STREETSCAPE RESOURCE GUIDE

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A project of Scenic Houston

Streetscape Resource Guide

Second Edition

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"Successful cities do not just happen. Nor are they necessarily the result of fortuitous history, geography, or economics. They come about because individuals and agencies within the public and private sectors make decisions and take a series of actions."

Cy Paumier
Creating a Vibrant City Center, 2004

WHO IS **SCENIC HOUSTON** ?

Scenic Houston is a non-profit organization working to **preserve** and **enhance** the character of Greater Houston areas, streets, sidewalks, and public spaces. Scenic Houston has long recognized that the character of Houston is linked to the appearance of its public streets and spaces. In fact, Houston's position as a global economic center offering a high quality of life and attractive urban amenities depends on functional, well-designed, vibrant streetscapes. Thoughtful, **holistic planning and development** will enhance Houston's public vistas for decades to come.

WHAT'S THE **PURPOSE** OF THE STREETSCAPE RESOURCE GUIDE?

Understanding that any stakeholder interested in Houston streetscape planning and development could benefit from a definitive resource guide — and finding none — Scenic Houston has produced this **Streetscape Resource Guide** with these objectives:

- **SUPPORT** optimal planning design and construction using current Code standards
- **CONSIDER** all users during the planning, design and construction phases
- **ILLUSTRATE** enhanced design standards that can result in long-term cost savings for both public and private investment
- **DEPICT** unintended consequences that can result from lack of cohesive planning
- **ENCOURAGE** continued growth and economic development in the region

HOW DO I **USE** THE STREETSCAPE RESOURCE GUIDE?

Through sketched street **sections** and **photographs** of existing streetscape conditions, this Streetscape Resource Guide is an illustrated companion for successful streetscape planning based on current streetscape development standards in the Houston region.[1] With the information contained herein, any user can become informed about preserving functional, well-designed streetscapes that enhance the character of our city.

Users of this Guide will be able to:

- **LEARN** sound principles and guidelines that govern streetscape development
- **ACCESS** recommendations for improvements to current Right-of-Way (ROW) design standards across pedestrian, travelway and shared streetscape realms
- **RECOMMEND** cross-section sketches of various ROW widths
- **SEE** an array of photos that clearly illustrate results when the recommended enhancements are in place
- **UTILIZE** the information and illustrations in this Guide to advocate for the best street improvements possible

Intended Stakeholders:

- City Officials
- Design Professionals
- Developers
- Management Districts
- Neighborhood Groups
- Residents
- Anyone who is invested in the benefits of thoughtful streetscapes.

[1] A list of relevant guidelines and standards utilized to compile this Guide are located in the Resources and References section.

* This Streetscape Resource Guide can be downloaded at www.scenichouston.org/streetscape-houston-project/

This Guide is divided in three sections as indicated in the chart below. Each section is color coded for ease of cross reference.

The boxes below show recommendations for each streetscape realm. The chapters are color coded on the recommended streetscapes for easy reference.

Pedestrian Realm

- Reduce green median areas to allow for open and friendly pedestrian space at sidewalks — add pedestrian benches and larger walkways
- Provide sufficient pedestrian walkways
- Enhance lighting and seating in high volume pedestrian areas
- Utilize native and sustainable landscaping around shade trees
- Follow the City's recommended tree list
- Consider appropriate placement for all signs
- Create an easement to allow for a wider pedestrian realm

Travelway Realm

- Provide sufficient pedestrian waiting areas
- Ensure proper drainage
- Supply accessible ramps and access to pedestrian signal buttons
- Allow for safe passage of pedestrians
- Repair and consolidate curb cuts

Shared Realm

- Add landscaped stormwater planters to clean stormwater and provide a sustainable buffer from pedestrian travelway
- Ensure adequate lighting and avoid light pollution
- Landscape between walkways, streets, and parking lots
- Provide ADA compliance
- Align above-ground utilities and poles
- Minimize number of poles by consolidating utilties and signage

2

PEDESTRIAN REALM

"The measure of any great civilization is in its cities, and the measure of a city's greatness is to be found in the quality of its public spaces, its parks and squares."

John Ruskin
Creating a Vibrant City Center, 2004

2.1 Landscaping, Pedestrian Access, Walkways and Amenities

Well-planned pedestrian walkways complement and enhance streetscape function and appearance.

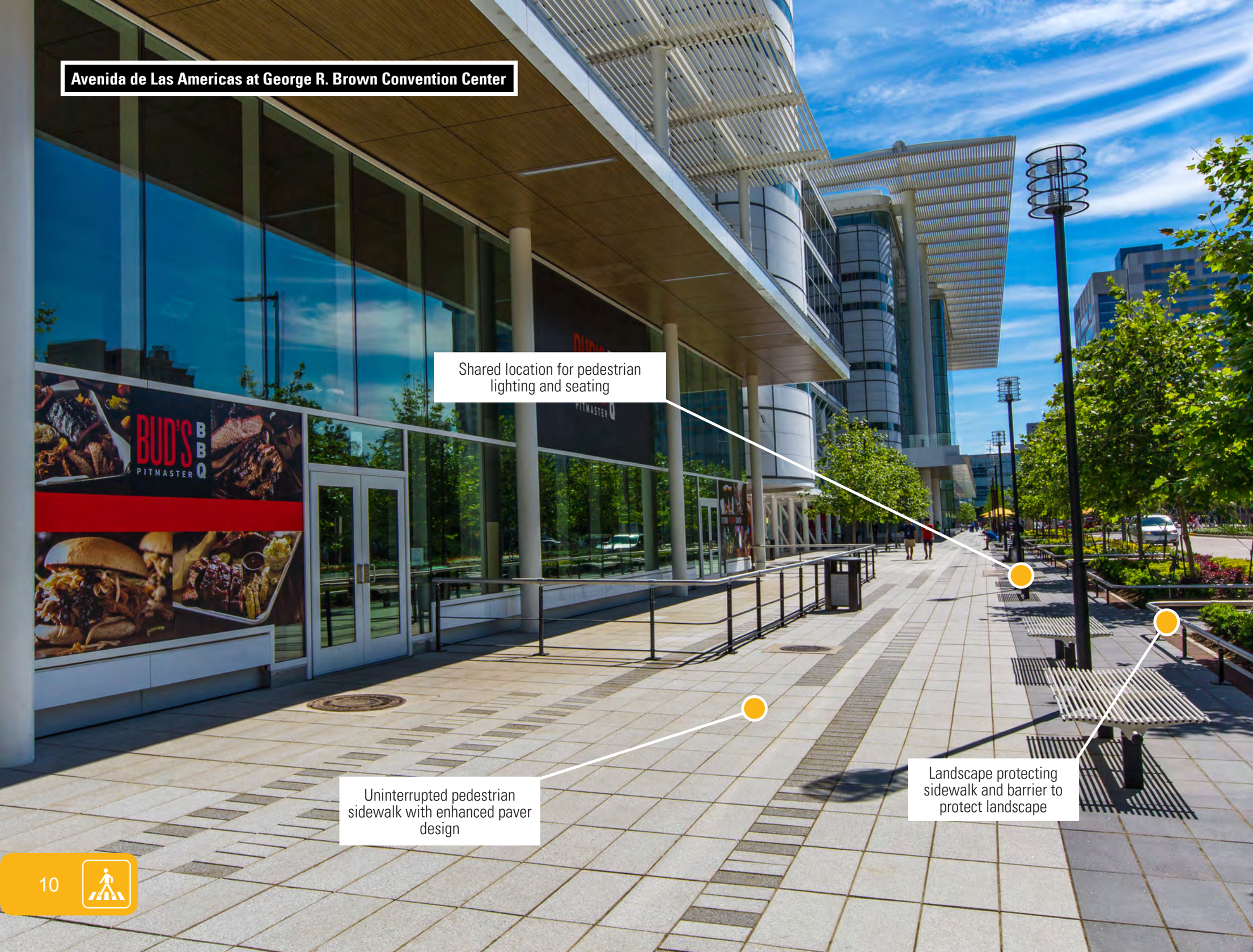
- Create a walkable environment
- Plan for pedestrian volume and activity
- Use pedestrian easements to increase pedestrian realm
- Coordinate pedestrian paths
- Improve access to transit vehicles
- Facilitate access to retail
- Create an enhanced sense of community
- Allow for street amenities such as benches, shelters, and trash receptacles to create a more inviting sense of place
- Improve safety
- Provide landscaping and street trees to:
  - supply shade
  - screen unsightly views
  - reduce stormwater runoff


Blodgett and Almeda
Decorative amenities
Landscaping and shading


West Alabama and Dunlavy
All underground and above ground utilities are within landscape area outside of walking path
Back of house utilities and dumpster enclosures are screened
H-E-B
FOOD · DRUG
1701
curbside


Kirby south of Kipling
Planting buffer between vehicles and pedestrians
Double row of shade trees provides enhanced pedestrian realm canopy


Bagby at McIlhenny
Shared pedestrian and vehicular lighting
Defined crosswalks for safety and mobility
Pedestrian site amenities
Uninterrupted pedestrian sidewalk


Avenida de Las Americas at George R. Brown Convention Center
Shared location for pedestrian lighting and seating
Uninterrupted pedestrian sidewalk with enhanced paver design
Landscape protecting sidewalk and barrier to protect landscape
BUD'S BBQ
PITMASTER

2.2 Lighting

Pedestrian-oriented lighting adds to overall streetscape safety and character.

- Improve visibility
- Increase the sense of personal safety
- Enhance streetscape character
- Coordinate with existing and proposed street trees to ensure continued illumination
- Direct light to pedestrian areas
- Reduce light pollution and interference with residential spaces


Avenida de Las Americas at George R. Brown Convention Center
Special light fixtures or art installations provide placemaking elements
At-grade lighting to limit the number of poles and vertical fixtures


Kirby at West Alabama
Tree located appropriate distance from light fixture — does not interfere/ obscure lighting
Vehicular lighting and seating amenity within landscape area rather than within sidewalk
Pedestrian light fixture appropriately located adjacent to sidewalk

2.3 Above-ground Utilities

Well-planned and coordinated placement of above-ground utilities creates a better organized streetscape and improved pedestrian access.

