

TIRZ 21 MOBILITY PLAN

Prepared for the Hardy/Near
Northside Redevelopment Authority
(TIRZ 21) by:



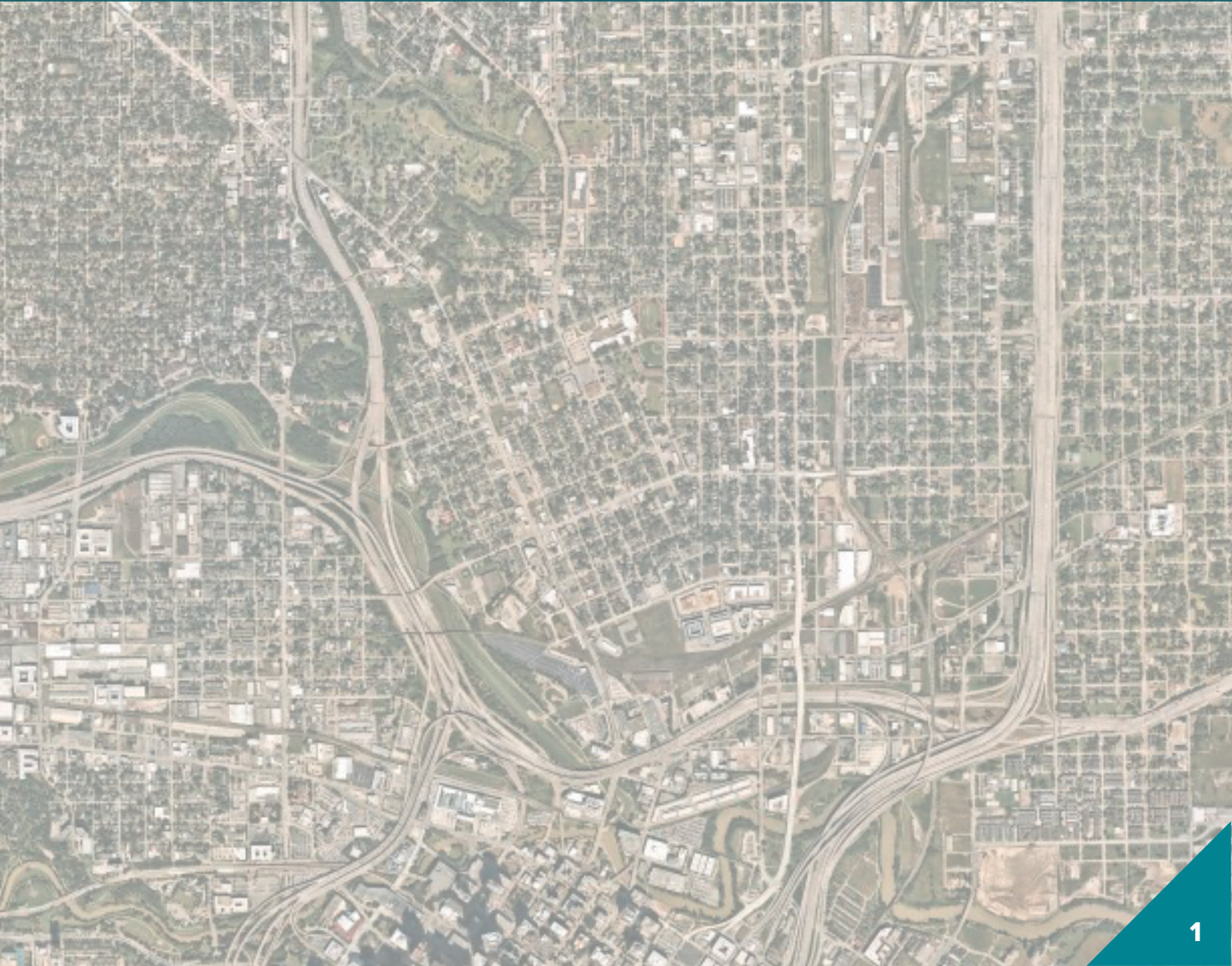
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About the Mobility Plan

This plan was prepared for the Hardy/Near Northside Redevelopment Authority (TIRZ 21) in 2021. The TIRZ 21 Mobility Plan is intended to provide the TIRZ with prioritized funding and partnership opportunities. This plan was developed through careful analysis of existing conditions and projects actively being developed or proposed by other agencies. This analysis resulted in a Fact Book that can be used to help the TIRZ communicate existing conditions and understand where needs and opportunities exist. Through coordination with the TIRZ and other agencies, mobility recommendations were developed to help the TIRZ leverage their funding and be active as a project stakeholder for many large-scale projects to ensure the needs of the Near Northside community are reflected in plans and design. The mobility recommendations are to be used as a guide for TIRZ 21 as they develop and annually reevaluate their Capital Improvement Plan (CIP).



Fact Book

This Fact Book is a compilation of current data and conditions in the TIRZ 21 area intended to inform infrastructure funding decisions. The data identifies the current context of the community, barriers, and opportunities. This section presents key data specific to mobility, including roadways, sidewalks, bikeways, transit, safety, and commute patterns. The TIRZ 21 boundaries and study area are identified in Figure 1. An overview of key takeaways from each mobility topic area in this section is provided below.

Trip Characteristics

A majority of residents work outside of the of the study area, driving several miles to reach their jobs. Alternatively, a majority of people who work within the study area live nearby, but are commuting into the study area. These commute trips, however, account for only a fraction of trips made within the study area. When looking at all trip types, a majority are not work related, and many are short trips of 3 miles or less in length.

Street Network

TIRZ 21 is criss-crossed by a wide variety of streets ranging from multi-lane interstates to narrow, unmarked residential roadways. Most of the larger streets in the TIRZ are operating well below their potential capacity, creating opportunities to reallocate space to other modes of travel.

Bikeways and Sidewalks

There are a few high-comfort bikeways within TIRZ 21, but not a well connected bikeway network. Additionally, sidewalk condition varies widely throughout the district. Investing in bicycle and pedestrian infrastructure could transform the atmosphere of the TIRZ while also making it a more accessible, inclusive district for everyone and support the large number of trips in the area.

Transit

TIRZ 21 boasts a robust transit network with multiple frequent routes and the METRORail Red Line. Improving access to transit has the potential to further reduce car-dependency in the area, making the TIRZ more affordable and accessible to people from all walks of life. METRONext presents the TIRZ with many opportunities to partner with METRO and other agencies and organizations to improve service and accessibility.

Safety

Between 2014 and 2018 there were over 2,500 vehicles crashes in the study area. Almost 50 of these resulted in serious injuries while 5 resulted in at least one death. Making informed decisions and wise investments in pedestrian, bicycle, and roadway infrastructure can reduce the likelihood of injury and death on the district's roadways.

Figure 1. TIRZ 21 Boundary



Travel Characteristics

Understanding the where people travel and for what purposes into, out of, and within the study area is key to developing an informed mobility plan that provides workers, residents, and visitors with meaningful transportation options and investments.

All Trips

The vast majority of trips made in the study area are not commute related. These trips make up 87% of trips (Figure 2) and include outings related to running errands, going out for lunch or dinner, traveling to recreational activities, going to school, and more. It is important that these activities and the variety of destinations within the TIRZ are well connected and accessible for multiple modes as people of all ages and abilities.

Short Trips

Short trips are defined as those that are three miles or shorter in length. Among home-based non-work trips (60% of all trips from Figure 2), nearly 1/3 are short trips (Figure 4). This rate is 5% lower than the city average, suggesting people are currently unable to safely and/or comfortably reach nearby destinations, or there is a greater variety of services needed within the area. Additionally, looking at trips for all purposes (Figure

3), more trips in the study area are taken between 3-10 miles than in the City of Houston. If provided with safe, comfortable infrastructure, short trips can easily be made by walking or biking.

Commute Trips

Figure 2 identifies that 13% of trips that start or end in the TIRZ are home-based work trips. Of employed study area residents, 97% commute to jobs outside of the study area (Figure 5). Of those trips, 58% travel less than 10 miles to work. This indicates an opportunity to facilitate increased transit and bike access to jobs. Figure 6 shows where study area residents work in the Houston region, with the largest concentrations clustered in Downtown, the Medical Center, Upper Kirby, and the Heights.

Alternatively, people that work within the study area but live elsewhere represent 95% of workers (Figure 5). Only 35% of these workers travel less than 10 miles to work and 45% travel between 10 and 25 miles to work. Figure 7 shows where people who work in the study area live, with the greatest concentrations being nearly the TIRZ and to the north.

Overall, only 3% of residents and 5% of workers both live and work within the study area (Figure 5). These trips are most able to be taken by walking, biking, or transit.

Figure 2. TIRZ 21 Trip Types

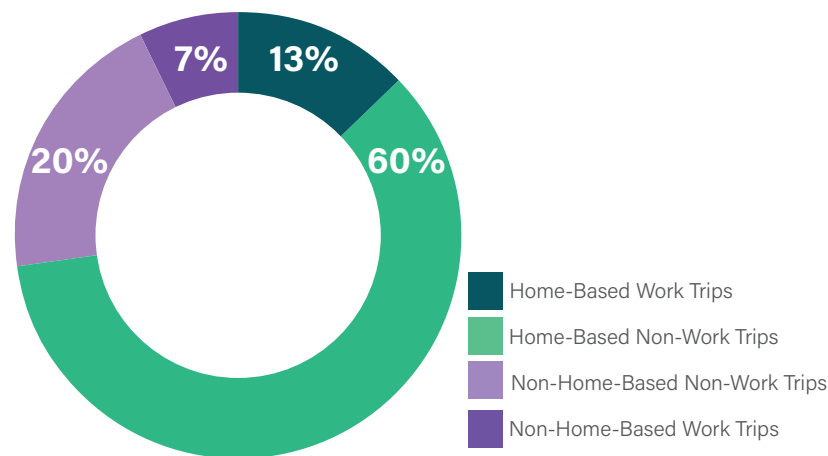


Figure 4. Home-Based Non-Work Trip Distances

Home-Based Non-Work Trips	City	Study Area
0-1 miles	7%	5%
1-3 miles	30%	27%
3-5 miles	21%	28%
5-10 miles	25%	28%
10+ miles	17%	12%

Figure 3. Trip Distance Distribution

For All Trips	City	Study Area
0-1 miles	7%	4%
1-3 miles	25%	22%
3-5 miles	19%	25%
5-10 miles	25%	29%
10+ miles	24%	21%

