of the first new MetroRail station on the north corridor. Tremendous mixed-use development potential exists around this node as well as potential for new public space and strong pedestrian connections as described in section V Public Improvements.

Potential Festival Streets at Fulton and Quitman Streets

Conceptual design option for the North Main and Burnett Street major node.

4. MAJOR DESTINATIONS

The Northside area currently includes a number of major destinations that are primarily neighborhood-focused in character. These destinations include Moody Park, Looscan Elementary School, Martinez Elementary School, Jefferson Davis High School the Carnegie Library, Kettleson Elementary and the University of Houston - Downtown. Of these major destinations, Moody Park and the University of Houston - Downtown tend to be the largest draws for people from outside of the Northside neighborhood. Both of these areas will soon enjoy strong transit access through new MetroRail stations. The planned Senior Center on Henry Street is also seen as a future major destination. Many of the streetscape concepts defined in this study seek to create safer and more attractive pedestrian connections to these important destinations. For more details on individual connections, please see section V. Public Improvements.

5. MEDICAL CLINICS

There are currently three medical clinics and facilities located on North Main Street and three blocks west along Paschall Street. These will be key destinations both for transit riders and current neighborhood residents.

Existing Jefferson Davis High School.

Existing University of Houston - Downtown.

6. MAJOR NEIGHBORHOOD ENTRANCES

The Livable Centers Study identifies four key neighborhood entrances that should be improved and celebrated:

- Quitman and the Little White Oak Bayou: This is an important connection from the proposed trail system to the new MetroRail station at North Main Street and Quitman. This area also helps to connect Northside with its neighbors to the west side of Interstate 45.
- Hogan and the Little White Oak Bayou: This will also be an important entrance with the completion of the Bayou open space and trail network. Opportunities for public improvements in this area could allow stronger bicycle and pedestrian connections.
- Interstate 10 and North Main Street: This entrance, at the southern portion of the neighborhood is a key junction with Downtown Houston and is currently the first experience visitors have of the Northside neighborhood. The University of Houston - Downtown has a very strong presence in this area. Future expansion of the University could create a more vibrant gateway zone and positive identity for the neighborhood.
- Fulton and Burnett Streets: This key intersection, which is being planned by the City will become a major route into Northside from Downtown Houston. Fulton and Burnett Street will become a key junction between the Hardy Yards Redevelopment and the southern portion of the neighborhood. A roundabout is currently planned to direct traffic in this area. The Livable Centers Study encourages this roundabout concept either at this location or a block south into Hardy Yards in conjunction with strong identity features including landscape and public artwork to help celebrate this important new gateway and interaction of old and new.

7. FLOODWAY

Several areas within Northside near the Little White Oak Bayou are currently in designated floodway zones. Though there are currently homes within these zones, the Livable Centers Study focuses redevelopment opportunities outside of the floodway. Over time, it is encouraged that vacant sites within the floodway become public open space to help preserve the linear open space corridor and trail network proposed for the Bayou.

Neighborhood entrances should be improved and celebrated.

Natural habitat within the floodway should be restored.

Figure 26 Connectivity and Circulation

C. CONNECTIVITY AND CIRCULATION

1. MAJOR ARTERIAL ROADS

Major arterial roads within the Study area include North Main Street, Fulton Street, Irvington Boulevard and Elysian and Hardy Streets running north-south and Burnett Street, Hogan and Lorraine Streets, Quitman Street, Collingsworth Street and Patton Street running east-west. Typically, these streets are spaced about ¼ to ½ of a mile apart forming a framework for the grid of internal urban residential streets. Many of the streetscape concepts described in section V. Public Improvements are focused on these Major arterial roads.

2. PROPOSED PARKWAY

A key element of the Study is a proposed parkway treatment for Burnett Street from the railyard east to Elysian Street. Houston has many classic parkways spread throughout the City that provide a strong sense of place and identity, assist in beatification, provide shade and define important edges of neighborhoods. The proposed parkway treatment would include a wide esplanade or median along Burnett Street and is strongly encouraged to:

- Help define the southern section of the Northside Neighborhood with a strong place-making feature.
- Act as a transition between primarily low-rise single family homes to the north with proposed higher intensity development on the Hardy Yards development to the south.
- Create a linear open space corridor, eventually connecting to the proposed Little White Oak Bayou open space area.
- Provide an important east-west bicycle connection between the proposed Little White Oak Bayou trail system and the planned bicycle corridor below Elysian Street.
- Promote the redevelopment of several large vacant or underutilized properties to the north of Burnett Street into medium-density housing and mixed-use development.

Figure 27 Streetscape Improvement Concept for Burnett Street Parkway
Conceptual design option for the Burnett Street Parkway showing landscaped median.

3. PROPOSED STREET CONNECTIONS

The City of Houston is currently planning a series of new street connections within the southern portion of the neighborhood. These connections include:

- Extension of San Jacinto Street from Providence to Burnett Streets.
- Extension of Mckee Street over the railyard to Hardy Yards.
- Extension of Hardy Street over the railyard to Hardy Yards.

Each of these planned street connections is intended to help connect the Northside neighborhood with Downtown Houston, help provide more street capacity in conjunction with the transit-focused reconstruction of North Main Street and help to integrate Hardy Yards into the overall circulation network.

The Livable Centers Study proposes an additional series of street connections in the southern portion of the neighborhood:

- Hardy Yards street network: New streets are proposed within the Hardy Yards development to help to create urban blocks and to extend the "historic grid" of Northside into this new District.
- University of Houston - Downtown street network: The Study proposes a future expansion of the University of Houston - Downtown campus to the west side of North Main Street. To create a framework for this expansion, new street connections should be developed in context with new buildings and open spaces to create access from North Main Street to the interior of the site. Connections across the rail yards to Burnett Street should also be strongly considered.
- Warehouse District street network: The Study proposes an additional connecting street from the planned San Jacinto extension to the eastern side of the University of Houston - Downtown as well as the west side of the proposed Warehouse District. The Warehouse District, which is currently isolated by Interstate 10 to the south and the rail yards to the north, could be made more accessible through this connection, helping to spur redevelopment.
- Patton Street truck stop property street network: The Study proposes the eventual redevelopment of the truck stop property at the intersection of Patton Street and Interstate 45 into a medium-density mixed-use district. In order to promote this neighborhood-scaled redevelopment, it is recommended that the current street network north of Catherine Street and west of Fulton Street be extended into this site, helping to define individual blocks while providing access from surrounding areas.

4. FULTON STREET - MAJOR THOROUGHFARE DESIGNATION

The City is currently planning for change along Fulton Street between Burnett Street and Hogan Street. This section has recently been designated as a "major thoroughfare" with the following justification:

- "Major thoroughfares North Main Street and Elysian/West Hardy Street are the primary north-south streets that allow access to the CBD between US 45 and US 59. With the proposed MetroRail alignment planned along North Main, a parallel vehicle transportation route is needed to capture spill-over traffic and accommodate the vehicular traffic generated by Hardy TIRZ development.
- The METRO Intermodal Facility is planned south of the intersection of Burnett and North Main. Besides servicing light rail, the Intermodal Facility will circulate buses. Personal vehicles, passenger rail, freight rail and other future modes of transit that will greatly impact the area.
- Fulton Street north of Hogan Street is already designated as a major thoroughfare and is programmed on the Capital Improvement Plan (N-000818) for reconstruction in Fiscal Year 2011. The proposed extension of San Jacinto north of the CBD along Fulton will allow for improved mobility and access to the CBD."

  - Planning Commission Action – 2009-09 San Jacinto/Fulton

The Study recommends streetscape improvements through this section of Fulton Street that enhances its residential character while providing for an important north-south bicycle route. These recommendations are listed in section V. Public Improvements.

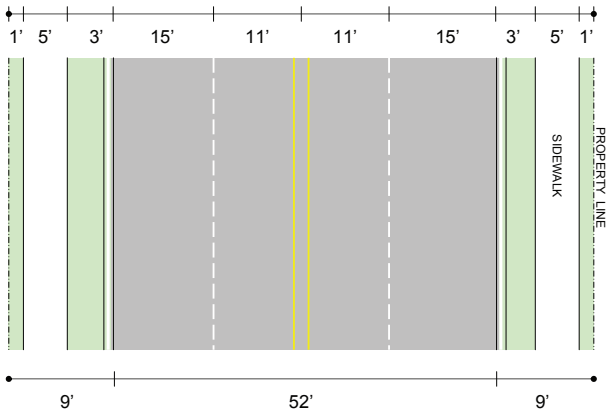


Figure 28 Fulton Street - Right-of-way (ROW) and Paving Section options from Planning & Development Department, City of Houston.

Figure 29 Proposed Streetscape improvements for Fulton Street (south of Boundary Street) that will enhance the residential character and provide a north-south bicycle route.

5. VEHICULAR CONNECTIONS

The City is currently planning a bridge over the rail yards as part of the San Jacinto extension. As an option to the bridge, the Study recommends examining the feasibility of a tunnel, which would help ensure positive land use relationships to San Jacinto with in the Hardy Yards area.

6. TRAFFIC CIRCLE

The City is currently planning a traffic circle or roundabout at Burnett and San Jacinto as part of the San Jacinto extension. This feature is intended to help disperse traffic into the Northside neighborhood. As an option to planned roundabout location, the Study recommends examining the feasibility of shifting the roundabout into the Hardy Yards area, which would help ensure positive land use relationships and connectivity to the internal block structure of Hardy Yards while also creating a distinct focus and landmark feature symbolizing entrance into both the new development and Northside.

7. BUS ROUTES

Bus routes currently exist on many of the major arterials through the Northside neighborhood including North Main Street, Fulton Street, Hogan Street, Quitman Street, and Irvington. It is anticipated that many of the North Main Street buses will be replaced by the planned MetroRail line. The Study recommends general reconfiguring of bus routes to help feed into new MetroRail stations from surrounding neighborhoods as much as possible.

A roundabout will help disperse traffic into the Northside neighborhood, while creating a strong gateway feature

The Study recommends general reconfiguring of bus routes to help feed into new MetroRail stations from surrounding neighborhoods as much as possible.

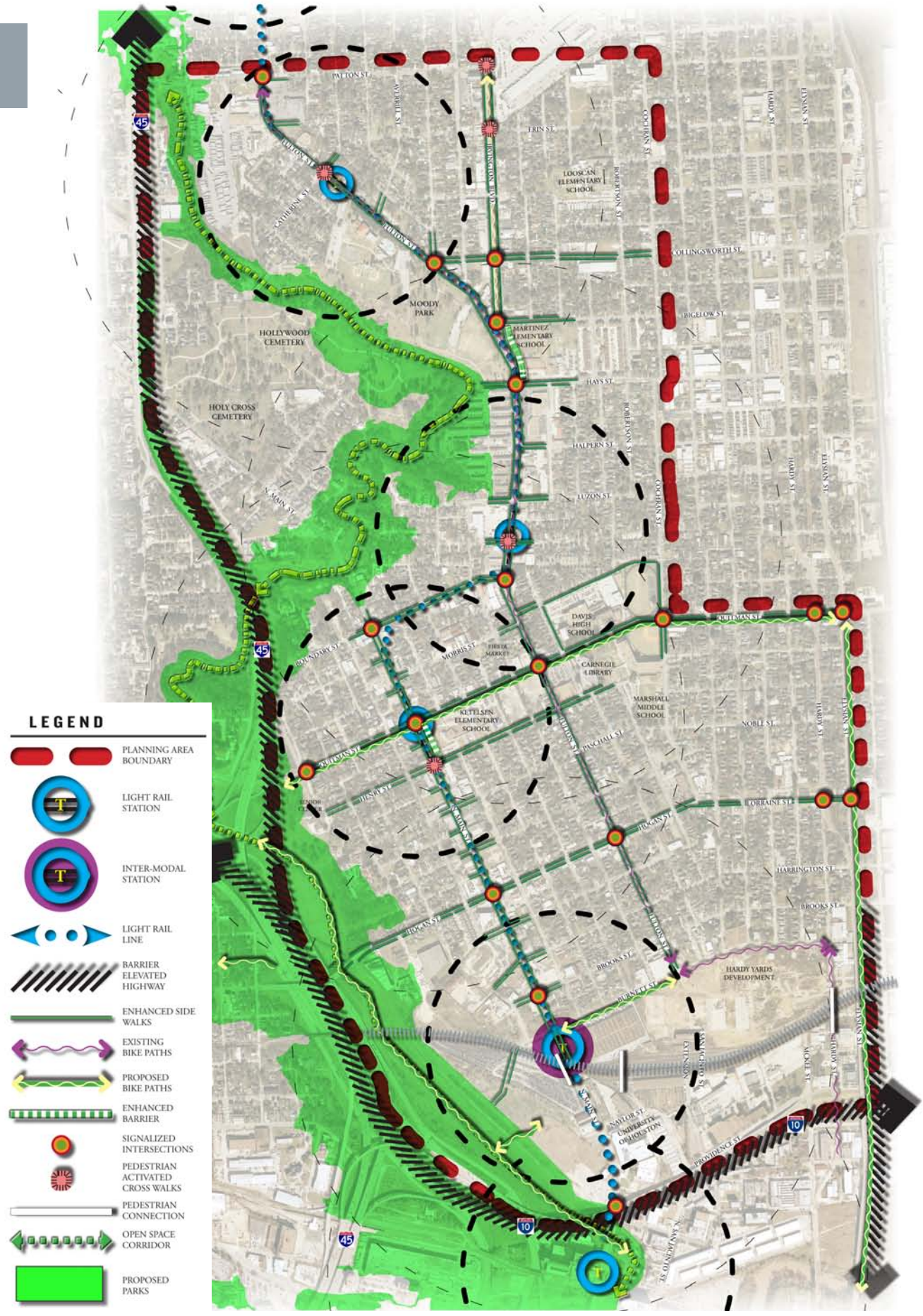


Figure 30 Pedestrian and Bicycle Amenities

D. PEDESTRIAN AND BICYCLE AMENITIES

By promoting a improved pedestrian and bicycle amenities, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Improve the pedestrian network and create bikeways throughout the community."

1. BARRIER - HIGHWAY

Interstates 45 and 10 act as major neighborhood and circulation barriers due to both their physical configurations, noise and psychological perception. The Study recommends safe and attractive pedestrian crossings at existing intersections through better lighting and cleaning programs. The Study also recommends the creation of the Little White Oak Bayou hike and bike trail network which will provide new access points for bicyclists and pedestrians with two new crossings under Interstate 45 and one new crossing under Interstate 10.

2. ENHANCED SIDEWALKS

Throughout the Study area, enhanced sidewalks are needed to replace dilapidated, overly narrow or non-existent current sidewalks. The Study recommends focusing enhanced sidewalks along existing arterials as well as one block in from transit corridors as outlined in the Houston Urban Corridors Plan. Enhanced sidewalks include wider walking areas, different paving patterns, street trees, benches and other street furniture and new lighting. Specific recommendations and conceptual streetscape elements are described in section V. Public Improvements.

Wider sidewalks and landscaping create a comfortable and safe pedestrian environment.

The Livable Centers Study promotes bicycle and pedestrian amenities within Northside.

3. BIKE ROUTES

The Houston Bicycle Master Plan recommends bicycle routes along Hardy Street, Burnett Street, and Fulton Street running from south to north. East-West routes through Northside are absent from the Master Plan. The Study recommends supplementing these routes with the following elements:

- Bicycle route or path along the Burnett Street parkway: This would be a key east-west route for the southern portion of the neighborhood and could be designed within the paved street area or possibly within the center median or esplanade.
- Bicycle route along Quitman Street: This would be a key east-west route for the central portion of the neighborhood and help to connect the "heart" of Northside including Jefferson Davis High School and the Carnegie Library with the planned MetroRail station at Quitman and North Main as well as the proposed Little White Oak Bayou trail system. This route could also extend east and west of the neighborhood to help integrate surrounding communities directly into the MetroRail system.
- Bicycle path along the Little White Oak Bayou: The Study recommends the creation of a system of hike / bike trails adjacent to the Little White Oak Bayou, connecting to existing off-street bicycle trails to the north and planned bicycle trails to the south. This bicycle rout would become the main north-south connector through Northside, helping to integrate the neighborhood more strongly with Downtown Houston and surrounding areas. The Study also recommends key connection points to the proposed trail to easily access existing single family neighborhoods throughout Northside. This project is defined as one of the five key "next steps" to create a Livable Center in the Northside neighborhood as defined in section IV. Implementation Roadmap.

The Livable Centers Study promotes bicycle and pedestrian amenities within Northside.

The Study recommends the creation of a system of hike / bike trails adjacent to the Little White Oak Bayou.

4. PEDESTRIAN CONNECTIONS

Connecting the southern portion of Northside including Hardy Yards to the University of Houston – Downtown campus and the Warehouse District is a main goal of the Study. Each of these pedestrian crossings could become landmarks and important gateways to the neighborhood. To this end, the Study recommends three new pedestrian connections across the rail yards:

- Connection on west side of North Main Street: This connection would help to alleviate the perceived unsafe and unpleasant existing tunnel sidewalk along North Main.
- Connection east of North Main Street at the planned MetroRail Intermodal Station: This connection would create direct access from the train station to the University of Houston – Downtown campus while helping to bridge the widest part of the rail yards.
- Connection on Hardy Street: This is currently a City planned street connection. The study recommends that street connections happen at Mckee Street and that Hardy Street be dedicated as a pedestrian connection. This would help to integrate the eastern portion of Hardy Yards with the eastern portion of the Warehouse District.

5.SIGNALIZED INTERSECTIONS

Signalized auto intersections currently exist along many of the neighborhood's arterial streets. The Study does not recommend any additional signalized auto intersections in the Northside area.

Conceptual design option for pedestrian bridge near North Main Street and rail yards.

New developments should create pedestrian friendly environments to encourage walking and gathering.

6.PEDESTRIAN ACTIVATED CROSSWALKS

A key principle of the Study, as desired by the community, is safe and efficient crossings of the MetroRail tracks along North Main Street and Fulton Street. Pedestrian Activated Crosswalks are currently planned in conjunction with most MetroRail stations along the corridor. In addition to these planned connections, the Study recommends additional Pedestrian activated crosswalks at the following locations:

- Henry and North Main Streets: This is an important crossing for students at Ketelson Elementary School.
- Fulton and Panama Streets: Pedestrian activated crosswalks at this intersection will help to connect residents on the east side of Fulton to existing and future retail uses on the west side of Fulton as well as the planned MetroRail station.
- Irvington Boulevard and Erin Street / Irvington and Patton Streets: These intersection will see additional pedestrian and auto traffic due to the Avenue CDC affordable housing development currently under construction.
- Catherine and Fulton Streets: This crossing should be created in conjunction with the planned MetroRail station at this location in order to provide safe crossings to and from the train from surrounding neighborhoods and Moody Park.

Pedestrian Activated Crosswalks are currently planned along the corridor.

A key principle of the Study, as desired by the community, is safe and efficient crossings of the MetroRail tracks.

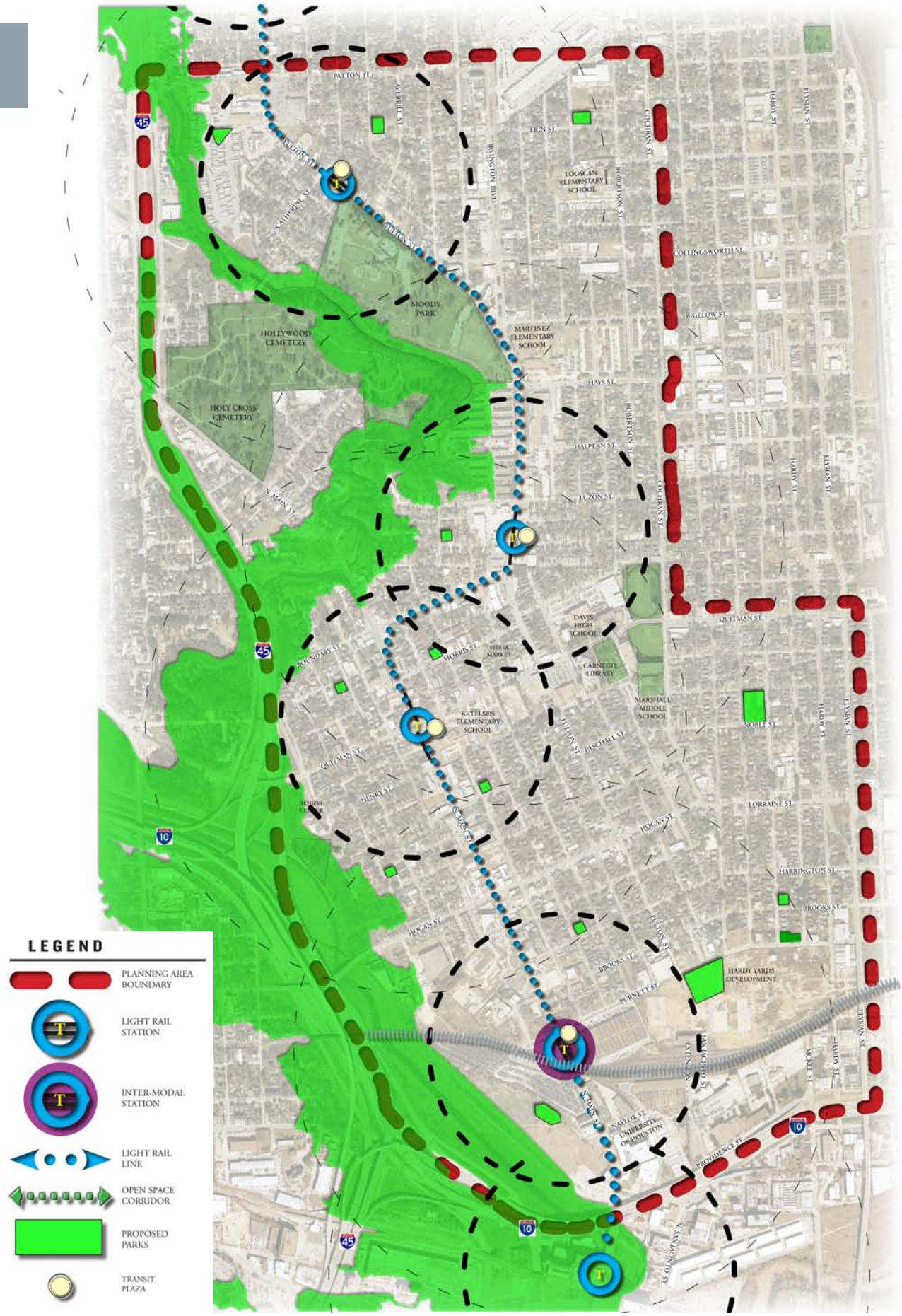


Figure 31 Parks and Open Space

E. PARKS AND OPEN SPACE

I. OPEN SPACE CORRIDOR

The Little White Oak Bayou is an important natural resource that weaves through the Northside neighborhood. The Bayou is currently underutilized and not publicly accessible. The Study recommends the creation of a hike and bike trail network adjacent to the Little White Oak Bayou including restoration of natural areas and direct neighborhood connections. This important open space corridor has the potential to connect several residential and commercial areas within Northside with existing neighborhood green spaces such as the Hollywood Cemetery, the Holy Cross Cemetery, Moody Park and Hogg Park. The trail network along the Bayou could potentially link up with existing trails to the north as well as planned trails to the south to create a seamless bicycle and pedestrian connection to surrounding neighborhoods, downtown Houston and other regional destinations.

