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Special Thanks



Special thanks to the Museum Park Super Neighborhood Council for its invaluable effort in spearheading and securing local match funding for the Museum Park Livable Centers Study and the Caroline Street Pedestrian/Bicycle Infrastructure Improvement Project Planning and Pre-design Concept Plan Report.





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COH CITY OF HOUSTON COH PMD CITY OF HOUSTON PARKING MANAGEMENT DIVISION CPE CENTERPOINT ENERGY GSMD GREATER SOUTHEAST MANAGEMENT DISTRICT HCC HOUSTON COMMUNITY COLLEGE HGAC HOUSTON GALVESTON AREA COUNCIL HFC HOUSTON FIRST CORPORATION HISTORIC HOUSTON HHD HOUSTON HEALTH DEPARTMENT HPARD HOUSTON PARKS AND RECREATION DEPARTMENT HERMANN PARK CONSERVANCY HPDD HOUSTON PLANNING AND DEVELOPMENT DEPARTMENT HPWED HOUSTON PUBLIC WORKS AND ENGINEERING DEPARTMENT HSE HOUSTON SOUTHEAST HOUSTON WILDERNESS HW KATY PRAIRIE CONSERVANCY KPC MIDTOWN MANAGEMENT DISTRICT MD MUSEUM DISTRICT ASSOCIATION METRO THE METROPOLITAN TRANSIT AGENCY OF HARRIS COUNTY MPLCS MUSEUM PARK LIVABLE CENTERS STUDY MPNA MUSEUM PARK NEIGHBORHOOD ASSOCIATION MUSEUM PARK SUPER NEIGHBORHOOD PARKING BENEFITS DISTRICT PBD PRIVATE DEVELOPERS PH PRESERVATION HOUSTON P0 PRIVATE OWNERS PT PRESERVATION TEXAS RICE U RICE UNIVERSITY SH SCENIC HOUSTON TREES FOR HOUSTON THC TEXAS HISTORICAL COMMISSION

TIRZ 2 MIDTOWN TAX INCREMENT REINVESTMENT ZONE #2

TIRZ 7 OST/ALMEDA TAX INCREMENT REINVESTMENT ZONE #7

TMC TEXAS MEDICAL CENTER

TXDOT TEXAS DEPARTMENT OF TRANSPORTATION

URH URBAN HARVEST

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EXECUTIVE SUMMARY

PROJECT OVERVIEW

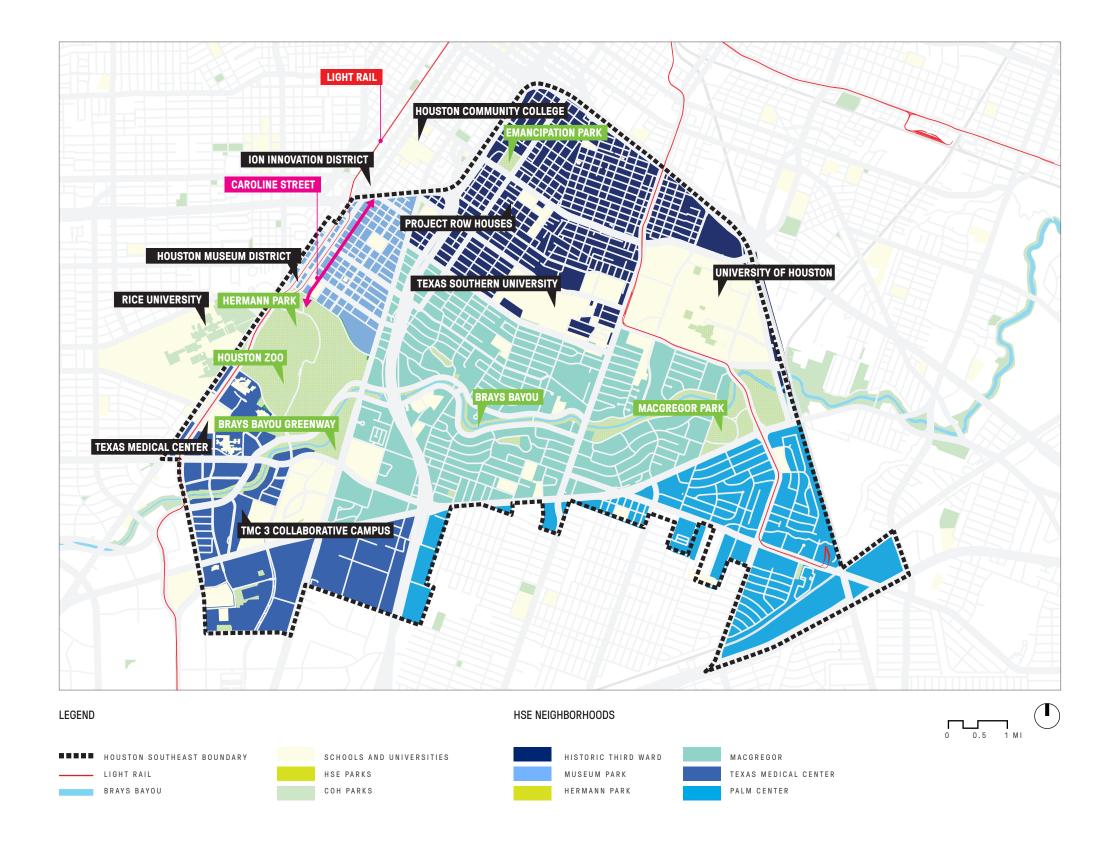
Planning and Pre-Design Services for pedestrian improvements to the right-of-way along Caroline were conducted in 2019-2020 following the recommendations included in the Museum Park Livable Centers Study (MPLCS) completed in the Summer of 2016. This summary provides an overview of the project's process, findings, and recommendations that create a roadmap towards future implementation. The concept plan sets the foundation for future engineering and detailed design efforts.

The Caroline Street Promenade/Pedestrian-Bicycle Infrastructure Improvement Project is a 1.7 mile, 15-block corridor study in Houston Southeast. The project is focused on the stretch of Caroline Street spanning from Wheeler Avenue at I-69 to Hermann Drive.

The project consists of back-of-curb pedestrian improvements (plus esplanades) that address the issues of multi-modal accessibility, pedestrian safety and comfort, ecosystem services, neighborhood identity, and by extension, economic development potential in the area.

The means by which these objectives are achieved synthesize mobility, landscape, and placemaking design into a singular vision that is scalable and flexible enough to facilitate buy-in among a complex group of stakeholders and the community at large.

For the purposes of planning, base mapping information was collected through field visits by the consultant team. Previous corridor analyses conducted during the MPLCS that initially served as the point of departure for planning and design were revisited to reflect recent developments in the neighborhood context. Design recommendations were derived within the parameters of the project goals that would resonate with the current funding climate (that prioritizes functional benefit in lieu of purely beautification-focused objectives).



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EXECUTIVE SUMMARY

PROJECT PROCESS AND METHODOLOGY

The objective of the design approach and the planning process was to establish a path towards implementation through advocacy and strategic decision making. Over a period of eight months, the consultant team worked closely with the Client group to ground the process in common values held by the area stakeholders and to capture the sense of urgency surrounding the concurrent development scheduled in the local area. Paticipatory engagement techniques at stakeholder and public meetings were used to inform the project Stakeholder Advisory Committee (SAC) as well as the public along the way.

The project design methodology was informed by its planning context and built upon a combination of background studies and the main governing pillars of Greater Southeast Management District. The "Why?" of the project is closely tied to the District's mission of promoting a high quality of life and societal equity for its stakeholders. The "What?" is the directive for project goals and objectives founded in the District's strategic goals and services, including:

- Business and Economic Development
- Environmental, Urban Design and Visual Improvement
- Marketing, Public Relations and Perception Enhancement
- Transportation and Local Mobility
- Enhanced Public Safety

The project goals clearly define key principles employed in the process of design and are predicated on the need for advocacy and continuous implementation and maintenance funding. As such, they stress the need for inter-agency coordination, consensus building, and using this project as a vehicle to achieve district-wide goals.

The "How?" (design strategies and tactics) help the implementation of goals and objectives based on the principles of functionality, performance criteria, and appeal to potential funding sources.



DIRECTION:

PROCESS PRINCIPLES



COORDINATE: BE STRATEGIC IN LEVERAGING TIMING,
GEOGRAPHY AND RESOURCES TOWARDS PROJECT OUTCOMES



2 BUILD CONSENSUS: INVOLVE COMMUNITY AND STAKEHOLDERS FOR FUTURE PARTNERSHIPS



3 REPLICABLE IMPROVEMENT SCENARIOS THROUGHOUT THE DISTRICT



4 DESIGN FOR A HIERARCHY OF NEEDS IN THE URBAN REALM:
DEFINE THE PROJECT AS "CRITICAL INFRASTRUCTURE" THAT
REQUIRES LAYERS OF MOBILITY, LANDSCAPE, AND IDENTITY
IMPROVEMENTS

CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

IMPLEMENTATION:

GOALS AND OBJECTIVES	STRATEGIES / TACTICS:	MOBILITY	LANDSCAPE DESIGN	PLACEMAKING/IDENTITY
1. PROMOTE MULTI-MODAL SAFETY AND USE		 Introduce curb extensions (bulbouts) to reduce vehicular travel speeds and extend pedestrian realm at intersections Create well-defined striped delineation of parking zone and crosswalks Add sharrow lane markings 	 Design for planting at intersections that adheres to the COH safety guidelines, limb up tree growth when interferes with safe travel clearance Use landscape as resiliency infrastructure for environmental health 	 Add bike lane signage Add pedestrian wayfinding signage Enhance vehicular and parking signage where needed
2 ESTABLISH CONNECTIVITY AND WALKABILITY AS NOTABLE DISTRICT FEATURES		 Add continuous six-foot sidewalks where possible and rebuild ramps to City and ADA standard Add pedestrian lighting at intersections Create signature hardscape design at intersections and median tips 	 Preserve shade and enhance human comfort by maintaining the health of the existing tree canopy through a robust tree maintenance program Develop a consistent planting palette to extend the park environment into the neighborhood 	 Develop pedestrian wayfinding signage to include multiple destinations in the neighborhood beyond Caroline corridor Design wayfinding to create a sense of discovery and anticipation
PROMOTE HEALTH BENEFITS FOR THE COMMUNITY AND URBAN ECOSYSTEMS		 Maintain narrow lanes and tighter radii at intersections to reduce vehicular speeds for safety encouraging safe bicycle and pedestrian travel Create convenient micromobility share staging where possible 	 Amend existing urban soils and rehabilitate at-risk trees Improve habitat value with a diverse plant palette at the esplanades Create a balanced maintenance program Design provisions for maximum greening at I-69 and Wheeler cap 	references in District signageDevelop a "Cultural Trail" signage prototype for the District as a whole
4 AID ECONOMIC DEVELOPMENT IN THE AREA BY LEVERAGING TOURISM OPPORTUNITY		 Maintain easy vehicular access for regional traffic near the museums at Hermann Drive Streamline parking wayfinding in the area Create a multi-modal and walkable campus that connects area's notable destinations 	 Pilot planting enhancements at key gateways and intersections Create PR messaging campaign drawing attention to the area's landscape improvement program Create landscape demonstration projects to promote public awareness and education 	 Design signage for creation of walkable loops in the neighborhood Include directions to District businesses in District signage Create a branded gateway moment at I-69 and Wheeler Create activation strategies for vacant/underutilized lots
5 IMPROVE AREA IDENTITY AND CHARACTER FEBRUARY 2020		 Bury the above ground utilities to support resiliency of urban infrastructure Create continuity through a consistent planting palette that can be a model for other medians in the neighborhood 	 Utilize a plant palette throughout the corridor that provides consistent appearance throughout the year Create educational program encouraging native planting in the area Provide consistent street furniture amenities 	 Develop and implement District branding to promote destination awareness Make wayfinding appearance a quiet and complementary feature of the streetscape Utilize public art placement and other cultural character enhancements

EXECUTIVE SUMMARY

CAROLINE STREET CONCEPT PLAN

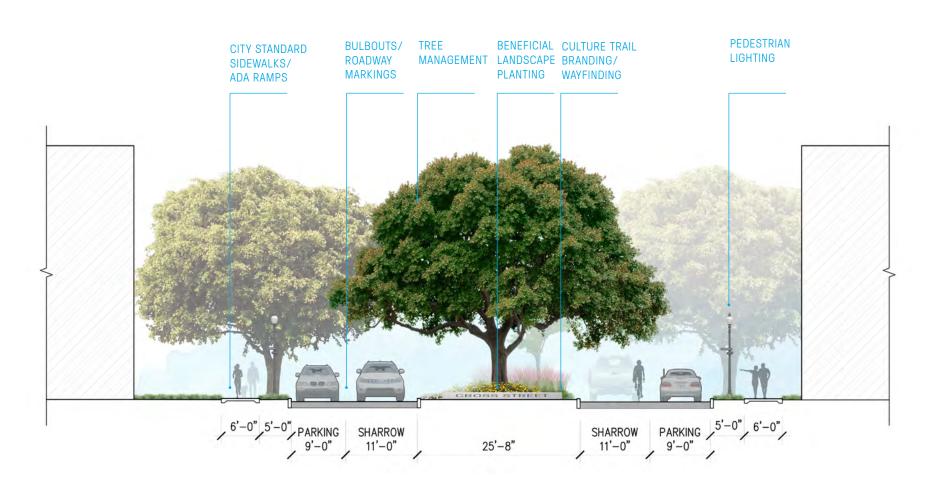
LEGEND

---- PROJECT SCOPE

GATEWAY AREAS

---- IMPLIED CHARACTER ZONES









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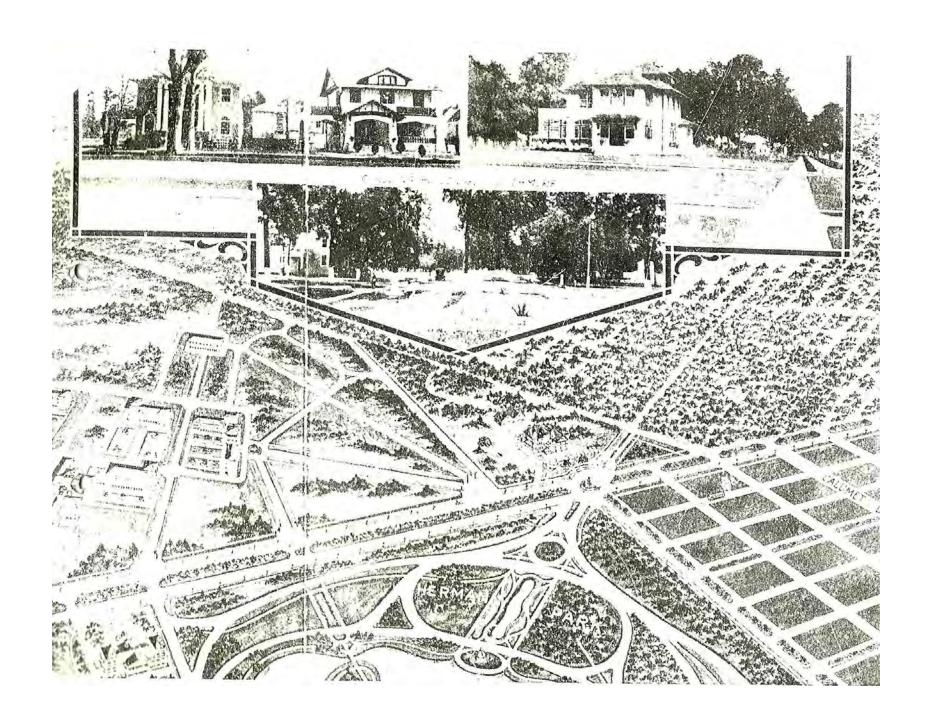




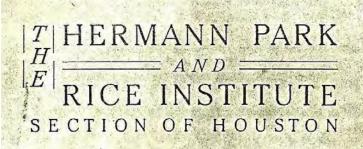


HISTORICAL CONTEXT

Caroline Promenade today serves as a central spine of a cultural district embedded in a historic residential area. Originally envisioned as a system of boulevards connected with the tracts of "Rice Institute" and "Hermann Park and Hospital," this development has become one of the most iconic places in Houston. In keeping with the original vision of Caroline's role as a walkable boulevard, the idea of a promenade in a garden setting, should be reinforced. Walkable districts and streets have reemerged as a foundational urban structure for healthy, connected, and prosperous communities.



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CONTAINING information of vital importance to investors. Letters from twenty-six leading cities of the United States and a perspective view of Houston as it will look when improvements now under way are completed. Showing that real estate around or near a University or Large City Park has always been in other cities and is now in Houston a great opportunity for investment.

The entrance to Hermann Park will be the center of Houston's complete boulevard system, where all boulevards now built or to be constructed will converge. The Hermann Park and Rice Institute section will become the civic social center.

704 1-2 Main Street 206-208 Levy Building HOUSTON, TEXAS H. F. Mac GREGOR and F. J. De MERITT

Owners of

OUTHMORE, BLODGETT PARK and KENILWORTH GROVE

RESIDENCE SUBDIVISIONS

THIS BOOKLET is published to interest you in Southmore, Blodgett Park and Kenilworth Grove residence subdivisions.

In every good enterprising American city, a field for investment has been opened up in real estate development, which has made possible more sure fortunes than any other investment opportunity.

In Houston this opportunity is offered in the development of the Rice Institute, the Hermann Park and Hermann Hospital sites, and the construction of the Main Street Boulevard, which have definitely directed and firmly fixed the future residential growth of this city. This development has just begun.

There are nearly seven hundred acres in the sites of the Rice Institute and Hermann Park and Hospital. The three sites are contiguous, forming one large beautiful tract which will be transformed into a garden of civic beauty. From east to west this tract will measure nearly one mile; from north to south about one half mile. Penetrating the center is the Main Street Boulevard, now under construction, a wide, beautiful thoroughfare, with a handsome esplanade in the center and with promenade walks of unusual width, and street lights on the sides. This Boulevard will lead direct from the Rice Institute and Hermann Park, without a turn, through the best residence section of the city to the heart of the business section.

The combined endowment of the Rice Institute and the Hermann Hospital will aggregate about fifteen million dollars. The revenues from these two institutions are more than enough to insure a rapid and complete development of their properties on an elaborate scale.

Few Houstonians are awake to what this development eans,

Probably no other American city of the size of Houston, has had such wealth of enterprise founded in any one favored section. Few have had such institutions so richly endowed.

In most cities, colleges are established with me are endowment. Their growth is slow and the beautification of their

grounds and construction of buildings slower. In most cities the park development is not so elaborate. The Main street boulevard is an enterprise that not many cities undertake. Yet in other cities the experience has been that around or near colleges or universities, less favorably established, or around or near parks opened up less auspiciously, real estate values are often the highest.

Letters have been received and are printed in this booklet, from heads of commercial organizations from twenty-six representative cities of the United States, showing that such real estate is high and in demand; that the better class of residence development is attracted to Universities and Parks.

Prices in Southmore, Blodgett Park and Kenilworth Grove, are low. Some building sites with 50 feet front can be bought for \$11,40 per front foot, or \$570.00 a lot. Many choice sites can be bought on the basis of \$900.00 per lot, or \$18.00 a front foot. Some of the best sites can be bought on a front foot basis of from \$20.00 to \$35.00. This same class of property in many other cities is selling for \$100.00 per front foot.

These subdivisons are restricted and are laid out with broad streets and boulevards with gravel pavement. Concrete sidewalks lead to the street car. Water, gas, electric lights and telephones, are modern conveniences which they have. There are many beautiful trees. The Fannin street car line runs through these properties direct, without a turn from the business section. Many fine homes have already been built, pictures of several of which may be seen in this booklet.

This is your opportunity to buy—can you afford to neglect?

H. F. Mac GREGOR and F. J. De MERITT, Owners

JOHN VAN DeMARK, Seles Agent Office 206-208 Levy Building, 704 1-2 Main St. Telephone Preston 763

Salesmen are ready to show you the property at any time, whether you have immediate intention of buying or merely wish to look at the property as a possible investment. Telephone Preston 763 for information, today.

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REGIONAL PLANNING CONTEXT

The importance of the improvements to Caroline Promenade is apparent when understanding the regional planning context and the project's impact and timeliness. The envisioned improvements have the potential to leverage the unique geography of the corridor in the next few years as several key projects in the area are nearing implementation at the same time.

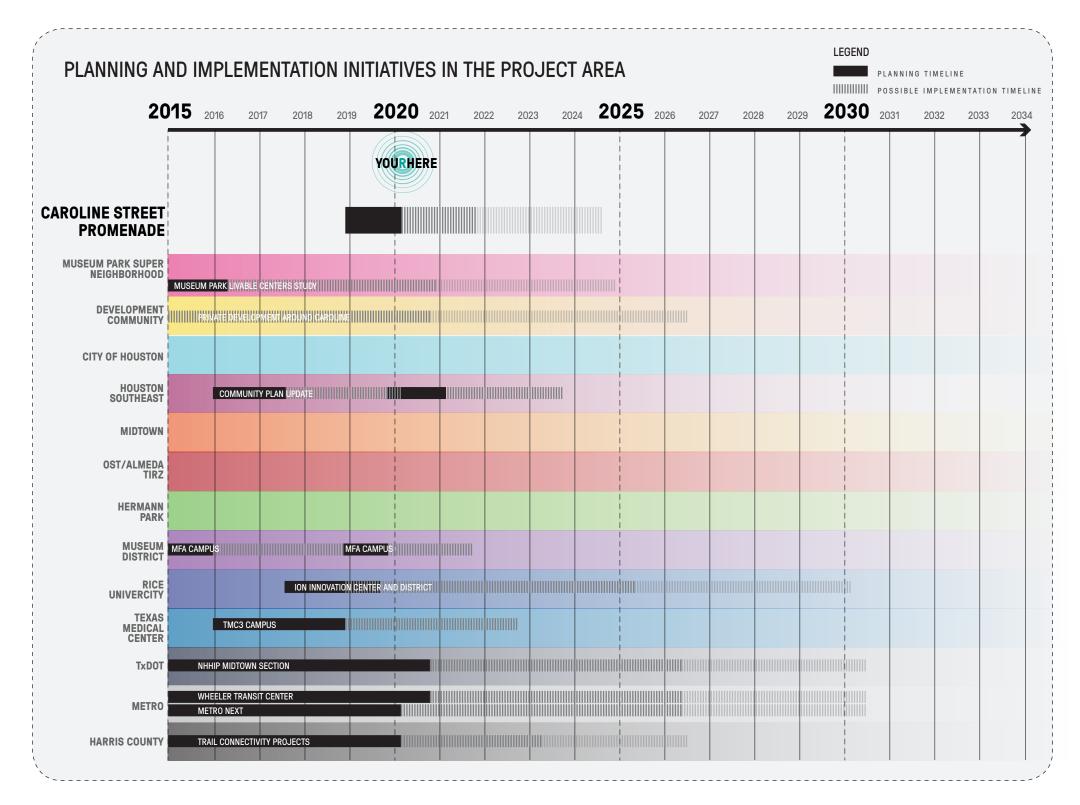
TXDOT NORTH HIGHWAY IMPROVEMENT PROJECT (2004-2030)

TxDOT's multi-billion dollar reconstruction of the I-69/I-45 freeway corridor (NHHIP), scheduled to break ground in the early 2020s, will have a transformative impact on the area. By capping the trench in the "Midtown" section of the project (at the intersections of Fannin, Caroline, and Cleburne Streets), the reconstruction will allow for a more continuous street-level experience over (not below) the freeway. In order to fully leverage the benefit of this investment, it is critical that the right design measures are incorporated into TxDOT's development and implementation processes. Key considerations are the multi-modal nature of the future Wheeler corridor and gateway to the District via transit, bike and pedestrian access across the cap, and significant landscape allowance on the caps for environmental mitigation of the freeway traffic impacts. Provisions for significant greening should be included in TxDOT's current cap structure design to align with the vision for future mobility and robust landscape infrastructure on Caroline.

THE ION/ RICE INNOVATION DISTRICT (2019-2030)

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The first phase in the development of the Innovation District by Rice Management Company on 16 contiguous acres in Midtown broke ground in 2019. Located just north of Caroline Promenade, the district "will combine a diversity of commercial development with housing, public spaces and best-in-class infrastructure" (https://news.rice.edu/2019/01/30/transformation-of-sears-building-into-the-ion-begins-in-may-2/). A network of higher learning institutions composed of Rice University, the University of Houston, University of Houston-Downtown, the University of St. Thomas, Houston Community College, Texas Southern University, Houston Baptist University, San Jacinto College and the South Texas College of Law – will provide academic programming in the Ion. Restaurant and entertainment amenities will "make the building a continuous hive of collaboration and activity" (lbid).



CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

TMC3 (2016-...)

Texas Medical Center's 1.5-million square foot collaborative research campus on 37 acres south of TMC and Brays Bayou bookends the new north-south Innovation Corridor. The campus will integrate leading researchers with a host of top-tier expertise from the private sector in order to translate fundamental discoveries into commercial solutions to advance human health The ground-breaking project will generate a \$5.2 billion stimulus to Texas and create nearly 26,000 new jobs, according to a third-party economic impact study by Silverlode Consulting conducted in November 2017 (https://www.tmc.edu/tmc3/).

MUSEUM OF FINE ARTS HOUSTON CAMPUS EXPANSION (2014-2020)

Museum District's new Susan and Fayez S. Sarofim Campus is slated for completion at the end of 2020. Several new buildings housing museums and art education facilities are connected by gardens and plazas at the street level, promoting a pedestrian-centric environment that will be activated day to night. Caroline Promenade is positioned to further support such an important investment into the Houston public realm by safely channeling pedestrian traffic to the newly expanded cultural campus.

HERMANN PARK MASTER PLAN UPDATE (2017-2040)

The Hermann Park Master Plan Update encompasses three major themes: "expanding the spectrum of play, invigorating the presence of nature, and improving access, mobility, and vital connections throughout Hermann Park" (https://www.hermannpark.org/media/uploads/2019-10_commons_deck.pdf, p.42). These goals will be implemented in phases starting with the play component over the years 2021-2023. The plan's focus on accessibility, gateway experience design, and nature creates an organic alignment with the project goals set for Caroline Promenade.

WHEELER TRANSIT STATION / METRO NEXT PLAN

The intermodal Wheeler Transit Station at the north end of the Caroline Promenade project will be reconfigured in conjunction with the TxDOT NHHIP reconstruction and affected by the urban design layout of the future Innovation District. Unimpeded access to multi-modal traffic options including Metro buses, bus rapid transit (BRT), and light rail transit (LRT) will be essential to the success of Caroline as a major connectivity corridor. A designed gateway transition at Wheeler and Caroline will enable a multi-purpose access goal, moving people from the transit station to the new Innovation District and to the top-of-cap open space amenities.



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GREATER SOUTHEAST MANAGEMENT DISTRICT PLANNING CONTEXT

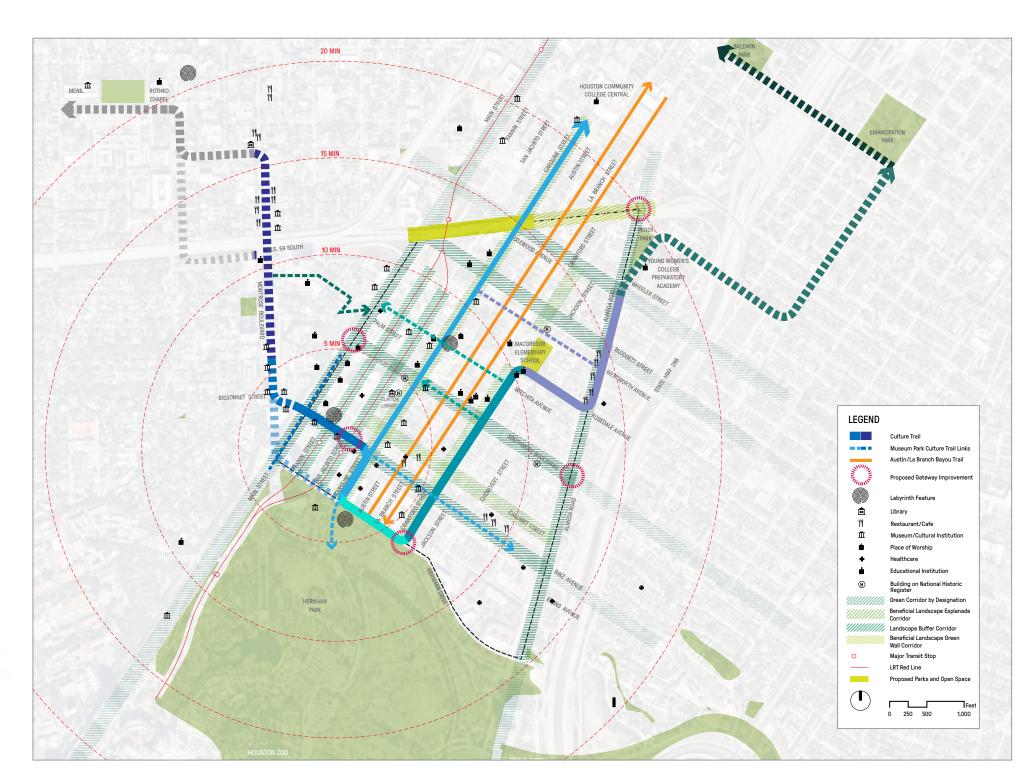
MUSEUM PARK LIVABLE CENTERS STUDY (2015-2016)

Over the course of a year, a team of planning and design consultants conducted Museum Park Super Neighborhood area analysis and developed Conceptual Plan recommendations under HGAC's Livable Centers Program. The organizing elements for the Conceptual Plan framework included five subject areas: Transportation, Economic Development, Housing Choice, Placemaking/Branding/Wayfinding, and Sustainability/Open Space. Developed through a robust public engagement process, the plan recommendations were at the top of the community's priorities list. These recommendations serve as the foundation for the concepts summarized in this report, namely:

- 1. CULTURE TRAIL: Designate an east-west walking/biking trail that connects the Museum of Fine Arts campus with Hermann Park and Almeda Corridor via Museum Park neighborhood.
- **2. GREEN GRID:** Develop area landscapes as a robust green network that extends the park character and benefits into the city.
- **3. CAROLINE PROMENADE:** Connect educational, cultural institutions, and places of worship from Houston Community College to Hermann Park with enhanced pedestrian realm, beneficial landscaping and unique placemaking via Caroline Street Promenade.



MPLCS RECOMMENDATIONS SUMMARY MAP
(Museum Park Livable Centers Study, SWA, 2016)



(Museum Park Livable Centers Study, SWA, 2016)

HOUSTON SOUTHEAST COMMUNITY PLAN (2016-2018)

Shortly after the Museum Park Livable Centers Study was complete, another planning initiative was soon underway. Encompassing all of Houston Southeast, its goal was to facilitate a sound economy that would attract investment, increase the tax base, and create employment opportunities for the District's residents. With the eight components of the plan: Economic Development & Employment, Land Use & Housing, Placemaking, Transportation & Mobility, Parks & Open Space, Community Facilities and Historic & Cultural Assets, Public Health, and Public Safety, and twenty identified "Priorities" within them, the plan confirmed the community's interest in specifically establishing a Culture Trail facility in the District while enhancing the appearance of District corridors.