Figure 5. Inflow/Outflow

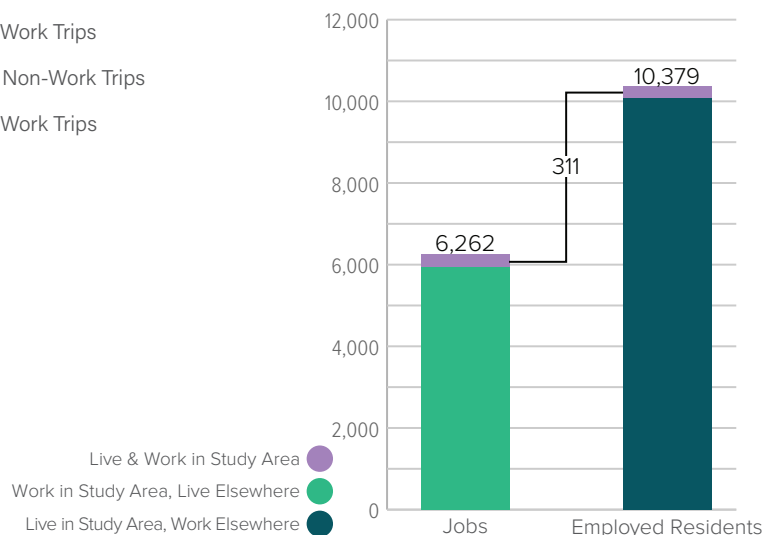


Figure 6. Where Residents Work

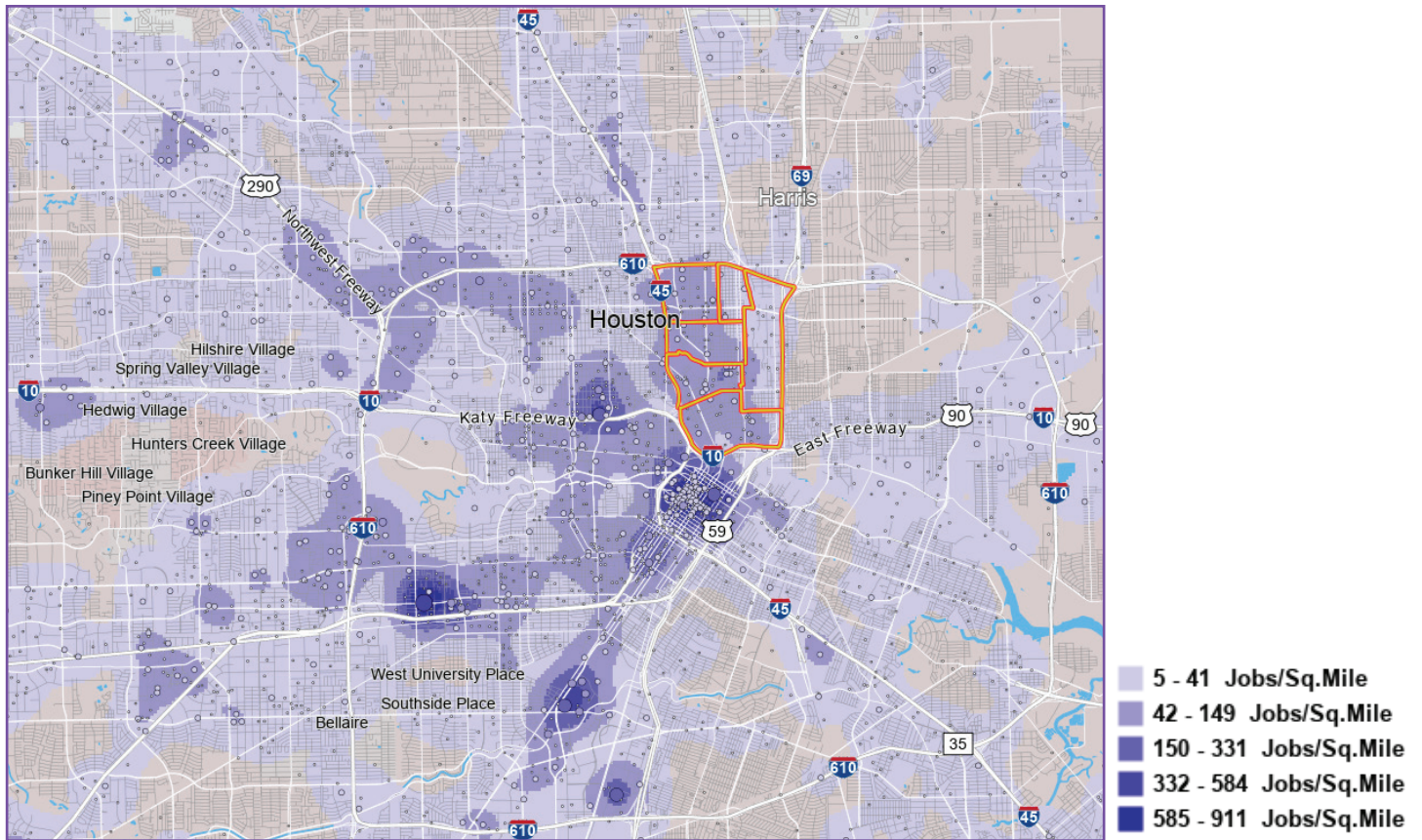
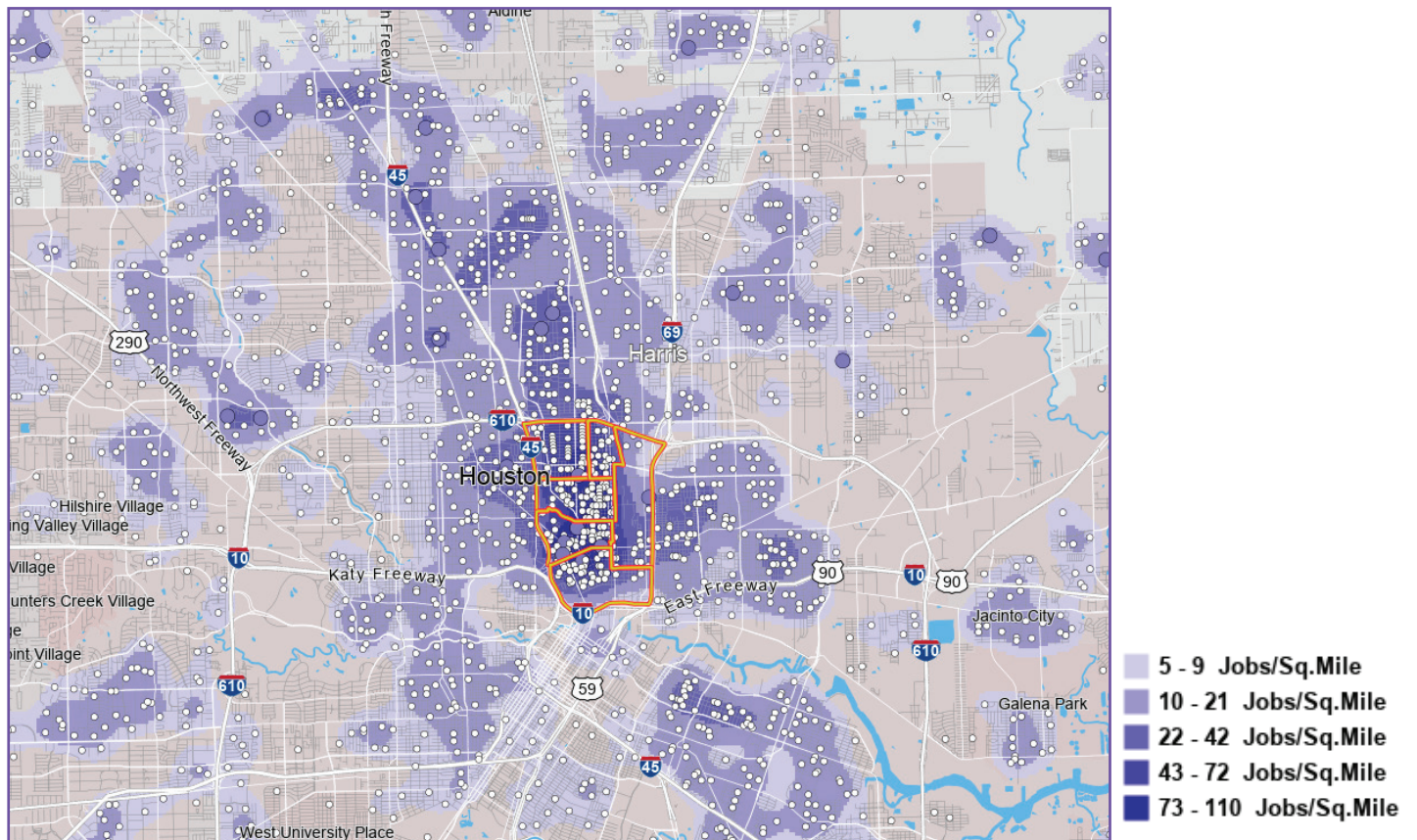


Figure 7. Where Workers Live



Source: US Census, Longitudinal Employer-Household Dynamics (LEHD), 2018

Street Network

TIRZ 21 is criss-crossed and surrounded by multiple major corridors and encircled by Interstates 45, 610, 69, and 10. Within the TIRZ, multiple major thoroughfares and connectors link the TIRZ to highways and adjacent districts. A vast majority of these corridors contain 2-4 lanes and have streets that exceed 50 feet in width, with several, such as Calvalcade Street and Irvington Boulevard, eclipsing 80 feet wide. Figure 10 provides a detailed catalogue of corridor characteristics.

Despite the large size of these roads, the average daily traffic (ADT) seen on these roads is relatively low. As seen in Figure 10, most corridors are averaging only 4,000 to 8,000 vehicles per day. This includes many major thoroughfares, such as Hardy Street, Elysian Street, and Quitman Street. This excess capacity on roadways encourages drivers to move at higher speeds, creating more dangerous roadways for all users, particularly for pedestrians and people on bicycles.

Several corridors, such as Quitman Street and Lorraine Street, are also plagued by poor pavement quality (see Figure 9). Poor pavement quality further exasperates the previously mentioned safety concerns and creates an uncomfortable experience for all roadway users whether they are walking, biking, or driving.

Extra capacity on roadways and the need to resurface and/or reconstruct them provides opportunities to reallocate unused space for multi-modal improvements. Investments in walking and bicycle infrastructure can improve the overall safety of local corridors for all uses and elevate the feel and atmosphere of a community.

Even though local roads have ample spare capacity, the highways around the TIRZ are also potentially about to get a large-scale expansion. The North Houston Highway Improvement Project (NHHIP), if realized, will see the expansions and realignment of various interstates, primarily Interstates 45 and 10. Property impacts from the projects in the TIRZ could be extensive along the western and southern borders. There are concurrent plans to develop a new tollway corridor, the Hardy Connector, which would travel through the TIRZ's eastern edges. The approximate areas directly impacted by these projects are shown in gold in Figure 8. The TIRZ could have the potential to be involved in the development of these projects and maximize benefits for the district while minimizing negative impacts.



Hardy St at Quitman St
Map Data: 2019 Google

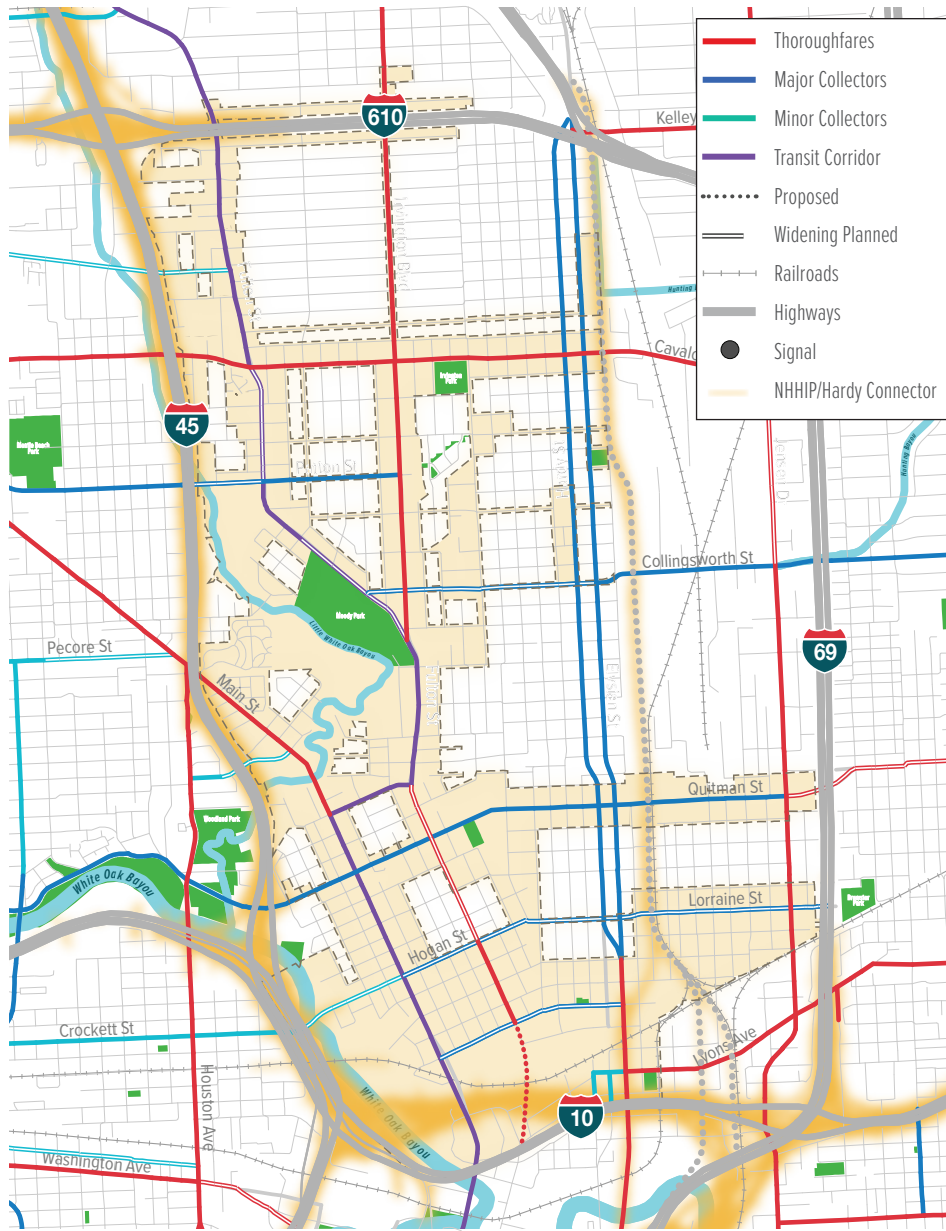


Fulton St at Halpern St
Map Data: 2019 Google



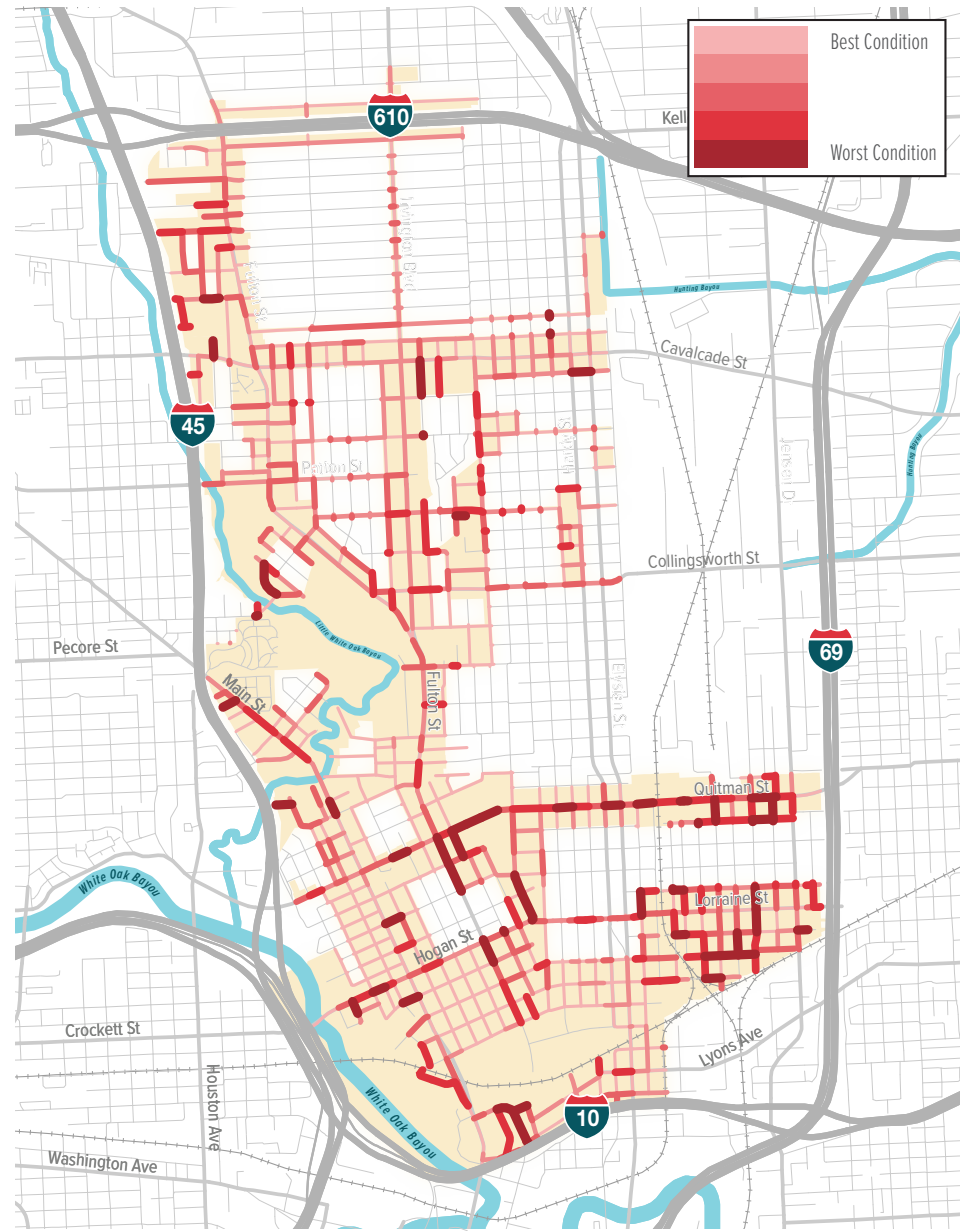
Fulton St at Halpern St
Map Data: 2019 Google