This project is defined as one of the five key "next steps" to create a Livable Center in the Northside neighborhood as defined in section IV. Implementation.

The Study recommends the creation of a hike and bike trail network adjacent to the Little White Oak Bayou.

Figure 32 Connections and improvements to Moody Park will help improve this existing neighborhood amenity.

2. TRANSIT PLAZAS

Transit plazas are small gathering places near rail stations that can act as important gateways into the Northside neighborhood. These spaces can be designed with seating, public artwork, space for vendors, shade structures, fountains and other placemaking elements. The plazas can also be designed to have kiss and ride spaces and bus stops that allow integration with the planned MetroRail line. By promoting attractive transit plazas at station areas, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Use light rail to improve the overall transit network and to attract economic development." The study recommends transit plazas at the following locations:

- North Main and Burnett Streets: A transit plaza is recommended at the southeast corner adjacent to the planned intermodal station. This space could be very vibrant and active as both an entrance area to the MetroRail station as well as an important urban gathering space for the southern Northside neighborhood, University of Houston – Downtown Campus students and new residents of the planned Hardy Yards development.
- North Main and Quitman Streets: A transit plaza is recommended at both the southeast corner and northeast corner of this important intersection. The North Main Street / Quitman MetroRail station will be a key gateway into the "heart of Northside" area and plazas on both side of Quitman will both symbolize this key neighborhood entrance. Streetscape improvements including the creation of "festival streets" as described in section IV. Implementation Roadmap.
- Fulton and Panama Streets: A transit plaza is recommended at the northeast corner of this intersection. This plaza will likely be more park-like in nature and relate directly to the adjacent single-family homes to the west.
- Fulton and Catherine Streets: A transit plaza is recommended at the southeast corner of this intersection. This plaza would act as a symbolic entry to Moody Park and relate to the adjacent single-family neighborhood on both sides of Fulton Street.

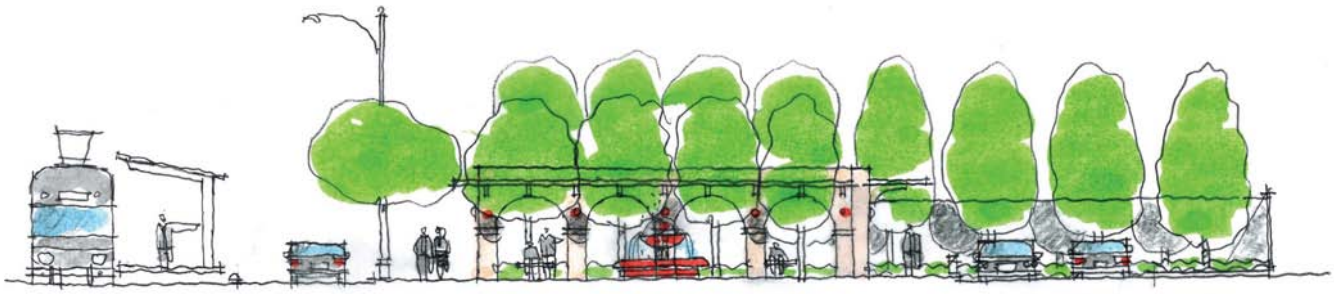


Figure 33 Conceptual design option of Quitman Station transit plaza including kiss and ride spaces and public art.

3. PROPOSED PARKS

As the Northside neighborhood grows over time, more open spaces are going to be needed for both active and passive uses. The Study recommends the creation of small parks throughout the neighborhood. The intent of the recommendations shown in Figure 31 is not to propose exact locations, rather it is to show where vacant or underutilized property may be available within neighborhoods that currently lack open space within Northside. By promoting the development of new parks, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Create vibrant community gathering places, improve community parks and develop additional parks and community facilities."

Figure 34 New pocket parts should be located on left-over remnant parcels created through the planned MetroRail project.

The Study recommends the creation of small parks throughout the neighborhood.

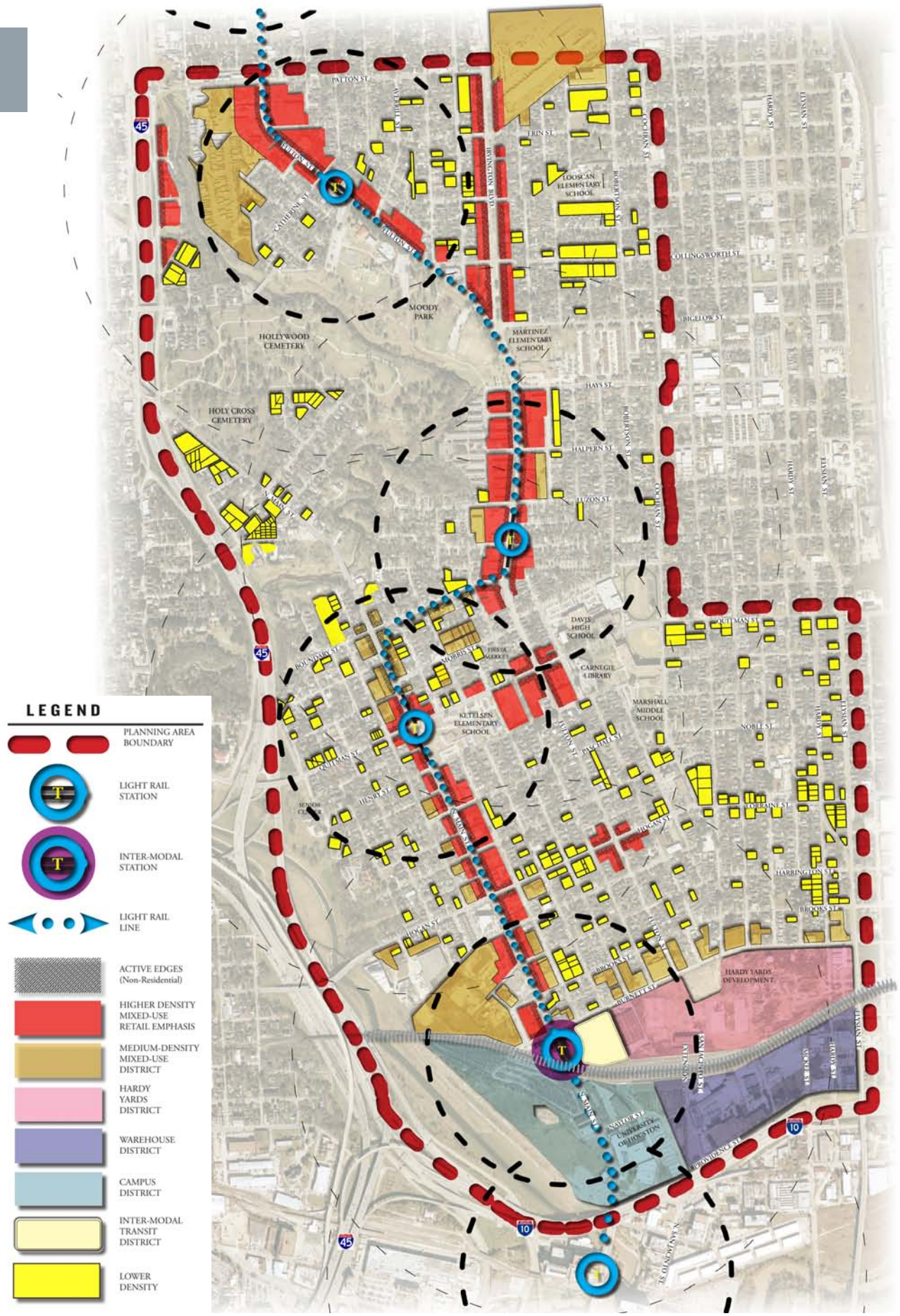


Figure 35 Land Use and Urban Form

F. LAND USE AND URBAN FORM

I. ACTIVE EDGES

The active edges represented in Figure 35 delineate mixed-use and commercial areas that are intended to have buildings that relate directly to the sidewalk. These active edge areas should be focused on the pedestrian to create vibrant, attractive corridors for redevelopment. By promoting new development in these areas, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Improve the visual appearance of commercial corridors and nearby residential areas while preserving historic housing stock and commercial structures." Many of the guidelines listed in section F. Design Guidelines are intended to help create these active edges.

The Study proposes active edges that are intended to have buildings that relate directly to the sidewalk. These active edge areas should be focused on the pedestrian to create vibrant, attractive corridors for redevelopment.

2. HIGHER DENSITY MIXED-USE (RETAIL EMPHASIS)

The Study recommends property along key neighborhood arterials to be redeveloped over time with a mixed-use retail emphasis. This designation generally refers to higher-density development with active retail uses on the ground floor and housing, service, or office uses above. By promoting a mixture of uses in these areas, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Where possible, develop mixed-use complexes that integrate with transit and encourage multi-family and townhouse development to locate near transit stations." The corridors recommended for higher-density mixed use development include:

- North Main Street from Burnett to Quitman Streets
- Quitman from Everrett to Tackaberry Streets
- Fulton from Morris to Hays Streets
- Fulton from Collingsworth to Patton Streets
- Irvington from Bigelow to Patton Streets

Higher-density MIxed-use development with active retail uses on the ground floor and housing, service, or office uses above.

3. MEDIUM DENSITY MIXED-USE

The Study recommends areas defined in Figure 35 to be redeveloped over time with a medium-density mixed-use emphasis. This designation generally refers to new development with a mixture of uses, either vertically or horizontally on a site. These uses will typically focus on housing, service, retail or office uses. By promoting a mixture of uses in these areas, the Study builds off of the previously-established Plan Principle as described in section II. C. The largest areas recommended for medium-density mixed use development include:

- The large semi-industrial area north of the rail yards and west of North Main Street.
- Larger properties on the north side of Burnett Street.
- North Main Street from Quitman to Boundary Streets.
- The Avenue CDC development east of Irvington Boulevard and north of Erin Street.
- The "truck stop" area south of Patton Street and west of Fulton Street.

Medium intensity office development can provide new jobs within Northside

New multi-family developments should include public open spaces.

4. HARDY YARDS DISTRICT

The current plans for Hardy Yards are described in section II. B. Ongoing and Previous Studies. By promoting the redevelopment of Hardy Yards, the Study builds off of the previously-established Plan Principle from the Northside Village Economic Redevelopment Plan: "Redevelop industrial and semi-industrial properties as residential, neighborhood-oriented commercial and community facilities." The Study recommends full integration of the Hardy Yards development with the Northside neighborhood and the planned MetroRail Station at North Main Street and Burnett Streets. Ideally, the new land uses, open spaces and circulation options presented at Hardy Yards will be a strong benefit to the Northside neighborhood as a whole. New stores, restaurants and gathering places will be potentially embraced by both existing and new residents to create a vibrant anchor for the southern portion of the neighborhood.

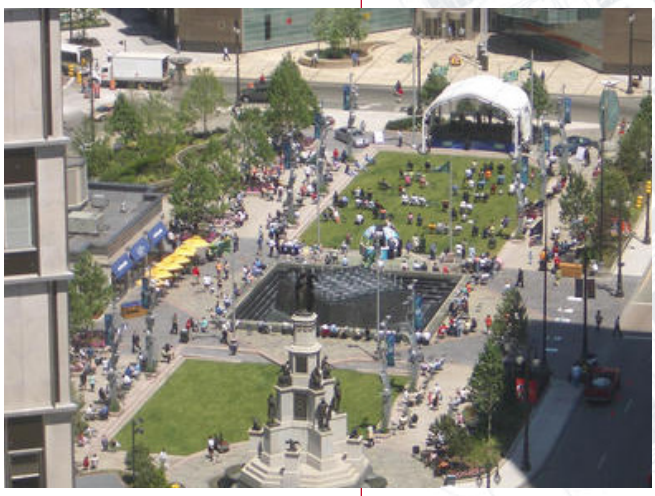
Figure 36 Conceptual design option showing Hardy Yards and MetroRail station looking southeast.

Development at Hardy Yards should include a mixture of housing types.

5. CAMPUS DISTRICT

The Campus District, as shown on Figure 35, Includes the existing University of Houston – Downtown Campus on the east side of North Main Street as well as a recommended future campus expansion area to the west. The University, as a strong community resource, has the opportunity to integrate into the Northside neighborhood to the benefit of existing residents and businesses as well as the school. Thousands of students, teachers and faculty currently use the Downtown Campus. If safe, attractive connections are made to the north of the rail yards, both new and existing businesses along North Main Street could potentially flourish. Educational and community programs hosted at the University could further tie the neighborhood and campus together. The Campus District is a tremendous resource for the future growth of Northside as a whole.

Figure 37 Conceptual design option showing possible UH campus expansion area, looking east.



An expanded campus could be focused around a major new open space.

6. WAREHOUSE DISTRICT

The Warehouse District is located east of the University of Houston – Downtown Campus, west of Elysian Street, north of Interstate 10 and south of the rail yards. This area contains a variety of light industrial uses and is a vital link between Northside and Downtown Houston. As a transitional zone, access through the District will better connect the surrounding areas. The Study recommends a mixture of light industrial and urban housing uses in these area, generally keeping the working nature of the neighborhood intact. Possibilities may also exist for future University of Houston campus expansion eastward over time.

The Study recommends a mixture of light industrial, live/work and urban housing uses in these area, generally keeping the working nature of the neighborhood intact.

7. INTER-MODAL DISTRICT

METRO's inter-modal station at Burnett and North Main Streets will be a vital link between transit modes including light rail, planned commuter rail and bus service. This station should be celebrated as a special place and made as user-friendly as possible through strong pedestrian connections to the surrounding neighborhood. As a future hub for transit-oriented development, the inter-modal station area should, along with Hardy Yards and the University of Houston – Downtown Campus, anchor the southern portion of the Northside neighborhood.

Figure 38 Conceptual design option for North Main Street / Burnett Street Intermodal Station.

Figure 39 The conceptual design option shows integration between all travel modes including pedestrians, bicyclists, autos, buses and rail.

8. LOWER DENSITY RESIDENTIAL

Throughout the neighborhood, there are a large number of vacant or underutilized properties. These sites sit within existing single-family and duplex areas within Northside. The Study recommends gradual infill of these smaller sites with lower density homes. Single-family, duplex or townhouse development should fit the character of the neighborhoods in scale and general form.

Townhouse development is encouraged on vacant sites.

Small lot single family homes can gradually infill the smaller vacant or underutilized sites within Northside.

Figure 40 Preferred Conceptual Plan

G. BUILDING DESIGN GUIDELINES

I. INTENT

The Livable Centers Design Guidelines have been prepared to provide goals for new development within the Northside neighborhood. These illustrated guidelines are intended to establish quality appearance, compatibility of character and variety of design within the plan area.

Because of the mixture of land uses and development in a Livable Center, quality building design is essential. Although each building type varies in character defined by its use, there are a number of fundamental features and principles they should share. These guidelines are meant to delineate the general character and scale of new development while allowing creativity and uniqueness in individual architectural design.

Design Guidelines can articulate the neighborhood's goals of quality design of buildings and relationships to public space.

1. ORIENTATION

New buildings should maintain a continuous frontage with the building face adjacent and parallel to the front setback along streets and should address or open directly on to the sidewalk. Special attention should be paid to buildings that front important public spaces such as the Moody Park and the proposed transit plazas. Building setbacks will generally vary depending on land use and street type. Buildings along designated Urban Corridors should reflect guidelines outlined in Section II.B.

2. ENTRIES

Building entries should be well designed and easily identifiable from the street. When buildings are located at intersections, entrances should be located at the building corner. Above podium (a configuration where parking is either at-grade or partially below grade, but not fully underground, with the building or open space above) structures, stoops should be frequently spaced to provide pedestrian activity at the street level and to provide visual interest along the partially raised podium.

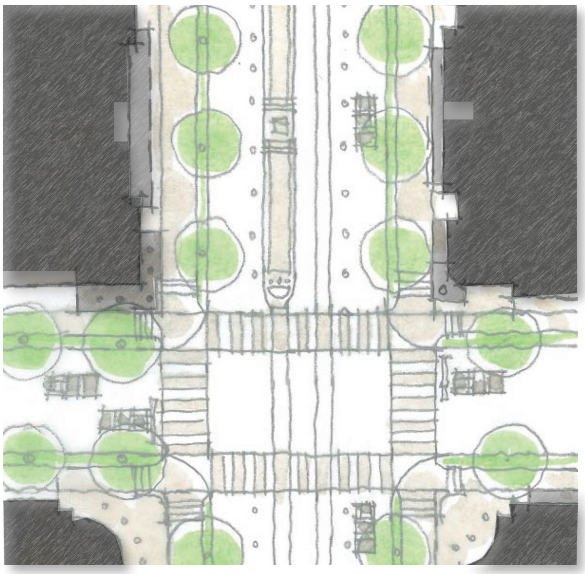


Figure 41 New Buildings should maintain a continuos frontage along streets and should address or open directly to the sidewalk.

Building entries should be well designed and easily identifiable from the street.

3. MASSING

Development massing should reflect the adjacent uses while defining space and creating a "street wall." Corner buildings should incorporate special features that reinforce important intersections and create buildings of unique architectural merit.

4. ARTICULATION

Buildings within the Livable Center should foster the appearance of an urban neighborhood with special attention to detailing within pedestrian range of touch and view. The use of quality materials, unique signage, canopies or awnings and intricate design details such as recessed windows and attractive moldings can reinforce the pedestrian nature of the street.

To create a pedestrian scale and character, facades should be defined through architectural treatment in a relatively small rhythm of approximately 25'-50' with vertically-oriented windows and entries.

Corner buildings should incorporate special features that reinforce important intersections and create buildings of unique architectural merit

Facades should be defined through architectural treatment in a relatively small rhythm of approximately 25'-30'.

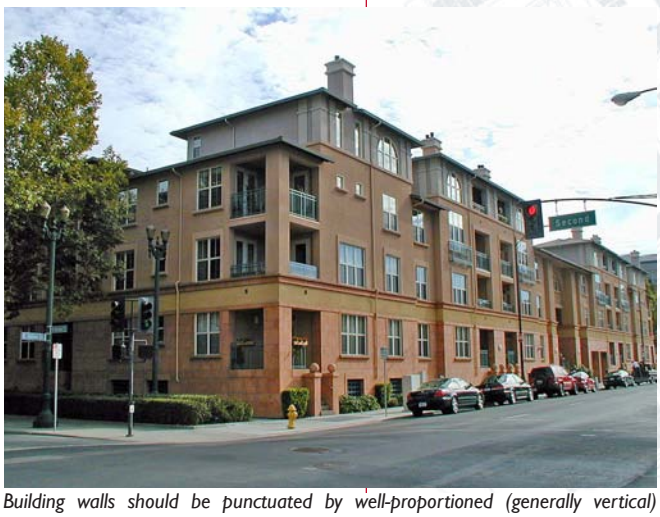
5. MATERIALS

Building materials are an important component of a quality built environment and should be used in a consistent and harmonious manner throughout the project. Building materials should be used to define elements such as building base, body, parapets, bays, arcades and structural elements. Materials should convey a sense of integrity, permanence and durability.

6. WINDOWS

Building walls should be punctuated by well-proportioned (generally vertical) openings that provide relief, detail and variation on the facade. Windows should be generously inset to create shade and shadow, while adding to the detail of the facade. Flush "nail-on" windows are strongly discouraged. Tinted or reflected glass is also strongly discouraged. Sound reduction windows should be used in buildings directly adjacent to the rail yards.

Building materials should be used to define elements such as building base, body, parapets, bays, arcades and structural elements.



Building walls should be punctuated by well-proportioned (generally vertical) openings that provide relief, detail and variation on the facade.

7. ROOFS

Individual roof forms should reflect the facade articulation, and building massing rather than a single roof over an articulated building. Roofs should be a combination of Gables, Flat/ parapet and Hips (where appropriate) to provide visual interest and be consistent with the building articulation. Flat roofs are encouraged on mixed-use buildings along major corridors such as North Main Street and Irvington Boulevard. Parapet / flat roofs should have strong cornice detailing, to provide scale and visual interest. Pitched roofs are generally more appropriate for townhouses, single-family homes and multi-family buildings.

Pitched roofs are generally more appropriate for townhouses and multi-family buildings

Parapet / flat roofs should have strong cornice detailing, to provide scale and visual interest.

8. BUILDING TYPES - OVERVIEW

Individual building types have their own set of design guidelines. The following guidelines help ensure that the overall plan will create a productive pedestrian environment. Each building type intends to support an active streetscape by keeping the pedestrian friendly elements on the street edge and moving the less desirable areas, such as parking lots, to the rear of the buildings.