		TIMEFRAME FOR IMPLEMENTATION			
STRATEGY NO.	RECOMMENDED STRATEGY	Phase 1 2017-2020	Phase 2 2021-2024	Phase 3 2025-2028	
8.1	Join with other organizations to create a cultural trail through the District that connects businesses, historic landmarks, art institutions, and parks and open spaces.	✓	✓	✓	

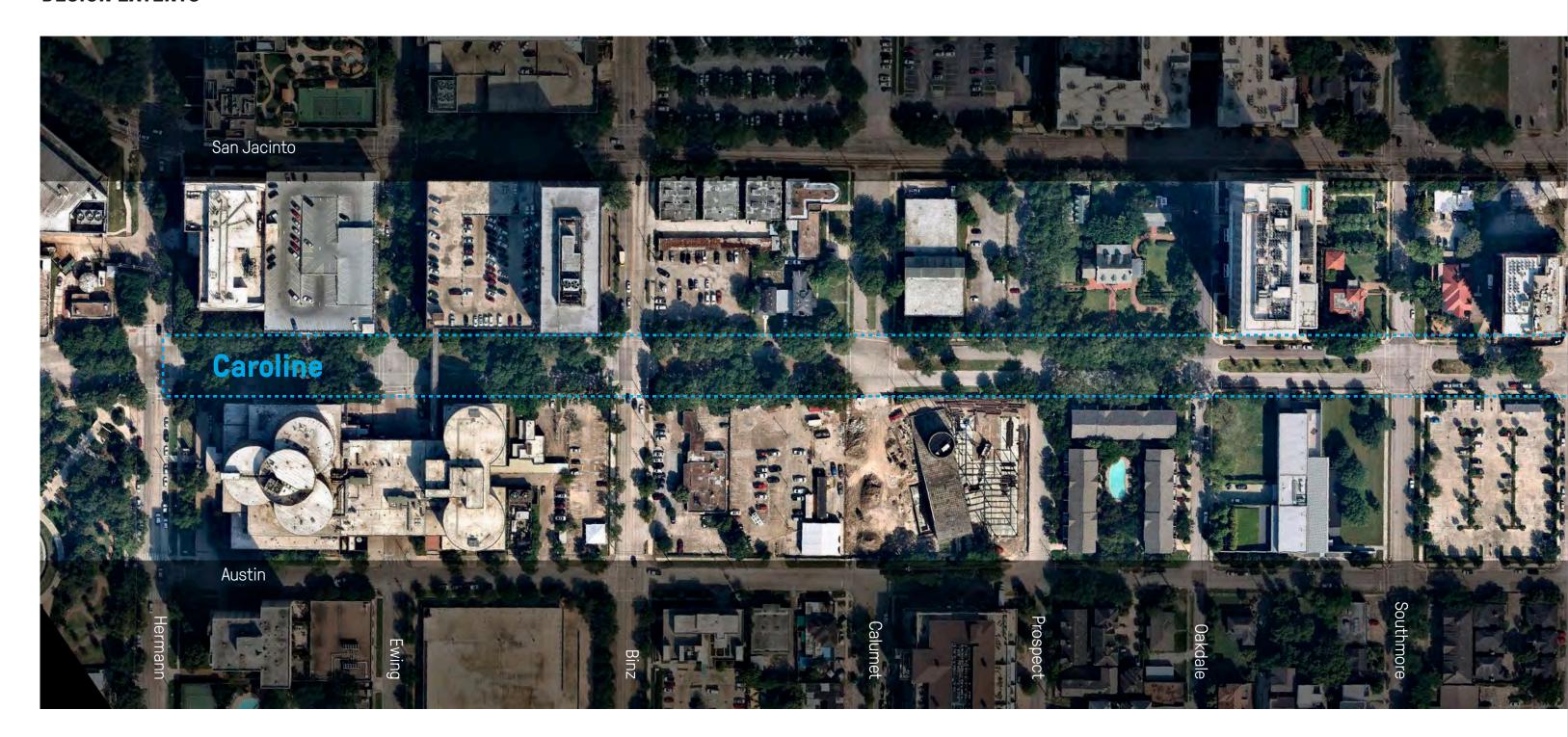
HSE COMMUNITY PLAN: IMPLEMENTATION TIMETABLE FOR HSE CULTURE TRAIL STRATEGY (Houston Southeast Community Plan, Roberta F. Burroughs & Associates, 2018)

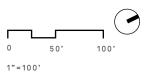


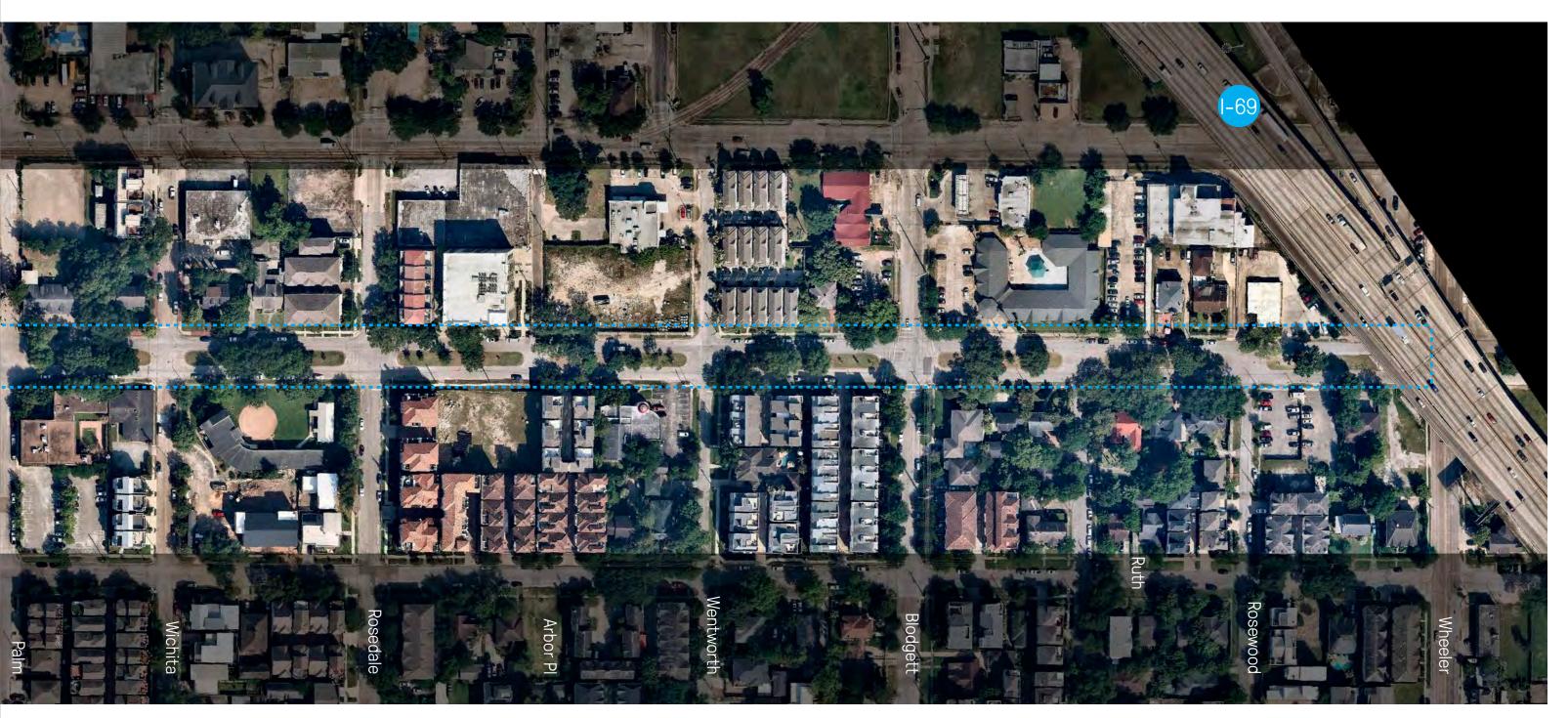
HSE COMMUNITY PLAN MOBILITY AND CULTURAL ASSET Analysis MAPS (Houston Southeast Community Plan, Roberta F. Burroughs & Associates, 2018)

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DESIGN EXTENTS







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SITE ANALYSIS: MOBILITY

DESIGN SYSTEMS ANALYSIS

Site analysis on Caroline was conducted through two parallel approaches. **Design Systems Analysis** focused on continuous manifestation of issues associated with Mobility, Landscape, and Wayfinding and Branding systems. While **Zone Analysis** assessed the 15 blocks of streetscape as a varied experience perceived as "character zones".

A thorough existing conditions assessment of mobility systems was conducted to better understand the characteristics of the Caroline Street corridor. Field investigations, record drawings, and information from GIMS data available on City of Houston's website were used to evaluate the existing conditions.

ROADWAY

Existing Caroline Street is generally a divided 100-foot asphalt roadway with curb and gutter. The roadway cross section consists of one 23-foot lane in each direction, divided by a 18-30 foot raised median. All 15 crossings or intersections throughout the study limits are unsignalized. There is parallel parking along parts of Caroline Street and the road is marked as a bicycle route. The 23-foot wide lanes cause safety issues as it encourages

vehicles to travel at faster speeds putting bicyclist and pedestrians in harm's way. Caroline Street is currently classified as a local road with a posted speed limit at 30 miles per hour within the project limits.

SIDEWALK

A thorough field condition assessment of the existing sidewalks was conducted. The sidewalks were classified into three difference categories:

- Good Condition City compliant 5 to 6-foot sidewalks that were installed with recently built developments along the corridor that do not need to be replaced.
- Fair Condition sidewalks that were in fair condition but still need to be replaced because their current 4-foot width does not meet current City standards, tree roots have damaged and cracked parts of the sidewalk, or panels have settled over time.
- Poor Condition non-standard 4-foot (do not meet current City standards and are not ADA complaint) sidewalks that are in poor condition and need to be replaced.

VARIES VA

CURB RAMPS

The majority of the intersections have existing wheelchair ramps that meet current City criteria. However some ramps need to be replaced and adjacent roadway regraded to improve drainage during rain events.

SHARED (SHARROW) BICYCLE LANE

According to the B-Cycle Bike Share services website, Caroline is one of the top bicycle routes for bikeshare users in the city. Its use as a bikeway will only continue to grow in popularity with higher density residential development, schools, TMC and other key destinations in the area. Caroline is currently a shared lane (sharrow) and will continue to be shared by vehicles and bicyclists. Currently, signage and pavement markings are lacking and there is a need to provide visual indicators to vehicle traffic of the dual-use and nature of the roadway. Street parking has also encroached onto the bikeway striping. Inconsistent presence of street parking disrupts the unimpeded biking experience.

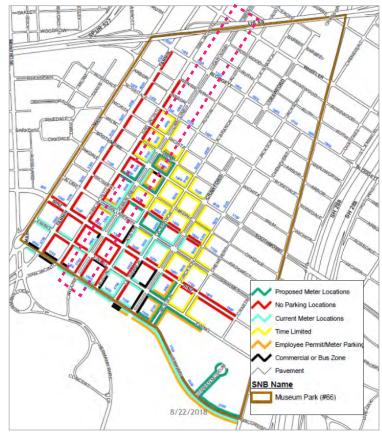
PARKING

Street parking is essential for the viability of mixed-use areas such as the one around Caroline. In 2014, a Parking Management Study was compiled for the Museum Park neighborhood. It intended to provide recommendations that promote smart parking and access management strategies, including sustainable parking and transportation solutions. This parking study identified parking problems throughout the study area, including on Southmore and Caroline.

Today, eight blocks of Caroline Street have either metered or time-limited parking. In February 2020, COH Park Houston adopted a Community Parking Program for Museum Park Super Neighborhood that will add managed on-street parking on Caroline.



TYPICAL "POOR" SIDEWALK CONDITION



PARKING BENEFITS DISTRICT AND TYPES OF STREET PARKING ON CAROLINE

TYPICAL STREET SECTION

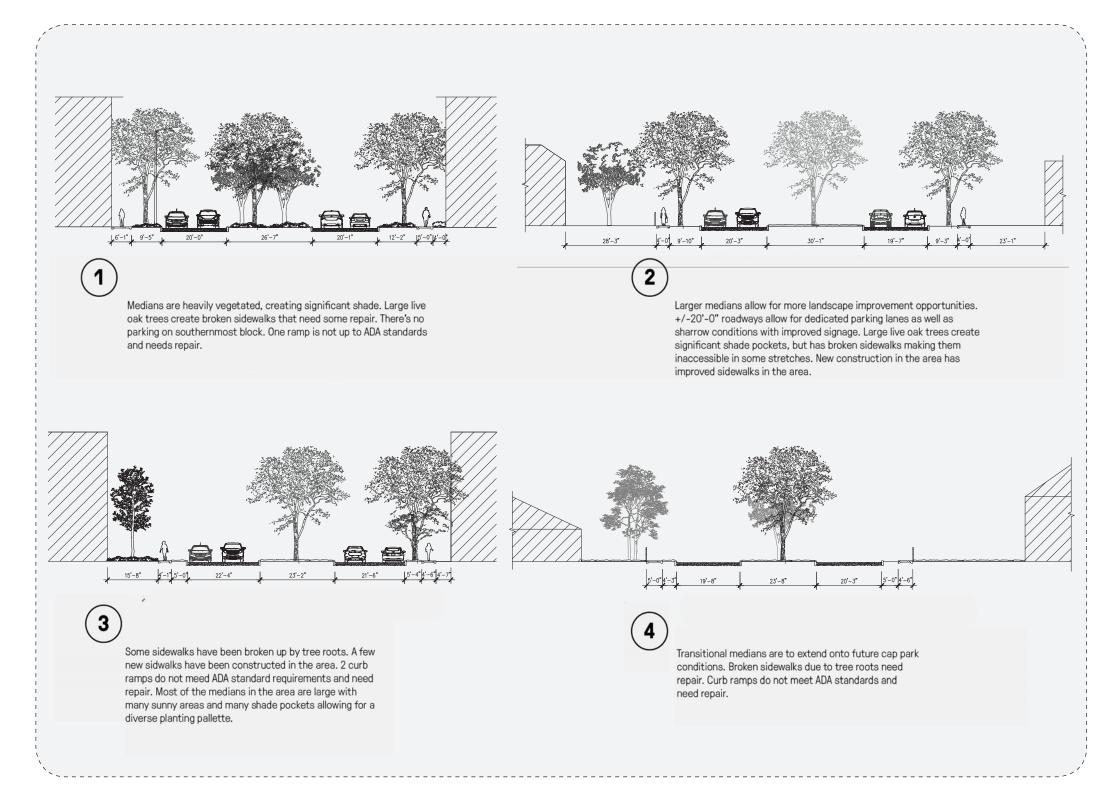
SITE ANALYSIS: MOBILITY

CHALLENGES

- Sub-standard sidewalks and pedestrian ramps
- Asphalt overlays at pedestrian ramps
- Poor sidewalk conditions/narrow width
- · Lack of bikeway delineation
- Poor drainage and ponding around ramps
- Lack of pedestrian crossing delineation
- Large crossing distances

OPPORTUNITIES

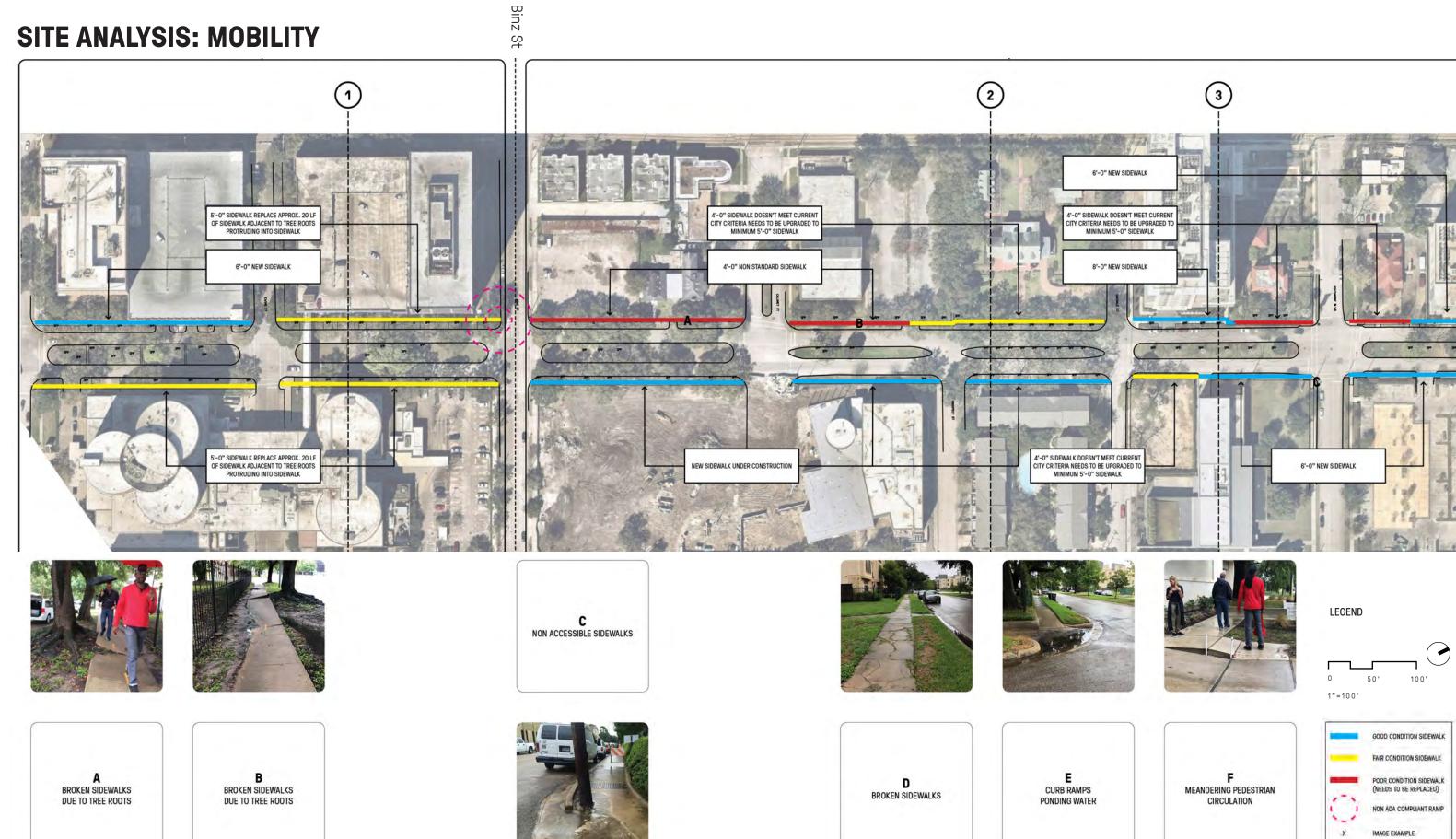
- Support Caroline bike route as signature route in COH
- Promote Caroline pedestrian route as a signature cultural promenade in COH
- Provide accessibility for all users
- Improve safety for all modes of transport
- Improve legibility of wayfinding for multiple modes of travel
- Improve localized drainage at intersections



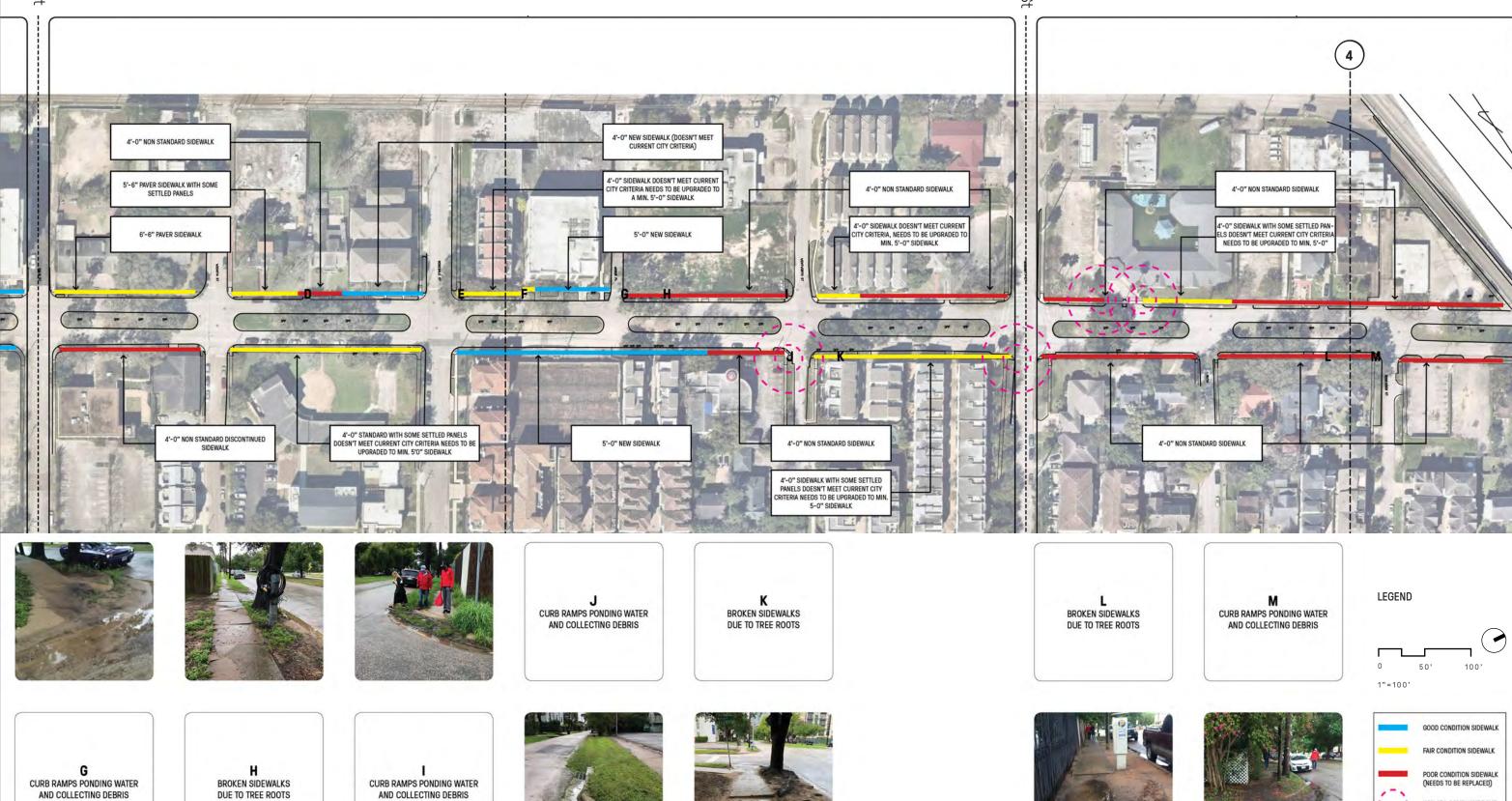
MOBILITY SECTION INVENTORY (SEE THE FOLLOWING TWO PAGES FOR SECTION LOCATIONS)

FEBRUARY 2020

SITE ANALYSIS: MOBILITY







FEBRUARY 2020

NON ADA COMPLIANT RAMP

IMAGE EXAMPLE

SITE ANALYSIS: LANDSCAPE CHARACTER

DESIGN SYSTEMS ANALYSIS

The existing conditions assessment of landscape systems was conducted through a field survey by the consultant team and a professional tree survey was also completed.

TREES

Tree canopy is the most visible and impressive existing asset on Caroline Street. It is composed of mature established specimen trees and infill of recently planted trees along the medians and at the back of curb. A number of "volunteer" species can be found throughout. Not all of the trees are native to the region, but the majority of them are. Live Oaks in particular dominate the streetscape's arboreal character, creating a ceiling of connecting branches over the roadway. It is a recognizable and celebrated characteristic of the older Houston neighborhoods, which are prevalent in the area around Rice University and Hermann Park.

To properly assess the condition of the existing trees, a global tree and shrub care company surveyed the trees' health, safety, and appearance and provided maintenance recommendations for the District's consideration.

All of the trees within the corridor were evaluated within the following categories: tree name, age, size of canopy, estimated value, general condition with details about diseases or defects, and recommended level of priority for maintenance.

A shade footprint generated by the existing tree canopy was also developed for a better understanding of under-story conditions as it relates to human comfort and sun to shade-tolerant shrub and groundcover planting options.

PLANTING AT ESPLANADES

At 18-30-foot width, the esplanades provide a substantial planting zone and a "linear park-like" feature that can also be found along Calumet, Crawford, and a portion of Southmore, located in the same Museum Park neighborhood. Esplanades are crowned at the center and have a roll-on curb at the edges. The curbs are in need of some repair. Esplanade planting conditions range the following types: non-native spreading ivy groundcover, bermuda turf, limited presence of median tip gardens, and exposed soil where turf has not been maintained. Tree root zones are occasionally exposed. The espla-

nades are not currently irrigated, though irrigation boxes were identified at a few back-ofcurb locations.

On the whole, inconsistency in the planting palette and lapsed maintenance over time takes away from the street character and positive aesthetic experience of the District residents and visitors. Worse yet, environmental performance of the esplanades is relatively insignificant due to the low levels of infiltration observed around compacted exposed soil areas and a relatively small habitat value of the non-native mono-cultural planting areas.

HARDSCAPE AND FURNISHINGS

The majority of the existing streetscape has a very narrow pedestrian realm determined by zero setback line on one side and mature tree trunks and root zones on the other. Street furniture zones can only be found at the medical office building frontages between Ewing and Binz. The majority of the sidewalks are unfinished concrete. Limited stamped/colorized treatment along a half of a single block, as well as exposed aggregate areas along two blocks creates an overall inconsistent ground

plane appearance. ADA ramps with concrete pavers have been installed at Binz and newer sidewalks have been poured at the frontages of the Holocaust Museum and Asia Society Texas Center. Damage to hardscape areas due to root zone movement overtime is prevalent and poses a challenge of repairs in context of tree health.

UTILITIES

Overhead powerlines are found on both sides of the street between Binz and Wheeler and are below grade between Hermann and Binz. Their presence significantly detracts from the streetscape character and according to comments from some residents, poses risk of economic loss during frequent storm occurrences.

LIGHTING

The street is lit by cobrahead fixtures either mounted on utility poles or COH light poles. Light levels along the street are perceived to be uneven; pockets of low light levels perceived unsafe for pedestrian activity are interspersed with occasional areas of glare generated by adjacent development.











LANDSCAPE CHARACTER: EXISTING CONDITIONS

CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

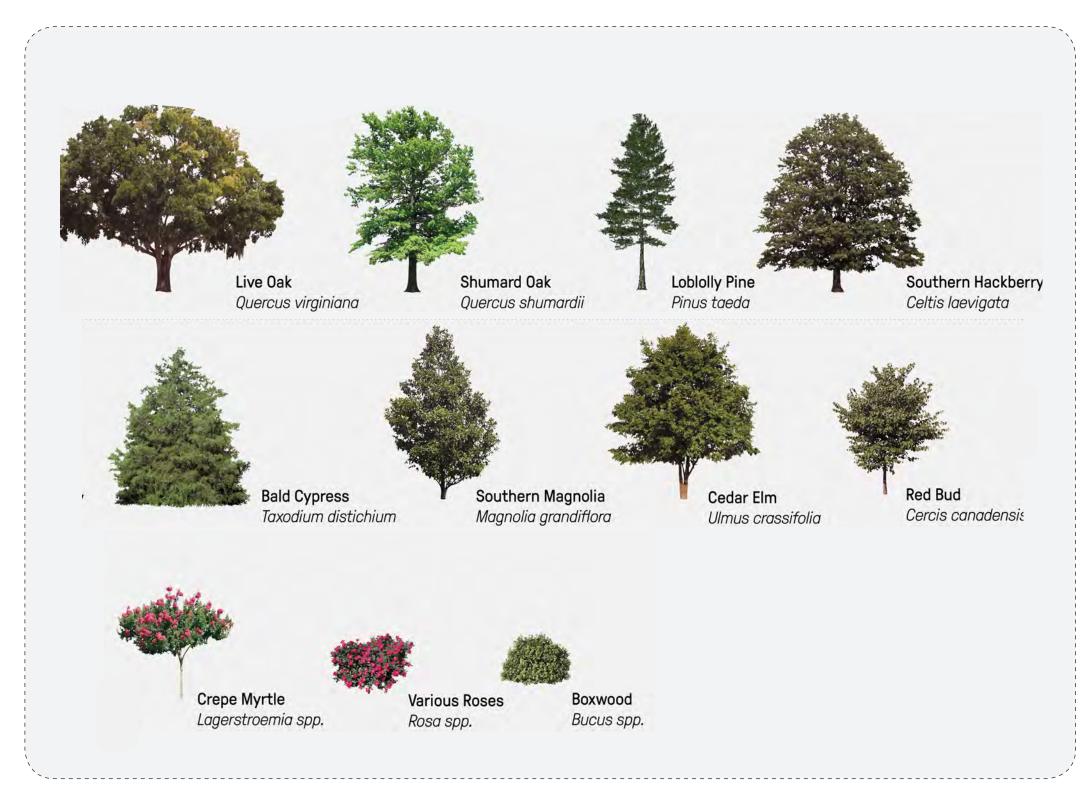
SITE ANALYSIS: LANDSCAPE CHARACTER

CHALLENGES

- Need for tree maintenance
- Inconsistent groundcover planting
- Poor condition of groundcover planting
- Weak connection to park character
- Poor infiltration at esplanades
- Poor habitat value at esplanades
- Lacking irrigation infrastructure at esplanades

OPPORTUNITIES

- Connect to Hermann Park/Centennial Gardens through gateway landscape improvements
- Maximize native planting palette for higher infiltration rates, and habitat value
- Maximize pollination and ecosystem health with landscape improvements
- Create neighborhood continuity by creating a model for branded hardscape/landscape palette
- Create a safer and more attractive pedestrian realm by introducing additional lighting
- Tie into the upgraded landscape character around the museums, and create an attractive pedestrian promenade for district visitors
- Promote environmental education and awareness through landscape improvements
- Promote the future greening of the I-69 freeway cap and seamless landscape experience on Caroline along the cap
- Maximize comfort and shade by improving health of the existing tree canopy
- Remove invasive trees and enhance canopy with biodiverse native tree selections



LANDSCAPE MATERIAL INVENTORY

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SITE ANALYSIS: LANDSCAPE CHARACTER St.





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FEBRUARY 2020

1"=100'

SITE ANALYSIS: LANDSCAPE CHARACTER

Binz St





TREE SURVEY MAPS

Data on the existing trees along Caroline Street public right-of-way was collected by Bartlett Tree Experts in October of 2019. A table provided in the Appendix is keyed to the tree survey map and contains detailed evaluation of each tree in the following categories:

- Species common name
- Age
- Canopy size
- Overall condition
- Level of priority to address maintenance
- Estimated value
- Proposed pruning category
- Pest disease types
- Defect types

"High" and "urgent" tree maintenance needs are concentrated primarily in the blocks between Hermann and Binz. Medium level of maintenance is recommended throughout.





3. TREE CONDITION: POOR

4. TREE CONDITION: AT-RISK



URGENT

*PER BARTLETT TREE EXPERTS 10/19

SITE ANALYSIS: BRANDING AND WAYFINDING

DESIGN SYSTEMS ANALYSIS

For the area branding/wayfinding systems analysis, it was important to understand the immediately adjacent and present established brands on Caroline in addition to the District's brand identity components farther afield. Neighborhood brand assessment created for the Museum Park Livable Centers Study served as the basis for further analysis.

EXISTING BRANDS PRESENCE

Several established organizational brands that influence the Caroline corridor by proximity include the Museum District, Midtown, Houston Southeast, and Hermann Park. In addition to individual museum and cultural institutions; local businesses, hospitals, and residential projects have direct brand presence on Caroline. Occasionally, as a result of their adjacencies, a stylistically inconsistent environment is created that adds to the vertical signage clutter.

As Hermann Park and Midtown's brand presence has remained consistent for years, Museum District is currently updating its area signage to coincide with completion of the new art campus on Main and Bissonnet. The new pylons will have a simpler and more streamlined aesthetic. Fitting with the world-class architecture of the new museum buildings, they will further elevate the urban aesthetic quality of the Museum District area near and on Caroline.

Houston Southeast is actively re-assessing its branding and marketing needs. Through that effort, it will have an opportunity to test placemaking/branding/wayfinding ideas that may be applied District-wide or be customized to individual neighborhoods' needs.

WAYFINDING

The pedestrian wayfinding system is present largely in the aforementioned Museum District pylons. On Caroline, they can be found at the Hermann, Southmore and Blodgett intersections. The markers include a map and highlight all museum-related destinations with walking distances and arrows to select points of interest. A few Museum District COH brown metal signs can also be found on Caroline.

Historical blue and white tile street signs can be found on Caroline at some curbs in the area. Along with the aging concrete curbs, they are generally in deteriorated condition.