Figure 8. Existing Roadway Network



Source: City of Houston, 2019

Figure 9. Roadway Pavement Condition



Source: City of Houston, 2016

Figure 10. TIRZ 21 Corridor Characteristics

Street	From	To	Type	Traffic Counts (ADT)	Current Pavement Width (ft)	Right of Way	Current Lanes	Projected Lanes	Median
Burnett St	Hardy St	Freeman St	Major Collector	N/A	50	90	4	TBW	N
	Jensen Dr	Hardy St	Thoroughfare	17,236	85	110	4-3		Y
Calvacade St	Hardy St	Irvington Blvd	Thoroughfare	8,688	85	110	4-4		Y
	Irvington Blvd	Fulton St	Thoroughfare	13,152	85	110	4-5		Y
	Fulton St	N Freeway Service Rd	Thoroughfare	17,236	85	110	4-6		Y
Collingsworth St	Jensen Dr	Elysian St	Major Collector	7,004	50-115	70-130	4-6		N
	Elysian St	Fulton St	Major Collector	4,972	25-40	50	2	TBW	N
Elysian St	Eurl St	Cavalcade St	Major Collector	7,449	40	60	4		N
	Cavalcade St	Collingsworth St	Major Collector	4,923	40	60	4		N
	Collingsworth St	Quitman St	Major Collector	6,150	40	60	4		N
	Quitman St	Lorraine St	Major Collector	5,891	40	60	4		N
Fulton St	N Loop E Freeway	Calvacade St	Transit Corridor	7,252	55	80	2-4		Y
	Calvacade St	Patton St	Transit Corridor	N/A	50	70	2	TBW	Y
	Patton St	Catherine St	Transit Corridor	7,251	50	70	2		Y
	Catherine St	Bigelow St	Transit Corridor	11,950	55	80	2	TBW	Y
	Bigelow St	Boundary St	Transit Corridor	8,489	55	85	2		Y
	Boundary St	Morris St	Thoroughfare	N/A	50-65	65-80	2-4	TBW	Y
	Morris St	Hogan St	Thoroughfare	5,563	35-45	60	2	TBW	N
	Hogan St	Burnett St	Thoroughfare	N/A	30-35	60	2		N
Hardy St	Eurl St	Cavalcade St	Major Collector	6,650	40	60	4		N
	Cavalcade St	Collingsworth St	Major Collector	6,201	40	60	4		N
	Collingsworth St	Quitman St	Major Collector	5,815	40	60	4		N
	Quitman St	Lorraine St	Major Collector	5,400	40	60	4		N
	Lyons Ave	Providence St	Minor Collector	N/A	30-35	60	2		N
Hogan St	Cochran St	N Main St	Major Collector	5,723	40	60	4	TBW	N
	N Main St	Glaser Dr	Minor Collector	7,608	40	60	4		N
Irvington Blvd	N Loop E Freeway	Bigelow St	Major Collector	13,375	80	100	4-6		Y
Lorraine St	Jensen Dr	Semmes St	Major Collector	917	35	60	2	TBW	N
	Maffitt St	Gano St	Major Collector	4,653	35	50	2	TBW	N
Lyons Ave	Jensen Dr	Elysian St	Thoroughfare	N/A	40	65	2		N
	Elysian St	McKee St	Minor Collector	N/A	35	65	2		N
McKee St	Lyons Ave	Providence St	Minor Collector	N/A	30-35	60	2		N
N Main St	N Freeway Service Rd	Boundary St	Thoroughfare	9,565	40	55	4		N
	Boundary St	Burnett St	Transit Corridor	10,287	55	85	2		Y
	Brooks St	Burnett St	Transit Corridor	N/A	45-55	90	3-4		N
	Burnett St	Naylor St	Transit Corridor	N/A	45-75	90	2-4		Y
	Naylor St	Rothwell St	Transit Corridor	N/A	70	90	2-3		Y
Patton St	Irvington Blvd	Fulton St	Major Collector	9,251	40	65	4		N
	Fulton St	N Freeway Service Rd	Major Collector	21,948	40	65	4	TBW	N
Quitman St	Jensen Dr	Maury St	Major Collector	7,282	35	50-65	2		N
	Maury St	Fulton St	Major Collector	7,837	30	50	2		N
	Fulton St	South St	Major Collector	6,830	30	50	2		N

ADT = Average Daily Traffic

TBW = To Be Widened

Source: City of Houston: 2016-2018

Bikeways

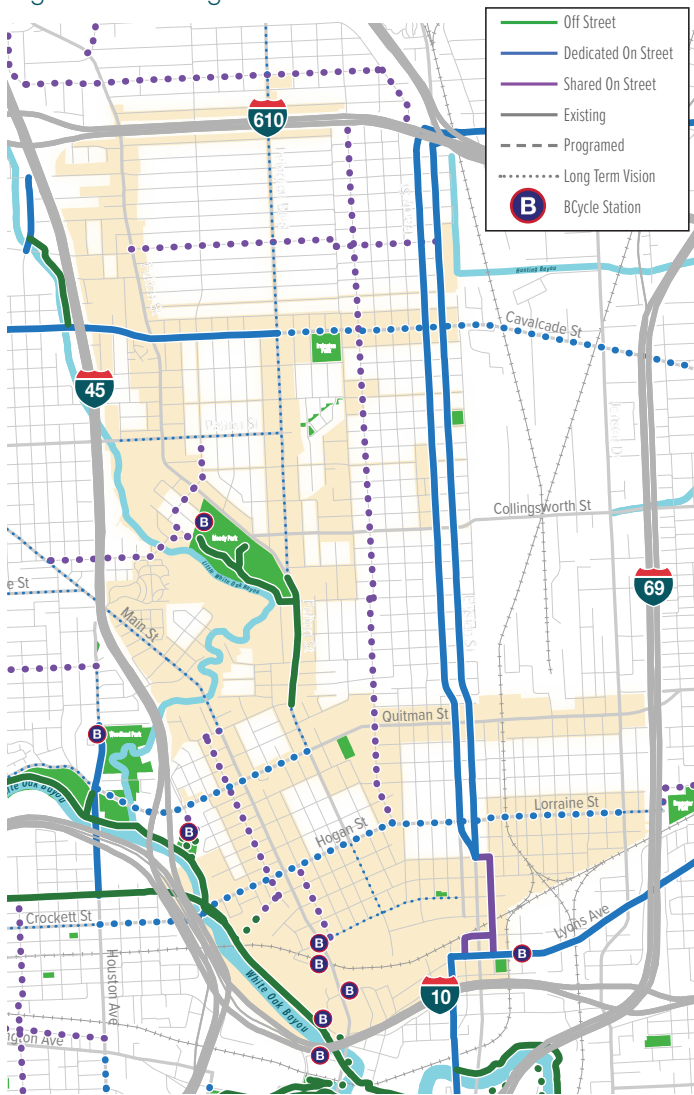
The current bicycle network in the study area includes dedicated on-street bike lanes on Hardy Street and Elysian Street, Lyons Avenue, and on Calvacade Street west of Irvington Boulevard. It includes Little White Oak Bayou Trail and provides some connectivity to the extensive White Oak and Buffalo Bayou trails. The Houston Bike Plan proposes several new high-comfort bikeways in the TIRZ, including the eastward extension of bike lanes on Calvacade Street, the creation of bike lanes on Hogan Street and Lorraine Street, and the creation of numerous on-street neighborhood bikeways. The TIRZ has the opportunity to work with the City on these projects as well as build on the plan to improve connections between local parks, attractions, and other destinations.

BCycle bike-share stations are also located in a few locations within the TIRZ, largely concentrated near Burnett Transit Center and White Oak Bayou. As the bike and trail networks are expanded, there is opportunity to expand the bike share network as well to provide increased access to the community.

Sidewalks

Sidewalks form the basis for vibrant, healthy, walkable communities. Sidewalk conditions in the TIRZ vary widely, with some corridors having substantial, high-quality pedestrian infrastructure, while others have aging or inaccessible sidewalks. Several streets lack any type sidewalk providing significant gaps in the network. Expanding and improving pedestrian infrastructure is critical to elevating the TIRZ's quality of life and developing a connected community that is accessible for everyone.

Figure 11. Existing and Planned Bike Network



Source: City of Houston & Team Analysis, 2020



Newly improved sidewalks, at Fulton St and Morris St feature paths at least six feet in width and accessible ramps.
Map Data: 2019 Google



Several Streets, such as Semmes St (above), lack sidewalks.
Map Data: 2019 Google

Transit

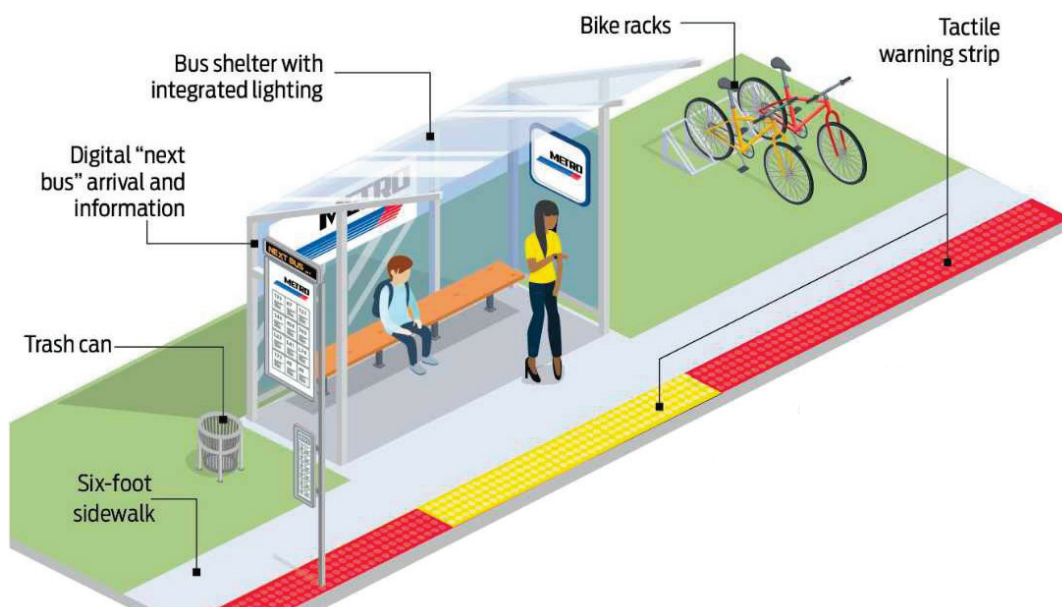
The study area has a robust transit network that connects destinations within the TIRZ to each other, the surrounding area, and region serving thousands of people every day. There are nearly 4,000 combined bus boardings and alighting each and every weekday across 141 bus stops. On average, each stop sees a combined total of 27 boardings and alightings per weekday. A fifth of these are seeing above average boardings. Despite the high ridership, a majority of these stops lack user amenities. In particular, 77% of bus stops in the TIRZ have no shelter to protect riders from wind, rain, or heat. The bus stop areas that see the most activity are near the Cavalcade and Burnett Transit Center METRORail stations and in the area of Collingsworth Street and the Hardy Street/Elysian Street corridors.

The bus stops are distributed across 8 routes. At the core of the network are four frequent lines that provide service every fifteen minutes or less: METRO bus routes 26, 51, and 52 and the METRORail Red Line. METRO bus routes 6 and 11 provide half-hourly service along the boundary of the TIRZ, while routes 3, 66, and 79 serve riders once an hour. See Figure 12 for routes and bus activity information.

In 2019 voters approved a sales tax measure to fund METRONext, a service enhancement and expansion plan developed by METRO that will be implemented over the coming years. Figure 13 shows transit improvements from METRONext. The largest proposed changes to service within the TIRZ will come in the form of BOOST. BOOST is a program that will provide service enhancements to the most-utilized lines in the METRO network.

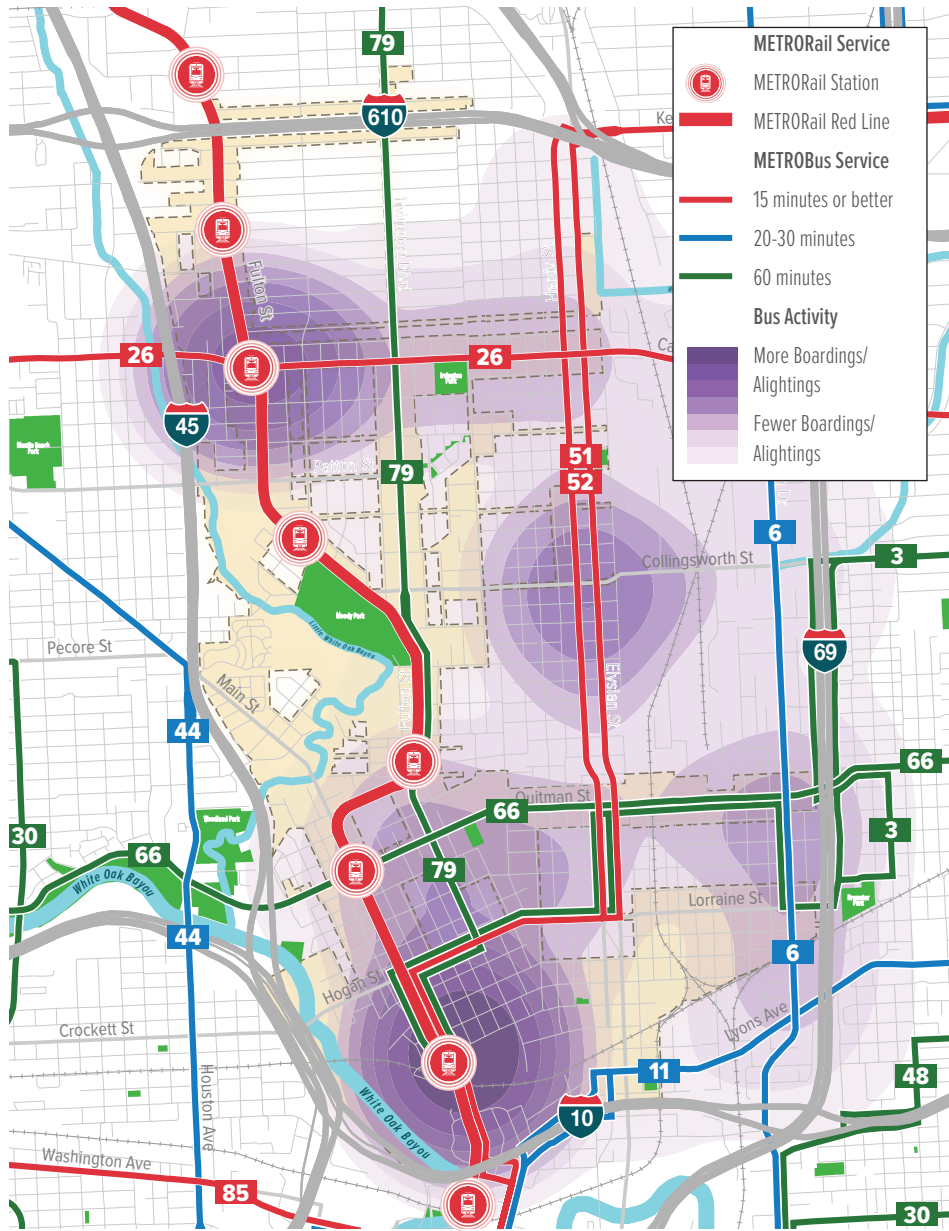
These enhancements could included elements such as improved shelter amenities and accessibility, sidewalk and bikeway improvements, priority for transit at traffic lights (transit-signal priority), and optimized stop placement to provide quicker, faster, more reliable rides. Currently, METRO plans to upgrade route 26 to BOOST standards. Route 44, which runs along the western edge of the TIRZ, is also planned to be upgrades as part of the BOOST program. The image below highlights what these types of improvements could look like in the community.