9. MULTI-FAMILY RESIDENTIAL

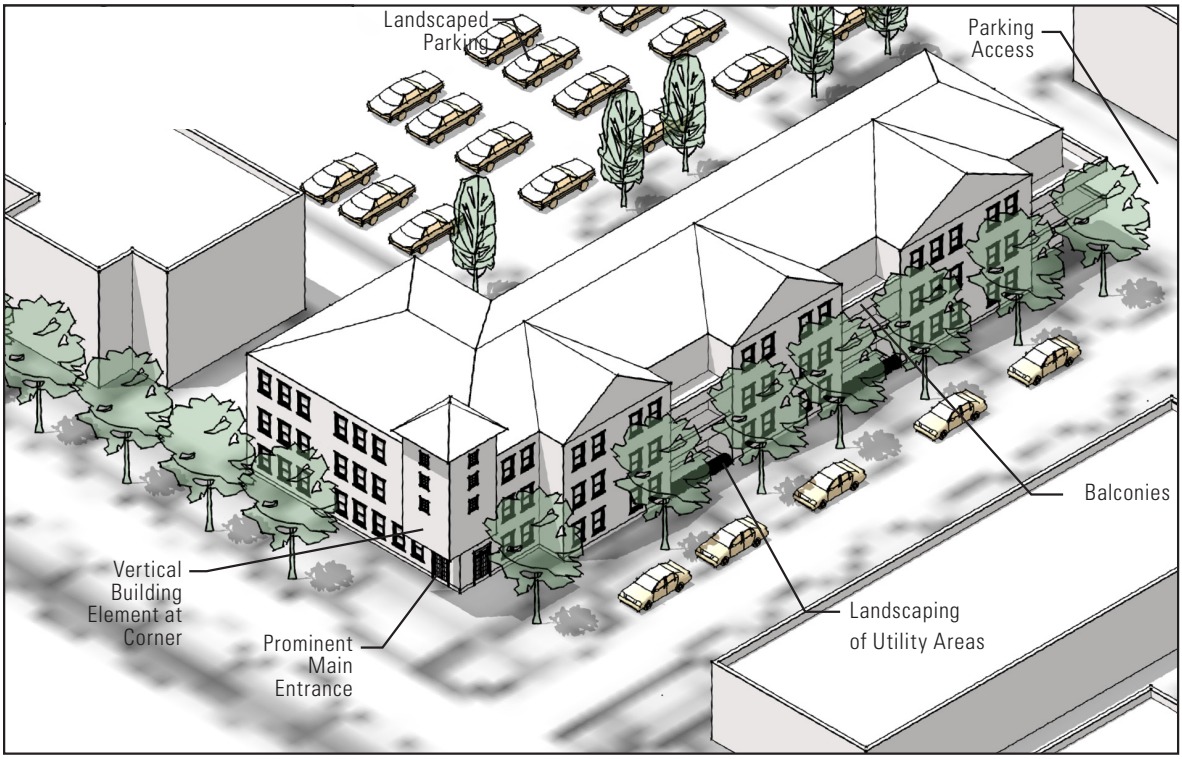


Figure 42 Multi-Family Residential Design Guidelines Sketch

Building Design

- Buildings should have vertically-oriented windows along all facade faces.
- Rooflines and chimneys should give the impression of residential uses.
- Subgrade parking or parking podiums should be encouraged.
- Shared or individual residential stoop entries are required along front facades to provide variation and activity along the residential street frontage.
- Roof forms should be visually interesting, reflect the building massing, and be of quality materials.
- Mechanical equipment shall be organized, screened and integrated with the architecture of the building.
- Facade rhythm should be articulated to provide a typical traditional building pattern of approximately 25 feet, and should emphasize verticality.

10. TOWNHOUSE

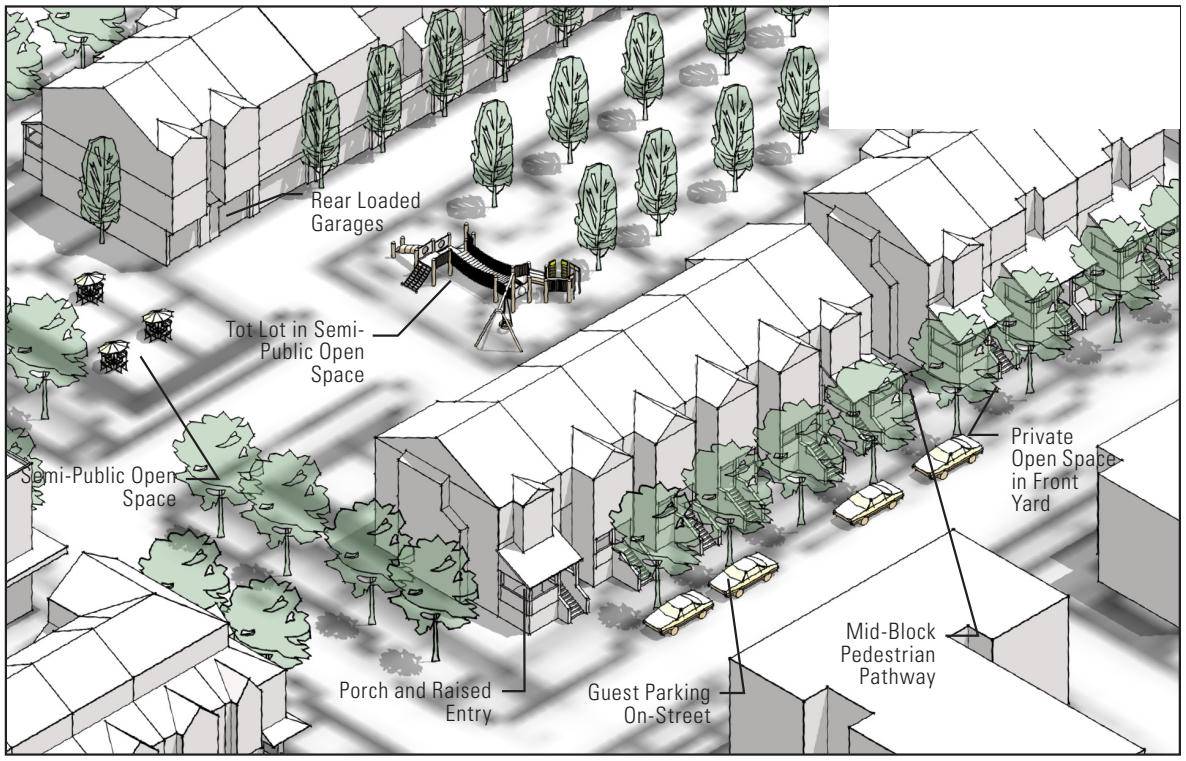


Figure 43 Townhouse Design Guidelines Sketch

Building Design

- Townhouses should face public and internal streets whenever possible to provide an attractive environment for both residents and visitors, and provide clearly identifiable addresses for units.
- Dwelling entries such as stoops and porches should be the predominant façade feature.
- Tandem garages should be incorporated to provide additional parking capacity.
- Building facades and roof lines should provide articulation to provide identity for individual units.
- The massing of rowhouses should break the main façade into three of four distinct elements: entry; main facade; a single or two story element and the roof.
- A combination of gable, flat and some hip roofs are appropriate for residential developments to provide visual interest.

II. RETAIL

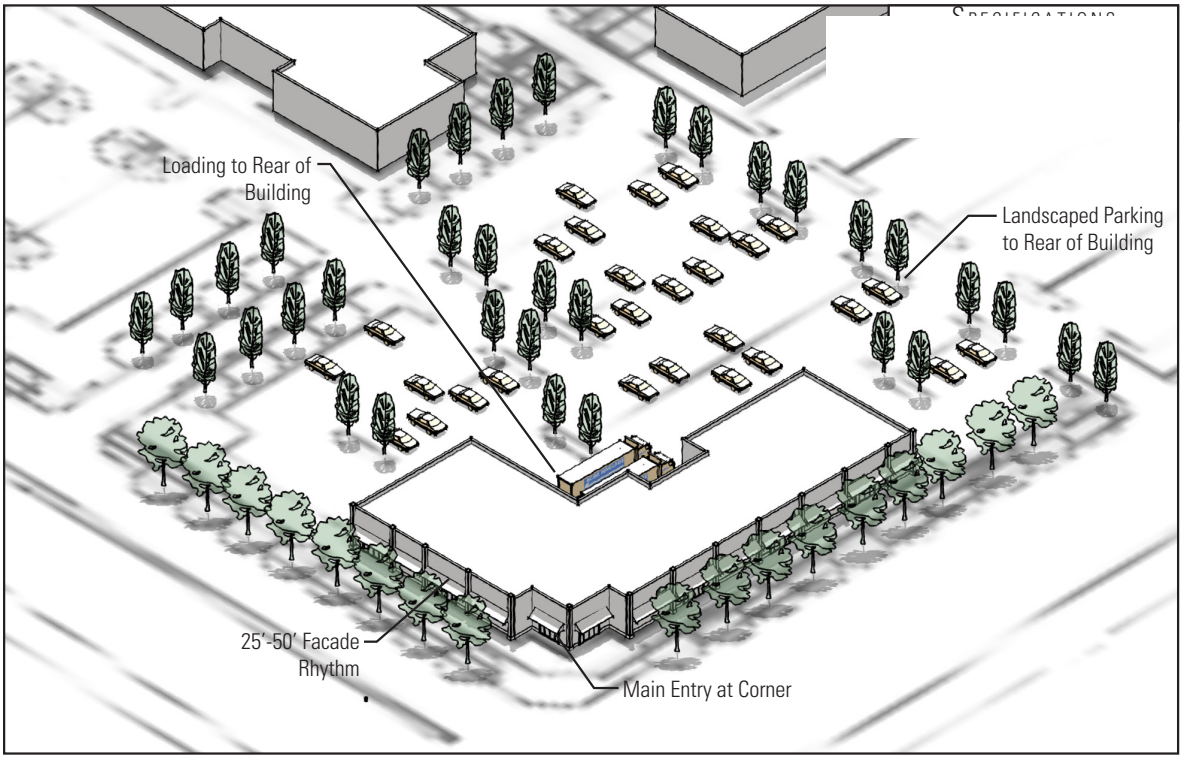


Figure 44 Retail Design Guidelines Sketch

Building Design

- Retail buildings should be oriented to the street with pedestrian-scaled storefronts with large storefront windows and detailing features directly adjacent to the sidewalk.
- A large percentage of the front facade should have storefront windows and glass doors.
- Retail buildings should be located on the corners of blocks so as to define intersections.
- Primary building entries should be located towards the sidewalk.
- Storefronts entries should be semi-recessed and should be located at approximately 25'-50' spacings.
- Special attention should be given to craftsmanship and detailing of materials and finishes within the pedestrian zone.
- Buildings should have canopies, awnings, or arcades for pedestrian protection and shading.
- Flat roofs are generally encouraged for commercial buildings for a more urban appearance. Parapets shall be articulated with well designed details. Mechanical equipment shall be organized, screened and designed to be consistent with the design of the building and hidden from public view to best extent possible.

I2. MIXED-USE

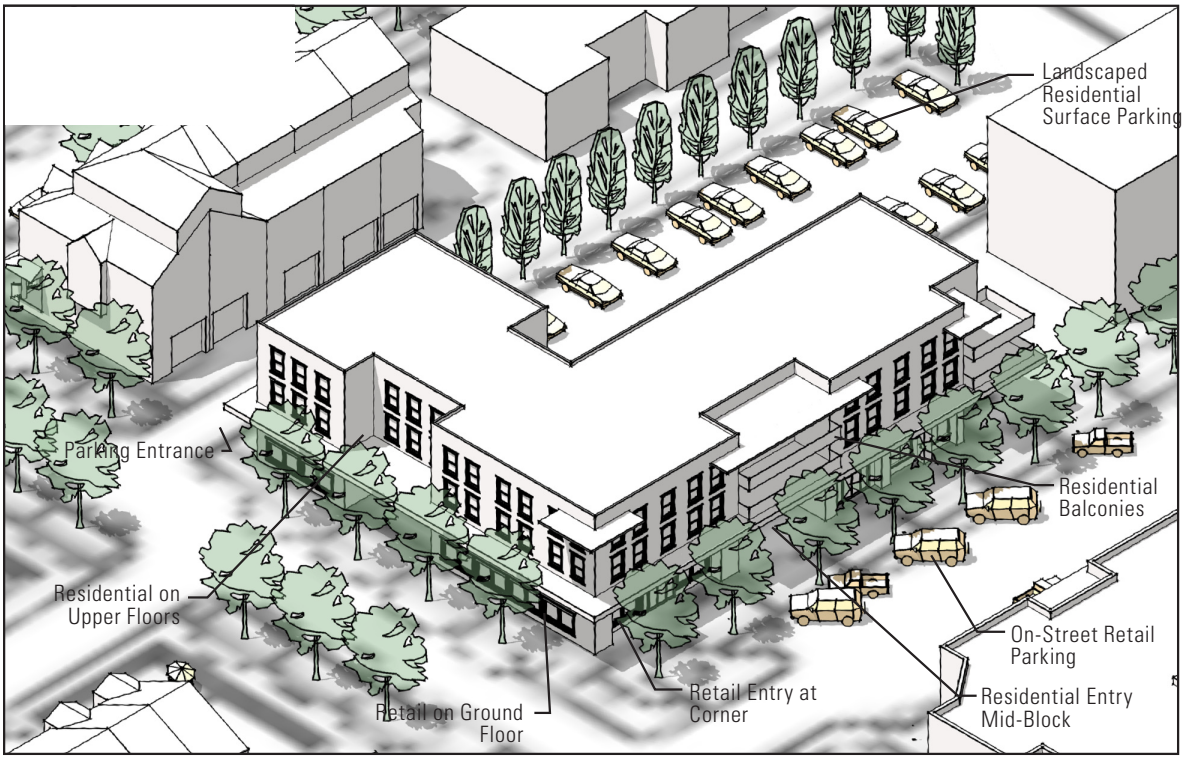


Figure 45 Mixed-Use Design Guidelines Sketch

Building Design

- Retail should be located on the ground floor, with residential uses above.
- Residential uses should have usable balconies of functional size adjacent to living areas.
- Retail uses should have canopies and pedestrian scaled-lighting along the sidewalk.
- Buildings should have landmark features such as vertical building elements at building corners.
- Cafe seating should be located adjacent to front entrees to help activate the sidewalk.
- A large percentage of the front facade should have storefront windows and glass doors.
- Prominent retail entries should be located at the building corner with residential entries located mid-block.

Secondary residential entries may be located adjacent to parking areas.

- Storefronts should be semi-recessed and should be located at approximately 25'-50' spacings.
- Attention should be given to craftsmanship and detailing of materials and finishes within the pedestrian zone.
- Retail frontage should have entry canopies, awnings, or arcades for pedestrian protection and shading.

13. INDUSTRIAL FLEX SPACE

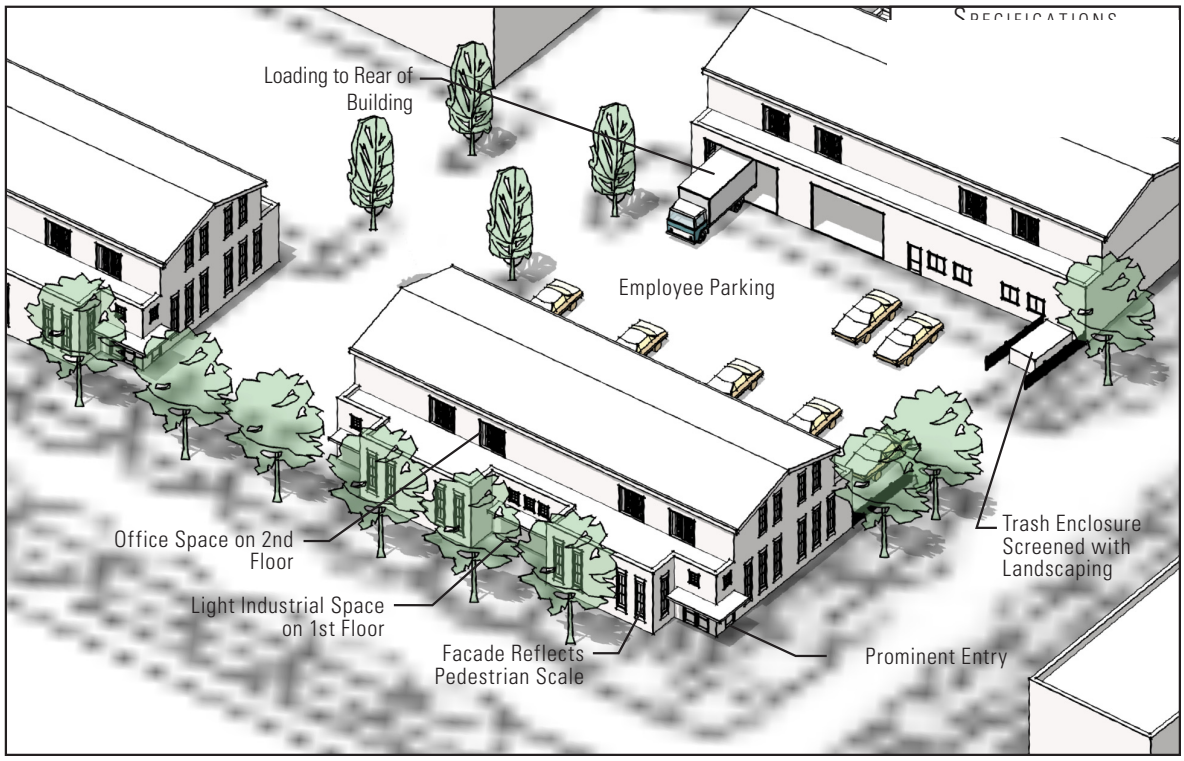


Figure 46 Industrial Flex Space Design Guidelines Sketch

Building Design

- Primary building entries should be adjacent to the sidewalk, secondary entrances may be located to the side or rear of the building.
- Industrial buildings should have flat or shed roofs and contemporary design features emphasizing durability and permanence.
- In two story buildings, light industrial uses should be located on the ground floor, with office uses above.
- The building facade should reflect a pedestrian scale, with ample vertically-oriented windows on the ground floor.
- The use of reflective or dark-tinted glass should be discouraged, especially at ground level.

IV. IMPLEMENTATION ROADMAP

A. INTRODUCTION

This chapter offers an "Implementation Roadmap" for the Northside Livable Centers Study. The section begins with an overview of federal, state and local funding sources that can serve as a menu of potential resources for implementing the study. In addition, it identifies a series of priority projects that represent practical next steps toward improving the quality of the neighborhood and the potential for leveraging private investment. These priority projects are discussed in terms of their costs, implementation strategies, likely funding sources and timing.

B. FUNDING SOURCES/STRATEGIES

In order to be successfully implemented, the capital improvements and initiatives recommended for the Northside neighborhood will need to be paired with appropriate funding sources. The following section outlines an overview of potential sources at the Federal, State, and Local levels.

I. FEDERAL

Although Federal funding sources are very competitive, they also generally offer the largest sized grants. In most cases, these federal funds are granted to regional, state, and municipal entities, which outline the manner in which they will be dispersed in their application for funding. In Houston, this entity is typically H-GAC, which is responsible for overseeing transportation planning in the region. Many of the federal sources also require a local match, which can be achieved through the state and local sources, listed below. Note that for the funding sources administered by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) operate under the auspices of the SAFETEA-LU, the 2005 Transportation reauthorization bill. A new bill will be passed to replace this bill in the near future and, as such, existing funding streams may be modified or eliminated while other funding sources may be introduced.

The Obama administration has undertaken several efforts to expand federal support for "livability" initiatives, suggesting that there may be additional funding for some of the recommendations outlined in the study. These efforts have included the creation of the HUDDOT-EPA Interagency Partnership for Sustainable Communities. This partnership serves to "coordinate federal housing, transportation, and other infrastructure investments to protect the environment, promote equitable development, and help to address the challenges of climate change," goals shared by H-GAC's Livable Centers program. The transportation reauthorization bill is likely to include additional funding mechanisms for supporting these efforts.

CONGESTION MITIGATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM

The CMAQ program, jointly administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), provides funds to State DOTs, MPOs, and transit agencies to invest in projects that reduce criteria air pollutants regulated from transportation-related sources. This has been interpreted broadly and includes programs, such as Livable Centers, that help plan and implement urban interventions that promote alternatives to automobile travel, including biking, walking, and transit. H-GAC selects projects that will receive CMAQ funding in conjunction with its 3-year Transportation Improvement Program. CMAQ funding requires a 20% local match or better.

SURFACE TRANSPORTATION PROGRAM (STP)

The FHWA's Surface Transportation Program 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. As per the FHWA's Bicycle and Pedestrian Program, STP funding can be applied to nearly the full range of federally approved bicycle and pedestrian improvements, including bike/ped planning, construction/improvements of sidewalks and crosswalks, signal improvements, and traffic calming. In Texas, TE funds are dispersed at the state level in form of Statewide Transportation Enhancement Program (STEP) grants.

A portion of STP funds are set aside for Transportation Enhancement (TE) Activities, which offer funding opportunities to help expand transportation choices and enhance the transportation experience through 12 eligible TE activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping, historic preservation, and environmental mitigation.

STP funding is awarded to H-GAC, which administers the program allocates funding to specific projects.

TRANSPORTATION AND COMMUNITY AND SYSTEM PRESERVATION (TCSP) PROGRAM

The FHWA's Transportation, Community, and System Preservation (TCSP) Program is a comprehensive initiative of research and grants to investigate the relationships between transportation, community, and system preservation plans and practices and identify private sector-based initiatives to improve such relationships. States, metropolitan planning organizations, local governments, and tribal governments are eligible for discretionary grants to carry out eligible projects to integrate transportation, community, and system preservation plans and practices that: improve the efficiency of the transportation system of the United States; reduce environmental impacts of transportation; reduce the need for costly future public infrastructure investments insure efficient access to jobs, services, and centers of trade; examine community development patterns and identify strategies to encourage private sector development patterns and investments that support these goals.

SAFE ROUTES TO SCHOOL PROGRAM

The FHWA's Safe Route to School Program provides funds to states to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The program's funding opportunities include those for infrastructure projects, such as engineering improvements, that improve safety. Because there are multiple schools within the study area, some of the recommendations may be eligible for this funding.

RECREATIONAL TRAILS PROGRAM (RTP)

The Recreational Trails Program (RTP) is a program of the FHWA that provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. In 2010, the FHWA allocated $3 million to Texas under this program.

