

CITY OF LA VISTA
MAYOR AND CITY COUNCIL REPORT
NOVEMBER 17, 2020 AGENDA

Subject:	Type:	Submitted By:
COMPREHENSIVE SIGNAGE AND WAYFINDING PLAN	◆ RESOLUTION ORDINANCE RECEIVE/FILE	RITA RAMIREZ ASSISTANT CITY ADMINISTRATOR DIRECTOR OF COMMUNITY SERVICES

SYNOPSIS

A resolution has been prepared to approve a professional services agreement with Design Workshop for development of a Signage and Wayfinding Plan in an amount not to exceed \$60,000.

FISCAL IMPACT

Funding is included in the FY21 budget for this project.

RECOMMENDATION

Approval

BACKGROUND

Over the last 18 months the City has been engaged in a Comprehensive Branding and Marketing Strategy project, which in addition to the brand strategy, resulted in the development of a new logo and strap line. One of the elements included in the brand strategy implementation recommendations pertained to wayfinding.

A Signage and Wayfinding Plan is a critical tool for deploying brand standards in the built environment, and while often thought of as only signage, it is really an extension of a community's brand and can help create meaningful experiences and establish a sense of place. Wayfinding makes people feel safe and comfortable getting to their destination and navigating that destination once they arrive. Visitors will be more likely to stay longer, spend more money, and come back (likely bringing others with them) if they have a great experience.

During many of the public engagement and visioning exercises held over the last several years we have received a consistent message—La Vista lacks identity. All of our recent efforts, including projects such as the Streetscape Design, the City Centre development, Civic Center Park improvements, the Interface Design and the Branding Strategy, have focused on creating a sense of place, an iconic, memorable experience, an identity for La Vista. Developing a community-wide, comprehensive Signage and Wayfinding plan is essential to continuing this effort and applying it throughout the City.

Although signage is an important component, wayfinding is much more than simply installing signs. There are critical components of a wayfinding plan that need to be addressed by an expert trained in what makes wayfinding effective. Sign companies are great at making signs, however they are not trained in brand strategy and place-based design. Examples of some components that would be addressed in a wayfinding plan include:

- Assessing signage location, taking into consideration whether it is pedestrian or vehicular, the speed of vehicles, the distance for effective placement, etc.
- Map-based kiosks
- Monument signs
- ADA requirements
- Incorporating the brand
- Incorporating public art
- Trail signage
- Park signage
- Parking structure identification

All of that and more, while at the same time finding creative ways to incorporate the City's branding efforts into the plan.

The Mayor and City Council have invested considerable resources on efforts to create a unique identity for La Vista. The development of a comprehensive Signage and Wayfinding Plan is the next step.

Design Workshop was previously engaged to design streetscape improvements for 84th Street. During the initial phases of that project, wayfinding was discussed as a potential component. However, due to the fact that the branding project was on the horizon, we did not pursue the wayfinding component at that time.

A copy of the scope of work is attached as well as a sample deliverable prepared by Design Workshop for a similar project. A short presentation will also be made at the City Council meeting.

RESOLUTION NO._____

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF LA VISTA, NEBRASKA AUTHORIZING THE EXECUTION OF A PROFESSIONAL SERVICES AGREEMENT WITH DESIGN WORKSHOP, DENVER COLORADO FOR DEVELOPMENT OF A SIGNAGE AND WAYFINDING PLAN IN AN AMOUNT NOT TO EXCEED \$60,000.

WHEREAS, the Mayor and City Council have determined that design and plan development are necessary; and

WHEREAS, the FY21/22 Biennial Budget provides funding for the proposed services;

NOW, THEREFORE BE IT RESOLVED, by the Mayor and City Council of La Vista, Nebraska, that a professional services agreement, in a form satisfactory to the City Administrator and City Attorney, be authorized with Design Workshop, Denver, Colorado for development of a signage and wayfinding plan in an amount not to exceed \$60,000.

PASSED AND APPROVED THIS 17TH DAY OF NOVEMBER 2020.

CITY OF LA VISTA

ATTEST:

Douglas Kindig, Mayor

Pamela A. Buethe, CMC
City Clerk

Proposal for La Vista Signage and Wayfinding Plan

(La Vista, Nebraska)

11/11/20

PROJECT DESCRIPTION

Design Workshop will develop a comprehensive signage and wayfinding plan that address the application of the City's new branding standards. This will include a review and analysis of the existing branding, signage and city properties and proposed plans for signage and wayfinding locations, sign types and sign designs.

SCOPE OF SERVICES

PROJECT APPROACH

A signage and wayfinding plan is a critical tool for deploying brand standards in the built environment. A successful plan will translate the recently completed brand standards into an actionable plan across the city's existing parks and public spaces as well as upcoming street improvements and future development sites. Design workshop values a multi-modal approach to signage that creates a coherent, legible experience that is aligned with the local brand and aesthetic. This is accomplished through a systematic approach to entry monuments, directional signs, information kiosks and trail markings as well as complimentary graphics on public property.

1. Task 1: Project Kick-off and Overall Project Management

Design Workshop prides itself on effective and communicative project management, leading to highest quality outcomes. It begins with a kick-off meeting that brings the right team to the table to identify all the critical components of the project and continues for the duration of the project with regular check-ins to ensure the plan is working and course correct where it may not be.

1.1. Strategic Kick-off: This meeting will be a discussion to align the project schedule and expectations using Design Workshop's PM Toolkit.

Deliverables:

Meeting #1 Project SKO
Bi-Weekly Progress Calls

2. Task 2: Project Context

While we have a great understanding of La Vista through our previous work, this project will review and compile additional information relevant to the signage plan and compile information for following tasks.

2.1. Field Review: Building on our existing knowledge of La Vista we will review any additional plans, study or documents that may inform the signage and wayfinding plan, including GIS data to develop a map of key locations, and vehicle, bicycle and pedestrian networks. Using the background information collected in the first step, we will review any existing wayfinding as well as future development sites for opportunities and constraints. During this phase we will develop a map identifying bicycle, pedestrian, and vehicle circulation networks as well as key city buildings, parks, significant sites and known future developments. This map will also identify any

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districting or top-level categories that may be used to create differentiation in the signage designs, such as color coding.

- 2.2. **Field Review Meeting:** We will meet with City Staff to discuss the design vision and goals for the city wayfinding plan. This will include a visual preference survey, a mapping exercise and initial findings from the first two steps. We will also meet with the relevant public staff to discuss fabrication and maintenance needs.
- 2.3. **Wayfinding Best Practices:** Design Workshop will prepare a memo that addresses current best practices in municipal signage and wayfinding including typical signage hierarchy, elements, and placement typologies consistent with conditions in La Vista.

Deliverables:

Data Needs Memo
Meeting #2 Field Review Meeting
Wayfinding Practices Memo

3. Task 3: Signage and Wayfinding Framework

- 3.1. **Location Plan:** Based on the review and analysis in Task 2 we will prepare a map showing the preliminary locations for each sign type in the overall signage hierarchy. These locations will include typical placement details for common location in La Vista.
- 3.2. **Signage Typology:** The power of a brand lies in its consistent application across media. With an understanding of the various sites, location and overlaid with the circulation networks we will identify the various sign types needed to create a comprehensive signage plan. These will include sign types for trails and parks, vehicular directional and signature entry markers as well as others. In addition to the sign types we will recommend a number of graphic treatments for city property from street furnishings to architectural signage and parking garage wayfinding. These opportunities will be identified in Task 1.
- 3.3. **Signage Design Concepts:** Using the recently completed branding guidelines as well as the signage concepts previously prepared by Design Workshop, we will develop 3 distinct signage design concepts for stakeholder groups to review. Each concept will have a unique character and will consider, information hierarchy, messaging, audience, functional requirements, and maintenance. These initial concepts will be designed to an illustrative level for presentation to the stakeholders through an online survey. Based on the feedback from this round a preferred design option will be created and presented to the City Staff for a final round of commenting. These comments will be addressed in a revised round of the preferred signage design concepts.

Deliverables:

Meeting #3 Preliminary Location and Typology Review
Meeting #4 Initial Signage Concept Review
Meeting #5 Preferred Signage Concept Review

4. Task 4: Signage and Wayfinding Plan

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- 4.1. With the completion of the previous tasks a final document will be prepared that incorporates the analysis, planning and design of the complete signage plan. As part of this plan a series of recommendations regarding next steps, priority areas and implementation will be included.

Deliverables:

Meeting #6 Draft Signage and Wayfinding Plan Review
Final Signage and Wayfinding Plan

OPTIONAL TASKS (not included in current scope or budget)

1. **Destination Recommendations:** This scope does not include the development of a list of recommended locations to include on wayfinding signage. Design Workshop can integrate this into the process by conducting additional meetings with stakeholders and internal reviews to develop a consistent approach to identifying and prioritizing destinations for wayfinding signage. This will include a tiered list of destinations that include local landmarks and destinations.
2. **Phasing and Cost Estimate:** Design Workshop will work with the city to develop a phasing plan to identify the three priority projects and the sign types and quantities in those areas. This will be used to develop a cost estimate that includes design, fabrication and installation.

INITIAL INFORMATION

Client shall provide the following information or services as required for performance of its services. Design Workshop assumes no responsibility for the accuracy of such information or services provided by client and shall not be liable for errors or omissions therein, but may rely on the accuracy of the information provided by Client. Should Design Workshop be required to provide services in obtaining or coordinating compilation of this information, such services shall be billed as additional services.

In order to begin services, Design Workshop will require the following information:

1. Existing plans related to signage and wayfinding, including branding, marketing and development studies as well as any GIS data or maps of existing signage and circulations studies to develop a map of key locations, and vehicle, bicycle and pedestrian networks.

PROJECT CONDITIONS

1. Client/Client Rep. coordination may need extra time if Design Workshop has to coordinate with multiple stakeholders.

PROJECT EXCLUSIONS

The following exclusions are not part of Design Workshop's base scope of services and shall be considered Additional Services. Design Workshop will endeavor to solicit approval from the client prior to commencing services however failure to obtain prior approval does not inhibit Design Workshop from being compensated at Design Workshop standard hourly rates for producing the associated work.

1. Revisions to site area or project scope of work
 - a. Design and engineering scope of services required because of changes to the Project including but not limited to changes in size or location of project area, quality and complexity, schedule, program, or budget;
2. Additional Graphic Deliverables

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- a. Alternate Design directions and/or alternate solutions after the completion of the preferred design package;
- b. Preparation of marketing, fundraising, promotional and collateral material such as renderings, graphics, etc. not listed herein;
- c. Production of fully-rendered 3D (or physical) model or fly-through;

3. Certifications & Permits

- a. Services in conjunction with permit submissions, applications, entitlements, and/or presentations to regulatory agencies except as defined herein;
- b. Coordination and documentation of sustainable design requirements, e.g., LEED, Well Building, Living Building Challenge, or SITES, certification unless contracted;

4. Construction Observation

- a. Phased document (plans and technical specifications) preparation for phased Construction Observation services, including "early bid" packages except as defined herein;
- a. Additional time required in the construction observation phase other than the hours defined herein;
- b. Preparation of record drawings or of measured drawings of existing conditions;
- c. Rework of design documents due to misinterpretation by the Contractor, or as the result of substitution of product or materials specified;

5. Meetings and Site Visits

- a. In person, web and site meetings in addition to the number indicated in base scope of services of this agreement;

6. Sub-Consultant Services

- a. Only subconsultants listed herein are part of the scope of services.
- b. Cost estimating/Opinion of Probable Construction Cost services unless included herein as a base scope of service.

PROJECT TEAM

Design Workshop typically organizes projects in a team format with key responsibilities divided between the Principal-in-Charge and Project Manager. The key team members for your project are listed below:

Principal-in-Charge – **Robb Berg**

Robb Berg will serve as Principal-in-Charge of the La Vista Signage and Wayfinding project and will have primary responsibility for the overall content and quality of the services performed by Design Workshop.

Project Manager – **Michael Stout**

Michael Stout will serve as the Project Manager for the La Vista Signage and Wayfinding project and will also be responsible for leading the planning and design efforts associated with the work. His responsibilities will include the coordination of Design Workshop's in-house design team as well as regular communication and coordination with all members of the client team.

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SCHEDULE

Design Workshop is prepared begin work based on the provided schedule and receipt of a retainer and a signed copy of this proposal from an authorized owner's representative. At this time, the following generalized schedule is anticipated:

See attached.

FEES AND EXPENSES

1. Basic services

Compensation to Design Workshop for the services described herein and in accordance with the conditions of this agreement shall be for a lump sum fee of \$54,000.

When compensation is on a lump sum, Design Workshop's fee shall be equitably adjusted if the scope of the work is increased by change order(s) or the cost or price of construction is increased by at least 10% of the budget. Such equitable adjustment shall be based on the percentage increase in the cost or price of construction.

The estimated fees are as follows:

BUDGET

Task 1: Project Kick-off and Overall Project Management	\$3,500
Task 2: Project Context	\$15,000
Task 3: Signage and Wayfinding Framework	\$30,000
Task 4: Signage and Wayfinding Plan	\$5,500
Total Professional Fees (labor only)	\$54,000

2. REIMBURSABLE EXPENSES

Reimbursable Expenses are in addition to compensation for Basic Services. Reimbursable expenses incurred by Design Workshop and consultants directly related to the project such as, but not limited to, travel, photography, telephone charges, video conference charges, and printing expenses shall be billed at Design Workshop's cost plus fifteen percent (15%).

Reimbursables \$2,500

3. RETAINER

In accordance with Design Workshop's policy, a retainer of \$10,000 is payable upon acceptance of this proposal. The retainer will be applied to our final billing. All invoices must be paid prior to release of the final documents.

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4. ADDITIONAL SERVICES

Services in addition to those described above are to be compensated on a Time and Materials basis per Design Workshop's current published rate schedule. Additional services will include (but are not limited to) redesign of previously approved work, major revisions to program and/or expansion of scope of services. Whenever practical, changes, additions, or modifications to the scope of services shall be authorized by written change request; however, the absence of such a written change order shall not act as a bar to payment of fees due Design Workshop, provided the change was in fact approved and ordered by the Client.

5. TAXES (For Canada, UAE and other states and countries that may apply)

Any taxes or fees, (local, state or federal), based on gross receipts or revenues will be added to amounts due under this contract.

PAYMENT TERMS

1. This is a lump sum contract and will be billed monthly as a percentage completed for each phase of the work.
2. Invoices will be mailed from Design Workshop's office by the 10th of each month. Invoices are payable within 30 days of the date of billing. Invoicing shall be specific to each major task and will describe the completed portion of the services.
3. Extensive itemized breakdowns of hourly activities or provision of detailed backup for reimbursed expenses for accounting purposes are not a normal procedure; however, at the Client's request, Design Workshop will provide this service at an hourly rate of \$65 (sixty-five dollars) per hour.

ACCEPTANCE

1. This Agreement is entered into between Design Workshop, Inc. and City of La Vista, owner or reputed owner of the property to be benefited by Design Workshop's services.
2. If this contract meets with your approval, please sign below and return one (1) copy for our file.
3. If this agreement is not accepted within two (2) months from the date of receipt, the offer to perform the described services may be withdrawn and Design Workshop may renegotiate this proposal.
4. The Client agrees that they have read and understood the Contract Provisions attached hereto and incorporated herein by reference.

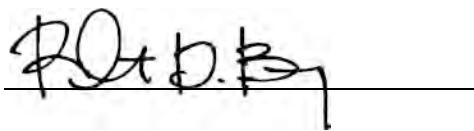
DESIGN WORKSHOP, INC.

Proposal for La Vista Signage and Wayfinding Plan

(La Vista, Nebraska)

11/11/20

By:



Date: 11/11/20

Title: Principal

APPROVED BY CLIENT:

By:

Date: _____

Title:

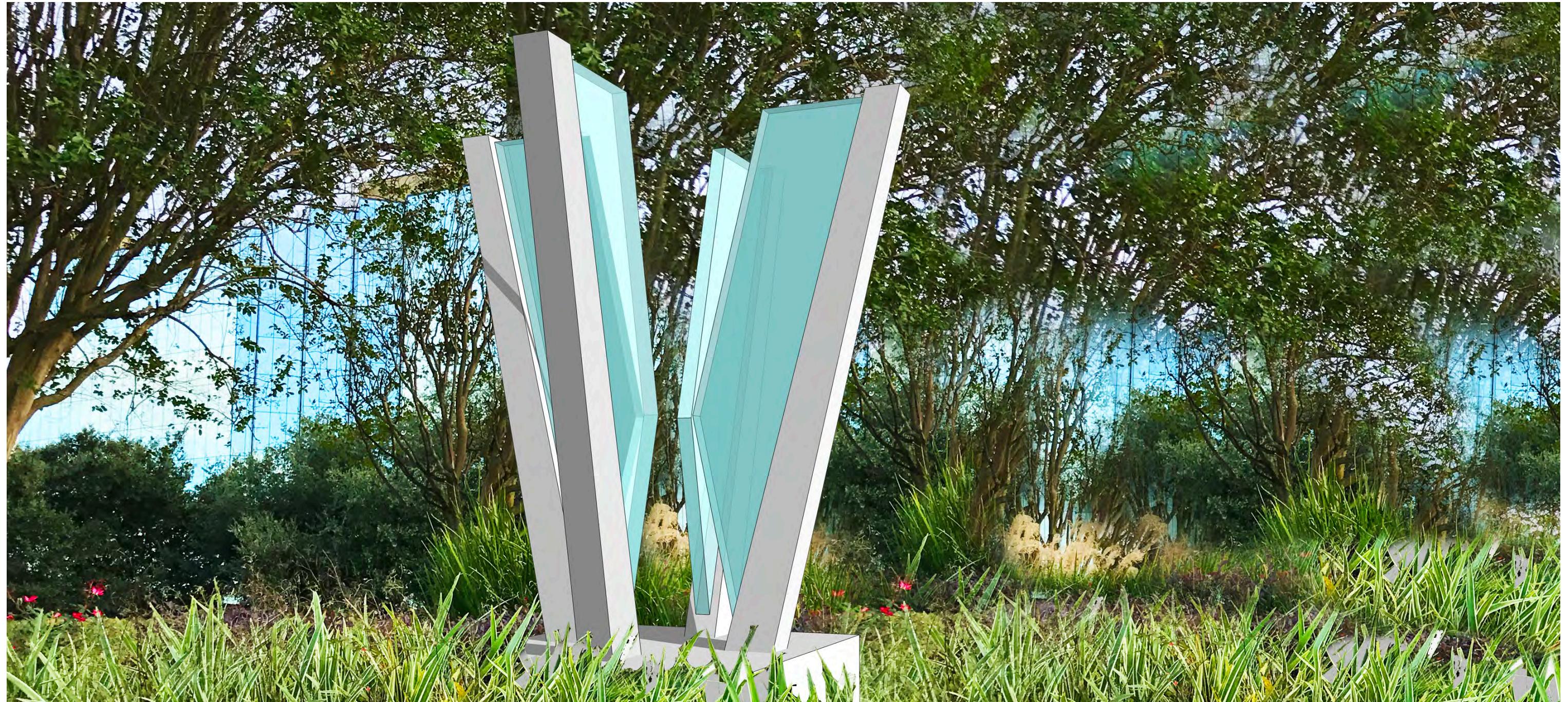
La Vista Signage and Wayfinding Schedule

	JAN	FEB	MAR	APR	MAY	JUN
Task 1: Project Kick-off		●				
Task 2: Project Context						
Task 2.1 Field Review		●	●			
Task 2.2 Wayfinding Best Practices		●	●			
Task 3: Signage and Wayfinding Framework				●		
Task 3.1 50% Framework Package				●		
Task 3.2 100% Framework Package				●	●	
Task 4: Signage and Wayfinding Plan						
Task 4.1 50% Plan Package				●	●	
Task 4.2 100% Plan Package				●	●	●

WESTCHASE DISTRICT

DISTRICT MARKER
MASTER PLAN

PREPARED FOR CLIENT
NOVEMBER 2, 2018



DESIGNWORKSHOP

ACKNOWLEDGEMENTS

WESTCHASE DISTRICT

IRMA SANCHEZ

Vice President of Projects

LOUIS JULLIEN

Projects Manager

PEDESTRIAN BRIDGE CONCEPT DESIGN + FEASIBILITY CONSULTANTS

DESIGN WORKSHOP INC.

ROBB BERG

Managing Principal

ALEX RAMIREZ

Project Manager

ZOEY ZHANG

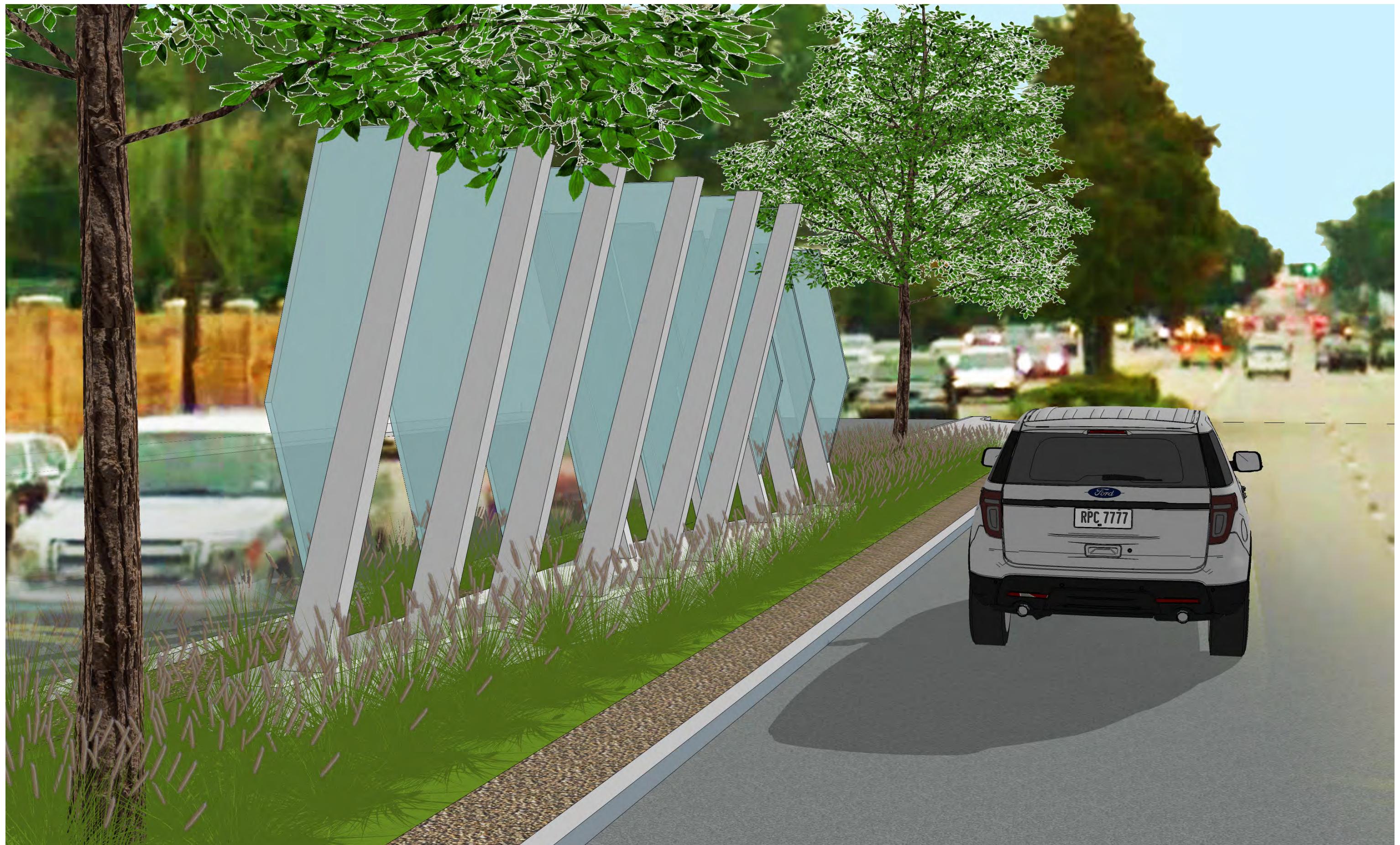
Project Environmental Graphic Designer

DESIGNWORKSHOP

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TASK 1-1

VISION

CRITICAL SUCCESS FACTORS
PROJECT CHALLENGE
PROJECT APPROACH
GOALS + STRATEGIES
COMPONENTS

VISION STATEMENT - Westheimer Road, a major thoroughfare located in the heart of Westchase District, will be reimagined and rebuilt as an aesthetic and functional streetscape by the District. Part of the effort is to re-envision the system of monuments and equip all users with an improved sense of place identity across the District. The 41 monument signs that exist in Westchase District to-date are to be revamped and replaced with identifiable district markers. In essence, the District Marker Master Plan is being conducted to accomplish the goal of providing clear visual cues in the public realm and redefining the Westchase District brand.

The design team will identify key elements in the existing monument signage, explore feasible locations for their placement through analysis of baseline conditions, investigate regulations that are important to adhere to and finally, develop options for a family of district marker elements, appropriately scaled and contextually designed to fit within the identity of Westchase District.



CRITICAL SUCCESS FACTORS

In order for the District's residents and visitors to have an improved understanding of destinations in the area and be aware of their locations, a clear and thoughtful design of district marker will be provided in this study.

THE RESULTS SHOULD AIM TO:

- **ADDRESS** existing conditions and provide analysis focusing on various opportunities related to mobility improvements, location and public space
- **OFFER** destination understanding for multiple types of streetscape users along Westheimer
- **ENHANCE** visual experience of each district marker and utilize lighting elements as part of the visual brand strategy
- **PROVIDE** a sense of place using district identifiers
- **INVOLVE** client feedback and encourage client ownership
- **COMPLETE** the study in a timely and cost-effective manner
- **IMPLEMENT** "Phase I" improvements as part of the streetscape project

PROJECT CHALLENGE

Westheimer Road is a prominent, arterial road running east-west between downtown Houston and Highway 6 near George Bush Park. The segment between Westerland Drive and S. Kirkwood Road, located in Westchase District, is in particular need of improvements related to access and mobility, shade and human comfort, way-finding and infrastructure. The street is set amongst large strip malls and big-box retail development, which results in vast swaths of parking lots and wide, often frequent curb cuts. The right of way extends to nearly 130' in width with eight vehicular lanes and periodic turn lanes. The back of curb dimension varies in width from less than 5'-0" to just over 8'-0" often obstructed by utility poles and interrupted by poor paving conditions. This creates an environment of limited pedestrian and bicycle mobility and often creates uncomfortable walking experiences for pedestrians along the corridor.

When driving or walking along Westheimer Rd., pedestrians and drivers are faced with inconsistent signage and confusion about distances between destinations. For example, there is a lack of consistent map placement per bus shelters along the corridor, making it difficult for commuters, who are often the primary walkers along Westheimer, to travel in a timely manner. In addition, the road lacks a clear, reliable and legible structure of lighting, signage and identity that not only make it difficult to attain a symbiotic relationship between streetscape users, but also creates visual havoc with improper and limited lighting.

- **How can we deliver a consistent library of district marker that can easily be implemented throughout the District?**
- **How can we enhance district branding to be recognizable as the Westchase District?**
- **How can we design for streetscape marker elements that do not compete with the various forms of strip mall signage and billboards?**
- **What are ways of providing a clear destination understanding to streetscape users?**

PROJECT APPROACH

The District Marker Master Plan will distinguish itself from other master plans and feasibility documents based on how well it integrates the District's brand into the design of district marker. The study will be recognized as a local hallmark for circulation, brand and identity.

GOALS AND STRATEGIES

Goals and strategies for this study are intended to establish benchmarks by which the design team is able to measure outcomes and have a basis for design decisions. The following are goals, associated strategies and metrics and core principles that aspire to fulfill the District's vision for legibility and branding.