METRONext also outlines the expansion of the METRORapid bus rapid transit (BRT) network. As of now, there are no planned METRORapid stops planned in or adjacent to the TIRZ, however, a route is being planned that will connect Downtown to Greenspoint and George Bush Intercontinental Airport (IAH). There is potential for the TIRZ to influence and collaborate with METRO and TxDOT during the project's development and implementation.



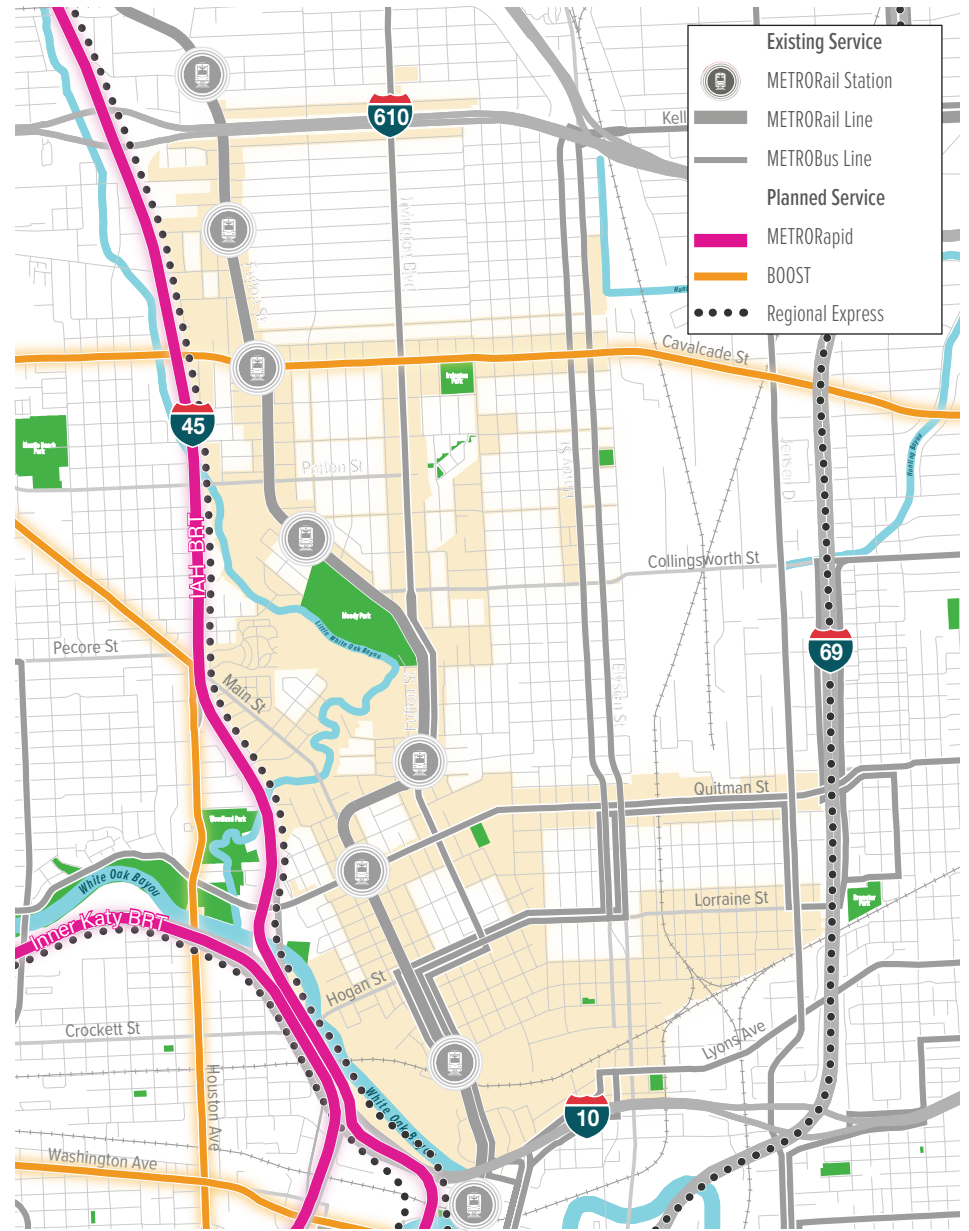
A rendering of what types of features could be present at a typical BOOST stop.
Source: METRO 2020

Figure 12. Existing Transit Network & Bus Activity



Source: METRO, 2019

Figure 13. Planned METRONext Improvements



Source: METRO, 2019

Safety

Between 2014 and 2018 there were over 2,500 vehicles crashes in the Study Area. Almost 50 of these resulted in serious injuries while 5 resulted in at least one death. Figure 16 identifies the areas with highest crashes and those where a death or serious injury occurred. A vast majority of these crashes have been along Hardy Street and Elysian Street, both of which have posted speed limits at or above 35mph. As seen in Figure 15, most of these crashes have occurred near major signalized intersections. These intersections include those at Calvacade, Collingsworth, and Quitman Streets.

It is important to note that the crash data available was prior to the changes in the Hardy/Elysian corridor. Although improvements have been made, this crash data is still relevant to identify areas of need throughout the District and to assess improvements over time in the future.

Streets with higher speed limits have crashes that tend to be more severe as well. Each 35mph crash has a 40% greater chance to be fatal or severe than crashes on 30mph roads. The likely hood of fatality rises exponentially as the speed of a vehicle increases.

People walking and biking are the most likely groups to be killed or seriously injured when involved in a crash. Figures 14 and 15 identify how many crashes have involved pedestrians or bicyclists between 2014 and 2018 and how many of those crashes resulted in death. A majority of pedestrian crashes are clustered around the Qutiman/Near Northside and Fulton/North Central METRORail stations, suggesting additional safety measures are needed. Figure 17 shows the locations of additional crashes that have resulted in the death of a bicyclist or pedestrian.

Figure 14. Summary Crash Data

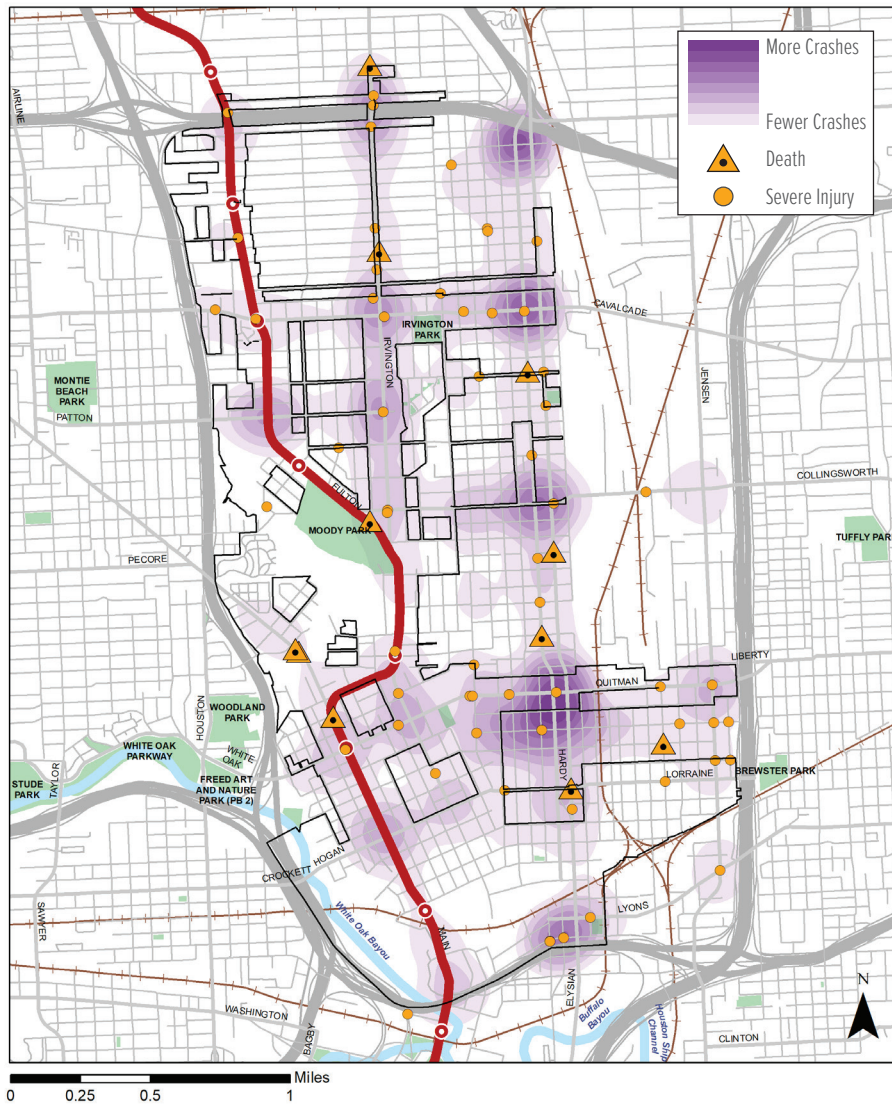
	TIRZ 21	Study Area (IH10, IH69, IH45, IH610)
Total Crashes	1689	2517
Total Deadly Crashes	5	10
Total Crashes with Serious Injuries	48	63
Total Bicyclist Crashes	31	38
Total Pedestrian Crashes	51	66
Total Deadly Bicyclist Crashes	0	1
Total Deadly Pedestrian Crashes	3	3

Figure 15. Crash Data by Year

By Year Assessment	2014		2015		2016		2017		2018	
	TIRZ 21	Study Area	TIRZ 21	Study Area	TIRZ 21	Study Area	TIRZ 21	Study Area	TIRZ 21	Study Area
Total Crashes	309	441	357	543	371	568	316	466	336	499
Total Deadly Crashes	1	3	3	5	1	1	0	1	0	0
Total Crashes with Serious Injuries	10	10	9	15	9	15	10	12	10	11
Total Bicyclist Crashes	7	8	6	7	8	11	7	8	3	4
Total Pedestrian Crashes	10	11	10	13	10	14	11	17	10	11
Total Deadly Bicyclist Crashes	0	1	0	0	0	0	0	0	0	0
Total Deadly Pedestrian Crashes	1	1	2	2	0	0	0	0	0	0

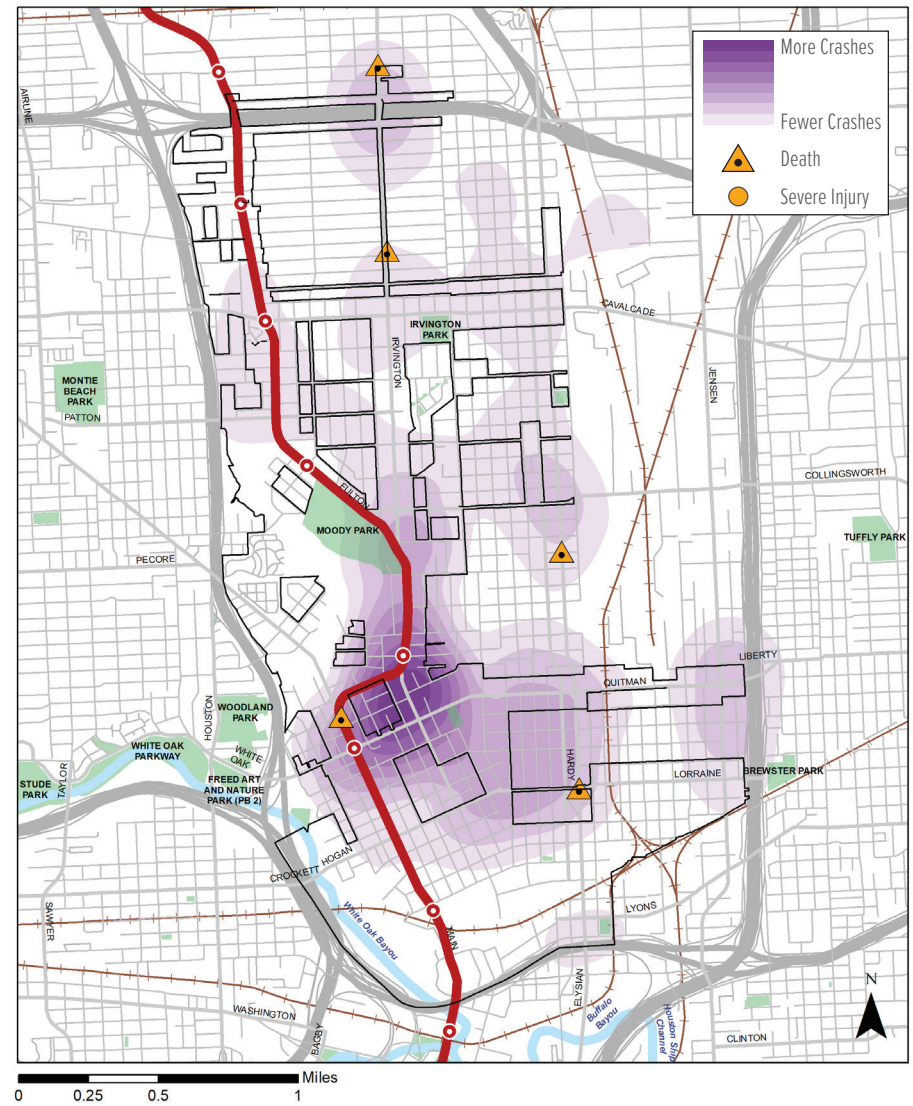
Source: TxDOT CRIS Database, 2014-2018

Figure 16. Crash Density | All Crashes



Source: TxDOT CRIS Database, 2014-2018

Figure 17. Crash Density | Pedestrians & Bicycles



Source: TxDOT CRIS Database, 2014-2018

TIRZ 21 Mobility Recommendations

Introduction

The recommendations identified in this section are based on analysis of current facilities and accessibility within the TIRZ 21 as well as current or proposed projects by other entities that provide an opportunity to leverage resources and build connectivity. The recommendations have been developed into project profile pages. These project profiles include multiple components to help inform the nature and level of future project work. The information provided includes project categorization, a project description with accompanying visuals to provide context, cost estimates, potential partners, project benefits, and the anticipated role for the TIRZ.