- Focus on above-ground utilities during the planning and early design phase of projects.
- Minimize the number of above-ground utilities where possible.
- Align utilities with street lights and street signs for aesthetic appeal.
- Locate above-ground utilities away from intersections.
- Verify correct utility placement during construction.
- Place above-ground utilities in landscape areas out of pedestrian pathway.
- Design for long-term maintenance of both underground and above-ground utilities.


McKinney at Austin
Existing utility poles used for signage
ONE WAY
Utilities and trees in alignment
Above-ground utilities located together in landscaped areas
Clear pedestrian access


Kirby at Bissonnet
Excessive accumulation of above-ground utilities
Duplicate fire hydrants unnecessary


Bering north of San Felipe
Obstructed line of sight for motorist exiting driveway
Inaccessible sidewalk
Poor planning and execution create problems for pedestrians
Doggy Do
Pet Waste Station

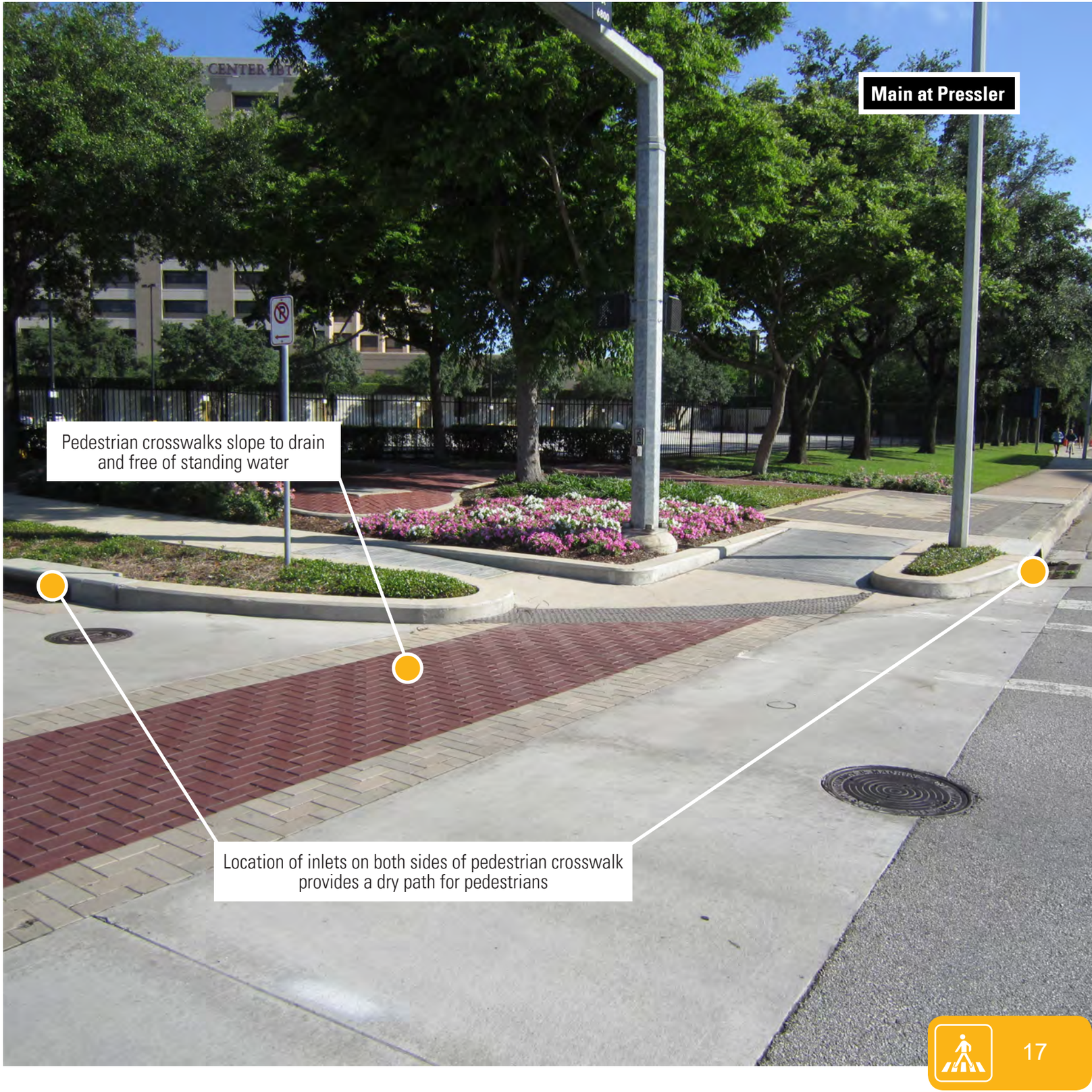
2.4 Drainage

Drainage improvements and low impact development strategies allow for an improved pedestrian experience. They divert runoff from pedestrian crossings and slow down and clean storm water before it reaches inlets that flow into the bayous and continue on to Galveston Bay.

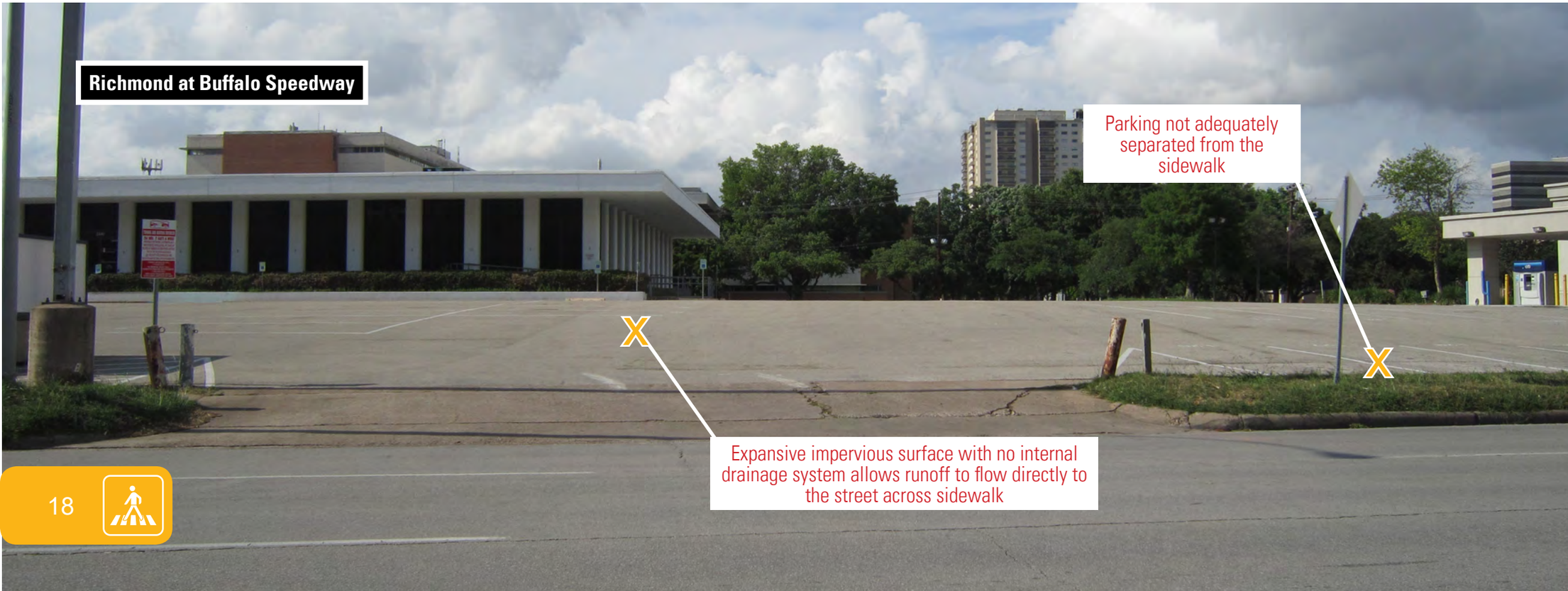
- Streets can employ low impact development methods:
  - Reduce impervious areas
  - Store stormwater: This can be done in a surface feature, such as a bioswale, or gravel storage underground
  - Consider permeable surfaces

Considerations for drainage inlets:

- Interrupt stormwater flows. Impervious surfaces like driveways and sidewalks can drain through a vegetated buffer such as a median before they reach a stormwater inlet. This filters out some pollutants before they reach the storm sewer
- Avoid sheet flow across sidewalks, down pedestrian ramps, and in the bicycle travelway
- Design site detention storage to meet relevant safety criteria for pedestrians
- Install internal drainage to allow drainage directly to the street, avoiding pedestrian areas




Bagby prior to reconstruction
Inlet location results in drainage flowing across pedestrian path
Gutter slope too flat, results in debris collection


Richmond at Buffalo Speedway
Parking not adequately separated from the sidewalk
Expansive impervious surface with no internal drainage system allows runoff to flow directly to the street across sidewalk


Mandell Park along Bonnie Brae
Utilities and lighting away from pedestrian pathway
Drainage swales and inlets within landscape to collect and slow water runoff


Richmond west of Edloe
Drainage placement avoids walkway and curbs
Adequate slope (max 2%) prevents accumulation in pedestrian path
BUILDINGS
8 & 12
P
Driveway trench at base of slope captures runoff

2.5 Signage

An improved streetscape should include a coordinated system of directional and informational signage that is aesthetically pleasing, consistent and appropriately located. Signage should:

- Offer direction to key area destinations
- Consolidate and group directional, regulatory and informational signage
- Place outside of pedestrian pathways
- Avoid obstructing motorist views