CULTURAL AMENITIES AND IDENTITY

A large part of Caroline's identity comes from its unique collection of building architecture and ample tree canopy. The future brand overlay/placemaking development for the streetscape should embrace these components as primary design drivers.











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SITE ANALYSIS: BRANDING AND WAYFINDING

CHALLENGES

- Multiple established brands in the corridor
- Signage clutter
- Lapses of character/identity
- Disjointed destinations

OPPORTUNITIES

- Pilot Culture Trail brand with new signage
- Pilot District brand ideas with new signage
- Develop a family of embedded smaller scale wayfinding
- Promote environmental education
- Promote awareness of history, heritage and culture
- Minimize signage clutter
- Design for future systems of urban wayfinding (both high and low tech)
- Promote walkability with the appropriate scale and signage
- Seek out opportunities for unique cultural statements and activation with public art
- Activate empty lots in transition to address temporary blight
- Punctuate gateway moments



























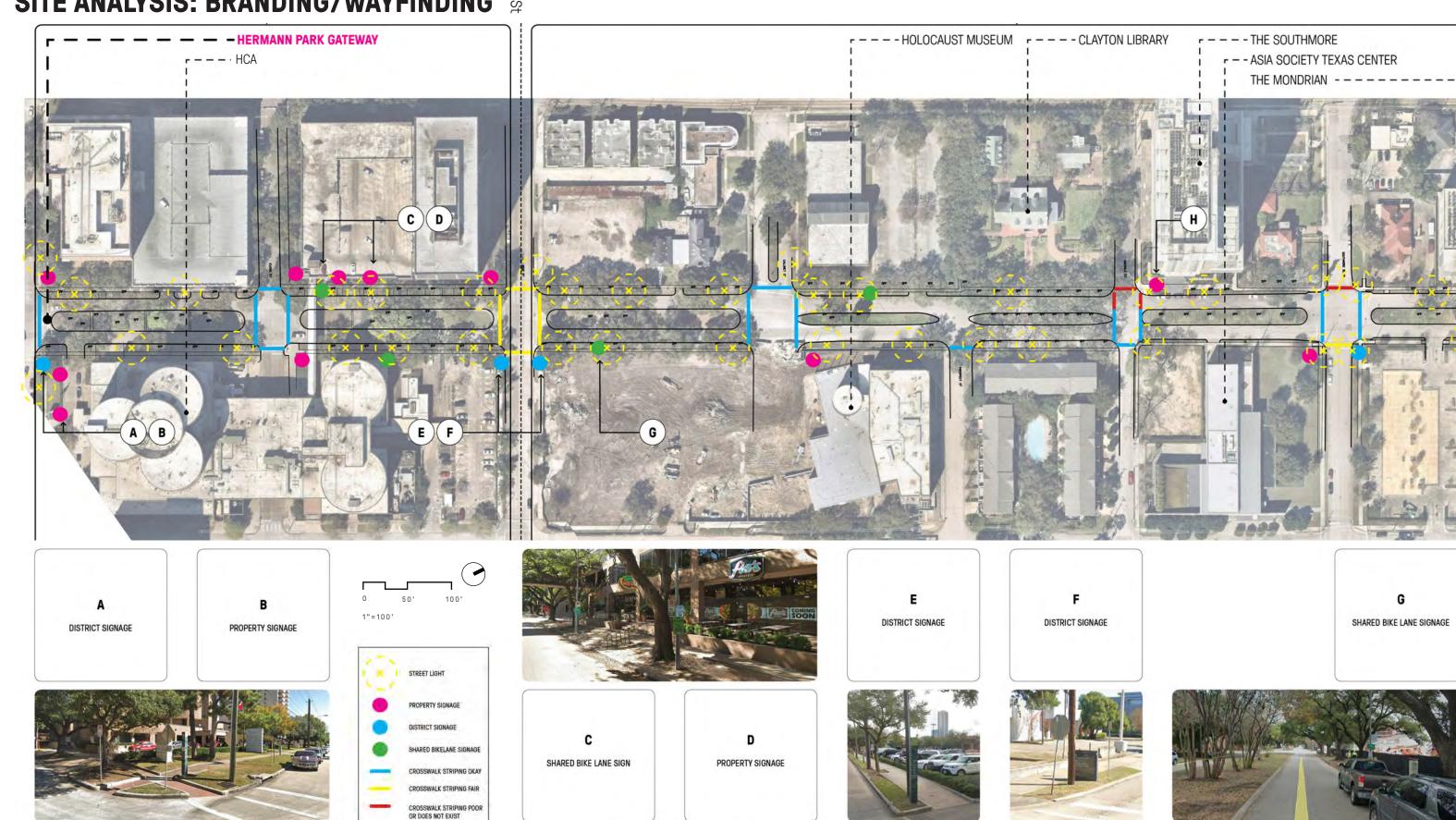




BRAND PRESENCE INFLUENCE

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SITE ANALYSIS: BRANDING/WAYFINDING $^{\text{Bin}}_{\text{SQ}}$



PROPERTY SIGNAGE

PROPERTY SIGNAGE

CROSSWALK STRIPING FAIR
CROSSWALK STRIPING POOR
OR DOES NOT EXIST

SITE ANALYSIS: ZONES

IMPLIED ZONING

Caroline Street adjacencies are varied and complex, with museums, educational institutions, medical buildings and assorted churches directly fronting the street or located within its immediate vicinity. The first approach towards assessment of needs via design systems analysis aims at addressing the streetscape's continuity, while the second approach is zeroing in on the different implied zones within the streetscape that make the 15-block journey a fulfilling and varied experience.

The zones fall into place based on the grain of surrounding urban fabric and land use, as well as the cross street connectivity that creates gateways to Caroline from surrounding District destinations.

PARK/TMC GATEWAY

The southernmost zone connects directly to Hermann Park Centennial Gardens gateway and terminates at the Binz intersection. Highrise architecture of HCA Houston Healthcare Hospital buildings forms an urban condition with a street wall sparingly activated with commercial activity.

MUSEUM/HISTORICAL

The Museum/Historical zone (Binz to Palm) has the largest concentration of Museum District institutions directly on Caroline and has a direct connection to the sprawling MFA campus just to the west via Binz. The nationally designated historic landmark Clayton Library, the Asia Society Texas Center, and the newly expanded

Holocaust Museum campus have significant frontages on Caroline. New residential towers are also exist in this stretch.

NEIGHBORHOOD

The neighborhood zone (from Palm to Blodgett) retains a residential neighborhood feel with a mixture of lower to mid-rise architecture. Institutions of note are Covenant Baptist Church and Houston Museum of African-American Culture.

INNOVATION GATEWAY

The gateway to the future Caroline Promenade (and Greater Southeast Management District) from the north is defined by two expansive planning and construction

initiatives. The current site of the Mexican Consulate and associated adjacencies will soon be in transition with the Consulate's departure due to TxDOT construction in the I-69 corridor. Rice Management Company has consolidated lands north of the freeway and is moving ahead with implementation of an Innovation District- a mixed-use campus of co-working, entrepreneurial hub co-mingled with educational facilities and institutions. Due to the rapid contextual changes, the makeup of this zone for the next few years will be in transition. During this time, provisions for the physical interface with the freeway cap and access to the Innovation District are important factors to consider.

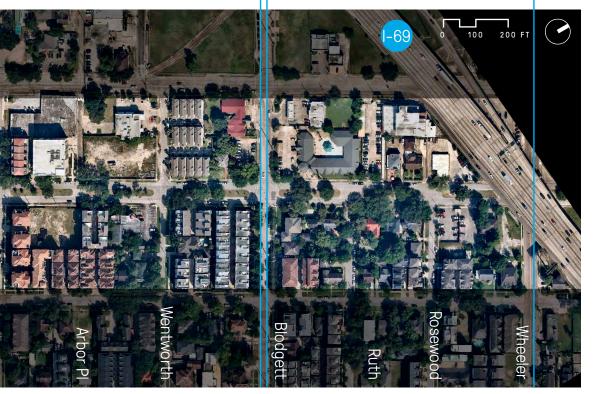
PARK/TMC GATEWAY

MUSEUM/HISTORICAL



NEIGHBORHOOD

INNOVATION GATEWAY



CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT 30

PARK/TMC GATEWAY

STREETSCAPE SYSTEMS: EXISTING CONDITIONS ASSESSMENT

SIDEWALKS	Generally in good condition some damage due to tree adjacencies, few ramp accessibility issues
STREETSCAPE	Narrow R.O.W., multiple curb cuts, limited furniture zone
PARKING	Limited street parking, office parking garages and private surface lots adjacent
BIKE LANES	Shared bike lane, minimal signage
LIGHTING	COH cobraheads, ambient spillover from businesses
PLANTING	Diverse tree canopy at sidewalk and median. Groundcover in fair condition
UTILITIES	Below grade
ADJACENCIES	High-rises and large trees provide heavily shaded streetscape
SIGNAGE	Traffic, Museum District signage, large medical tower signage

PROPOSED AREAS OF IMPROVEMENT

5		1
LOWEST PRIORITY		HIGHEST PRIORITY
SAFETY	4.	Provide signature striping at crossings, delineate parking and sharrow lane, add lighting
MOBILITY / ACCESS	2.	Rebuild ADA ramps, sidewalks to COH standards
AESTHETICS	1.	Mark a vibrant gateway from park to neighborhood
COMFORT	5.	Implement an ongoing arbor care management system to protect this critical natural resource
BRANDING / WAYFINDING	3.	Organize identity elements, reduce clutter, connect to park gateway

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MUSEUM/HISTORICAL

STREETSCAPE SYSTEMS: EXISTING CONDITIONS ASSESSMENT

SIDEWALKS	Generally in good condition, some new, some below standard width
STREETSCAPE	Narrow R.O.W., multiple curb cuts, limited furniture zone
PARKING	Metered street parking, parking lots adjacent
BIKE LANES	Shared bike lane, minimal signage
LIGHTING	COH cobraheads on utility poles, building and landscape lighting levels are high
PLANTING	Mix of established and new tree canopy at sidewalk and median. Groundcover in poor condition
UTILITIES	Above grade
ADJACENCIES	Institutional and cultural adjacencies along with mix of low, mid, high-rise residential with varied street wall conditions
SIGNAGE	Traffic, Museum District signage, institutional signage, multifamily residential properties signage

PROPOSED AREAS OF IMPROVEMENT

5		1
LOWEST PRIORITY		HIGHEST PRIORITY
SAFETY	2.	Provide signature striping at crossings, delineate parking and sharrow lane, mitigate light pollution
MOBILITY / ACCESS	4.	Rebuild ADA ramps, sidewalks to COH standards, bury overhead utilities as a function of resilience
AESTHETICS	1.	Develop median planting program
COMFORT	3.	Implement an ongoing arbor care management system to protect this critical natural resource
BRANDING / WAYFINDING	5.	Organize identity elements, reduce clutter

NEIGHBORHOOD

STREETSCAPE SYSTEMS: EXISTING CONDITIONS ASSESSMENT

SIDEWALKS	Below standard width, multiple ADA accessibility issues
STREETSCAPE	Narrow R.O.W., multiple curb cuts, limited furniture zone
PARKING	Time-limited street parking
BIKE LANES	Shared bike lane, minimal signage
LIGHTING	COH cobraheads on utility poles, low level spillover on sidewalk
PLANTING	Mix of established and new tree canopy at sidewalk and median. Groundcover in poor condition
UTILITIES	Above grade
ADJACENCIES	Some institutional and cultural adjacencies, mix of low, mid-rise residential properties with varied street wall conditions
SIGNAGE	Traffic, institutional signage

PROPOSED AREAS OF IMPROVEMENT

5		1
LOWEST PRIORITY		HIGHEST PRIORITY
SAFETY	1.	Provide signature striping at crossings, delineate parking and sharrow lane, add lighting
MOBILITY / ACCESS	2.	Rebuild ADA ramps, sidewalks to COH standards, bury overhead utilities as a function of resilience
AESTHETICS	3.	Develop median planting program
COMFORT	4.	Implement an ongoing arbor care management system to protect this critical natural resource
BRANDING / WAYFINDING	5.	Organize identity elements, reduce clutter

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RICE INNOVATION GATEWAY

STREETSCAPE SYSTEMS: EXISTING CONDITIONS ASSESSMENT

SIDEWALKS	Below standard width, multiple ADA accessibility issues
STREETSCAPE	Narrow R.O.W., multiple curb cuts, limited furniture zone
PARKING	No street parking
BIKE LANES	Shared bike lane, minimal signage
LIGHTING	COH cobraheads on utility poles, low level spillover on sidewalk
PLANTING	Mix of established and new tree canopy at sidewalk and median. Groundcover in poor condition
UTILITIES	Above grade
ADJACENCIES	Some institutional and cultural adjacencies, mix of low, mid rise street wall
SIGNAGE	Traffic, institutional signage

PROPOSED AREAS OF IMPROVEMENT

5		1
LOWEST PRIORITY		HIGHEST PRIORITY
SAFETY	1.	Provide signature striping at crossings, delineate parking and sharrow lane, add lighting
MOBILITY / ACCESS	2.	Rebuild ADA ramps, sidewalks to COH standards, bury overhead utilities as a function of resilience
AESTHETICS	3.	Develop median planting program
COMFORT	4.	Implement an ongoing arbor care management system to protect this critical natural resource
BRANDING / WAYFINDING	5.	Organize identity elements, create gateway entry mark









CONCEPT PLAN

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A MODEL OF WALKABILITY FOR HOUSTON

The vision for Caroline Promenade is to create a blueprint for a walkable place and a safer community in the comfort of urban nature in a landmark regional destination. As a broader ambition, the project aims to redefine a neighborhood, a district, and a city as new connected walkable geographies.

Throughout the engagement process, project stakeholders articulated a variety of distinct aspirations towards environmental stewardship, high quality cultural statements, economic development throughout the District, and a healthy livable community. *Walkability* became a unifying idea that could help achieve these aspirations and build public consensus. In essence, Caroline Promenade could create "a model of walkability for Houston".

THE MAKING OF A WALKABILITY-CENTRIC PLAN

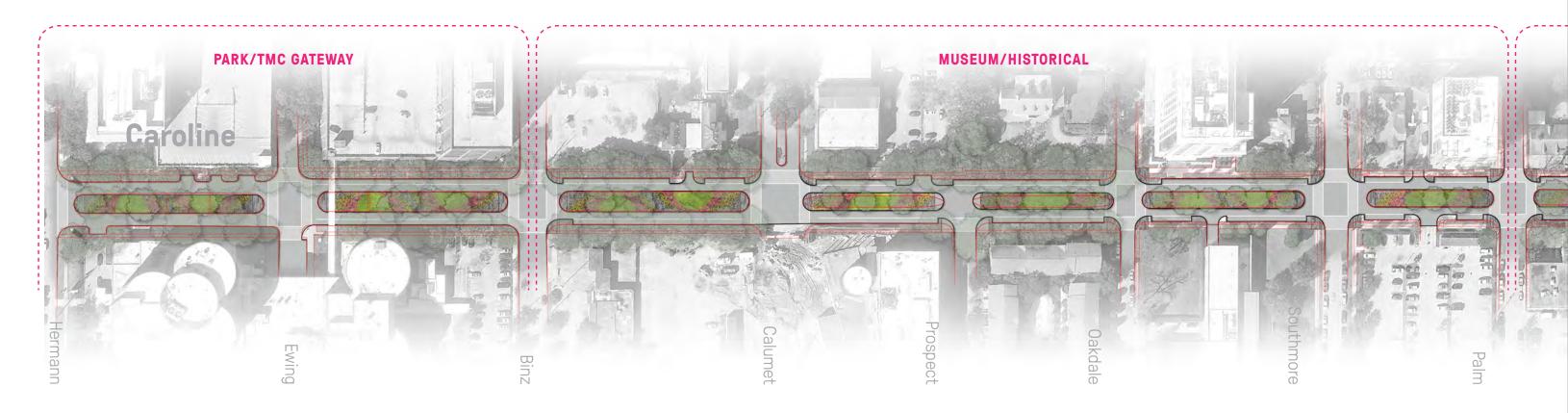
The Concept Plan emerges out of how we frame pedestrian movement in the corridor. There is longitudinal (along) movement and lateral (across) movement on Caroline. The four character zones highlight the variety of street contexts and underscore the lack of continuity on Caroline. Public input collected through the process helped prioritize project goals in support of continuous identity "along" the street, including Safety, Aesthetics, Mobility, Branding, and Comfort. "Across" movement is equally important to the extended project beneficiaries and interests futher afield in the District. The combination of designing for "along" and "across" movements creates a unique approach to the Caroline Promenade plan development.

"MOVING ALONG"-SIDEWALKS AND ESPLANADES

Enhanced landscape in the esplanades is the biggest design opportunity to support continuity in the plan. Design of the esplanades as continuous ecological corridors is achieved through plant selection and organically shaped beds that flow from block to block. Continuous arbor is essential for continuous shade and pedestrian comfort. Proposed arbor management works in support of shade and comfort continuity. Uninterrupted accessible sidewalks is a critical component of streetscape walkability. The ability to achieve desirable sidewalk widths throughout the Caroline corridor is tempered by the narrow public realm and the root zones of established trees. Despite the challenge, sidewalk continuity that weaves through the trees and responds to adjacent context is an important objective of the plan.

"MOVING ACROSS"-INTERSECTIONS

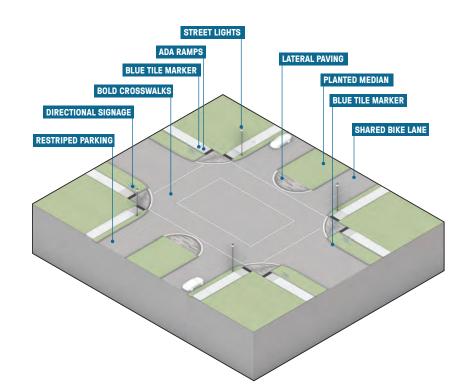
The "Look Both Ways" statement, typically referring to pedestrian safety, is co-opted for the experiential enjoyment of walking. The visitor is prompted to slow down, stop, look around, and meander through the District discovering new destinations and ways to connect to the neighborhood. The 16 intersections along the corridor represent 16 opportunities that can promote walkability beyond the corridor itself. Their design can facilitate the exploration of the District on foot via personal routes and loops. With that goal in mind, the introduction of bulbout elements at the intersections not only enhances safety by reducing the crossing distance for pedestrians, but also adds critical "real estate" in the narrow and limited right-of-way. A wider place to pause extends the moment of reflection and facilitates exploration.



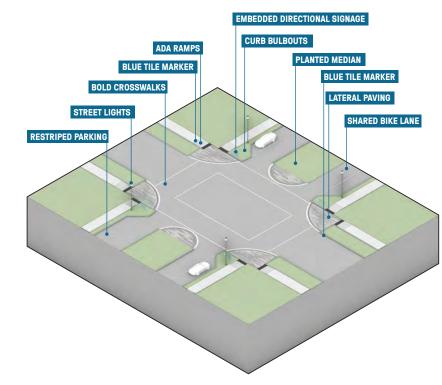
CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

Intersection design is unique in the way it brings together lighting, paving patterns, road markings, landscape, branding, and wayfinding. Paving pattern striations slow down movement, while alternating lighter and darker paving tones aim to balance the environmental impacts of heat absorption and solar reflectance. Pedestrian scale lighting and new wayfinding features are sited to enhance safety and legibility. Paved esplanade tip "isles" carry low walls with street names, and provide refuge to pedestrians while easing maintenance.

In order to supports pedestrian, bicycle, and vehicular travel safety, view corridors are considered in the development of planting design for the esplanades. Overall, components of the plan promote vehicular traffic calming, that allows for all modes of travel to coexist with less conflict. Caroline Promenade creates its own flavor of walkability within the model of "complete street" design, enfusing unique natural and architectural elements with community expression.

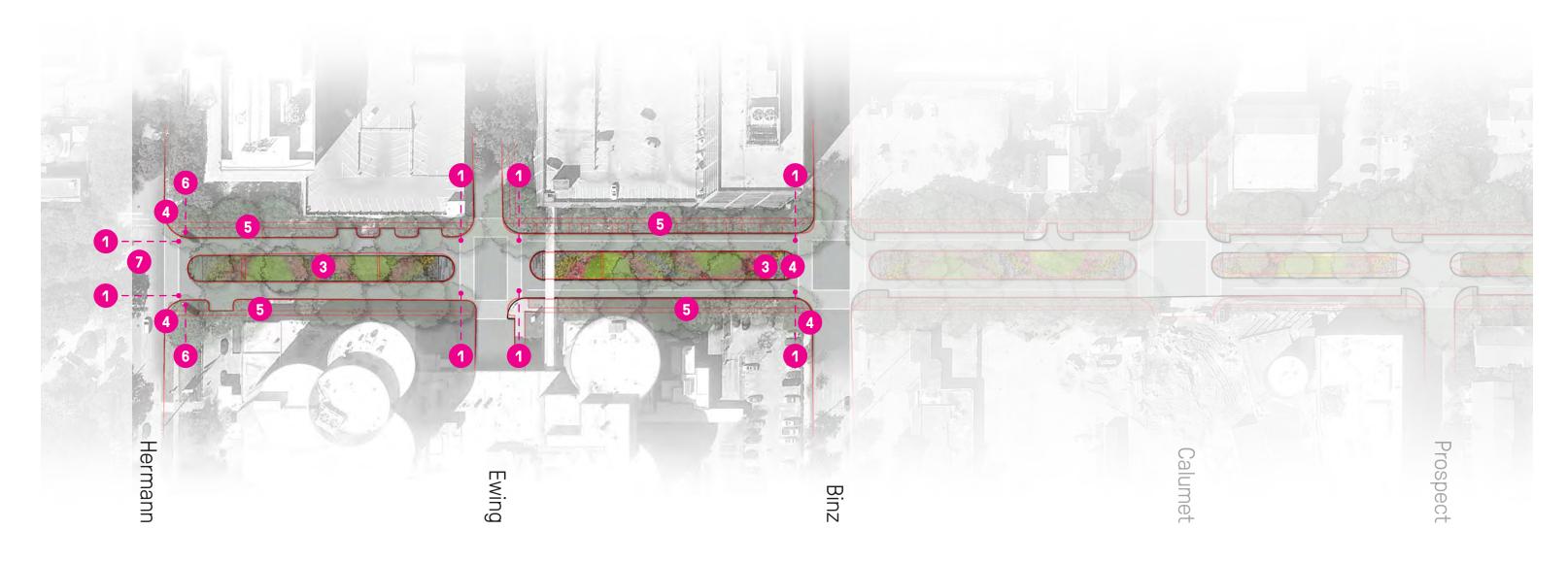


INTERSECTION DESIGN PROTOTYPE WITHOUT BULBOUTS



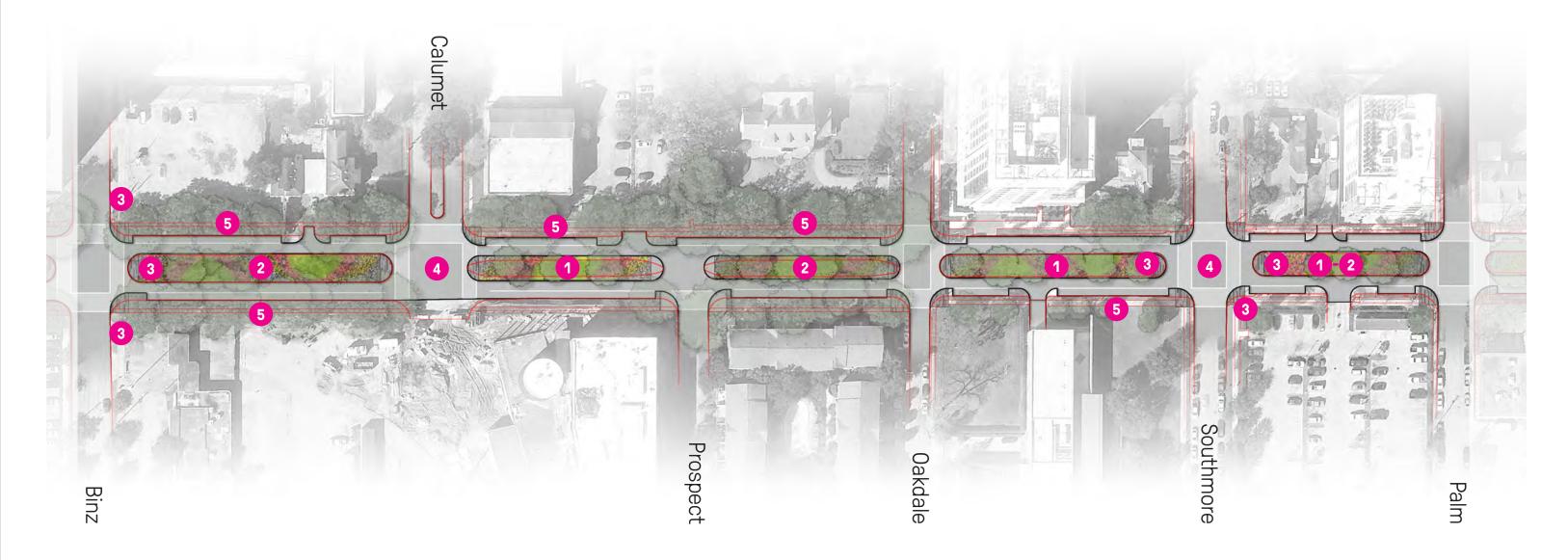
INTERSECTION DESIGN PROTOTYPE WITH BULBOUTS





- 1 No Bulbout
- 2 Sun Planting Palette
- 3 Shade Planting Palette
- 4 Wayfinding Marker
- 5 Multi-functional Furnishings
- 6 Gateway Marker
- 7 Temporary Art Crosswalk

indicates current curb and sidewalk alignment

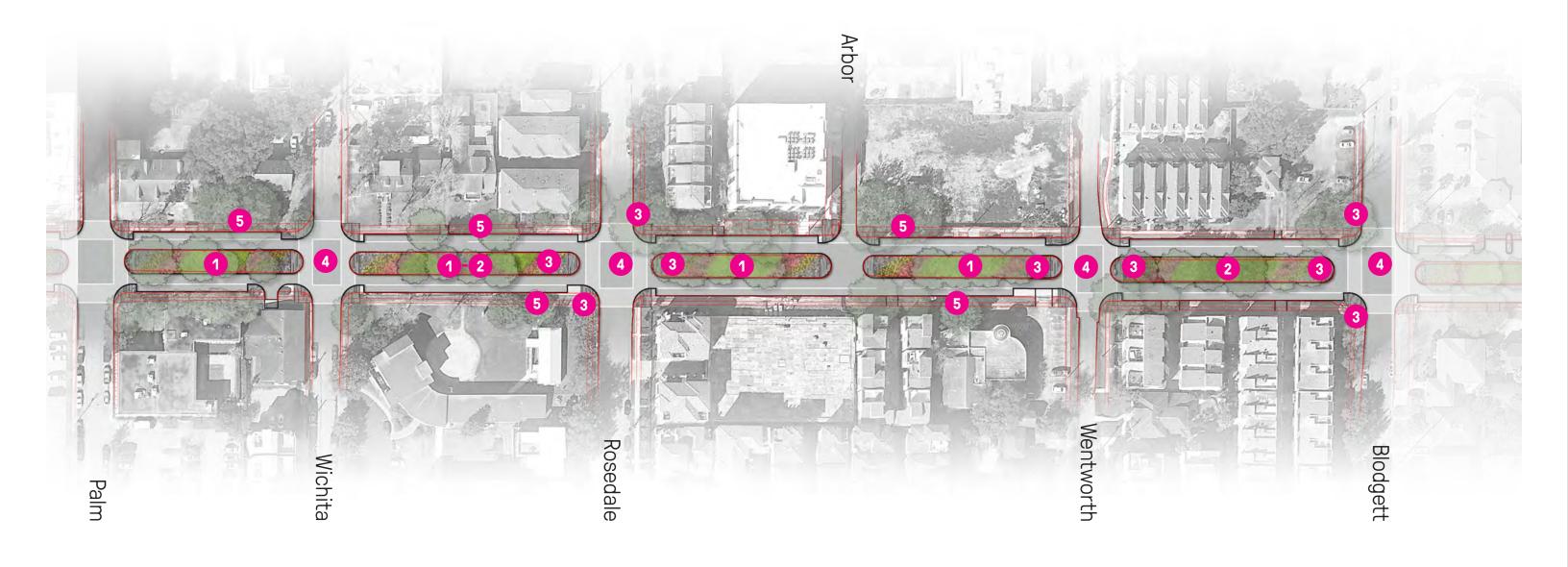


- 1 Sun Planting Palette
- 2 Shade Planting Palette
- 3 Wayfinding Marker

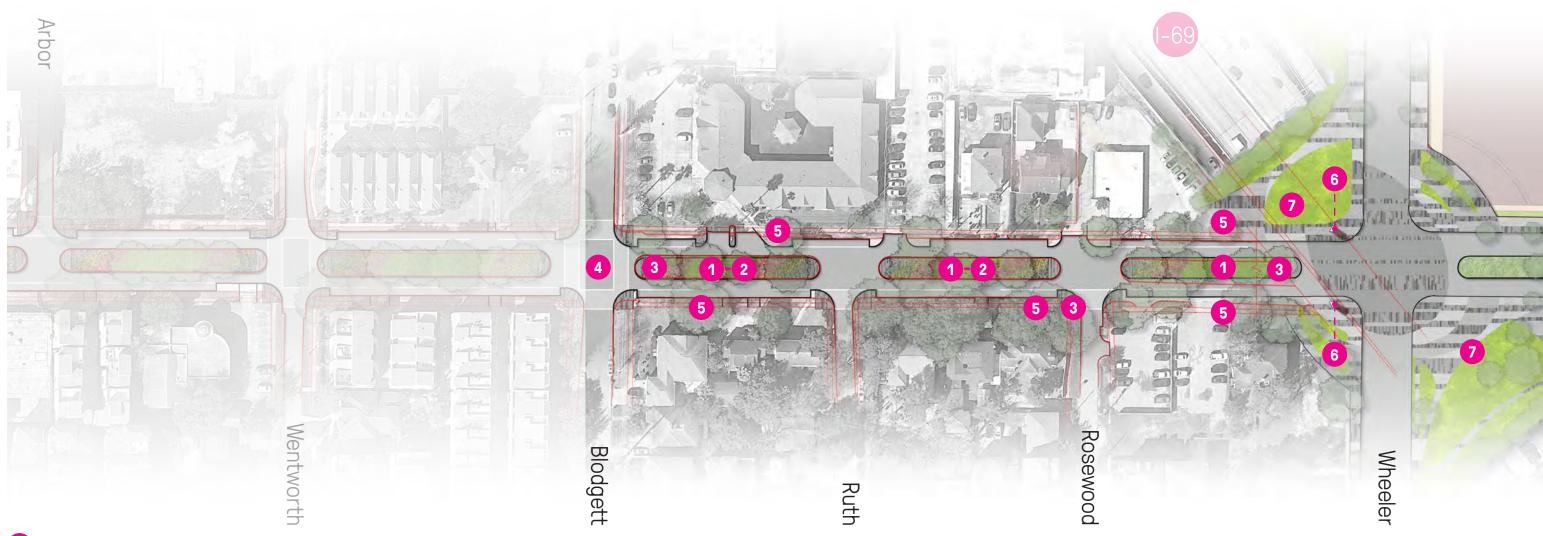
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- 4 Temporary Art Crosswalks
- Multi-functional Furnishings indicates current curb and sidewalk alignment