GOAL 1

CREATE A SENSE OF IDENTITY



STRATEGIES

- 1 Provide a common standard and roadmap for district marker, applicable and distinctive to the District
- 2 Develop a list of priority locations as well as concept plans for the district marker kit-of-parts
- 3 Improve gateway conditions such that entry into and out of the District is well-noted
- 4 Establish a library of hierarchical district marker elements that range in size and character depending on placement within the District and visibility

METRICS

- Westchase District Graphic Standards
- TxDOT Wayfinding + Signage Guidelines
- APCO (Association of Public - Safety Communications Officials) Distance Legibility Chart
- Areas of vehicular traffic and foot traffic
- Westchase District boundaries
- Points of entries and exits
- Major Intersections
- Major Intersections
- City of Houston MTFP
- Points of District entries and exits
- TxDOT Wayfinding Guidance
- APCO Distance Legibility Chart

GOAL 2

CONNECT PLACES



STRATEGIES

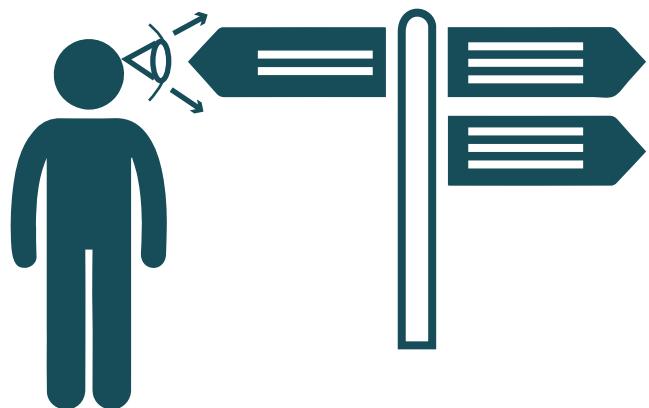
- 1 Detect various baseline circumstances, constraints and opportunities
- 2 Research previous studies that impact potential locations of district marker improvements
- 3 Understand TxDOT regulations on signage and wayfinding requirements
- 4 Clarify types of users, categories of district commuter sizes and kit-of-parts

METRICS

- Number of bus stops with shelters
- Number of street intersections for monument sign
- City of Houston Major Thoroughfares Plan
- Traffic Counts / Frequency
- Connections to trails
- Westchase Mobility Plan
- Westchase Pedestrian + Bicycle Plan
- COH Pedestrian + Bicycle Master Plan
- Traffic Accident Analysis
- Westheimer Corridor Mobility Plan
- Municode
- TxDOT Wayfinding Guidance
- TxDOT Wayfinding Guidance
- Legible London
- METRO

GOAL 3

PROVIDE CONSISTENCY + CLARITY



STRATEGIES

- 1 Enhance streetscape experience for streetscape users by providing a district identified marker
- 2 Offer identifiable markers and functional streetscape features that answers key questions at the appropriate time and place
- 3 Inform users with the right amount of material and information
- 4 Improve mobility through the use of district markers
- 5 Design for safety, accessibility and mobility, context, resiliency and cost-effectiveness

METRICS

- Number of bus stops with shelters
- Ridership information / Number of commuters and pedestrians
- Areas of marker barriers / constraints
- Relevant Wayfinding + Signage documents and guidelines (Legible London)
- Areas of most foot traffic
- Areas of most vehicular traffic
- TxDOT Wayfinding Guidance
- Relevant Wayfinding + Signage documents and guidelines
- City of Houston MTFP
- City of Houston Bikeways Plan
- Westheimer Improvements Plan
- Reimagine Houston METRO
- Number of crossings
- Number and areas of cluttered signs
- View corridors

GOAL 4

ENSURE SAFETY AND SECURITY



STRATEGIES

- 1 Reduce time spent on navigation and assure safety, accessibility, and legibility particularly in conflict zones
- 2 Increase levels of efficiency for multimodal transportation, particularly for vehicles
- 3 Ensure design clarity and limit cluster of landmarks and district marker components
- 4 Detect barriers along Westchase District that hinder visual clearances and provide placement of elements at important nodes

METRICS

- Number and areas of traffic accidents or crashes between pedestrians, vehicles and cyclists
- Levels of traffic congestion
- Existing Locations of monument sign elements
- Existing Locations of Elements
- Number of damaged or hazardous monument sign elements



Providing identification that helps people travel between destinations



Ensuring method of predictability for easy recognition of landmarks



Providing information in manageable amounts, in advance, repeatedly and consistently



Presenting branding clearly, logically and succinctly through marker design

COMPONENTS

Navigation from place to place is a fundamental human activity and an integral part of everyday life. People use their knowledge and previous experiences to find their way to and from destinations in the built environment.

A district marker informs users of their surroundings. It is important to show branding and information at strategic points to provide people confirmation of the right direction. Complex structures in the built environment are interpreted and stored by people's perception. In essence, distances, locations and time may be remembered differently than they are in reality. To tackle this, creating a system of markers or landmarks can help ground perception of time and physicality to certain locations in a community.

WHO...

WHO ARE THE USERS?

District marker components are developed for numerous users across Westchase District. Each user, whether traveling by personal vehicle, commuting by bus, or traveling by foot or on bike, will have different goals and unique schedules based on their mode of travel. Each mode of transportation will result in different experiences that all need to be accounted for in this study.

TYPES OF JOURNEYS

There are different types of journeys associated with each mode of travel. Whether it is a resident in a vehicle with knowledge of the area or whether it is a cyclist new to Westchase District, the system should support and enhance their understanding of the District to enable efficient travel time. Journeys also vary and can be altered depending on a change in decisions. In essence, availability of local knowledge becomes even more important. The district marker system should support as many journeys as possible. The following are typical journeys made by types of transport.

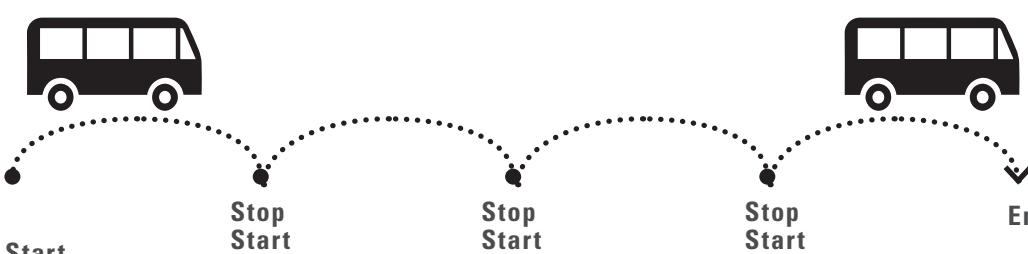
VEHICULAR JOURNEY

Those who use vehicle travel in Westchase usually understand how far they have to travel, from point A to B.



TRANSIT JOURNEY

Transit journeys occur in a start-stop motion. The process can be one of learning where the commuter may utilize different routes to get to an ultimate destination.



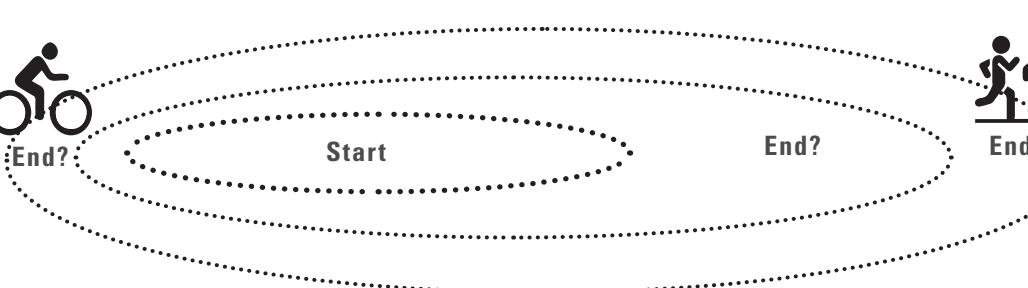
PEDESTRIAN COMMUTE

Pedestrian commuters in Westchase often use other modes of travel midway to reach destinations.

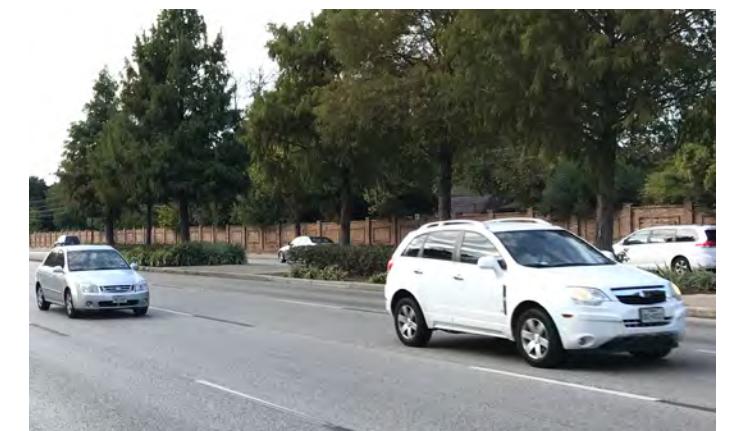


HIKERS + BIKERS JOURNEY

Cyclists and hikers are strollers who use their intuition to explore and discover interesting places in the District.



STRIDERS
efficiency and short distances



STROLLERS
opportunistic, wandering and longer distances



WHAT...

IDENTITY - DISTRICT MARKER

A district marker element may populate the built environment for users to navigate in the District. The elements serve a purpose of directionality, connectivity, and brand identity that express information to aid users in their daily travels. These district markers build a family of identification that pedestrians, commuters, cyclists and drivers can associate with Westchase District.

To create a visible environment and enhance an identity of a place, it is necessary to place landmarks in locations that are visible to multiple users. In addition, identified marker help define the street and set a precedent within a District. They are structures that are built not only to serve a purpose, but also to be an iconic symbol that is easily recognizable and is representative of a place.



WHY...

WHY ARE THEY IMPORTANT?

A District marker is an important communication. Markers serve to guide multiple street users in their daily travels.

District markers are used to define a District's boundaries and its identity, creating a sense of place through a series of features that are usually placed at key junctions. In addition, they are critical in implementing a brand to symbolize a community and provide a point of directional reference for visitors and residents.

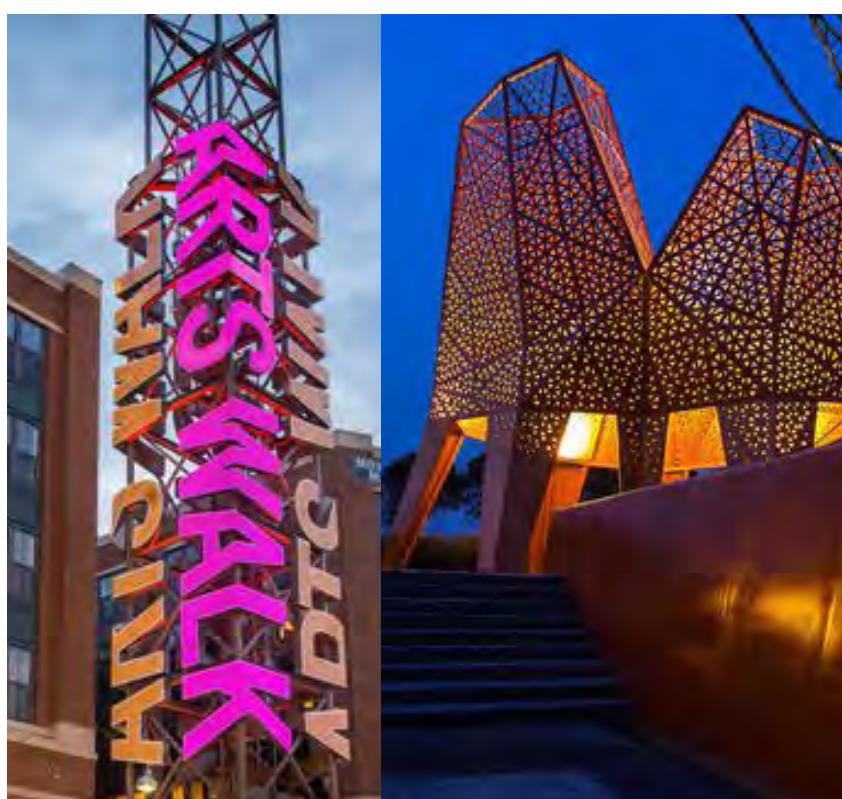


WHERE + WHEN...

WHERE AND WHEN ARE THEY NEEDED?

District markers usually occur in areas of high visibility along paths of pedestrians, cyclists, transit users and cars. They are often needed at conflict zones between multiple users (i.e.: intersections and junctions) to direct the flow of traffic and at major points of interest to provide directional information.

Entry points, exit points, key intersections and major thoroughfares are some examples of where district markers may occur.



HOW...

HOW CAN THEY BE IMPLEMENTED?

There are multiple entities involved in the implementation of district marker elements. Most governmental entities are responsible for sculptural and gateway elements on properties accessible to the public. Some are implemented by developers or builders on private lands that may also require the approval of government facilities.

District markers can be implemented by public entities such as management Districts, super neighborhoods, the City or Tax Increment Reinvestment Zones through design consultants and contractors. There is usually a public process whereby community residents and important stakeholders engage in discussions about their execution. Developers and other

private entities can also work with a City or District to create landmarks or district markers that fall on private properties or easements.





**TASK
2-1**

BASELINE CONDITIONS

**DESIGNING A DISTRICT MARKER FAMILY
MAJOR THOROUGHFARES PLAN
EXISTING TRAILS, PARKS AND BIKEWAYS NETWORK
TRANSIT RIDERSHIP AND BUS STOPS
MAJOR POINTS OF INTEREST
AVERAGE DAILY TRAFFIC**

Analysis of baseline conditions is a critical component of every project and underscores opportunities and challenges inherent to each project site. The design team examined key aspects of the District that would create a premise for locating district marker elements. For example, examining the major thoroughfares plan (MTP) in Westchase District will allow for the potential allocation of wayfinding elements at intersections between freeways and arterial roads or where traffic volume is highest to ensure maximum visibility. The information gathered includes the major thoroughfares plan, existing trails network, existing transit network and points of interest. The analysis of these baseline conditions also serves to support the overall vision for the District's brand identity and directional clarity.

DESIGNING A DISTRICT MARKER FAMILY

1 STUDY GATEWAYS AND ENTRANCES INTO THE DISTRICT

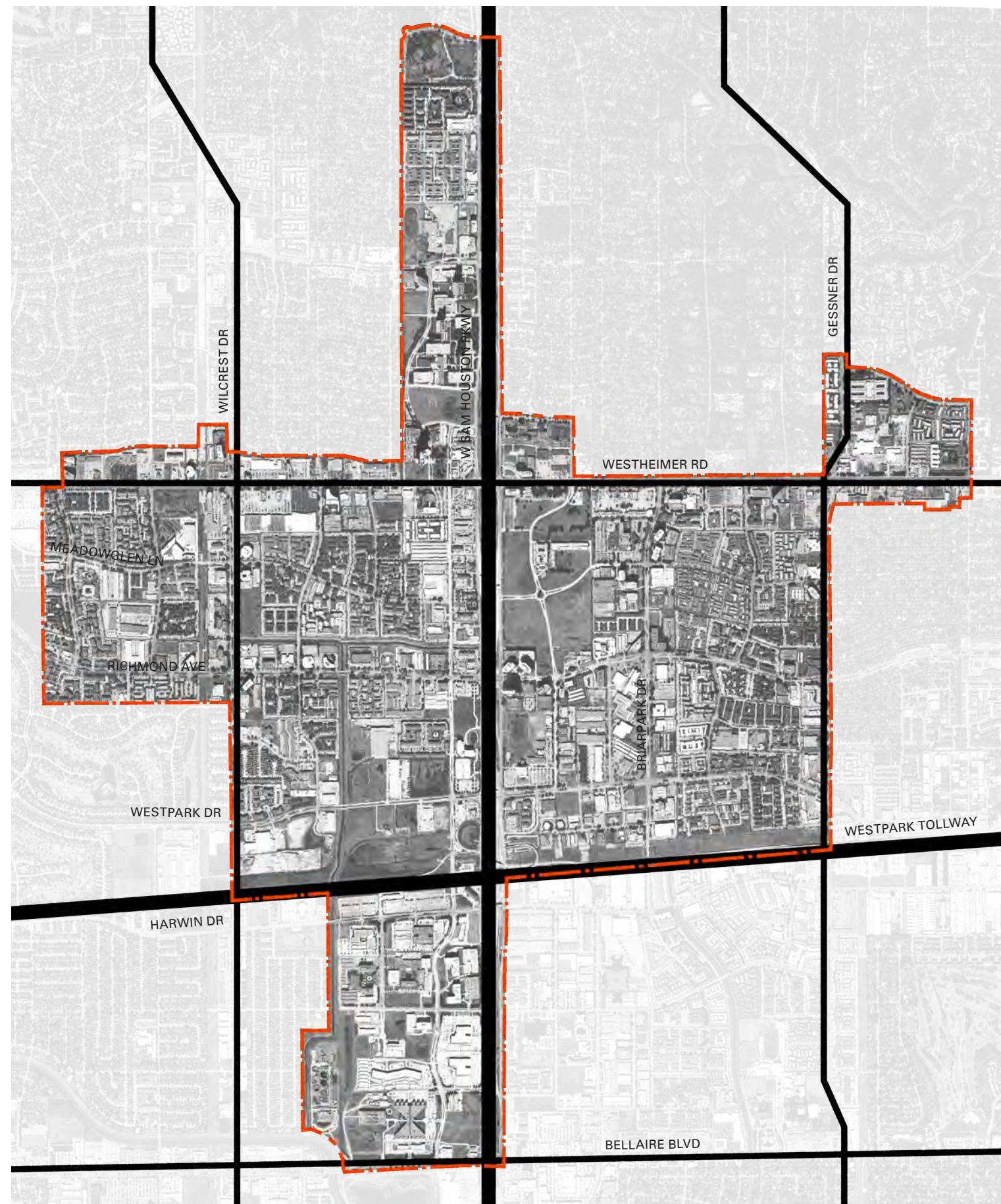
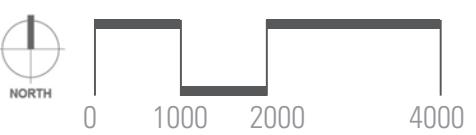
It is important to acknowledge entries into Westchase District as there are adjacent communities (Memorial City and Spring Branch in the north) that have brands of their own. Understanding where points of entry are located will be key to communicating to residents and visitors they have arrived in Westchase District. Although there are many points of entry, it is not suggested to provide district markers for all locations. Strategic interventions will require assessing where there are major thoroughfares, trail entry/exit locations, major points of interest and greatest traffic counts.

2 MAP PUBLIC ATTRACTIONS

Identifying public attractions is an important factor when positioning district markers with the right scale. Each major decision point provides an opportunity to identify the district and to express a warm welcome for all users. Major attractions can be civic buildings, retail centers or recreational amenities (i.e.: parks).

3 PROPOSE DISTRICT MARKERS IN VARIOUS SCALES

Gateways, vehicular decision points, and pedestrian decision points all require a different scale of district marker. A rule of thumb is to locate district markers at major intersections (i.e.: COH Major Thoroughfares Plan) and at any other major decision point throughout the District. Having a family of district marker elements that are tailored to serve a variety of systems (bus stops- commuter-driven element, trails and parks-recreational element, major intersections- vehicular-driven element) will allow users of different modes of transport to have identifiable destinations.



SOURCE DATA: GOOGLE EARTH 2017

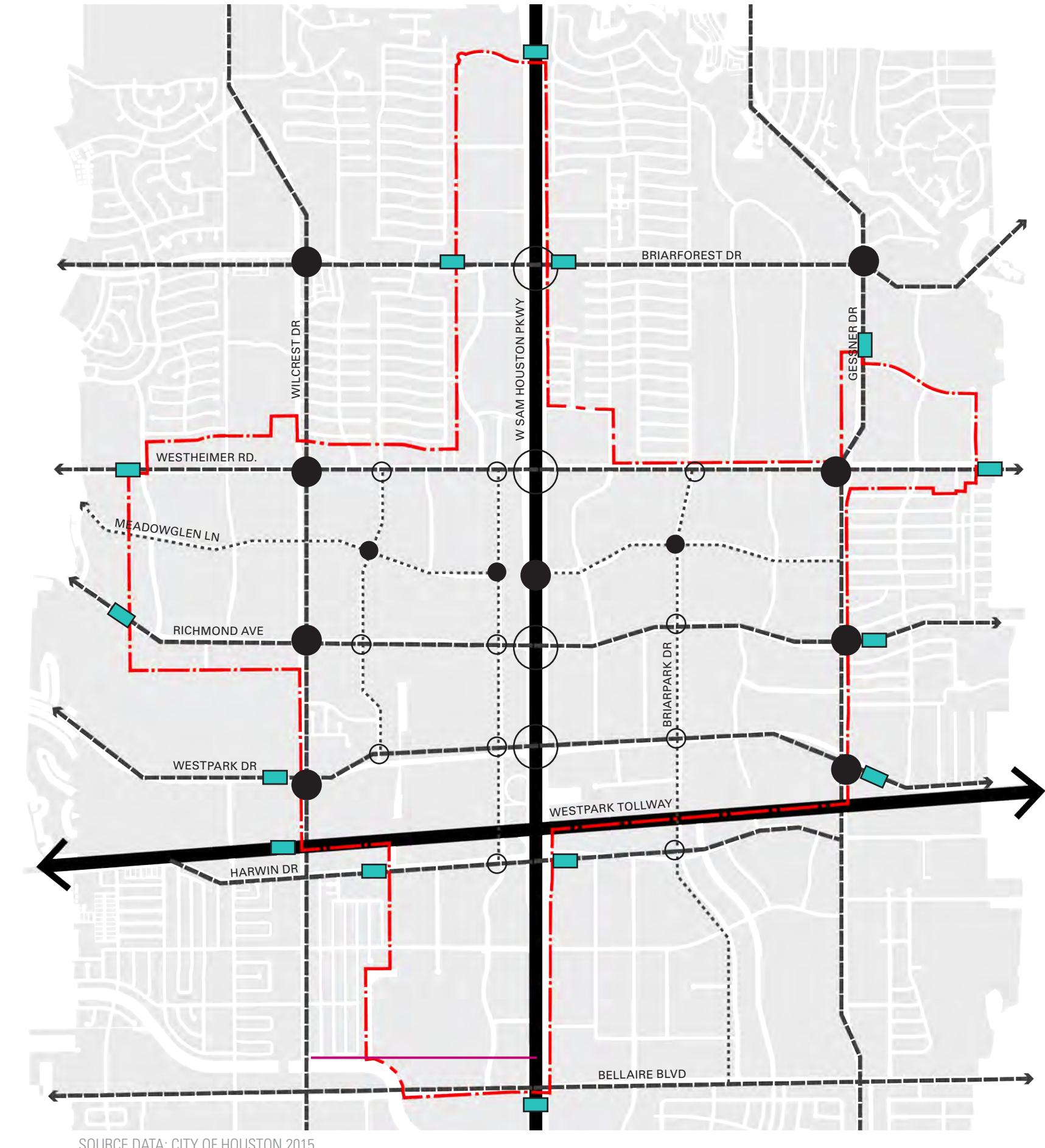
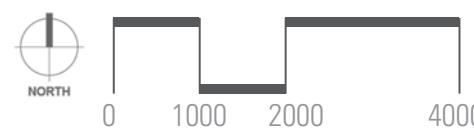
MAJOR THOROUGHFARES PLAN

LEVELS OF INTERSECTIONS AND DISTRICT ENTRIES

The existing major thoroughfares plan (MTFP) provides a basis for locating important gateway elements or monuments at key intersections. Elements of the MTFP include freeways, arterial roadways and collector roads and each carries a certain amount of traffic volume. Depending on the types of intersection, whether it is a cross between a freeway and an arterial or an arterial and a collector, a strategy can be developed to prioritize the location of district markers at intersections that carry high traffic volume and have the greatest visibility. In essence, freeway and arterial intersections may be prioritized over collector roads. In addition, positioning district markers at major points of ingress / egress at District boundaries will allow both residents and visitors to understand when they have entered Westchase District.