Washington near Henderson
Consolidation of signs would avoid unnecessary sign clutter
WELLHEAD PROTECTION AREA
FOR INFO CONTACT
CITY OF HOUSTON
WATER PRODUCTION
(713) 226-4497
SHARE THE ROAD
ONLY
Sign pole obstruction blocks pedestrian or wheeled access


Smith at Rusk
Convention District
Discovery Green
Toyota Center
Second Signal
City Hall
Central Library
Allen Center
Midtown
800 SMITH
City Hall
Julia Ideson Library
Central Library
Allen Center
Sam Houston Park
Tranquillity Park
Hobby Center
Provide a comprehensive style of signage and wayfinding throughout individual districts
Ensure sign poles are outside of pedestrian walkways


Bagby at Walker
GBY & WALKER
Hobby Center
Sabine Promenade
Buffalo Bayou Park
Downtown Aquarium
Theater District
Bayou Place
City Hall Annex
Sam Houston Park
Central Library
City Hall
45 NORTH
Dallas
Allen Pkwy
Overall signage character coordinating throughout the district
Utilities incorporated within hardscape without blocking pedestrian walks


White Oak Bayou at Heights
BAYOU GREENWAYS
RULES & REGULATIONS
Park Hours: Dawn to Dusk
Glass containers are prohibited.
Alcoholic beverage consumption is prohibited.
Dumping and littering is prohibited.
Use trash receptacles.
Improperly parked vehicles will be towed.
Smoking is prohibited.
Ordinance 2006-1054, Section 21-243
Vending or sales are prohibited without a permit.
Hunting or use of firearms is prohibited.
Swimming in the bayou is prohibited.
Dogs are to remain on leash at all times.
Pet owners are required to pick up after pets.
Ordinance 2003-1275, Section 6-24
Plants & animals are protected.
Do not remove or molest.
Control noise levels.
Please be respectful of others.
Destroying public property is prohibited.
Title 19, Chapter 191 of the Government Code of Texas
BAYOU GREENWAYS
houston PARKS
Enjoy the bayou
STOP

2.6 Transit

Optimally designed and implemented transit stops benefit transit users, pedestrians, bicyclists, and automobile users. Transit system success is heavily dependent upon a transit stop's ability to accommodate transit users without unnecessarily interrupting the flow of pedestrians or bicyclists on nearby sidewalks and bike paths or vehicles using the street. Well-designed transit stops will plan for:

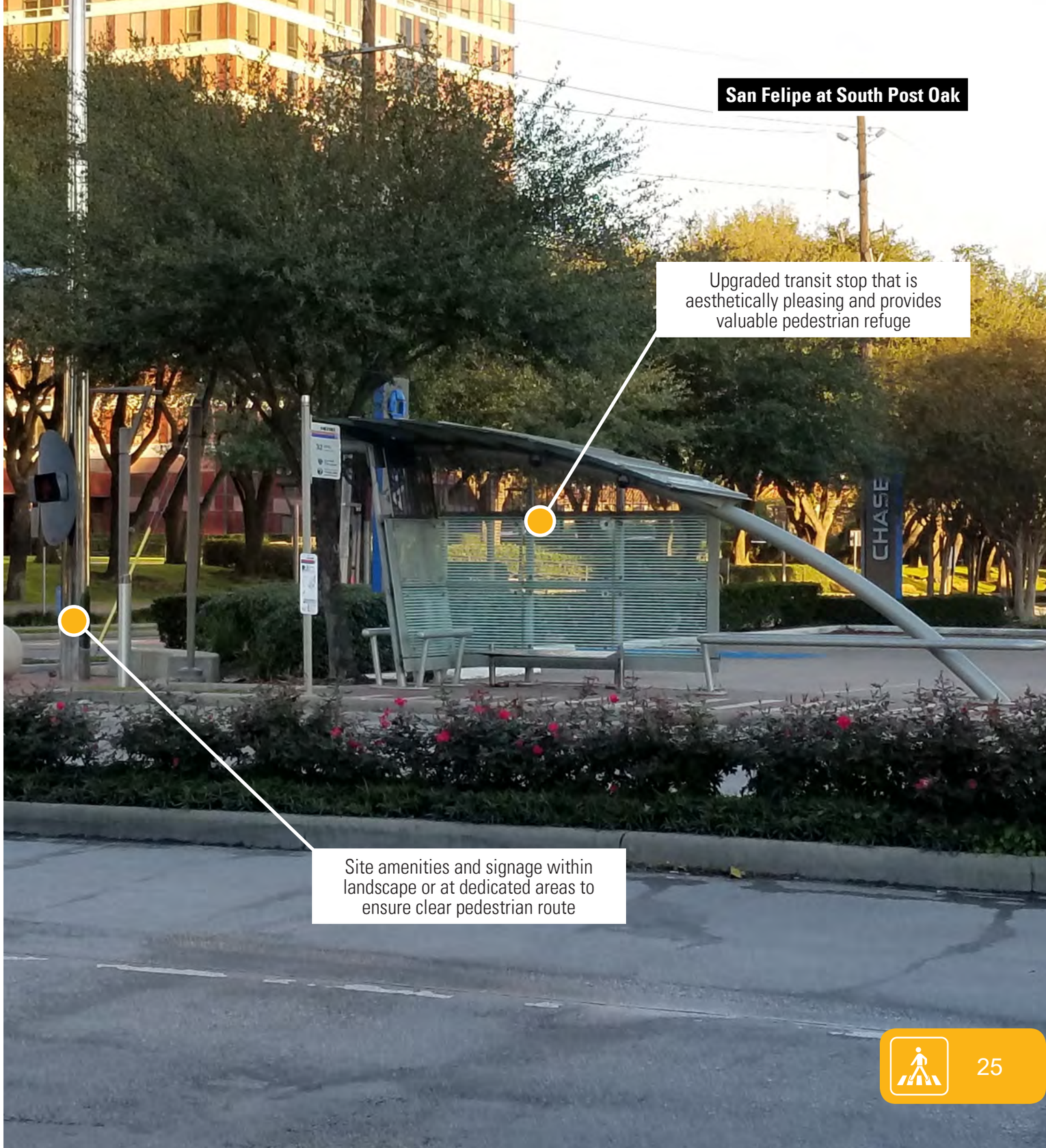
Comfort
- Shelter from rain, wind, cold, heat, sun, and shade — one size does not fit all; the shelter is designed to the specific area
- Provide adequate visibility and lighting to create social safety
- Design to encourage cleanliness by providing trash receptacles and regular maintenance
- Provide a bench or leaning rail, space for a wheelchair, strollers and walkers

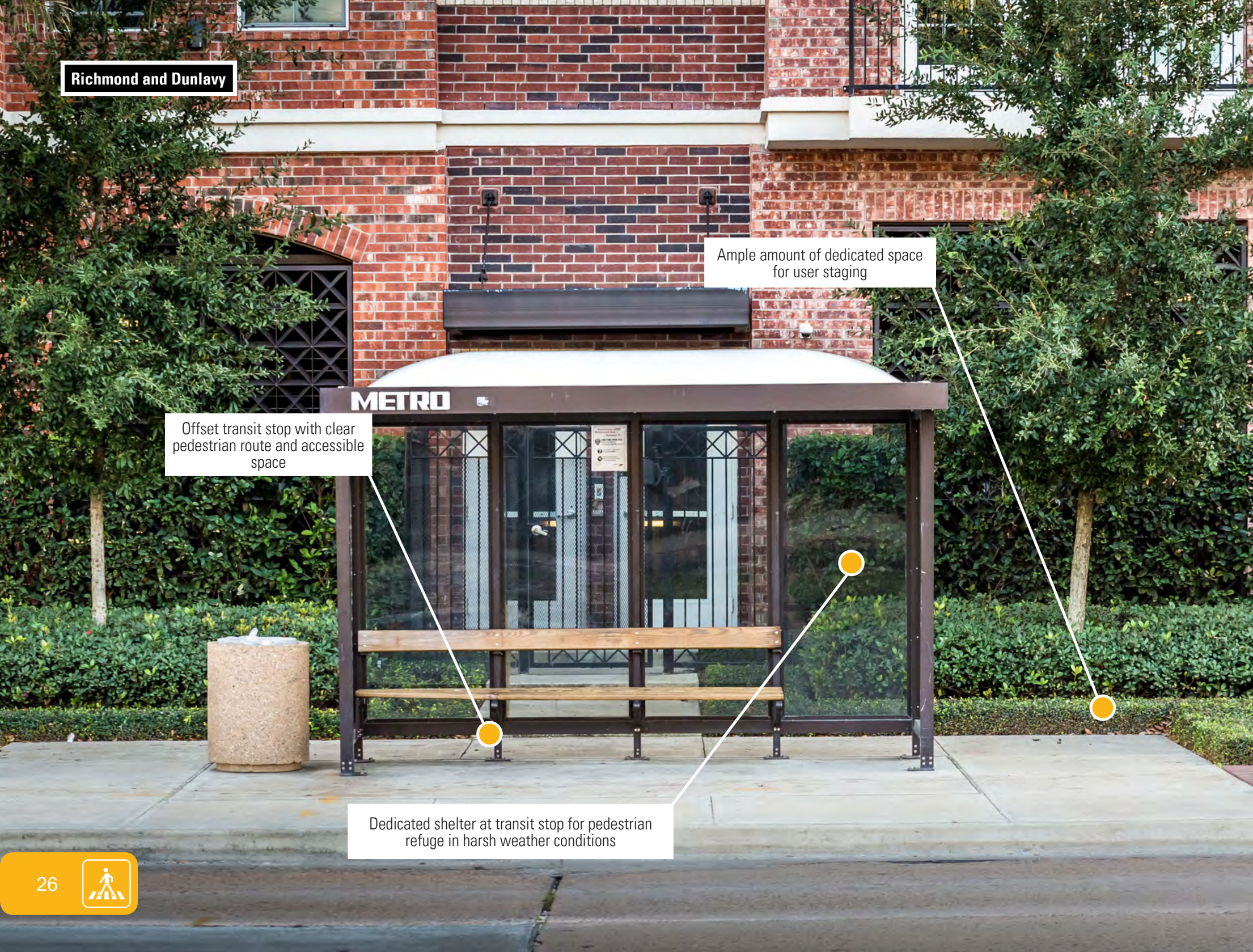
Capacity
- Size for ridership and boarding needs
- Design for line management determined by ridership and boarding timing

Access/Placement
- Consider ADA accessibilty standards are met as a minimum
- Ensure adequate pathways so shelter does not interfere with pedestrian or bicycle facilities
- Provide unobstructed boarding areas
- Supply parking for bicycles

Critical Information and Wayfinding
- Provide signage include the following information
  - Stop name and number
  - Route number, direction and destination
  - System logo
  - Nearby points of interest
  - Real time displays and wait times

Aesthetics
- Include Landscaping and green elements
- Consider signature stop designs and public art




Richmond and Dunlavy
Ample amount of dedicated space for user staging
METRO
Offset transit stop with clear pedestrian route and accessible space
Dedicated shelter at transit stop for pedestrian refuge in harsh weather conditions

2.7 Path to Steet/Sidewalk Connections

Providing a path to sidewalk and street connections allows pedestrians and bicyclists to access green space and provides alternate travel paths to reach destinations. By providing appropriately designed connections, pedestrians and bicyclists have a safe path that they are likely to use where they feel comfortable.