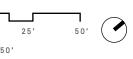
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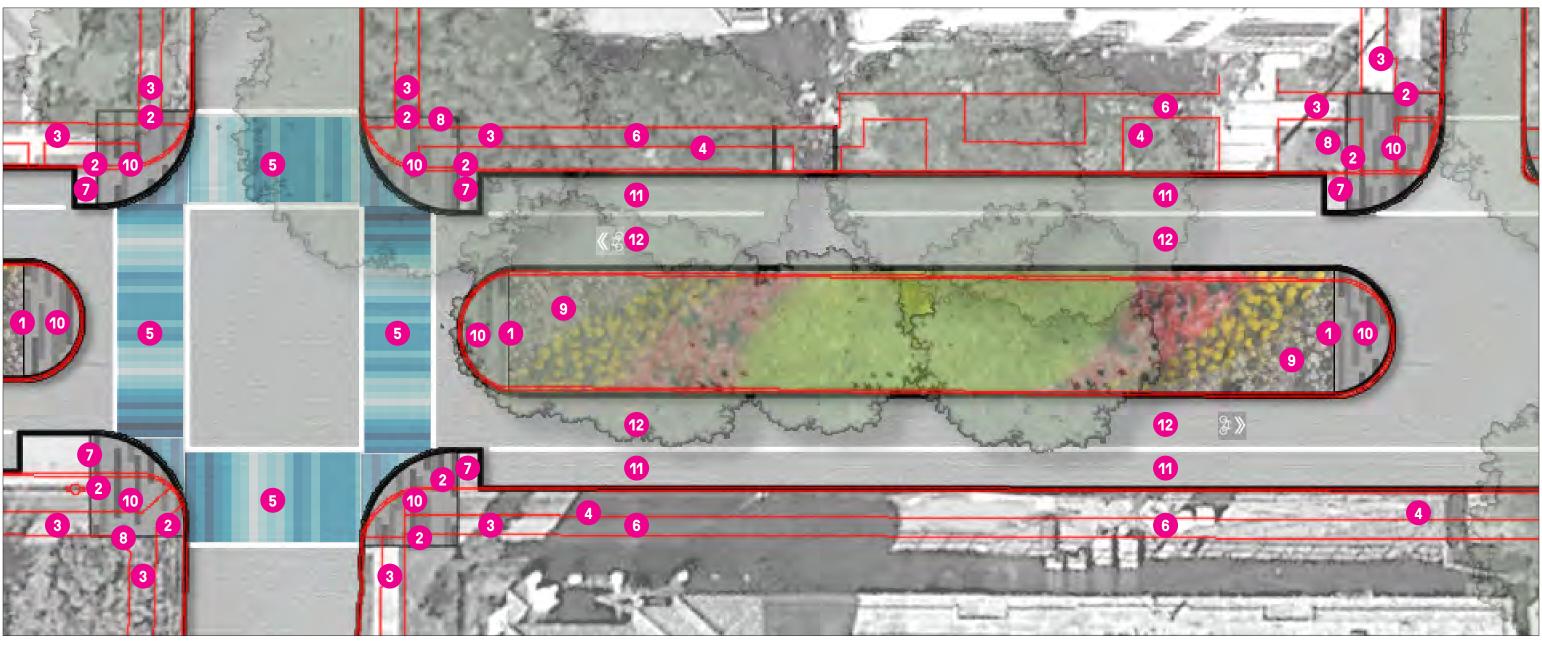
- 1 Sun Planting Palette
- 2 Shade Planting Palette
- 3 Wayfinding Marker
- 4 Temporary Art Crosswalks
- Multi-functional Furnishings indicates current curb and sidewalk alignment



- 1 Sun Planting Palette
- 2 Shade Planting Palette
- 3 Wayfinding Marker
- 4 Temporary Art Crosswalk
- 5 Multi-functional Furnishings
- 6 Gateway Marker
- 7 Freeway Cap Landscape Amenities indicates current curb and sidewalk alignment



CONCEPT PLAN: TYPICAL BLOCK



- 1 Street Name Signage
- 2 Blue Tile Markers
- 3 ADA Ramps
- 4 Multi-functional Furnishings
- 5 Temporary Art Crosswalks

- 6 Updated 5-6-FT Sidewalks
- 7 Pedestrian Light Poles
- 8 Culture Trail Pedestrian Wayfinding
- 9 Low Planting For Vehicular View Triangle
- 10 Pedestrian Isles with Lateral Paving Pattern

- 11 Re-Striped Street Parking Zone
- 12 Sharrow Lane Markings

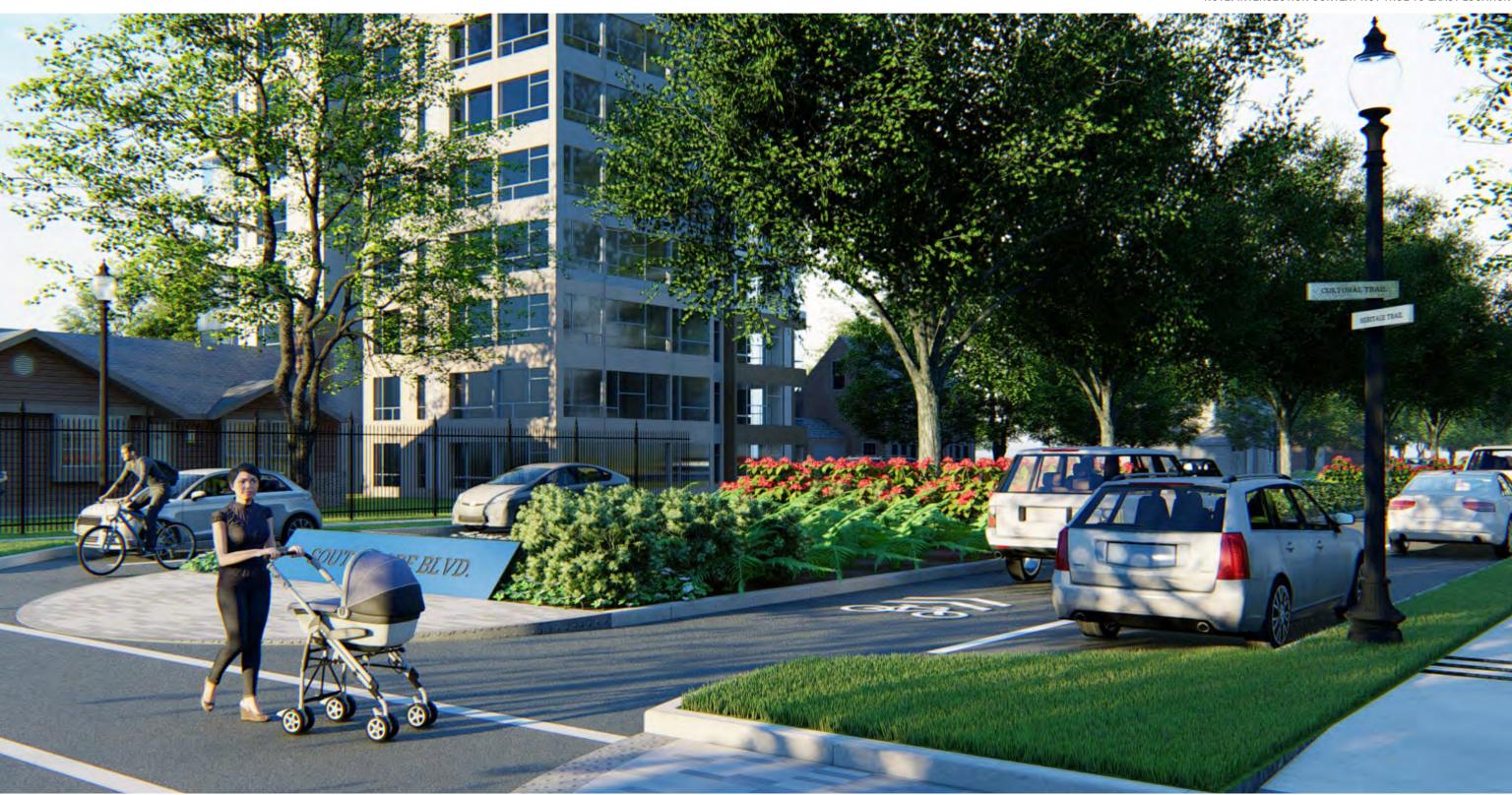
indicates current curb and sidewalk alignment

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



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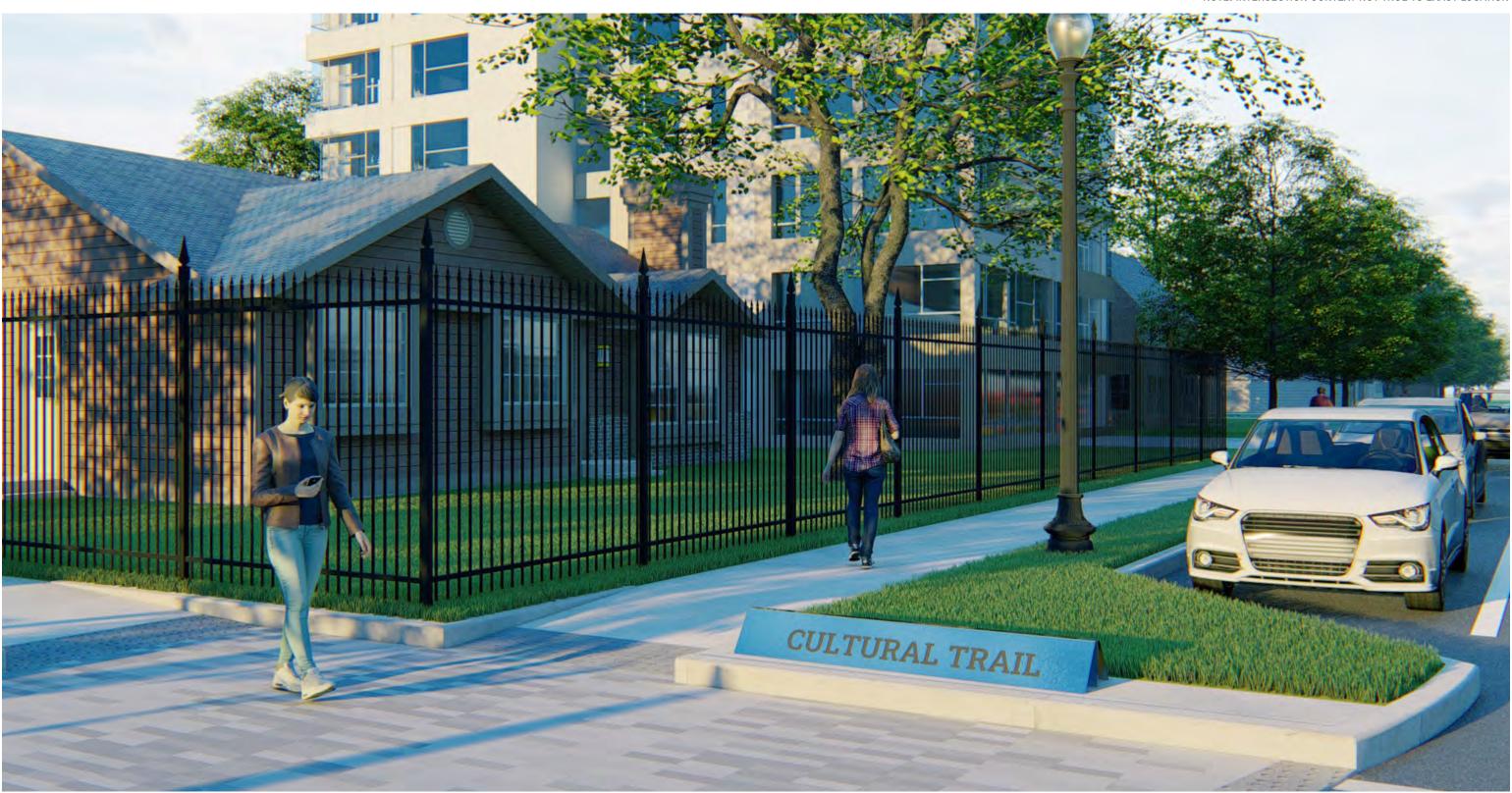
NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



CONCEPT PLAN: MOBILITY

RECOMMENDED IMPROVEMENTS

The overall goal is to enhance safety for all users - pedestrians, bicyclists and vehicles. Based on the information obtained, analysis, and assessment of the existing conditions, the following recommended improvements will meet the project objectives:

1. CURB EXTENSIONS (BULBOUT)

Curb extensions or bulbouts are recommended to visually and physically narrow the roadway from 20-23-FT down to 11-FT-wide lanes. This will provide the following benefits:

- the overall width of a roadway leads to reduction in traffic speeds as it discourages speeding. Studies have demonstrated that lane widths of 10- to 11-FT are appropriate in urban areas and have a positive impact on a street's safety without impacting traffic operations. See the graph on the next page demonstrating that narrower streets help promote slower driving speeds which, in turn, reduces the severity of crashes. Tightening intersection curb radii also encourages slower turning speeds.
- Pedestrian safety: increasing the overall visibility
 of pedestrians by aligning them with the parking lane and reducing the crossing distance for
 pedestrians makes it safer for pedestrians while
 increasing the available space for street furniture,
 benches, plantings, and street trees.

BULBOUT CONCEPT DIAGRAM

 Drainage: creating bulbouts will require milling and overlaying the parking area between the bulbouts to reverse the cross slope for that area to avoid having stagnant water. In addition, the bulbouts will affect some of the existing inlets and they will need to be relocated to the proposed curb location of the bulbouts.

2. CITY AND ADA COMPLIANT CURB RAMPS

To provide a more pedestrian friendly environment and improve quality of life, the existing sidewalks that are in "fair" and "poor" conditions will be removed and replaced with standard 5-6-foot City-compliant sidewalks. The existing curb ramps will be removed and replaced with City and ADA-compliant ramps.

Please note that the recently built sidewalks and curb ramps that are in good condition will remain in place. These sections were identified during the field reconnaissance. It is recommended that ADA ramp design provides for in-line ramps (type A, B).

3. WAYFINDING SIGNAGE

Wayfinding signage will be installed at regular intervals along the corridor to direct pedestrians and bicyclists through the project corridor and inform them of route direction changes.

4. PARKING STRIPING

Striping will be installed along the parking lanes to better delineate the travel lane from the parallel parking realm.

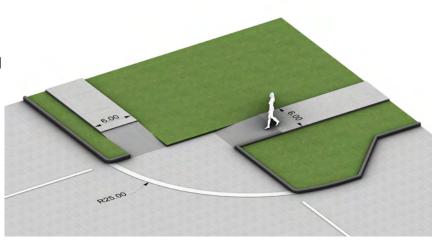
5. CROSSWALK STRIPING

Proper crosswalk striping will be installed in conformance with the latest edition of the City of Houston's Standard Details. The striped area will serve as a canvas for temporary graphics that can be installed near

schools, museums, and church crossings, and may be either installed through collaboration with professional artists or the community during events like Sunday Streets and block parties. The longevity of these temporary art crosswalks will depend on the installation technique developed in the art project goal. Depending on the goal, the installation may be installed to last anywhere from weeks to several years.

6. SHARED LANE (SHARROW) DELINEATION

Caroline is currently a shared lane (sharrow) and will continue to be so. This means that the roadway travel lane will continue to be shared by vehicles and bicyclists. Proper signage and pavement markings will be used to provide a visual indicator to vehicle traffic of the dual use of the roadway. Shared lane markings will be used to encourage bicyclist to travel in the middle and most visible portion of the travel lane (far from the on-street vehicular parking).



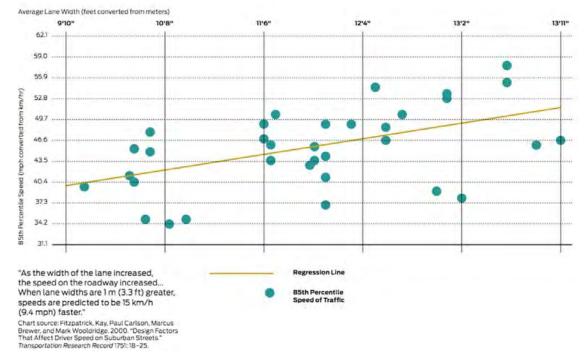
ADA RAMP TYPE A

ADA RAMP TYPE B

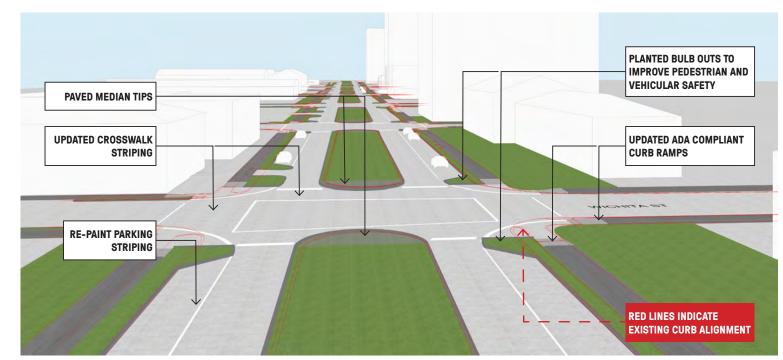
CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

CONCEPT PLAN: MOBILITY

RECOMMENDED IMPROVEMENTS



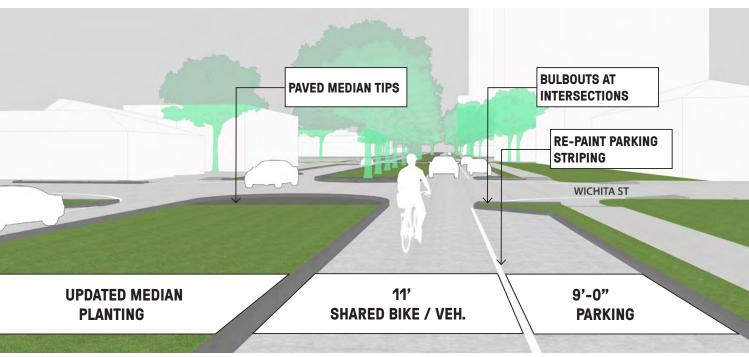
WIDER TRAVEL LANES ARE CORRELATED WITH HIGHER VEHICLE SPEEDS



PROPOSED CONDITION



EXISTING CONDITION



PROPOSED CONDITION

RECOMMENDED IMPROVEMENTS

The objective of the project is to enhance landscape character and to increase the positive environmental impact of the Caroline streetscape. By introducing best design practices to increase carbon sequestration, biodiversity, and ecosystem services, project recommendations ultimately aim to increase livability for human and non-human inhabitants of the city. Viewing ecosystem services in an urban setting as monetary assets, the project advocates for their preservation and enhanced performance to better serve in support of urban resilience from the ecological, infrastructural, economic, and community standpoint. The use of a robust approach in the public right-of-way for ecological and health educational purposes may also leverage collaboration opportunities with Health Science Museum, Children's Museum of Houston, Houston Museum of Natural Science, Hermann Park Conservancy, and other Strategic Partners/Stakeholders.

1. BENEFICIAL LANDSCAPES/ SUSTAINABLE LANDSCAPE STRATEGIES

As defined by the Environmental Protection Agency, beneficial landscaping enables us to avoid or lessen negative effects of urbanization while meeting our needs for function, beauty, environmental and economic benefits. Beneficial landscaping, sometimes referred to as natural or native landscaping, contains a number of principles, such as:

- Utilize regionally native plants to form the foundation of the landscape.
- Reduce the use of turf. Instead, install woodland, meadow or other natural plantings.
- Reduce or eliminate the use of pesticides.

- Practice organic gardening or integrated pest management.
- Compost and mulch on-site to eliminate solid waste, control weeds, restore nutrients and organic matter to the soil, and reduce or eliminate the need for fertilizer and herbicide applications.
- Practice soil and water conservation. If irrigation is used, use drip irrigation or other water conserving techniques, and water in the early morning or evening hours.
- Create additional wildlife habitat to help compensate for land lost to urban/suburban development.

"Beneficial landscape strategies" and sustainable landscape strategies go hand-in-hand. Sustainable strategies offer an opportunity to work with the existing landscape and environmental assets on site to achieve a more resilient approach with reduced demands on natural resources, preservation of ecological systems and reduced carbon footprint from maintenance protocols. Sustainable practices should be integrated and programmed as part of the Caroline corridor and future projects within the District to enhance the long-term resilience of urban ecosystems. The conceptual design considers how to integrate this approach seamlessly with the existing conditions along the corridor to create healthy and beneficial environments that reflect both the development values and environmental education aspirations of the District's landscape strategy.



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RECOMMENDED IMPROVEMENTS

2. SOILS

It is vital to first look at approaches for amending the existing soils. Soils are the foundation for creating thriving landscapes, yet within urban street corridors, they are notoriously compacted and nutrient poor. Possible potential measures to improve the existing soil conditions include:

- Implementing cover crops as an economical approach to suppress weed growth, decrease compaction, improve erosion control, soil tilth, and nutrient composition. Example cover crop planting mixes could include annual rye grass, millet, turnip, and radish.
- In conjunction with the cover crops, imported soils will create planting areas that drain properly and support healthy plant growth. Imported soil depth shall be no more than 2" under existing trees.
- Mechanical tillage will help incorporate imported soil amendments (shall not occur within the critical root zone of trees).
- Application of hardwood (or pine straw) mulch will improve tree health.
- Eradication of bermuda grass prior to new planting implementation within the corridor should use natural approaches first. Chemicals should only be used as the final means to aid full eradication.
- If and when possible, organic fertilizers should be used instead of chemical fertilizers.

3. LANDSCAPE MAINTENANCE

Tree and landscape plantings should be selected based on their suitability for climate, soils, drainage conditions, and growth habit. Where practical, vegetation should be selected and spaced to allow for full mature growth with minimal maintenance. Likewise, tree and landscape plantings should be planted to avoid conflict between vehicular circulation and paving systems, as allowed by existing conditions. Seasonal variation throughout the corridor should be integrated to maintain the overall structure of the landscape and provide seasonal interest. Landscape displays of flowering trees and plantings, as well as fall color and winter form, should be choreographed throughout to provide seasonal interest. Perennial and annual plantings should be reserved only for high visibility locations and with consideration to maintenance resources. Turf lawns should be utilized purposefully and as required to provide cover in areas where landscape plantings will not provide a successful approach in regards to survivability and maintenance needs. Adequate surface drainage for all lawn areas will be required.

4. REGULATORY CONTEXT

Landscape planting selection should consider public safety to ensure clear lines of sight throughout the corridor. Landscape plantings should be selected and/or maintained to ensure visibility throughout the corridor. Planting and irrigation design should adhere to the City of Houston Adopt-an-Esplanade design guidelines. Future adoption by the Adopt-an-Esplanade program includes review by Urban Forestry and Planning COH Departments.

5. TREES

Preservation and protection of the existing trees along Caroline is of utmost priority as the established and emerging canopy is invaluable to the character, human comfort, and ecological health of the project area. A tree survey conducted in October 2019 assigned monetary value to the existing trees as a major investment in need of conservation and maintenance. It is recommended that the trees on Caroline, particularly the ones identified to be in "poor" and "at risk" states, are addressed through an arbor care management program to protect an enhance this critical natural resource.

\$ 1,613,001.41

COMBINED MONETARY VALUE OF EXISTING TREES ON CAROLINE (value derived from assessment of the trees condition, age, size, species, and location)

1. TREE CONDITION: GOOD



2. TREE CONDITION: FAIR



3. TREE CONDITION: POOR



4. TREE CONDITION: AT-RISK



EXSTING TREE CONDITIONS PER THE TREE SURVEY CONDUCTED IN OCTOBER 2019

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RECOMMENDED IMPROVEMENTS

6. LANDSCAPE PALETTE APPLICATION PRINCIPLES

The goal of the landscape design approach is to create a flexible system that helps achieve aesthetic and environmental goals of planting improvements. Projected installation and maintenance costs also directly play into the specifics of plant material selection and plant material amounts. Connection to the park character, sustainability goals and opportunities for environmental education were influencing factors in the development of this design approach.

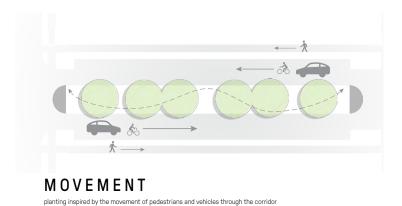
A series of landscape design criteria graphically explained on this page summarizes the project's landscape-related goals and helps guide future detail design at specific corridor locations.

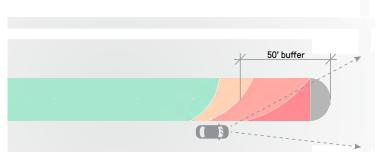
7. LANDSCAPE PALETTE SUSTAINABILITY

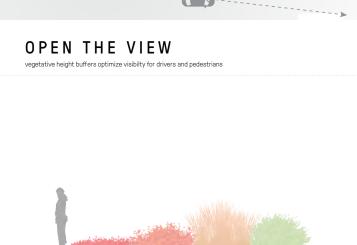
Sustainability in landscape design must consider selection of plants that are adaptable to local climate conditions and soil types. Native planting should be used where possible to limit irrigation demands, enhance site ecology, and provide a more resilient urban landscape. Invasive plant species should be avoided.

Proper establishment and long-term success will depend on irrigation to supplement water needs during dry periods. The irrigation system should integrate smart control systems and distribution that targets planting root zones to reduce water usage.

A selective plant palette contributes greatly to the character of urban corridors. Urban planting design must consider the existing site conditions in order to determine sequencing, grouping, and heights of the plants. Selection and groupings of plants along the Caroline corridor and throughout the District serve to contribute to spatial definition and scale, as well as reinforce the

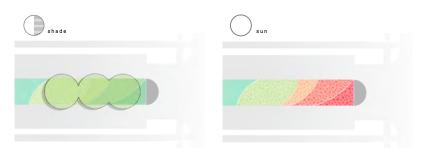








TEXTURAL VARIATION



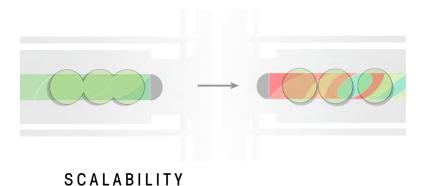
SHADE/ SUN POCKETS

plant alternatives based on sun/ shade created by existing tree canopy

patterns of planting vary in levels of complexity

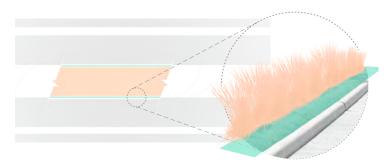


SEASONAL INTEREST plants arranged to bloom at different months, providing different looks throughout the year





PLANT DIVERSITY



CLEAN EDGES & DIVERSE FIELDS



COMPLEMENTARY BENEFITS plants that complement each other and balance out each others' pros &cons

CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

RECOMMENDED IMPROVEMENTS

overall character. Location and groupings of key species should be considered to emphasize legibility of significant native landscape communities. Practical considerations for mitigating seasonal micro-climates, including provisions for shade, solar exposure, and wind corridors should be incorporated into design and selection of plant material to maximize comfort and extend seasonal use of outdoor spaces throughout the Caroline corridor and the neighborhood.

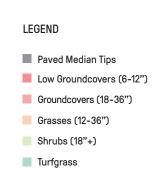
Scalability of the design is another contributing factor to a more sustainable nature of the project. It will ensure that maintenance dollars will be committed to the areas with high economic and environmental impact.

8. LANDSCAPE CHARACTER: EARLY WINS CONSIDERATIONS

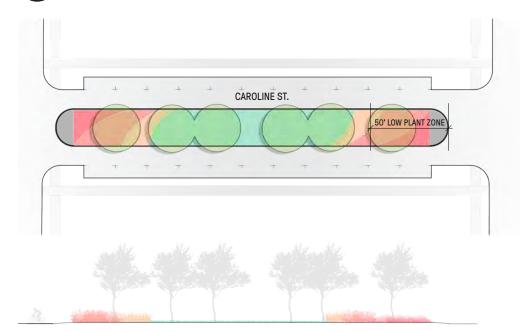
Ultimately, the path to success along the Caroline corridor is not linear. District priorities and funding will steer the overall direction of the project. Outdoor demonstration projects promote public awareness and education and can be a catalyst for similar initiatives by the general public as well as other governmental agencies. They can also aid in the development and expansion of beneficial techniques and technologies. Outdoor demonstration projects are an effective method of promoting and sharing information about environmentally sensitive landscape approaches and the use of environmentally and economically beneficial landscape practices. Outdoor demonstration projects can also showcase partnership opportunities among industry, academia, and other governmental agencies. Cooperative agreements can

assist in the development of technologies and techniques in such areas as recycled or reclaimed water use. Possible considerations for "early wins" and landscape-focused pilot projects along the corridor may include:

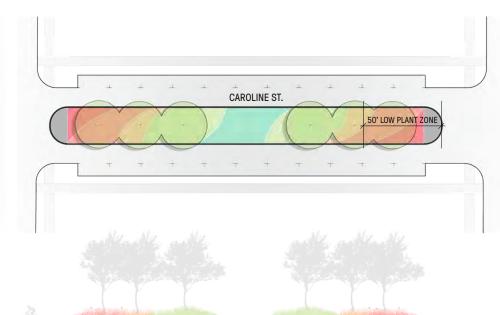
- Amending existing soils with cover crops;
- Mulching under existing trees to protect exposed roots and limit further erosion;
- Implementation of tree maintenance measures identified on the basis of the conducted tree survey
- Soil testing to evaluate soil health and chemistry;
- Pilot plantings with community Partners;
- · Addressing corridor gateway from Hermann Drive.



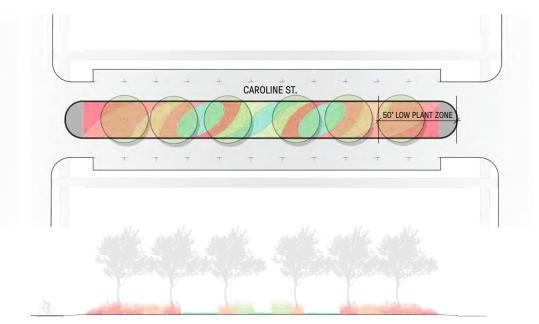








(2.) MAXIMUM PALETTE APPLICATION



SCALABLE APPLICATION OF LANDSCAPE PALETTE

RECOMMENDED IMPROVEMENTS

9. HARDSCAPE PALETTE

Signature hardscape is envisioned in support of pedestrian mobility needs and streetscape character. It is proposed that a paver and concrete scoring pattern run perpendicular to the path of pedestrian travel and are able to receive embedded directional signage, running in the same direction. Paved isles are proposed at esplanade tips to provide refuge as well as to simplify maintenance and to ensure consistent appearance throughout the length of the street.

10. BURIAL OF OVERHEAD UTILITIES

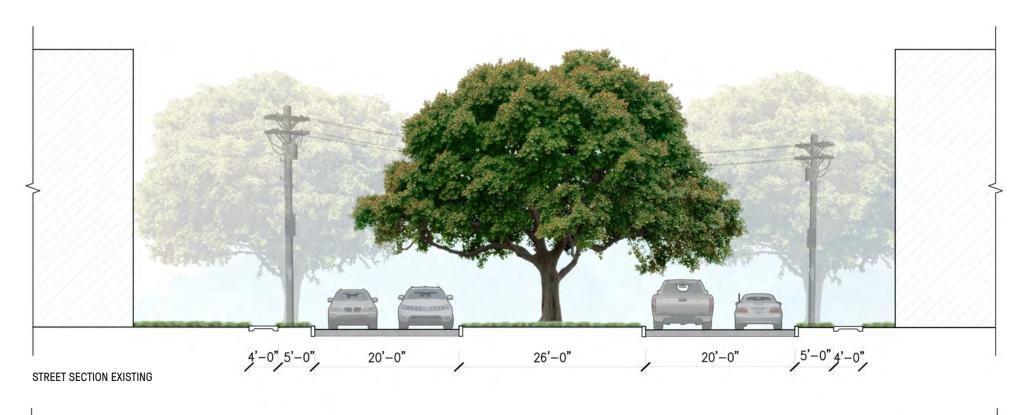
Overhead powerlines and aged pole infrastructure supporting utilities is one of the biggest detriments to the current character of Caroline Street. Despite the typically high costs associated with the removal and burial of overhead utilities, it is still recommended that feasibility of such removal is studied and implementation considered for Caroline Promenade.