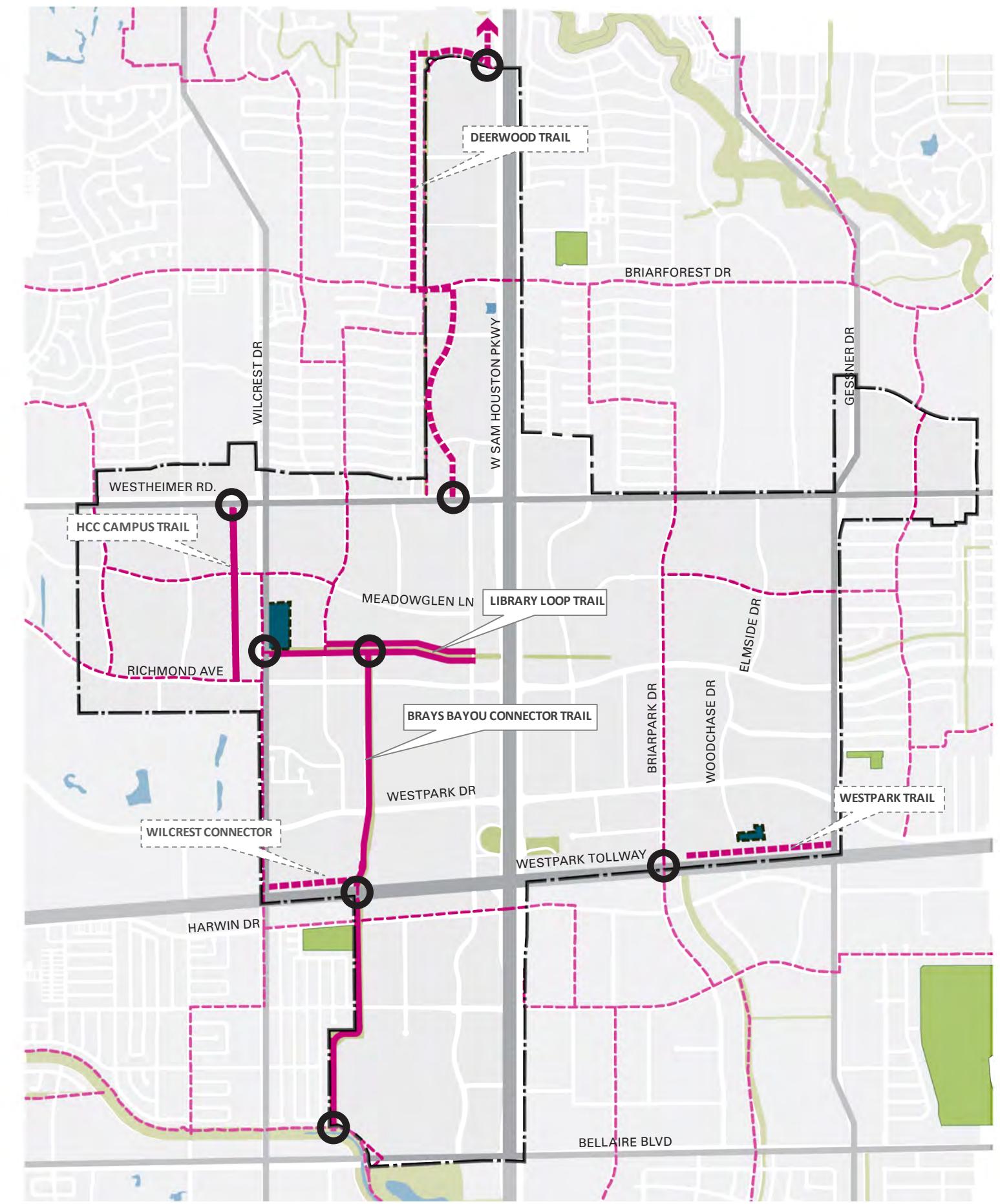
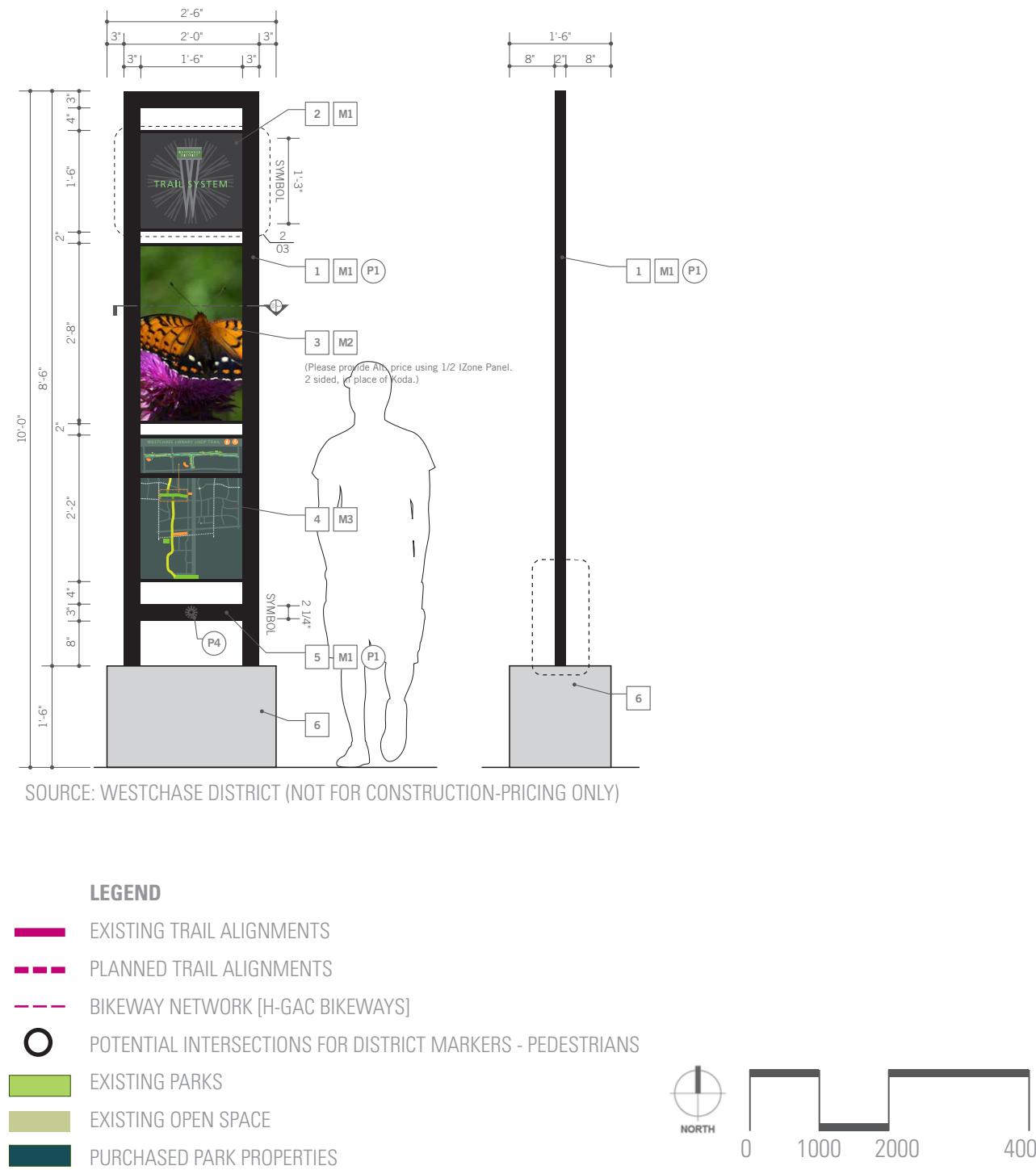


LEGEND	
	FREeways
	MAJOR ARTERIAL ROADWAYS
	COLLECTOR ROADWAYS
	ENTRY POINTS ALONG MAJOR ARTERIAL ROADS
	INTERSECTIONS [FREWAY - ARTERIAL]
	INTERSECTIONS [ARTERIAL - ARTERIAL]/ [FREWAY - ARTERIAL]
	INTERSECTIONS [ARTERIAL - COLLECTOR]
	INTERSECTIONS [COLLECTOR - COLLECTOR]



EXISTING TRAILS AND PARKS NETWORK

Westchase District has recently conducted the Trails and Parks Master Plan in an effort to enhance the trails network and alleviate park deficit. Part of the study focused on providing amenities such as signage and markers suitable for long-term trail usability and accessibility. Westchase is installing a series of wayfinding signs (referred to by WD as "trail spikes") along the existing trail system that include information about the history and ecology of the area. These metal "trail spikes" will be placed at key decision points as well as in areas of interest. The map to the right locates potential areas for wayfinding elements for trail users.



TRANSIT NETWORK + STOPS

Commuters are important users of the public realm in Westchase District and often require directional clarity and destination confirmation. Positioning district markers and providing signage options (in the form of bus shelter maps, schedules, markers) at points of high ridership and transfers or transit centers alleviates confusion and allows commuters to journey efficiently. The map to the right illustrates points of bus ridership and transfer zones across Westchase District and locations where potential smaller scale district markers may be placed.



RANKING BY STREET

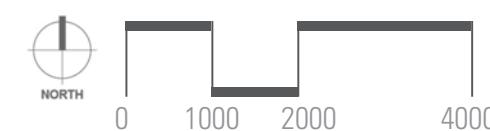
- 1 WESTHEIMER STREET
- 2 RICHMOND AVE
- 3 GESSNER DR
- 4 WALNUT BEND LN
- 5 WILCREST DR
- 6 BRIARPARK DR

LEGEND

- RED: LOCAL BUSES RUNNING EVERY 15 MINS
- BLUE: LOCAL BUSES RUNNING EVERY 16-30 MINS
- BLACK: EXPRESS SERVICE RUNNING WEEKDAY PEAK
- EXISTING OPEN SPACES
- POTENTIAL INTERSECTIONS FOR DISTRICT MARKERS - COMMUTER
- BUS STOP BOARDING NUMBER (BUS RUNS EVERY 15 MINS)
- BUS STOP BOARDING NUMBER (BUS RUNS EVERY 16-30 MINS)



SOURCE DATA: METRO/TEI 2017



MAJOR POINTS OF INTEREST

District marker elements may be located at major points of interest where visibility requirements are high (due to visitor frequency) and points of reference may be needed for residents, employees or visitors in and to the area. Such areas may include the intersection of Seagler Rd. and Richmond where there is a cluster of office parks that inhabit the Houston West Chamber of Commerce and the Westchase District. Other areas may include one of Houston's prime cultural venues, Chinatown, located along Bellaire Boulevard or near institutions such as the Houston Community College campus.

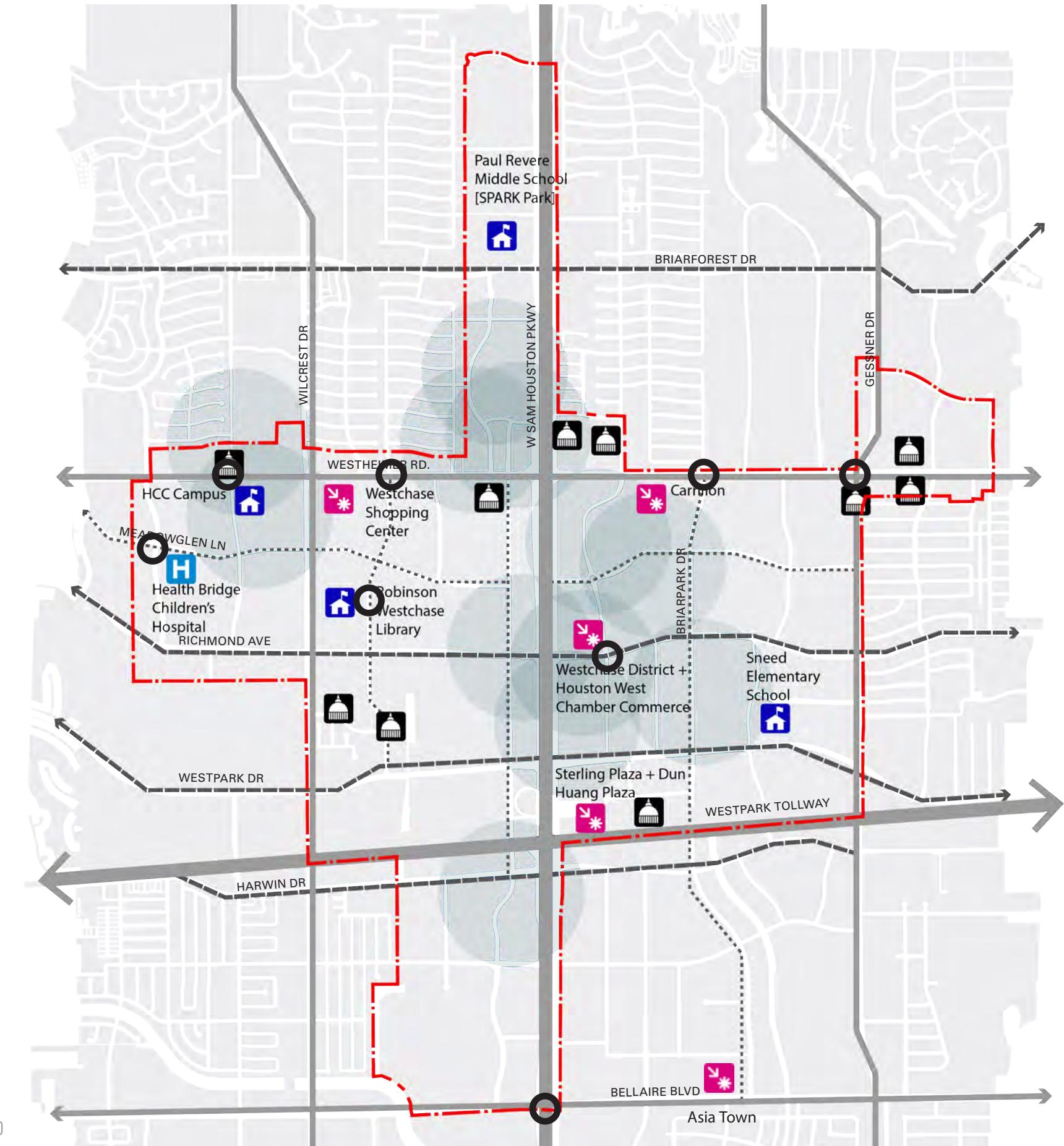
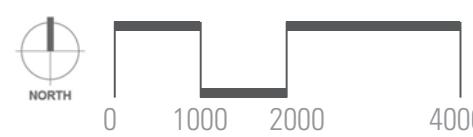


RANKING BY STREET

- 1 WESTHEIMER STREET
- 2 WALNUT BEND LN
- 3 GESSNER DR
- 4 MEADOWGLEN LN
- 5 RICHMOND AVE
- 6 WESTPARK TOLLWAY

LEGEND

- CIVIC SPACES
- POINT OF INTEREST
- HOSPITALS
- MAJOR POINTS OF INTEREST
- DEVELOPMENT HOTSPOTS
- POTENTIAL INTERSECTIONS FOR DISTRICT MARKERS - VEHICULAR



AVERAGE DAILY TRAFFIC VOLUME

As mentioned earlier, areas of high traffic volume serve to create visual catchment areas particularly along major thoroughfares and arterial roads. Visual cues for vehicular traffic will allow drivers, who are the predominant users in the area, to understand where they are situated in the City and in the District.



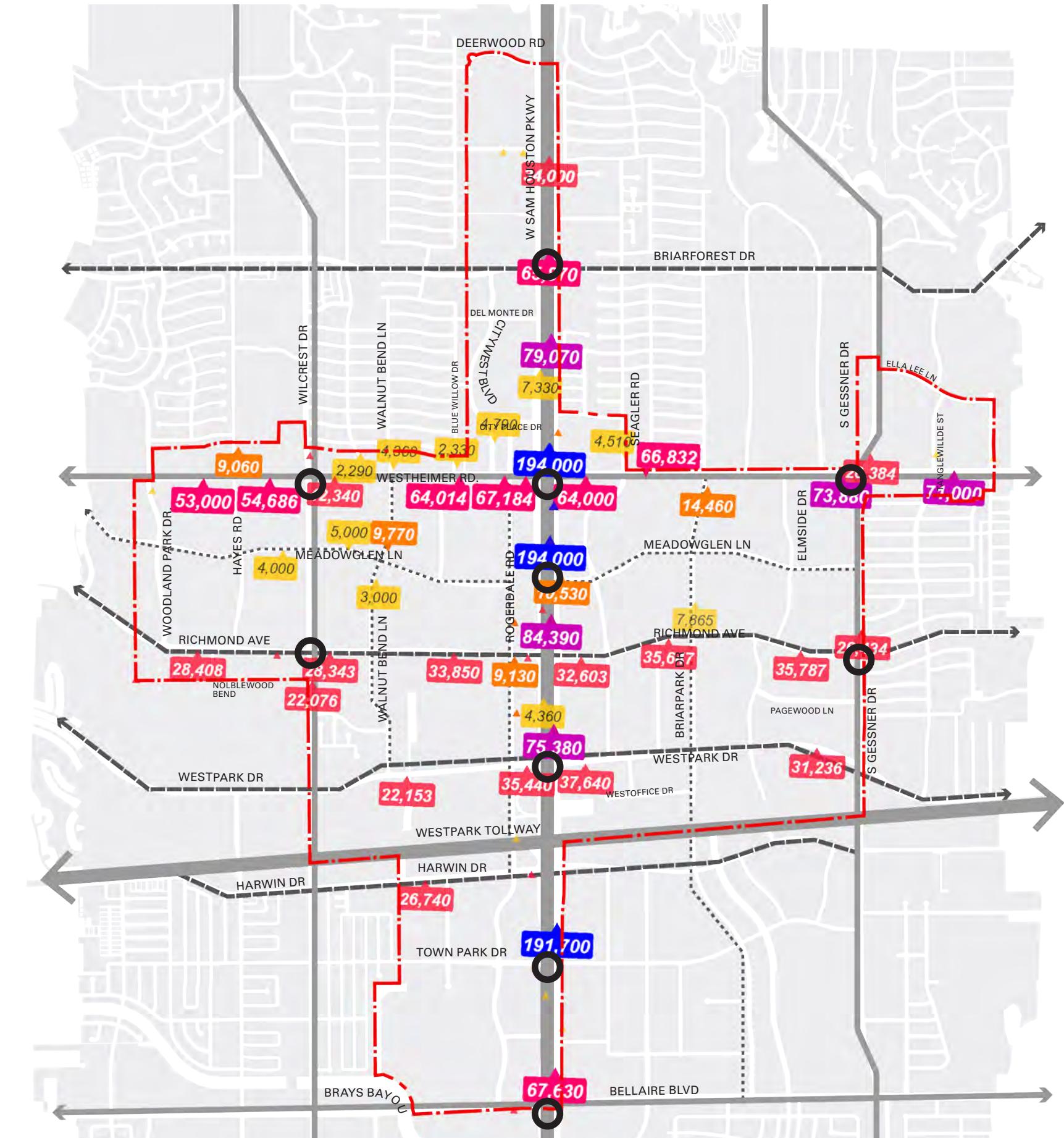
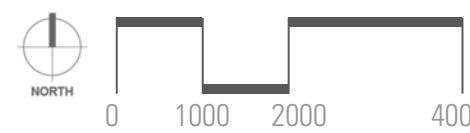
RANKING BY STREET

- 1 SAM HOUSTON TOLLWAY
- 2 WESTHEIMER STREET
- 3 RICHMOND AVE
- 4 WESTPARK DR
- 5 MEADOWGLEN LN
- 6 HARWIN DR

LEGEND

- ▲ UP TO 6,000 VEHICLES PER DAY
- ▲ 6,001 - 15,000
- ▲ 15,001 - 30,000
- ▲ 30,001 - 50,000
- ▲ 50,001 - 100,000
- ▲ MORE THAN 100,000 PER DAY

○ POTENTIAL INTERSECTIONS FOR DISTRICT MARKERS - VEHICULAR







**TASK
3-1**

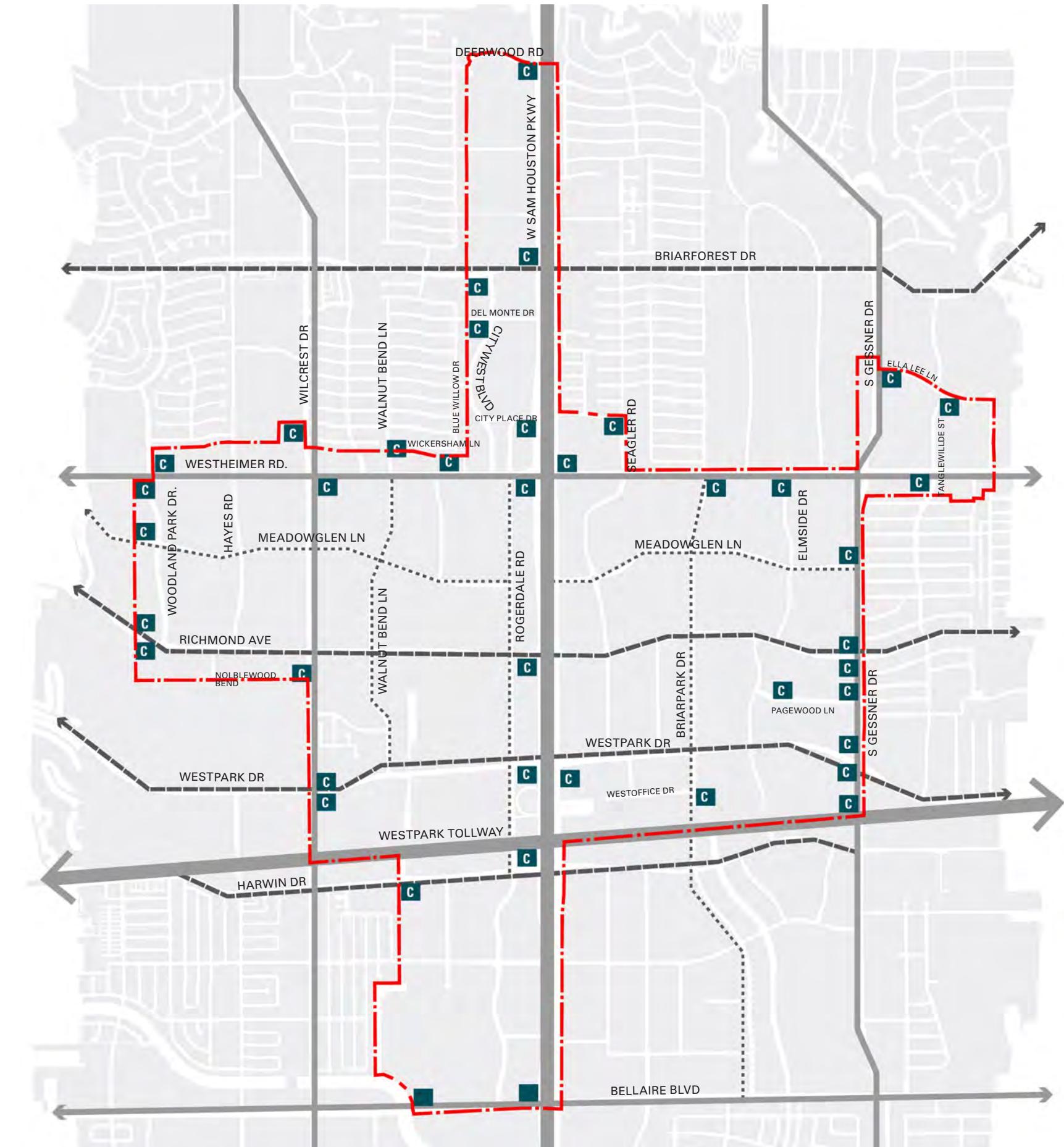
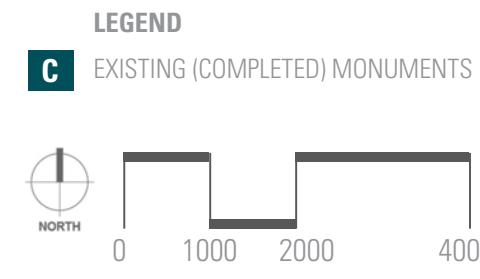
LOCATION PLAN

EXISTING MONUMENT LOCATIONS PROPOSED LOCATIONS FOR WESTCHASE DISTRICT MARKERS

The following is an analysis of the existing Westchase monument location plan. Presently the District has adopted a one-size-fits-all approach that uses a series of white metal obelisks designed through various phases of Westchase branding (older monuments feature the pre-2016 branding while newer monuments have been updated to reflect the latest branding standards). The proposed district marker design understands the need for a hierarchy of markers and a degree of customization within it to clearly define the markers as District identification.

EXISTING MONUMENT LOCATIONS

Westchase District has established 41 obelisk monuments across the District in the last seventeen years. These obelisks, dotted throughout the area at key intersections, illustrate the Westchase District logo and brand colors in acrylic vinyl coating at the top end of the obelisk and display a light feature at the triangular head. The District is working to replace these monuments with new elements that are appropriately scaled and provide materiality and context. It will be important to make a note of existing marker locations and make recommendations for other potential locations that are suitable to increase visibility and legibility for all streetscape users.



SOURCE DATA: WESTCHASE DISTRICT, AS OF SPRING 2017

PROPOSED LOCATIONS FOR WESTCHASE DISTRICT MARKERS

DESIGNING DISTRICT MARKERS FOR SPECIFIC LOCATION

In the proposed district marker location plan, locations have been determined based on a number of factors.

Traffic volume determines both size and need. For example, high-volume corridors such as Westheimer Road are a prime opportunity for large-scale, prominent branding. As such, Westheimer will be treated with Tier 1 and Tier 2 district markers.

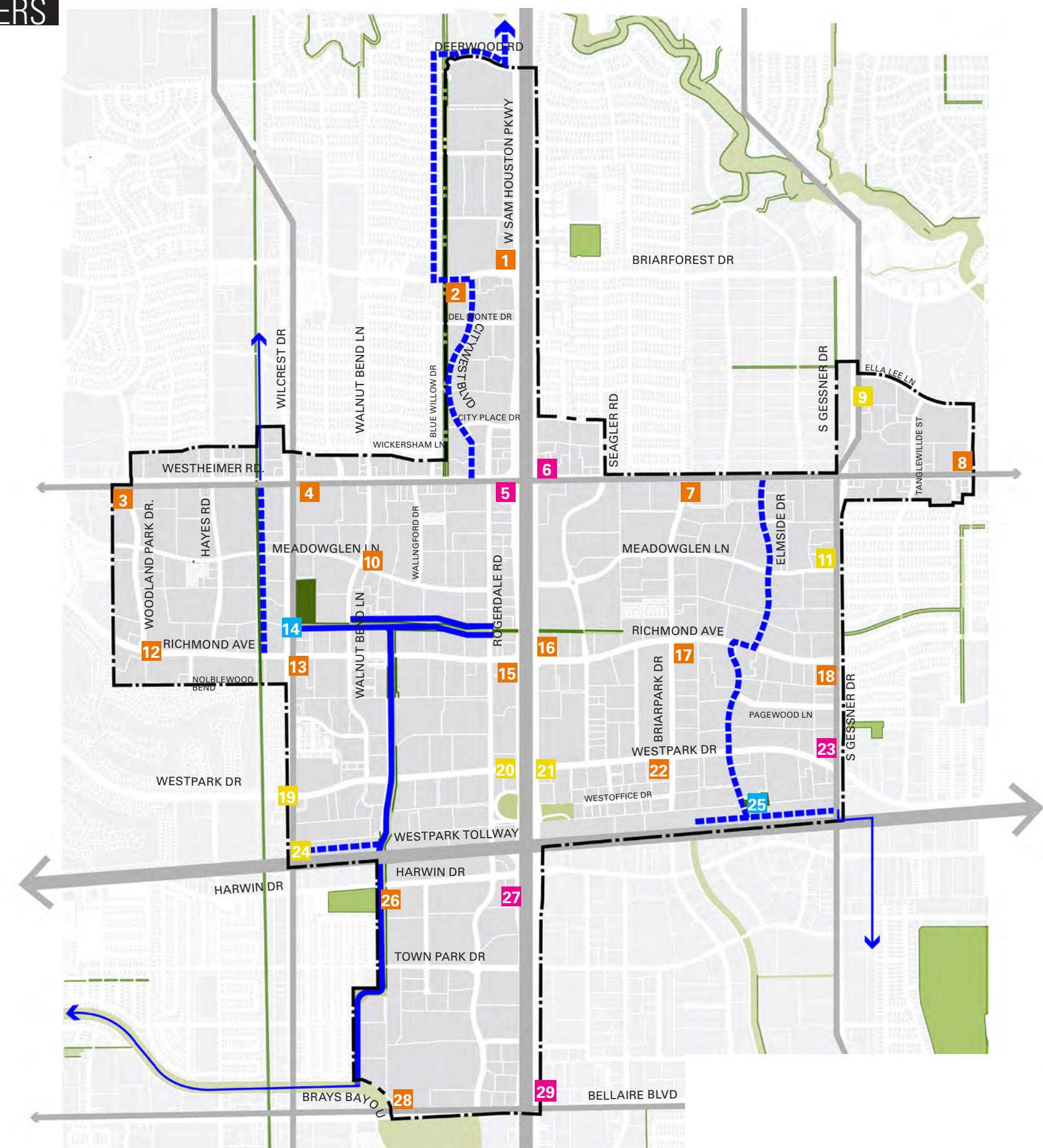
Desire for sense of place determines location based on surroundings. For example, parks identification can be treated with Tier 4 district marker. This not only gives the park a strong sense of place but also creates landmarks for visitors. A destination identification within the District can give directions to visitors using the markers as points of reference.

Need for District identity determines location based on the surroundings. In areas with strong commercial branding on private property, installing district markers in tandem with custom signage and wayfinding can lend a strong and cohesive brand appearance to clearly establish a hierarchy of identity.

Location within District determines location based on geographic position. For example, major points of entry into the District (major junctions along Beltway 8 and key surface intersections on edge of District) are treated with Tier 1, 2, and 3 district markers to "welcome" patrons into the District, while locations within the District are treated with Tier 4 district markers to provide a subtle reminder of place.

Saturation determines location based on the location of district markers/branded features in the immediate area. This is immediately visible by looking at the way monuments are clustered in the existing location plans (vs. proposed). It is important that district markers not appear on every corner and at every point of entry into the District. Over-branding a place can greatly take away from the effect when district markers appear too frequently or if two are visible from any given location. Using this logic, we have reduced the number of district markers from the District's current location plan by strategically identifying key locations where district markers will have the most impact.