Well-designed connections include:

- Uninterrupted continuous pathways
- Well-marked intersections
- Separation from vehicles using underpasses or bridges
- High visibility
- Pedestrian and bicycle refuge on large streets
- Reduced traffic speed at junctions
- Adequate lighting
- Trash receptacles
- Bicycle and automobile parking when appropriate
- Wayfinding signage
- ADA compliance as a minimum
- Maintenance planning

Montrose and Allen Parkway

All utilities placed within adjacent landscape to keep pedestrian paths clear

Public art used at connection locations helps with placemaking

Clear access points and connections to pedestrian walks and trails

2.8 Bike Facilities

Optimally designed and implemented bike systems benefit transit users, pedestrians, bicyclists and automobile users. Bike system success is dependent upon the ability to accommodate bike parking facilities and bicycle users without unnecessarily interrupting the flow of pedestrians on nearby sidewalks or vehicles utilizing the street.

Characteristics of a good bike parking system:

Comfort
- Cleanliness — plan for regular maintenance, trash bins
- Safety — adequate lighting and visibility

Capacity
- Number of bicycle facilities and size determined by current and future users

Access/Placement
- Provide easy access to pedestrian, transit or vehicular traffic
- Unobstructed
- Avoid interference with pedestrian, transit and vehicular traffic

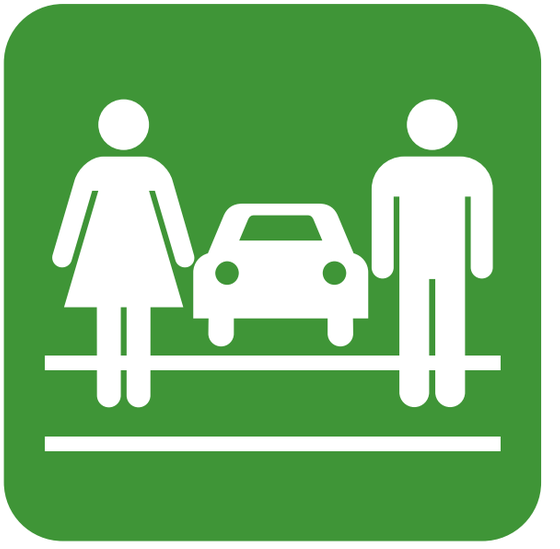
Provide Critical Information and Wayfinding
- Location name
- Nearby points of interest

Aesthetics
- Landscape and green elements
- Public art
- Signature facility designs


Crawford and Walker B-Station
Clear directional and information signage located near gathering spaces and bicycle stations
Clear access points and connections from bicycle parking and pedestrian walks
CRAWFORD & WALKER
Discovery Green
Shopping District
Toyota Center
Root Memorial Square
Main Street Square
City Hall
Theater District
Convention Center
Visitor Center
East Downtown
BBVA Compass Stadium
CRAWFORD & WALKER
Convention Center
Visitor Center
Discovery Green
Shopping District
Toyota Center
HSPVA
Minute Maid Park
East Downtown
BBVA Compass Stadium
Theater District
Historic District
B
713-880-9700


Memorial City near Gaylord
Provide map of accessible routes, bicycle lanes and parking locations
BICYCLE PARKING
Provide bicycle racks near pedestrian corridors and walkways

3



SHARED REALM

"Streets and their sidewalks, and the main public places of a city, are its most vital organs "

Jane Jacobs
Death and Life of Great American Cities, 1961

3.1 Underground Utilities

The organized placement of underground utilities will yield an unobstructed pedestrian realm, a more pleasing overall streetscape experience and can simplify future maintenance and improvements.

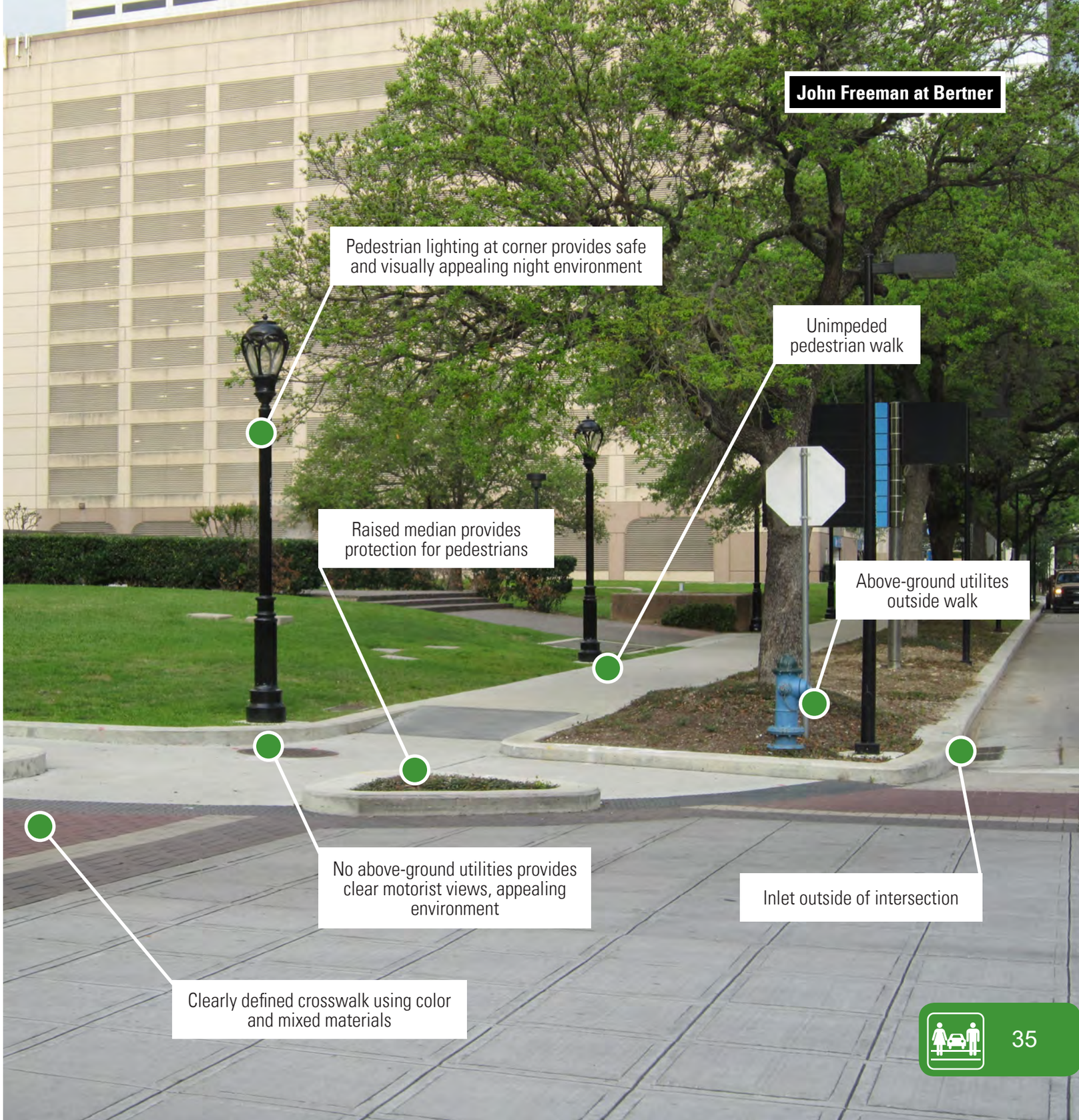
- Coordinate the design of hardscape and utilities.
- Sidewalks should be free of impediments such as inlets and above ground utilities.