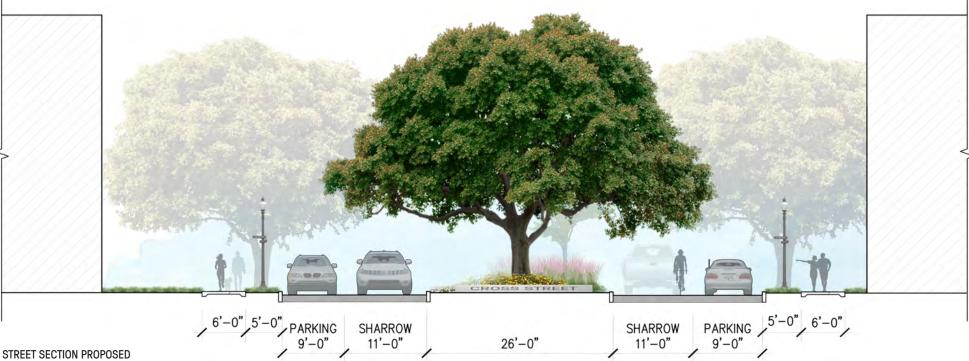
11. LIGHTING

Supplemental pedestrian lighting on Caroline should be focused at street intersections. In the interest of protecting the existing tree root zones, only low impact siting should be identified for additional light poles. Historic character of pole lights already present on Main Street, in Hermann Park, Midtown, and Almeda Road set a strong precedent for character continuity of light installations on Caroline. It is recommended that specific considerations for poles and fixtures are coordinated with the District's forthcoming effort to develop lighting standards for its major corridors. Supplemental lighting associated with wayfinding and potential branded elements should be included in a comprehensive lighting scheme that makes sense not only for Caroline corridor, but for the District as a whole.

12. URBAN FURNISHINGS

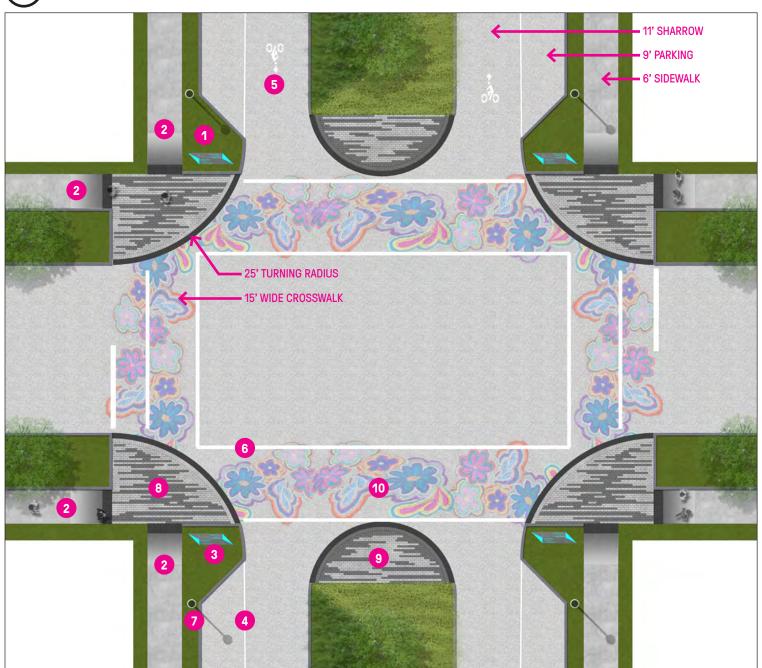
Due to the narrow available back-of-curb space mostly occupied by established trees, urban furnishings have to creatively solve a problem of providing respite and function in a limited space, without creating unduly management challenges for the District. Apart from adhering to the District's standards on things like litter receptacles, a multifunctional approach to designing furniture that can combine functionality of a bench and a bike rack, for example, can be a creative and branded solution for Caroline.



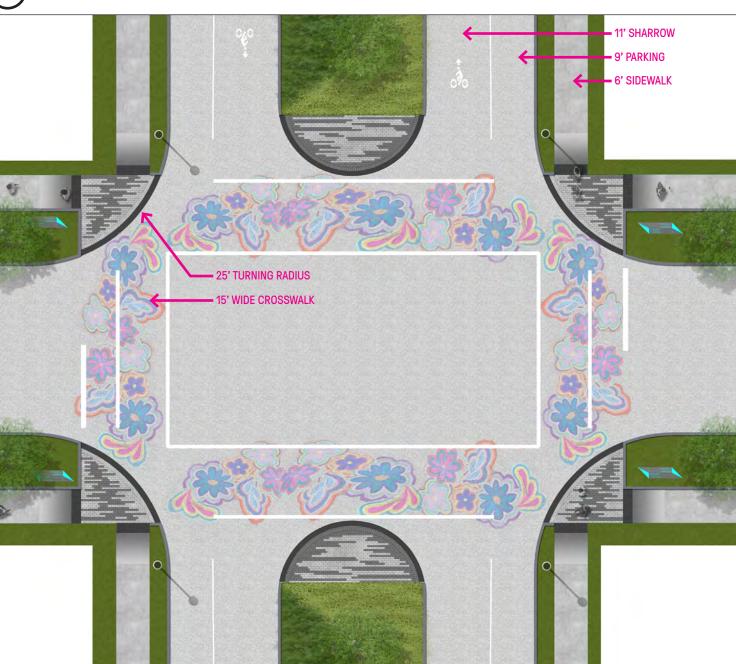


RECOMMENDED IMPROVEMENTS

(1.) PROPOSED INTERSECTION TYPE WITH BULBOUTS



2.) PROPOSED INTERSECTION TYPE WITHOUT



LEGEND

BULB OUT

STREET LIGHTING

MEDIAN TIP PAVING

ADA COMPLIANT CURB RAMPS
WAYFINDING SIGNAGE
PARKING STRIPING
SHARROW DELINEATION
CROSSWALK STRIPING

PEDESTRIAN LANDING PAVING

TEMPORARY CROSSWALK PAINT

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PLANTING PALETTE CASE STUDY

"STRICTLY NATIVE" CASE STUDY PALETTE NARRATIVE

The selected landscape palette shown here provides an example of potential planting strategy on Caroline esplanades with a special consideration given to the sun exposure and shade conditions due to the tree canopy and adjacent building architecture.

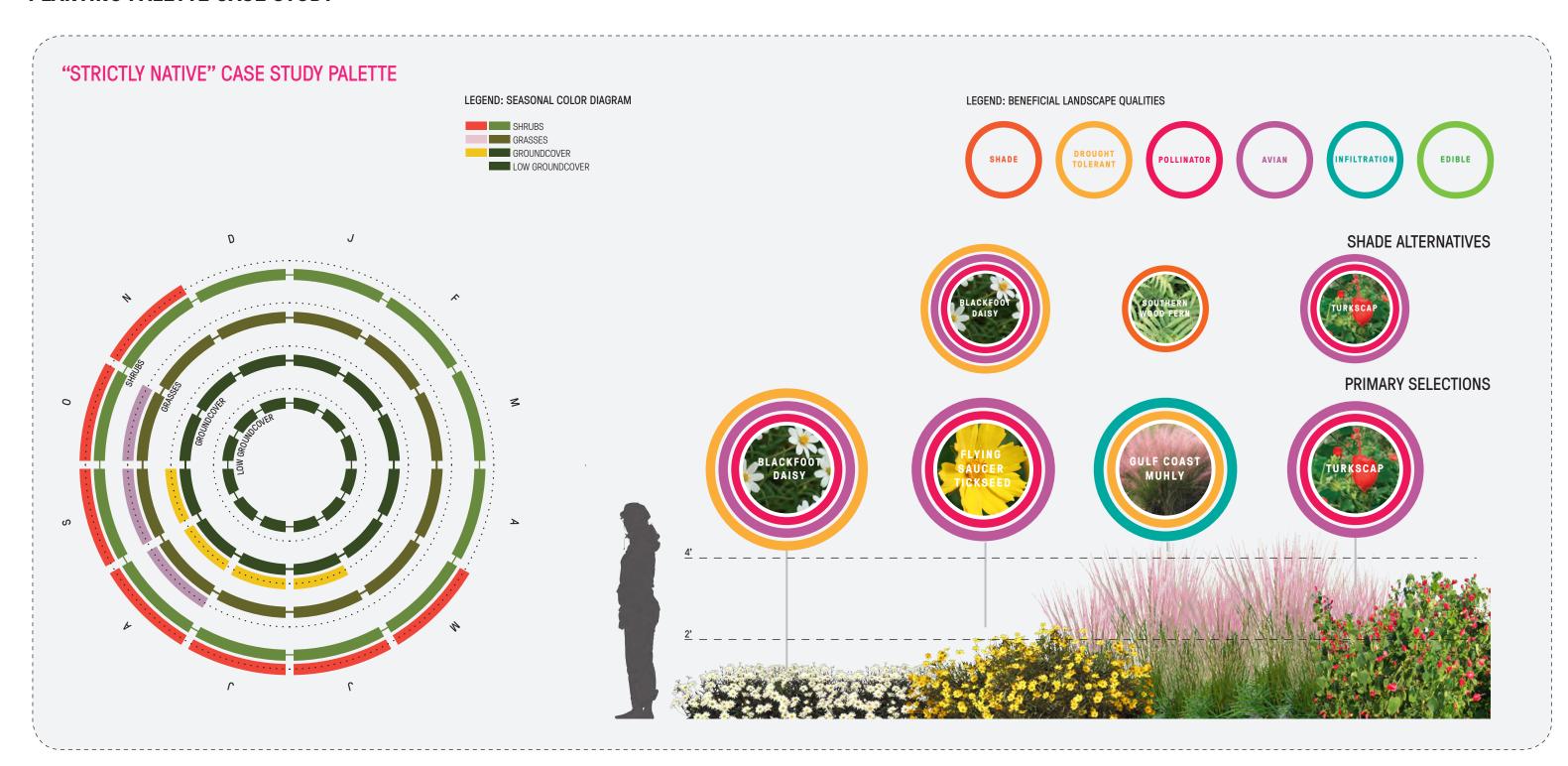
The palette incorporates container grown native perennial plant selection that will bloom throughout a majority of the growing season. These species may require dead-heading and additional trimming to encourage repeat blooming and increased foliage production. Some natives and perennial species will go dormant during the winter months and require trimming in late February to promote a strong flushing of foliage and blooms in the spring.

A yearly application of organic fertilizer, when possible, will only improve the health and blooming of these selections. Irrigation management will be critical with this approach to ensure that water levels are correct: excess water levels can have an adverse effects on native plants. As with all landscape installations, the season can have a large impact on the watering needs and establishment period. Consideration of environmental conditions along with proper plant establishment and maintenance will play a key role in the success of the installation during the life of the project.



CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

PLANTING PALETTE CASE STUDY



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PLANT LIST

Multiple plant palette variations were studied in the course of the project and vetted with the District staff, Hermann Park Conservancy horticulturist, Texas Parks and Wildlife representatives, COH Urban Forestry Department, and community garden enthusiasts. Resources developed by the Katy Prairie Conservancy, Texas A&M Agrilife, and Lady Bird Johnson Wildlife Research Center were also referenced in developing the project final plant material selections.

The recommended design direction is to generally align with the COH Parks Department advocacy to plant native species on public lands with the purpose of promoting native habitat and environmental health of urban areas while reducing maintenance requirements.

A plant list developed as a result of close collaboration with multiple experts will serve as the foundation for planting design on Caroline and other corridors in the neighborhood. As the plant list allows for numerous potential planting schemes, it is recommended that the final palette and layout selected for implementation adheres to the design principles articulated earlier in this document.

		NAME	MATURE HT	MATURE Spread	BLOOM TIME	BLOOM COLOR	SUN - SHADE	HABITAT VALUE	NATIVE / Adapted	EVERGREEN/ DECIDUOUS
		STAR JASMINE	12-24"	10-12'	JUN- AUG	. •	* *	• 0 0	. A	EVERGREEN :
	E	CREEPING JUNIPER	2-3'	SPREADING :	APR- MAY	: • •	* * *	• 0 0	. A	: EVERGREEN :
	, §	ZEXMENIA	3'	3'	MAY-SEPT	• •	* *		N	EVERGREEN
	LOW	BLUE ELF ALOE	1-2'	1-2'	DEC-FEB	•	* *	\bullet \bullet \bigcirc	. A	EVERGREEN :
	LOW GROUNDCOVER	SAND LEAF FIG IVY	6"	5' :	N/A	•	: ★ ★	• 0 0	. A	: EVERGREEN :
	GR	BERKELEY TEXAS SEDGE	1'	1' :	APR- MAY	:	:	• 0 0	: A	: EVERGREEN :
		FROGFRUIT	3-6"	1'	MAY-OCT		*	• 0 0	Α	EVERGREEN
		PLUMBAGO	3-4'	4-6'	APR-SEPT		<u>-</u> •∕ <u>-</u>	• • 0	. A	DECIDUOUS
		CREEPING ROSEMARY	2-3'	2-3'	FEB-APR	• •	*		. A	EVERGREEN
		LOUISIANA IRIS	1-6'	12"	APR-MAY	. • •	→ ★ ∴	\bullet \bullet \circ	: N	: DECIDUOUS :
		FLYING SAUCERS TICKSEED	12-16"	9-12"	JUN-AUG	: •	: * :	\bullet \bullet \bigcirc	: N	: DECIDUOUS :
		PURPLE CONEFLOWER	2-5'	1-3'	APR-SEPT	•	* *	\bullet \bullet \bigcirc	N	DECIDUOUS
		PINK DRIFT ROSE	1-2'	2-3'	SPRING-FALL		*	\bullet \bullet \bigcirc	. A	DECIDUOUS
		TEXAS LANTANA	2-6'	2-6'	APR-OCT	: •	: * :	\bullet \bullet \bigcirc	: N	: DECIDUOUS :
		MAY NIGHT SALVIA	2-3'	2-3'	SEPT-NOV	: •	÷. ÷. ÷.		. A	: DECIDUOUS :
	Æ	AUTUMN SAGE	1-3'	1-3'	FEB-OCT	• • •	* * *	• • •	N	DECIDUOUS :
	TALL GROUNDCOVER	BLACK-EYED SUSAN	1-2'	12"	JUN-OCT	•	*	• • •	N	DECIDUOUS
		LEMON BEEBALM	1-2'	12"	MAY-JUL	• • •	* *	\bullet \bullet	N	DECIDUOUS
		BLACKFOOT DAISY	6"	1-2'	MAR-NOV	. • •	: * *	• • •	. N	: DECIDUOUS :
		BAT FACED CUPHEA	1-2'	1-2'	MAR-NOV	:	: * * ∴		. A	: EVERGREEN :
		PINK SKULLCAP	12-18"	2-3'	MAY-OCT		* *		N	HERBACIOUS
		GULF COAST PENSTEMON	12-18"	1-3'	MAR-JUN	•	* *	\bullet \bullet \circ	N	HERBACIOUS
		MEXICAN OREGANO	3' - 4'	1-3'	APR-SEPT	: •	: ☀ :	• • •	: A	: EVERGREEN :
		SILVER STREAK FLAX LILY	18" - 24"	18" - 24"	SPRING	. •	· * * :		. A	: EVERGREEN :
		SOUTHERN WOOD FERN	3'	3'	N/A	•	· *	• • •	N	DECIDUOUS
		LACE FERN	2-3'	2-3'	N/A	:	÷	• • •	A	EVERGREEN
•	• • • • • • •			4.01		••••••••		• • • • • • • • • • • • • • • • • • • •	•••••••	
		MEXICAN FEATHERGRASS	3'	1-3'	JUN-SEPT		* *	• • 0	A	: HERBACIOUS
	တ္သ	BAMBOO MUHLY	3-5'	3-4'	JUN-SEPT		* *	• • 0	. A	HERBACIOUS
	GRASSES	CASSIAN	2-3'	2-3'	JUL-SEPT			• • 0	. A	HERBACIOUS
		ADAGIO MAIDEN GRASS	3-4'	3'	JUN-AUG	:	* *	• • ○	: A	HERBACIOUS
	9	'LITTLE KITTEN' MAIDEN GRASS	3'	12-18"	AUG-OCT	•	<u>*</u>	• • ○	. A	: HERBACIOUS
		GULF COAST MUHLY	1-3'	1-3'	OCT	•	*		. N	HERBACIOUS
		INLAND SEA OATS	2-4'	1-2'	JUL-SEPT	•	- ∳∳-	• • •	N	DECIDUOUS

PLANT LIST (CONT.)

	'THE BLUES' LITTLE BLUESTEM				COLOR		VALUE	ADAPTED	DECIDUOUS
1	DILLE ODAMA IDI ONDE AMBITIONI	2-4'	1-3'	JUN-DEC	:	* *	• • 0	: N	HERBACIOUS
	BLUE GRAMA 'BLONDE AMBITION'	3'	3'	JUL-AUG	•	* *	• • 0	. N	HERBACIOUS
⊕×	CUSTOM PRAIRIE GRASS MIX	1-3'	1-3'	MAR-OCT	•	*	• • •	N	HERBACIOUS
SEED	TX ROADSIDE MIX 'WILD FLOWERS'	1-3'	1-3'	MAR-OCT	•	* *	• • •	N	HERBACIOUS
	DWARF YAUPON	3-4'	3-4'	N/A	•	* *	• • 0	N	EVERGREEN
1	DWARF BOTTLEBRUSH	3'	5'	SPRING-SUMMER	•	*	\bullet \bullet \bigcirc		EVERGREEN
1	DWARF BARBADOS CHERRY	3-5'	3-5'	APR-OCT		<u>-</u> ∳-		N	EVERGREEN
	TEXAS SAGE SILVER STAR	2-5'	4-6'	YEAR ROUND	•	★ - ★-	\bullet \bullet \bigcirc	. N	EVERGREEN
ı	CARISSA HOLLY	3-4'	4-6'	: N/A	•			: A	EVERGREEN
1	UPRIGHT ROSEMARY	2-3'	2-3'	FEB-APR	:	: * * : * : *		: A	EVERGREEN
	TURKS CAP	2-3'	2-3'	• MAY-NOV	•	₩ -₩	\bullet \bullet \bigcirc	• N	DECIDUOUS
SHRUBS	BLUEBERRY 'SOUTHERN BELLE'	3-4'	2-3'	MAY-JUN			• • •	A	DECIDUOUS
HE I	RUSSELIA	3-5'	3-5'	MAY-OCT	•	: ★ ※ ☆ : : ★ ※ :		. A	DECIDUOUS
<u>~</u>	NEARLY WILD ROSE	2-3'	2-3'	: MAY-OCT		· · · · · ·	\bullet \bullet \circ	: A	DECIDUOUS
1	PROSTRATE ROSEMARY	2'	4-8'	MAR-MAY		* *		: A	EVERGREEN
,	VIBURNUM 'WALTER'S WHORLED'	4-5'	4-5'	APR-JUN	:	* *	\bullet \bullet \bigcirc	: A	DECIDUOUS
1	PRINGLES DWARF PODOCARPUS	4-5'	4-5'	N/A	•	- ⋈ ⋈-		A	EVERGREEN
· ·	AMERICAN BEAUTYBERRY	4-5'	4-5'	SUMMER	•	- <u>w</u> <u>-</u> <u>w</u> -	• • •	N	DECIDUOUS
1	DWARF PALMETO	5'-6'	5'-6'	SPRING	:	-)	• • •	. N	EVERGREEN
1	LITTLE HENRY DWARF SWEETSPIRE	2-3'	2-3'	SPRING-SUMMER		* *	• • •	· N	DECIDUOUS
	TEXAS REDBUD	10-20'	10-20'	MAR- APR			• • •	· N	DECIDUOUS
	PARSLEY HAWTHORN	25'	25'+	MAR- MAY		· · · · · · · · · · · · · · · · · · ·	• • ○	: N	DECIDUOUS
7 1	YAUPON HOLLY	25-45'	25'	APR- MAY		* * * :	• • ○	N	DECIDUOUS
ES EN	POSSUMHAW	15-30'	15-30'	MAR- MAY			• • •	N	DECIDUOUS
2 #	RUSTY BLACKHAW VIBURNUM	12-20'	12-20'	APR- MAY	:	÷.	• • ○	. N	DECIDUOUS
NS.	SOUTHERN WAX MYRTLE	6-12'	6-12'	•	•	* * *	• • ○	. N	EVERGREEN
	WHITE FRINGETREE	15-30'	15'	: APR- MAY		∴	• 0 0	: N	DECIDUOUS
(CHERRY LAUREL	15-36'	12-36'	FEB-APR		* *	• • ○	: N	EVERGREEN
TS.	SWEET POTATO	.5-1'	8-10'	'	•	*	• • ○	• A	HERBACIOUS
BAN	TURNIP	1-3'	1'	• JAN - SEPT	:	*	• • •	: A	HERBACIOUS
	RADISH	2-3'	1-2'	•	•	*	• • •	: A	HERBACIOUS

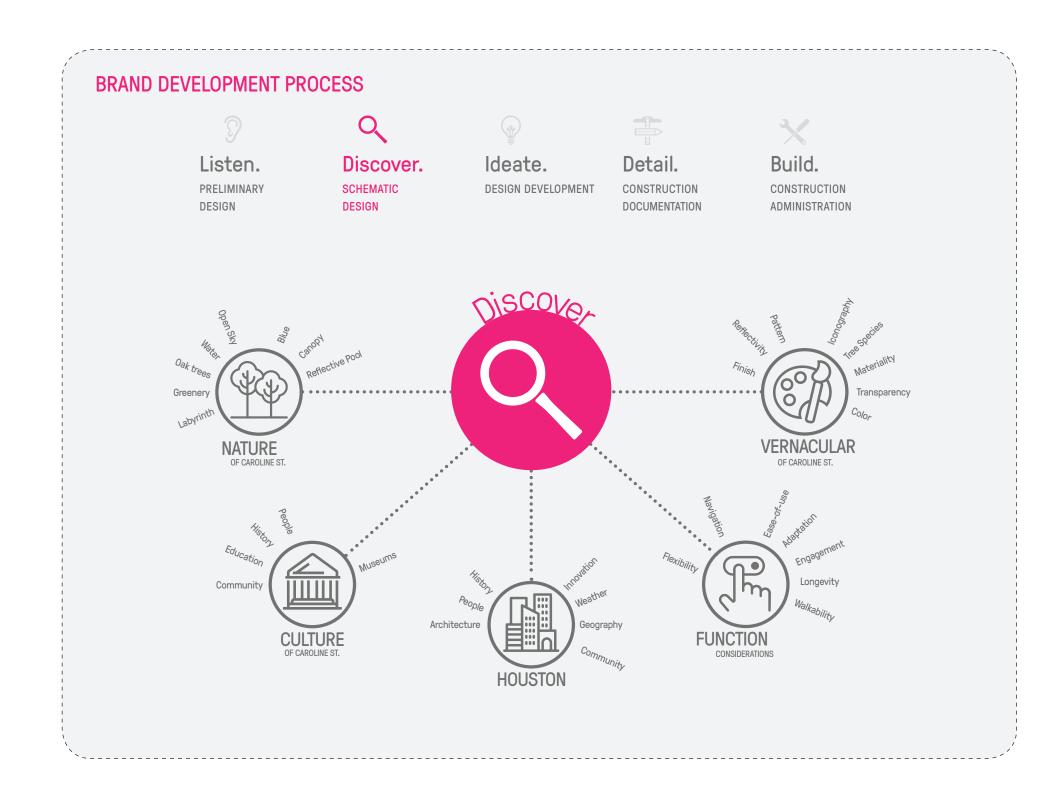
DESIGN PROCESS

BRAND DEVELOPMENT PROCESS

At the beginning of the design process, the team's goal was to discover and celebrate what makes Caroline Street special. Researching the context, culture, and vernacular of the area helped better understand what can inspire the look and feel of the public realm brand identity. Through this research, the team identified factors that could influence the Caroline Street brand, such as color, natural context, architectural context, climate, weather, and pattern. A list of design principles was also developed to guide the conceptual development process.

The next step was to integrate branding concepts with a wayfinding strategy that combined industry trends, the knowledge of existing street grid use with ideas about the future of urban navigation systems connected to advancements in technology. From this point, a design strategy considered functionality, such as ease of use, walkability, longevity, and durability. This process was also largely informed by the feedback received during meetings with the Client group and larger community.

To progress past the initial concepts and schematics presented in this report, a robust and focused brand identity design exercise would need to coordinate with the ongoing District efforts towards the latest branding and marketing-related campaigns and projects. The approach can serve as a model to be implemented across the Houston Southeast to celebrate the identity of the area, create a consistent signage language, and improve the built environment for its users.



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DESIGN PRINCIPLES

A FAMILY OF OBJECTS

Wayfinding/Branding Strategy is introducing a family of objects that reflect the philosophy and goals of the project: to be an elegant cultural statement that does not add to the vertical clutter.

ENCOURAGE LATERAL MOVEMENT

Wayfinding system encourages "lateral" movement by including destinations not directly located on Caroline: commercial districts, restaurant rows, neighborhoods, arts districts, and historic landmarks.

NORTH AND SOUTH GATEWAY ELEMENTS

Gateway elements designate a transition into a destination, community, or some other change of place. They serve as a placemaking icon that is often the first impression that a pedestrian or motorist will have of that community. Caroline has two opportune moments to designate that transition at Hermann Drive and Wheeler Avenue at the future I-69 freeway cap.

EMBEDDED SIGNAGE

Wayfinding system utilizes an "embedded" approach and is primarily integrated within horizontal surfaces: curbs, sidewalks, and paved median tips. When expressed on vertical surfaces, it utilizes existing urban furnishings and infrastructure.

POLE-MOUNTED SIGNAGE

Signage attached to existing vertical elements in the built environment. These are likely displaying identification signage or directional signage.

EDUCATIONAL VALUE

Wayfinding system carries educational value by incorporating information about historic landmarks, events, and personalities. Environmental education facts can talk about interconnected urban ecosystems in an accessible and engaging way.

FUTURE-PROOFING URBAN NAVIGATION: ROLE OF TECHNOLOGY

Embedding instances of augmented reality technology within analogue signage can assist wayfinding, support walkability, create a sense of adventure, and expand storytelling opportunities by linking to a remote resource database. Integration of technology needs to remain flexible and rely on a design that can be easily reconfigured at a later date.

PUBLIC ART

Public art opportunities should be promoted to be in service of a walkable city. Art can mark major gateway intersections, or be more spread out throughout the District to aid "wayfinding by landmarks" and strategically activate various neighborhood corners.

APPLICATION EXAMPLES

Examples of successful wayfinding strategies that are subtle and quiet demonstrate how interplay of matte and reflective surfaces can scale down an object, lighten the frame and make it "float", how neutral colors help sculptural form to recede, how embedding signage in horizontal surfaces allows the pedestrian to engage with her environment in a new way, how existing vertical infrastructure can be "wrapped" with identity elements, and how integration of augmented reality technology allows the virtual world of data to expand functionality of physical wayfinding objects.

























WAYFINDING PRECEDENT IMAGERY

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BRAND DEVELOPMENT

COLOR STRATEGY

In the discovery phase the team researched the context of the project to understand the vernacular of the environment. Collected imagery represents the spectrum of the project's visual cues and helps develop a color palette that feels native to the area. Similar processes to develop and refine the brand vernacular include but are not limited to materiality, finish, and content. Along Caroline, the presence of urban nature dominates the character of the place. Inspired by a natural palette derived from tree canopies, noble materials, sky, light, and dappled shadow, the color strategy frames the environment.



POTENTIAL BRAND COLOR OPTIONS

NEIGHBORHOOD AESTHETIC





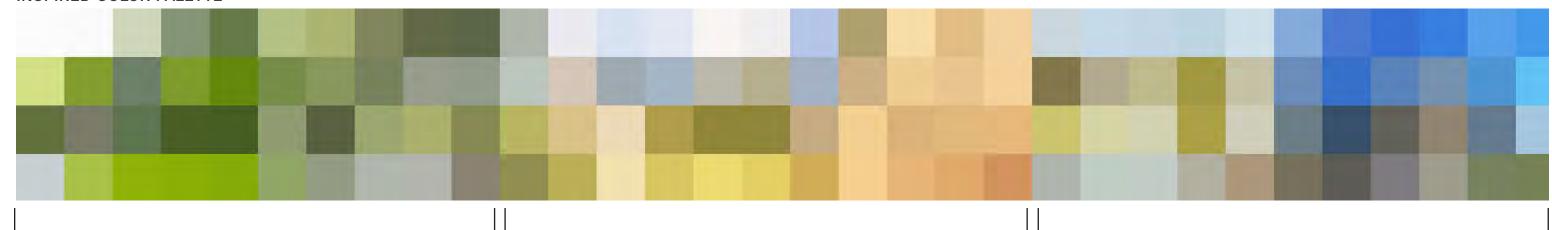








INSPIRED COLOR PALETTE



SECONDARY (BLEND INTO THE ENVIRONMENT)

TERTIARY (WILL BE SEEN BUT NOT HIGH IMPACT)

PRIMARY (STAND OUT AND BE SEEN)

BRAND DEVELOPMENT

MATERIAL STRATEGY

The initial observations on the material influences of Caroline context reveal an understated elegant application of monochromatic material palette. It consists of reflective polished and painted metal surfaces that blend with their surroundings by engaging the quality of light and the dynamic nature of Houston sky. With blue as an accent color, even the historic tile street signs are consistent with the clean and neutral palette of the cultural context and identity. The potential material palette of wayfinding elements gravitates toward simplicity, contemporary character and lightness. The reflective sheen make objects appear and disappear at different times of day and view angles, as they mirror shadows of trees and the color of sky, and glow in the sunlight.