The draft recommendations have been categorized based on the project type and potential role of the TIRZ. The project categories are defined below and referenced in the Figure 18 Project Summary Table, Figure 19 Project Summary Map, and each project profile. The projects are intended to build off of and connect to each other to create a more comprehensive mobility network while best leveraging TIRZ resources in partnership with other projects and agencies where possible.

Category 1: Program for Safety and Accessibility

Improving multimodal safety and accessibility outside of larger projects and around key community destinations, such as schools, community facilities, transit, and parks is an essential component of enhancing mobility within the TIRZ. This recommendation does not provide specific projects, but key areas for improvement and guidance for types of improvements. Improvements include sidewalks, intersections, and other small enhancements that over time can create meaningful and wide-spread changes in the community.

Category 2: Improving Key Streets

This category of projects builds on projects from other agencies that do not extend through the TIRZ in an effort to create complete connections and enhanced community access. These projects represent opportunities for the TIRZ to work with partner agencies.

Category 3: Creating Accessible Transit Corridors

TIRZ 21 has seen significant investments in transit over the last decade. The projects recommended in this category are intended to build on those investments with enhanced multimodal connections and create walkable and bikeable corridors that are essential to support transit service and future development. These corridors also build on existing corridor enhancements by other agencies in order to best utilize TIRZ funding and leverage partnerships.

Category 4: Leveraging Mega-Project Opportunities

Projects in this category represent a need to respond to, adapt to, or capture the opportunity of significant and large-scale projects in and around TIRZ 21. Projects like the North Houston Highway Improvement Project (NHHIP) and the Hardy Connector are large-scale projects that will place significant impacts onto the TIRZ 21 area. The projects recommended in this category are intended to focus the TIRZ's efforts on ensuring safe, multimodal connections to and across these large corridors. These two "mega" projects represent opportunities to leverage infrastructure investments in a way that will benefit the residents and businesses within the TIRZ and mitigate potentially negative impacts, like decreased connectivity.

The recommendations related to the NHHIP (5.1 - 5.5 in Figure 18) are intended to supplement TxDOT's project. It will be important to coordinate with TxDOT, particularly to ensure design and timing are complementary. Some recommended projects may be able to be implemented early with appropriate coordination. Additionally, the Houston-Galveston Area Council (H-GAC) has identified future funding for projects that can supplement the NHHIP. It is recommended to coordinate with H-GAC on this opportunity as well to leverage funding and implementation resources.

Project Cost Estimates

Figure 18 shows a summary of key information for each project. The cost estimates provided in Figure 18 and on each recommendation page are planning-level capital costs inclusive of design, contingency, and mobilization. As these projects move into the project development process the cost estimates will be further refined through design.

Figure 18. Project Summary Table

Project ID	Cost Estimate	Role	Category	Proposed Timing
1.1 Multimodal Safety & Access Improvement Program	\$100,000 - \$500,000 annually	L	1	Ongoing
2.1 Hogan-Lorraine Access & Drainage Improvement	\$1,109,000	L	2	Short
2.2 Quitman Connection Project	\$41,146,000 (COH)	C	2	Medium
3.1 Cavalcade Accessibility Improvements	\$1,971,000	F	2	Short
3.2 Irvington Multimodal Enhancements	\$1,510,000	F	3	Short
3.2 Irvington Multimodal Enhancements	\$4,325,000	L/F	3	Short
3.3 Burnett Enhanced Bikeway Extension	\$437,000	L	3	Short
3.4 Trail to Transit Connector	\$327,000	L/F	3	Medium
4.1 Hardy Corridor Multimodal Vision	N/A	C	4	Ongoing
4.2 Elysian Viaduct Enhancement	\$168,000	L	4	Short
4.3 Rail Crossing Improvements	Part of HCTRA Costs	C	4	Ongoing
5.1 Little White Oak Trail	\$11,338,000	F/C	4	Long
5.2 San Jacinto Multimodal Extension	\$9,735,000	F/C	4	Long
5.3 Hogan Street Bridge Enhancement	Part of TxDOT Costs	C	4	Ongoing
5.4 Patton Street Connection	\$249,000	L/C	4	Long
5.5 Link Street Connection	\$174,000	L/C	4	Long
5.6 Main Street Bikeway Improvements	\$3,228,000	L	4	Short
Total				\$37,571,000*

***Notes:**

Does not include costs for projects 2.1 (COH), 4.1, 4.3, or 5.3. Assumes \$300,000 per year for 10 years for project 1.1.

Role

L = Lead
F = Funding Partner
C = Coordinating Partner

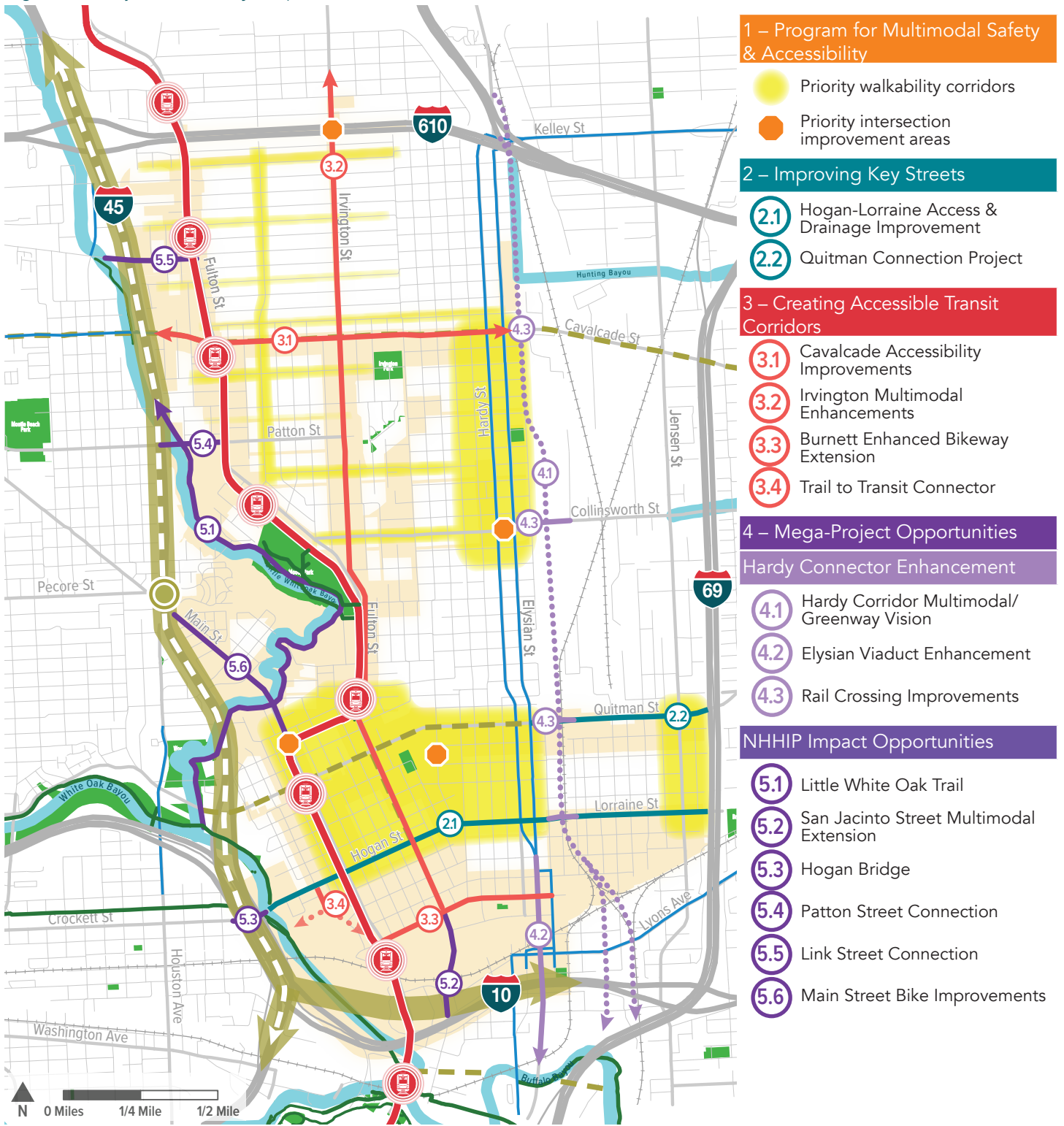
Category

1 = Mega-Project Opportunities
2 = Accessible Transit Corridors
3 = Improving Key Streets
4 = Multimodal Safety & Accessibility

Proposed Timing

Short = 1-5 years
Medium = 6-10 years
Long = 10+ years
Ongoing = Continual improvements or coordination

Figure 19. Project Summary Map



Legend

- Project by Other Agency
- Intersection Program Improvement
- Proposed BRT/Station
- Existing High-Comfort Bikeway
- Hardy Connector Project
- Trail
- Sidewalk Program Improvement Area
- TIRZ 21 Boundary

1.1 Multimodal Safety & Access Improvement Program

Project Description

The Multimodal Access & Safety Improvement Program is an annual fund of \$100,000 to \$500,000 per year (to construct and leverage grants and partnerships) for walking and biking improvements including ADA compliant sidewalks and curb ramps, intersection improvements, wayfinding signage, B-Cycle Stations, first/last mile transit enhancements, and end-of-trip bicycle facilities. This program is recommended to be used separate from the individual projects recommended in order to provide safety and accessibility enhancements to a larger area of the TIRZ and to make steady progress. The TIRZ should keep track of improvements, celebrate neighborhood enhancements and milestones (5 new miles of sidewalks! or 50 new bike racks! etc.), and communicate the information with the community. Priority areas for walkability and intersection improvements are highlighted on the Project Map, page 16.

Project Components

- Fill in walkability gaps around priority areas that increase access to schools, transit, trails, or other community destinations. Improvements include ADA compliant sidewalks and curb ramps.
- Improve intersections near transit stops, schools, where bicycle facilities cross a corridor, or there is increased activity due to destinations. Intersection improvements include, but are not limited to high-visibility crosswalks and signage, reducing crossing distance on wide corridors with pedestrian refuges or bulb-outs, and modified signal timing. Intersection improvements can begin as shorter-term using materials like paint and bollards to make improvements quickly. These improvements can show support for more permanent and long-term improvements in the future.
- Develop a sidewalk rebate or cost-sharing program for residents or business owners to reduce the financial burden of and to incentivize sidewalk repairs. This would also include a public education campaign.
- Partner with the Greater Northside Management District to develop an end-of-trip facility program and implement facilities, such as bike racks, covered bike parking, bike corrals, and bicycle repair stations. Create a dense network of end-of-trip facilities so that traveling by bicycle acts as a competitive choice to/from and within the TIRZ area for distances that are too long to walk but too short to feasibly take transit.
- Partner with Houston BCycle to fund and implement new stations to expand bike share access to the community. Prioritize stations that offer key connectivity to existing transit nodes, including rail stations and intersections of high-frequency bus lines.

Cost Estimate

Total: \$100,000 - \$500,000 annually

Category

- Multimodal Safety & Accessibility Program

Role

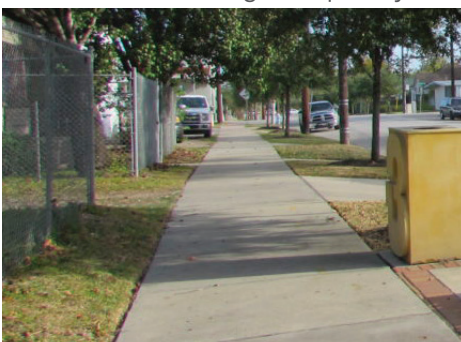
- Lead

Project Partners

- City of Houston Complete Communities Initiative
- Safe Routes to Schools Program
- H-GAC
- Houston BCycle
- BikeHouston
- METRO (transit access)
- Greater Northside Mgmt. District
- Developers and Business Owners
- City of Houston
- Harris County

Project Benefits

- The sidewalk and bikeway network work in tandem to provide safe and attractive access to key community destinations like transit, parks, schools, and jobs. Approximately one in eight residents in the TIRZ 21 area do not have access to a vehicle; robust active transportation networks offer affordable and healthy mobility options while improving opportunities for healthy lifestyle and recreational choices.



Wide, comfortable sidewalk in East End



Permanent intersection improvements from tactical urbanism-project in Fayetteville, AR



Recent Quitman Street at Fulton Street intersection improvements
TIRZ 21 Mobility Recommendations

2.1 Hogan-Lorraine Accessibility & Drainage Improvements

Project Description

Hogan-Lorraine Streets were chosen as a City of Houston Walkable Places Pilot Corridor. Additionally, the City has identified a paving and drainage project along this corridor from Jensen Street to Houston Street. This would be a full rebuild and includes sidewalks, drainage, lighting, utilities, and more.

It is recommended for the TIRZ to coordinate with the City of Houston (and others as applicable) to promote moving this project forward with drainage benefits, walkability enhancements, BOOST level transit standards & bikeway facilities. The TIRZ may work with the City as a stakeholder or funding partner.

As the City of Houston's project will take time to design and implement, there are lower-cost, short-term improvements that the TIRZ could make as part of an interim retrofit solution.