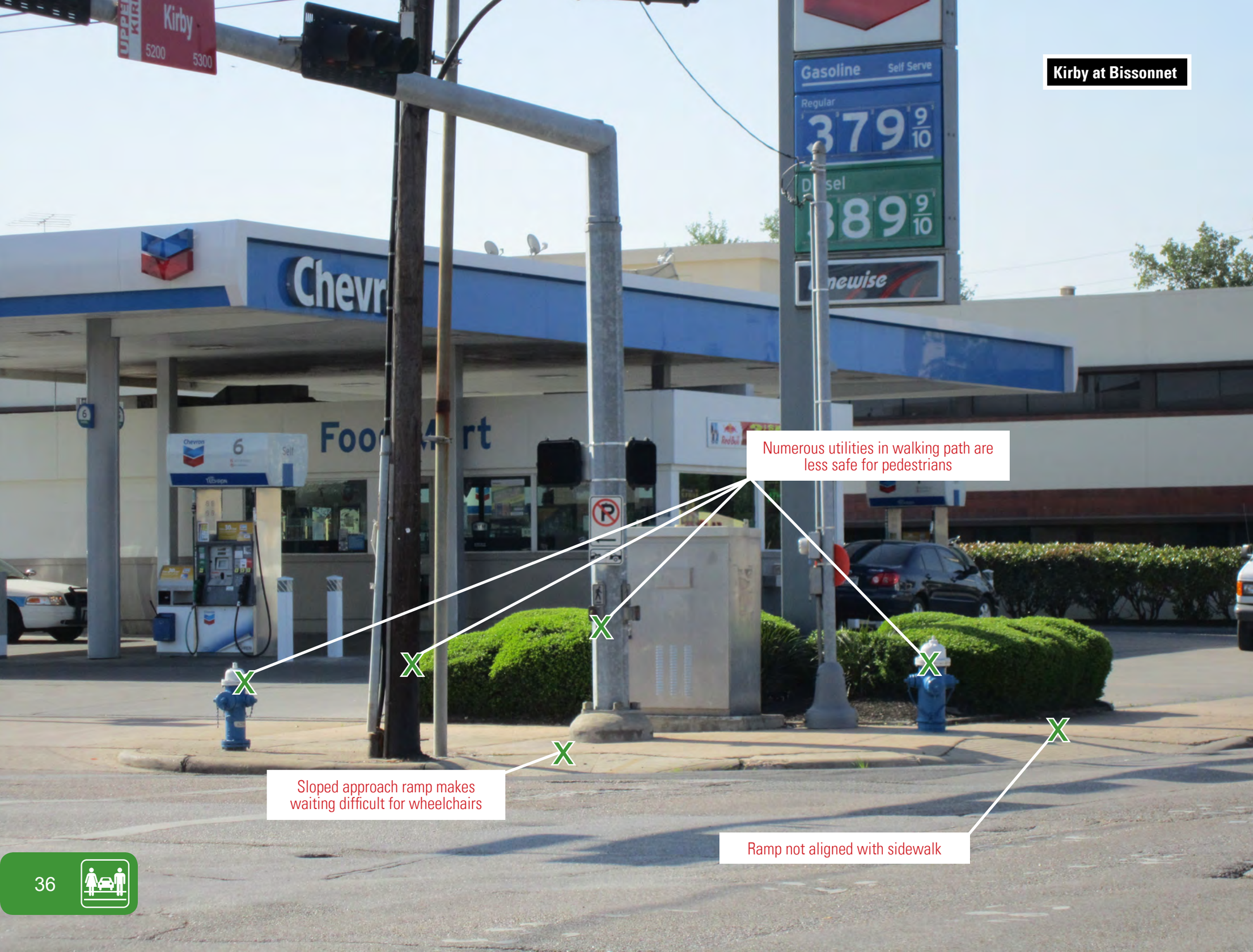

Kirby at Kipling
Easy access to pedestrian signal buttons
Collecting drainage behind street corners keeps sidewalk and ramps dry and clean and filters water by passing it across a vegetated buffer
Flat staging for pedestrians provides comfortable waiting position
Sidewalk aligned with crosswalk facilitates pedestrian/wheeled access
THE BANK OF RIVER OAKS

3.2 Intersections

Visibility is important at street corners where pedestrian activity is often concentrated.

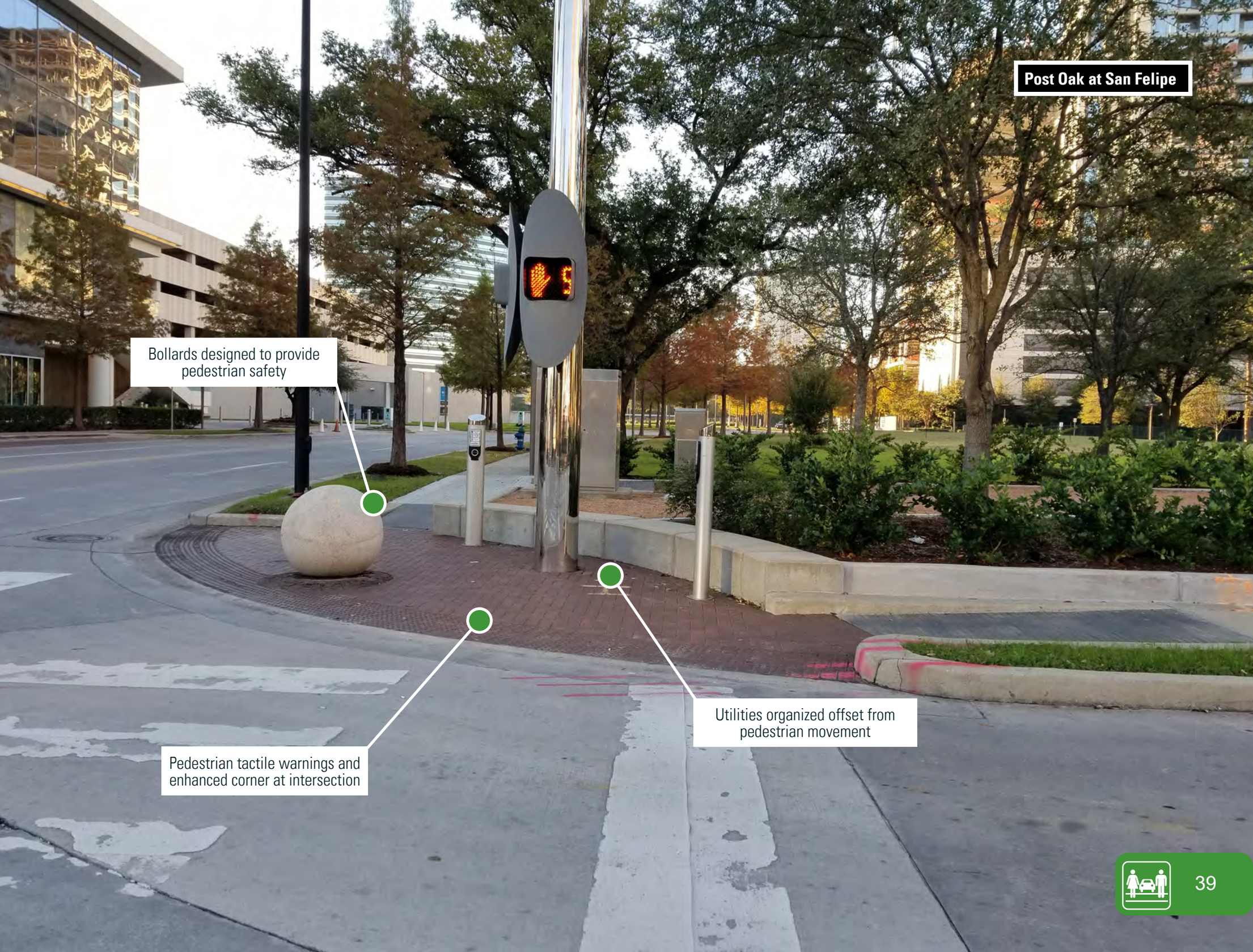
- Place utilities away from intersections and out of visibility triangles
- Show locations of utilities on construction and installation drawings and consider their locations during the design phase
- Verify correct utility placement during construction
- Provide easy access to pedestrian signal buttons
- Provide aligned crosswalk paths and flat staging for pedestrian / wheel access and comply with all ADA requirements
- Keep current and future needs in mind
- Provide refuge areas for pedestrians
- Plan for visibility for pedestrians, cyclists and cars




Kirby at Bissonnet
Numerous utilities in walking path are less safe for pedestrians
Sloped approach ramp makes waiting difficult for wheelchairs
Ramp not aligned with sidewalk
Kirby
5200
5300
Gasoline
Self Serve
Regular
379 9/10
Diesel
389 9/10


West Gray at Bagby
Gray
400
300
ONE WAY
POST
MIDTOWN SQUARE
Provide protection for pedestrians
Keep lighting and utility poles away from pedestrian walk and crossings