SUSTAINABLE COMMUNITIES PLANNING GRANT PROGRAM

In the 2010 Budget, Congress provided a total of $150 million to the Department of Housing and Urban Development (HUD) for a Sustainable Communities Initiative to improve regional planning efforts that integrate housing and transportation decisions, and increase the capacity to improve land use and zoning. Of that total, approximately $100 million will be available for regional integrated planning initiatives through HUD's Sustainable Communities Planning Grant Program. Conducted as a part of H-GAC's region-wide Livable Centers program, this plan contains many recommendations that are likely to be eligible for funding under this program.

2. STATE

URBAN OUTDOOR RECREATION GRANTS

This program, administered by the Texas Parks and Wildlife Department offers grants to specific cities and counties over 500,000 in population for the acquisition and development of park land. This assistance program is distributed in the form of 50% matching grant funds up to $1,000,000. Local governments must apply, permanently dedicate project areas for public recreational use, and assume responsibility for operation and maintenance.

RECREATIONAL TRAIL GRANTS

The Texas Parks and Wildlife Department administers funding from the federal Recreational Trails Program. The grants can be up to 80% of project cost with a maximum of $200,000 for non-motorized trail grants. Funds can be spent on recreational trail projects such as the construction of new recreational trails, to improve existing trails, to develop trailheads or trailside facilities, and to acquire trail corridors.

3. LOCAL/REGIONAL

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

CDBG funding is awarded by formula to large cities, such as Houston, which then determine how to disperse funds. Funds can be used to carry out a wide range of community development activities directed toward revitalizing neighborhoods, economic development, and providing improved community facilities and services. Cities are required to give maximum feasible priority to activities that benefit low- and moderate-income persons or that aid in the prevention or elimination of slums or blight. This is the only federal source that can be counted toward a local match for other federal funding sources.

COMMUNITY TREES GRANT PROGRAM

Established in 2005, H-GAC's Community Trees Grant Program provides technical and financial assistance to cities, counties and non-profit organizations seeking to increase the number and diversity of trees in their communities. The grant provides funds to purchase trees for plantings in parks and other public spaces. The program is a reimbursement grant that requires a one-to-one match. H-GAC provides technical assistance, but it is required that applicants solicit volunteers to carry out the tree plantings. This volunteer time may be used as an in-kind match contribution.

Tax Increment Reinvestment Zone (TIRZ)

A TIRZ is a legally defined geographic area, established by the City. Depending on the financing plan established at the time of the TIRZ's creation, a portion (up to 100%) of the marginal increase in property tax revenue collected within its boundaries may be retained by the TIRZ and used to repay bonds issued for the purpose of financing projects within the area. The city can also contribute sales tax revenue to TIRZ projects. A wide variety of expenses are eligible for these funds, including public improvements, basic infrastructure, gap financing for development, and a range of professional services. In general, TIRZ expenditures are intended to facilitate/ catalyze new development and/or generate increases in sales or property assessments, thus creating a self-sustaining financing mechanism.

In Northside, only the area within and immediately adjacent to Hardy Yards is included within the TIRZ. Consequently, with its current boundaries, TIRZ bonds can only be applied to the recommendations for Burnett Street and the Main Street pedestrian connection. If the boundaries were expanded, however, the enormous property tax increment that may be generated by the eventual redevelopment of Hardy Yards could be used to finance public improvements elsewhere in the Northside.

CITY OF HOUSTON GENERAL FUND OR BOND CONTRIBUTIONS

The City of Houston may elect to issue bonds or grants in support of the activities outlined in this plan. Depending on the implementation, a range of city agencies may be willing to enter into a partnership to fund or manage projects, including the Department of Public Works and Engineering and the Parks and Recreation Department.

HARRIS COUNTY FLOOD CONTROL DISTRICT (HCFCD)

HCFCD provides support to activities that further its mission. This includes funding for tree planting, vegetation management, and offering easements for hike and bike trails. Because a portion of the study area is within a flood plain, it may be eligible for funding or direct assistance.

MANAGEMENT DISTRICT GENERAL FUNDS

The Greater Northside collects revenue from owners of commercial property within its boundaries, based on property tax assessments on a rate of $0.012 per $100 of valuation. The management district may choose to allocate a portion of its budget toward the finance of the capital improvements and other projects outlined in the plan. For projects implemented with federal funding sources, this would likely come in the form of payment toward the required 20% local match.

4. OTHER

NEIGHBORHOOD EMPOWERMENT ZONES (NEZ)

Texas Local Government Code allows municipalities to designate Neighborhood Empowerment Zones (NEZs) in order to promote the creation and rehabilitation of affordable housing; enhance economic development opportunities; or increase in the quality of social services, education, or public safety. Within an NEZ, a municipality may waive or adopt fees for construction of new buildings, enter into agreements for refund of municipal sales tax and for abatement of municipal property taxes, and set standards to encourage energy-efficient building construction.

LISC-GO NEIGHBORHOODS/PRIVATE DONORS

The Local Initiatives Support Corporation (LISC) has partnered with The Avenue CDC to identify key community needs, goals, and opportunities in order to develop a "Quality of Life Agreement" as a part of its Go Neighborhoods initiative. This agreement will include detailed implementation strategies for attaining a community vision that includes improved access to jobs, better schools, expanded activities for youth, enhanced community safety, and the preservation of affordable housing. LISC has provided seed money for these efforts and may offer a challenge grant later in the efforts. Additionally, this process and the presence of this national Community Development Financial Institution may help to attract additional grants from private donors to the Northside. To the extent that the strategies outlined in that Agreement are supported by the recommendations of this plan, there may be an opportunity to apply these resources to the implementation of this plan.

	Potential Use											
Funding Source	Building Construction	Community/ Economic Development	Community-Oriented Events	Environmental Mitigation	Sidewalks/ Lighting/ Stree Furniture	Planning	Plaza Construction/ Maintenance	Street Trees	Street Crossings	Trails	Traffic Calming	Other Major Capital Improvements
American Reinvestment and Recover Act	x	x		x	x	x	x	x	x	x	x	x
City of Houston General Fund/Bonds	x	x	x	x	x	x	x	x	x	x	x	x
Community Development Block Grant (CDBG)		x										
Community Trees Grant Program								x				
Congestion Mitigation and Air Quality (CMAQ) improvement program					x	x		x	x		x	x
Harris County Flood Control District				x				x				
Neighborhood Empowerment Zones		x										
Public/Private Partnerships	x											
Recreational Trails Program (RTP)										x		
Safe Routes to School Program					x			x	x		x	x
Surface Transporation Program (STP) (including TE and STEP)				x	x	x		x	x		x	x
Tax Increment Reinvestment Zone (TIRZ)	x	x	x	x	x	x	x	x	x	x	x	x
Transportation and Community and System Preservation (TCSP) Program				x	x	x		x			x	x
Private Donors/Sponsors	x	x	x	x	x	x	x	x	x	x	x	

Figure 47 Possible Funding Sources for Improvements

C. NEXT STEPS - PRIORITY PROJECTS & STRATEGIES

Six priority efforts have been identified as critical next steps for implementation. These priority efforts are described below, along with a discussion of their estimated cost and likely funding sources. The projects have been listed based on priority.

1. CREATE A STRONGER PEDESTRIAN CONNECTION AT THE BURNETT / NORTH MAIN TUNNEL WHILE IMPLEMENTING "PARKWAY" UPGRADES TO BURNETT STREET

After the light rail is constructed, the first station north of the existing downtown service will be at the intersection of Burnett and North Main Street. As such, this intersection will be a focus of activity, and of a gateway to the Northside. Presently, however, this intersection does not exist, as Main Street descends into a tunnel a block north of Burnett. The current long and inhospitable pedestrian access via the tunnel creates a barrier between Northside and downtown. The plan proposes either constructing of a pedestrian bridge over the railroad tracks or altering the configuration of the tunnel such that it ends at this intersection. This will both strengthen the link between Northside and downtown and will enhance the connectivity between the future light rail stop and the rest of the neighborhood. As described in Section III, implementing this improvement in conjunction with parkway-style upgrades on Burnett will provide a connection between the transit and areas to the east while serving as a seam between the future development at Hardy Yards and the rest of Northside.

IMPLEMENTATION STRATEGY

While this may be the single most important set of capital improvements in the plan, it is also expected to be the most expensive. The most likely mechanism for funding these improvements is through TIRZ bonds, issued from the property tax increment anticipated from the future development at Hardy Yards. As such, implementation will be delayed until development is moving forward. The University of Houston-Downtown is also a potential partner in this endeavor. Additional funding may be needed from federal Transportation Enhancement and CMAQ funding.

COST

While not the ultimate solution, a short-term retrofit of the existing pedestrian tunnel to include new lighting would cost approximately $70,000. A pedestrian bridge would cost approximately $1 - $1.5 million to construct. The parkway-style upgrades to Burnett street will cost approximately $1.3 million, including hardscape, softscape, and a 20% contingency.

2. SUPPORT EFFORTS TO ENSURE EXISTING BUSINESSES AND RESIDENTS BENEFIT FROM THE NEW TRANSIT SERVICE

While the implementation of light rail service has the potential to be a great neighborhood amenity Members of the Northside community have expressed concern that it may also result in neighborhood changes that harm existing residents and businesses. Residents fear that the light rail will bring increased property values that will lead to higher rents or property taxes, which will force them from their homes. Neighborhood business owners fear customers will be unable to access their shops during construction of the light rail, and that over the longer term their rents may increase. Protecting and enhancing the existing community is an important strategy for fostering a successful, safe and healthy neighborhood, and for encouraging future private investment. For example, studies show that neighborhood retail is an important amenity that can contribute to the potential for successful, walkable, transit-accessible neighborhoods.

Examples of Strategies to Support Local Businesses along New Light Rail Corridors:

1. Seattle, Washington: Rainier Valley Community Development Fund

In 2009, Seattle opened the first section of its light rail line, which will link its downtown to Seattle-Tacoma International Airport. During planning for the project, local community groups expressed concerns about how existing households and businesses would be affected by the new transit line, which travels through several multi-cultural low- and moderate-income neighborhoods in Southeast Seattle.

In response, the City, Sound Transit and King County established a $50 million fund to promote TOD in Southeast Seattle, pooling Community Development Block Grant (CDBG) funding with transit mitigation money and other sources. The goal of the Rainier Valley Community Development Fund (RVCDF) is to help mitigate the impacts of light rail construction on local businesses; provide financial assistance to stimulate community development; and promote workforce development in the Rainier Valley. The fund provides grants and loans for commercial and multifamily development, as well as to support new and existing businesses. A portion of the fund will be used to purchase and assemble land for TOD, and to assist with real estate development projects that also include affordable housing, and other community benefits. Over time, the fund is expected to work as a revolving loan fund that will assist with community development efforts.

2. Twin Cities Region, Minnesota: Central Corridor Business Resources Collaborative

The Central Corridor is a new light rail line that will link downtown Minneapolis and Downtown St. Paul, the second in a series of planned new light rail investments in the region. Currently under construction, the Central Corridor is scheduled for completion in 2014. For much of its 11-mile span, the light rail will run along University Avenue, a major commercial corridor with a wide variety of businesses, including many small businesses. The population of the corridor is very diverse and is home to many recent immigrant households and small ethnic retailers. The light rail project has raised concerns about disruption to existing transit and pedestrian ways, gentrification and its impact on local businesses.

In response to these concerns, a group of six business associations and chambers, the Cities of Minneapolis and Saint Paul, the Metropolitan Council, and several community development groups have come together to form the Central Corridor Business Resources Collaborative (CCBRC). With the support of the Central Corridor Funders Collaborative (a group of local foundations interested in promoting equitable development along the line), the CCBRC is working to bridge various community-led planning efforts addressing business and economic development in the Central Corridor. In the short term, they are focused on business and construction mitigation as the transit project is built. Over the longer term, the group is working to leverage the light rail investment to sustain a vibrant and diverse business community along the Corridor. Current efforts include:

- *Various efforts to assist businesses with signage, access, parking and marketing during construction of the light rail (funded by Metropolitan Council and the Cities).*
- *Training, technical and financing assistance (funded by local business associations).*
- *Façade improvement program - $200,000 (led by a local business association, funded through a federal appropriation); and*
- *$13 million in streetscape and other "placemaking" infrastructure to enhance the pedestrian environment near light rail stations. (City of Saint Paul)*

IMPLEMENTATION STRATEGY

The Go Neighborhoods planning process, led by LISC and The Avenue CDC, is currently underway in the Northside neighborhood. That plan is focused on community capacity building and addressing the social, economic, educational, and security needs of residents and businesses. These efforts can help to identify strategies to foster neighborhood stability, and attract resources from national foundations and other sources. For example, the creation of a Community Land Trust has the potential to help preserve and enhance the existing stock of affordable housing, and the implementation of a Neighborhood Empowerment Zone may help facilitate the development of new housing (both affordable and market rate). The Management District, Metro and other public entities should consider ways they might support the recommendations that emerge from this process.

Another important effort for ensuring neighborhood stability is supporting local businesses during and after light rail construction. METRO recently announced a new program to assist small businesses during construction of new light rail lines. Qualifying businesses will be considered for assistance up to $25,000 during the construction period. Businesses will be offered free technical assistance from SCORE, a volunteer, non-profit association that provides counseling to small businesses.

COST

The costs of this strategy will vary based on the size and scope of the programs selected.

3. CREATE "FESTIVAL STREETS" AT FULTON AND QUITMAN; IDENTIFY THE BEST LOCATION FOR A "BETTER BLOCK" PROJECT

The creation of "Festival Streets" is another important strategy to help support local businesses and community-based efforts to enhance the quality of life in the neighborhood. The festival streets will require a redesign of the streets to make them safer and more attractive to pedestrians. These streets will accommodate two travel lanes for motor vehicles with a shared bicycle lane on either side, parallel on-street parking on both sides, and 10-foot sidewalks with trees and other plantings on both sides. In addition, there will be space for café seating, street lights will be added to existing poles to enhance the safety of the pedestrian environment, and hanging lights will span the roadway to emphasize the special district.

The "Better Block" project is a concept innovated in the Oak Cliff neighborhood of Dallas, designed as an inexpensive way to show the potential impact of future street improvements. As a part of this project, the organizers implemented temporary interventions in the right-of-way of a single block, reducing the number of car lanes from 3.5 to 1, and replacing them with a bike lane, space for café seating, trees, and lighting. These interventions, which coincided with a community event that included live music and programming from local retailers, lasted only a day, served as a demonstration of how the block could be enlivened if these changes were made permanent. Implementing a Better Block project in the Northside neighborhood could not only galvanize support for such streetscape improvements, but could also serve as a means of attracting new customers to local businesses.

As one of the most active pedestrian intersections in the study area, it is a priority to implement safety improvements along Fulton and Quitman Streets as soon as possible. While funding may

pose the largest barrier to implementing this recommendation, and a Better Block project, whether implemented at that intersection or elsewhere, may be an important mechanism for galvanizing community support for more permanent streetscape improvements. It may also demonstrate to drivers that the impact on travel times would be minimal compared to the community benefits.

IMPLEMENTATION STRATEGY

The Better Block project should be planned and implemented in coordination with the outcomes of the Go Neighborhoods efforts, in order to both leverage and facilitate the community building efforts undertaken as a part of that process. As a relatively inexpensive intervention, the Better Block project could be funded through a combination of sponsorship from local businesses, private donors, and money from the Greater Northside Management District. The capital improvements entailed in the creation of Festival Streets would likely require federal transportation funding, via H-GAC and TxDOT, including that allocated under the Transportation Enhancements, CMAQ, and Safe Routes to School programs. This can be supplemented by H-GAC's Community Trees Program and funding from the City and Management District.

COST

Implementing Festival Streets on Quitman from N Main to Tackaberry and on Fulton from Boundary to Henry would cost approximately $1.9 million, including hardscape, softscape and a 20% contingency. The cost of a Better Block project is limited: the project in Oak Cliff cost less than $1,000, according to its organizers. Both the University of Houston-Downtown and the Fiesta Mart, located at the intersection of Fulton and Quitman, have expressed interest in supporting the Better Block project.

4. CREATE STREETSCAPE IMPROVEMENTS ALONG THE EAST-WEST HOGAN/LORRAINE AND PATTON CORRIDORS

The Hogan and Lorraine Streets form a primary east-west corridor through the central part of Northside. This corridor currently includes an important neighborhood medical clinic for the neighborhood, and could become a mixed-use hub with public and other uses for the neighborhood in the future. In order to calm traffic and foster a safe, lively pedestrian environment, the street will be reduced from four travel lanes to two and parallel parking will be accommodated on both sides of the street. In addition, 6-foot sidewalks will be developed with trees and other plantings on each side and pedestrian lighting will be added.

Implementation

The Hogan and Lorraine Streets form a primary east-west corridor through the central part of Northside. This corridor currently includes an important neighborhood medical clinic for the neighborhood, and could become a mixed-use hub with public and other uses for the neighborhood in the future. In order to calm traffic and foster a safe, lively pedestrian environment, the street will be reduced from four travel lanes to two and parallel parking will be accommodated on both sides of the street. In addition, 6-foot sidewalks will be developed with trees and other plantings on each side and pedestrian lighting will be added. As another critical east-west corridor, Patton will also benefit from similar improvements.

IMPLEMENTATION STRATEGY

As major east-west connectors and community centers, instituting streetscape improvements along the Hogan/Lorraine and Patton corridors is important for improving community safety and aesthetic character, as well as providing improved neighborhood access to transit. The capital

improvements outlined for this corridor would likely require federal transportation funding, via H-GAC and TxDOT, including that allocated under the Transportation Enhancements, CMAQ, and Safe Routes to School programs. Because a portion of the corridor is within a flood zone, the Harris County Flood Control District may also be able to help support tree planting and other vegetation maintenance. This can be supplemented by H-GAC's Community Trees Program and funding from the City and Management District.

COST

For Hogan / Lorraine: Approximately $1.5 million, including hardscape, softscape, and a 20% contingency. Planning level cost estimates for Patton Street improvements may be calculated based on similar streetscape costs in this Study.

5. ESTABLISH PLAZAS AND SMALL OPEN SPACES WITHIN PUBLICLY OWNED METRO REMNANT PROPERTIES ALONG THE RAIL CORRIDOR

In several places along the light rail corridor, METRO purchased property needed to construct the light rail, even where they only needed small portions of some of these parcels. This will ultimately leave small "remnant parcels" that are too small or irregular to support new development, and that present opportunities to develop new plazas and small-scale public spaces that can support community gatherings and improve security and aesthetics of the transit stations. Some parcels also house power substations enclosed by chain link fences. These fences might be replaced by more aesthetically pleasing enclosures that offer the potential for a public art component of the plazas.

IMPLEMENTATION STRATEGY

Following transit construction, METRO will be returning these remnant parcels to the City of Houston. These parcels, which are too small to support new development, are unlikely to be able to attract large bids. Consequently, the agency may be willing to dispose the parcels for a nominal fee as a means of eliminating their liability expenses associated with ownership and to promote the community benefits associated with these plazas.. The funding for capital improvements could come from private donors or sponsors, from H-GAC's Community Trees Program, and from the City and Management District.

COST

Acquisition costs are unknown, but the City of Houston may be willing to convey parcels to a community- based land manager for a nominal fee if they are willing to assume responsibility for maintenance and liability. The cost of capital improvements, including hardscape, softscape, and a 20% contingency will be approximately $800,000 for all four of the proposed plazas. This does not include maintenance, which will vary according to the specifics of the treatments applied.

6. ESTABLISH A HIKE AND BIKE TRAIL ALONG THE LITTLE WHITE OAK BAYOU, INCLUDING CONNECTIONS INTO THE NEIGHBORHOOD

As described in Section III, this system of hike / bike trails will be constructed adjacent to the Little White Oak Bayou, connecting to existing off-street bicycle trails to the north and planned bicycle trails to the south. This bicycle route will help to integrate existing open spaces and connect the neighborhood directly to Downtown Houston and surrounding areas. Access will be provided to the proposed trail at key connection points in order to easily connect existing housing areas throughout Northside. The construction of this trail will be used as an opportunity to identify areas of the adjacent floodway for habitat restoration.

In addition to creating a valuable recreational amenity and improving the natural environment, the hike and bike trail will create an important connection between the Northside neighborhoods and downtown. By addressing both recreational and circulation needs, the trail will help encourage alternative modes of transportation and improve the public health of neighborhood residents.

IMPLEMENTATION STRATEGY

In order to be successful, this trail will require one or more longterm champions among members of the Northside community. There is potential for a coalition between groups from the MD Anderson YMCA, University of Houston-Downtown student groups, and other community-based organization to serve as advocates for the project. There are also opportunities for funding and implementation partnerships between the City of Houston Parks and Recreation Department, citywide bike and trail advocates, H-GAC, the Greater Northside Management District, and Harris County Flood Control District. Each of these potential partners has a different interest in the trail, ranging from transportation and flood control to public health and community building and each will be able to contribute resources accordingly. In addition, funding for the more intensive capital improvement elements may be available from the federal Recreational Trails Program (administered by the Texas Parks and Wildlife Department).

COST

Approximately $2.9 million, including hardscape, softscape, and a 20% contingency.

D. RECOMMENDATIONS FOR METRO

In developing the Livable Centers Study, great focus was given to the MetroRail Corridor. The recommendations below summarize key elements and options identified through the Study process.

1) Create a transit plaza over Hernandez Tunnel, adjacent to Burnett Street.

2) Create a sound and safety wall along the rail yards.

3) Create an open park under the elevated rail north of Burnett Street.

4) Develop Landscaping and public art on support columns at the elevated rail section and on retaining wall structure.

5) Provide a pedestrian crossing at Paschall and/or Henry Streets

6) Revise the Quitman Station Kiss and Ride parking lot to include transit plaza element

7) Provide short-term parking and transit plaza at Boundary and North Main Streets

8) Provide public artwork including decorative fencing and landscaping appropriate and matching the general streetscape at the transformer location near Boundary and Fulton Streets.

9) Locate 10' shared sidewalk / trail away where possible and provide street trees at 30' on center.

Connections to transit will help connect the amenity to the Northside neighborhood.