NEIGHBORHOOD MATERIALITY









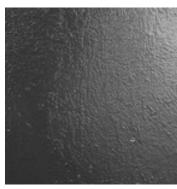


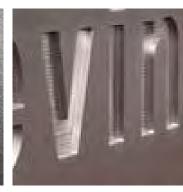


INSPIRED MATERIAL PALETTE

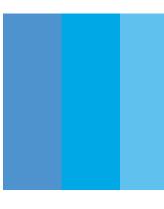


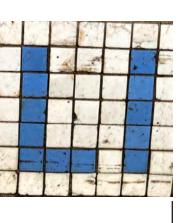












BRUSHED STAINLESS STEEL

POLISHED STAINLESS STEEL

PAINTED METAL

ETCHED OR PERFORATED LETTERING

VINYL OR ENAMEL LETTERING

BRAND COLOR ACCENTS

HISTORICAL BLUE TILE

BRAND ELEMENTS



INTEGRATED SIGNAGE STUDIES (POTENTIAL APPLICATION AT STREET INTERSECTIONS)

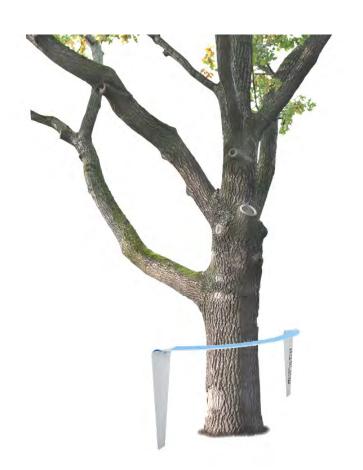
BRAND ELEMENTS



GATEWAY PYLON STUDIES (POTENTIAL APPLICATION AT I-69 CAP AREA)

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BRAND ELEMENTS

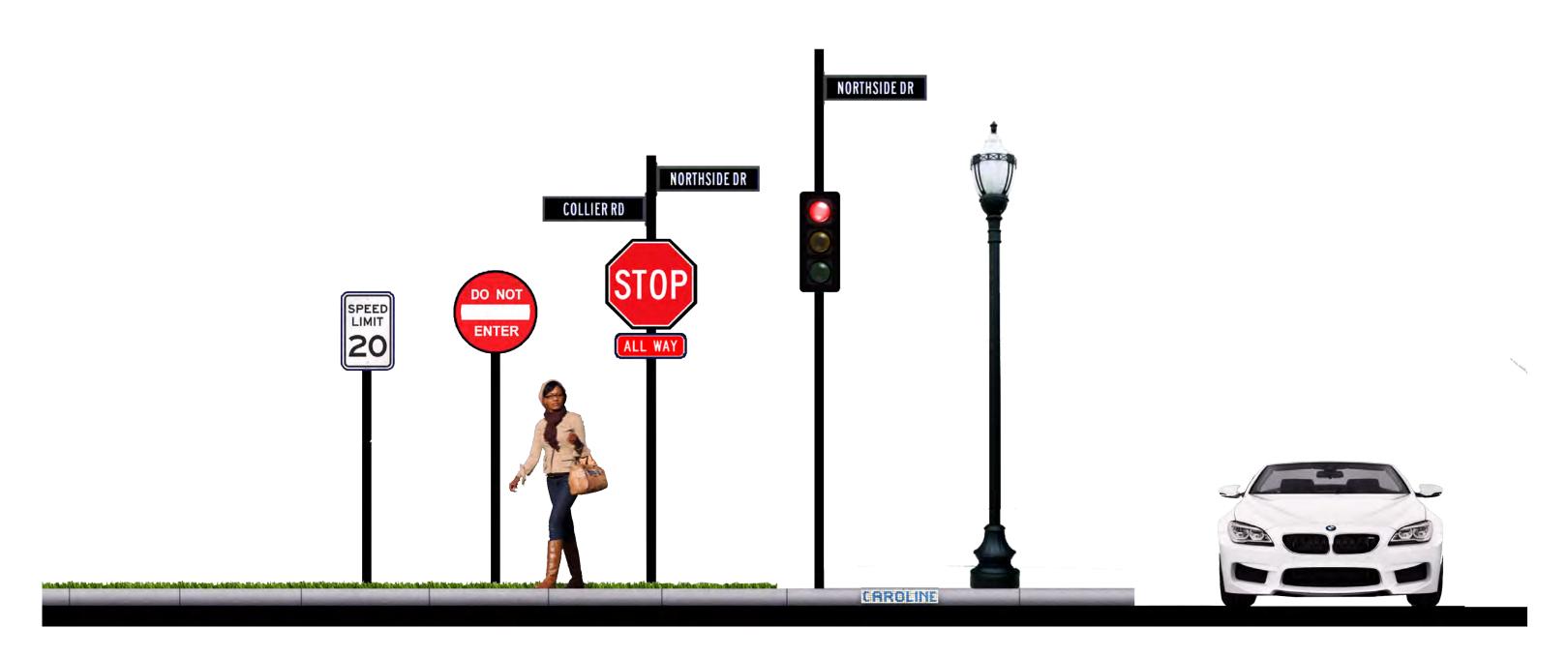






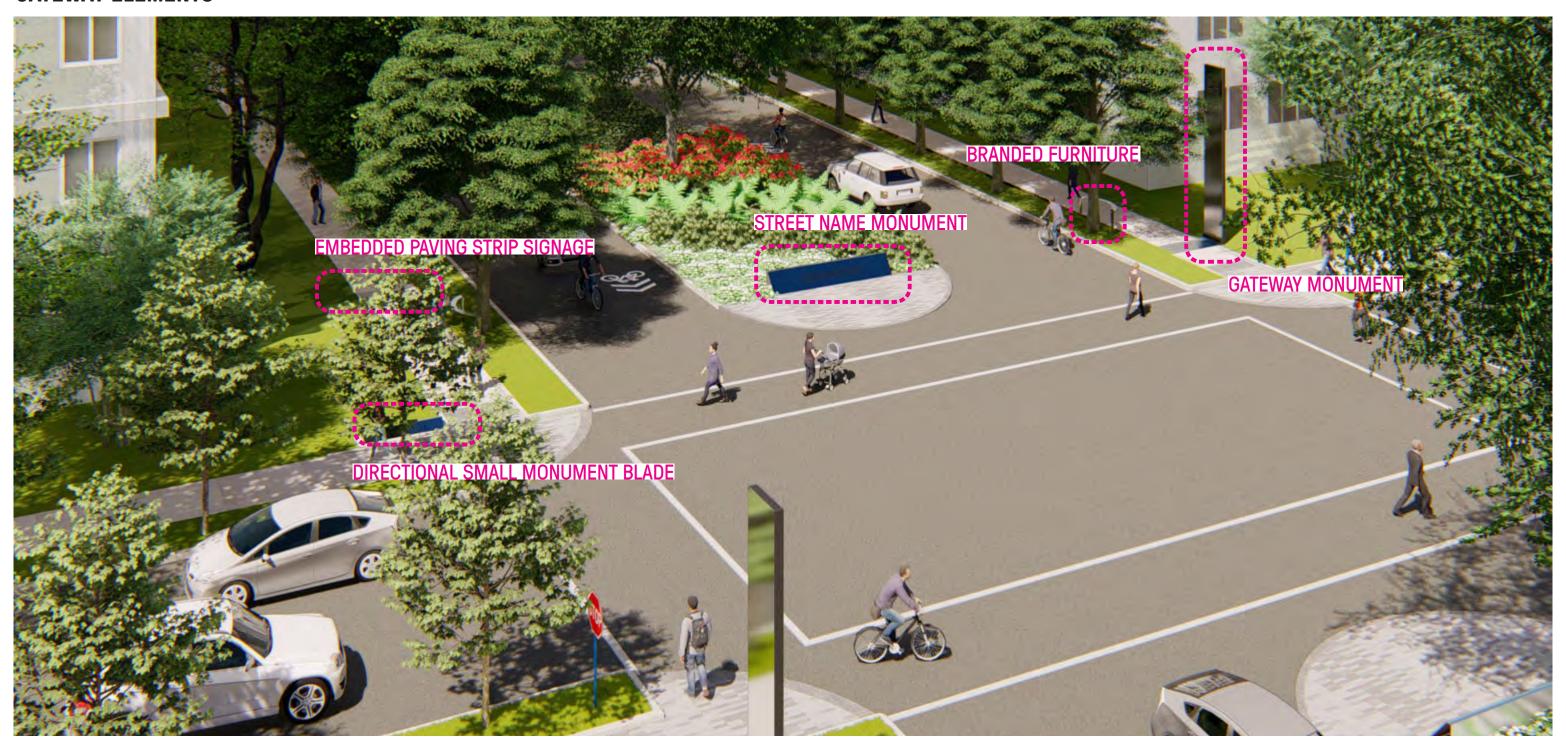
"TREE GUARD" MULTIFUNCTIONAL SIGNAGE OBJECT STUDY (APPLICATION AT TREES ACROSS GATEWAY LOCATIONS OR ALONG SIDEWALK)

UPGRADES TO THE EXISTING SIGNAGE AND LIGHTING



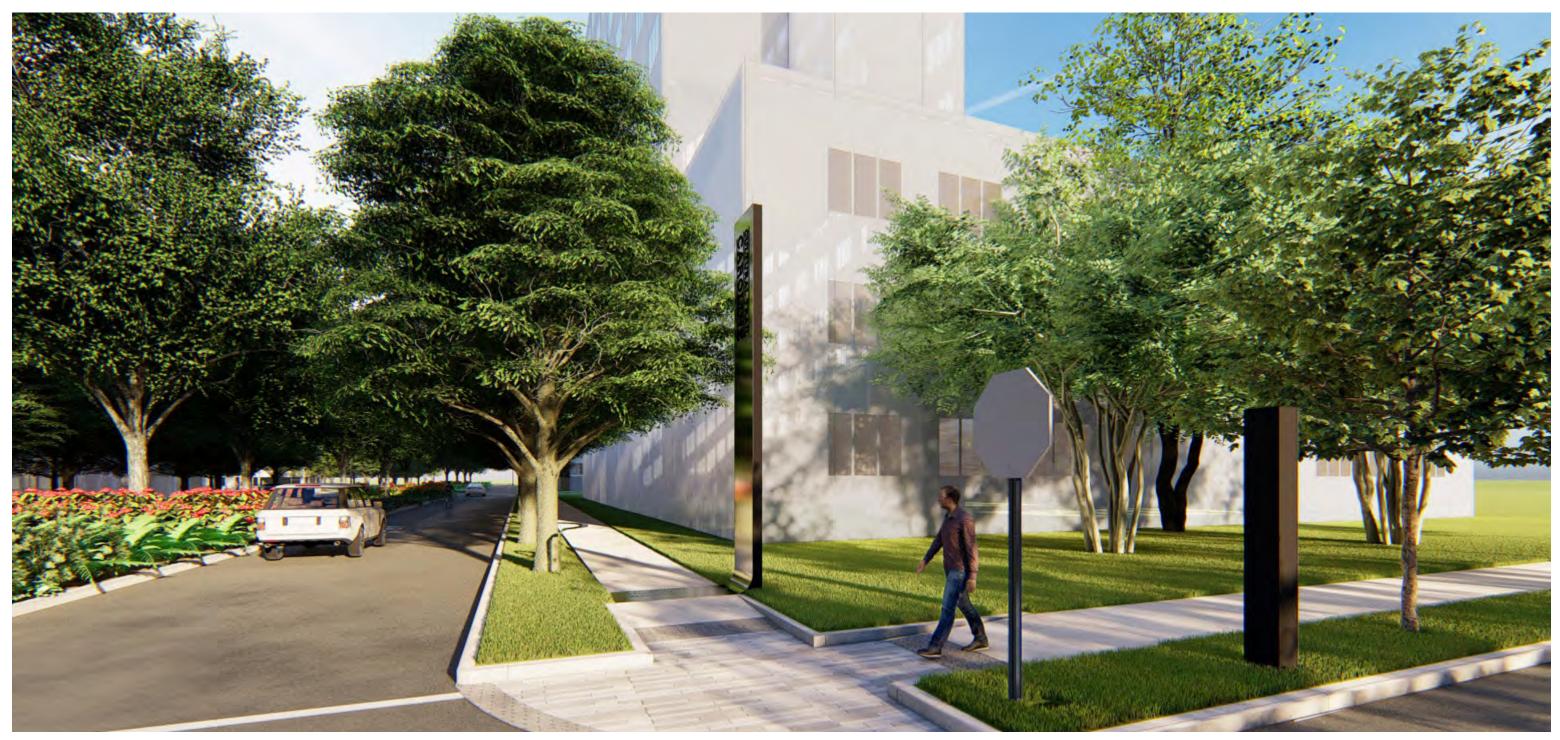
UNIFORM COLORATION OF EXISTING TRAFFIC SIGNAGE AND LIGHT INFRASTRUCTURE

GATEWAY ELEMENTS



PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



HERMANN DRIVE GATEWAY STUDY

PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



HERMANN DRIVE GATEWAY STUDY

PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



HERMANN DRIVE GATEWAY STUDY

PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



HERMANN DRIVE GATEWAY STUDY

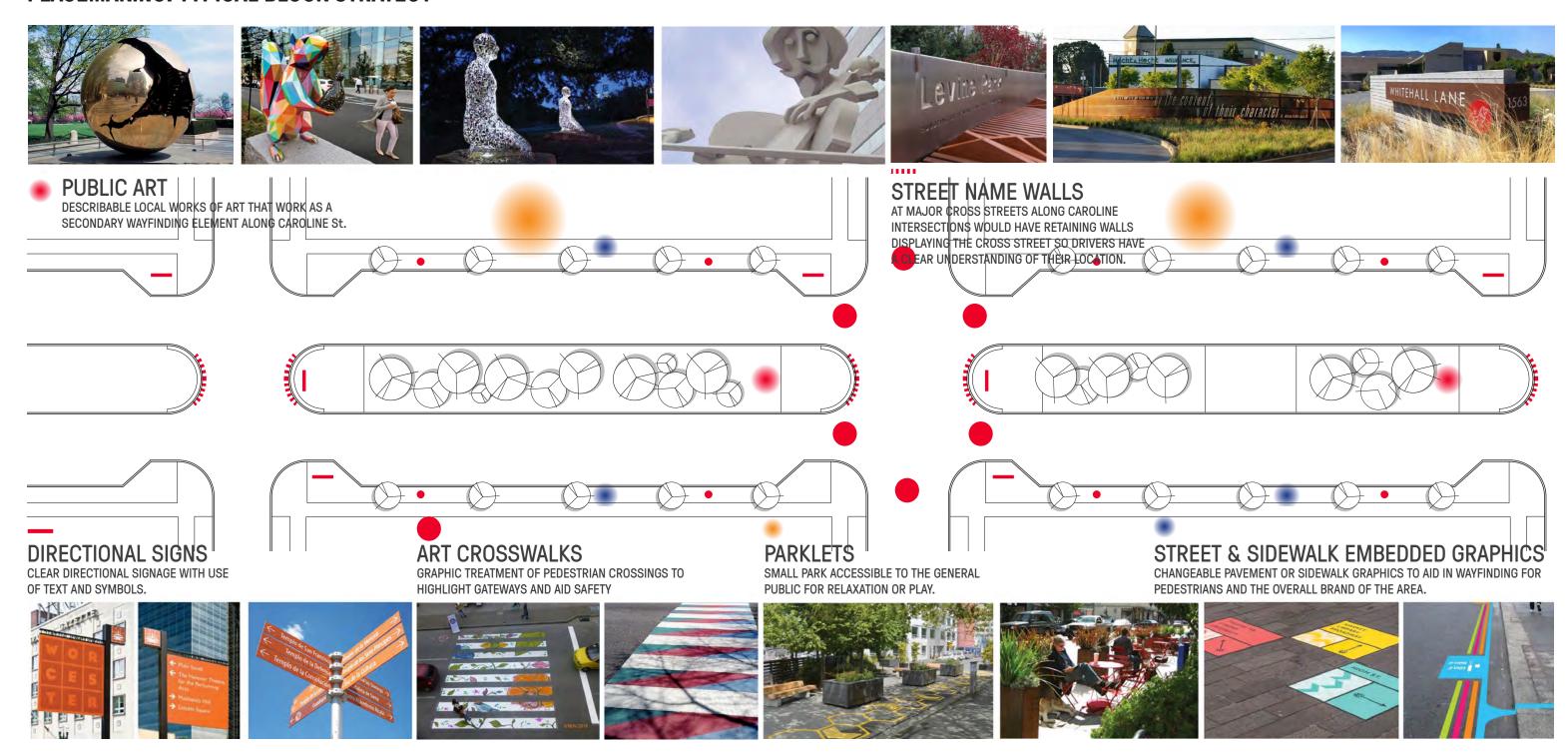
PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



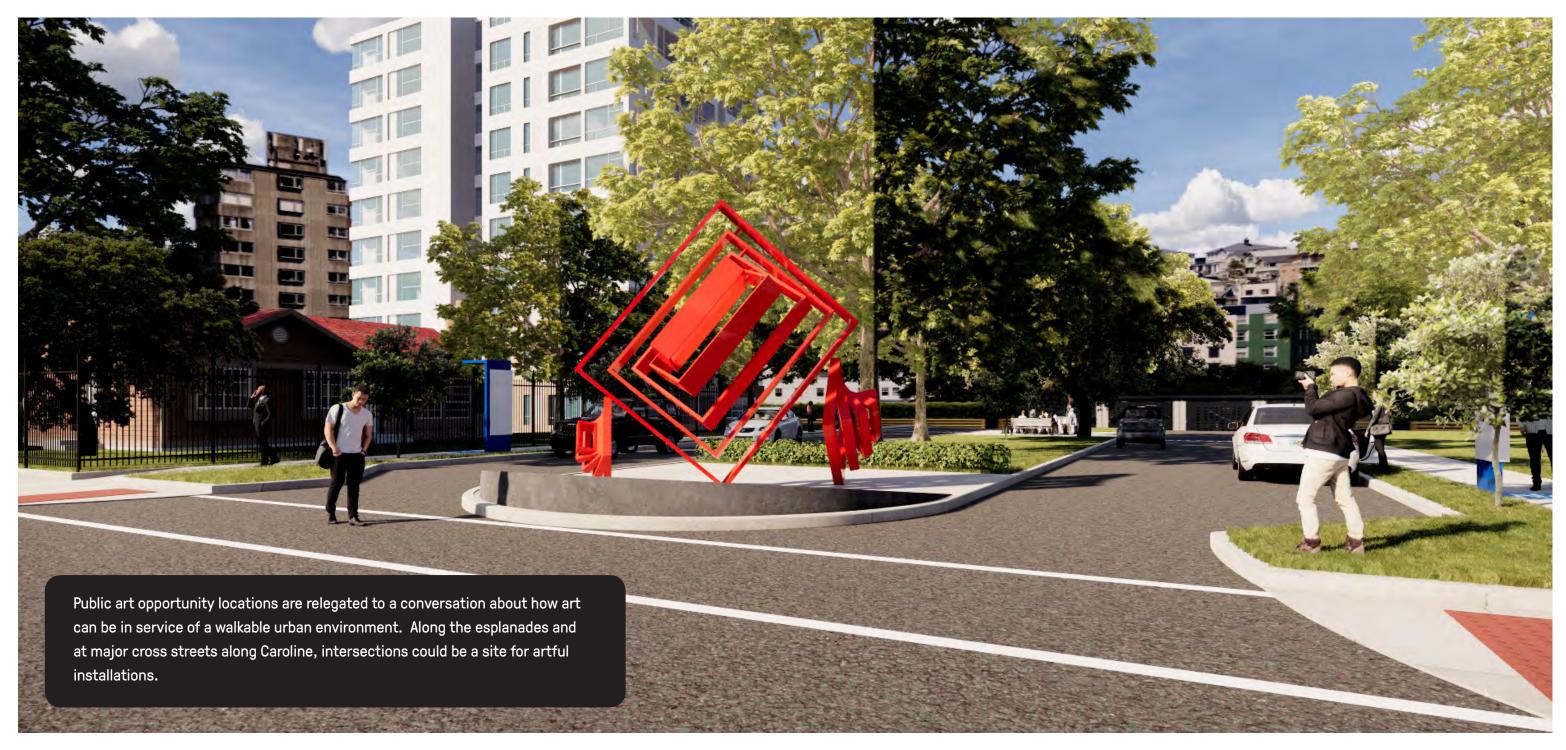
HERMANN DRIVE GATEWAY STUDY

PLACEMAKING: TYPICAL BLOCK STRATEGY



PLACEMAKING: PUBLIC ART

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION



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PLACEMAKING: TEMPORARY STREET GRAPHICS



CROSSING STUDY AT WENTWORTH

PLACEMAKING: GATEWAY ELEMENTS

NOTE: INTERSECTION CONTEXT NOT TRUE TO EXACT LOCATION

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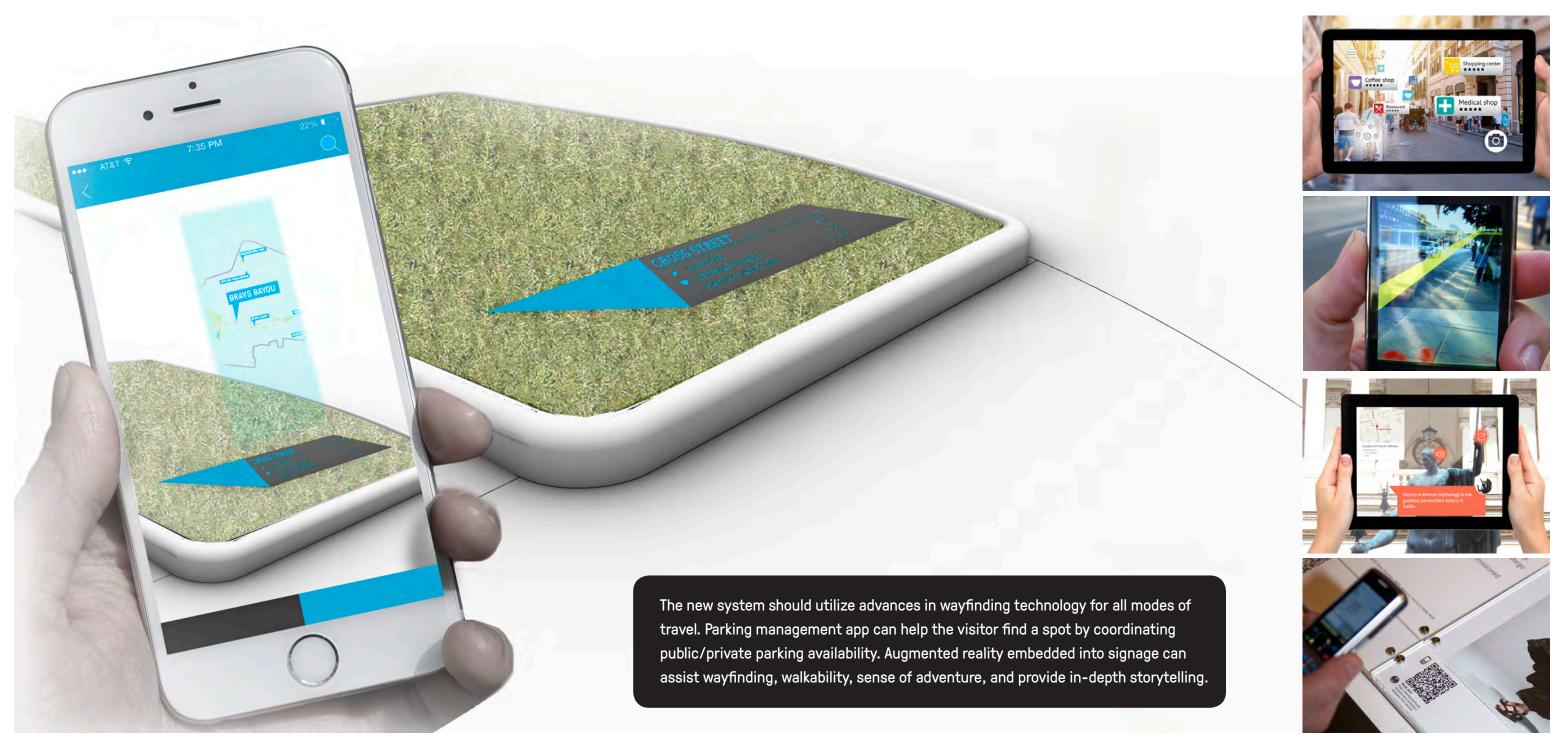
HERMANN DRIVE GATEWAY STUDY

PLACEMAKING: PARKLET MOMENTS

NOTE: STREET CONTEXT NOT TRUE TO EXACT LOCATION



PLACEMAKING: WAYFINDING TECHNOLOGY, PARKING APP, AUGMENTED REALITY



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PROCESS OVERVIEW

The consultant team implemented a tiered public engagement process, inviting a broad range of stakeholders to share progress and solicit comments on the design process. Houston Southeast and in particular Museum Park Neighborhood residents, Museum District representatives, religious organizations, businesses and property owners had varied opportunities to engage in the planning/design process for Caroline Streetscape.

STAKEHOLDER ADVISORY COMMITTEE

The Stakeholder Advisory Committee (SAC) played a key role in the planning process - the design team conducted monthly meetings with the group to present concepts and preview materials prepared for public meetings. SAC was comprised by the members of the Museum Park Super Neighborhood Council representing local businesses, places of worship, Museum Park Neighborhood Association, HCA Houston Healthcare, Museum District; representatives from the Management District, Hermann Park Conservancy, and the Museum District Association. Outreach was conducted via traditional and digital means. In addition to public meetings, Houston Southeast staff maintained a special micro-site dedicated to the project on the Management District's website.

PUBLIC MEETINGS

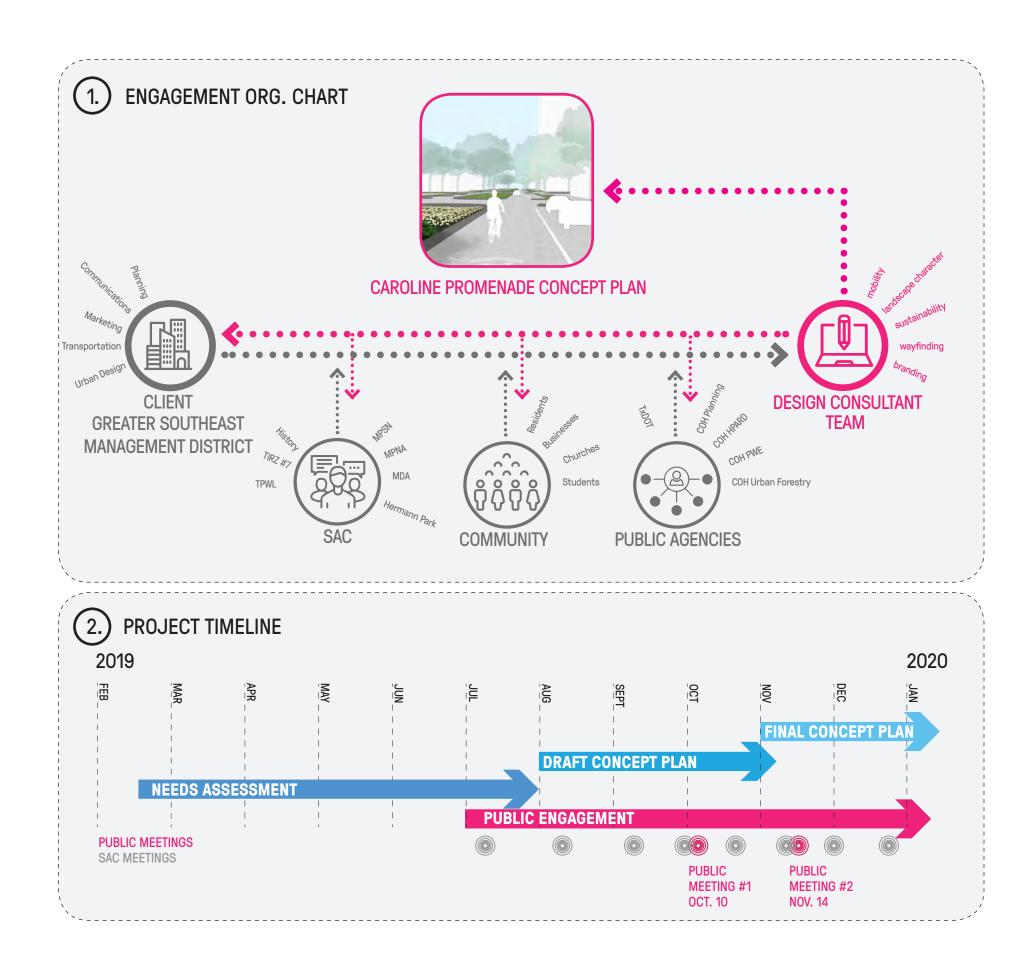
Public meeting materials were organized and presented in a user-friendly format that focused on key issues affecting community members and other stakeholders. In every instance, there was a formal presentation that provided an overview of the project and its status, along with an opportunity for participants to ask questions and provide feedback subsequent to the presentation. In addition, all of the public meetings were highly interactive, i.e., after the formal presentation, participants were provided with an opportunity to circulate to display boards that related to each of the Study's components, engage with members of the consultant team, and share verbal and written comments. Public meeting venues were as follows:

- #1 Covenant Baptist Church, October 10, 2019
- #2 Covenant Baptist Church, November 14, 2019

MEETING NOTICES

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Potential participants were notified via electronic mail, and meeting notices on the GSEMD"s website.



CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

PUBLIC MEETING #1: ANALYSIS

MEETING AGENDA

The goal of the meeting was to present area analysis and allow the public steer design direction for Caroline streetscape. The meeting consisted of a formal powerpoint presentation that introduced project background and design systems addressed by the project scope, such as mobility, landscape character and branding/wayfinding. The presentation was followed by an "open house" with expert stations set up to provide additional detailed information for each discipline. Needs assessment analysis boards accompanied each station as reference.

FEEDBACK COLLECTION AND RECORDING

The public had a chance to engage the project team in informal discussions, provide written comments on specific drawing content, and after the meeting re-visit meeting presentation materials online and follow up with on-line feedback.

*NOTE:PUBLIC COMMENTS AVAILABLE UPON REQUEST



Interactive station for the project goal setting was designed around a survey that asked guests to rank project goals in order of priority. The concept of "design zones" was also introduced and allowed to collect a more detailed understanding of priorities considered for different stretches of the corridor.



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PUBLIC MEETING #1: "SITE ANALYSIS"

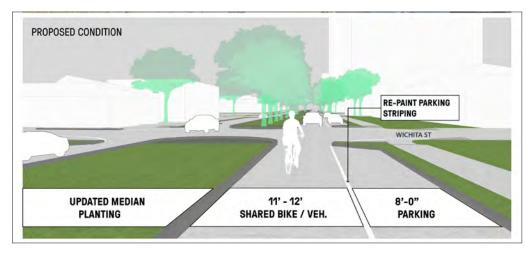
INTERACTIVE STATION 1: MOBILITY

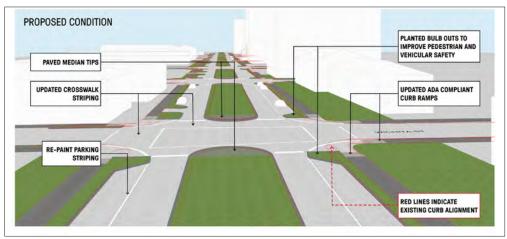
At the Mobility interactive station, a dimensioned plan drawing showed the initial concept for the roadway in context of an aerial map. The plan was accompanied by site analysis boards and street sections to help explain the existing street modes of travel and potential modifications that could optimize the roadway for all users.



DIAGRAMMATIC PROPOSED ROADWAY LAYOUT







BULBOUT CONCEPT DRAWINGS

PUBLIC MEETING #1: "SITE ANALYSIS"

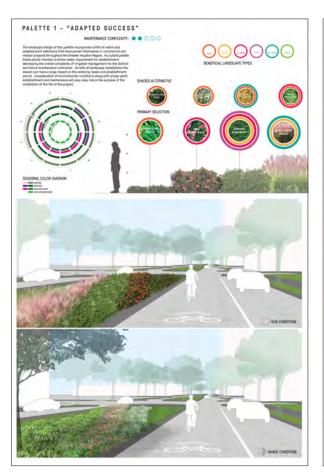
INTERACTIVE STATION 2: LANDSCAPE PALETTE

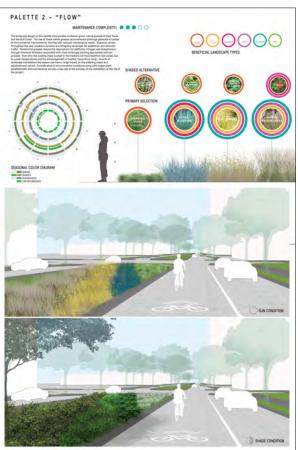
At the Landscape Character interactive station, feedback collection was focused on identifying a preferred plant character option out of five palettes presented to the public. The feedback informed an approach to further progress landscape character concept design.

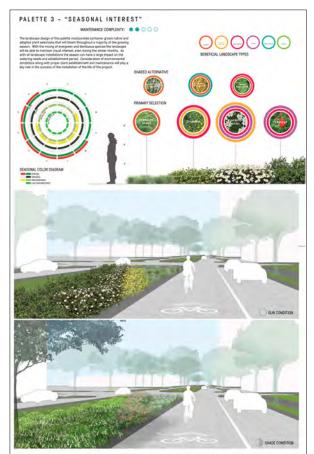
PREFERRED PALETTE

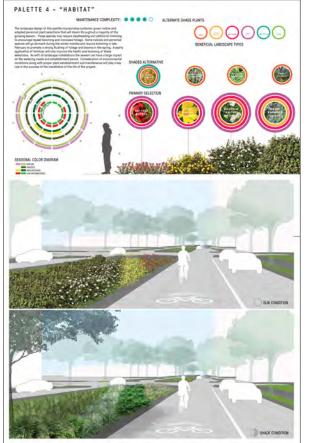
"Strictly Natives" planting palette received an enthusiastic response from the community members and bacame the basis of the concept plan planting design.