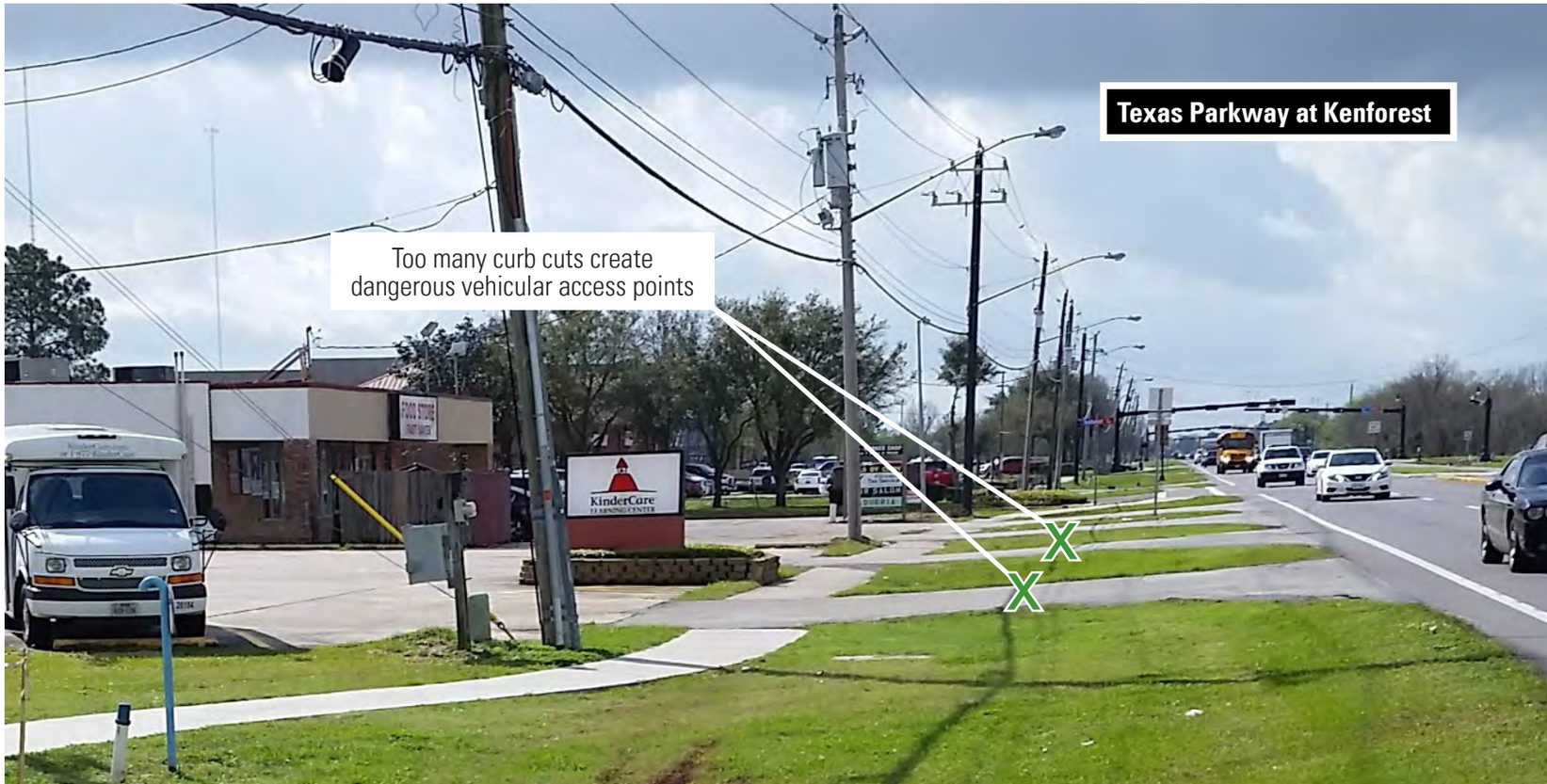

Bagby at Pierce
Ensure pedestrian safety at intersections and crossings
Incorporate bicycle parking and refuge along with public art
Ensure all above-ground utilities outside of pedestrian walkways


Post Oak at San Felipe
Bollards designed to provide pedestrian safety
Pedestrian tactile warnings and enhanced corner at intersection
Utilities organized offset from pedestrian movement

3.3 Shared Curb Cuts

Curb cuts should be minimized to reduce pedestrian and vehicle crossings. This also creates a more attractive pedestrian realm and facilitates smooth flow of all traffic with greater opportunities for landscaping.

- Minimize curb cuts
- Provide visual and tactile cues to warn pedestrians about vehicle crossings



Streetscapes can be more sustainable by supporting habitat, helping to manage stormwater with natural features, and using resources responsibly.

- Use native plants and minimize the use of turf grass. Turf grass requires more water, fertilizer, and carbon-intensive maintenance than native planting.
- Plant trees. Trees absorb stormwater, make the sidewalk safer and more comfortable for pedestrians, reduce heat island effect, and clean the air of carbon dioxide.
- Use light fixtures that minimize light pollution. Light should be directed down toward surfaces needing light. This helps preserve the night sky and nocturnal habitat.


Mandell Park along Richmond
Use of native plants within right-of-ways, planting areas or adjacent property minimizes water use

4

TRAVELWAY REALM

"While vehicular access and parking must be convenient and efficient, it is important to give the pedestrian clear priority in order to encourage walking and enliven the streets. "

Cy Paumier
Creating a Vibrant City Center, 2004

4.1 On-Street Parking

There are many design options for on-street parking:

- Parking on outside edge of wide lane
- Parallel parking in separate lane
- Angled parking
- Head-in parking

Streetscape elements near on-street parking have a significant impact on the safety and quality of the parking. Some of these items include:

- Drainage
- Streetlights
- Pedestrian lights
- Burned out bulbs
- Visibility when backing out

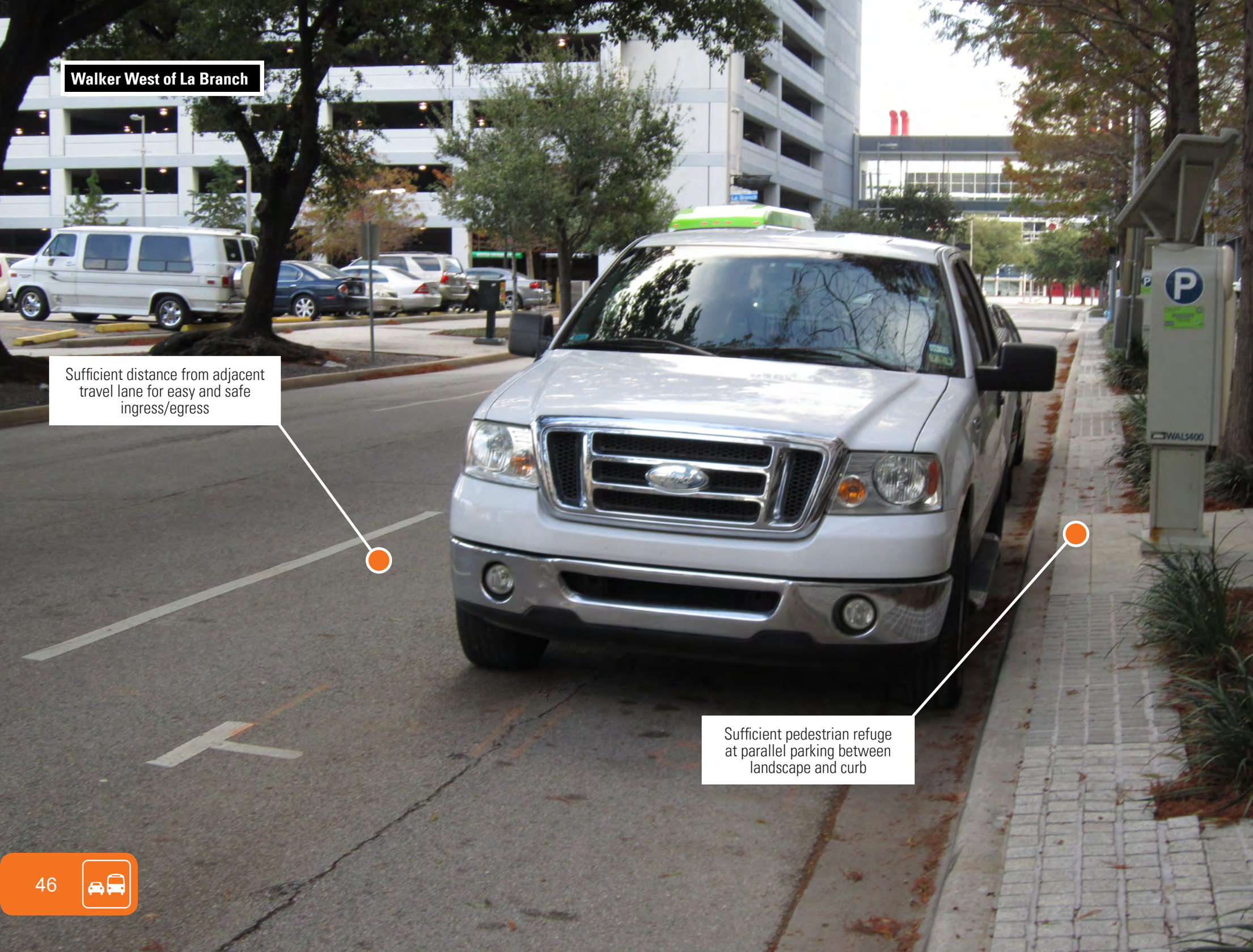
Provide an adequate distance from intersections to the first on-street parking space in order to assure visibility and appropriate sight lines.

Provide adequate access to pedestrian pathways.

Provide sufficient distance from travel lanes for safe ingress / egress.

Consider landscape separation from vehicular traffic.