Project Components

Short-Term Retrofit

- Restripe Hogan St from Houston St to Cochran St to include bike lanes with one side adjacent to a parking lane. Parking could potentially alternate which side of the street it is on as needed.
- Restripe Lorraine St from Cochran St to Hardy St with bike lanes that connect into the new bike lanes between Hardy and Elysian Streets.
- Develop a neighborhood bikeway on Lorraine St from Semmes St to Jensen St.

Long-Term City of Houston Rebuild

- 6' wide bike lanes consistent with the Bike Plan. Where space allows along the corridor, protected bike lanes should be considered.
- 6' wide sidewalks (minimum 5' wide and up to 8' wide in areas with high amounts of pedestrian activity).
- New drainage, pedestrian-scale lighting, enhanced bus stops and transit accessibility, intersection safety improvements.
- Where right-of-way allows, on-street parking should be considered along with floating bus stops and bulb-outs for pedestrian and bicycle safety.

Cost Estimate

Total: \$ \$1,109,000 (retrofit)
\$41,146,000 (rebuild: City's CIP cost est.)

Category

- Improving Key Streets

Role

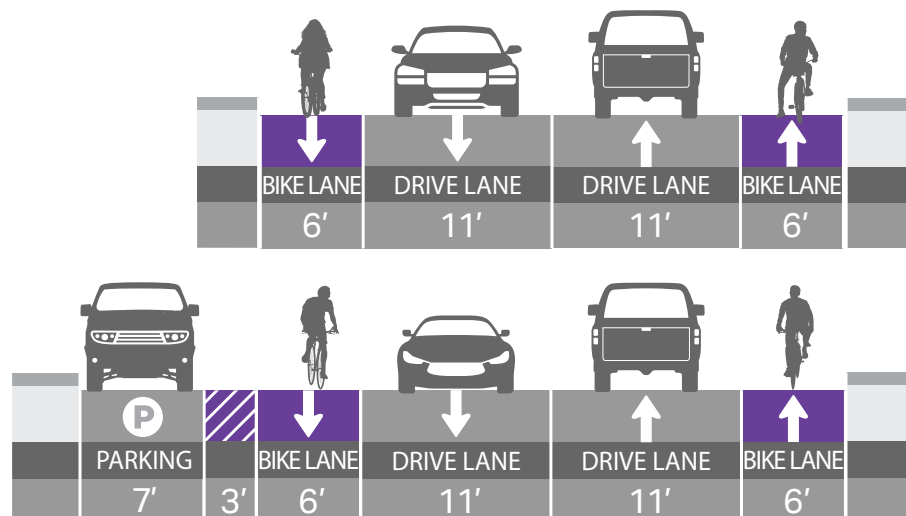
- Coordinating Partner

Project Partners

- City of Houston
- METRO
- Harris County

Project Benefits

- Improved multimodal safety and accessibility
- Enhanced transit access
- Improved resiliency with new drainage and utilities



Top Right: Example of on-street parking with intersection bulb outs for pedestrian safety at Hutchins and Dallas Streets

Top Left: Typical cross-section for Lorraine Street west of Hardy Street

Bottom Left: Typical cross-section for retrofit option on Hogan Street

2.2 Quitman Connection Project

Project Description

Extend the existing Harris County Pct 2/Metro project from Elysian Street to connect to Jensen-US 59 Crossing. This project currently extends from Houston Avenue to Elysian Street. This project includes improvements to the pedestrian realm and bike lanes in partnership between Harris County and the Greater Northside Management District, METRO, and City of Houston.

This project should coordinate with the Hardy Corridor Rail Crossing Improvements (2.1 and 2.3) and extend from the eastern point of rail crossing improvements (approximately Carr Street) to the Eastex Freeway Service Road.

Project Components

- Pedestrian realm improvements, including ADA sidewalks and crosswalks, and intersection crosswalks.
- High-comfort bike lanes.
- Landscaping, signage, and pedestrian-scale lighting.
- Design should correlate as appropriate with the current Harris County Pct. 2 project design to ensure continuity and a comfortable experience for all users.

Cost Estimate

Total: \$1,971,000

Category

- Improving Key Streets

Role

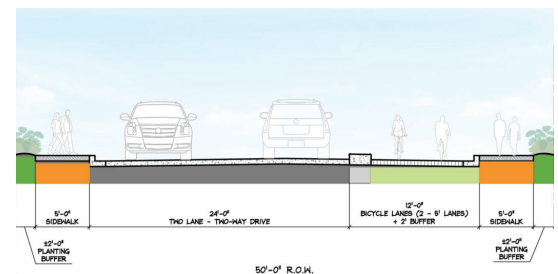
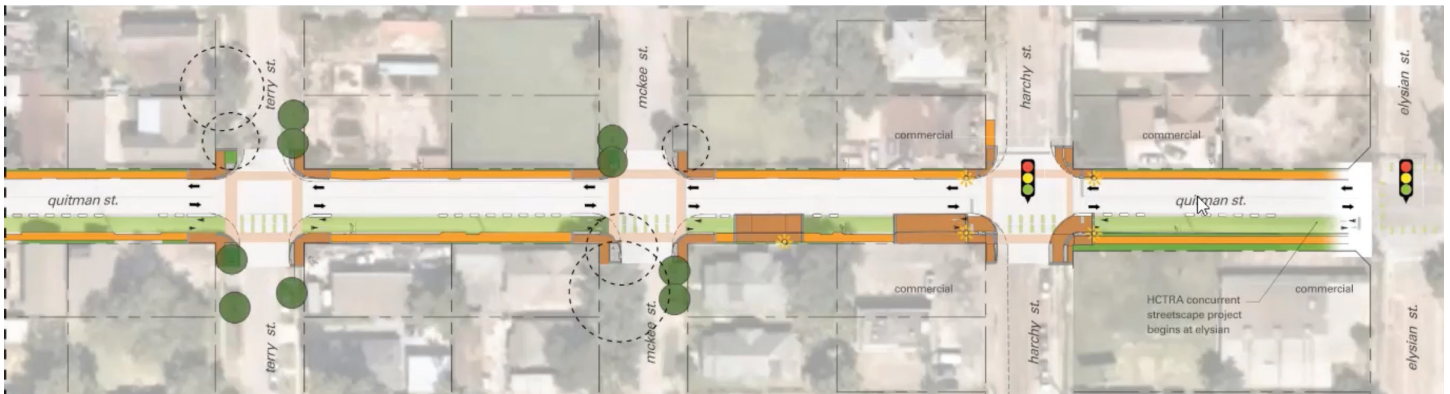
- Funding Partner

Project Partners

- Harris County
- City of Houston
- METRO
- Greater Northside Mgmt. District

Project Benefits

- Increased community connectivity
- Safe, multimodal access to destinations and transit



Top: Proposed design west of Elysian Street (GNMD presentation)

Bottom Right: Proposed cross-section from Elysian Street to Cochran Street (GNMD presentation)

Bottom Left: Existing conditions on Quitman Street east of railroad tracks (Map data 2019)

3.1 Cavalcade Accessibility Improvements

Project Description

The METRO BOOST program is a part of the METRONext long-range plan. The 26 Longpoint-Cavalcade route is designated as a future BOOST corridor. Through a coordinated set of capital, operating and service improvements, the BOOST program provides existing and prospective bus riders with an enhanced experience to all parts of their trip: a better walk, a better stop, and a better ride. The BOOST program creates transit corridors that are safer, more accessible, and more comfortable for METRO riders and all people traveling along the corridor. These improvements also deliver faster, more reliable, and more frequent service.

It is recommended for the TIRZ to work with METRO as a key partner in funding and implementing the proposed BOOST corridor improvements to improve transit service and accessibility on the corridor. Being a funding partner may accelerate the implementation of the 26 route as a Boost Corridor.

Project Components

Enhanced bus stops that meet or exceed BOOST standards. BOOST bus stops should include spacious, safe, and comfortable stops for riders. The TIRZ can accelerate BOOST projects by providing additional funding, as well as providing additional amenities, such as custom shelters, bike racks, and other place making amenities to create stops that reflect a district's unique character.

Improved pedestrian and bikeway connections to Cavalcade street that fall outside the scope of BOOST projects. For example, any sidewalk improvements that would require street reconstruction, or sidewalk construction that would require alterations to open-ditch drainage, would fall outside the scope of any future METRO-funded BOOST Work. The TIRZ or another entity would need to fund these improvements.

Cost Estimate

Total: \$1,510,000

Cost likely to vary depending on METRO coordination, input, and the level of bus stops and amenities included.

Category

- Creating Accessible Transit Corridors

Role

- Funding partner

Project Partners

- METRO
- City of Houston
- Harris County
- Greater Northside Mgmt. District

Project Benefits

- Enhanced transit access and service to the community
- Expanded multimodal mobility
- Increased safety along the corridor



Photo of BOOST bus stop with new sidewalks and an enhanced street crossing on Studewood Street

3.2 Irvington Boulevard Multimodal Enhancements

Project Description

Irvington Boulevard is a major corridor in the district that is currently host to a pair of low-comfort bike lanes and the METRO Bus route 79. The corridor provides direct access to the METRORail Red Line and the frequent 26 Longpoint-Cavalcade bus route, and is an important connection to downtown, interstate 610, and destinations north of the district. Enhancing this key street to provide improved pedestrian, bicycle, and transit facilities, along with place-making amenities and features will improve access to the district and beyond for people using the corridor, while also turning the street into an iconic, visually distinct area with greater-Houston.

Project Components

- Re-stripe Irvington Boulevard to provide a five foot bike lane with a two foot buffer in both directions.
- Install physical barriers within the striped buffer to provide a high-comfort biking facility along the corridor
- Create transit-islands at bus stop locations for METRO Route 79 to improve safety and for bicycle users and transit riders along the corridor.
- Construct ADA compliant sidewalks and curb ramps where needed. Sidewalks should be 6' wide if feasible with a minimum width of 5'
- Street crossings along Irvington Street should include visible crosswalks and lighting to ensure visibility of pedestrians at intersections.
- Develop visually pleasing, place-making landscaping and amenities, including signage, way-finding, seating, planters, and custom pavings to create a welcoming urban realm the reflects the district's local character

Cost Estimate

Total: \$4,324,800

Category

- Creating Accessible Transit Corridors

Role

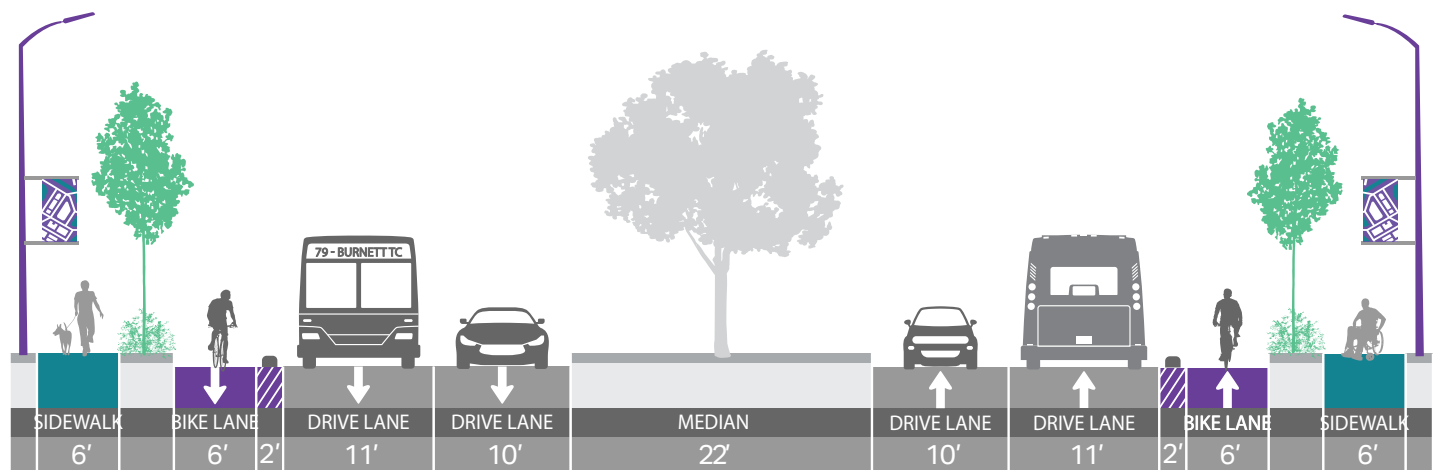
- Lead or Funding Partner

Project Partners

- City of Houston
- Harris County
- METRO
- Greater Northside Mgmt. District

Project Benefits

- Support redevelopment of commercial corridor
- Enhance safety for all modes
- Improve access to transit and community destinations



Proposed typical cross-section for Irvington Drive

3.3 Burnett Street Enhanced Bikeway Extension

Project Description

Burnett Street acts as a primary connection between bike facilities on Hardy & Elysian Streets to the Burnett Transit Center, where people can connect to METRORail and bus services. The construction of a high-comfort cycle track along the street would offer safe, seamless connections between transit and other high-comfort bicycle facilities.