LEGEND (SEE TASK 4-1 FOR DISTRICT MARKER DESIGN)	
#	TIER 1: LARGE WESTCHASE DISTRICT MARKER (QTY.5)
#	TIER 2: SMALL WESTCHASE DISTRICT MARKER (QTY.16)
#	TIER 3: LINEAR WESTCHASE DISTRICT MARKER (QTY.6)
#	TIER 4: DISTRICT FEATURE MONUMENTS (QTY.2)
■	EXISTING MONUMENTS
■	EXISTING PARKS
■	EXISTING OPEN SPACE
—	EXISTING TRAILS
...	PLANNED TRAILS
■	ACQUIRED PARK SPACE
—	WESTCHASE DISTRICT BOUNDARY

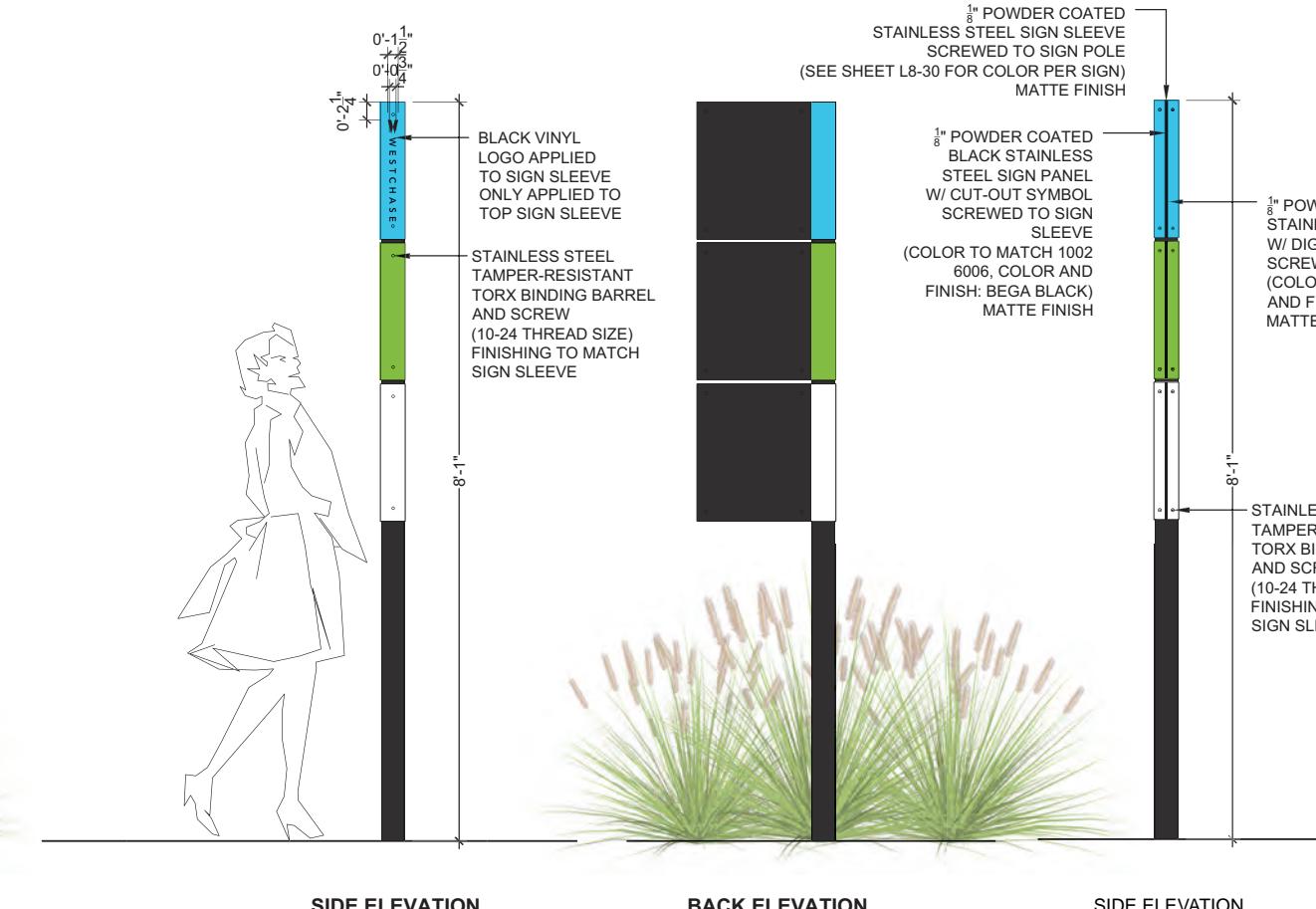
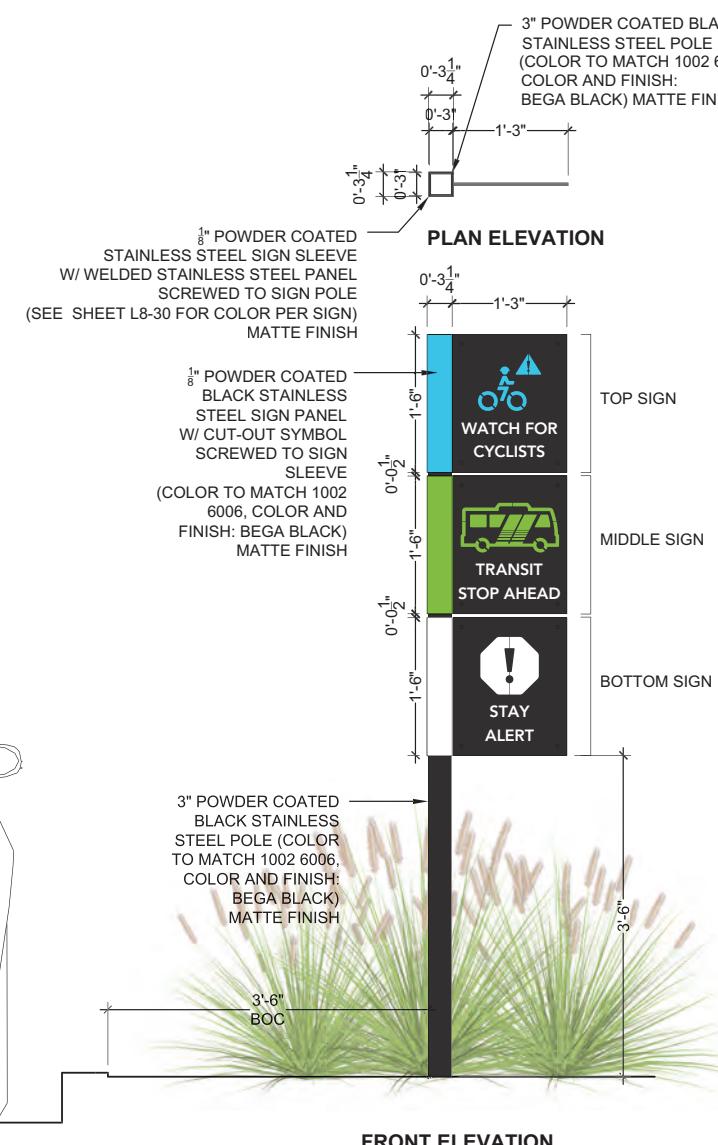
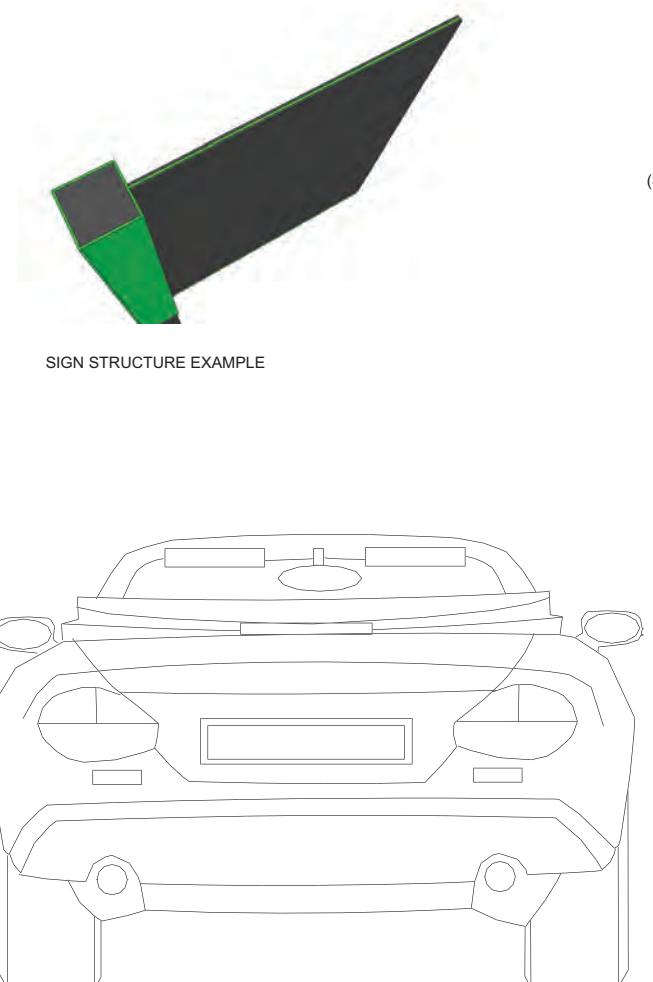
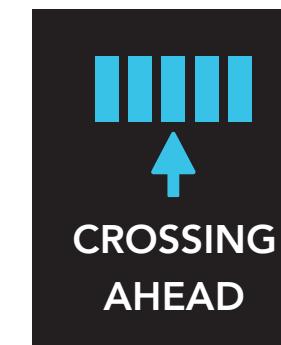


PROPOSED BIKE TRAIL SIGN CONCEPT DESIGN

A non-regulatory sign is recommended to be placed near bike trail beginnings, intersections and ends for safety purpose. This non-regulatory sign was designed for Walnut Bend Lane, featuring five safety messages with matching pictograms to increase legibility and attention for all users. The back side of each sign panel creates opportunity to brand the street and educate users on the street. This master plan recommends future plan developers follow this concept in order to keep the branding and design consistent.

TYPE 1

FREESTANDING SIGN



PROPOSED BIKE TRAIL SIGN CONCEPT DESIGN

Ground painted graphics are also recommended for increasing the safety attention for all users on the street. Customized symbols and accompanying text are added to distinguish the pedestrian lane and cyclist lane, as well as the direction of the designated lane.

TYPE 2

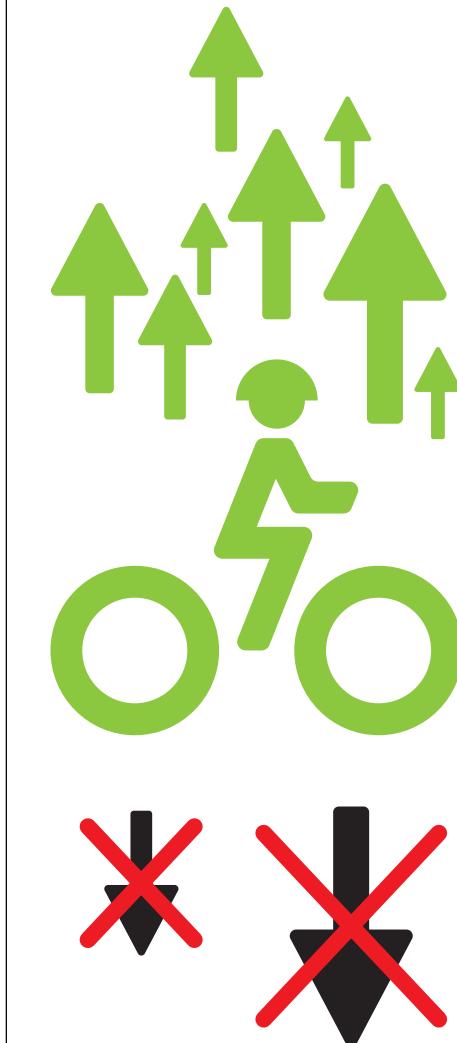
GROUND SIGN



PEDESTRIAN LANE
OPTION 1



PEDESTRIAN LANE
OPTION 2



CYCLIST LANE
OPTION 1



CYCLIST LANE
OPTION 2





TASK 3-2

LEGALITIES + CODES

The following summary of classification and code is based on our current understanding of both TxDOT and Houston Municode regulations and standards. District markers such as the proposed are subject to different regulations depending on features of the final design (construction-ready). Regulations are subject to change over time. Verify revision date on cover of document.

[GENERAL OVERVIEW](#)
[GENERAL CLASSIFICATIONS](#)
[OUTDOOR ADVERTISING SIGNS](#)
[SPECTACULAR SIGNS](#)
[SITE CLASSIFICATION](#)
[TYPE CLASSIFICATION](#)
[SPECIAL FUNCTION CLASSIFICATION](#)
[GENERAL & ARCHITECTURAL DESIGN](#)
[DESIGN & MATERIALS](#)
[CLEARANCE](#)
[VARIANCE PROCEDURE & COMMITTEE](#)
[ELECTRICAL REQUIREMENTS](#)
[METHOD FOR CALCULATING SIGN MEASUREMENT](#)
[SIGN HEIGHT AND SIZE RESTRICTIONS](#)

TXDOT CLASSIFICATIONS

GENERAL OVERVIEW

Under the Texas Department of Transportation (TxDOT), district markers such as those proposed in this document are subject to all laws governing architectural features in and around the right-of-way such as height restrictions, sight line and visibility restrictions, dark sky ordinances (where applicable), and spectacular sign regulations (if applicable).

The district marker concepts in this document can fall under the following categories within TxDOT rules and regulations, depending on their final design. Final design is defined as the construction-ready design that will be installed and erected along a TxDOT roadway.

OUTDOOR ADVERTISING SIGNS

TxDOT regulates off-premise outdoor advertising signs along Texas highways under the Highway Beautification Act and highways and roads located outside of the corporate limits of cities, towns and villages under the State Rural Roads Act. Outdoor advertising does not include signs located within the state right-of-way, including traffic signs, memorial signs or logo signs.

Enterprise Permitting Solution (EPS) allows you to conduct online outdoor advertising business in Texas, including:

- Apply, amend and renew a license or permit
- Maintain an account
- Register for directional signs
- Obtain nonprofit permits
- Resolve violations
- Transfers
- Request replacement plates
- Submit and track complaints
- Locate permitted and unpermitted sign structures

Please read the following prior to starting the registration process:

The person registering for the account should be the primary contact.

The primary contact may register delegates after completing the registration process.

All primary contacts and delegates should register as individuals even if they work for a company/organization.

SPECTACULAR SIGNS

TxDOT regulates spectacular signs located on private property along TxDOT governed rights of way (ROW). Spectacular signs are defined as: any sign that physically rotates, oscillates, contains any moving parts, or contains lights which produce or are capable of producing a pulsating strobe-like effect.

Should you believe that a sign that is classified as spectacular is eligible for a variance, it is recommended that the property owner or lessee follow the prescribed procedure for obtaining a license and variance for the sign in question.

- Apply, amend and renew a license or permit
- Maintain an account
- Register for directional signs
- Obtain nonprofit permits
- Resolve violations
- Transfers
- Submit and track complaints
- Locate permitted and unpermitted sign structures

Please read the following prior to starting the registration process:

The person registering for the account should be the primary contact.

The primary contact may register delegates after completing the registration process.

All primary contacts and delegates should register as individuals even if they work for a company/organization.

SIGN TYPES & CLASSIFICATION

SITE CLASSIFICATION

For the purpose of the following, signs shall be first classified as either an "on-premises sign" or an "off-premises sign".

- On-premises sign shall mean any sign identifying or advertising the business, person, activity, goods, products or services primarily sold or offered for sale on the premises where the sign is installed and maintained when such premises are used for business purposes or which convey information or messages.
- Off-premises signs should not be allowed.

TYPE CLASSIFICATION

All signs shall further be classified into one of the following type signs:

- **Ground sign** shall mean a sign which is supported by uprights or braces in or upon the ground.
- **Marquee sign** shall mean a projecting sign attached to or hung from a canopy or covered structure projecting from and supported by a frame or pipe support extending beyond a building.
- **Monument sign** shall mean any sign six (6) feet or less from the natural ground level to the top of the sign. Such sign shall be solid from the ground to the top and permanently affixed to the ground at intersections.
- **Projecting sign** shall mean any sign which is affixed to any building wall or structure and extends beyond the building wall or structure more than twelve (12) inches.
- **Roof sign** shall mean any sign erected, constructed or maintained above or upon the roof of any building.
- **Wall sign** shall mean any sign affixed to or painted upon the wall of any building.
- **Flag sign** shall mean any sign constructed of cloth, canvas, light fabric or material affixed to a building, wall, fence or on a staff or pole set in a concrete foundation.
- **Awning sign** shall mean any sign made of cloth, metal or plastic with a metal frame attached to a building and projecting over a sidewalk, thoroughfare, or parking area when the same is so erected as to permit its being raised to a position flat against the building when not in use; should not extend off of private property.
- **Canopy sign** shall mean any sign, other than an awning attached to a building, projecting over a thoroughfare, sidewalk, or parking area and not erected so as to permit its being raised to a flat position against the building, does not permit use of marquee letters, and is commonly supported by poles or uprights set upon the underlying ground; should not extend off of private property.
- **Multiple business sign** shall mean that type of sign that is a single structure but has a different display for each different business such as may be found at a shopping center.

SPECIAL FUNCTION CLASSIFICATION

Any on-premises or off-premises sign of any type may also be included within one or more of the following additional classifications according to the special functions of that sign:

- **Electrical sign** shall mean any sign containing electrical wiring or utilizing electric current, but not including signs illuminated by a light source exterior to the sign structure.
- **Portable sign** shall mean any sign designed or constructed to be easily moved from one location to another, including signs mounted upon a motor vehicle or designed to be mounted upon a trailer bench, wheeled carrier, or other non-motorized mobile structure. A portable sign with the wheels removed shall still be considered a portable sign hereunder. For the purpose of this chapter, trailer signs and signs on benches are "portable signs".
- **Spectacular sign** shall mean any sign which has any automatically changing advertising, which is equipped with glaring or rotating strobe or spotlights, or which has any moving message whatsoever.
- **Temporary sign** shall mean any sign including a banner constructed of cardboard, wallboard, or other light materials, not to exceed twelve (12) square feet in size. Further, a temporary sign is intended to be used for a specific period of time (not to exceed thirty (30) days) and then removed. A portable sign and flag sign shall not be considered a temporary sign.
- **Movable sign** shall mean signs designed to be moved by hand and normally stored inside the building during the nighttime.

TXDOT GENERAL DESIGN GUIDELINES

GENERAL & ARCHITECTURAL DESIGN

1. General. All sites and sign structures shall be designed and constructed to resist wind forces as specified in this section. All bracing systems shall be designed and constructed to transfer lateral forces to the foundations. For signs on buildings, the dead and lateral loads shall be transmitted through the structural frame of the building to the ground in such manner as not to over-stress any of the elements thereof. The overturning moment produced from lateral forces shall in no case exceed two-thirds (2/3) of the dead load resisting moment for all signs. Uplift due to overturning shall be adequately resisted by proper anchorage to the ground or to the structural frame of the building for all signs. The weight of earth superimposed over footings may be used in determining the dead-load resisting moment such earth shall be carefully placed and thoroughly compacted.
2. Wind loads. All signs and sign structures shall be designed to resist wind loads.
3. Vertical design loads. Vertical design loads, except roof live loads, shall be assumed to be acting simultaneously with the wind loads.
4. Working stress. All signs shall be designed to conform with the requirements of the 2006 Edition of the International Building Code, regarding allowable working stresses. The working strength of chains, cables, guys or steel rods shall not exceed one-fifth (1/5) of the ultimate strength of such chains, cables, guys or steel rods.
5. Registered engineer's seal. All commercially erected signs shall be approved by a professional registered engineer registered in the State of Texas and all plans shall contain the engineer's seal.

DESIGN & MATERIALS

1. General. The supports for all signs or sign structures shall be placed in or upon private property and shall be securely built, constructed and erected in conformance with the requirements of the 2006 Edition of the International Building Code.
2. Materials. Materials for construction of all signs and sign structures shall be of the quality and grade as specified for building in the 2006 Edition of the International Building Code.
3. Non-structural trim. Non-structural trim and portable display surface may be of wood, metal, approved plastics, or any combination thereof, consistent with the 2006 Edition of the International Building Code.
4. Anchorage members supporting unbraced signs shall be so proportioned that the bearing loads imposed on the soil in either direction, horizontal or vertical, shall not exceed the safe values stated in section 18-14(a)(1) herein. All ground signs shall be anchored to resist the wind load specified in section 18-15(a)(2) herein, acting in any direction. Anchors and supports shall be designed for safe bearing loads on the soil and for an effective resistance to pull out amounting to a force twenty-five (25) percent greater than the required resistance to overturning.
5. Electrical requirements. All electrical fixtures, equipment, and appurtenances installed in conjunction with a sign shall be designed and installed in accordance with the City of Houston's Electrical Code as it now exists or may hereinafter be amended

CLEARANCE

1. Clearances from high voltage power lines. Signs shall be located a minimum distance of twelve (12) feet measured horizontally and twelve (12) feet measured vertically from overhead electrical conductors commonly called distribution lines and a minimum distance of five (5) feet measured horizontally and five (5) feet measured vertically from what are commonly called service drop lines. The term "electrical conductors" as used in this subsection means any electrical conductor, either bare or insulated, installed above the ground.
2. Clearance from poles. No sign shall be erected nearer than five (5) feet horizontally or eight (8) feet vertically from any telephone pole or cable pole or cross-member of that pole.

VARIANCE PROCEDURE AND COMMITTEE

- Definition of the committee. The sign appeals committee created herein may, for a particular site, authorize the following special variances and exceptions with respect to the provisions of this chapter.
- Functions. The sign appeals committee shall recommend to the city council resignation for amendments to this code in keeping with technological progress with respect to public health, safety and welfare.
- Granting variances. The committee may, in specific cases and subject to appropriate conditions, authorize only the following special variances and exceptions to the regulations established in this chapter when the committee has made a finding from the evidence presented that strict compliance with the requirements of this chapter will result in a hardship or inequity to the applicant in accomplishing the objectives of this article, provided that economic or self-created hardship alone shall not be a sufficient basis for the granting of a variance or exception:/
- Grant up to a forty (40) percent variance in total square footage of sign area, height, setback.
- Authorize the relocation on site of a legal sign, which meets the general requirements of this chapter or variable items in this section.
- Allow the erection of one additional on-premises free-standing sign per site provided that the additional sign shall not be located within one hundred (100) feet of any other free-standing sign.
- Authorize on-premises signs other than monument style where a monument sign is not practicable or possible.
- Nonconforming signs. The committee may require a nonconforming sign to be brought into immediate conformity with all current standards of all ordinances of the city or to be removed when, from the evidence presented, the commission finds the sign to be hazardous to the public or to have been abandoned by its owners.

ELECTRICAL REQUIREMENTS

- All electrical fixtures, equipment and appurtenances installed in conjunction with a sign shall be designed and installed in accordance with the City of Houston Electrical Code.
- With the exception of electrical signs covered by the provisions of Section 4611(c)(3), all electrical signs shall be limited to bulbs of 150 watts for bulbs located in the face of the sign.
- Signs shall have electrical circuits limited to the normal voltage used in most commercial buildings, shall contain a sunshade screen dimmer, and shall not use reflectorized lights as part of the face of the sign.
- For the purpose of definition, "reflectorized lights" shall mean any lamp constructed with reflector-type materials so as to focus, intensify, flood or spot such lamp in a certain direction, including, but not limited to, lamps designated by the manufacturers as flood, spot, reflector flood, reflector spot, reflector light or clear reflector.

METHOD FOR CALCULATING SIGN MEASUREMENT

- Method of Determining the Area of a Sign. In determining the area of any sign, the dimensions of the rectangle enclosing the signboard, excluding the supporting structure, shall be used.
- In measuring ground signs with more than one cabinet, each cabinet will be circumscribed.
- If the sign includes cutouts or facings extending beyond the dimensions of the rectangular signboard, the measurement of the sign area shall include the actual area of the cutout or extended facings.
- For signs of a double-faced, back-to-back or V-type nature, each face shall be considered a separate sign in computing the face area.

SIGN HEIGHT AND SIZE RESTRICTIONS

- Except as stated herein, no ground sign shall be established, constructed or erected that exceeds an overall height of 42 1/2 feet, including cutouts extending above the rectangular border, measured from the highest point on the sign to the grade level of the ground surface in which the sign supports are placed.
- On-premise ground signs shall be further limited in height and size in accordance with Table 4609. On-premise roof signs shall not at any point exceed 8 feet above the roof level; an on-premise wall sign erected upon a facade, false front, mansard or other similar architectural construction that extends above the actual roof shall not at any point exceed 8 feet above the highest point of the actual roof.
- Projecting signs shall be a minimum of 14 feet in height above the grade. These height limitations shall not apply to on-premise signs lawfully permitted or lawfully erected prior to the effective date.
- The maximum height limit above grade for signs in the “central business District” as that term is defined by Chapter 42 of the City Code, as amended, shall be 42 1/2 feet.
- A wall sign may extend no higher than 8 feet above the roof line of the building.
- Section 4609 53 Exception: The height limit of 42½ feet for signs in the central business District shall not apply to a headquarters logo sign that meets each of the following criteria: 1. The sign may display only the registered trademark or a portion of the registered trademark of the principal occupant of a headquarters building.
- For purposes of this requirement, a headquarters building is a structure that has 750,000, or more, square feet of gross usable floor space, provided that at least 45 percent of the gross usable floor space is occupied by the holder of the registered trademark as the headquarters for its operations in the world, within the United States, or within a region of the world that includes all of the United States.
- The sign shall be displayed upon the surface structure of the headquarters building. The display may be created by light projection, video projection, laser technology, or other technology that causes the image to appear upon the surface structure of the building and shall appear upon the roof structure, a parapet wall, or other building surface that is situated above the highest occupiable story of the building.
- The sign shall be visible only between sunset and sunrise. The sign may utilize projection equipment or other light sources that are not readily visible from ground level but shall not utilize any conventional sign cabinet or structure.
- Evidence must be provided with the sign permit application that (i) the entity to be represented on the sign is the principal occupant of the headquarters building, meaning that it occupies more space within the building than any other occupant, (ii) that the criteria set forth in Item (1) above are applicable, and (iii) that the building owner accepts and agrees to the removal requirement specified below.
- The building owner's agreement to remove the sign shall be accompanied by evidence of title demonstrating ownership of the building, shall be in the form of a covenant running with the title to the property that is approved by the city attorney, and shall be recorded at the applicant's expense in the real property records of Harris County.
- The sign illumination must be a continuous image that is not blinking or animated in any manner. 5. No more than two signs, each not exceeding 1500 square feet in area, may be placed on any building under this exception.
- A sign authorized under this exception is authorized for only so long as each of the criteria specified above remains in effect. Upon request of the Sign Administrator, the permit holder shall provide evidence of compliance with the requirements of this section.
- Upon failure to timely provide evidence of compliance or upon any change of circumstances that causes a sign to no longer be authorized, the Sign Administrator shall revoke the permit, and the building owner shall upon request of the Sign Administrator cause the sign to be removed.
- The aggregate size of all wall signs shall cover no more than 50% of the wall surface upon which they are mounted or painted. (4) Except as stated herein, and subject to such further restrictions on size as are established under Table 4609, no on-premise sign other than an on-premise wall sign shall be established, constructed, or erected that has a face area exceeding 300 square feet, including cutouts, but excluding uprights, or that has face dimensions that exceed 30 feet in width.
- No off-premise sign shall be established, constructed or erected that has a face area exceeding 672 square feet, including cutouts, but excluding uprights. No double faced off-premise sign shall be established, constructed or erected unless each face is 75 square feet or less and the faces are abutting on one edge.
- Additional restrictions on the height and size of signs, according to the type of sign and the category of right-of-way adjacent to the frontage where the sign is located, are shown in Table 4609 as follows: (5) “Sign type,” for purposes of Table 4609, refers to the number of separate and distinct business entities, service entities, persons or organizations utilizing a single sign structure for their respective commercial advertising messages.
- The term “single business sign” shall mean any sign, regardless of the number of faces, messages or cabinets on the sign structure, that contains advertising for a single business or service entity only. Regardless of the number of the sign faces on any single sign structure advertising separate business or service entities, no business or service entity shall have a sign larger in size than that authorized for a single business or service entity.
- The size in square feet referred to in Table 4609 is the total area Section 4609 55 allowable for the combined area of all sign faces on any one side of a single sign structure. For purposes of Table 4609, any sign that is located along and visible from more than one category of right-of-way shall be subject to the least restrictive requirements established for signs of any category of right-of-way from which the sign is visible and along which the sign is located.