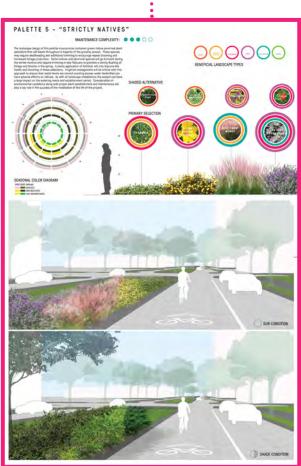












LANDSCAPE PALETTE OPTIONS

PUBLIC MEETING #1: "SITE ANALYSIS"

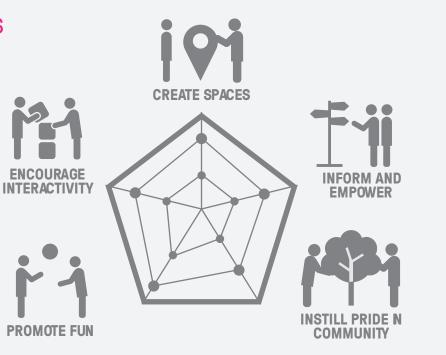
INTERACTIVE STATION 3: BRAND DEVELOPMENT/IDENTITY

At the "Brand Development" interactive station, design principles were introduced, accompanied by precedent examples of bold placemaking projects. Ideas of public art, lighting, and programmatic activation were discussed as components of the area brand in addition to the traditional approach to signage/wayfinding design.

The majority of public comments reflected a desire to study a more subtle approach to placemaking strategies.

BRAND IN CONTEXT OF "PLACEMAKING" PRINCIPLES

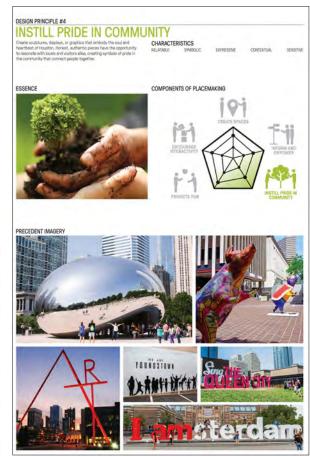
Branding/wayfinding features were presented as part of a larger "placemaking" idea. A memorable and successful "place" is a combination of physical features that supports the community by promoting a sense of belonging, curiosity, pride and comfort while making legible/framing the unique cultural value of the area. These principles were used as talking points to start the conversation about the placemaking strategies for the project area.













PLACEMAKING PRINCIPLES IMAGE BOARDS

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PUBLIC MEETING #2: "PLAN SYNTHESIS"

MEETING AGENDA

The goal of the second public meeting was to present synthesized conceptual plan information and collect feedback on the details of the design approach. The meeting consisted of a short powerpoint presentation followed by an "open house" with plan materials displayed on printed board and handout displays.

FEEDBACK COLLECTION AND RECORDING

Written comments and discusinons with the consultant team were recorded and organized. Presentation materials were made available online for additional review and comment period.

*NOTE:PUBLIC COMMENTS AVAILABLE UPON REQUEST

PLAN "BUILDING BLOCKS"

Synthesis diagrams addressed distribution of mobility, landscape, and wayfinding/branding improvements.



unobstructed vehicular access from binz to hermann dr. bike lane no parking

median gardens and

hardscape

ada ramps

PARK/TMC

GATEWAY

bulbouts from binz to sharrow bike lane street parking ada ramps parking zone markings crosswalk markings

MUSEUM/

HISTORICAL

bulbouts from palm to blodgett sharrow bike lane street parking palm to rosedale ada ramps parking zone markings crosswalk markings

NEIGHBORHOOD

bulbouts from blodgett to rosewood sharrow bike lane no street parking ada ramps parking zone markings crosswalk markings

INNOVATION GATEWAY

LANDSCAPE FOCUS



median gardens and hardscape address at risk trees hardscape

median gardens and

median gardens and hardscape

wheeler cap planting



BRANDING FOCUS



major gateway secondary gateways

secondary gateways

major gateways

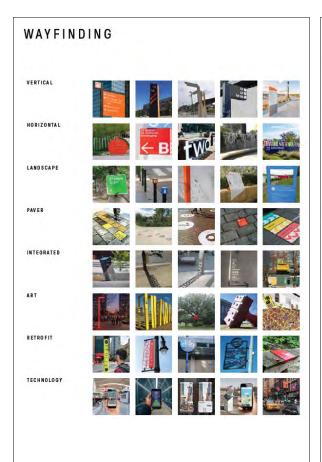
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DESIGN STRATEGY SYNTHESIS DIAGRAMS

PUBLIC MEETING #2: SYNTHESIS



DRAFT ILLUSTRATIVE PLAN









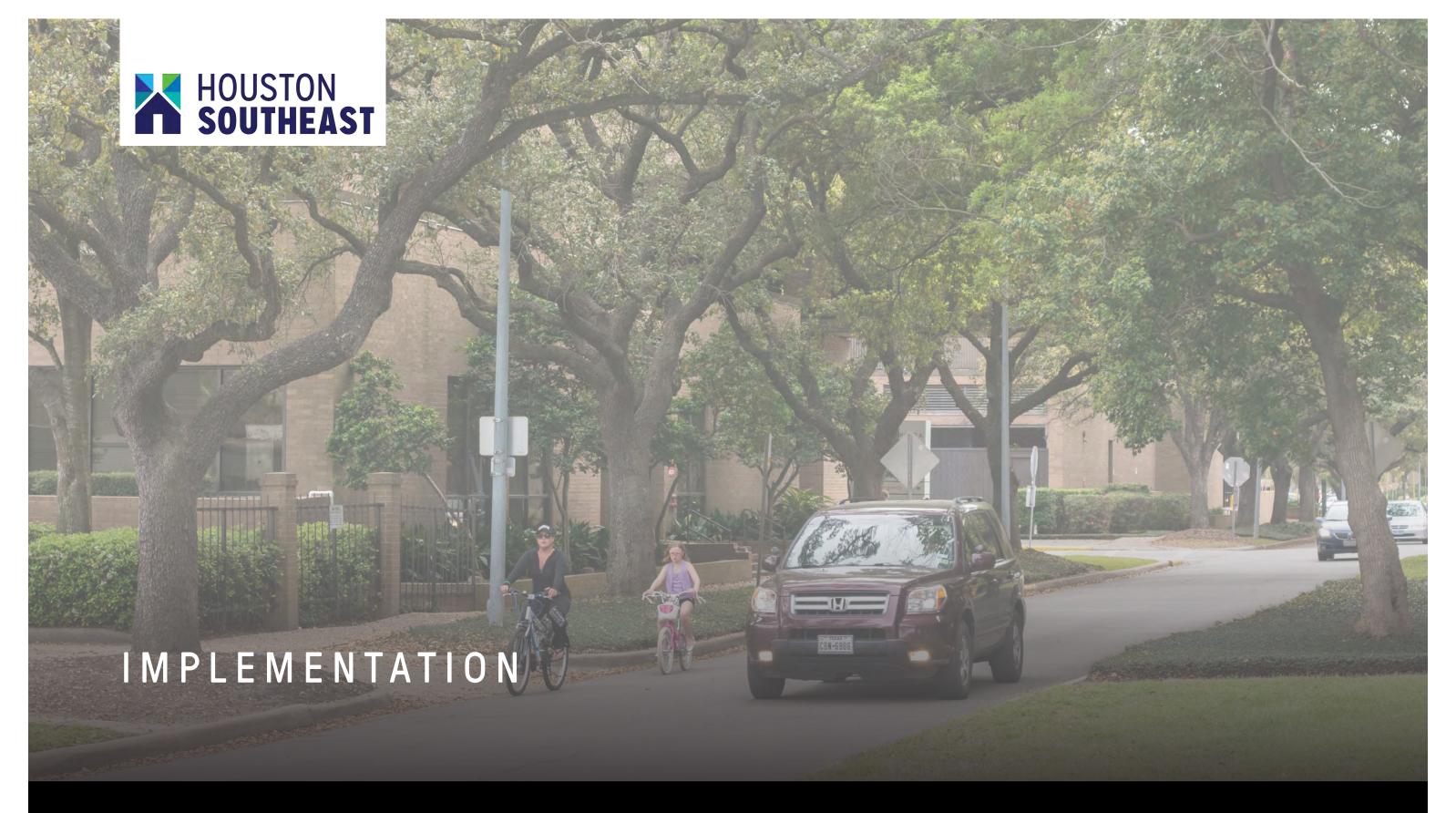


WAYFINDING CONCEPT BOARDS

CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

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PROCESS

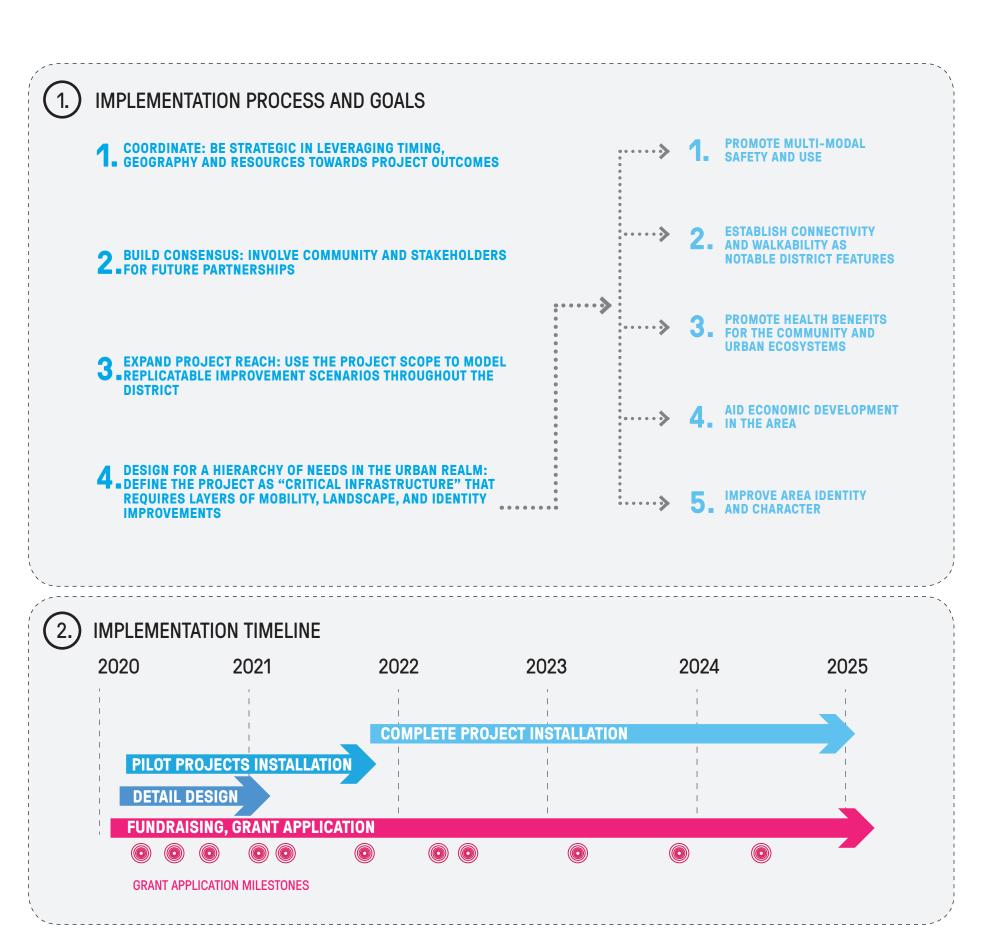
Throughout the planning process designing a path towards implementation was as important as developing design ideas themselves. Over a period of 8 months, the consultant team worked closely with the Client group to ground the project in common values of the area stakeholders. The process aimed to coordinate with the concurrent projects in the area, build consensus for future partnerships, expand project reach beyond its immediate area and model a design approach for other parts of the District, and take steps towards positioning the project for future funding. Community engagement and the project Stakeholder Advisory Committee meetings were focused on managing internal and external expectations on how to achieve some of the design ideas developed in the plan.

The "Why?" of the project addresses the significance of the effort to make Caroline Promenade a central spine of the connected cultural district that will enhance the capacity to entice visitors, create a sense of place, improve mobility, and manage what should be a national tourism destination. This will help elevate this epicenter of culture in the City as an economic engine for conventions, national meetings, innovation, education, high school field trips from across the country. There isn't another collection of institutions and a major Park in the United States like what is right here, in Museum Park, in Houston Southeast, Houston TX. To establish continuity of the project with its planning context, design methodology reflected a combination of previous studies and aspirations of the District. Namely, the mission and vision, of the project is closely tied to the District's mission of promoting a high quality of life and societal equity for its stakeholders. The "What?" is the directive for project goals and objectives founded in the District's strategic goals and services, such as:

- Business and Economic Development
- Environmental, Urban Design and Visual Improvement
- Marketing, Public Relations and Perception Enhancement
- Transportation and Local Mobility
- Enhanced Public Safety

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Project goals help clearly define key principles employed in the process of design and are predicated on the need for advocacy and continuous implementation and maintenance funding. As such, they stress the need for inter-agency coordination, consensus building, and using the seemingly small project as a vehicle to achieve district-wide goals. And finally, the "How?", design strategies and tactics, help the implementation of goals and objectives based on the principles of functionality, performance criteria, and appeal to potential funding sources.



CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

AREA STAKEHOLDERS AND POTENTIAL PARTNERS

PARK/TMC GATEWAY

MUSEUM/HISTORICAL

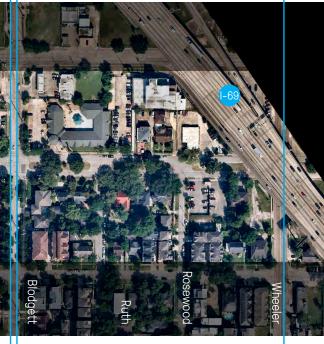
NEIGHBORHOOD

RICE INNOVATION GATEWAY









Hermann Park Conservancy
HCAHouston Healthcare Hospital
Museum District
Museum of Natural Science
Scenic Houston
Midtown TIRZ
MPNA, MPSN
Businesses

Museum of Fine Arts
Holocaust Museum
Clayton Library
Asia Society Texas Center
Hermann Park Conservancy
Children's Museum
Museum of Natural Science
COH Libraries, COH HPARD
Scenic Houston
Midtown TIRZ
MPNA, MPSN
Businesses

Museum District

Museum District Covenant Baptist Church HMAAC

Hermann Park Conservancy Children's Museum COH Libraries, COH HPARD Scenic Houston Midtown TIRZ MPNA, MPSN Businesses Museum District Montessori School

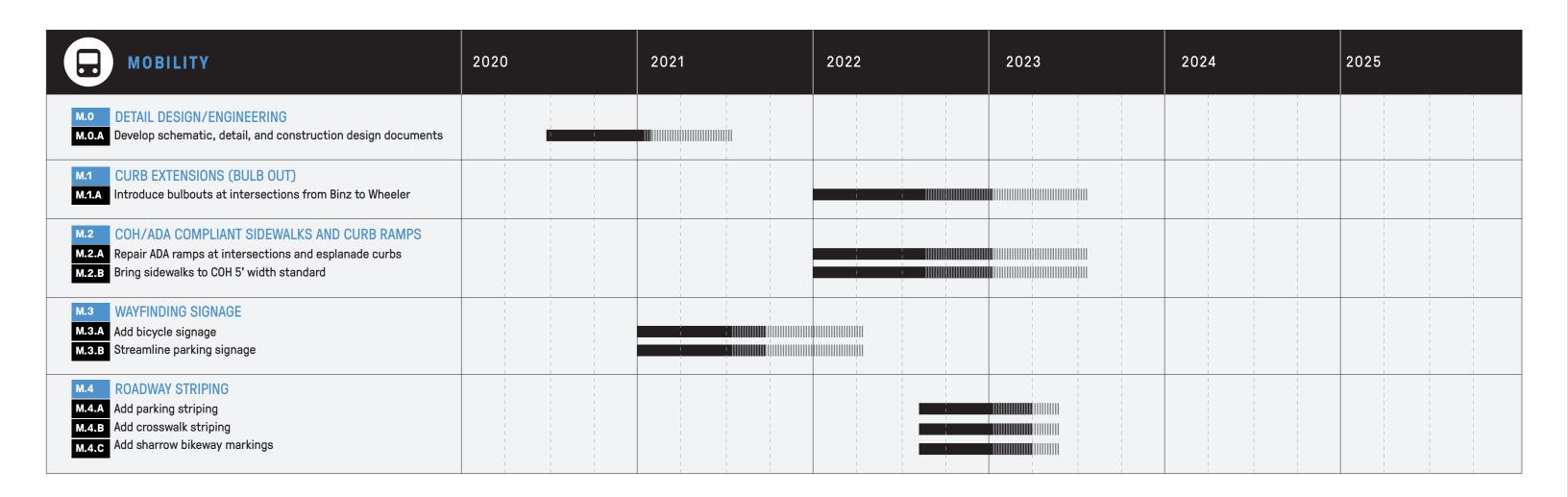
Hermann Park Conservancy Children's Museum Museum of Natural Science COH Libraries, COH HPARD Midtown MD

Rice Innovation District HCC

Scenic Houston MPNA, MPSN Businesses TxDOT ZONE-SPECIFIC STAKEHOLDER
NON-ZONE-SPECIFIC STAKEHOLDER

PHASING

*NOTE: PROJECT SEQUENCE ASSUMES SECURED FUNDING BY THE APPROXIMATE START DATES



IMPLEMENTATION PARTNERSHIPS*

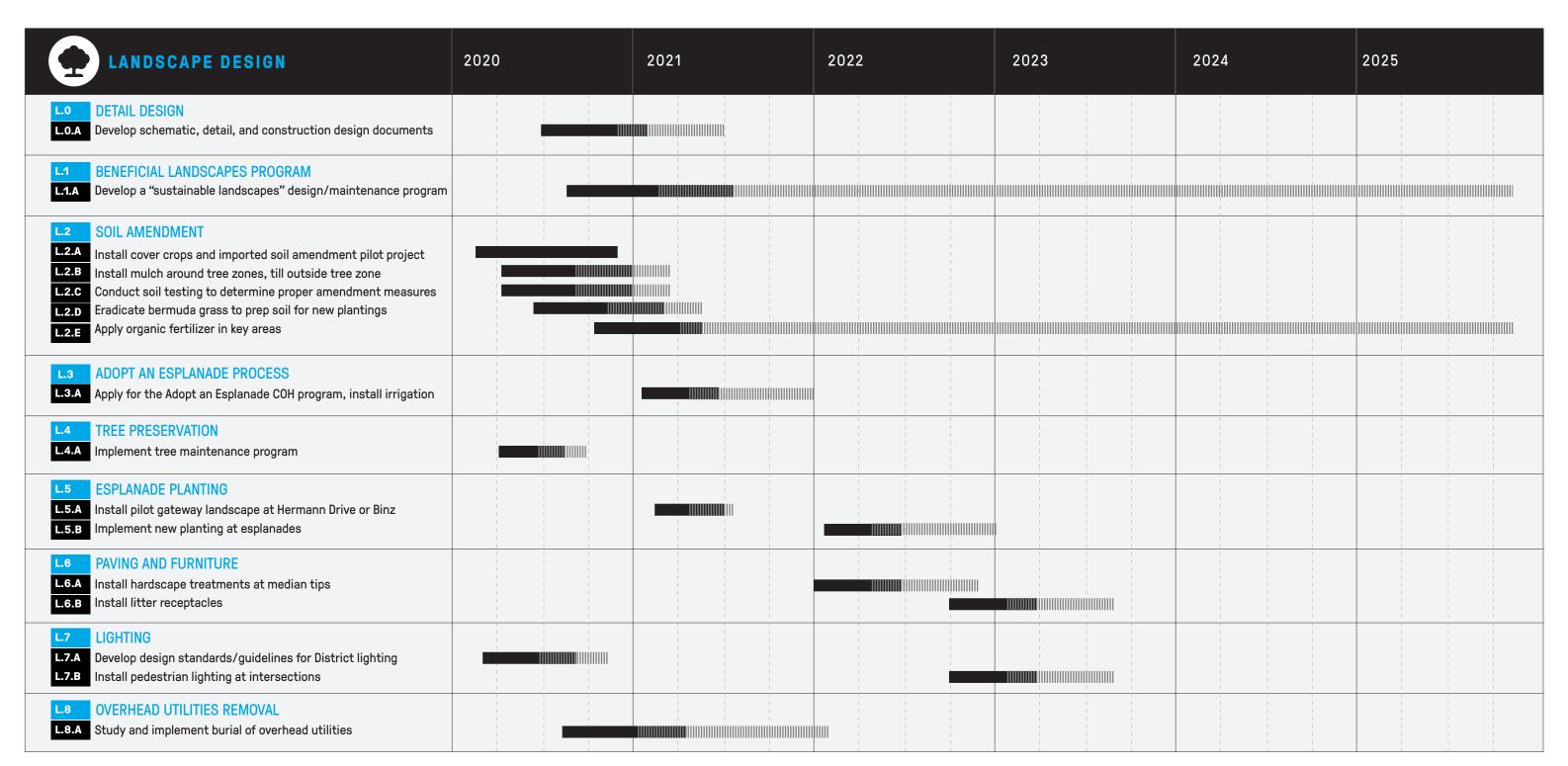
*NOTE: PARTNERSHIPS MAY SUPPORT A RANGE OF CONTRIBUTING ACTIVITIES TOWARDS PROJECT IMPLEMENTATION

MOBILITY	IMPLEMENTATION PARTNERS
M.O.A DETAIL DESIGN/ENGINEERING M.O.A develop schematic, detail, and construction design documents	GSMD, MPSN, TXDOT
M.1 CURB EXTENSIONS (BULB OUT) M.1.A introduce bulbouts at intersections from Binz to Wheeler	GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD
M.2.A repair ADA ramps at intersections and esplanade curbs bring sidewalks to COH 5' width standard	GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD
M.3.A add bicycle signage M.3.B streamline parking signage	GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD
M.4. ROADWAY STRIPING M.4.A add parking striping M.4.B add crosswalk striping M.4.C add sharrow bikeway markings	GSMD, MPSN, MD, COHPMD, HPWED, HPDD, TIRZ2 GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD GSMD, MPSN, MD, HPWED, HPDD, TIRZ2, HGAC, METRO, PBD

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PHASING*

*NOTE: PROJECT SEQUENCE ASSUMES SECURED FUNDING BY THE APPROXIMATE START DATES



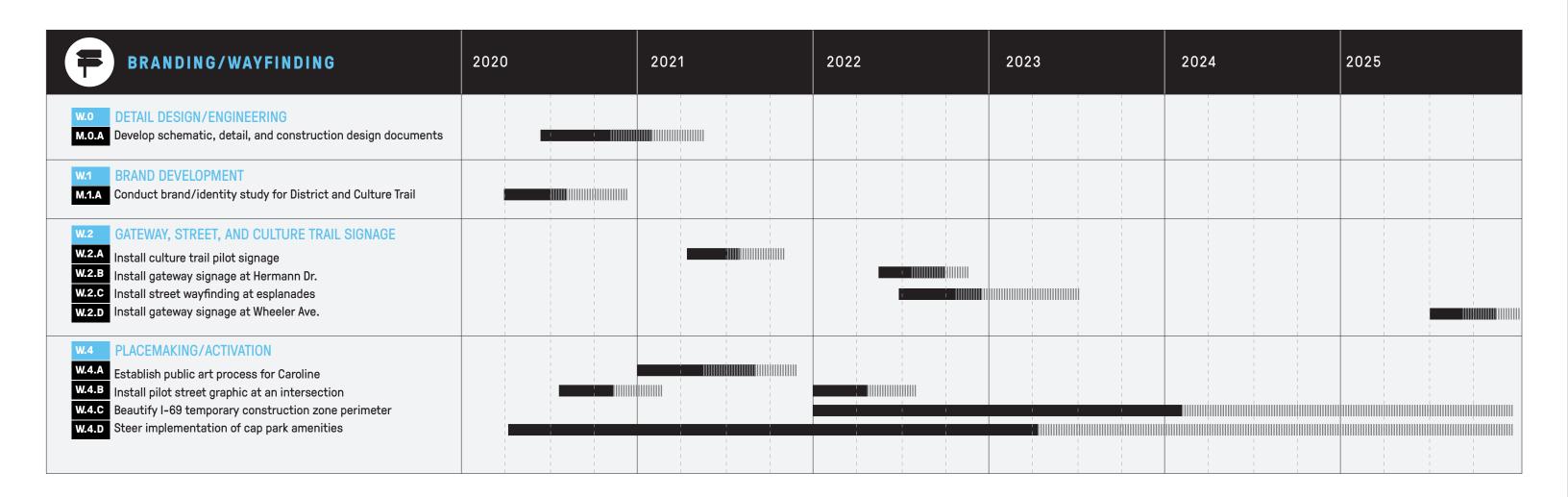
IMPLEMENTATION PARTNERSHIPS*

*NOTE: PARTNERSHIPS MAY SUPPORT A RANGE OF CONTRIBUTING ACTIVITIES TOWARDS PROJECT IMPLEMENTATION

LANDSCAPE DESIGN	IMPLEMENTATION PARTNERS
L.O DETAIL DESIGN L.O.A develop schematic, detail, and construction design documents	GSMD, MPSN, TXDOT
L.1. BENEFICIAL LANDSCAPES PROGRAM L.1.A Develop a "sustainable landscapes" design/maintenance program	GSMD, MPSN, MPNA, HPC, KPC, HPARD
L.2. SOIL AMENDMENT L.2.A Install cover crops and imported soil amendment pilot project L.2.B Install mulch around tree zones, till outside tree zone Conduct soil testing to identify proper amendment measures L.2.D Eradicate bermuda grass to prep soil for new plantings L.2.E Apply organic fertilizer in key areas	GSMD, MPSN, MPNA, HPC, KPC, URH, USDA GSMD, MPSN, MPNA, HPC
L.3 ADOPT AN ESPLANADE PROCESS L.3.A Apply for the Adopt an Esplanade COH program, install irrigation	GSMD, MPSN, MPNA, HPARD
L.4 TREE PRESERVATION L.4.A Implement tree maintenance program	GSMD, MPSN, MPNA
L.5 ESPLANADE PLANTING L.5.A Install pilot gateway landscape at Hermann Drive or Binz L.5.B Implement new planting at esplanades	GSMD, MPSN, MPNA, HPC, HCA, SH, PD
L.6 PAVING AND FURNITURE L.6.A Install hardscape treatments at median tips L.6.B Install litter receptacles	GSMD, MPSN, MPNA, HPWED, HPDD, TIRZ 2 GSMD, MPSN, MPNA, TIRZ2, TIRZ 7
L.7. LIGHTING L.7.A Develop design standards/guidelines for District lighting L.7.B Install pedestrian lighting at intersections	GSMD, TIRZ 7, CPE GSMD, MPSN, MPNA, TIRZ 2, CPE
L.8 OVERHEAD UTILITIES REMOVAL L.8.A Study and implement burial of overhead utilities	GSMD, TIRZ 2, MPSN, MPNA, CPE

PHASING

*NOTE: PROJECT SEQUENCE ASSUMES SECURED FUNDING BY THE APPROXIMATE START DATES



IMPLEMENTATION PARTNERSHIPS*

*NOTE: PARTNERSHIPS MAY SUPPORT A RANGE OF CONTRIBUTING ACTIVITIES TOWARDS PROJECT IMPLEMENTATION

BRANDING/WAYFINDING	IMPLEMENTATION PARTNERS
W.O DETAIL DESIGN/ENGINEERING M.O.A Develop schematic, detail, and construction design documents	GSMD, MPSN
W.1 BRAND DEVELOPMENT M.1.A Conduct brand/identity study for District and Culture Trail	GSMD, MPSN, MDA, HPC
W.2.A Install culture trail pilot signage W.2.B Install gateway signage at Hermann Dr. W.2.C Install street wayfinding at esplanades W.2.D Install gateway signage at Wheeler Ave.	GSMD, MPSN, MPNA, MDA GSMD, MPSN, MPNA, MDA, HPC GSMD, MPSN, MPNA, MDA GSMD, MPSN, MPNA, MDA, HPC, RICE U
W.4.A Establish public art process for Caroline W.4.B Install pilot street graphic at an intersection W.4.C Beautify I-69 temporary construction zone perimeter W.4.D Steer implementation of cap park amenities	GSMD, MPSN, MPNA, MDA GSMD, MPSN, MPNA, MDA, HPWED GSMD, MPSN, MPNA, MDA, TXDOT GSMD, MPSN, MPNA, MDA, TXDOT, RICE U, MD, TIRZ 2, METRO

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POTENTIAL FUNDING AND PARTNERSHIPS

POTENTIAL IMPLEMENTATION PARTNERS

Each project recommendation presented in the Conceptual Plan touches on implementation by listing out "Implementation Partners". Implementation partners may contribute a range of possible activities towards bringing the vision for Caroline Promenade to reality. Table of abbreviations on this page references programs and organizations that are logically connected to the geography and/or intent of the project on a local, state, and federal level. These are described further in the "Potential Funding and Partners" pages of the report.

СОН	CITY OF HOUSTON
OH PMD	CITY OF HOUSTON PARKING MANAGEMENT DIVISION
CPE	CENTERPOINT ENERGY
GSMD	GREATER SOUTHEAST MANAGEMENT DISTRICT
HCC	HOUSTON COMMUNITY COLLEGE
HGAC	HOUSTON GALVESTON AREA COUNCIL
HFC	HOUSTON FIRST CORPORATION
НН	HISTORIC HOUSTON
HHD	HOUSTON HEALTH DEPARTMENT
HPARD	HOUSTON PARKS AND RECREATION DEPARTMENT
HPC	HERMANN PARK CONSERVANCY
HPDD	HOUSTON PLANNING AND DEVELOPMENT DEPARTMENT
HPWED	HOUSTON PUBLIC WORKS AND ENGINEERING DEPARTMENT
HSE	HOUSTON SOUTHEAST
HW	HOUSTON WILDERNESS
KPC	KATY PRAIRIE CONSERVANCY
MD	MIDTOWN MANAGEMENT DISTRICT
MDA	MUSEUM DISTRICT ASSOCIATION
METRO	THE METROPOLITAN TRANSIT AGENCY OF HARRIS COUNTY
MPLCS	MUSEUM PARK LIVABLE CENTERS STUDY
MPNA	MUSEUM PARK NEIGHBORHOOD ASSOCIATION
MPSN	MUSEUM PARK SUPER NEIGHBORHOOD
PBD	PARKING BENEFITS DISTRICT
PD	PRIVATE DEVELOPERS
PH	PRESERVATION HOUSTON
P0	PRIVATE OWNERS
PT	PRESERVATION TEXAS
RICE U	RICE UNIVERSITY
SH	SCENIC HOUSTON
TFH	TREES FOR HOUSTON
THC	TEXAS HISTORICAL COMMISSION
TIRZ 2	MIDTOWN TAX INCREMENT REINVESTMENT ZONE #2
TIRZ 7	OST/ALMEDA TAX INCREMENT REINVESTMENT ZONE #7
TMC	TEXAS MEDICAL CENTER
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
URH	URBAN HARVEST

TUU

POTENTIAL FUNDING AND PARTNERSHIPS

Public investment in the public realm and transportation network can spur additional investment from the private sector. Public investments can come from a variety of sources including local sources, grants, and partnerships. It will be important to utilize a variety of funding sources and leverage grants and private funding to maximize local resources. The information below provides a variety of funding sources that could be utilized or pursued for implementation of the plan. In addition to the local partnerships and funding opportunities that would ordinarily be considered for placemaking and sustainability project implementation, such as the Management Districts, TIRZs, City of Houston, there is a number of funding opportunities for projects focused on mobility and transportation, but also parks, community agriculture, placemaking, and cultural resources.

FEDERAL GRANT OPPORTUNITIES

U.S. Department of Agriculture (USDA) Farm to School Grant Program

Food and Nutrition Services of the USDA administers funds under this grant to improve access to local foods and expand educational activities in agriculture and gardening for students in kindergarten to 12th grade. Grants can be used for planning, training and technical assistance, purchasing equipment, developing school gardens, building partnerships, implementing farm to school programs, and supporting operations. Eligible recipients include state and local agencies and non-profit groups. The grant can be used for projects that increase the purchase and consumption of locally produced fresh food and implementing nutrition education and garden-based curriculum. The development of Museum Park landscapes as an "outdoor classroom"

and collaboration with educational institutions in the neighborhood to support projects in that vein may fit well with the educational requirements outlined in the program.