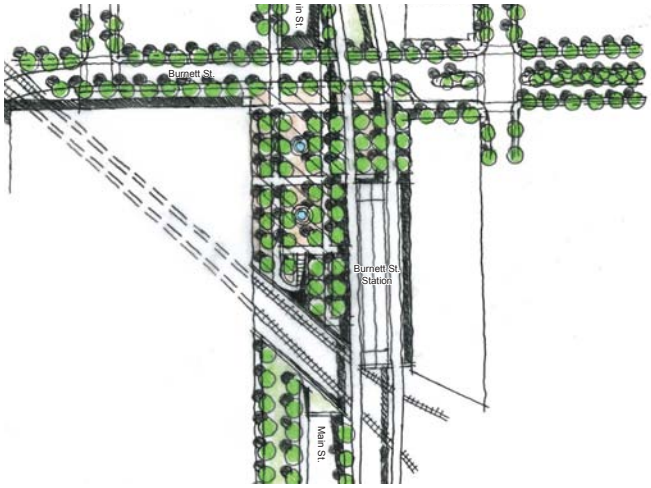


Figure 48 A transit plaza is recommended on top ot the North Main Street tunnel.

E. PROJECTED AIR QUALITY BENEFITS

There are very few studies on the effect of microscale pedestrian improvements on travel patterns. The "Making the Land Use, Transportation, Air Quality Connection" (LUTRAQ) demonstration project is one such study (1,000 Friends of Oregon (1993). Making the Land Use Transportation Air Quality Connection—The Pedestrian Environment—Volume 4A. Available at: http://ntl.bts.gov/DOCS/tped.html) Special attention was given to the quality of the pedestrian environment as gauged by the Pedestrian Environment Factor (PEF), a composite measure of "pedestrian friendliness". The four variables included in the PEF are: ease of street crossings, sidewalk continuity, local street characteristics (grid vs. cul-de-sac) and topography. Each of these is given a score of 1-3, resulting in a maximum PEF score of 12. Most significant to this project was the finding that a higher PEF score for a zone was accompanied by a lower automobile mode share for that zone. A one-point increase in PEF was accompanied by a decrease in automobile mode share of 1.8 percent.

The sidewalk improvements proposed as part of this study will increase sidewalk continuity along approximately 45,300 linear feet of neighborhood streets in the study area. Although PEF was not field-verified, this improvement is expected to increase the PEF score by 1 based on sidewalk continuity benefits. While the Portland study would suggest a 1.8 percent decrease in automobile mode share, H-GAC estimates a more conservative 0.9 percent decrease.

The analysis is based on Traffic Analysis Zones (TAZs) as determined by H-GAC as part of their regional travel demand model. TAZs included in the Near Northside study area are listed below in Table 1.

Table 1: TAZs encompassing Northside study area

TAZ	North Boundary	South Boundary	West Boundary	East Boundary
1475	Hogan St.	IH 10	IH 45	N. Main St.
1476	Burnett St.	IH 10	N. Main St.	Hardy St.
1479	-	Quitman St.	IH 45	N. Main St.
1480	Cottage/Hays Sts.	Quitman St.	N. Main St.	Fulton St.
1481	Hays St.	Quitman St.	Fulton St.	Elysian St.
1482	Quitman St.	Hogan St.	IH 45	N. Main St.
1483	Quitman St.	Hogan St.	N. Main St.	Fulton St.
1484	Hogan St.	Burnett St.	N. Main St.	Hardy St.
1485	Quitman St.	Hogan St.	Fulton St.	Hardy St.
1504	Weiss St.	Collingsworth St.	Fulton St.	Irvington Blvd.
1505	Weiss St.	Collingsworth St.	Irvington Blvd.	Maury St.
1506	Collingsworth St.	Hays St.	Fulton St.	Maury St.
1507	Weiss St.	Cottage/Hays St.	IH 45	Fulton St.

Source: Houston - Galveston Area Council

In the regional travel demand model, the total number of person-trips per day is calculated from each TAZ to all other TAZs in the region. The total number of trips generated by each TAZ is divided into home-based work (commuting), home-based non-work (such as to school, shopping, entertainment, etc.) and non-home-based (errands during the workday, for example). These are totaled for the study area as shown below in Table 2.

Table 2: Total Person-Trips by TAZ for Year 2009

Traffic Analysis Zone	Home-Based Work	Home-Based Non-Work	Non-Home-Based	TOTAL
1475	538	759	1,067	2,364
1476	1,498	1,596	2,656	5,750
1479	1,285	3,683	1,957	6,925
1480	2,027	4,908	2,512	9,447
1481	2,947	9,193	4,149	16,289
1482	724	1,753	665	3,142
1483	754	1,915	727	3,396
1484	1,379	3,486	1,285	6,150
1485	1,768	8,465	2,946	13,179
1504	1,639	3,729	1,458	6,826
1505	2,395	7,295	2,755	12,445
1506	1,632	4,233	2,307	8,172
1507	1,324	2,814	1,729	5,867
TOTAL	**19,910**	**53,829**	**26,213**	**99,952**

Source: Houston - Galveston Area Council

The number of automobile trips generated by these zones is estimated at 76,886 per day based on 99,952 person trips/day divided by the Houston regional average vehicle occupancy of 1.30. (Vehicle occupancy is not available for sub-areas of the region.) The average vehicle trip distance of 12.0 miles is calculated using 2009 regional trip characteristics by trip type (e.g. home-based work), weighted by the distribution of work, non work and non-home trips modeled for the TAZs in the study area (See Tables 3 and 4 below).

Table 3: Data for Estimate to Trip Distance

Trip Purpose	Regional Avg Trip Distance (mi)	Number of Trips in TAZs
Home-Based Work	20.32	19,910
Home-Based Non-Work	9.81	53,829
Non-Home-Based	13.05	26,213
TOTAL		**99,952**
Weighted Average	**12.75**	

Table 4: Data for Estimate to Vehicle Occupancy		
Trip Purpose	Regional Avg Occupancy	Number of Trips in TAZs
Home-Based Work	1.10	19,910
Home-Based Non-Work	1.53	53,829
Non-Home-Based	1.24	26,213
TOTAL		99,952
Weighted Average	1.37	

Sources: 2000 Census, U. S. Census Bureau; Technical Memo RE: Houston-Galveston 1995 Household Travel Survey from David Pearson, Texas Transportation Institute to Jerry Bobo, H-GAC, December 20, 1996; and 2009 Person Trip Tables provided by H-GAC February 2009. Home-based non-work trips include school, shopping, entertainment, airport and other.

VMT reduced are calculated to be **8,823 per day** based on multiplication of the average trip distance (12.75), number of vehicle trips in the zone (76,886) and the percentage of trips reduced by the project (0.9%).

12.75 x 76,886 = 980,296

980,296 * 0.009 = 8,823 mi/day

Vehicle emissions are calculated by multiplying VMT by the weighted average emission rates by vehicle type (average emission rates by vehicle type multiplied by the fraction of such vehicles measured regionally on the Local (intrazonal) road type as shown in Table 5 below).

Table 5. Vehicle Mix and Average Emission Rates by EPA Vehicle Type									
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	All Vehicles
Vehicle Type									
Local Roads	59.0%	24.2%	7.2%	3.2%	0.2%	0.3%	5.9%	0.1%	100.0%
Emissions									
VOC (g/mile)	0.40	0.47	0.45	1.36	0.06	0.10	1.12	4.65	0.50
NOx (g/mile)	0.62	0.66	0.77	3.87	0.50	0.54	5.58	0.97	1.03

Source: Houston - Galveston Area Council

VOC = 8,823 mi/day * 0.5 g/mi = 4,412 g/day = 4.412 kg/day

NOx = 8,823 mi/day * 1.03 g/mi = 9,088 g/day = 9.088 kg/day

Thus, the final air quality benefit from the Near Northside projects is estimated at the following pollutant reductions:

4.412 kg/day Volatile Organic Carbon

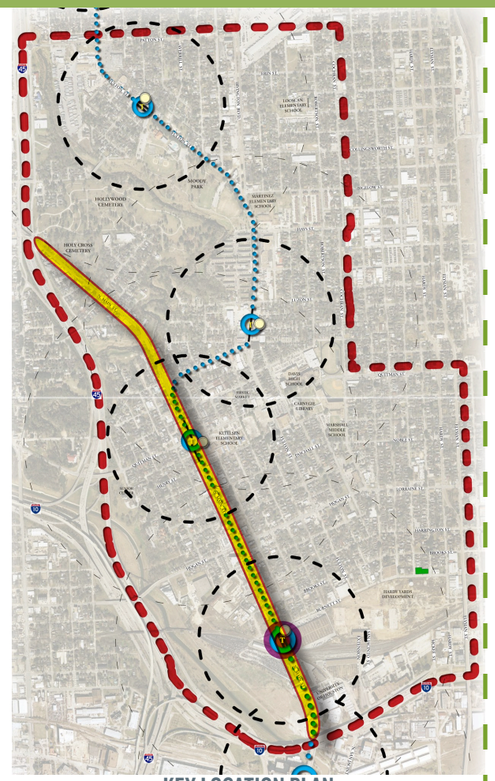
9.088 kg/day Nitrogen Oxides

V. PUBLIC IMPROVEMENTS - PROJECT CUT SHEETS

Existing Information & Challenges:

- North Main Street currently accommodates four to six travel lanes with no on-street parking in a range of 60 to 100 feet right-of-way.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, not present in certain sections or provided on private lots.
- Tree lawn/planting is sporadic.
- There are existing electric poles in the tree lawn/planting strip at some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

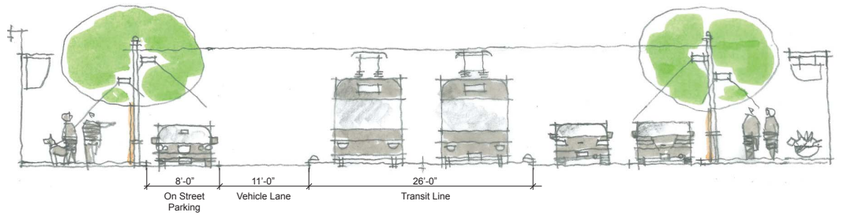
COST ESTIMATES:

North Main Street Improvements:

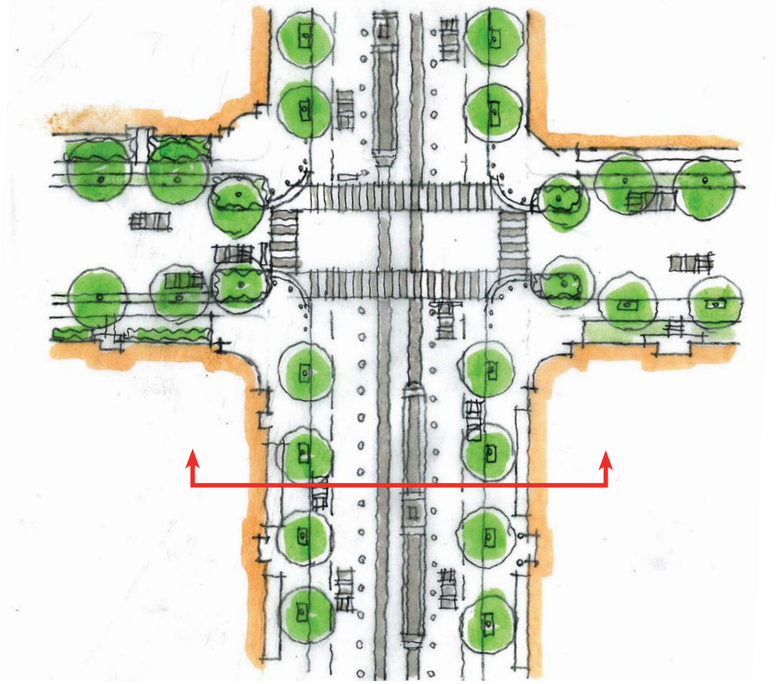
Hardscape total:	$ 2,000,000
Softscape total:	$ 200,000
Contingency (20%):	$ 425,000
Grand total:	**$2,625,000**

Proposed Improvements:

- North Main street has been plannned to be a transit corridor street, with transit running in the center of this street.
- A redesign of the street to accommodate 26 feet for the lightrail line in the center and 1 travel lanes on each side.
- Parallel on-street parking on either sides of N. Main street next to the tree lawn/planting.
- The tree lawn/planting to be adjacent to the curb providing a buffer from the trafic.
- Sidewalks with landscaping sufficiently wide enough to give it a main street feel, allowing outdoor spaces and amenities for the retail/mixed-use needs and providing a buffer from the traffic.
- Street lights in the tree lawn/planting will empahsize this corridor and make it pedestrian friendly.



TYPICAL STREET SECTION



TYPICAL STREET PLAN

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | NORTH MAIN STREET

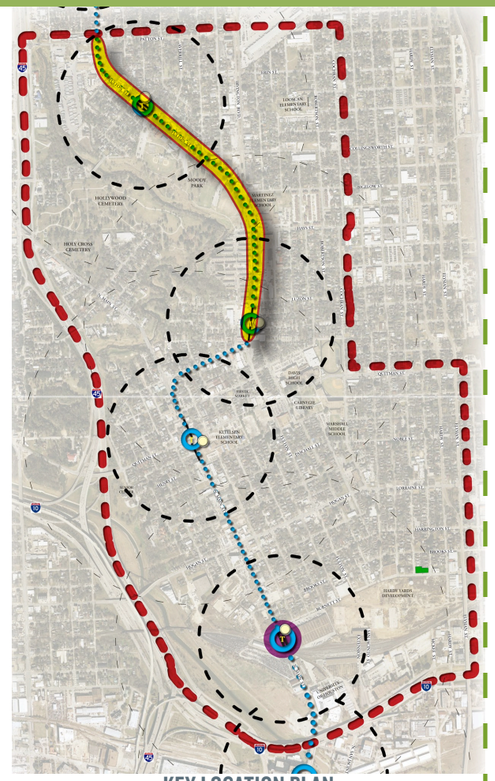
VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Fulton Street currently accommodates two to four travel lanes and on-street parking at some sections in a range of 60 to 70 feet right-of-way.
- There are existing bike lanes north of Quitman st and signed bike routes south of Quitman st.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, not present in certain sections or provided on private lots.
- Tree lawn/planting is sporadic.
- There are existing electric poles in the tree lawn/planting strip at some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

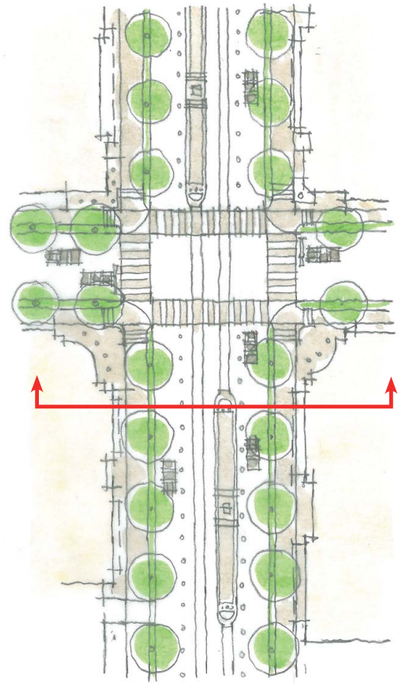
COST ESTIMATES:

Fulton Street (north of Boundary st.) **Improvements:**

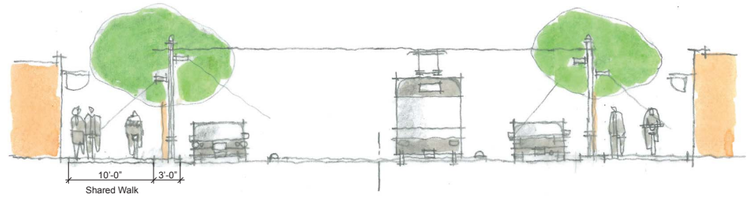
Hardscape total:	$1,300,000
Softscape total:	$ 75,000
Contingency (20%):	$ 275,000
Grand total:	**$1,650,000**

Proposed Improvements:

- Fulton street (north of Boundary st.) has been plannned to be a transit corridor street, with transit running in the center of this street.
- A redesign of the street to accommodate lightrail line in the center and 1 travel lane on each side.
- A minimal tree lawn/planting to be adjacent to the curb providing a buffer from the trafic.
- Shared sidewalk and bicylce lane on each side
- Street lights in the tree lawn/planting will empahsize this corridor and make it pedestrian friendly.

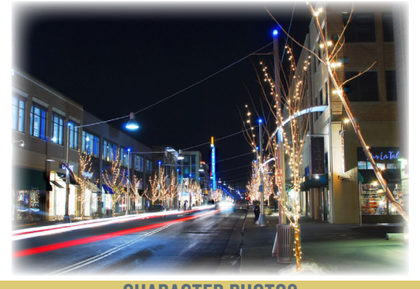


TYPICAL STREET PLAN



FULTON ST. NORTH OF BOUNDARY ST. - STREET SECTION

FULTON AND BOUNDARY PLAZA PLAN



CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | FULTON STREET NORTH OF BOUNDARY STREET

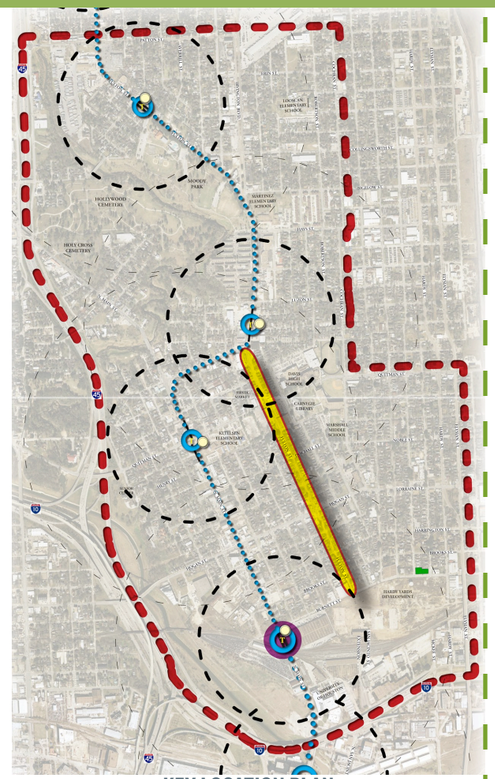
VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Fulton Street currently accommodates two to four travel lanes and on-street parking at some sections in a range of 60 to 70 feet right-of-way.
- There are existing bike lanes north of Quitman st and signed bike routes south of Quitman st.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, not present in certain sections or provided on private lots.
- Tree lawn/planting is sporadic.
- There are existing electric poles in the tree lawn/planting strip at some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

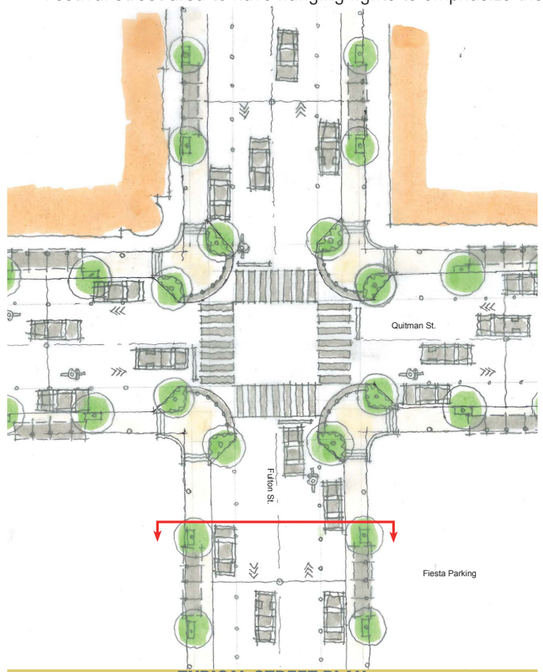
COST ESTIMATES:

Fulton Street (south of Boundary st.) **Improvements:**

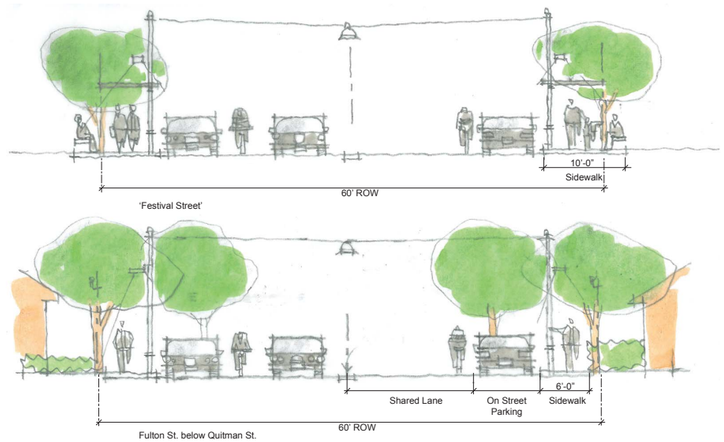
Hardscape total:	$ 800,000
Softscape total:	$ 75,000
Contingency (20%):	$ 200,000
Grand total:	**$1,075,000**

Proposed Improvements:

- A redesign of the street to accommodate 2 travel lanes with a shared bicylce lane on each side.
- Parallel on-street parking on both sides.
- 10 feet of sidewalks with tree lawn/planting on both the sides.
- Bulb-outs at street intersections, as a traffic calming measure intended to slow the speed of traffic and increase driver awareness.
- The sidewalks to be adjacent to the curb at the mixed-use/commericial side redevelopment, allowing outdoor use spaces and amenities for the mixed-use needs and providing a buffer from the traffic.
- Street lights attached to existing electric poles provide a safe and pleasant pedestrian walkable environment.
- Festival street area to have hanging lights to emphasize the special district.