TASK
3-3

EVOLUTION OF THE WESTCHASE BRAND

BRAND ANALYSIS CREATING PATTERNS AND TEXTURES

A complete brand analysis is a critical component of any successful identity exercise. A thorough brand analysis consists of a number of components. We have understood and contextualized the existing brand standards and used them in a way that adheres to the brand and evolves it at the same time. The brand analysis influences the design of all streetscape elements from monumentation to signage to paving and more.

EVOLVING THE WESTCHASE DISTRICT BRAND

IDENTIFYING KEY ELEMENTS WITHIN A BRAND TO BUILD ON

The Westchase District has a unique identity with a few key graphic components. In this exercise, the design team will aim to identify these key components and use them to create new identity pieces which will carry the brand forward.

In the study of graphic design, the team calls this “deconstruction” or taking apart logos, typography, and other forms. Taking apart the logo reveals two identical polygons which we can use to create textures, patterns, and other iconic elements. Likewise, their frame provides a study of angles, which the team can match in other uses of linework throughout the identity.

Finally, the typographic styles of Avenir and the color palette provide a solid foundation from which to design informational elements and apply primary and secondary colors to all elements.

TYPOGRAPHY: AVENIR

Avenir Light

ABCDEGHIJKLMNOPQRST

UVWXYZ

abcdefghijklmnpqrstuvwxyz

0123456789

Avenir Roman

ABCDEGHIJKLMNOPQRST

UVWXYZ

abcdefghijklmnpqrstuvwxyz

0123456789

Avenir Roman Bold

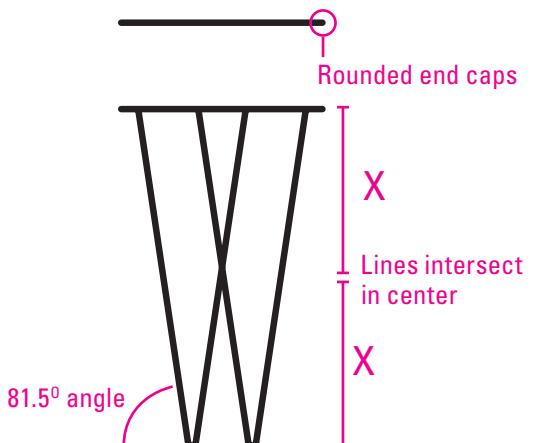
ABCDEGHIJKLMNOPQRST

UVWXYZ

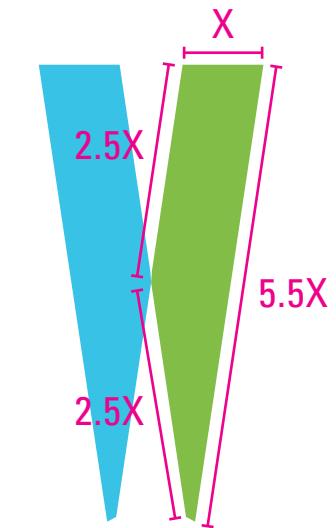
abcdefghijklmnpqrstuvwxyz

0123456789

LINE WORK



SHAPE WITHIN STROKE



Internal shapes are identical and reflected horizontally.

COLORS



Pantone 367



70% Black



Pantone 2985



80% Black



Process Black



90% Black



Pantone 380



100% Black



Pantone 8201

CREATING PATTERNS AND TEXTURES

DEVELOPING WAYS TO USE THE IDENTITY BEYOND PLACING A LOGO

One of the most important pieces of any successful brand identity is a graphic mosaic, texture, or pattern created from the brand's visual elements. By deconstructing the Westchase Identity, the design team has focused in on ways to use the existing Westchase brand in new and innovative ways.

Each of these textures pulls elements from the Westchase logo. The linework texture uses the angles and line-weights of the logo to create a minimalist pattern.

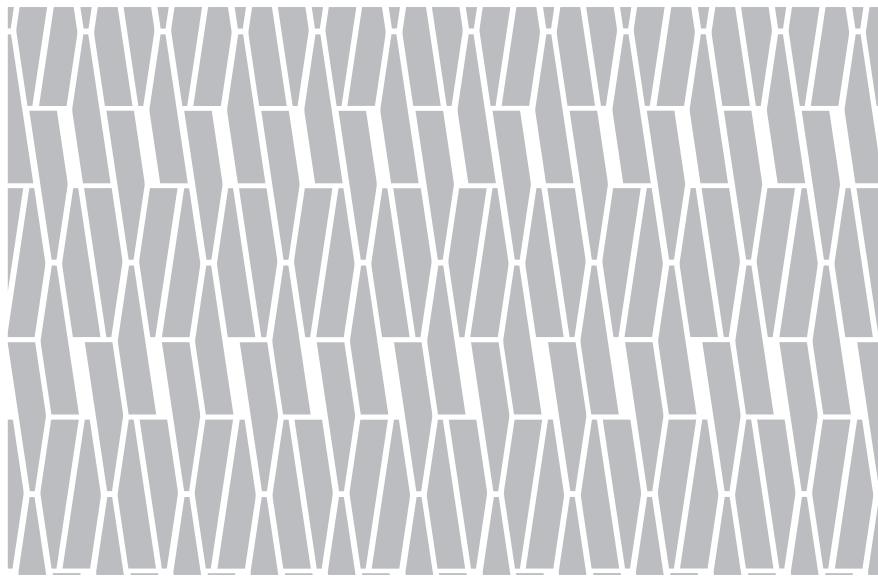
The Geometric pattern takes its influence from Arabesque patterns by combining elements to create alternating rows. In essence, the texture combines the W-mark to create hexagons which are interlaced with each other. In addition, the Asymmetrical pattern is reflective of the Seigaiha pattern, allowing for a free-flowing movement where each element is slightly different and doesn't always follow a prescribed pattern.



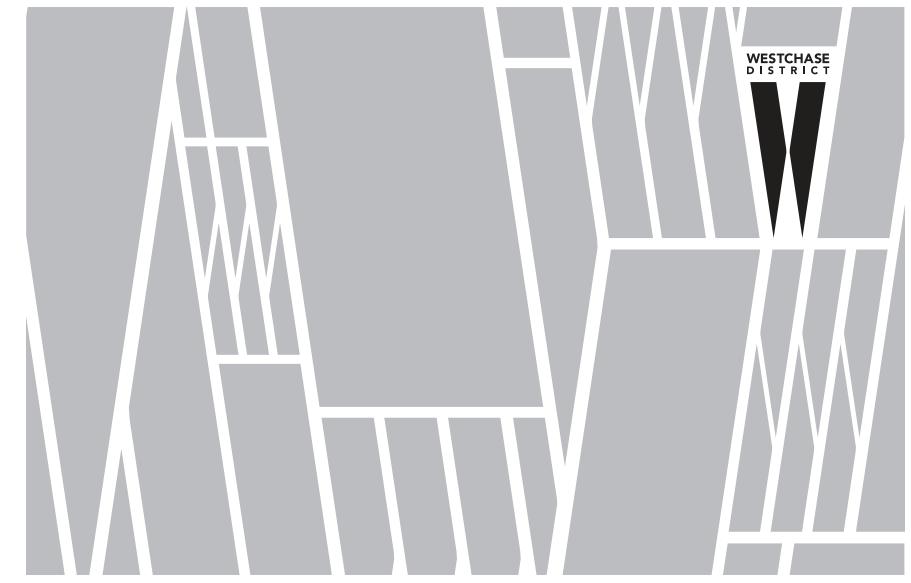
WESTCHASE LINework PATTERN



HEXAGONAL ARABESQUE PATTERN



GEOMETRIC PATTERN



ASYMMETRICAL MOSAIC PATTERN





**TASK
4-1**

PROPOSED DISTRICT MARKER DESIGN

CONCEPT OVERVIEW

TIER 1: LARGE WESTCHASE DISTRICT MARKER

TIER 2: SMALL WESTCHASE DISTRICT MARKER

TIER 3: LINEAR WESTCHASE DISTRICT MARKER

TIER 4: DISTRICT FEATURE MONUMENT

MATERIAL RECOMMENDATIONS

FABRICATION RECOMMENDATIONS

The following concepts were designed to reflect the team's understanding of existing conditions, precedents, the District's goals and the concurrent work on the Westheimer Road Streetscape Improvements project. The design team has produced five concepts for district markers organized into a hierarchy of tiers.

CONCEPT OVERVIEW

DESIGNING A FIN THAT CAN BE SCALED AND MULTIPLIED TO CREATE INFINITE SHAPES

The concept of the fin is directly influenced by the Westchase "W". When two are set facing each other, the glass fins create the full W mark. In other executions, the glass fins are used independently.

Although none of the district markers feature the full Westchase logo lockup, each fin is a visual nod to the logo.

Fins can be treated with a frosted texture or pattern (see materials). Likewise, the designs of the fins can be unique or all the same.

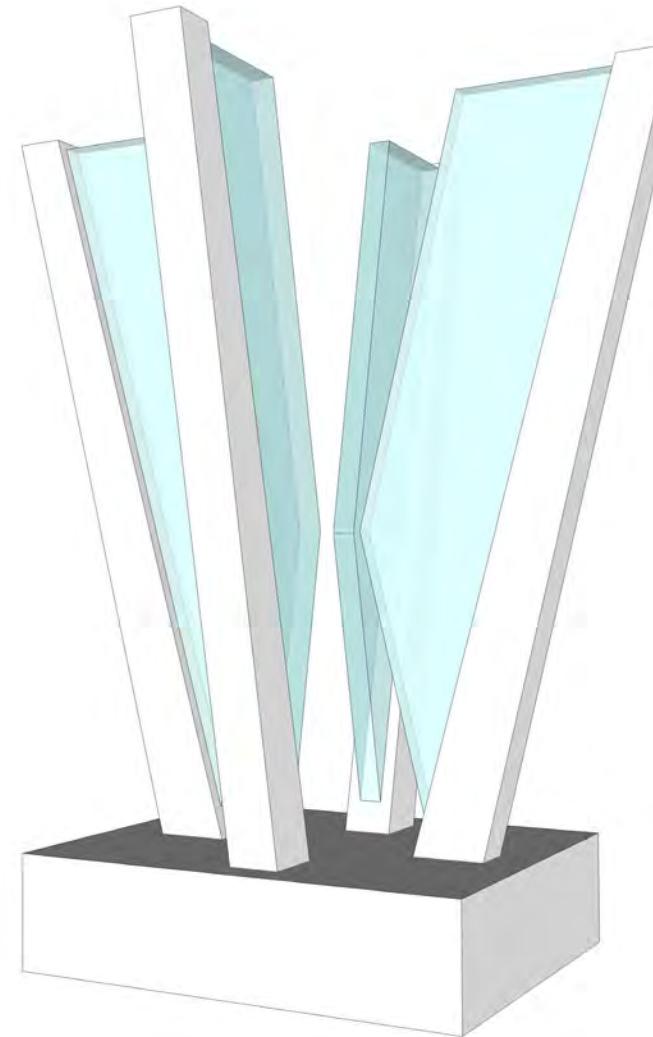
These district markers can be lit in a variety of ways. Interior optical illumination uses the glass fin as a projection device, while up-lighting the fins can create a soft glow at night.

ADAPTING TO LOCATION WITH SHAPE

Every location is different. The family of district markers can fit any constraints that the installation location may pose.

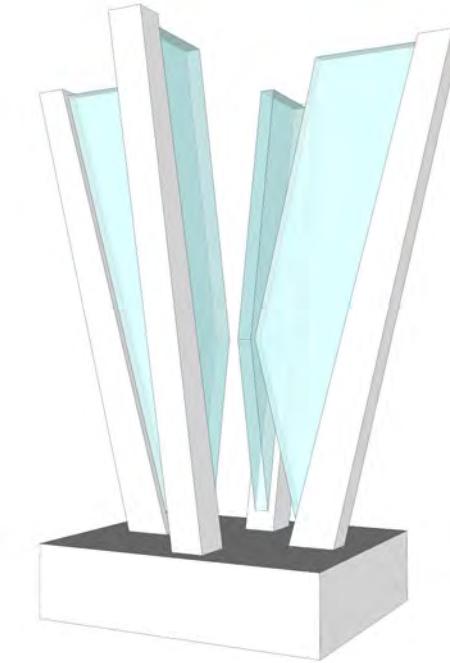
For example, curvature in the roadway or landscape can be accounted and designed for with a linear marker in vertical direction. Conversely, in a narrow space such as corner of major intersections, at a major roadway, the marker can be a smaller scale, straight form designed for single or bi-directional viewing.

Lastly, when the final footprint is determined, one more level of complexity is added. In linear forms, the glass fins scale in sequence from their pillars in one direction. For example, the Tier 3 district marker shows the fins growing from right to left, forming a full half-W at the left end. The direction of this "growth" is determined by traffic flow and most likely direction of experience.



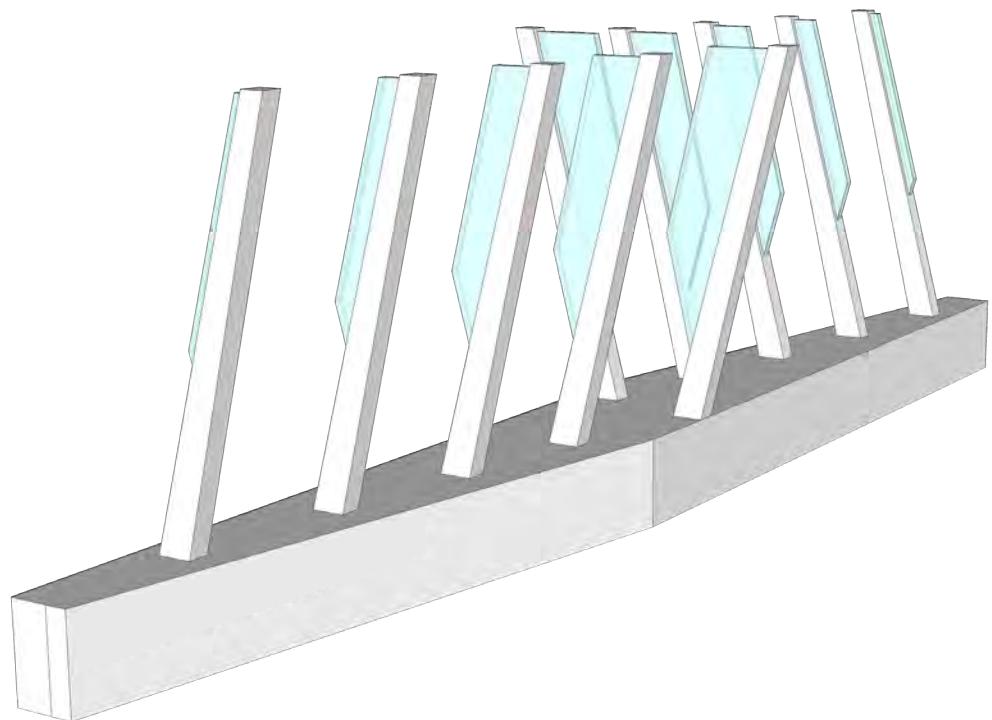
TIER 1 LARGE WESTCHASE DISTRICT MARKER

The large Westchase District Marker is intended for vehicular visibility on high-speed streets. It is imagined to be the primary district marker due to its design and scale. This district marker is approximately 20 feet tall and forms a four-sided prism with the glass fins creating the Westchase "W" brand mark, visible from all angles.



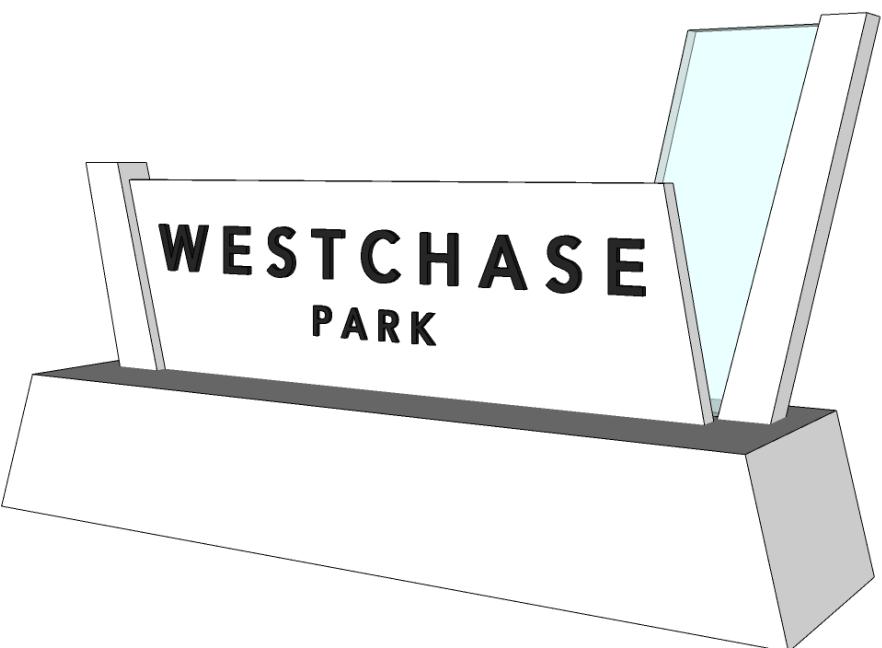
TIER 2 SMALL WESTCHASE DISTRICT MARKER

The small Westchase District Marker is intended for both vehicular visibility on medium-speed streets and major intersections where there may be significant pedestrian activity. It is designed to be the secondary district marker due to the location limitation and smaller scale. This district marker is approximately 10 feet tall and carries the same form of a four-sided prism with the glass fins from the large Westchase District marker.



TIER 3 LINEAR WESTCHASE DISTRICT MARKER

The Linear Westchase District marker is intended for major thoroughfares through the district to provide additional sense of district identity. This district marker is approximately 6 feet tall and is inspired by the fin structure seen in the Tier 1 and Tier 2 district markers. This district marker is designed to be placed in areas where space is more narrow than wide, such as roadway medians or along trails.

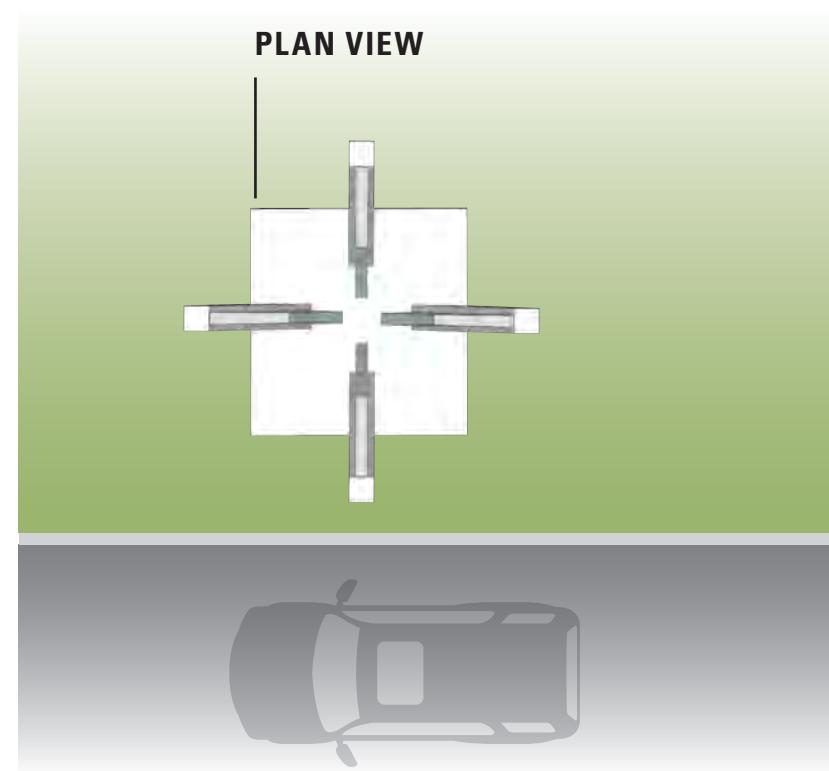


TIER 4 DISTRICT FEATURE MONUMENTS

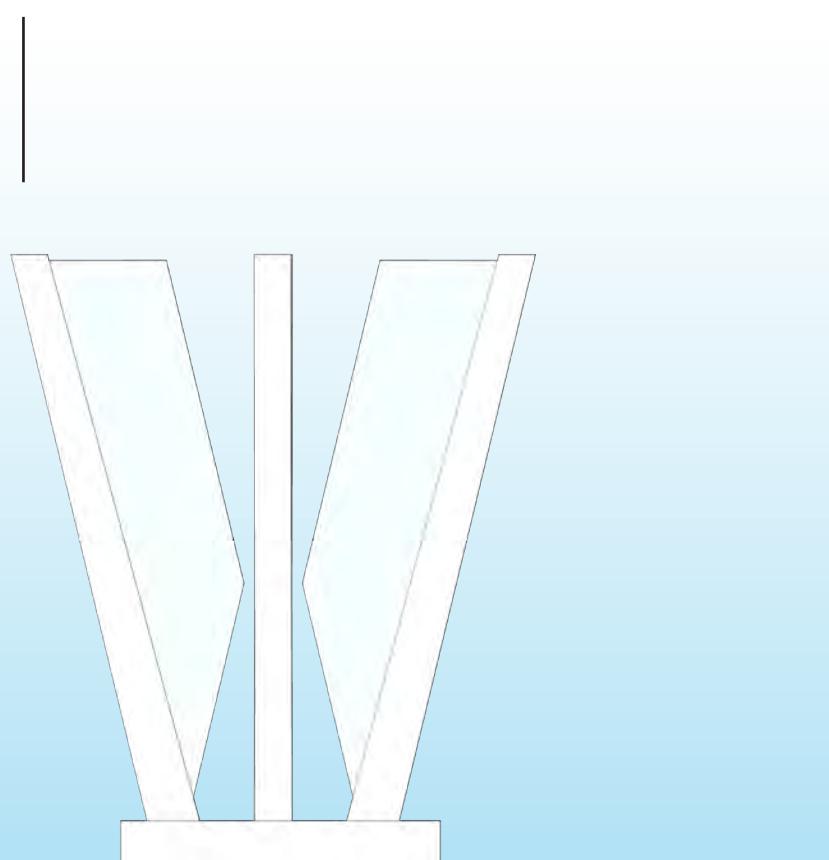
The Tier 4 district feature monument is intended to identify important point of interests in Westchase District. For example, this district feature monument may be used to identify neighborhood parks, district library or district civil spaces. This marker is approximately 6 feet tall and forms the "W" for Westchase from the left angular sign panel with the glass fin on the right.

TIER 1: LARGE WESTCHASE DISTRICT MARKER

The Westchase "prism" or "jewel" is designed to translate the glass fins and the "W" brand for spaces that are non-linear and adjacent to roadways that carry high volumes of traffic. The configuration of the fins creates a three-dimensional Westchase brand mark that is visible and legible from all angles and all directions. During the day, the glass fins shimmer and refract light, creating what will appear to be a large prism. At night the fins are intended to be illuminated and individually programmed so as to create dazzling lighting effects, progressions and colors in each fin.