U.S. Environmental Protection Agency (EPA) Environmental Education (EE) Grants

The EPA awards approximately \$2 million to \$3 million annually through its EE program. These grants "support environmental education projects that increase the public's awareness about environmental issues and provide them with the skills to take responsible actions to protect the environment." Beneficial landscapes initiative in the "Green Grid" recommendation part of the plan may be fully in line with the EPA grant requirements.

Surface Transportation Block Grant Program (STBGP)

STBGP funds are perhaps the most flexible federal funding available and may be used for nearly all transportation project types, including construction of a wide variety of sidewalk and bicycle facilities and non-construction projects such as maps, data collection and monitoring, bike share, and more. The Houston-Galveston Area Council (H-GAC) allocates this federal funding for the Houston region and holds a competitive process for distributing funds typically every other year, coordinating with approval of the region's Transportation Improvement Program (TIP). Within the STBGP program there is a set-aside specifically for bicycle and pedestrian. Eligible activities include infrastructure facilities, safety and educational activities, and Safe Routes to School programs. These funds are subject to the same competitive process and allocation as the overarching STBGP funds.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

Funds from CMAQ program may be used to construct sidewalk and bicycle facilities if they demonstrate an air quality improvement. CMAQ funds are also allocated through a competitive process by the H-GAC, and typically match the same call-for-projects timing as STBGP funds.

The Community Development Block Grant (CDBG) Entitlement Program

The program provides annual grants on a formula basis to cities and counties. These grants are intended to revitalize neighborhoods, improve economic development, and provide improved community facilities and services. Eligible activities include construction of public facilities improvements, including sidewalks and bikeways. Coordination with the City of Houston's Housing and Community Development Department would be required.

Congressionally Directed Funding

The District has been successful in the past in receiving congressionally directed funding through close partnerships with Congresswoman Sheila Jackson-Lee. While congressionally directed funding programs are currently on a moratorium per U.S. Senate requirements, there is potential in the future for directed funding to make a return. In the event it does, the District should monitor and coordinate with key elected and appointed officials through annual appropriations processes.

LOCAL FUNDING SOURCES

Municipal Management Districts (MMDs)

Municipal Management Districts are special districts created by the Texas legislature. Houston Southeast encompasses the Museum Park neighborhood and is empowered to promote transportation and economic development, along with several other functions within their boundaries. This includes funding for sidewalks, neighborhoods, streets, and more to make transportation facilities safer and more vibrant. Beyond infrastructure investment, MMDs also provide maintenance activities for transportation facilities and can implement programs.

Tax Increment Reinvestment Zones (TIRZs)

Tax Increment Reinvestment Zones are special zones created by City Council in efforts to attract new investment in an area. Taxes from new improvements are set aside in a fund designed to finance public improvements within the boundaries of the TIRZ. Public improvements can include bicycle facilities and amenities. Many TIRZ boundaries overlap with MMDs as well, providing even greater opportunities to support implementation and maintenance of the Livable Centers Plan. Within Museum Park, the Midtown TIRZ and OST/Almeda TIRZ both operate. Coordinating and leveraging funding with the MMD and TIRZs is an important strategy to identify funding for improvements, and leverage funding from other sources.

City of Houston

Coordination with the City of Houston also provides opportunity to leverage funding that may be spent on maintenance or reconstruction projects within the District.

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POTENTIAL FUNDING AND PARTNERSHIPS

INNOVATIVE PARTNERSHIPS

As sidewalks and bikeways provide healthy, affordable, and fun transportation options to a community, they also add significant value. These projects can attract investment interest from developers, businesses, hospitals, philanthropic organizations, and non-profits. The following list identifies means to better leverage resources from these entities.

Metropolitan Transit Authority of Harris County (METRO)

Federal Transit Authority (FTA) formula funding allocated to METRO is available to be spent on access to transit facilities, providing parking, improving signage, and even maintaining those facilities, provided there is a link to transit. Better connections to the METRO Rail Red Line, Wheeler Station, and bus stops would improve the multimodal access off Caroline, as well as benefit METRO.

Businesses and Developers

Businesses and developers can be partners in developing better infrastructure and providing amenities for people walking and biking in on Caroline and in the larger neighborhood. Financial assistance in connecting people on foot or on bike to their business or providing parking, landscape amenities, and promotion of walking and bicycling in the neighborhood are just a few ways that businesses may be partners in implementing recommendations in this plan.

Hospitals and Other Health Service Providers

Health service providers are natural places of concern for community health and can be a partner for improving active transportation facilities. For example, the Seattle Children's Hospital committed to making bicycle and pedestrian improvements in its Major Institution Master Plan. Through that, they are improving nearby connections, including bike lanes, to the hospital and investing \$2 million in a Bicycle and Pedestrian Fund to build infrastructure to help employers and visitors access the hospital safely. Working with hospitals in the Texas Medical Center, is an additional strategy that could help provide safer and more comfortable streetscape facilities.

Public-Private Partnerships

Through coordination with the Midtown
Redevelopment Authority which spans the majority
of the project corridor, development agreements
can be utilized to help implement the improvements
through collaboration with the private sector. These
agreements could allow for private development to
implement project elements and to be reimbursed for
these improvements through the creation of future
tax increment.

Philanthropic Entities and Non-Profits

Partnerships with non-profit organizations can demonstrate support for projects and programs beyond government entities, which can be crucial to obtaining federal funds or leveraging new local funding. The Kinder Foundation, the Houston Endowment and The Robert Wood Johnson Foundation are potential resources that have supported bicycle, pedestrian, and environmental projects. The Robert Wood Johnson Foundation particularly looks for projects if they can be tied to research or promotion of health and physical activity.

Parking Benefit District

A Parking Benefit Districts can serve as a financing tool to support improvements in employment and activity centers. Within a parking benefit district, public parking spaces (on and off-street) are charged hourly rates designed to keep a particular percentage of parking spaces vacant at all times. Funds collected from parking charges go directly to improvements within the district, such as bike facilities and amenities. According to case studies in Austin, Texas and Washington, D.C., the Federal Highway Administration has found that the application of parking benefit districts has been shown to reduce the need for surface parking and improve traffic congestion while funding local improvements, such as bicycle facilities within the district.

The Houston Endowment

The foundation provides grants to support initiatives focused on arts and culture, education, the environment, health, and human services. Grants are awarded for general operating support, project support, capital improvements, capacity building, innovative approaches, public policy and engagement, and research. The foundation accepts applications and awards grants throughout the year with no hard deadlines. No local matching funds are required.

The Cockrell Foundation

The foundation provides financial assistance to 501(c) (3) organizations primarily in the Houston area to support education, youth activities, health care, medical research, and cultural institutions. Grants are given to support annual campaigns, capital campaigns, endowments, building funds, matching funds, special projects, and general purposes.

The Kresge Foundation

Funding is provided to government entities and non-profits with projects focusing on arts and culture, education, environment, health, and human services. Most grants are awarded on an on-going basis. Both single- and multi-year grants are given for operating support, project support, and program-related investments.

City of Houston Department of Neighborhoods Neighborhood Matching Grant Program

This grant helps neighborhoods fund various beautification and improvement projects by providing a dollar-for-dollar matching grant reimbursement ranging from \$500 to \$5,000. The program is designed to cultivate the spirit of volunteerism to help neighborhood-based organizations learn the art of planning and community building through neighborhood projects.

Art Place National Grants Program

This grant is designed to invest in creative placemaking projects that involve cross sector partners committed to strengthening the social, physical, and economic fabric oftheir communities. ArtPlace provides support for projects led by the arts/artists that are integrated with a community's economic development and revitalization strategies, and have the potential to attract additional support. Non-profit organizations, local and tribal governing bodies, individual artists/designers, and for-profit organizations are eligible, and awards range between \$50,000 and \$500,000.

Texas Historical Commission (THC) Certified Local Government (CLG) Grants

Certified-local-government CLG grants provide funding to participating city and county governments to develop and sustain an effective local preservation program critical to maintaining local historic resources. Activities eligible for CLG grants funding must be tied to the statewide comprehensive preservation planning process. Rehabilitation or restoration of properties individually-listed in the National Register of Historic Places or contributing to a National Register historic district qualify are eligible activities.

COST ESTIMATE

9Cs801 - Caroline St Landscape Improvements					
ost Estimate					
tem	Qty.	unit	Unit Cost	Unit Total	Remarks
Demolition					
Existing Concrete Pavement	7,302	sy	\$5.00	\$36,510.00	Removal and Disposal
Existing Concrete Sidewalk and Ramps	8,979	sy	\$5.00	\$44,895.00	Removal and Disposal
Subtotal	5,51.5	-1		\$81,405.00	
Grading Grading					
ine grading and soil preparation	125,000	sf	\$0.35	\$43,750.00	Minimal rough grading and fine grading
Subtotal				\$43,750.00	
Jtility Adjustments					
Adjust Manhole Frames/ Cover	10	ea	\$500.00	\$5,000.00	Adjust manholes to match proper elevations
Remove and Install 10 Inlets	10	ea	\$4,000.00	\$40,000.00	New Storm Sewer Inlets
nstall RCP Storm Sewer Pipe	125	lf	\$75.00	\$9,375.00	New Storm Sewer Pipe
djust Water Meter Valves	56	ea	\$200.00	\$11,200.00	Adjust Water meter valves
Subtotal				\$65,575.00	
Hardscape					
Concrete Pavers	6,300	sf	\$22.50	\$141,750.00	Median Cap Pavers
demove and Replace existing Curb	32,808	lf	\$9.00	\$295,272.00	Remove existing curb and replace with bulbouts (all but 2 blocks)
DA Ramps	27,238	sf	\$15.00	\$408,570.00	Construct ADA Ramps including ADA truncated Domes
Concrete Median	17,820	sf	\$6.00	\$106,920.00	Median Improvements
idewalks (4.5" thick)	67,870	sf	\$6.00	\$407,220.00	Sidewalks where needed
'ermatrak	2,528	sf	\$75.00	\$189,600.00	approx. 1/3 of total sidewalk needed
Concrete Pavement	30	sy	\$130.00	\$3,900.00	Misc. concrete replacement
Concrete Driveway (7" Thick)	7,480	sf	\$9.00	\$67,320.00	Early Strength Concrete Driveway, including excavation and base
Mill and Overlay Parallel Parking Areas	1,600	sy	\$12.00	\$19,200.00	Slope towards the street/gutter for positive drainage
level Pav Mrk Ty I (W) (6") (Sld)	5,520	lf	\$1.75	\$9,660.00	
Refl Pav Mrk Ty I (W) (12") (SId)	5,832	lf	\$2.00	\$11,664.00	
Refl Pav Mrk Ty I (W) (24") (Sld)	1,036	lf	\$7.00	\$7,252.00	
efl Pav Mrk Ty B (W) (Bike Symbol)	192	ea	\$400.00	\$76,800.00	
nstall Street Signs	28	ea	\$350.00	\$9,800.00	
Relocate existing Street Signs	42	ea	\$250.00	\$10,500.00	
Subtotal				\$1,765,428.00	
rrigation					
rrigation (sprinkler)	85,000	sf	\$8.00	\$680,000.00	Bermuda, Perennials and Ornamental Planting - Meters, Taps, Controllers, Bores, and PVB
Subtotal				\$680,000.00	

Planting	_				
Ornamental Trees - 30g	50	ea	\$300.00	\$15,000.00	30 Gal.
Shrubs	1,615	ea	\$35.00	\$56,525.00	3 Gal. ~36" O.C.
Medium Height Perennials	9,423	ea	\$15.00	\$141,345.00	1 Gal. ~18" O.C.
Low Perennials	16,386	ea	\$10.50	\$172,053.00	4" Pots ~10" O.C.
Tall Grasses	3,015	ea	\$15.00	\$45,225.00	1 Gal. ~24" O.C.
Solid Sod	16,614	sy	\$5.00	\$83,070.00	bulbout, medians and other supplemental sod planting
Existing Tree Maintenance	1	ls	\$15,000.00	\$15,000.00	Per the preliminary risk assessment
Subtotal				\$528,218.00	
Site Furnishings					
Pedestrian Lights (4 per intersection)	58	ea	\$9,500.00	\$551,000.00	Pedestrian overhead lights
Electrical Service Drop (1 per intersection)	15	ea	\$12,500.00	\$187,500.00	Electrical connection for pedestrian lights
Branded Furniture	90	ea	\$2,000.00	\$180,000.00	Tree guard/ Seating elements
Subtotal				\$918,500.00	
Way Finding					
Embedded Paving Strip Signage	48	ea	\$5,000.00	\$240,000.00	Embedded paving strip signage within paths
Directional Small Monument Blade	12	ea	\$8,000.00	\$96,000.00	Directional monument at intersections
Street Name Monument	12	ea	\$15,000.00	\$180,000.00	Median monument at intersections
Gateway Monument	4	ea	\$50,000.00	\$200,000.00	Gateway monument at zone specific transitions
Special Graphics and Finishes	1	ls	\$100,000.00	\$100,000.00	Monuments and Signage
Subtotal				\$716,000.00	
Project Soft Costs					
Consultant Design Fees	1	ls	\$676,000.00	\$676,000.00	Based on Current Conceptual Costs
Subtotal				\$676,000.00	
T-1-1				AF 474 070 00	
Total				\$5,474,876.00	
Construction Contingency 20%				\$1,094,975.20	
General Conditions, Bonds Etc 10%				\$656,985.12	
Grand Total				\$7,226,836.32	
Yearly Est Maintenance Wayfinding Upkeep Allowance				000-\$105,000/ YR ,000-\$85,000/ YR	

\$1,613,001.41 Based on condition, age, size, species, location

\$14,600,000.00 \$1,250-2,200 / If

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Estimated Existing Tree Value

Burying Overhead Utilities

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TREE SURVEY

BARTLETT TREE EXPERTS, OCTOBER 2019 (table keyed to a GIS dataset)

	TreeID	Common Name	Age	Canopy (ft)	Condition	Priority	estimatedValue	PruningCategory
	1	Tallow Tree-Chinese	Mature	15	Poor	1	\$4,107.46	
	2	Oak-Live	New planting	6	Good	3	\$750.07	Developmental
	3	Oak-Live	Young	8	Good	3	\$750.07	Developmental
	4	Oak-Live	Young	8	Good	1	\$1,080.10	Developmental
	5	Oak-Live	Young	8	Good	1	\$1,080.10	Developmental
	6	Oak-Live	Mature	30	Fair	2	\$16,801.51	Maintenance
	7	Oak-Live	Mature	25	Fair	1	\$8,572.20	Maintenance
	8	Oak-Live	Mature	35	Good	3	\$31,916.95	Maintenance
	9	Oak-Live	Mature	35	Fair	3	\$13,394.06	Maintenance
	10	Oak-Live	Mature	35	Fair	3	\$16,801.51	Maintenance
	11	Oak-Live	Mature	35	Good	3	\$31,916.95	Maintenance
	12	Oak-Live	Mature	30	Good	ASAP	\$23,522.12	Risk Mitigation
–	13	Oak-Live	Mature	25	Good	2	\$15,871.43	Maintenance
SID	14	Oak-Live	Mature	35	Good	ASAP	\$27,002.43	Risk Mitigation
	15	Oak-Live	Mature	35	Good	2	\$28,258.53	Maintenance
ST. WEST	16	Oak-Live	Mature	20	Good	2	\$14,521.31	Maintenance
ш	17	Oak-Live	Mature	30	Good	ASAP	\$23,522.12	Risk Mitigation
₹	18	Oak-Live	Mature	30	Fair	ASAP	\$30,198.30	Risk Mitigation
_	19	Oak-Live	Mature	30	Good	3	\$18,751.69	Maintenance
Ä	20	Oak-Live	Mature	25	Fair	3	\$13,394.06	Maintenance
	21	Oak-Live	Mature	35	Good	3	\$25,232.27	Maintenance
CAROLINE	22	Oak-Live	Mature	30	Fair	ASAP	\$15,622.84	Risk Mitigation
=	23	Oak-Live	Mature	20	Fair	ASAP	\$22,797.82	Risk Mitigation
	24	Oak-Live	Mature	25	Good	N/A	\$28,258.53	
2	25	Oak-Live	Mature	20	Good	3	\$18,751.69	Maintenance
	26	Oak-Live	Mature	20	Good	3	\$31,916.95	Maintenance
\overline{c}	27	Oak-Live	Mature	25	Good	N/A	\$14,521.31	
	28	Oak-Live	Mature	35	Fair	N/A	\$19,287.45	
	29	Oak-Live	Mature	35	Fair	N/A	\$14,487.02	
	30	Oak-Live	Mature	30	Fair	3	\$15,622.84	Maintenance
	31	Oak-Live	Mature	35	Fair	N/A	\$26,580.37	
	32	Oak-Live	Mature	20	Fair	N/A	\$12,343.97	
	114	Pecan	Semi-mature	25	Good	1	\$5,896.13	Maintenance
	115	Pecan	Semi-mature	25	Good	1	\$5,222.87	Maintenance
	154	Oak-Live	Young	6	Good	3	\$1,470.13	Developmental
	155	Oak-Live	Mature	20	Good	2	\$12,001.08	Maintenance
	156	Oak-Live	Mature	30	Good	3	\$23,522.12	Maintenance
	157	Oak-Live	Semi-mature	15	Fair	3	\$2,593.09	Maintenance
	158	Oak-Live	Mature	35	Good	1	\$25,232.27	Maintenance

	TreeID	Common Name	Age	Canopy (ft)	Condition	Priority	estimatedValue	PruningCategory
	116	Pine-Loblolly	Semi-mature	15	Good	3	\$4,704.42	Maintenance
	117	Palm-Mexican Fan	Semi-mature	6	Good	3	\$6,804.61	Maintenance
	118	Oak-Live	Mature	20	Fair	3	\$9,450.85	
	119	Oak-Live	Mature	35	Good	2	\$31,916.95	Maintenance
	120	Oak-Live	Mature	25	Fair	2	\$12,343.97	Maintenance
	121	Oak-Live	Semi-mature	15	Good	2	\$3,630.33	Maintenance
	122	Oak-Live	Semi-mature	15	Fair	1	\$1,735.87	Maintenance
	123	Oak-Live	Semi-mature	15	Good	2	\$3,630.33	Maintenance
	124	Oak-Live	Semi-mature	15	Fair	1	\$1,735.87	Maintenance
	125	Oak-Live	Semi-mature	20	Fair	2	\$3,085.99	Maintenance
	126	Oak-Live	Mature	30	Good	3	\$27,002.43	Maintenance
ш	127	Oak-Live	Mature	30	Good	N/A	\$30,100.54	-
SIDE	128	Oak-Live	Mature	30	Fair	3	\$12,343.97	Maintenance
7	129	Oak-Live	Mature	30	Fair	3	\$11,336.73	Maintenance
<u></u>	130	Oak-Live	Mature	25	Poor	ASAP	\$6,223.42	
EAST	131	Oak-Live	Mature	25	Good	3	\$21,871.97	Maintenance
⋖	132	Crapemyrtle-Common	Mature	8	Good	N/A	\$1,968.18	
Ш	133	Crapemyrtle-Common	Mature	8	Good	N/A	\$2,520.23	
<u> </u>	134	Crapemyrtle-Common	Mature	8	Good	N/A	\$4,320.39	
ST.	135	Oak-Live	Mature	35	Good	3	\$30,100.54	Maintenance
ш	136	Oak-Live	Mature	30	Good	N/A	\$27,002.43	
2	137	Oak-Live	Mature	30	Good	ASAP	\$30,100.54	Risk Mitigation
CAROLINE	138	Oak-Live	Semi-mature	25	Good	ASAP	\$8,670.78	Risk Mitigation
0	139	Oak-Live	Mature	30	Good	ASAP	\$43,914.78	Risk Mitigation
2	140	Oak-Live	Mature	30	Poor	ASAP	\$12,110.80	
⋖	141	Oak-Live	Mature	25	Fair	2	\$24,076.96	Maintenance
0	142	Oak-Live	Mature	20	Fair	3	\$18,023.05	Maintenance
	143	Oak-Live	Mature	25	Fair	2	\$16,801.51	Maintenance
	144	Oak-Live	Mature	25	Fair	N/A	\$9,450.85	
	145	Oak-Live	Mature	25	Good	N/A	\$15,871.43	
	146	Oak-Live	Mature	25	Good	N/A	\$14,521.31	
	147	Oak-Live	Mature	30	Good	3	\$14,521.31	Maintenance
	148	Oak-Live	Mature	20	Good	ASAP	\$13,231.19	Risk Mitigation
	149	Oak-Live	Mature	30	Good	N/A	\$27,002.43	
	150	Oak-Live	Mature	25	Good	3	\$17,281.55	Maintenance
	151	Oak-Live	Mature	30	Good	ASAP	\$30,100.54	Risk Mitigation
	152	Oak-Live	Mature	30	Good	3	\$33,707.75	Maintenance
	153	Oak-Live	Semi-mature	15	Good	N/A	\$6,750.61	

	TreeID	Common Name	Age	Canopy (ft)	Condition	Priority	estimatedValue	PruningCategory
	33	Pear-Callery	Mature	15	Fair	1	\$3,291.72	Maintenance
	34	Pear-Callery	Mature	15	Fair	2	\$7,406.38	Maintenance
	35	Oak-Water	Semi-mature	15	Fair	2	\$4,444.69	Maintenance
	36	Hackberry-Southern	Semi-mature	15	Good	N/A	\$2,359.71	
	37	Hackberry-Southern	Semi-mature	15	Good	N/A	\$1,248.11	
	38	Crapemyrtle-Common	Mature	15	Fair	N/A	\$977.23	
	39	Oak-Willow	Mature	20	Fair	1	\$5,277.05	Maintenance
	40	Oak-Cherrybark	Young	10	Good	3	\$525.05	Developmental
	41	Oak-Willow	Mature	25	Good	N/A	\$7,387.86	
	42	Oak-Live	Semi-mature	25	Fair	3	\$3,621.75	Maintenance
	43	Hackberry-Southern	Semi-mature	10	Dead	ASAP	\$	
	44	Oak-Willow	Semi-mature	15	Poor	1	\$2,501.71	
	45	Oak-Water	Semi-mature	10	Good	3	\$1,305.72	Developmental
	46	Crapemyrtle-Common	Mature	8	Good	N/A	\$1,152.10	
	47	Crapemyrtle-Common	Mature	10	Good	N/A	\$1,920.17	
	48	Crapemyrtle-Common	Mature	8	Good	N/A	\$1,536.14	
	49	Crapemyrtle-Common	Mature	15	Fair	3	\$1,080.10	Maintenance
	50	Crapemyrtle-Common	Mature	10	Fair	2	\$428.61	Maintenance
	51	Crapemyrtle-Common	Mature	10	Good	N/A	\$768.07	
	52	Crapemyrtle-Common	Mature	10	Poor	2	\$267.45	
	53	Crapemyrtle-Common	Mature	15	Fair	N/A	\$840.08	
	54	Crapemyrtle-Common	Mature	15	Good	N/A	\$2,568.23	
	55	Oak-Live	Young Semi-mature	15	Good	3	\$321.46	Maintonanco
	56 57	Hackberry-Southern Oak-Willow	Mature	25 25	Good	3 N/A	\$4,387.90	Maintenance
	58	Oak-Willow	Mature	25	Fair	N/A 3	\$20,521.85	Maintenance
	59	Camphor Tree	Mature	20	Fair	2	\$3,840.35	Maintenance
	60	Crapemyrtle-Common	Mature	15	Good	N/A	\$2,664.24	amechance
	61	Crapemyrtle-Common	Mature	15	Good	3	\$3,168.29	Maintenance
	62	Crapemyrtle-Common	Mature	15	Good	N/A	\$984.09	ameenance
	63	Crapemyrtle-Common	Mature	15	Good	N/A	\$1,560.14	
	64	Crapemyrtle-Common	Mature	15	Good	N/A	\$600.05	
	65	Crapemyrtle-Common	Mature	15	Fair	2	\$737.21	Maintenance
(A)	66	Crapemyrtle-Common	Mature	15	Good	3	\$2,040.18	
CAROLINE ST. MEDIANS	67	Crapemyrtle-Common	Mature	15	Fair	3	\$2,674.53	
₹	68	Crapemyrtle-Common	Mature	10	Good	3	\$984.09	Maintenance
	69	Crapemyrtle-Common	Mature	15	Fair	2	\$497.19	Maintenance
ш	70	Pine-Loblolly	Semi-mature	20	Fair	2	\$3,360.30	Maintenance
Σ	71	Pine-Loblolly	Semi-mature	15	Fair	3	\$2,897.40	Maintenance
	72	Magnolia-Southern	Semi-mature	10	Good	N/A	\$2,687.34	
တ	73	Redbud-Eastern	Semi-mature	10	Good	N/A	\$337.53	
ш	74	Redbud-Eastern	Semi-mature	10	Good	N/A	\$337.53	
Z	75	Oak-Live	Semi-mature	20	Good	3	\$8,670.78	Maintenance
	76	Magnolia-Southern	New planting	3	Good	2	\$254.42	Developmental
0	77	Elm-Cedar	New planting	4	Good	2		Developmental
ح	78	Elm-Cedar	New planting	4	Good	2	\$374.43	
S.	79	Elm-Cedar	New planting	4	Good	3		Developmental
	80	Elm-Cedar	New planting	4	Good	1		Developmental
	81	Magnolia-Southern	Semi-mature	10	Good	2	\$1,558.34	
	82	Oak-Shumard	Mature	15	Fair	ASAP		Risk Mitigation
	83	Oak-Shumard	Semi-mature	15	Poor	1	\$2,016.18	
	84	Oak-Live	Mature	30	Good	3	\$21,871.97	Maintenance
	85	Oak-Live	Semi-mature	20	Good	3	\$7,680.69	Maintenance
	86 87	Oak-Shumard Oak-Shumard	Mature Semi-mature	30 20	Fair Good	3	\$11,589.61	
	88	Oak-Live	Mature	25	Good	3	\$4,056.37	Maintenance Maintenance
	89	Oak-Live	Mature	30	Good	3	\$17,281.55	Maintenance
	90	Oak-Live	Mature	30	Good	3	\$13,231.19	
	91	Oak-Live	Mature	30	Good	3	\$20,281.83	
	92	Oak-Live	Mature	30	Good	3		Maintenance
	93	Maple-Red	Young	6	Good	2	\$216.02	
	94	Magnolia-Southern	Young	4	Good	3	\$254.42	Developmental
	95	Oak-Water	Semi-mature	10	Good	3	\$1,305.72	
	96	Oak-Shumard	Semi-mature	15	Fair	3	\$3,857.49	
	97	Hackberry-Southern	Mature	20	Fair	3	\$4,513.26	
	98	Elm-Chinese	Mature	20	Fair	1		Maintenance
	99	Elm-Chinese	Semi-mature	15	Good	N/A	\$3,153.88	
	100	Pine-Loblolly	Semi-mature	15	Fair	ASAP	\$2,897.40	Risk Mitigation
	101	Elm-Chinese	Young	8	Good	3	\$788.47	Developmental
	102	Oak-Live	Mature	30	Fair	2	\$20,184.66	Maintenance
	103	Oak-Live	Semi-mature	15	Fair	3	\$3,621.75	Maintenance
	104	Oak-Live	Mature	25	Fair	2	\$9,450.85	
	105	Oak-Live	Young	4	Fair	1		Developmental
	106	Oak-Live	Mature	30	Fair	2	\$20,184.66	
	107	Oak-Live	Young	6	Good	2	\$750.07	Developmental
	108	Oak-Live	Mature	25	Good	3	\$13,231.19	
	109	Elm-Chinese	Mature	15	Good	3	\$7,096.24	Maintenance
	110	Tallow Tree-Chinese	Mature	15	Poor	2	\$3,394.59	
	111	Elm-Chinese	Mature	20	Poor	2	\$3,754.62	l
	112	Tallow Tree-Chinese	Semi-mature	15	Fair	3	\$2,036.75	Maintenance
	113	Oak-Shumard	Mature	20	Fair	ASAP	\$9,069.39	Risk Mitigation

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MUSEUM PARK SUPER NEIGHBORHOOD COMMUNITY PARKING PROGRAM





2020 McKinney Houston, TX 77003 parking@houstontx.gov 832-393-8690 Monday – Friday 8 AM-5PM

Occupant ADDRESS City, State ZIP

NOTICE OF COMMUNITY PARKING PROGRAM DESIGNATION

On December 11, 2019, City Council approved the designation of the Museum Park Community Parking Program (CPP). The CPP authorizes ParkHouston to issue permits that exempt residents and employees from the on-street parking restrictions (meter and/or time limits). The CPP program is deployed in areas where multiple establishments rely on the street parking (residential, commercial, museums, etc.)

The area for the Museum Park Community Parking program are all streets included and bounded by IH US 59 to the north, SH 288 to the east, Hermann Drive to the south, and Main Street to the west.

The parking regulations (see reverse side) will become effective February 11, 2020. **If your block and street are not listed, there will be no change to the regulations on your block.**

- You are not required to purchase permits
- Permits must be properly displayed for exemption of the meter and/or time limit parking restrictions
- Employee permits are only valid in designated areas
- Limit 1 monthly permit per employee
- Limit 3 permits permit each calendar for single-family residential properties (1-8 units)
- Limit 1 permit each calendar year for multi-family residential units of 9-125 units. Maximum number of 50% of the units per property may obtain a permit.
- Permits do not guarantee a parking space
- All other parking regulations must be followed

A parking permit application is included. The completed application, payment and required documents can be mailed, and the permits will be mailed to you. You can also bring the completed application and required documents to our office and pick up the permits the same day.

For more information, visit http://www.houstontx.gov/parking/museum-park.html

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Address	Days	Days Hours		Employee Parking Area
5100 Austin	Mon-Sat	7am-6pm	4hrs	Yes
5200 Austin	Mon-Sat	7am-6pm	4hrs	Yes
5400 Austin	Mon-Sat	7am-6pm	4hrs	
1400 Calumet	Mon-Sat	7am-6pm	4hrs	
5100 Caroline	Mon-Sat	7am-6pm	4hrs	Yes
5200 Caroline	Mon-Sat	7am-6pm	4hrs	
1600 Ewing	Mon-Sat	7am-6pm	4hrs	Yes
1700 Ewing	Mon-Sat	7am-6pm	4hrs	Yes
1800 Ewing	Mon-Sat	7am-6pm	4hrs	Yes
1600 Hermann	Mon-Sat	7am-6pm	4hrs	
2100 Hermann	Mon-Sat	7am-6pm	4hrs	
1 Hermann Museum Circle	Mon-Sat	7am-6pm	4hrs	
2 Hermann Museum Circle	Mon-Sat	7am-6pm	4hrs	
3 Hermann Museum Circle	Mon-Sat	7am-6pm	4hrs	
4 Hermann Museum Circle	Mon-Sat	7am-6pm	4hrs	
5600 Jackson	Mon-Sat	7am-6pm	4hrs	Yes
5700 Jackson	Mon-Sat	7am-6pm	4hrs	Yes
5400 LaBranch	Mon-Sat	7am-6pm	4hrs	
1200 Oakdale	Mon-Sat	7am-6pm	4hrs	
1300 Oakdale	Mon-Sat	7am-6pm	4hrs	
1300 Palm	Mon-Sat	7am-6pm	4hrs	Yes
1300 Palm	Mon-Sat	7am-6pm	4hrs	Yes
1400 Prospect	Mon-Sat	7am-6pm	4hrs	
1300 Southmore	Mon-Sat	7am-6pm	4hrs	Yes
1200 Calumet	Mon-Sat	7am-6pm	4hrs	Yes
1500 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
1600 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
1700 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
1800 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
1900 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
2000 Hermann	Mon-Sat	7am-6pm	4hrs	Yes
2100 Hermann	Mon-Sat	7am-6pm	4hrs	Yes

CAROLINE STREET PEDESTRIAN / BICYCLE INFRASTRUCTURE IMPROVEMENT PROJECT

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