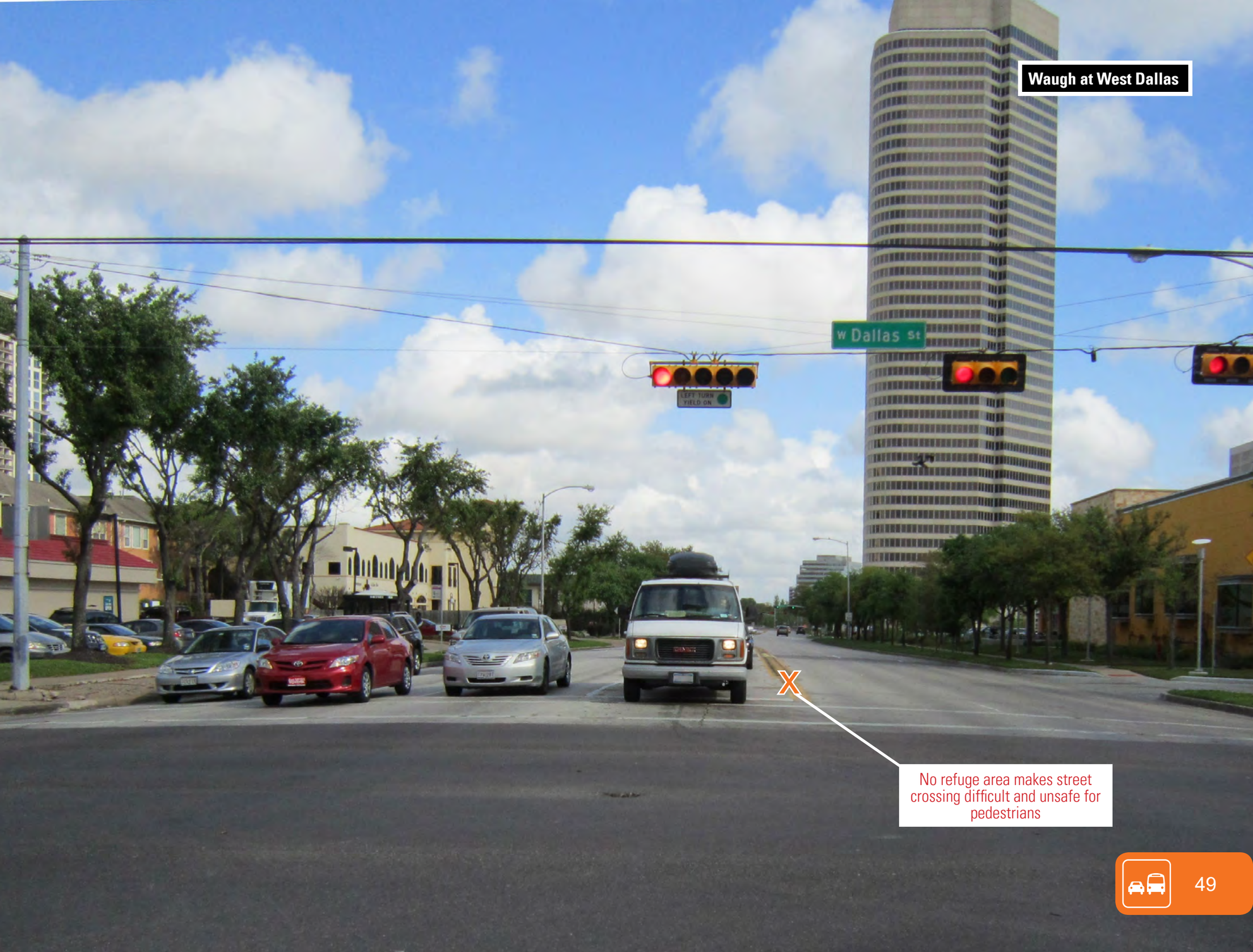

Timberloch Place at Woodlands Pkwy.
Pavers extended to curb between trees allow direct access from vehicle to sidewalk
Gutter on street side of parking space helps define parallel parking area
Parallel parking with handicap ramp incorporated in sidewalk and parking space


Walker West of La Branch
Sufficient distance from adjacent travel lane for easy and safe ingress/egress
Sufficient pedestrian refuge at parallel parking between landscape and curb


Bagby South of West Gray
Sufficient space for easy ingress/egress between buffer landscape
Drainage rain garden near street parking spaces improves aesthetic design

Roadway medians can offer benefits for pedestrians, cyclists and automobile traffic.

- Separate lanes of opposing traffic
- Provide a space to incorporate trees and landscaping, which helps to clean and store stormwater
- Offer refuge to pedestrians and bikers crossing wide streets


Waugh at West Dallas
w Dallas st
LEFT TURN YIELD ON
X
No refuge area makes street crossing difficult and unsafe for pedestrians


Gessner South of Interstate 10
Provide clear separation for pedestrian walk and major roadway
Landscaped areas reduce water run off and are aesthetically pleasing


Grisby at Westlake Park
Safe refuge within medians to provide pedestrian safety
Defined pedestrian walks through vehicular drive lanes
Drainage gutters away from pedestrian walks and vehicular intersection

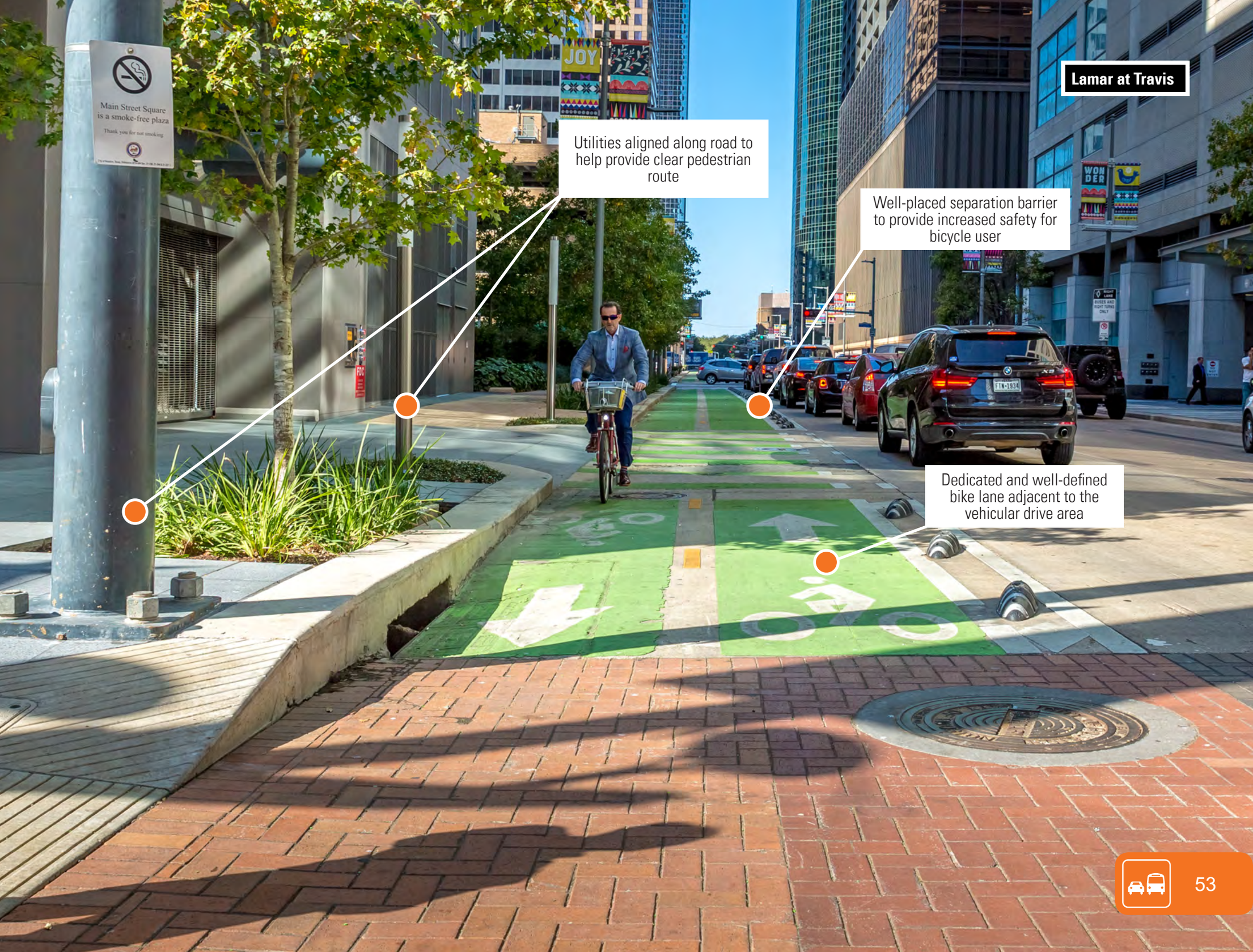
4.3 Bikeway

Well-designed bikeway facilities provide a number of benefits. High-comfort bikeways encourage people to use bicycles for transportation. Optimally designed bike lanes increase the safety of both bicyclists and motorists and recent studies show that bike lanes lead to increases in business in an area. Separated bike lanes allow bicycles to travel at appropriate speeds, facilitate safe behavior for both bicyclists and motorists, and may provide an additional buffer between vehicles and pedestrians.

It is critical to identify appropriate streets for bikeways.

Well-designed bike travel facilities include:

- A separated bike lane when the speed of cars is greater than 30 mph
- A minimum width of 6'
- Good connectivity
- Intersections designed for the safety of bicyclists, pedestrians and vehicular traffic
- Appropriately designed bike staging areas at intersections
- Adequate lighting
- Adequate sight lines
- Adequate lane marking
- Good wayfinding information


Lamar at Travis
Utilities aligned along road to help provide clear pedestrian route
Well-placed separation barrier to provide increased safety for bicycle user
Dedicated and well-defined bike lane adjacent to the vehicular drive area
Main Street Square is a smoke-free plaza
Thank you for not smoking
JOY
WONDER