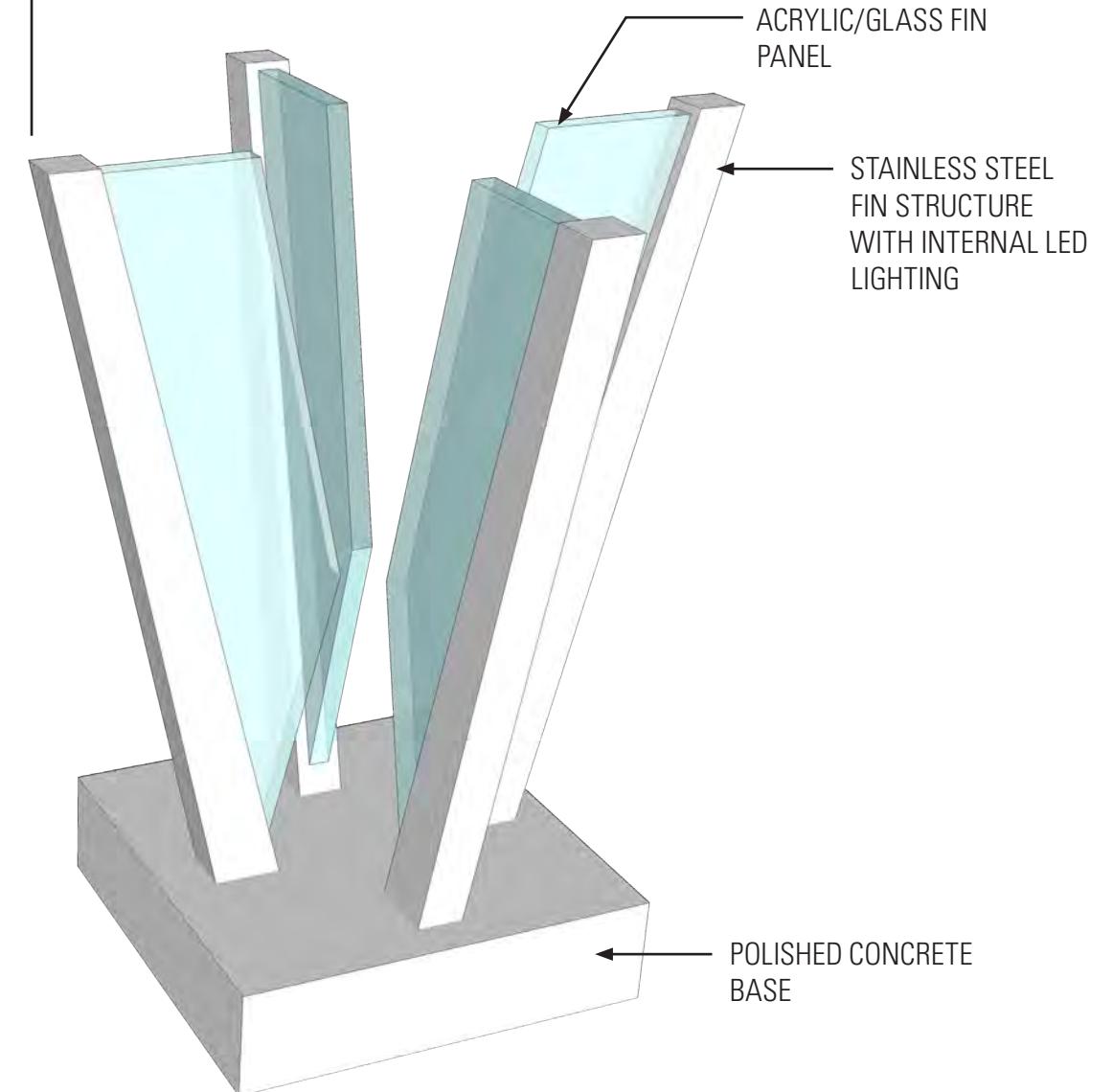


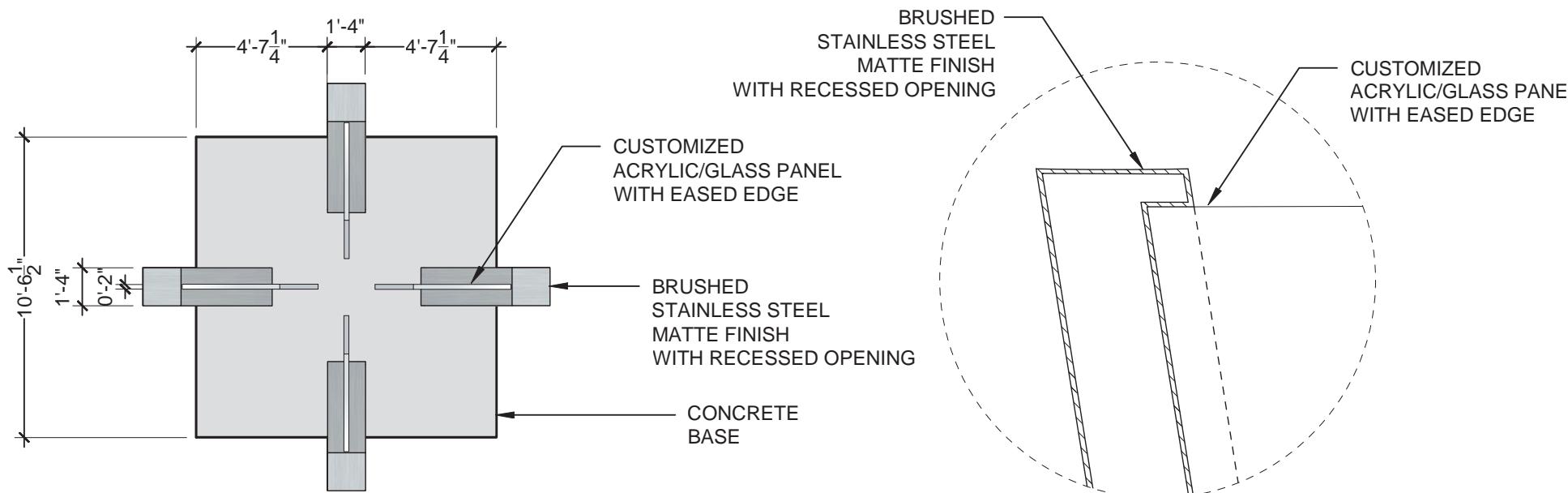
PLAN VIEW



PROFILE/ELEVATION

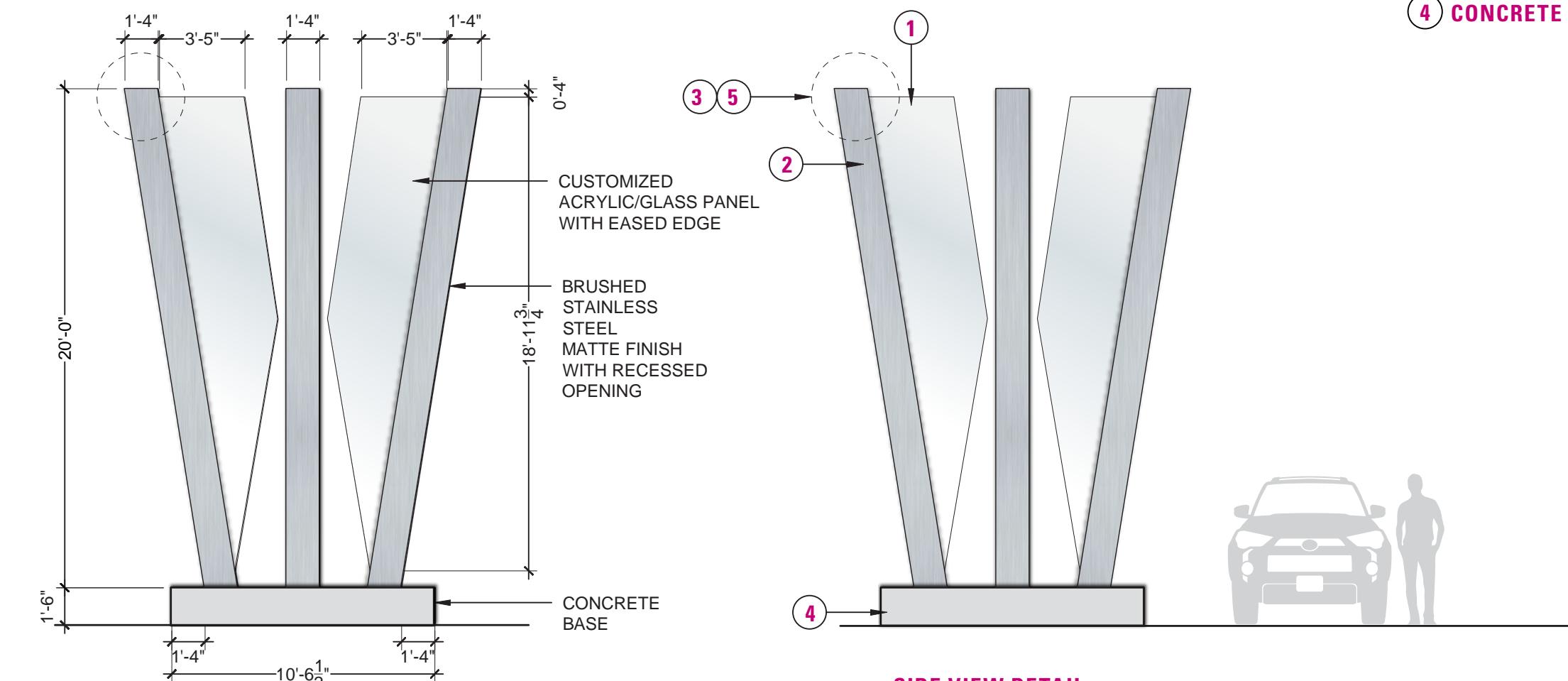
RENDERING





PLAN VIEW DETAIL

SCALE: 3/16"=1'-0



FRONT VIEW DETAIL

SCALE: 3/16"=1'-0

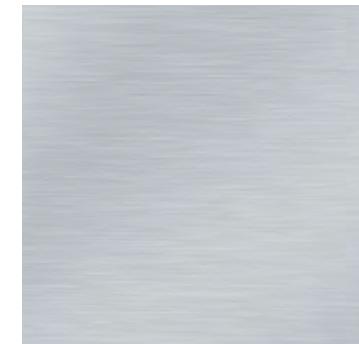
SECTION VIEW DETAIL

SCALE: NTS

FINISHING EXAMPLE



1 ACRYLIC/GLASS



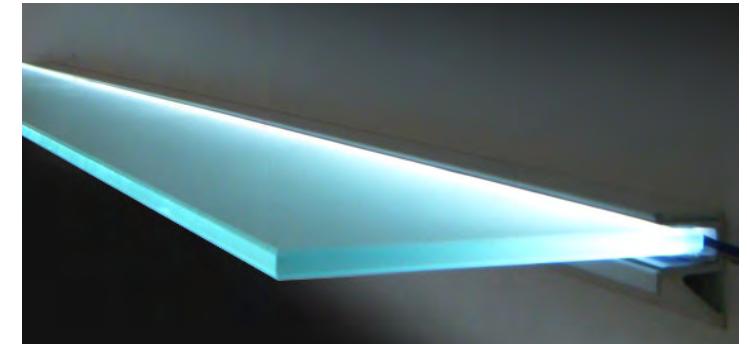
2 STAINLESS STEEL



3 STRUCTURE



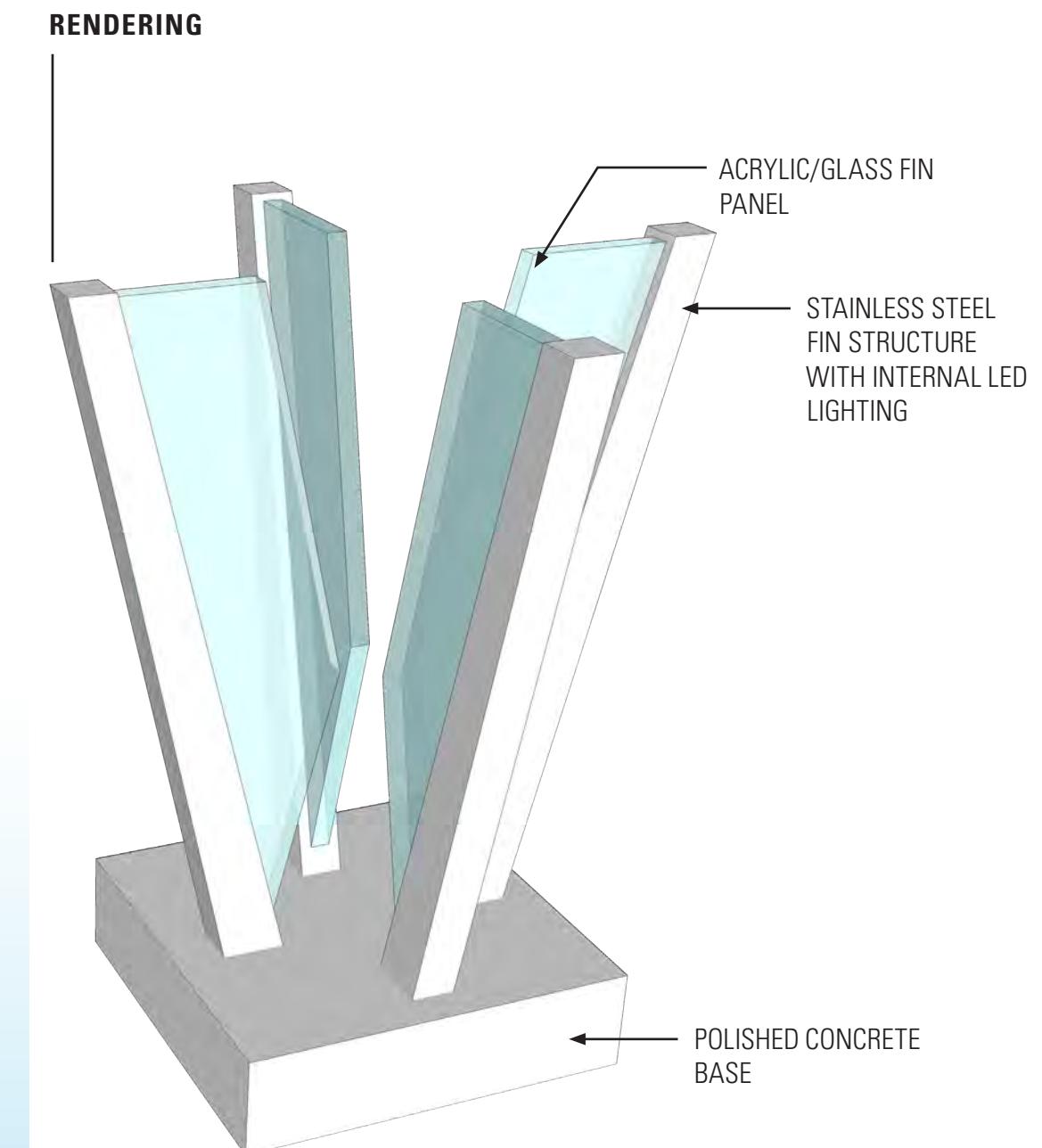
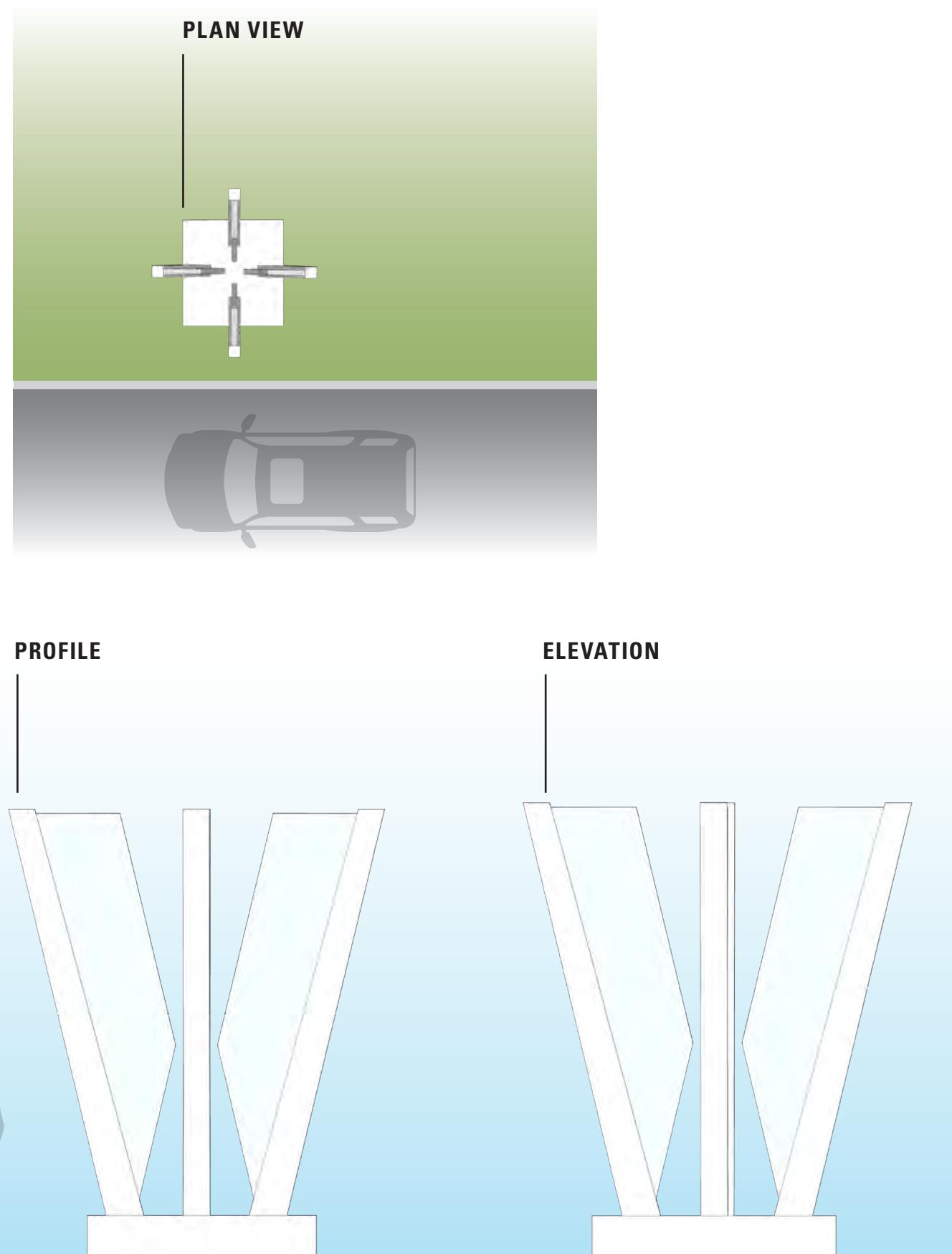
4 CONCRETE

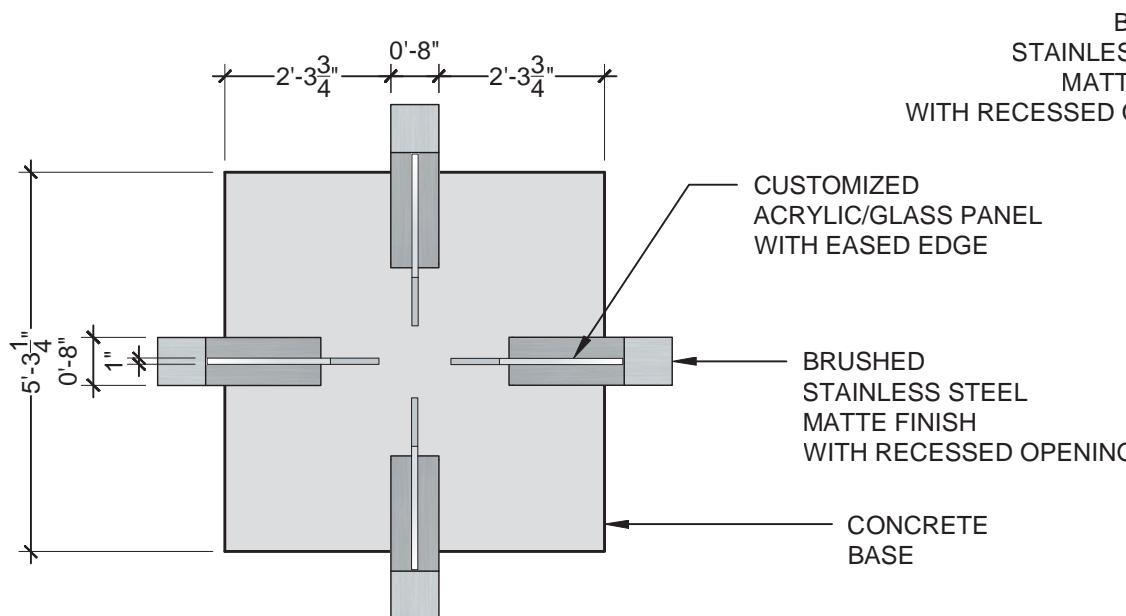


5 LED LIGHTING

TIER 2: SMALL WESTCHASE DISTRICT MARKER

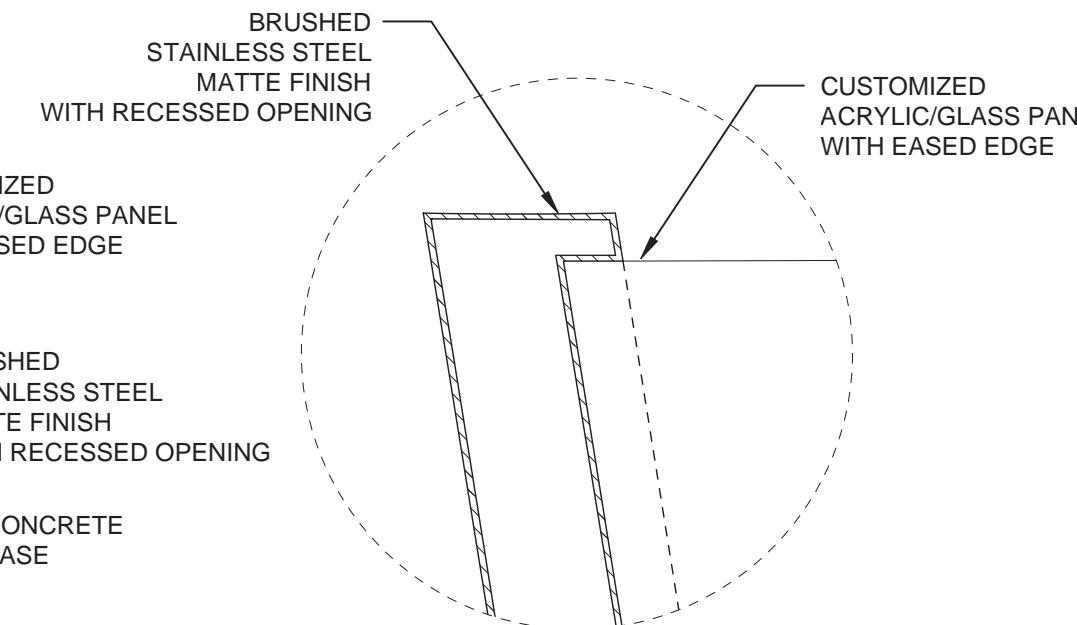
Applying the same design but at a smaller scale of the Tier 1 district marker. The Tier 2 district marker is designed to provide a closer identification for vehicular traffic at a slower speed street where they can fully receive the brand element from the glass fins and the full "W" brand mark for spaces. The configuration of the fins creates a three-dimensional Westchase brand mark that is visible and legible from all angles and all directions. During the day, the glass fins shimmer and refract light creating what will appear to be a large prism. At night the fins are intended to be illuminated and individually programmed so as to create dazzling lighting effects, progressions, and colors in each fin. The smaller scale allows the marker to be harmonic with smaller street landscaping and pavement.