TYPICAL STREET PLAN



FULTON ST. AT QUITMAN ST. - STREET SECTION

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | FULTON STREET SOUTH OF BOUNDARY STREET

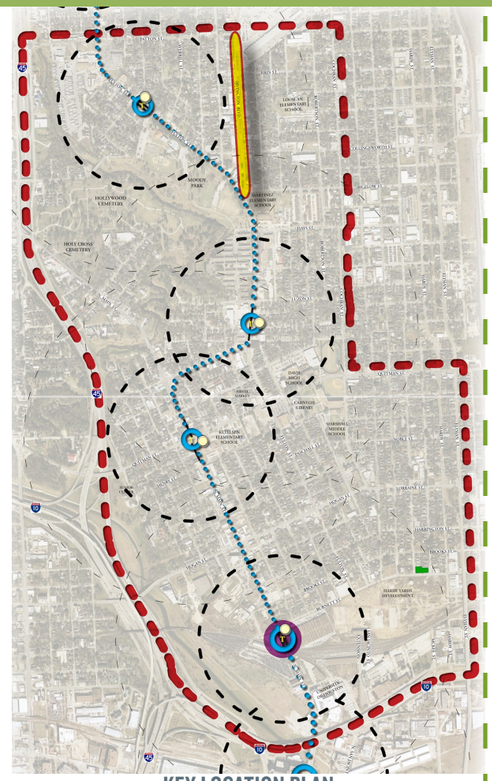
VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Irvington Blvd. currently accommodates four travel lanes seperated by a central boulevard at certain sections in a 100 feet right-of-way.
- Currently there is no on-street parking.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, missing in some sections.
- Tree lawn/planting is sporadic.
- There are existing electric poles in the tree lawn/planting strip at some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

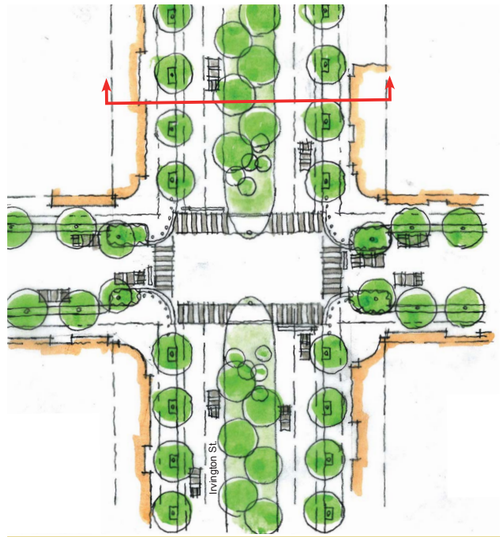
COST ESTIMATES:

Irvington Boulevard Improvements:

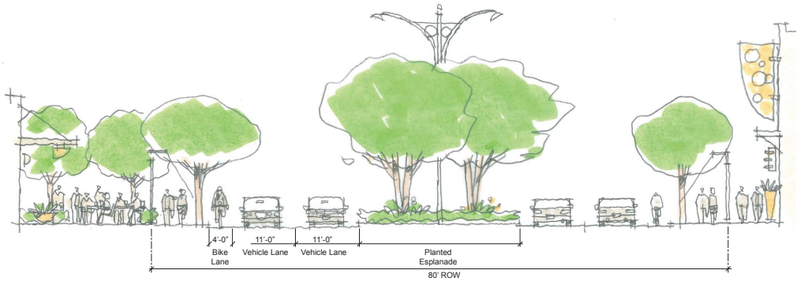
Hardscape total:	$ 665,000
Softscape total:	$ 115,000
Contingency (20%):	$ 155,000
Grand total:	**$ 935,000**

Proposed Improvements:

- Irvington blvd. will accommodate 2 travel lanes on each side with a central landscaped esplanade/boulevard.
- Dedicated 4 feet bike lanes on either sides next to the tree lawn/planting.
- The tree lawn/planting to be adjacent to the curb providing a buffer from the trafic.
- Sidewalks with landscaping sufficiently wide enough to give it a main street feel, allowing outdoor spaces and amenities for the retail/mixed-use needs and providing a buffer from the traffic.
- Street lights in the tree lawn/planting area making it pedestrian friendly.
- Street lights in the center of the boulevard (attached to existing electric poles where possible) will empahsize this corridor.



TYPICAL STREET PLAN



TYPICAL STREET SECTION

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | IRVINGTON BLVD.

VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Burnett street currently accommodates two travel lanes in a 60 feet right-of-way.
- Curbs and gutters are discontinuous.
- Sidewalks are not present in most of the sections or provided on private lots.
- Tree lawn/planting is sporadic and stretches all the way to the private properties.
- There are existing electric poles in the tree lawn/planting strip at some sections of this street.

EXISTING STREET PHOTOS

KEY LOCATION PLAN

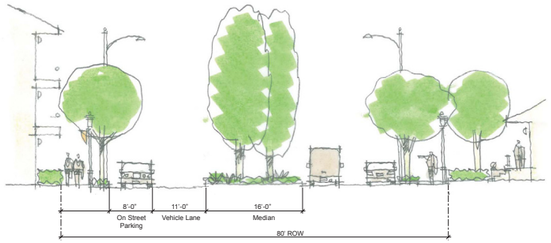
COST ESTIMATES:

Burnett Street Improvements:

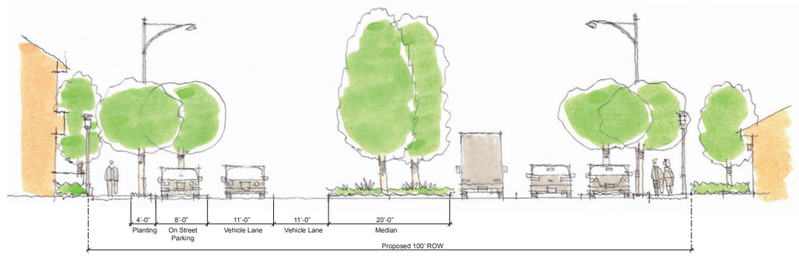
Hardscape total:	$ 665,000
Softscape total:	$ 115,000
Contingency (20%):	$ 155,000
Grand total:	**$ 935,000**

Proposed Improvements:

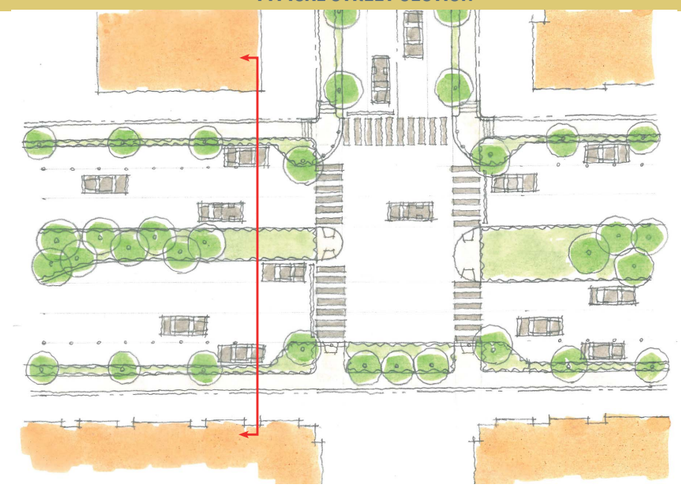
- Burnett street will accommodate 1 to 2 travel lanes on each side with a central landscaped median in a 80 to 100 feet right-of-way.
- Parallel on-street parking on either sides of Burnett street next to the tree lawn/planting.
- Bulb-outs at street intersections, as a traffic calming measure intended to slow the speed of traffic and increase driver awareness.
- The tree lawn/planting to be adjacent to the curb providing a buffer from the trafic.
- Sidewalks with landscaping on each sides.
- Street lights in the tree lawn/planting area making it pedestrian friendly.



TYPICAL STREET SECTION - 80' ROW OPTION



TYPICAL STREET SECTION



TYPICAL STREET PLAN

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | BURNETT STREET

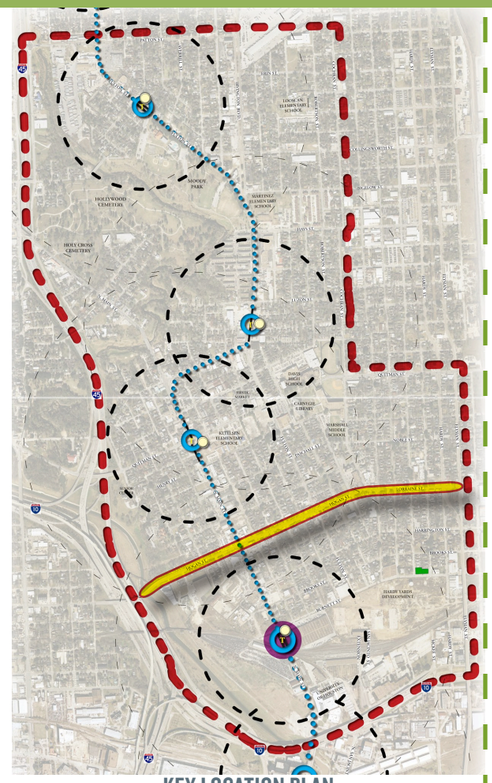
VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Hogan and Lorraine Street currently accommodates four travel lanes in a range of 50 to 60 feet right-of-way.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, not present in certain sections or provided on private lots.
- Tree lawn/planting is sporadic and not present oin most of the sections.
- There are existing electric poles at the edge of the curb or at the tree lawn/planting strip in some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

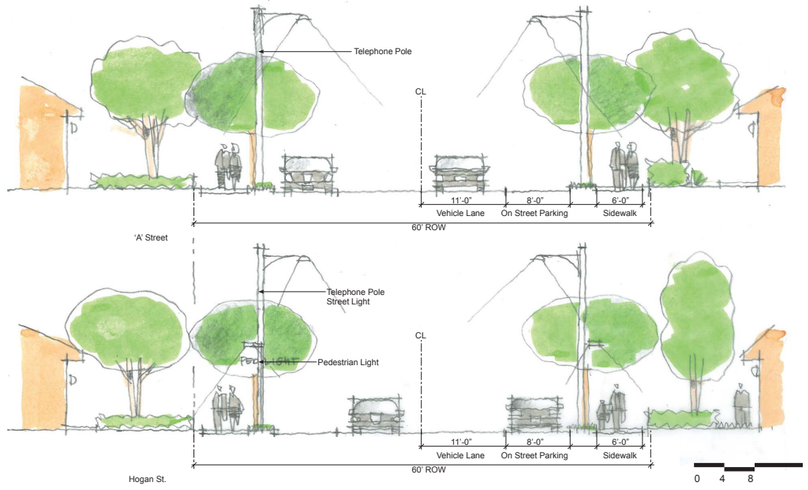
COST ESTIMATES:

Hogan and Lorraine Street Improvements:

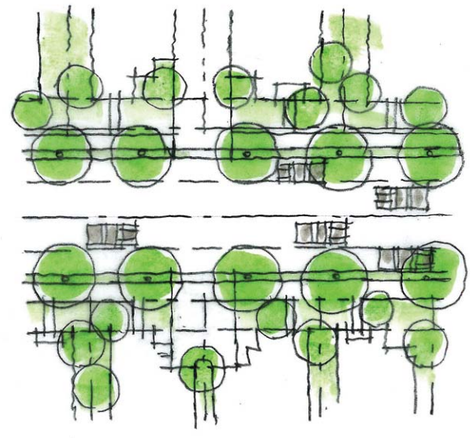
Hardscape total:	$1,200,000
Softscape total:	$ 75,000
Contingency (20%):	$ 255,000
Grand total:	**$1,530,000**

Proposed Improvements:

- A redesign of the street to accommodate 1 travel lanes on each side.
- 6 feet of sidewalks with tree lawn/planting on both the sides, with continuous curb and gutter.
- Parallel on-street parking on both sides.
- Street lights (attached to existing electric poles where possible) provide a safe and pleasant pedestrian walkable environment.
- Landscape/planting stipe between the residential uses and sidewalks.



TYPICAL STREET SECTION



TYPICAL STREET PLAN

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | HOGAN & LORRAINE STREET

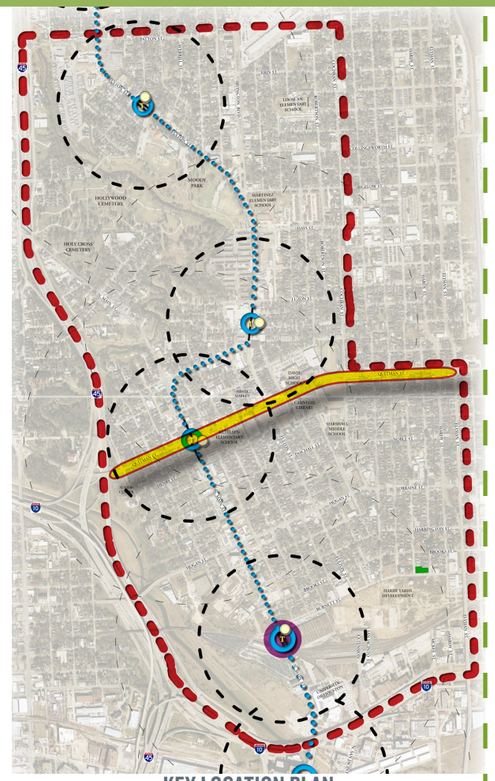
VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

Existing Information & Challenges:

- Quitman Street currently accommodates two travel lanes and parallel on-street parking in a range of 50 to 60 feet right-of-way.
- Curbs and gutters are discontinuous.
- Sidewalks are discontinuous, not present in certain sections or provided on private lots.
- Tree lawn/planting is sporadic and in some sections stretches all the way to the private property.
- There are existing electric poles in the tree lawn/planting strip or the edge of the curb at some sections of this street.

EXISTING STREET PHOTOS



KEY LOCATION PLAN

COST ESTIMATES:

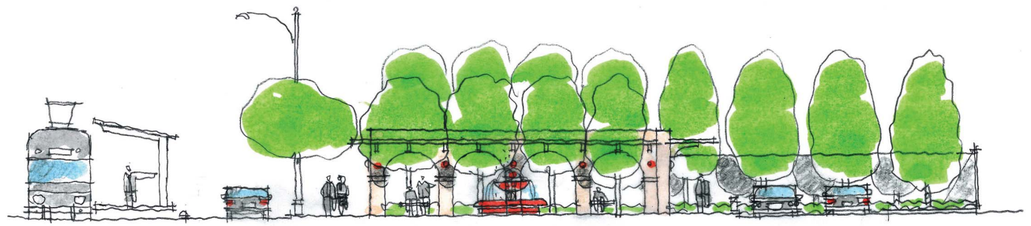
Quitman Street Improvements:

Hardscape total:	$760,000
Softscape total:	$ 50,000
Contingency (20%):	$162,000
Grand total:	**$972,000**

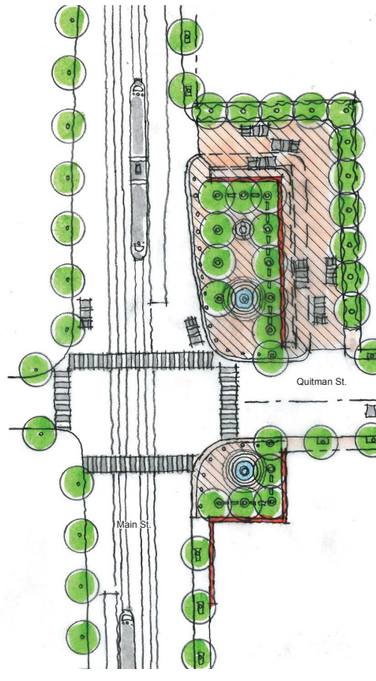
Quitman Kiss and Ride Plaza:

Hardscape total:	$325,000
Softscape total:	$ 19,000
Contingency (20%):	$ 68,800
Grand total:	**$412,800**

Proposed Improvements:



QUITMAN STATION KISS AND RIDE SECTION



QUITMAN STATION KISS AND RIDE PLAN

CHARACTER PHOTOS

PROPOSED IMPROVEMENTS | QUITMAN STREET

VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

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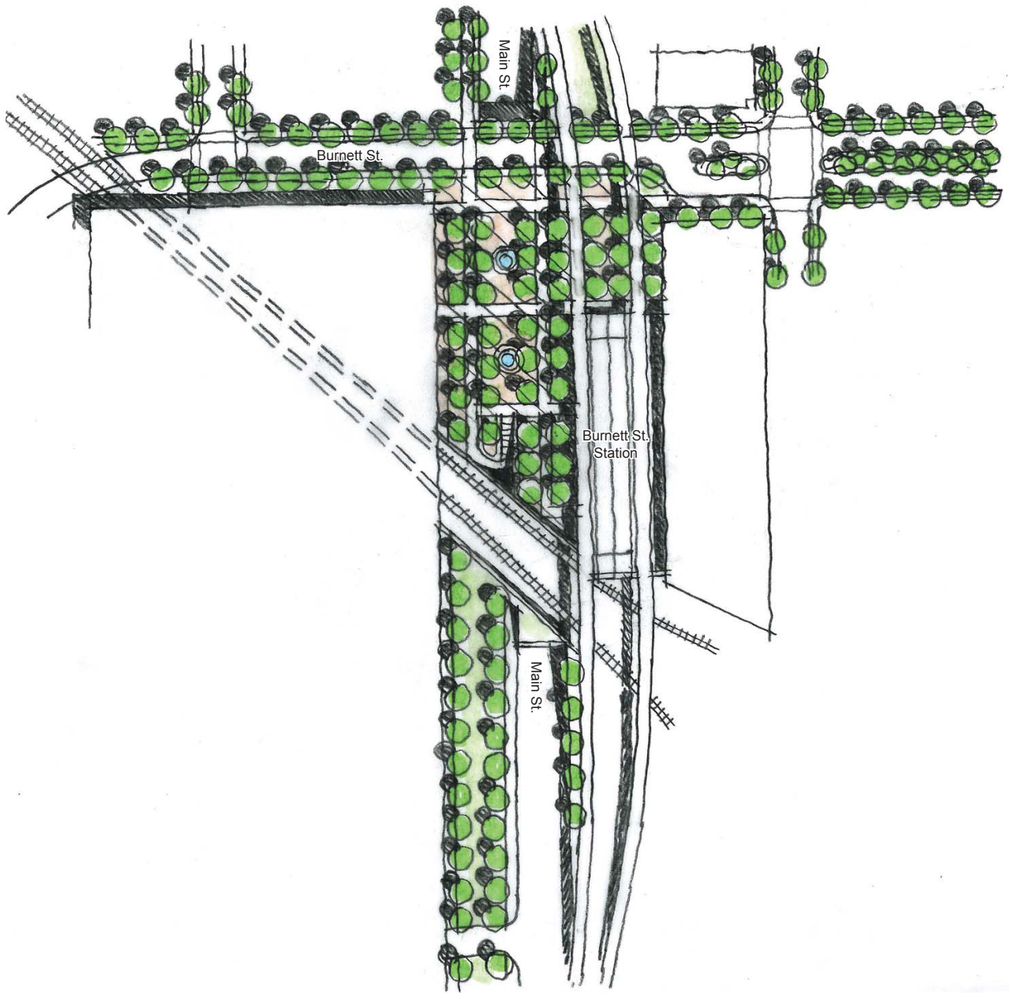
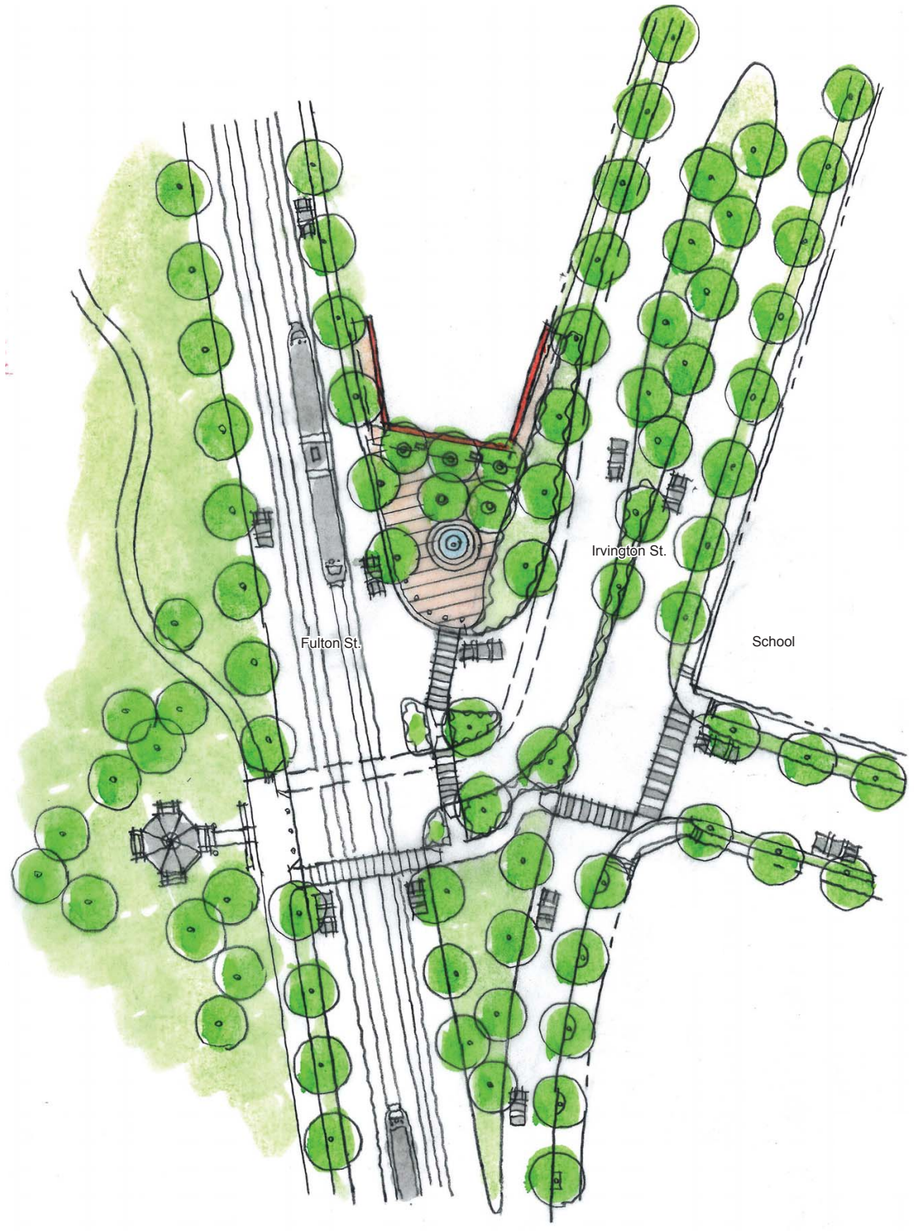