Project Components

- Re-stripe Burnett Street from Hardy Street to Burnett Transit Center to accommodate a two-way, 11' wide cycle track on the south side of the street that is protected from vehicular traffic by parking and a 3' wide buffered door-zone

Cost Estimate

Total: \$437,000

Category

- Creating Accessible Transit Corridors

Role

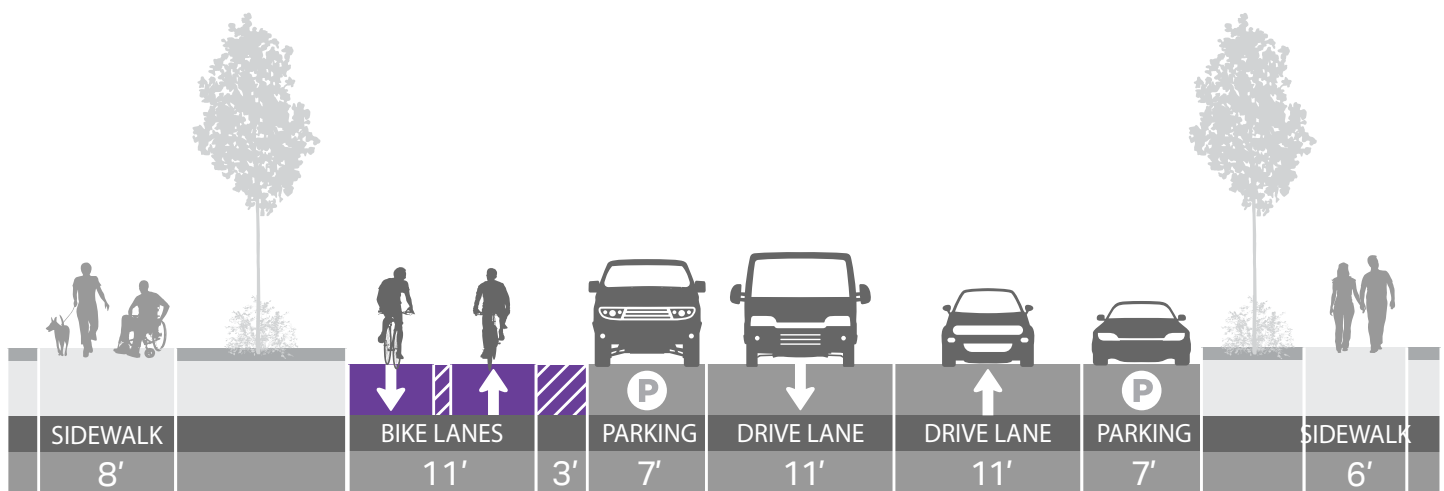
- Lead

Project Partners

- METRO
- City of Houston
- Greater Northside Mgmt. District

Project Benefits

- Builds on bikeway network and multimodal investments
- Enhances safety and accessibility
- Improves access to transit



Proposed Burnett Street cross-section with parking protected bike lanes

3.4 Trail to Transit Connector

Project Description

Currently, users of the White Oak Bayou Trail have to travel to the University of Houston Downtown station to access METRORail services. It is recommended to construct a connector from the White Oak Bayou Trail to Burnett Transit Center. This would provide riders with a closer connection to rail services and enhanced access to local bus routes. This connection would also provide a better access point for pedestrians trying to travel between the trail and the southern end of the district.

METRO is currently constructing a new Maintenance of Way (MOW) facility at Brooks and Keene Streets. It is recommended to work with METRO, UPRR, and other property owners to coordinate a more direct access from the trail to Keene Street. The existing rail alignment in this area is likely to be realigned and relocated in coordination with the North Houston Highway Improvement Project, which is a significant opportunity to leverage for location of this proposed trail.

From Keene Street it is recommended to use Trentham Street as a preferred connection to Burnett Transit Center if traffic control is to be established at that intersection in the future. Brooks Street to Freeman Street to Burnett Transit Center is an alternative.

Project Components

- Construct a 10 foot, multi-use trail connection linking the White Oak Bayous Trail to Keene Street.
- From Keene Street to the Burnett Transit Center construct a sidepath or on-street bike lanes along Keene Street and Trentham Place or Brooks Street and Freeman Street.
- Develop signage to direct bicycles from between the transit center and trail.

Cost Estimate

Total: \$327,000

Category

- Creating Accessible Transit Corridors

Role

- Lead or Funding Partner

Project Partners

- METRO
- UPRR
- Private Property Owners
- City of Houston
- Northside Management District

Project Benefits

- Increased transit access
- Increased trail access



Aerial image the area and potential link between the White Oak Bayou Trail and Burnett Transit Center

4.1 Hardy Corridor Multimodal/Greenway Vision

Project Description

Harris County is in the process of planning and designing the extension of the Hardy Tollway from I-610 to Downtown Houston. While the scope of this project includes the Tollway section, it is also an opportunity to reestablish east-west connectivity within the community. Additionally, HCTRA's new mission focuses on mobility for all people, including those who are walking, biking, or using transit. This Harris County project brings an opportunity to incorporate multimodal transportation connections and craft a vision for how the corridor can bring together and enhance the community.

TIRZ 21 should coordinate with the HCTRA Downtown Connector project and participate as a stakeholder. This will allow the TIRZ to provide project input to create a multimodal corridor and potential greenway with crossings that enhance safety and connectivity in the community.

Project Components

The vision for this corridor should be rooted in the following:

- Enhancing community connectivity where it had previously been reduced by the railroad.
- Providing multimodal accessibility along the HCTRA corridor itself and east-west connectors that will cross the new facility.
- Incorporating landscaping and placemaking where possible to create a comfortable and inviting feel for people using all modes while tying in the community's needs and history.

Cost Estimate

Total: N/A

Category

- Leveraging Mega-Project Opportunities

Role

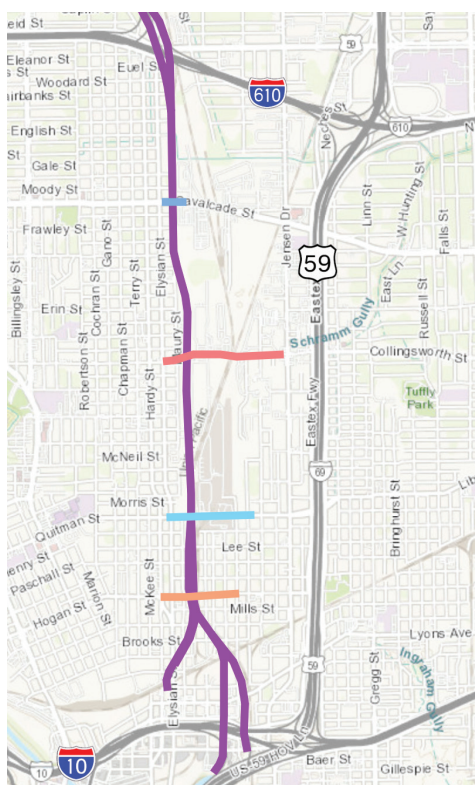
- Coordinating Partner

Project Partners

- HCTRA
- Harris County

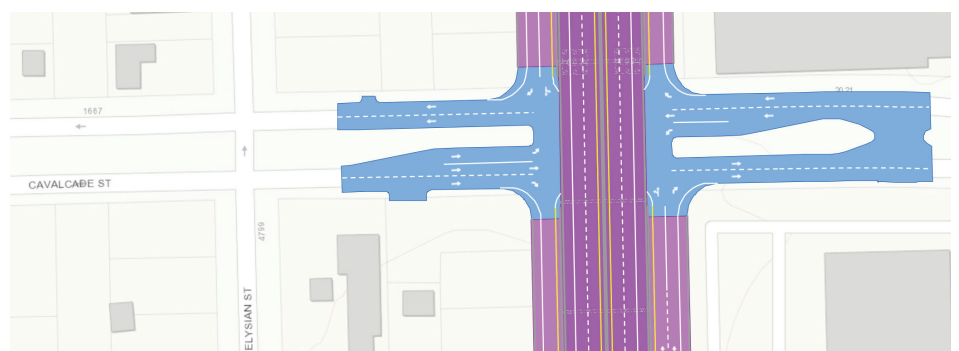
Project Benefits

- Increased safety and convenience for all users by removing at-grade railroad crossings at key intersections railroad crossings
- Enhanced community feel with new landscaping and green spaces
- Increased community connectivity

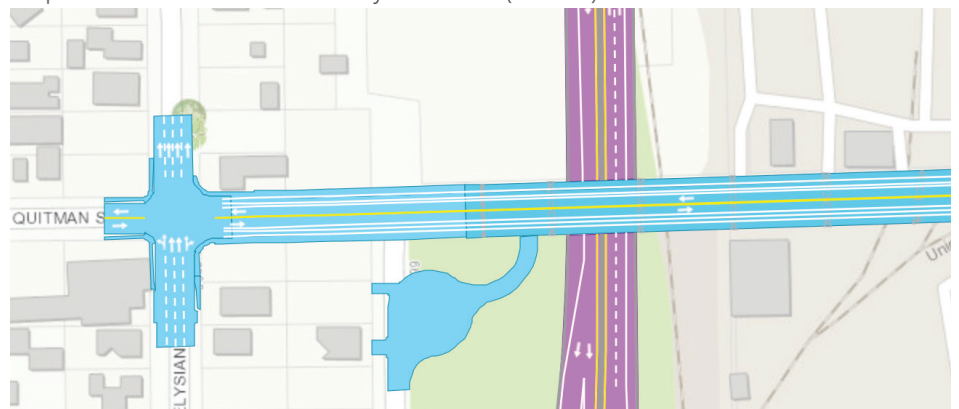


Hardy Connector Project map with highlighted railroad crossings (HCTRA)

TIRZ 21 Mobility Recommendations



Proposed Cavalcade Street at Hardy Connector (HCTRA)



Proposed Quiltman Street at Hardy Connector (HCTRA)

4.2 Elysian Viaduct Enhancement

Project Description

The Elysian Viaduct bridge has recently been reconstructed but does not include safe walking and biking options. Under the bridge, basic sidewalks have been constructed to enable a space for people walking. It is recommended to enhance the Elysian Viaduct with a focus on safe crossings for people walking and biking as well as improve comfort and activating this public space. Additionally, it is recommended to coordinate with the City of Houston (and other entities as appropriate) to allocate space on the Elysian Viaduct to accommodate people walking and biking. This would increase multimodal connections between the Near Northside community and Downtown Houston.

Project Components

The space underneath the Elysian Viaduct between Nance Street and Opelousas Street should be enhanced to create a sense of place and added safety and security for people walking and biking. Features that incorporate the community's history, create activity in the space, and provide better accessibility and safety can include lighting, signage, art, crosswalks, and more. Working with the community and art organizations to identify potential features like seating, interactive art, and artistic designs is recommended to build on the bridge colors and existing sidewalks along the corridor.

Intersections at Elysian and Harrington and Brooks Streets should be improved to provide safe crossings. High visibility crosswalks and lighting should be used at these intersections. Additionally the Harrington Street intersection should include enhanced striping and signage for existing bicycle connectivity.

The newly constructed Elysian Viaduct includes two lanes in each direction with a concrete barrier and shoulders in each direction. By reallocating the existing space it may be possible to create a dedicated space, potentially in the center with barriers from vehicle traffic. This concept could significantly improve the comfort and experience of people walking and biking across I-10, the railroad tracks, and Buffalo Bayou. This concept is not included in the cost estimate and is dependent on agency coordination.

Cost Estimate

Total: \$168,000

Costs include intersection and crossing improvements with some lighting and signing additions. This should be updated based on community feedback and identified placemaking components.

Category

- Leveraging Mega-Project Opportunities

Role

- Lead

Project Partners

- HCTRA
- Harris County
- City of Houston
- Greater Northside Mgmt. District

Project Benefits

- Enhanced sense of place
- Increased access to destinations
- Increased safety for multiple modes
- New community space that is activated



Opelousas Street at Elysian Viaduct showing new sidewalk, colored pillars and open space.

4.3 Rail Crossing Improvements

Project Description

The rail lines east of Elysian Street have disconnected the community. In coordination with project 2.1, there is an opportunity to remove this barrier and reconnect the community for people using all modes of travel. TIRZ 21 should be a partner and stakeholder in this project to ensure connectivity and safety for people using all modes in the district.

Project Components

- Construct new, 6 foot, ADA compliant sidewalks with accessible ramps across future rail crossings as part of the HCTRA project.
- Where appropriate, incorporate bike lanes on bridges where applicable to ensure bikeway connectivity.

Cost Estimate

Total: Part of Hardy Connector Project

Category

- Leveraging Mega-Project Opportunities

Role

- Coordinating Partner

Project Partners

- HCTRA
- City of Houston

Project Benefits

- Improved safety
- Increased accessibility



Lorraine Street at Hardy Street with bike lane intersection markings and connections to the newly constructed railroad underpass to the east. Example of connectivity for other corridors.

5.1 Little White Oak Trail

Project Description

The Little White Oak Bayou Regional Greenway is a proposed project by the Houston Parks Board. The full Greenway runs generally along the I-45 corridor connecting Greens Bayou to White Oak Bayou. The section of this proposed project where Little White Oak Bayou crosses I-45, north of Patton Street to White Oak Bayou is nearly 2 miles long. It is an opportunity to connect to parks, schools, transit, and other bikeways with a safe, mixed-use path.

It is recommended for the TIRZ to partner with the Houston Parks Board to support this project moving forward. The TIRZ can be a community partner that helps gain community input and support as well as a funding partner to help provide local match funding to bolster grant funding if needed.

Project Components

The full Greenway would consist of a variety of multi-use facilities. This segment would be an off-street trail, approximately 10' in width with trees and landscaping to complement the trail's natural aesthetics along the bayou. Additionally, community art and amenities, such as benches, could be incorporated at key areas to enhance the functionality for the community.

Crossings, such as bridges or on street treatments, for streets, railroad tracks, or the bayou itself would be required.

Cost Estimate

Total: \$11,338,000

*Houston Parks Board project cost for only this segment of the Greenway

Category

- Leveraging Mega-Project Opportunities

Role

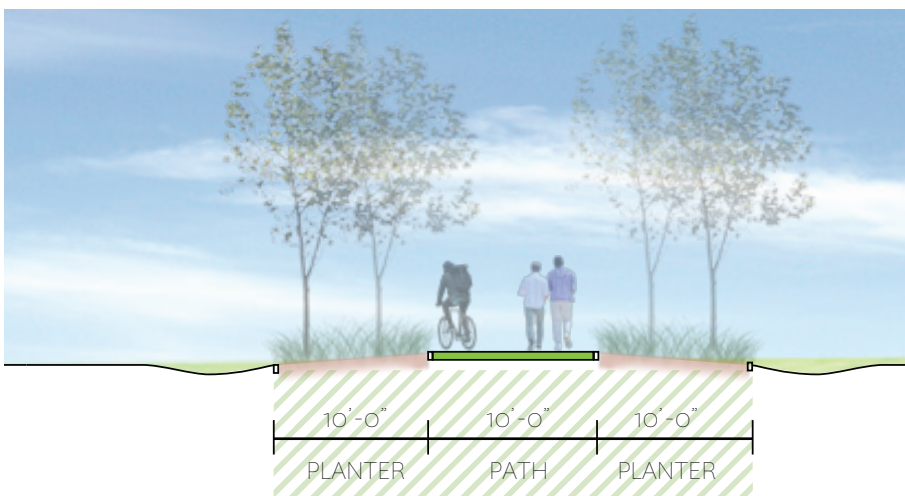
- Funding Partner
- Coordinating Partner

Project Partners

- Houston Parks Board
- Harris County
- Greater Northside Mgmt. District

Project Benefits

- Safe connections to transit and parks
- Expands the bikeway network
- Recreation area for community health



Proposed cross-section from Houston Parks Board TIP Application



Little White Oak Bayou at Trimble looking north of Moody Park

TIRZ 21 Mobility Recommendations

5.2 San Jacinto Multimodal Extension

Project Description

San Jacinto Street currently ends just north of I-10, but has been proposed as a new connection across the railroad tracks in Hardy Yards to Burnett Street at Fulton Street. As the North Houston Highway Improvement Project is implemented and I-10 is realigned, there is an opportunity to move this project forward and increase the connectivity between Downtown and the Near Northside community. This project is in the City of Houston Major Thoroughfare and Freeway Plan and is classified as a proposed major thoroughfare.