PLAN VIEW DETAIL

SCALE: 3/8"=1'-0



SECTION VIEW DETAIL

SCALE: NTS

FINISHING EXAMPLE



1 ACRYLIC/GLASS



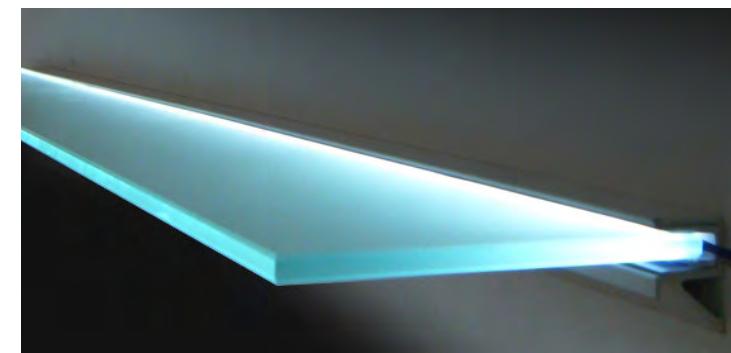
2 STAINLESS STEEL



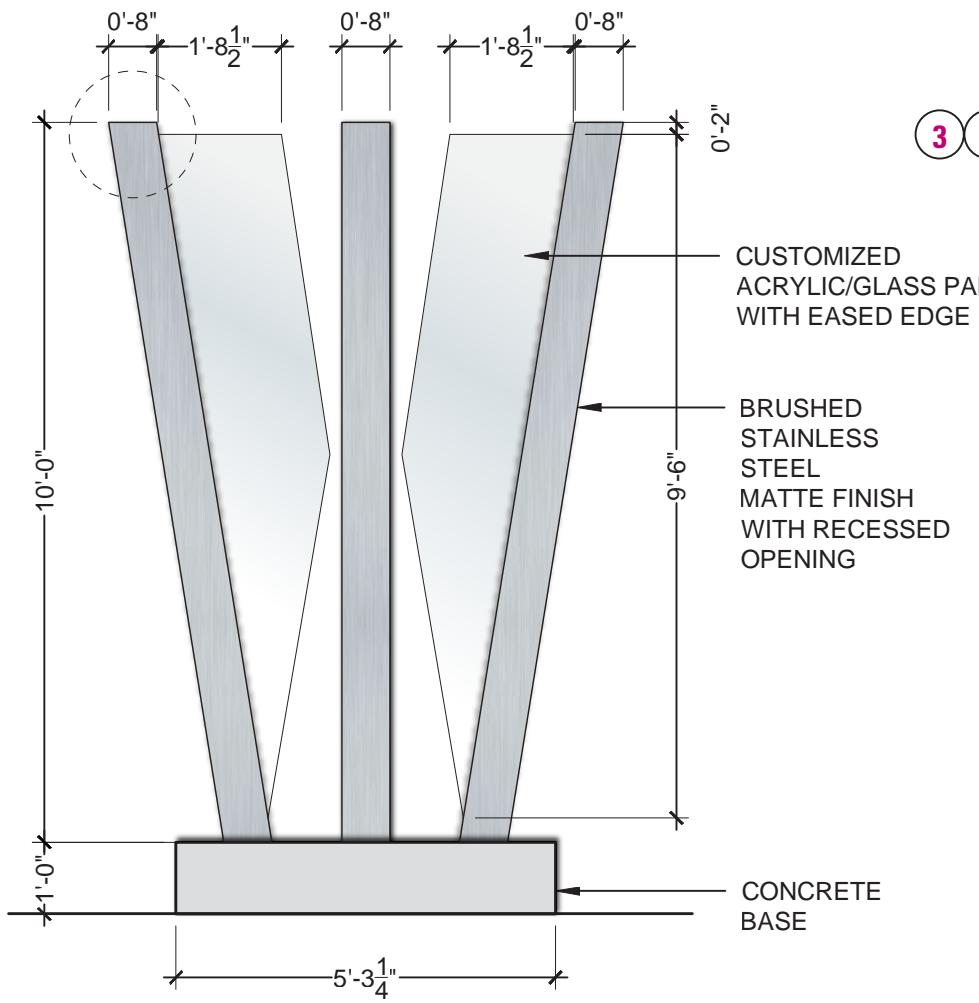
3 STRUCTURE



4 CONCRETE

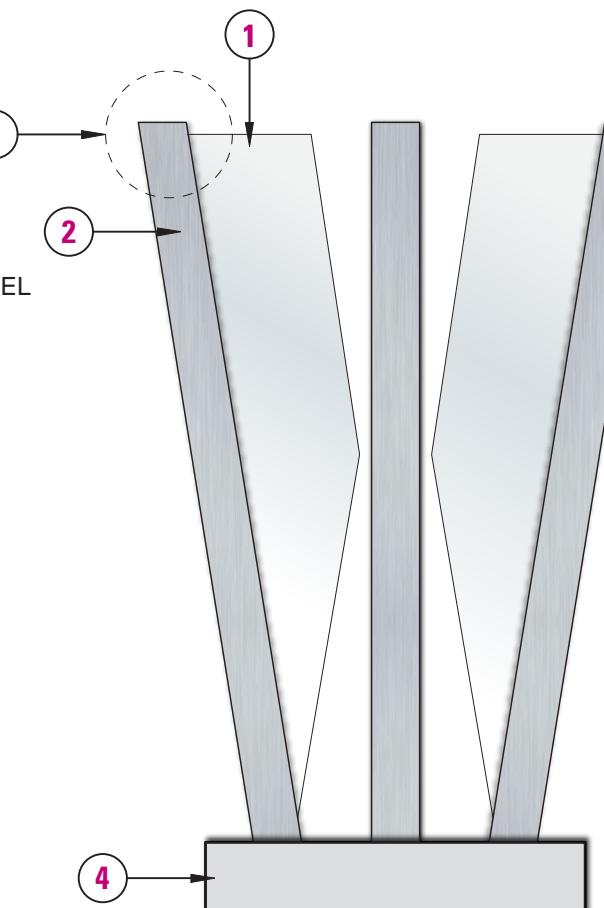


5 LED LIGHTING



FRONT VIEW DETAIL

SCALE: 3/8"=1'-0



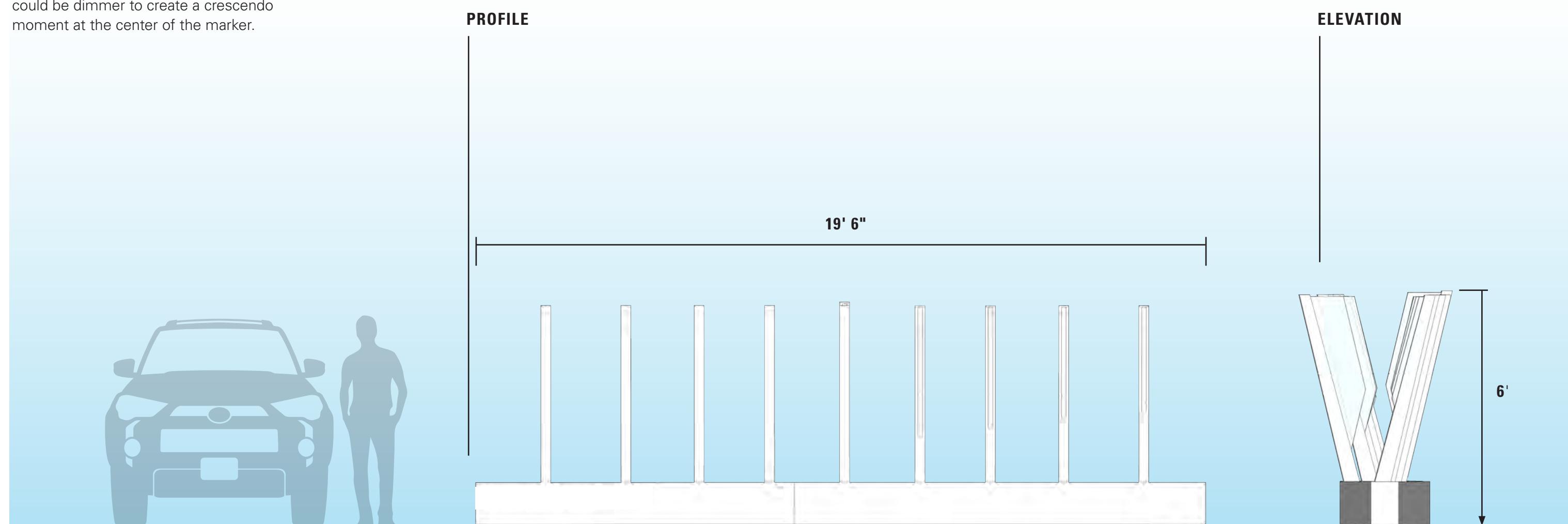
SIDE VIEW DETAIL

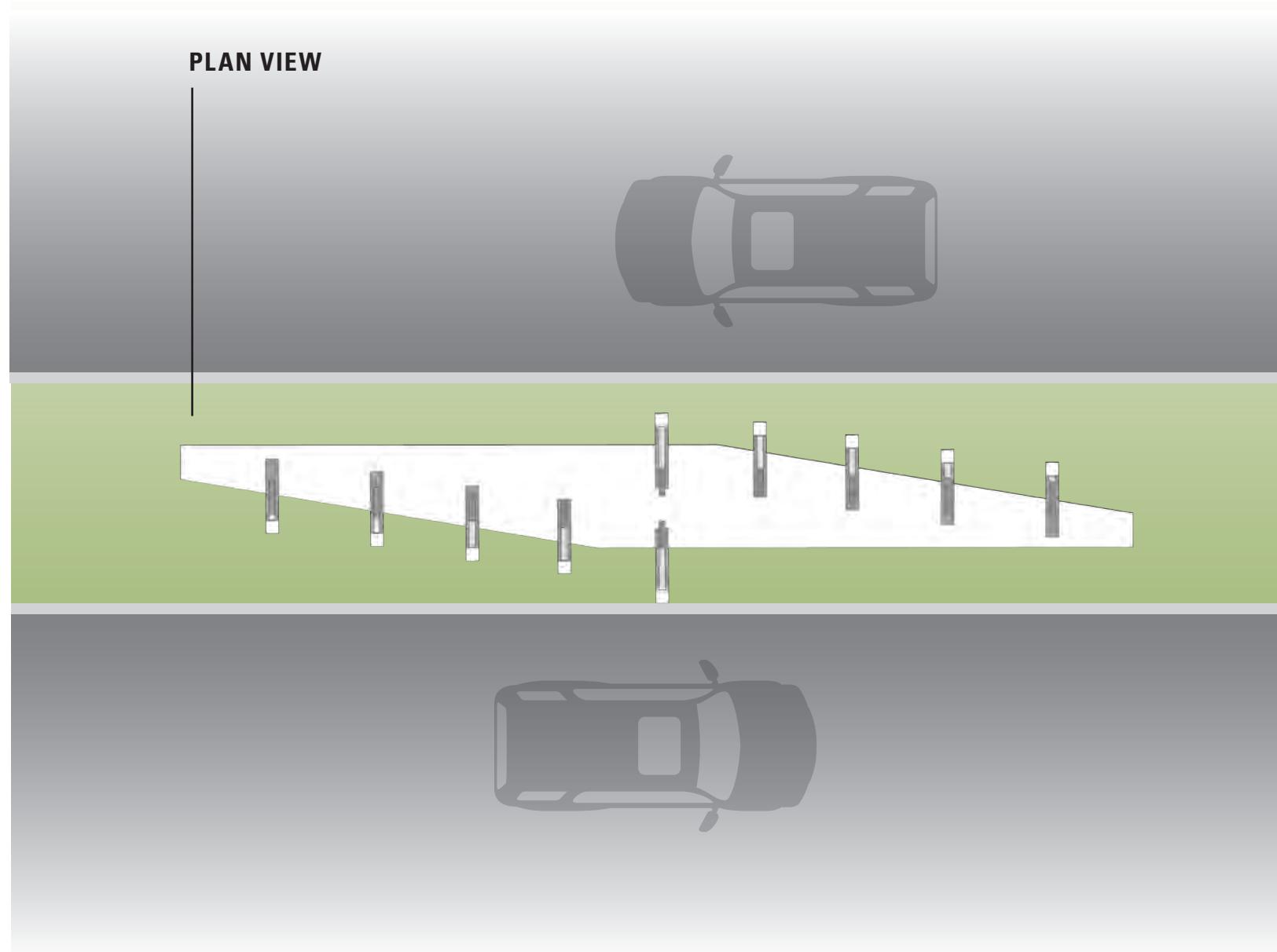
SCALE: 3/8"=1'-0



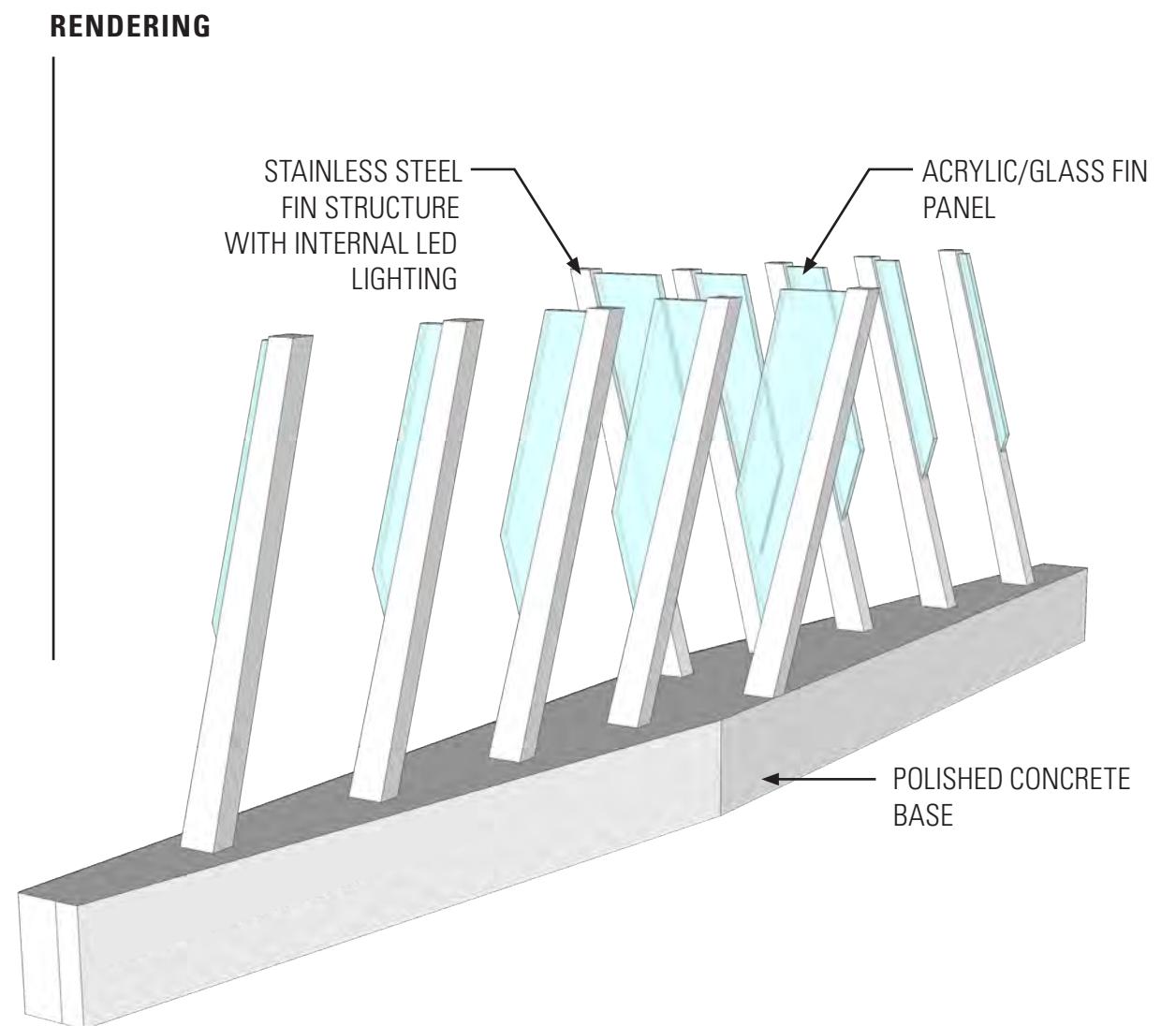
TIER 3: LINEAR WESTCHASE DISTRICT MARKER

The Tier 3 linear district markers are designed to be placed in a median of major thoroughfares through the District (for example, W Sam Houston Pkwy and Wilcrest Drive). The linear district marker is a series of blades that scale in sequence from either side to create the Westheimer "W" brand mark in the center. It is imagined that the blades could be individually programmed or controlled so that lighting could be utilized to create interest. For example, if the center "W" mark was lit the brightest, the blades on either end could be dimmer to create a crescendo moment at the center of the marker.



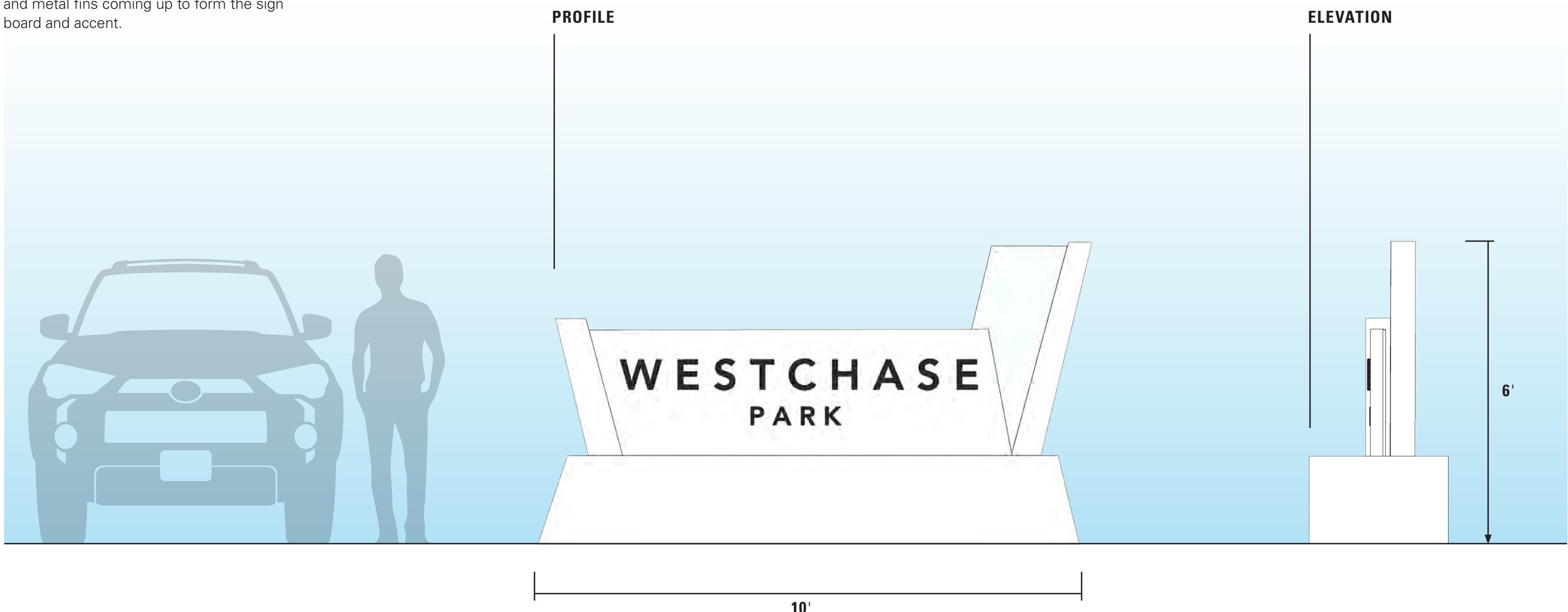


DESIGNED FOR TWO-WAY ROADWAYS WITH MEDIANS

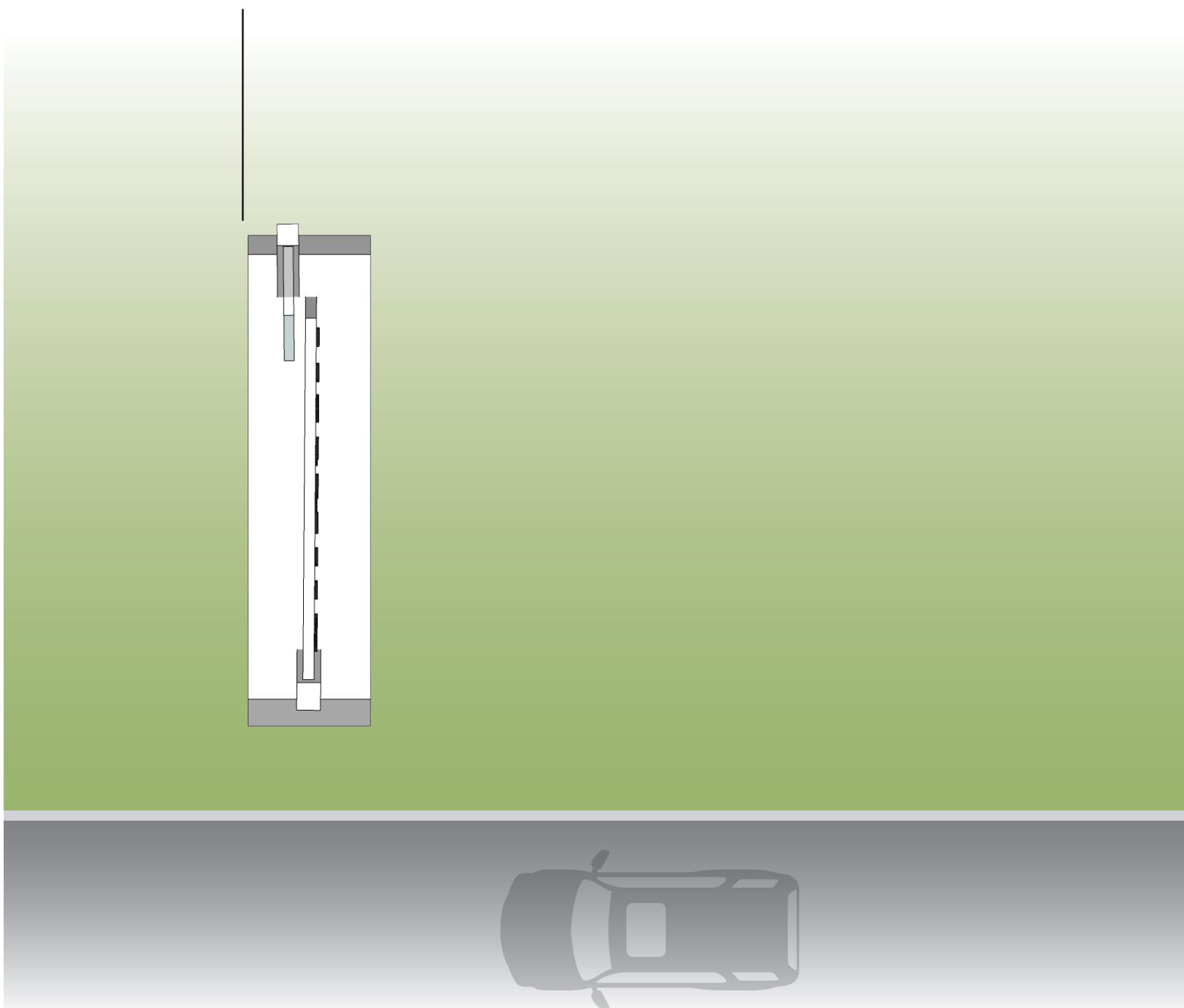


TIER 4: DISTRICT FEATURE MONUMENTS

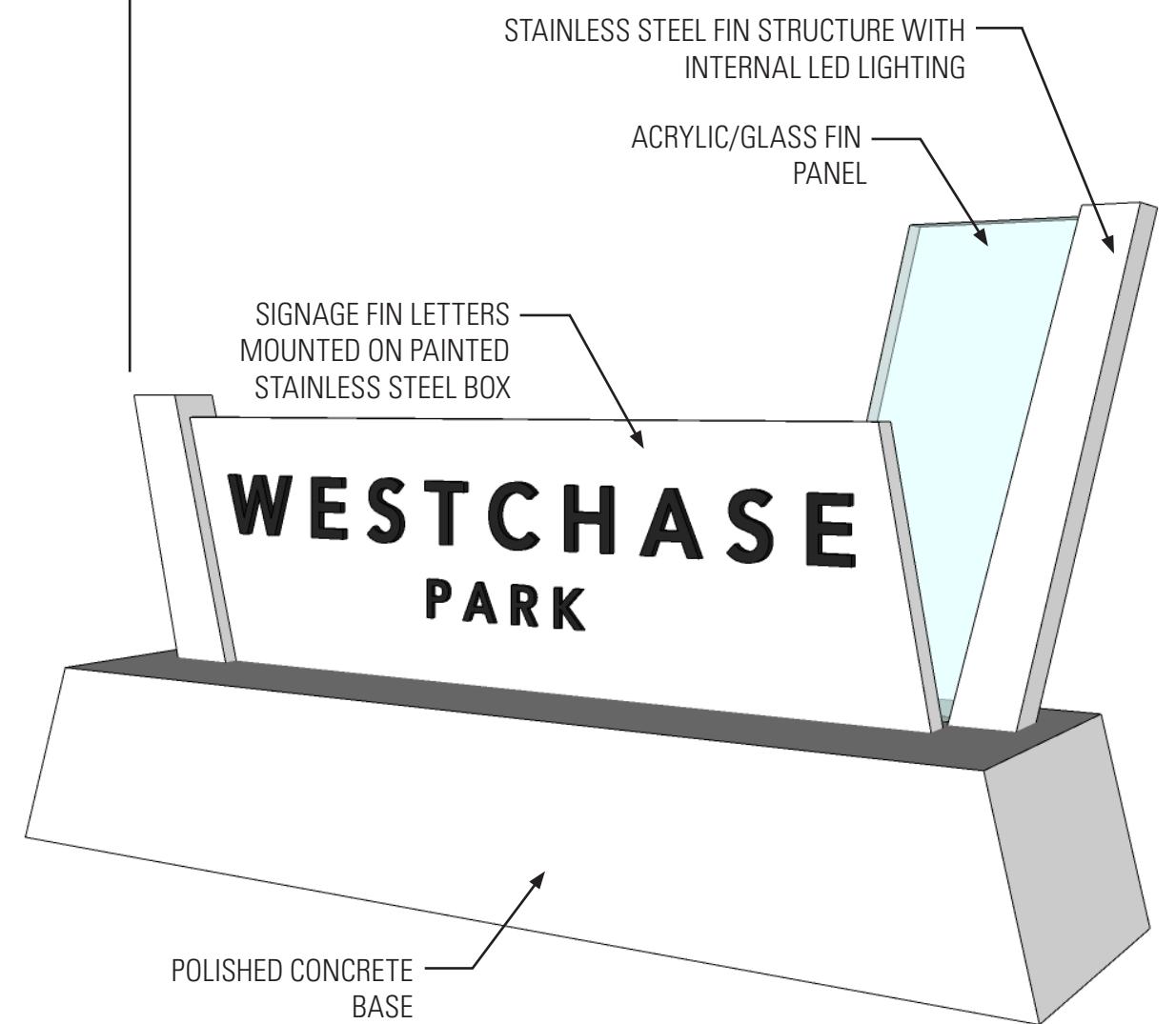
These monuments are designed to be used primarily as signage to cue or reference the Westchase monuments and brand. A modified glass fin can be lit up at night, similar to other monument features in this series. The angular form taken from Westchase "W" logo continues the geometric language from Tier 1 and Tier 2. Any text would be treated in the Avenir font and formatted individually for each monument sign. The base is envisioned to be a smooth, polished concrete with glass and metal fins coming up to form the sign board and accent.



PLAN VIEW



RENDERING



DESIGNED FOR PARKS AND OTHER DISTRICT-BRANDED POINTS OF INTEREST

FROSTED GLASS TO APPLY TEXTURE TO FINS



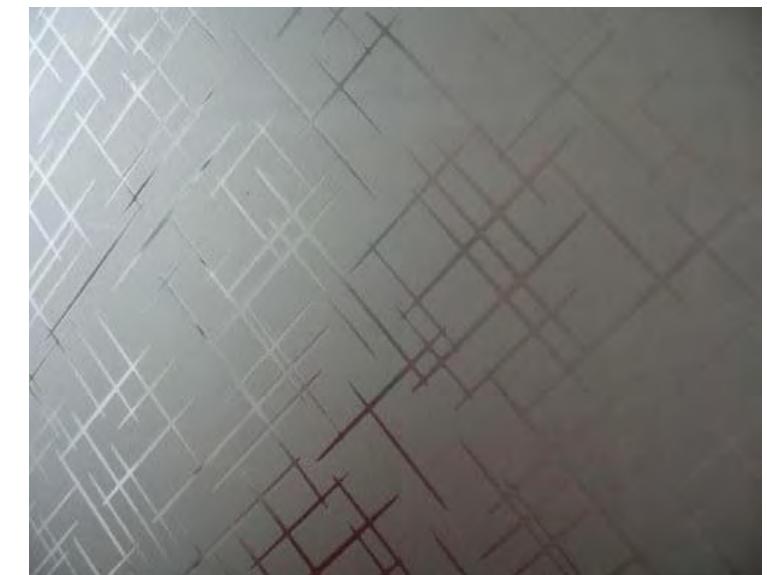
Close up detail of frosted glass panes in a custom metal and wood enclosure in use as a fence around a residence



Example of how frosting glass can create translucency and presence



Frosted glass panel with integrated lighting at night



Example of texture which uses frosting as negative space to create depth and dimension



Example of how light appears when viewed through frosted glass



Example of application where equal amounts of the glass is treated and untreated to create texture



Example of branding (typography and logo) applied to glass with frosted vinyl application



Example of molded front side and frosted back side to create multiple layers of dimension

ADDING TEXTURE, DIMENSION, AND BRANDING TO GLASS FINS

Frosted glass is a very contemporary and timeless approach to using glass in an urban environment. Frosted glass has benefited from the advancements of 3D printing and laser-cutting. Panels of outdoor-grade, tempered glass can be treated with fade, crack, and UV resistant translucent vinyl, creating a visible pattern in the glass. In the examples, frosted textures could be used to further enhance the Westchase District identity.

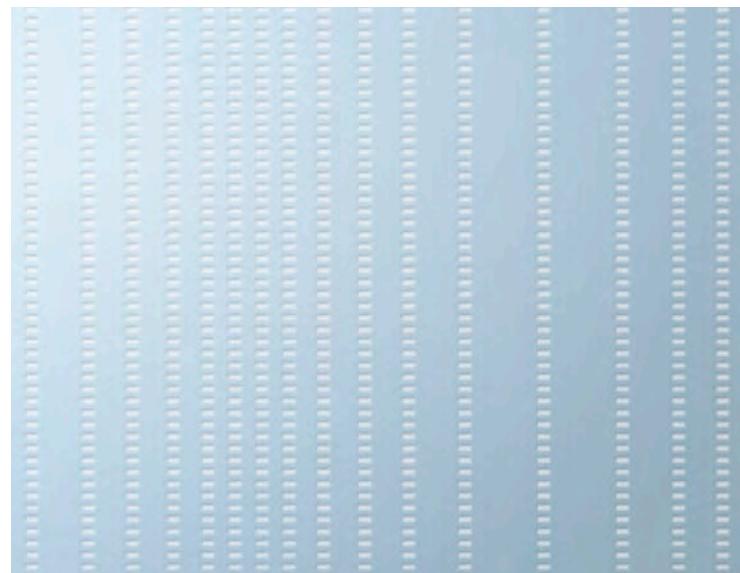
ETCHED GLASS TO APPLY TEXTURE TO FINS



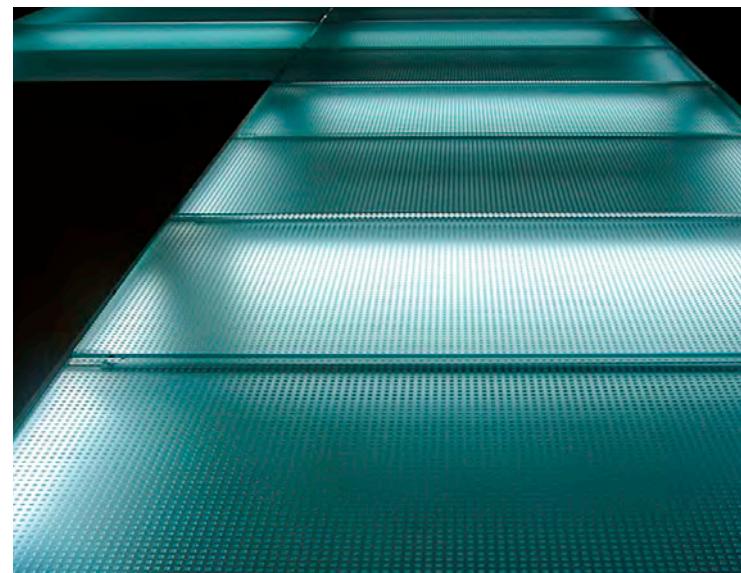
Intricate pattern with minute details etched into back side of glass



Typography etched into the center of a pane of glass



Frosted and etched glass panel to create surface tension (see following image for perspective view)



Etched surface creates visible, three-dimensional texture. In this application it is used to add tread to glass walkway



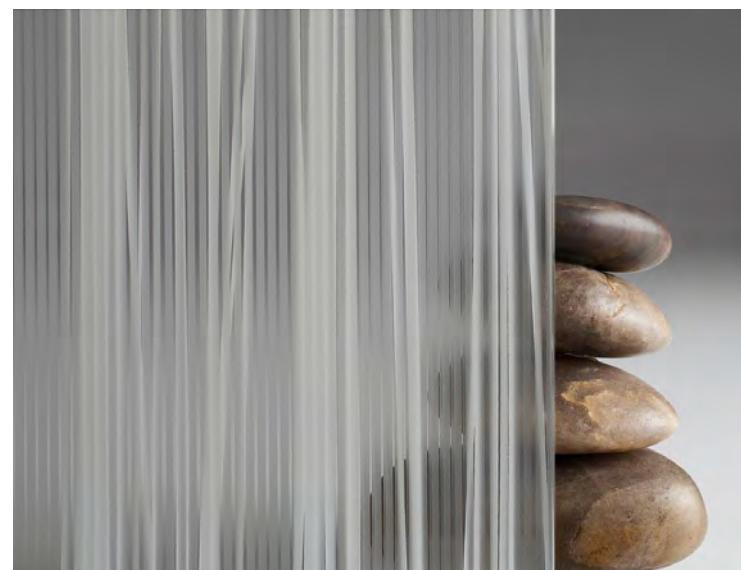
Multiple layers of etching in a single pane of glass creating physical depth



Reverse etching on backside (letters are etched in reverse) for optical illumination of glass blade sign



Textured etching on front side of glass, frosted vinyl applied to flat back side.