HERNANDEZ PLAN



MOODY PARK PLAN

PROPOSED IMPROVEMENTS | MISCELLANEOUS CONNECTIONS

VMWP PROJECT # 0933 | HOUSTON, TX | AUGUST 04, 2010 | H-GAC

VAN METER WILLIAMS POLLACK LLP

VI. APPENDICES

Table 1: Population and Households, 2000-2009

	Northside			City of Houston			Houston-Galveston-Brazoria CMSA		
	2000	*2009*	% Change	*2000*	*2009*	% Change	*2000*	*2009*	% Change
Population	13,701	14,191	4%	1,954,848	2,236,732	14%	4,669,571	5,766,155	23%
Households	3,831	3,914	2%	718,231	808,317	13%	1,639,401	1,990,733	21%
Average Household Size		3.52		2.67	2.72	2%	2.80	2.85	2%

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Table 2: Housing Units, 2000-2009

	Northside			City of Houston			Houston-Galveston-Brazoria CMSA		
	2000	*2009*	% Change	*2000*	*2009*	% Change	*2000*	*2009*	% Change
Total Housing Units	4,176	4,371	5%	782,378	913,232	17%	1,777,902	2,203,745	24%
Occupied Housing Units	3,831	3,914	2%	718,231	808,317	13%	1,639,401	1,990,733	21%
% Vacant Housing Units	8.3%	10.5%	27%	8.2%	11.5%	40%	7.8%	9.7%	24%
% Owner-Occupied	45.8%	43.5%		45.8%	45.4%		60.7%	62.6%	
% Renter-Occupied	54.2%	56.5%		54.2%	54.6%		39.3%	37.4%	

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Table 3: Educational Attainment, 2000-2009

	Northside		City of Houston		Houston-Galveston-Brazoria CMSA	
	2000	2009	2000	2009	2000	2009
Less than High School Diploma	67.1%	67.2%	29.6%	29.4%	23.6%	22.9%
High school diploma	18.4%	18.3%	20.4%	20.4%	22.8%	22.7%
Some college or Associate Degree	9.8%	9.7%	23.0%	23.1%	27.1%	27.4%
Bachelor's Degree or Higher	4.7%	4.7%	27.0%	27.1%	26.5%	27.0%
Total	100%	100%	100%	100%	100%	100%

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Table 4: Race and Ethnicity, 2000-2009

	Northside				City of Houston				Houston-Galveston-Brazoria CMSA			
	2000		2009		2000		2009		2000		2009	
Hispanic or Latino (of any race)	12,119	88.5%	12,870	90.7%	731,680	37.4%	985,585	44.1%	1,349,506	28.9%	1,972,386	34.2%
Not Hispanic or Latino	1,582	11.5%	1,321	9.3%	1,223,168	62.6%	1,251,147	55.9%	3,320,065	71.1%	3,793,769	65.8%
White	639	4.7%	445	3.1%	601,105	30.7%	559,621	25.0%	2,236,569	47.9%	2,403,324	41.7%
Black or African American	799	5.8%	778	5.5%	487,094	24.9%	534,524	23.9%	776,907	16.6%	960,033	16.6%
American Indian and Alaska Native	32	0.2%	27	0.2%	3,851	0.2%	4,313	0.2%	12,635	0.3%	15,770	0.3%
Asian & Pacific Islander	71	0.5%	34	0.2%	101,942	5.2%	120,965	5.4%	223,608	4.8%	323,370	5.6%
Some Other Race Alone	0	0.0%	4	0.0%	2,307	0.1%	2,522	0.1%	6,139	0.1%	6,704	0.1%
Two or More Races	41	0.3%	33	0.2%	26,869	1.4%	29,202	1.3%	64,207	1.4%	84,568	1.5%
Total	13,701	100%	14,191	100%	1,954,848	100.0%	2,236,732	100.0%	4,669,571	100.0%	5,766,155	100.0%

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Table 5: Occupations of Residents, 2000-2009

	Northside				City of Houston				Houston-Galveston-Brazoria CMSA			
	2000		2009		2000		2009		2000		2009	
	#	%	#	%	#	%	#	%	#	%	#	%
Management, professional, and related occupations	533	12.2%	557	12.1%	291,220	33.9%	337,165	34.2%	746,560	35.2%	971,339	36.2%
Service occupations	969	22.1%	1,020	22.2%	134,831	15.7%	153,599	15.6%	289,480	13.6%	354,894	13.2%
Sales and office occupations	931	21.3%	981	21.4%	227,417	26.4%	260,773	26.4%	580,083	27.3%	738,559	27.5%
Farming, Fishing and Forestry	11	0.3%	12	0.3%	1,210	0.1%	1,366	0.1%	4,462	0.2%	5,611	0.2%
Construction, Extraction, and Maintenance	1,027	23.5%	1,077	23.4%	94,569	11.0%	107,208	10.9%	235,483	11.1%	289,428	10.8%
Production, Transportation, and Material Moving	904	20.7%	946	20.6%	110,714	12.9%	126,182	12.8%	265,547	12.5%	326,298	12.1%
Total Workers	4,375	100%	4,593	100%	859,961	100%	986,293	100%	2,121,615	100%	2,686,129	100%

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Table 6: Household Income, 2000-2009

	Northside				City of Houston				Houston-Galveston-Brazoria CMSA			
	2000		2009		2000		2009		2000		2009	
	#	%	#	%	#	%	#	%	#	%	#	%
Less than $15,000	1,093	29.2%	887	22.7%	132,457	18.4%	126,157	15.6%	234,724	14.3%	226,761	11.4%
$15,000 to $24,999	791	21.1%	584	14.9%	105,887	14.7%	99,416	12.3%	197,302	12.0%	189,450	9.5%
$25,000 to $34,999	658	17.6%	636	16.2%	104,792	14.6%	103,968	12.9%	207,521	12.6%	207,494	10.4%
$35,000 to $49,999	588	15.7%	750	19.2%	117,451	16.3%	133,808	16.6%	261,203	15.9%	296,036	14.9%
$50,000 to $74,999	358	9.6%	597	15.3%	116,362	16.2%	138,678	17.2%	310,292	18.9%	369,773	18.6%
$75,000 to $99,999	184	4.9%	215	5.5%	57,368	8.0%	75,216	9.3%	181,458	11.1%	246,579	12.4%
$100,000 to $149,999	61	1.6%	207	5.3%	49,446	6.9%	75,445	9.3%	155,100	9.5%	273,591	13.7%
$150,000 or more	8	0.2%	38	1.0%	35,134	4.9%	55,629	6.9%	93,243	5.7%	181,049	9.1%
Total	3,741	100%	3,914	100%	718,897	100%	808,317	100%	1,640,843	100%	1,990,733	100%
Median (2009 $)	$31,918		$32,029		$47,235		$43,365		$57,742		$55,113	

Source: 2000 U.S. Census; Claritas, 2009; Strategic Economics, 2009.

Tables 7-9: Workplace Locations of Northside Residents

Zip Code	Count	Share
77002	247	6.1%
77027	209	5.1%
77009	176	4.3%
77030	138	3.4%
77007	136	3.3%
77092	131	3.2%
77008	126	3.1%
77056	103	2.5%
77055	80	2.0%
77098	73	1.8%
All Other Zip Codes	2,660	65.2%

City	Count	Share
Houston	3,059	75.0%
Austin	44	1.1%
Aldine	39	1.0%
Pasadena	33	0.8%
Humble	25	0.6%
Dallas	25	0.6%
Beaumont	24	0.6%
Stafford	22	0.5%
Jacinto City	20	0.5%
Sugar Land	19	0.5%
All Other Cities	769	18.9%

County	Count	Share
Harris Co.	3,628	88.9%
Montgomery Co.	62	1.5%
Fort Bend Co.	58	1.4%
Travis Co.	48	1.2%
Jefferson Co.	39	1.0%
Dallas Co.	30	0.7%
Brazoria Co.	30	0.7%
Galveston Co.	20	0.5%
Bexar Co.	19	0.5%
Liberty Co.	13	0.3%
All Other Counties	132	3.2%

Source: LEHD 2006, Strategic Economics 2009

Table 10: Employment Located in the Northside by Sector

Sector	Count	Share
Agriculture, Forestry, Fishing and Hunting	0	0.0%
Mining, Quarrying, and Oil and Gas Extraction	3	0.1%
Utilities	0	0.0%
Construction	291	9.1%
Manufacturing	165	5.2%
Wholesale Trade	746	23.3%
Retail Trade	744	23.2%
Transportation and Warehousing	502	15.7%
Information	72	2.2%
Finance and Insurance	86	2.7%
Real Estate and Rental and Leasing	6	0.2%
Professional, Scientific, and Technical Services	83	2.6%
Management of Companies and Enterprises	0	0.0%
Administration & Support, Waste Management and Remediation	58	1.8%
Educational Services	17	0.5%
Health Care and Social Assistance	198	6.2%
Arts, Entertainment, and Recreation	11	0.3%
Accommodation and Food Services	158	4.9%
Other Services (excluding Public Administration)	63	2.0%
Public Administration	0	0.0%
Total	**3,203**	**100.0%**

Source: LEHD 2006, Strategic Economics 2009

Tables 11-13: Residences of Northside Workers

Zip Code	Count	Share
77009	206	6.4%
77093	76	2.4%
77008	56	1.7%
77015	53	1.7%
77076	52	1.6%
77088	51	1.6%
77026	51	1.6%
77039	50	1.6%
77016	49	1.5%
77092	47	1.5%
All Other Zip Codes	2,511	78.4%

County	Count	Share
Harris Co.	2,646	82.6%
Montgomery Co.	123	3.8%
Fort Bend Co.	117	3.7%
Brazoria Co.	68	2.1%
Bexar Co.	40	1.2%
Dallas Co.	26	0.8%
Galveston Co.	25	0.8%
Jefferson Co.	20	0.6%
Travis Co.	18	0.6%
Wharton Co.	16	0.5%
All Other Counties	103	3.2%

City	Count	Share
Houston	1,655	51.7%
Pasadena	80	2.5%
Pearland	40	1.2%
San Antonio	34	1.1%
Spring	24	0.7%
Missouri City	24	0.7%
South Houston	22	0.7%
Channelview	22	0.7%
Atascocita	22	0.7%
Aldine	21	0.7%
All Other Cities	1,258	39.3%

Source: LEHD 2006, Strategic Economics 2009

Table 1: TAZs encompassing Northside study area				
TAZ	North Boundary	South Boundary	West Boundary	East Boundary
1475	Hogan St.	IH 10	IH 45	N. Main St.
1476	Burnett St.	IH 10	N. Main St.	Hardy St.
1479	-	Quitman St.	IH 45	N. Main St.
1480	Cottage/Hays Sts.	Quitman St.	N. Main St.	Fulton St.
1481	Hays St.	Quitman St.	Fulton St.	Elysian St.
1482	Quitman St.	Hogan St.	IH 45	N. Main St.
1483	Quitman St.	Hogan St.	N. Main St.	Fulton St.
1484	Hogan St.	Burnett St.	N. Main St.	Hardy St.
1485	Quitman St.	Hogan St.	Fulton St.	Hardy St.
1504	Weiss St.	Collingsworth St.	Fulton St.	Irvington Blvd.
1505	Weiss St.	Collingsworth St.	Irvington Blvd.	Maury St.
1506	Collingsworth St.	Hays St.	Fulton St.	Maury St.
1507	Weiss St.	Cottage/Hays St.	IH 45	Fulton St.

Table 2: Total Person-Trips by TAZ for Year 2009				
Traffic Analysis Zone	Home-Based Work	Home-Based Non-Work	Non-Home-Based	TOTAL
1475	538	759	1,067	2,364
1476	1,498	1,596	2,656	5,750
1479	1,285	3,683	1,957	6,925
1480	2,027	4,908	2,512	9,447
1481	2,947	9,193	4,149	16,289
1482	724	1,753	665	3,142
1483	754	1,915	727	3,396
1484	1,379	3,486	1,285	6,150
1485	1,768	8,465	2,946	13,179
1504	1,639	3,729	1,458	6,826
1505	2,395	7,295	2,755	12,445
1506	1,632	4,233	2,307	8,172
1507	1,324	2,814	1,729	5,867
TOTAL	19,910	53,829	26,213	99,952

Table 3: Data for Estimate to Trip Distance		
Trip Purpose	Regional Avg Trip Distance (mi)	Number of Trips in TAZs
Home-Based Work	20.32	19,910
Home-Based Non-Work	9.81	53,829
Non-Home-Based	13.05	26,213
TOTAL		99,952
Weighted Average	12.75	

Table 4: Data for Estimate to Vehicle Occupancy		
Trip Purpose	Regional Avg Occupancy	Number of Trips in TAZs
Home-Based Work	1.10	19,910
Home-Based Non-Work	1.53	53,829
Non-Home-Based	1.24	26,213
TOTAL		99,952
Weighted Average	1.37	

Table 5. Vehicle Mix and Average Emission Rates by EPA Vehicle Type									
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	All Vehicles
Vehicle Type									
Local Roads	59.0%	24.2%	7.2%	3.2%	0.2%	0.3%	5.9%	0.1%	100.0%
Emissions									
VOC (g/mile)	0.40	0.47	0.45	1.36	0.06	0.10	1.12	4.65	0.50
NOx (g/mile)	0.62	0.66	0.77	3.87	0.50	0.54	5.58	0.97	1.03

North Main St. from Hogan to Boundary St. - Metro Transit Corridor

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb		SY	$2.00	$0.00	
Remove Pavement		SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb		LF	$2.25	$0.00	
8" Pavement		SY	$30.00	$0.00	
6" Lime Treated Subgrade		SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	57,000	SF	$4.50	$256,500.00	15' Urban Corridor Sidewalk - 5' Metro Sidewalk
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	1,520	SF	$11.00	$16,720.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	19	EA	$4,500.00	$85,500.00	
Pedestrian Lights	142	EA	$3,500.00	$495,833.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	4	EA	$1,500.00	$6,000.00	
Art Enhancement	-	LS	$100,000.00	$0.00	
			Subtotal	$860,553.33	
Softscape					
30 gal. Street Trees	190	EA	$185.00	$35,150.00	
Soil modification	570	CY	$100.00	$57,000.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	3	Zone	$1,800.00	$5,400.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$100,050.00	
			Hardscape and Softscape Total	$960,603.33	
			20% Contingency	$192,120.67	
			Grand Total		**$1,152,724.00**

North Main St. from Boundary to I-45

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	172	SY	$2.00	$344.44	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	6,200	LF	$2.25	$13,950.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	2,756	SY	$5.00	$13,777.78	
Concrete Sidewalk	37,200	SF	$4.50	$167,400.00	6' Sidewalk
ADA Compliant Ramps	22	EA	$1,100.00	$24,200.00	
Street Crossing Markings	4	EA	$1,200.00	$4,800.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	21	EA	$4,500.00	$93,000.00	
Pedestrian Lights	103	EA	$3,500.00	$361,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$654,066.67	
Softscape					
30 gal. Street Trees	207	EA	$185.00	$38,233.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$44,333.33	
			Hardscape and Softscape Total	$698,400.00	
			20% Contingency	$139,680.00	
			Grand Total		**$838,080.00**

North Main St. from Tunnel to Hogan - Metro Transit Corridor

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	SY	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	28,000	SF	$4.50	$126,000.00	15' Urban Corridor Sidewalk - 5' Metro Sidewalk
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	9	EA	$4,500.00	$42,000.00	
Pedestrian Lights	47	EA	$3,500.00	$163,333.33	
4" Conduit	-	LF	$15.00	$0.00	
Column Enhancement	7	EA	$5,000.00	$35,000.00	
Wall Art Enhancement	420	LF	$150.00	$63,000.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$432,333.33	
Softscape					
30 gal. Street Trees	207	EA	$185.00	$38,233.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$44,333.33	
			Hardscape and Softscape Total	$476,666.67	
			20% Contingency	$95,333.33	
			Grand Total		**$572,000.00**

Burnett Hernandez Tunnel

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	42	SY	$2.00	$83.33	
Remove Pavement	62	SY	$6.00	$373.33	
Remove Driveway	-	SY	$6.00	$0.00	
Demolition and Excavation	1	Allow	$20,000.00	$20,000.00	
Tunnel Modification	1	Allow	$20,000.00	$20,000.00	
Curb	1,500	LF	$2.25	$3,375.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Stairs and Railing	320	SF	$75.00	$24,000.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	1,800	SF	$4.50	$8,100.00	
ADA Compliant Ramps	4	EA	$1,100.00	$4,400.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Plaza Pavement	62,205	SF	$8.00	$497,640.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	10	EA	$3,500.00	$35,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	20	EA	$2,000.00	$40,000.00	
Trash Receptacles	4	EA	$1,200.00	$4,800.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Water Fountain	2	EA	$35,000.00	$70,000.00	
Art Enhancement	1	LS	$150,000.00	$150,000.00	
			Subtotal	$812,940.00	
Softscape					
30 gal. Street Trees	75	EA	$185.00	$13,875.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Soil modification	300	CY	$100.00	$30,000.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$53,575.00	
			Hardscape and Softscape Total	$866,515.00	
			20% Contingency	$173,303.00	
			Grand Total		**$1,039,818.00**

Burnett Park at Brooks

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	SY	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Plaza Pavement	4,000	SF	$8.00	$32,000.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	4	EA	$3,500.00	$14,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	5	EA	$2,000.00	$10,000.00	
Trash Receptacles	2	EA	$1,200.00	$2,400.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
Water Fountain	1	EA	$35,000.00	$35,000.00	
Art Enhancement	1	LS	$150,000.00	$150,000.00	
			Subtotal	$244,900.00	
Softscape					
30 gal. Street Trees	30	EA	$185.00	$5,550.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Soil modification	120	CY	$100.00	$12,000.00	
Bermuda Sod	30,000	SF	$0.40	$12,000.00	
Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$39,250.00	
			Hardscape and Softscape Total	$284,150.00	
			20% Contingency	$56,830.00	
			Grand Total		**$340,980.00**

Burnett Street

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	1,467	SY	$5.00	$7,333.33	
Concrete Sidewalk	39,600	SF	$4.50	$178,200.00	
ADA Compliant Ramps	16	EA	$1,100.00	$17,600.00	
Street Crossing Markings	11	EA	$1,200.00	$13,200.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	22	EA	$4,500.00	$99,000.00	
Pedestrian Lights	110	EA	$3,500.00	$385,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Art Enhancement	1	LS	$150,000.00	$150,000.00	
			Subtotal	$846,000.00	
Softscape					
30 gal. Street Trees	220	EA	$185.00	$40,700.00	
Esplanade Planting	46,200	SF	$3.00	$138,600.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	46,200	SF	$0.40	$18,480.00	
Irrigation Zones	3	Zone	$1,800.00	$5,400.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$205,680.00	
			Hardscape and Softscape Total	$1,051,680.00	
			20% Contingency	$210,336.00	
			Grand Total		**$1,262,016.00**

Keene Street at Burnett to Brooks

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	700	LF	$2.25	$1,575.00	
8" Pavement	1,037	SY	$30.00	$31,111.11	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	4,200	SF	$4.50	$18,900.00	
ADA Compliant Ramps	4	EA	$1,100.00	$4,400.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	2	EA	$4,500.00	$10,500.00	
Pedestrian Lights	12	EA	$3,500.00	$40,833.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$76,133.33	
Softscape					
30 gal. Street Trees	23	EA	$185.00	$4,316.67	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$8,616.67	
			Hardscape and Softscape Total	$84,750.00	
			20% Contingency	$16,950.00	
			Grand Total		**$101,700.00**

Keene Street Pedestrian Linkage from Brooks to Pickne

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	4,200	SF	$4.50	$18,900.00	
ADA Compliant Ramps	4	EA	$1,100.00	$4,400.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	40	LF	$0.45	$18.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	23	EA	$3,500.00	$81,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$107,984.67	
Softscape					
30 gal. Street Trees	23	EA	$185.00	$4,316.67	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$8,616.67	
			Hardscape and Softscape Total	$116,601.33	
			20% Contingency	$23,320.27	
			Grand Total		**$139,921.60**

Keene Street from Pickne to Hogan

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	2	EA	$4,500.00	$9,540.00	
Pedestrian Lights	11	EA	$3,500.00	$37,100.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage		EA	$1,500.00	$0.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$46,640.00	
Softscape					
30 gal. Street Trees	21	EA	$185.00	$3,922.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$5,722.00	
			Hardscape and Softscape Total	$52,362.00	
			20% Contingency	$10,472.40	
			Grand Total		**$62,834.40**

Keene Street from Hogan to Quitman

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	3,560	LF	$2.25	$8,010.00	
8" Pavement	5,406	SY	$30.00	$162,177.78	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	113	SY	$40.00	$4,533.33	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	21,360	SF	$4.50	$96,120.00	
ADA Compliant Ramps	14	EA	$1,100.00	$15,400.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	12	EA	$4,500.00	$53,400.00	
Pedestrian Lights	59	EA	$3,500.00	$207,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage		EA	$1,500.00	$0.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$372,586.67	
Softscape					
30 gal. Street Trees	119	EA	$185.00	$21,953.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$23,753.33	
			Hardscape and Softscape Total	$396,340.00	
			20% Contingency	$79,268.00	
			Grand Total		**$475,608.00**