It is proposed to prioritize this connection as a pedestrian and bicycle corridor. This extension project would present safe, multimodal options to connect the community to more destinations. This compliments current efforts to lower the corridor classification of Fulton Street south of Burnett Street. A pedestrian and bicycle connection may be more feasible to link the Northside and Downtown Houston given the complexity of crossing the UPRR and I-10/I-45 facilities.

Project Components

- Construct a pedestrian and bicycle corridor with high comfort facilities including an 8' wide pedestrian area with a physical buffer to a 12' wide two-way cycletrack.
- This segment will require an underpass crossing of the Union Pacific railroad in Hardy Yards.
- Future development in the Hardy Yards should coordinate with the lower street classification and focus on providing safe, comfortable walking and biking access in conjunction with vehicular access. This includes on-street parking, protected bike lanes, and buffered 6' wide sidewalks to maintain safe, comfortable access to destinations.

Cost Estimate

Total: \$9,735,000

Additional coordination with UPRR and TxDOT is needed to refine the project and develop more detailed cost estimates due to the railroad underpass and highway underpass.

Category

- Leveraging Mega-Project Opportunities

Role

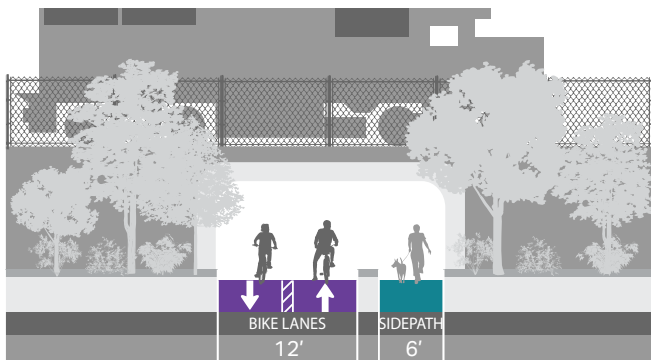
- Coordinating Partner

Project Partners

- City of Houston
- METRO
- Greater Northside Mgmt. District
- Union Pacific RR
- Developer/Property Owners

Project Benefits

- Additional Downtown access
- Enhanced mobility for all modes
- Increases connectivity and major barrier crossings



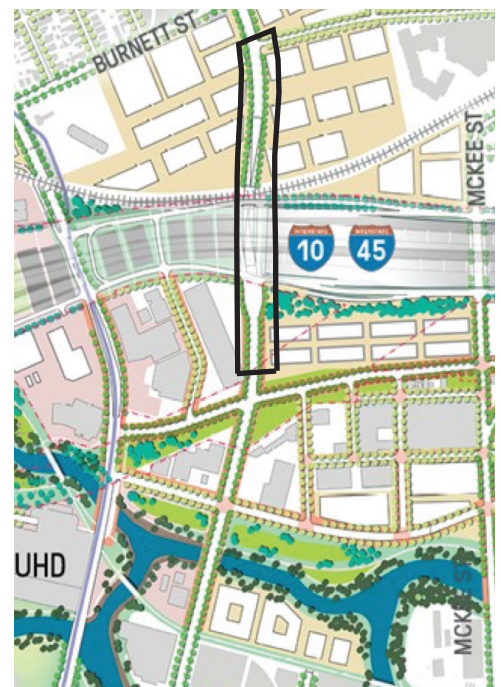
Proposed cross-section for San Jacinto Pedestrian Bicycle Corridor



Example pedestrian/bicycle underpass



Example from Georgia Tech University campus



City of Houston Vision of Northside connections with the realigned I-45/I-10 corridor San Jacinto is outlined in black

5.3 Hogan Street Bridge Enhancement

Project Description

As part of the North Houston Highway Improvement Project, the Hogan Street Bridge will be replaced. The new bridge should incorporate multimodal facilities as planned on Hogan and Lorraine Streets to ensure continuity and connectivity across I-45/I-10. Currently this project shows pedestrian facilities along the bridge in both directions.

The City of Houston has recommended enhancements to the TxDOT project to better connect trails, increase community connectivity, incorporate more parks and green space, and mitigate negative impacts. This represents an opportunity for the TIRZ to work closely with the City of Houston and TxDOT to ensure the pedestrian facility can accommodate bicyclists as well or for bike lanes to be incorporated into the street design as Crockett/Hogan/Lorraine Streets are an important multimodal connector in the City's Bike Plan.

Project Components

The bridge should coordinate with the Crockett/Hogan Street/Lorraine Street design, including 2 driving lanes in each direction and an enhanced pedestrian realm that can accommodate people walking and biking.

Cost Estimate

Total: Part of I-45 TxDOT project

Category

- Leveraging Mega-Project Opportunities

Role

- Coordinating Partner

Project Partners

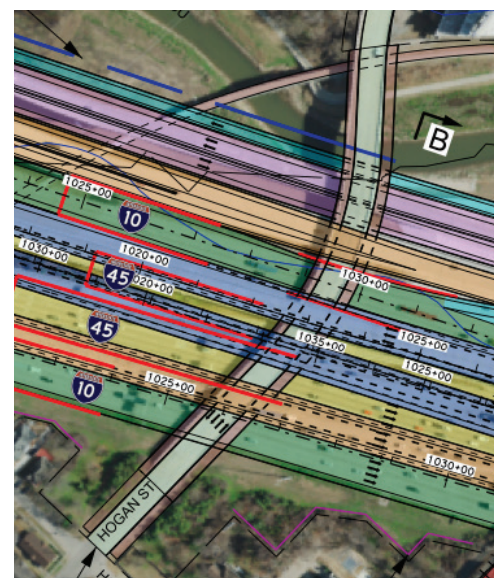
- City of Houston

Project Benefits

- Safe mobility options for people walking and biking
- Enhanced community connectivity across a major barrier



City of Houston vision for the Near Northside and Hogan Street Bridge



TxDOT Hogan Street design schematic (2019)

5.4 Patton Street Connection

Project Description

The North Houston Highway Improvement Project will be improving the Patton Street intersection and crossing at I-45, which will include ADA compliant pedestrian facilities. The METRORail Red Line project included improved pedestrian facilities along Fulton Street when completed in 2015. Patton Street between Fulton Street and I-45 will incorporate an enhanced pedestrian realm to provide a safer and more comfortable pedestrian experience and leverage these other investments.

Project Components

Short Term:

- Coordinate with the NHHIP to create a safe, comfortable, ADA-compliant pedestrian realm across I-45 and at the frontage road intersections.
- Along Patton Street between I-45 and Fulton Street, construct ADA compliant sidewalks and curb ramps where existing sidewalks are less than 5' wide or in poor condition. Sidewalks should be 6' wide if feasible with a minimum width of 5'.
- Street crossings along Patton Street should include visible crosswalks and lighting to ensure visibility of pedestrians at intersections.

Long Term:

- Coordinate with the City of Houston and advocate for a rebuild of Patton Street from Irvington Boulevard to I-45 (Airline Drive west of TIRZ 21). The rebuild should incorporate bike lanes, sidewalks, and pedestrian crossings to meet ADA and other best practice standards to create a safe, comfortable, multimodal experience. This would connect the bike lanes on Irvington, Little White Oak Bayou trails, Moody Park, Montie Beach Park, and Browning Elementary School.

Cost Estimate

Total: \$249,000 (beyond TxDOT improvements)

Category

- Leveraging Mega-Project Opportunities

Role

- Lead (short-term)
- Coordinating Partner (long-term)

Project Partners

- City of Houston
- Harris County

Project Benefits

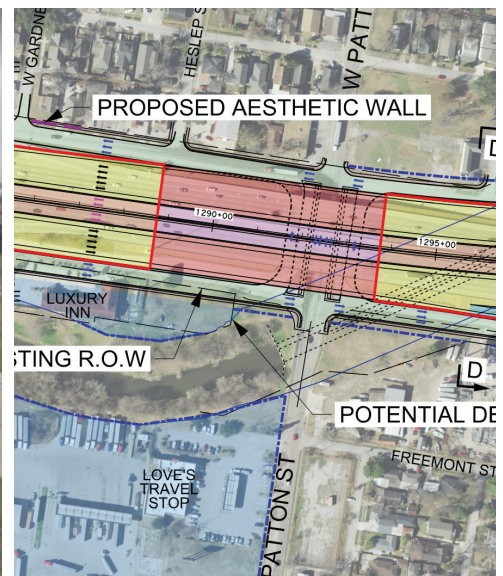
- Improved access to transit and businesses
- Safety enhancement for people walking
- Increased accessible connections to future trails and community destinations



Project location reference map



Overgrown and narrow sidewalks along Patton Street looking toward I-45.



TxDOT Patton Street design schematic (2019)

5.5 Link Road Connection

Project Description

The North Houston Highway Improvement Project will be improving the Link Road intersection and crossing at I-45, which will include ADA compliant pedestrian facilities. The METRORail Red Line project included improved pedestrian facilities along Fulton Street when completed in 2015. It is recommended that Link road between Fulton Street and the Little White Oak Bayou trail (approximately 200' west of I-45) incorporate an enhanced pedestrian realm to provide a safer and more comfortable pedestrian experience and leverage these other investments.

Project Components

- Coordinate with the NHHIP to create a safe, comfortable, ADA-compliant pedestrian realm across I-45 and at the frontage road intersections.
- Along Link Road fill gaps and fix sidewalk segments that are in poor condition with ADA compliant sidewalks and curb ramps. Sidewalks should be a minimum width of 5'.
- Pedestrian crossings along Link Road should include visible crosswalks and lighting to ensure visibility of pedestrians at intersections.
- Trees and wayfinding signage should be incorporated to enhance comfort, access to the trail and Red Line, and overall sense of place.

Cost Estimate

Total: \$174,000 (beyond TxDOT improvements)

Category

- Leveraging Mega-Project Opportunities

Role

- Lead

Project Partners

- City of Houston
- Harris County

Project Benefits

- Improved connections between trails and transit
- Enhanced pedestrian safety and accessibility
- Increased community connections



Top: Project location reference map
Top Left: Link Road east of I-45 showing speed cushions and sidewalks with a physical barrier
Top Right: Link Road west of I-45 at the existing Little White Oak Trail

5.6 Main Street Bikeway Improvements

Project Description

The North Houston Highway Improvement Project (NHHIP) will be redesigning the North Main Street bridge over I-45 and will include a cap that may be future open space. Additionally the I-45 project will be constructed to allow for a future BRT station at Main Street. The BRT station is not included in the NHHIP project, however the infrastructure is being designed to support a future station if applicable. This project presents an opportunity to enhance access from the community to new high-frequent transit service.

The Main Street Multimodal Improvements should create a high-comfort biking and walking connection between the METRORail Red Line, Little White Oak Bayou Trail, and the BRT station. Bikeway improvements on this corridor would connect to other existing and future bikeways to create a network that is integrated with transit and community access.

Project Components

Short Term:

- Construct a 10' wide shared-use path on the west-side of Main Street to provide bicycle and pedestrian connectivity from Boundary Street to I-45.

Long Term:

- Reconstruct Main Street from Boundary Street to I-45 as a 3-lane corridor with one lane in each direction and a center turn lane.
- The back of curb area should include a landscaped buffer and a 10' wide sidepath on each side for pedestrians and bicyclists.
- Reconfigure the Little White Oak Bridge to have one vehicle lane in each direction and continued facilities for walking and biking.
- Coordinate design with METRO to complement and enhance transit access for the future proposed BRT station.

Cost Estimate

Total: \$3,228,000 (short-term)
\$4,912,000 (long-term)

Category

- Leveraging Mega-Project Opportunities

Role

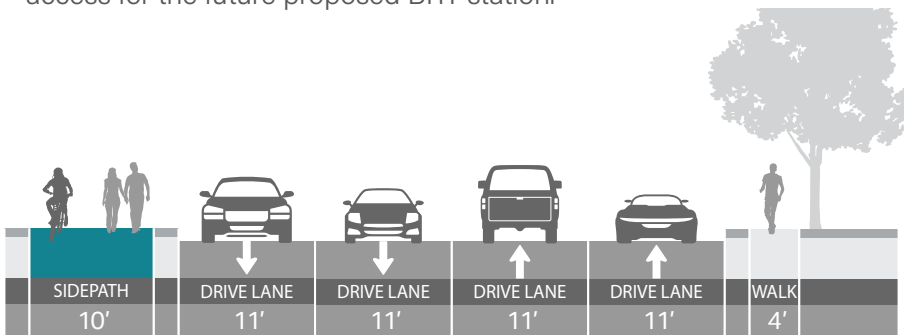
- Lead (short-term)
- Funding & Coordinating Partner (long-term)

Project Partners

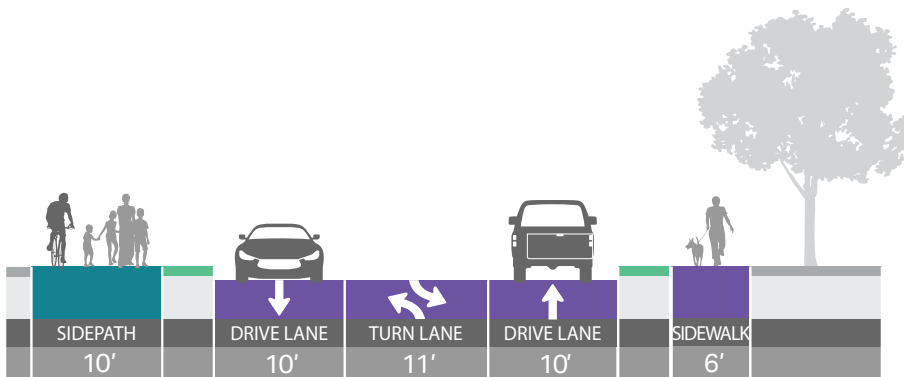
- City of Houston
- METRO
- Greater Northside Mgmt. District

Project Benefits

- Improved community access
- Multimodal safety
- Supports future investments



Proposed cross-section with short-term improvements (no change to existing street)



Proposed cross-section for long-term improvements