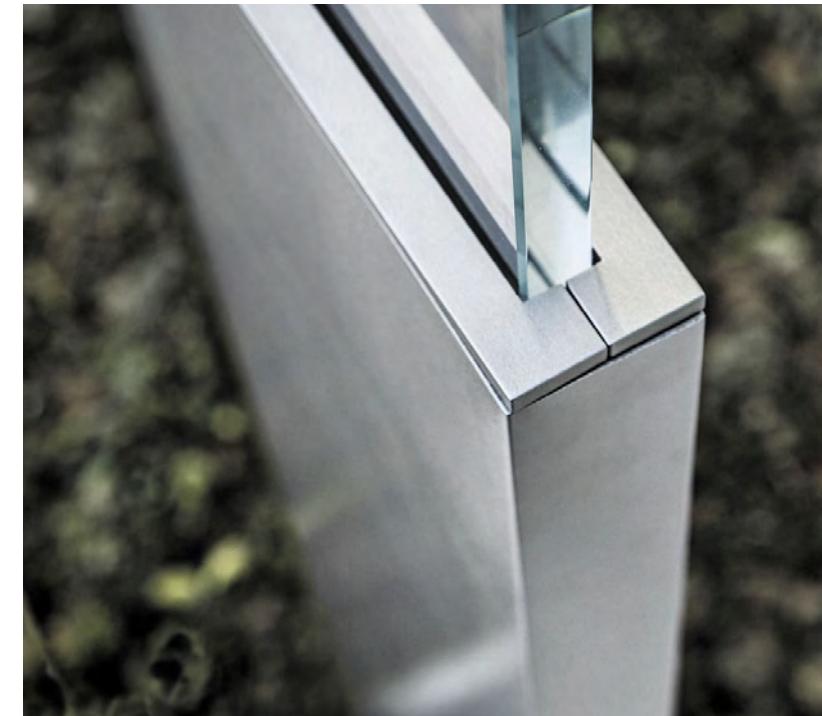
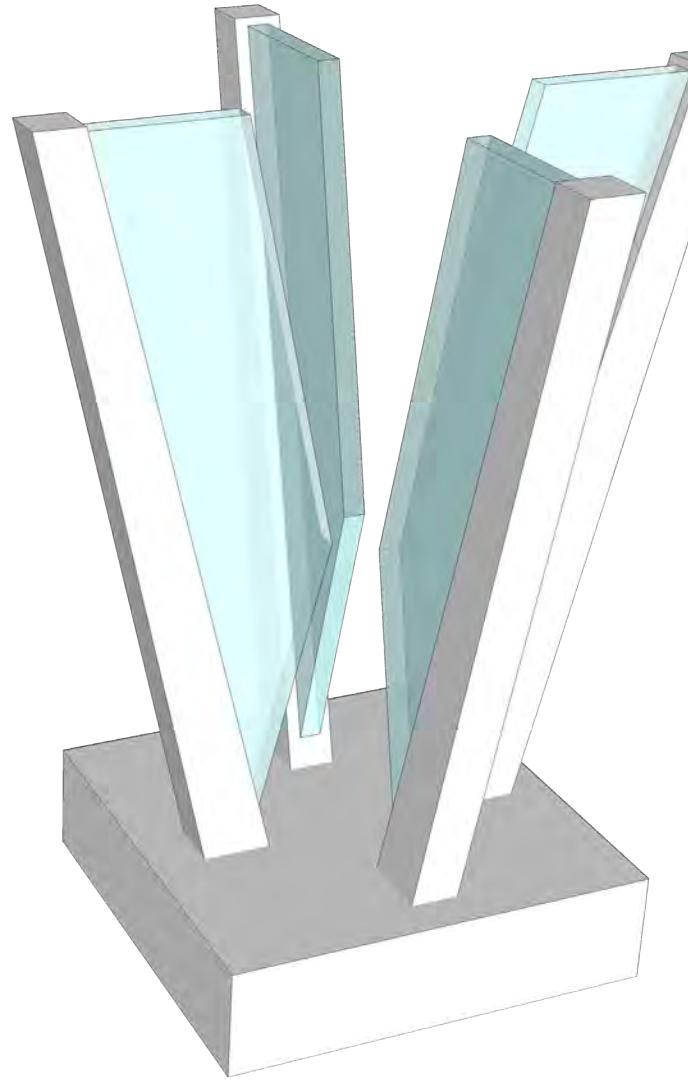


Texture glass panel with various etching depth designed to create a translucent barrier

ADDING TEXTURE, DIMENSION, AND BRANDING TO GLASS FINS

A more permanent (and more expensive) way to treat glass is to etch designs into glass. This is most often used when creating textures and graphics that require physical depth to achieve their visual quality. Etching is often also used when creating letterforms into glass and acrylic surfaces. It is also used to create traction when glass is used as flooring. Etching gives the same visual effect as a vinyl-application with the benefits of 3D texture and visual appearance.

CUSTOM HOUSING & OPTICAL ILLUMINATION



Example of custom the glass blade sitting inside of aluminum structure



Example of custom aluminum housing with LED lights to project light through the glass blade and illuminate the glass blade.

ADDING TEXTURE, DIMENSION, AND BRANDING TO GLASS FINS

Frosted glass is a very contemporary and timeless approach to using glass in an urban environment. Frosted glass has benefitted from the advancements of 3D printing and laser-cutting. Panels of outdoor-grade, tempered glass can be treated with fade, crack, and UV resistant translucent vinyl, creating a visible pattern in the glass. In this case, the glass fin sitting inside of the stainless steel structure allows the beacon to shine through the glass at night to provide a warm, friendly welcome, the LED can feature Westchase District branding colors.





**TASK
5-1**

IMPLEMENTATION OF DISTRICT MARKERS

IMPLEMENTATION GOALS

IMPLEMENTATION PLAN APPROACHES AND STRATEGIES

The following implementation plan outlines four approaches for the new Westchase district Markers. Over time, the 41 existing monuments will be phased out in effort to communicate one brand represented by the family of district markers seen in section 4-1. This implementation plan is intended to be used as a guide for the Westchase District over the next several years. Each recommended location will need to be studied at a site-specific scale in order to be most successful. The locations of these markers were developed by studying traffic volumes, transit ridership, trails and open space, bicycle facilities, retail shopping centers, and civic institutions, among many other things. These locations will position the district with highly visible district markers that will promote the brand of the Westchase District for the foreseeable future.

IMPLEMENTATION GOALS

Goals and approaches for this implementation plan are intended to establish different strategies which the design team recommends to provide consistency of visual experience through Westchase District for all users including pedestrian, cyclist, public transit and cars. The following are goals identified to fulfill the District's vision to provide a complete district identification.

1

GOAL

REPLACE EXISTING MONUMENTS

The one-size-fits-all approach that the District's current monumentation program takes doesn't account for the scale or context of the environment where the monuments are located. This goal is to replace existing monuments with context sensitive district markers. For example, the intersection of Westheimer Road and Beltway 8 (Sam Houston Tollway) requires a monument of a much larger scale, designed for viewing by more people at higher rates of speed. Monuments in lower-traffic/residential areas should be appropriately sized to fit the context (fewer people traveling at lower speeds).

2

GOAL

IDENTIFY LOCATIONS FOR MAXIMUM VISIBILITY

The current monumentation program has monuments in a number of locations that may not be optimized for highest viewership. The objective is to reassess the location of the existing monuments in order to identify the locations that will provide the most visibility and best opportunity to promote and establish the brand of the district.

IMPLEMENTATION APPROACH #1

The implementation plan uses three phases to realize full build-out and distribution of the new markers in the district. The vision for implementation of these markers includes developing a budget that can be used to get these markers constructed within a three year period. The phases create an annual budget that accounts for not only the implementation of new district markers, but also the removal of the existing monuments. As the district is able to identify the available annual budget, the approaches outlined in this section can be used to implement the vision for this plan.

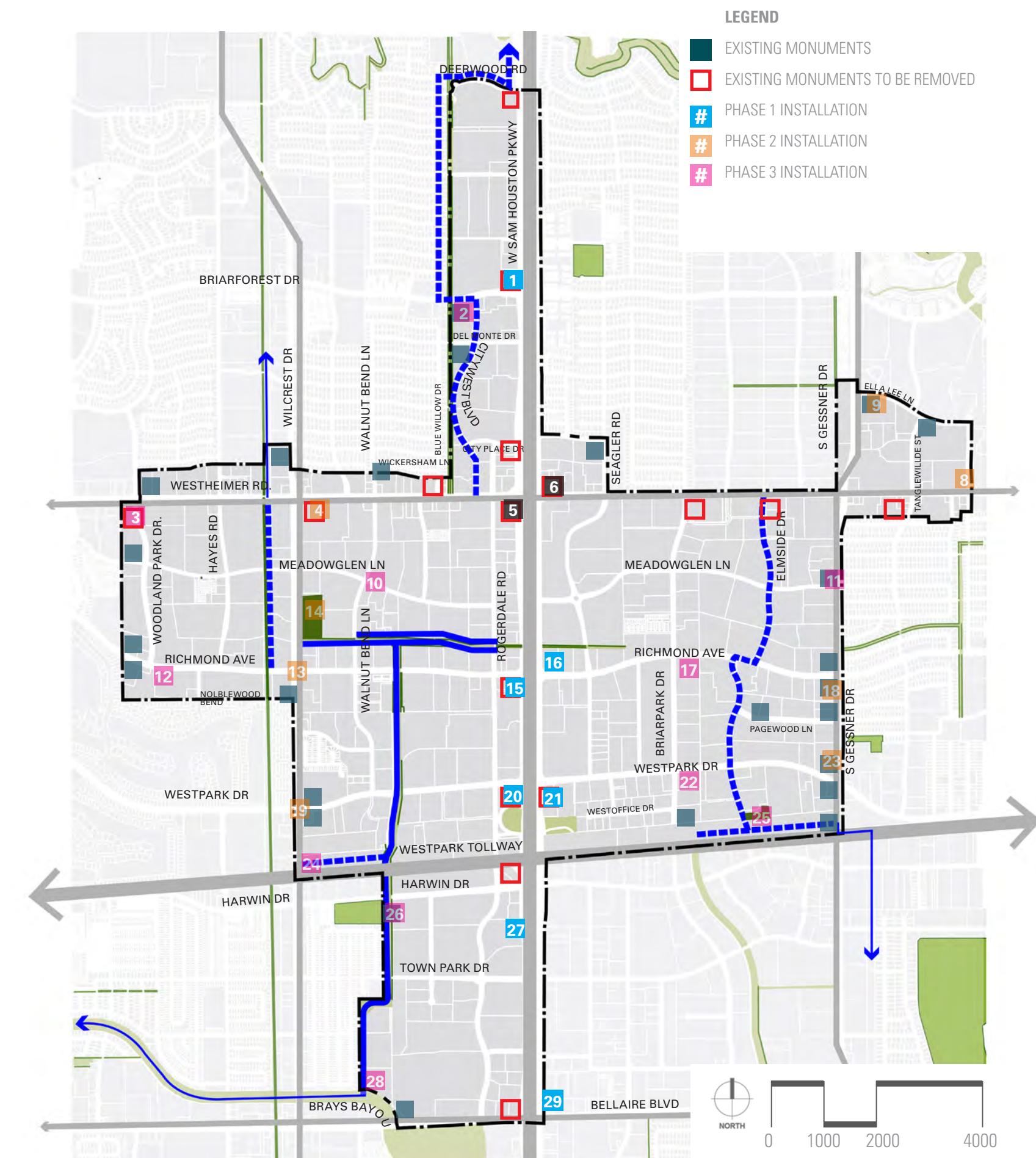
PHASE 1

IMPLEMENT MOST VISIBLE AND MOST IMPACTFUL MARKERS

In the first phase of this approach, the markers are strategically installed at locations with the highest levels of activity within the district. The monuments placed strategically adjacent to Beltway 8 will not only capture individuals traveling North and South through the district, but also those traveling east to west on major thoroughfares such as Briarforest Dr., Richmond Ave., West Park Drive and Bellaire Blvd. Three tiers of the monument are represented and installed in this stage. The existing monuments to be removed have been identified based on where upgraded monuments will make them redundant.

TYPE	QUANTITY	MONUMENT COST	COST
TIER 1	2	\$80,000	\$160,000
TIER 2	3	\$25,000	\$75,000
TIER 3	2	\$16,000	\$32,000
TIER 4	0	\$13,500	0
REMOVALS	9	\$2,000	\$18,000
PHASE 1 - TOTAL COST		\$285,000	

*Seven existing monuments will be removed as part of an earlier project.



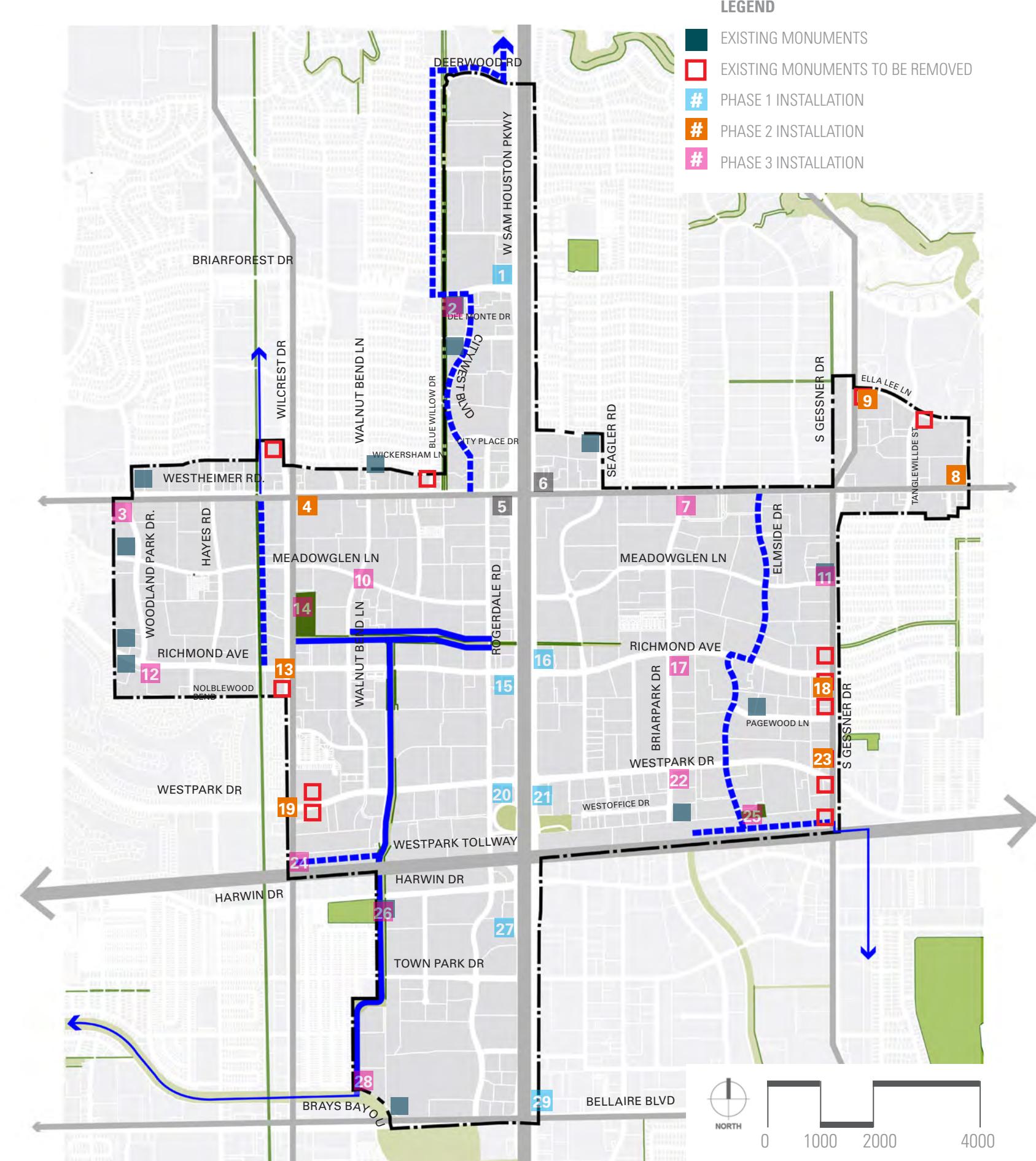
IMPLEMENTATION APPROACH #1

PHASE 2

INFILL AT STRATEGIC LOCATIONS

In Phase 2, monuments at key east west locations will capture visitors as they enter the district in the outer boundaries. These locations were based on average daily trips and road classification.

TYPE	QUANTITY	MONUMENT COST	COST
TIER 1	1	\$80,000	\$80,000
TIER 2	6	\$25,000	\$150,000
TIER 3	2	\$16,000	\$32,000
TIER 4	0	\$13,500	0
REMOVALS	12	\$2,000	\$24,000
PHASE 2 TOTAL COST			\$286,000



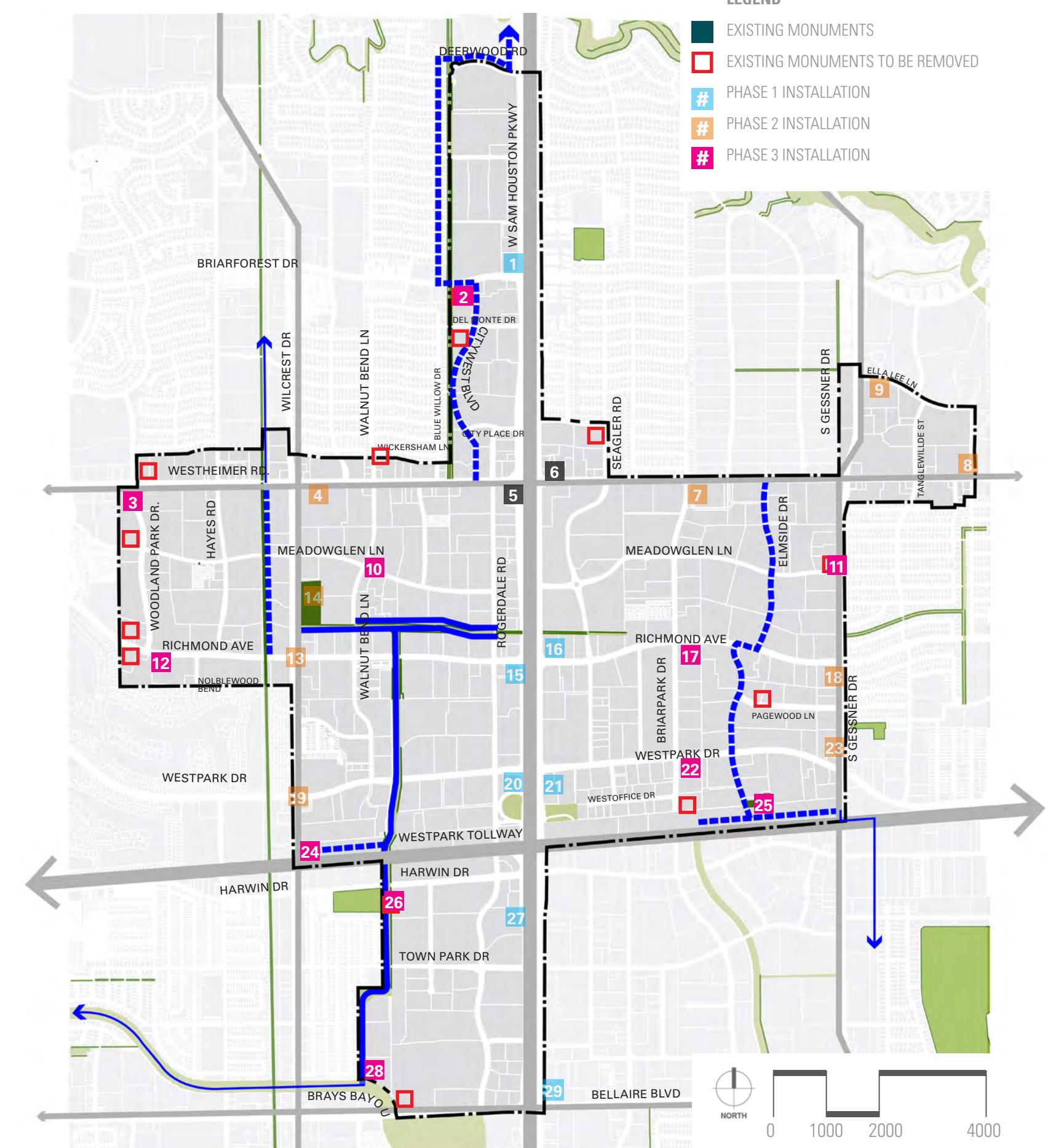
IMPLEMENTATION APPROACH #1

PHASE 3

INFILL

In this phase, the remainder of the markers will be installed, indicating a complete transition to the new monument language and branding.

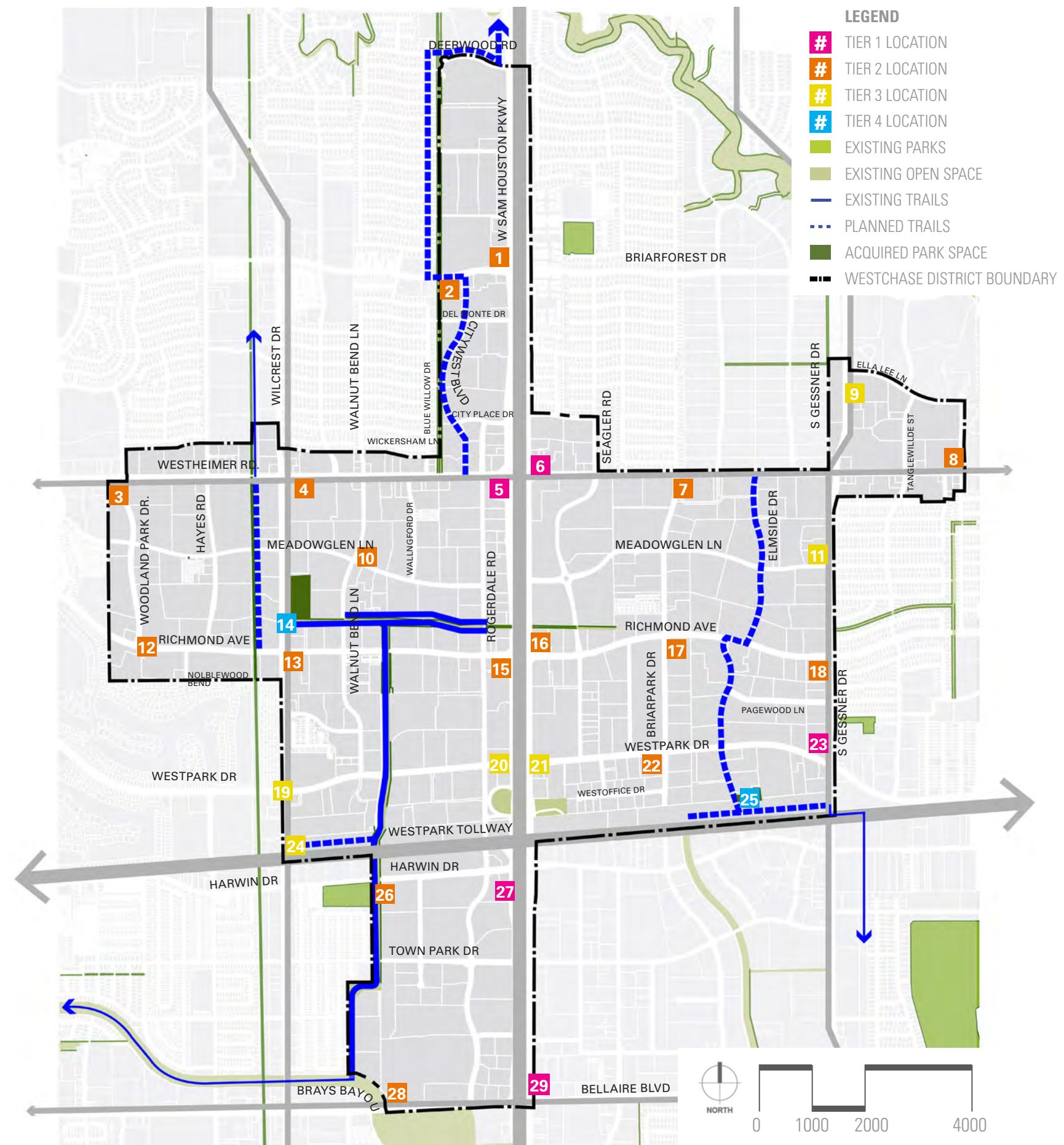
TYPE	QUANTITY	MONUMENT COST	COST
TIER 1	0	\$80,000	0
TIER 2	7	\$25,000	\$175,000
TIER 3	2	\$16,000	\$32,000
TIER 4	2	\$13,500	\$27,000
REMOVALS	13	\$2,000	\$26,000
PHASE 3 - TOTAL COST		\$260,000	

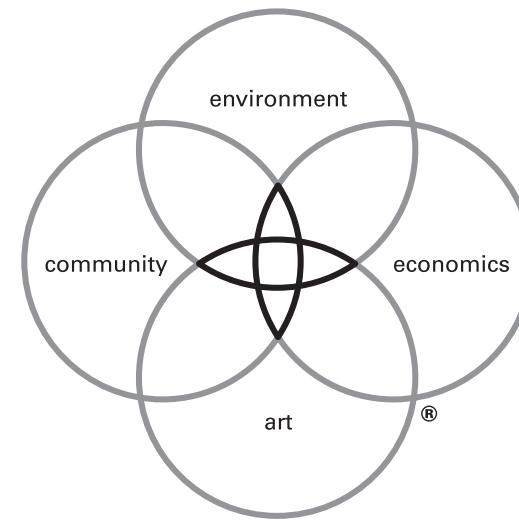


IMPLEMENTATION COMPLETION

This map shows all the district markers completed through four approaches.

#	DISTRICT MARKER TYPE	LOCATION
1	TIER 2	Northwest corner of Sam Houston Tollway and Briar Forest Drive
2	TIER 2	Southwest corner of CityWest Boulevard and Briar Forest Drive
3	TIER 2	Southwest corner of Westheimer Road and Woodland Drive
4	TIER 2	Southeast corner of Wilcrest Drive and Westheimer Road
5	TIER 1	Southwest corner of Westheimer Road and Sam Houston Tollway
6	TIER 1	Northeast corner of Westheimer Road and Sam Houston Tollway
7	TIER 2	Southeast corner of Westheimer Road and Briar Forest Drive
8	TIER 2	Northwest corner of Westheimer Road and Westerland Drive
9	TIER 3	Median on S Gessner Road crossing Woodlake Drive
10	TIER 2	Northeast corner of Meadowglen Lane and Walnut Bend Lane
11	TIER 3	Northwest corner of Meadowglen Lane and S Gessner Road
12	TIER 2	East median at Woodland Park Drive and Richmond Avenue
13	TIER 2	Southeast corner of Richmond Avenue and Wilcrest Drive
14	TIER 4	Southeast corner of Wilcrest Drive and Westchase Library Loop Trail
15	TIER 2	Southeast corner of Richmond Avenue and Sam Houston Tollway
16	TIER 2	Northwest slope at Sam Houston Tollway
17	TIER 2	Southeast corner of Richmond Avenue and Briarpark Drive
18	TIER 2	Southwest corner of Richmond Avenue and S Gessner Road
19	TIER 3	West median of Westpark Drive and Wilcrest Drive
20	TIER 3	West median of Westpark Drive and Sam Houston Tollway
21	TIER 3	East median of Westpark Drive and Sam Houston Tollway
22	TIER 2	Southwest corner of Westpark Drive and Briarpark Drive
23	TIER 1	Northwest corner of S Gessner Road and Westpark Drive
24	TIER 3	East median at Westpark Tollway and Wilcrest Drive
25	TIER 4	Park entrance
26	TIER 2	Southeast corner of Harwin Drive and Westchase District Trail
27	TIER 1	Southwest corner of Spring Suite driveway and Sam Houston Tollway
28	TIER 2	Northbound slope at Bellaire Boulevard and Brays Bayou
29	TIER 1	Northeast corner of Sam Houston Tollway and Bellaire Boulevard





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