Fulton Street between Quitman and Boundary

	Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape						
	Remove Curb	-	LF	$2.00	$0.00	
	Remove Pavement	-	SY	$6.00	$0.00	
	Remove Driveway	-	SY	$6.00	$0.00	
	Curb	-	LF	$2.25	$0.00	
	8" Pavement	-	SY	$30.00	$0.00	
	6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
	Lime (8%)	-	TON	$140.00	$0.00	
	Driveway	-	SY	$40.00	$0.00	
	Remove Sidewalk	-	SY	$5.00	$0.00	
	Concrete Sidewalk	-	SF	$4.50	$0.00	by Metro
	ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
	Street Crossing Markings	-	EA	$1,200.00	$0.00	
	Special Pavement	-	SF	$11.00	$0.00	
	Pavement Markings	-	LF	$0.45	$0.00	
	Street Lights	6	EA	$4,500.00	$25,500.00	
	Pedestrian Lights	28	EA	$3,500.00	$99,166.67	
	4" Conduit	-	LF	$15.00	$0.00	
	Benches	4	EA	$2,000.00	$8,000.00	
	Trash Receptacles	-	EA	$1,200.00	$0.00	
	Directional Signage	2	EA	$1,500.00	$3,000.00	
	Trellis	4	EA	$20,000.00	$80,000.00	
	Art Enhancement	1	LS	$150,000.00	$150,000.00	
				Subtotal	$365,666.67	
Softscape						
	30 gal. Street Trees	57	EA	$185.00	$10,483.33	
	5 gal. Shrubs	-	SF	$5.50	$0.00	
	Bermuda Sod	2,550	SF	$0.40	$1,020.00	
	Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
	2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
				Subtotal	$21,203.33	
				Hardscape and Softscape Total	$386,870.00	
				20% Contingency	$77,374.00	
				Grand Total	**$464,244.00**	

Fulton Street between Quitman and Henry

	Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape						
	Remove Curb	-	LF	$2.00	$0.00	
	Remove Pavement	-	SY	$6.00	$0.00	
	Remove Driveway	-	SY	$6.00	$0.00	
	Curb	-	LF	$2.25	$0.00	
	8" Pavement	-	SY	$30.00	$0.00	
	6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
	Lime (8%)	-	TON	$140.00	$0.00	
	Driveway	-	SY	$40.00	$0.00	
	Remove Sidewalk	-	SY	$5.00	$0.00	
	Concrete Sidewalk	-	SF	$4.50	$0.00	by Metro
	ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
	Street Crossing Markings	-	EA	$1,200.00	$0.00	
	Special Pavement	-	SF	$11.00	$0.00	
	Pavement Markings	-	LF	$0.45	$0.00	
	Street Lights	3	EA	$4,500.00	$12,450.00	
	Pedestrian Lights	14	EA	$3,500.00	$48,416.67	
	4" Conduit	-	LF	$15.00	$0.00	
	Benches	4	EA	$2,000.00	$8,000.00	
	Trash Receptacles	-	EA	$1,200.00	$0.00	
	Directional Signage	2	EA	$1,500.00	$3,000.00	
	Trellis	4	EA	$20,000.00	$80,000.00	
	Art Enhancement	1	LS	$150,000.00	$150,000.00	
				Subtotal	$301,866.67	
Softscape						
	30 gal. Street Trees	28	EA	$185.00	$5,118.33	
	5 gal. Shrubs	-	SF	$5.50	$0.00	
	Bermuda Sod	1,245	SF	$0.40	$498.00	
	Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
	2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
				Subtotal	$15,316.33	
				Hardscape and Softscape Total	$317,183.00	
				20% Contingency	$63,436.60	
				Grand Total	**$380,619.60**	

Fulton Street between Quitman and Boundary

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	by Metro
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	9	EA	$4,500.00	$40,500.00	
Pedestrian Lights	45	EA	$3,500.00	$157,500.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	-	EA	$1,500.00	$0.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$198,000.00	
Softscape					
30 gal. Street Trees	90	EA	$185.00	$16,650.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	4,050	SF	$0.40	$1,620.00	
Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$27,970.00	
			Hardscape and Softscape Total	$225,970.00	
			20% Contingency	$45,194.00	
			Grand Total		**$271,164.00**

Fulton Street between Boundary and Irvington

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	by Metro
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	17	EA	$4,500.00	$75,000.00	
Pedestrian Lights	83	EA	$3,500.00	$291,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	-	EA	$1,500.00	$0.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$366,666.67	
Softscape					
30 gal. Street Trees	167	EA	$185.00	$30,833.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$36,933.33	
			Hardscape and Softscape Total	$403,600.00	
			20% Contingency	$80,720.00	
			Grand Total		**$484,320.00**

Irvington Boulevard between Fulton and Patton

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	770	SY	$5.00	$3,851.85	
Concrete Sidewalk	52,000	SF	$4.50	$234,000.00	
ADA Compliant Ramps	20	EA	$1,100.00	$22,000.00	
Street Crossing Markings	20	EA	$1,200.00	$24,000.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	17	EA	$4,500.00	$78,000.00	
Pedestrian Lights	87	EA	$3,500.00	$303,333.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Art Enhancement	-	LS	$150,000.00	$0.00	
			Subtotal	$664,333.33	
Softscape					
30 gal. Street Trees	43	EA	$185.00	$8,016.67	
Esplanade Planting	26,000	SF	$3.00	$78,000.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	4	Zone	$1,800.00	$7,200.00	
Irrigation Borings	440	LF	$30.00	$13,200.00	
2" Irrigation water meter	2	EA	$2,500.00	$5,000.00	
			Subtotal	$111,416.67	
			Hardscape and Softscape Total	$775,750.00	
			20% Contingency	$155,150.00	
			Grand Total		**$930,900.00**

Fulton between Irvington and Patton

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	65,600	SF	$4.50	$295,200.00	
ADA Compliant Ramps	16	EA	$1,100.00	$17,600.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	27	EA	$4,500.00	$123,000.00	
Pedestrian Lights	137	EA	$3,500.00	$478,333.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Fence	-	LF	$50.00	$0.00	
Gate	-	EA	$20,000.00	$0.00	
			Subtotal	$917,133.33	
Softscape					
30 gal. Street Trees	137	EA	$185.00	$25,283.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$29,583.33	
			Hardscape and Softscape Total	$946,716.67	
			20% Contingency	$189,343.33	
			Grand Total		**$1,136,060.00**

Quitman Street between Fulton and Main

	Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape						
	Remove Curb	-	LF	$2.00	$0.00	
	Remove Pavement	-	SY	$6.00	$0.00	
	Remove Driveway	-	SY	$6.00	$0.00	
	Curb	-	LF	$2.25	$0.00	
	8" Pavement	-	SY	$30.00	$0.00	
	6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
	Lime (8%)	-	TON	$140.00	$0.00	
	Driveway	-	SY	$40.00	$0.00	
	Remove Sidewalk	187	SY	$5.00	$937.04	
	Concrete Sidewalk	25,300	SF	$4.50	$113,850.00	
	ADA Compliant Ramps	21	EA	$1,100.00	$23,100.00	
	Street Crossing Markings	-	EA	$1,200.00	$0.00	
	Special Pavement	-	SF	$11.00	$0.00	
	Pavement Markings	-	LF	$0.45	$0.00	
	Street Lights	-	EA	$4,500.00	$0.00	
	Pedestrian Lights	42	EA	$3,500.00	$147,583.33	
	4" Conduit	-	LF	$15.00	$0.00	
	Benches	8	EA	$2,000.00	$16,000.00	
	Trellis	8	EA	$20,000.00	$160,000.00	
	Trash Receptacles	-	EA	$1,200.00	$0.00	
	Directional Signage	2	EA	$1,500.00	$3,000.00	
	Art Enhancement	1	LS	$150,000.00	$150,000.00	
	Fence	-	LF	$50.00	$0.00	
	Gate	-	EA	$20,000.00	$0.00	
				Subtotal	$613,533.33	
Softscape						
	30 gal. Street Trees	42	EA	$185.00	$7,800.83	
	5 gal. Shrubs	-	SF	$5.50	$0.00	
	Bermuda Sod		SF	$0.40	$0.00	
	Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
	2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
				Subtotal	$12,100.83	
				Hardscape and Softscape Total	$625,634.17	
				20% Contingency	$125,126.83	
				Grand Total	**$750,761.00**	

Quitman Street between Tackaberry and Fulton

	Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape						
	Remove Curb	-	LF	$2.00	$0.00	
	Remove Pavement	-	SY	$6.00	$0.00	
	Remove Driveway	-	SY	$6.00	$0.00	
	Curb	-	LF	$2.25	$0.00	
	8" Pavement	-	SY	$30.00	$0.00	
	6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
	Lime (8%)	-	TON	$140.00	$0.00	
	Driveway	-	SY	$40.00	$0.00	
	Remove Sidewalk	30	SY	$5.00	$148.15	
	Concrete Sidewalk	4,000	SF	$4.50	$18,000.00	
	ADA Compliant Ramps	4	EA	$1,100.00	$4,400.00	
	Street Crossing Markings	-	EA	$1,200.00	$0.00	
	Special Pavement	-	SF	$11.00	$0.00	
	Pavement Markings	-	LF	$0.45	$0.00	
	Street Lights	-	EA	$4,500.00	$0.00	
	Pedestrian Lights	7	EA	$3,500.00	$23,333.33	
	4" Conduit	-	LF	$15.00	$0.00	
	Benches	2	EA	$2,000.00	$4,000.00	
	Trellis	2	EA	$20,000.00	$40,000.00	
	Trash Receptacles	-	EA	$1,200.00	$0.00	
	Directional Signage	2	EA	$1,500.00	$3,000.00	
	Art Enhancement	1	LS	$150,000.00	$150,000.00	
	Fence	-	LF	$50.00	$0.00	
	Gate	-	EA	$20,000.00	$0.00	
				Subtotal	$242,733.33	
Softscape						
	30 gal. Street Trees	87	EA	$185.00	$16,033.33	
	5 gal. Shrubs	-	SF	$5.50	$0.00	
	Bermuda Sod		SF	$0.40	$0.00	
	Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
	2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
				Subtotal	$20,333.33	
				Hardscape and Softscape Total	$263,066.67	
				20% Contingency	$52,613.33	
				Grand Total	**$315,680.00**	

Quitman Street between Cochran and Tackaberry

	Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape						
	Remove Curb	-	LF	$2.00	$0.00	
	Remove Pavement	-	SY	$6.00	$0.00	
	Remove Driveway	-	SY	$6.00	$0.00	
	Curb	-	LF	$2.25	$0.00	
	8" Pavement	-	SY	$30.00	$0.00	
	6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
	Lime (8%)	-	TON	$140.00	$0.00	
	Driveway	-	SY	$40.00	$0.00	
	Remove Sidewalk	150	SY	$5.00	$748.15	
	Concrete Sidewalk	20,200	SF	$4.50	$90,900.00	
	ADA Compliant Ramps	10	EA	$1,100.00	$11,000.00	
	Street Crossing Markings	-	EA	$1,200.00	$0.00	
	Special Pavement	-	SF	$11.00	$0.00	
	Pavement Markings	-	LF	$0.45	$0.00	
	Street Lights	-	EA	$4,500.00	$0.00	
	Pedestrian Lights	34	EA	$3,500.00	$117,833.33	
	4" Conduit	-	LF	$15.00	$0.00	
	Benches	8	EA	$2,000.00	$16,000.00	
	Trellis	2	EA	$20,000.00	$40,000.00	
	Trash Receptacles	-	EA	$1,200.00	$0.00	
	Directional Signage	2	EA	$1,500.00	$3,000.00	
	Art Enhancement	1	LS	$150,000.00	$150,000.00	
	Fence	-	LF	$50.00	$0.00	
	Gate	-	EA	$20,000.00	$0.00	
				Subtotal	$428,733.33	
Softscape						
	30 gal. Street Trees	34	EA	$185.00	$6,228.33	
	5 gal. Shrubs	-	SF	$5.50	$0.00	
	Bermuda Sod		SF	$0.40	$0.00	
	Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
	2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
				Subtotal	$10,528.33	
				Hardscape and Softscape Total	$439,261.67	
				20% Contingency	$87,852.33	
				Grand Total		**$527,114.00**

Quitman Street between Cochran and Main

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	385	SY	$5.00	$1,925.93	
Concrete Sidewalk	52,000	SF	$4.50	$234,000.00	
ADA Compliant Ramps	21	EA	$1,100.00	$23,100.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	2	EA	$3,500.00	$7,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	8	EA	$2,000.00	$16,000.00	
Trellis	8	EA	$20,000.00	$160,000.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Fence	-	LF	$50.00	$0.00	
Gate	-	EA	$20,000.00	$0.00	
			Subtotal	$443,100.00	
Softscape					
30 gal. Street Trees	87	EA	$185.00	$16,033.33	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$20,333.33	
			Hardscape and Softscape Total	$463,433.33	
			20% Contingency	$92,686.67	
			Grand Total		**$556,120.00**

Quitman Kiss and Ride Plaza

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	13,500	SF	$11.00	$148,500.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	4	EA	$3,500.00	$14,000.00	
Other Lighting	1	Allow	$15,000.00	$15,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Trellis	2	EA	$25,000.00	$50,000.00	
Water Fountain	2	EA	$30,000.00	$60,000.00	
Benches	8	EA	$2,000.00	$16,000.00	
Trash Receptacles	2	EA	$1,200.00	$2,400.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
Fence	320	LF	$50.00	$16,000.00	
Gate	-	EA	$20,000.00	$0.00	
			Subtotal	$324,900.00	
Softscape					
30 gal. Street Trees	30	EA	$185.00	$5,550.00	
5 gal. Shrubs	810	SF	$5.50	$4,455.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	2	EA	$2,500.00	$5,000.00	
			Subtotal	$18,605.00	
			Hardscape and Softscape Total	$343,505.00	
			20% Contingency	$68,701.00	
			Grand Total		**$412,206.00**

Boudary Entry Plaza

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	7,000	SF	$11.00	$77,000.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	2	EA	$3,500.00	$7,000.00	
Other Lighting	1	Allow	$8,000.00	$8,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Water Fountain	1	EA	$30,000.00	$30,000.00	
Trellis	2	EA	$25,000.00	$50,000.00	
Benches	3	EA	$2,000.00	$6,000.00	
Trash Receptacles	1	EA	$1,200.00	$1,200.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
Fence	240	LF	$50.00	$12,000.00	
Gate	-	EA	$20,000.00	$0.00	
			Subtotal	$192,700.00	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod		SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$6,100.00	
			Hardscape and Softscape Total	$198,800.00	
			20% Contingency	$39,760.00	
			Grand Total		**$238,560.00**

Boundary at Fulton Plaza

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	-	EA	$3,500.00	$0.00	
Other Lights	-	Allow	$3,500.00	$0.00	
Water Fountain	-	EA	$30,000.00	$0.00	
Trellis	-	EA	$25,000.00	$0.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	-	EA	$1,500.00	$0.00	
Fence	200	LF	$100.00	$20,000.00	
Gate		EA	$20,000.00	$0.00	
			Subtotal	$20,000.00	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs	-	SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	-	Zone	$1,800.00	$0.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$0.00	
			Hardscape and Softscape Total	$20,000.00	
			20% Contingency	$4,000.00	
			Grand Total		**$24,000.00**

Fulton at Irvington Plaza

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	4,050	SF	$11.00	$44,550.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	4	EA	$3,500.00	$14,000.00	
Water Fountain	1	EA	$30,000.00	$30,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	2	EA	$2,000.00	$4,000.00	
Trash Receptacles	1	EA	$1,200.00	$1,200.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$95,250.00	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	-	Zone	$1,800.00	$0.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$0.00	
			Hardscape and Softscape Total	$95,250.00	
			20% Contingency	$19,050.00	
			Grand Total		**$114,300.00**

Quitman Street between Cochran and Hardy Toll Road Extention

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	-	SF	$4.50	$0.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	-	EA	$3,500.00	$0.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	-	EA	$1,500.00	$0.00	
			Subtotal	$0.00	
Softscape					
30 gal. Street Trees	20	EA	$185.00	$3,700.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$9,800.00	
			Hardscape and Softscape Total	$9,800.00	
			20% Contingency	$1,960.00	
			Grand Total		**$11,760.00**

Quitman Street between Main and I-45

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	1,156	SY	$5.00	$5,777.78	
Concrete Sidewalk	15,600	SF	$4.50	$70,200.00	
ADA Compliant Ramps	22	EA	$1,100.00	$24,200.00	
Street Crossing Markings	10	EA	$1,200.00	$12,000.00	
Special Pavement	-	SF	$11.00	$0.00	
Bridge Decorative Abutment	2	EA	$8,000.00	$16,000.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	9	EA	$4,500.00	$39,000.00	
Pedestrian Lights	43	EA	$3,500.00	$151,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$314,566.67	
Softscape					
30 gal. Street Trees	87	EA	$185.00	$16,033.33	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$20,333.33	
			Hardscape and Softscape Total	$334,900.00	
			20% Contingency	$66,980.00	
			Grand Total		**$401,880.00**

Hogan Street between Gano and I-45

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	3,467	SY	$5.00	$17,333.33	
Concrete Sidewalk	46,800	SF	$4.50	$210,600.00	
ADA Compliant Ramps	45	EA	$1,100.00	$49,500.00	
Street Crossing Markings	23	EA	$1,200.00	$27,600.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	26	EA	$4,500.00	$117,000.00	
Pedestrian Lights	130	EA	$3,500.00	$455,000.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$861,200.00	
Softscape					
30 gal. Street Trees	260	EA	$185.00	$48,100.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$54,200.00	
			Hardscape and Softscape Total	$915,400.00	
			20% Contingency	$183,080.00	
			Grand Total		**$1,098,480.00**

Lorraine Street between Gano and Hardy Toll Road Extention

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	1,600	SY	$5.00	$8,000.00	
Concrete Sidewalk	21,600	SF	$4.50	$97,200.00	
ADA Compliant Ramps	24	EA	$1,100.00	$26,400.00	
Street Crossing Markings	12	EA	$1,200.00	$14,400.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	9	EA	$4,500.00	$39,000.00	
Pedestrian Lights	43	EA	$3,500.00	$151,666.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$330,166.67	
Softscape					
30 gal. Street Trees	87	EA	$185.00	$16,033.33	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	1	Zone	$1,800.00	$1,800.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$20,333.33	
			Hardscape and Softscape Total	$350,500.00	
			20% Contingency	$70,100.00	
			Grand Total		**$420,600.00**

Henry Street between Marion and South

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	18,600	SF	$4.50	$83,700.00	
ADA Compliant Ramps	11	EA	$1,100.00	$12,100.00	
Street Crossing Markings	11	EA	$1,200.00	$13,200.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	21	EA	$4,500.00	$93,000.00	
Pedestrian Lights	52	EA	$3,500.00	$180,833.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$384,333.33	
Softscape					
30 gal. Street Trees	207	EA	$185.00	$38,233.33	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$44,333.33	
			Hardscape and Softscape Total	$428,666.67	
			20% Contingency	$85,733.33	
			Grand Total		**$514,400.00**

Brooks Street between Main and Elysian

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Sidewalk	18,600	SF	$4.50	$83,700.00	
ADA Compliant Ramps	11	EA	$1,100.00	$12,100.00	
Street Crossing Markings	11	EA	$1,200.00	$13,200.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	21	EA	$4,500.00	$93,000.00	
Pedestrian Lights	52	EA	$3,500.00	$180,833.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	1	EA	$1,500.00	$1,500.00	
			Subtotal	$384,333.33	
Softscape					
30 gal. Street Trees	207	EA	$185.00	$38,233.33	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	2	Zone	$1,800.00	$3,600.00	
2" Irrigation water meter	1	EA	$2,500.00	$2,500.00	
			Subtotal	$44,333.33	
			Hardscape and Softscape Total	$428,666.67	
			20% Contingency	$85,733.33	
			Grand Total		**$514,400.00**

Little White Oak Bayou Bike Trail between Patton and Moody Park

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Trail	27,500	SF	$9.00	$247,500.00	
Slope Stabilization	2,750	LF	$200.00	$550,000.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	18	EA	$3,500.00	$64,166.67	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	3	EA	$1,500.00	$4,500.00	
			Subtotal	$866,166.67	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	-	Zone	$1,800.00	$0.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$0.00	
			Hardscape and Softscape Total	$866,166.67	
			20% Contingency	$173,233.33	
			Grand Total		**$1,039,400.00**

Little White Oak Bayou Bike Trail between Moody Park and I-45

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Trail	31,000	SF	$9.00	$279,000.00	
Slope Stabilization	3,100	LF	$200.00	$620,000.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Pedestrian Bridge	4	EA	$100,000.00	$400,000.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	21	EA	$3,500.00	$72,333.33	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
			Subtotal	$1,374,333.33	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	-	Zone	$1,800.00	$0.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$0.00	
			Hardscape and Softscape Total	$1,374,333.33	
			20% Contingency	$274,866.67	
			Grand Total		**$1,649,200.00**

Little White Oak Bayou Trail between I-45 and White Bayou and Spring Street Trails

Item	Quantity	Unit	Unit Cost	Item Total	Comment
Hardscape					
Remove Curb	-	LF	$2.00	$0.00	
Remove Pavement	-	SY	$6.00	$0.00	
Remove Driveway	-	SY	$6.00	$0.00	
Curb	-	LF	$2.25	$0.00	
8" Pavement	-	SY	$30.00	$0.00	
6" Lime Treated Subgrade	-	SY	$1.65	$0.00	
Lime (8%)	-	TON	$140.00	$0.00	
Driveway	-	SY	$40.00	$0.00	
Remove Sidewalk	-	SY	$5.00	$0.00	
Concrete Trail	35,000	SF	$4.50	$157,500.00	
ADA Compliant Ramps	-	EA	$1,100.00	$0.00	
Street Crossing Markings	-	EA	$1,200.00	$0.00	
Special Pavement	-	SF	$11.00	$0.00	
Pavement Markings	-	LF	$0.45	$0.00	
Street Lights	-	EA	$4,500.00	$0.00	
Pedestrian Lights	-	EA	$3,500.00	$0.00	
4" Conduit	-	LF	$15.00	$0.00	
Benches	-	EA	$2,000.00	$0.00	
Trash Receptacles	-	EA	$1,200.00	$0.00	
Directional Signage	2	EA	$1,500.00	$3,000.00	
			Subtotal	$160,500.00	
Softscape					
30 gal. Street Trees	-	EA	$185.00	$0.00	
5 gal. Shrubs		SF	$5.50	$0.00	
Bermuda Sod	-	SF	$0.40	$0.00	
Irrigation Zones	-	Zone	$1,800.00	$0.00	
2" Irrigation water meter	-	EA	$2,500.00	$0.00	
			Subtotal	$0.00	
			Hardscape and Softscape Total	$160,500.00	
			20% Contingency	$32,100.00	
			Grand Total		**$192,600.00**