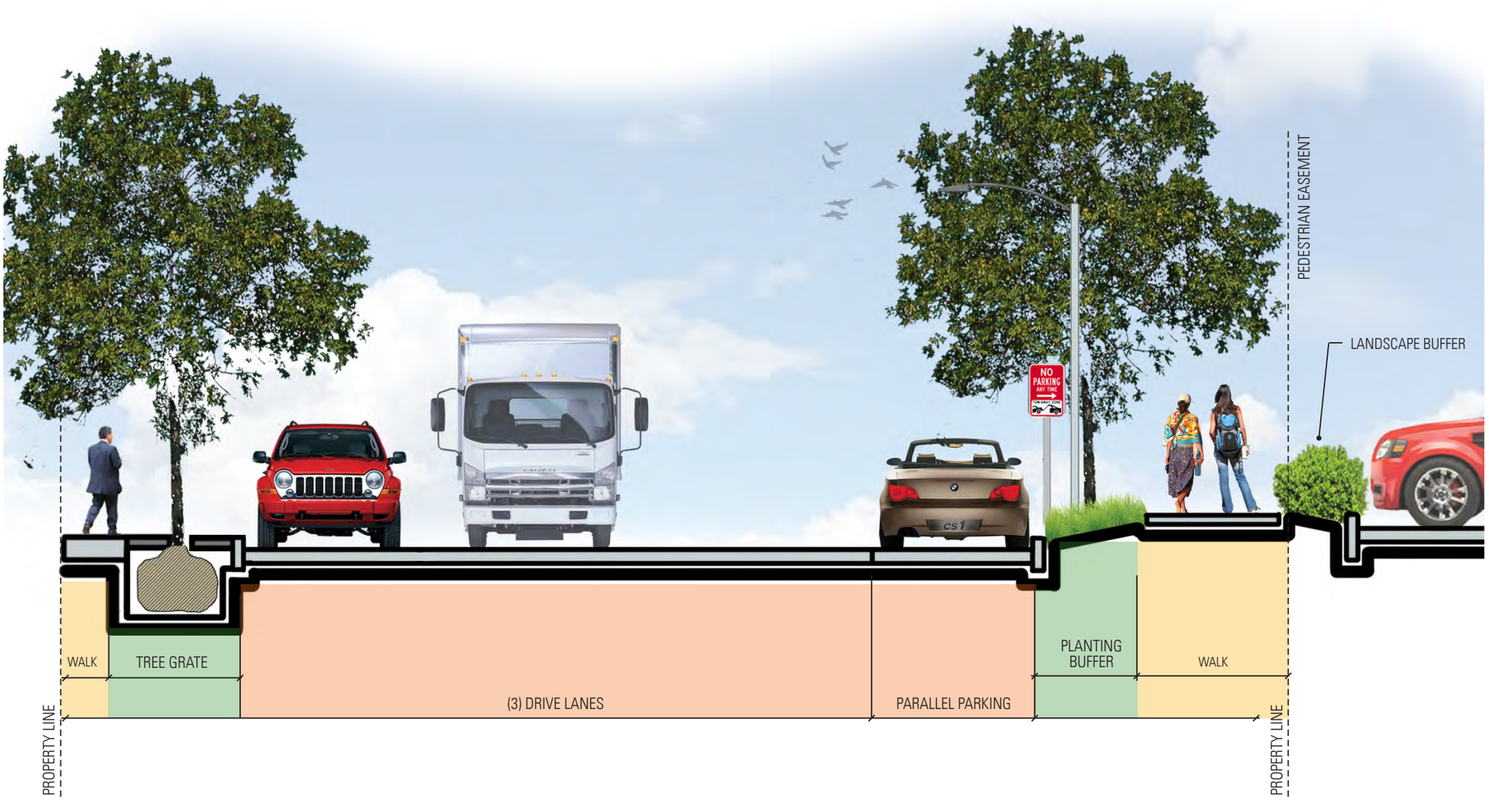
5

STREETSCAPE: CROSS-SECTIONS AND DETAIL

"The city center's most important public spaces are its streets — the space from building front to building front, including street pavement. Because of their visibility, streets can play a powerful role in building a positive, unified city image."

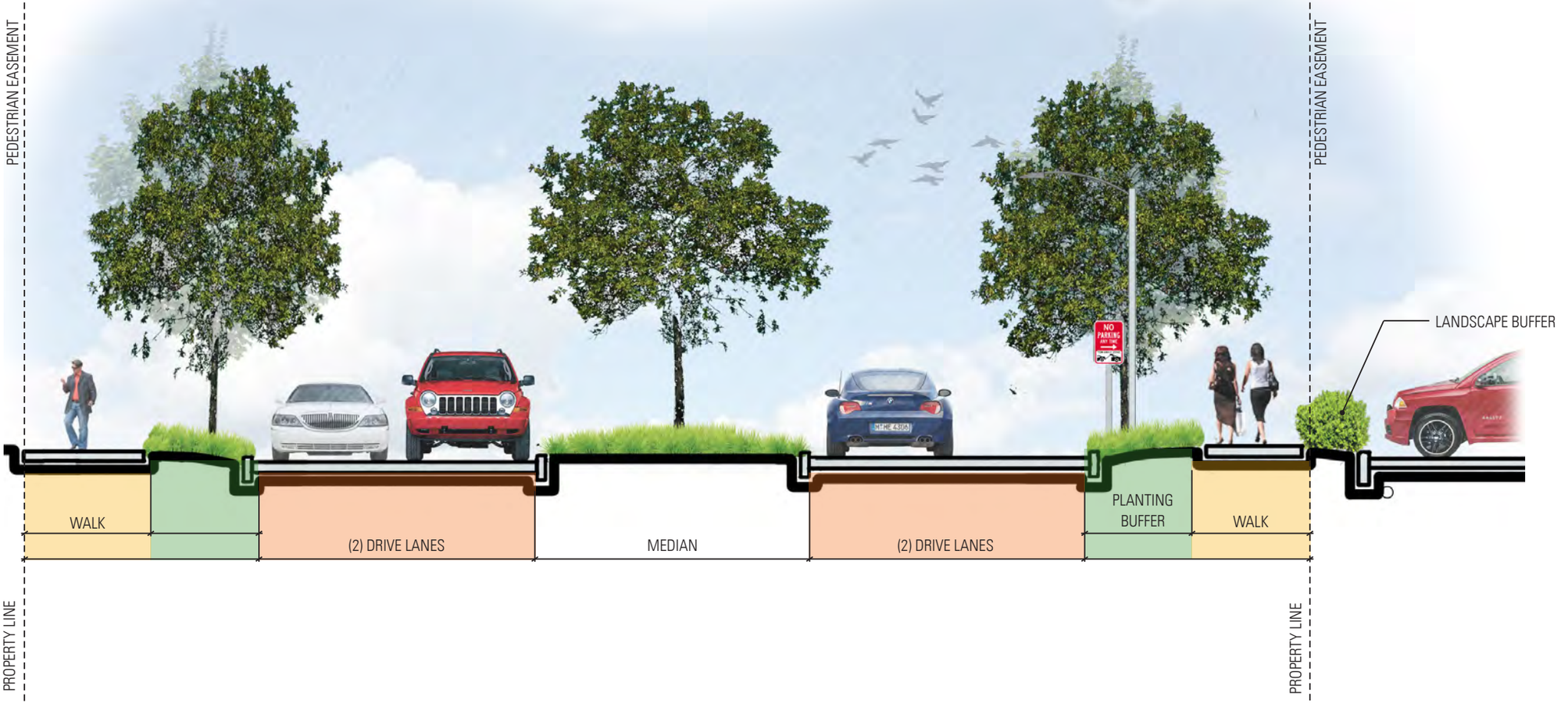
Cy Paumier
Creating a Vibrant City Center, 2004

5.1 Recommended Right-of-Way Section 60' Right-of-Way

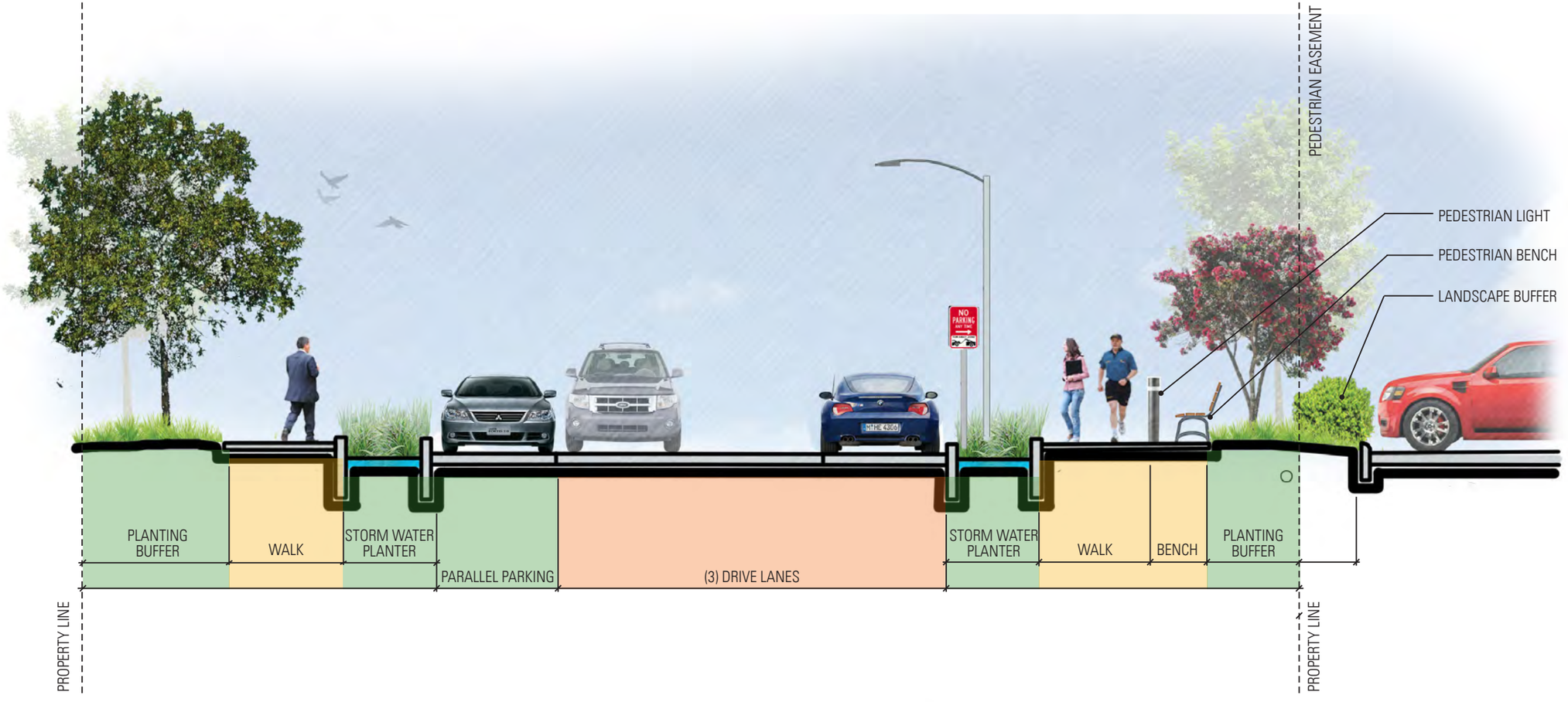


The intent is to provide more pedestrian space on the edge of the right-of-way in the areas of wider sidewalks, more space to plant street trees and screening shrubs, as well as providing an alignment and consolidation of above-ground utilities and street signage. This can be accomplished by reducing median widths and moving that area to the edge of the right-of-way as well as suggesting sidewalk easements on adjacent properties where the right-of-way is limited in size.

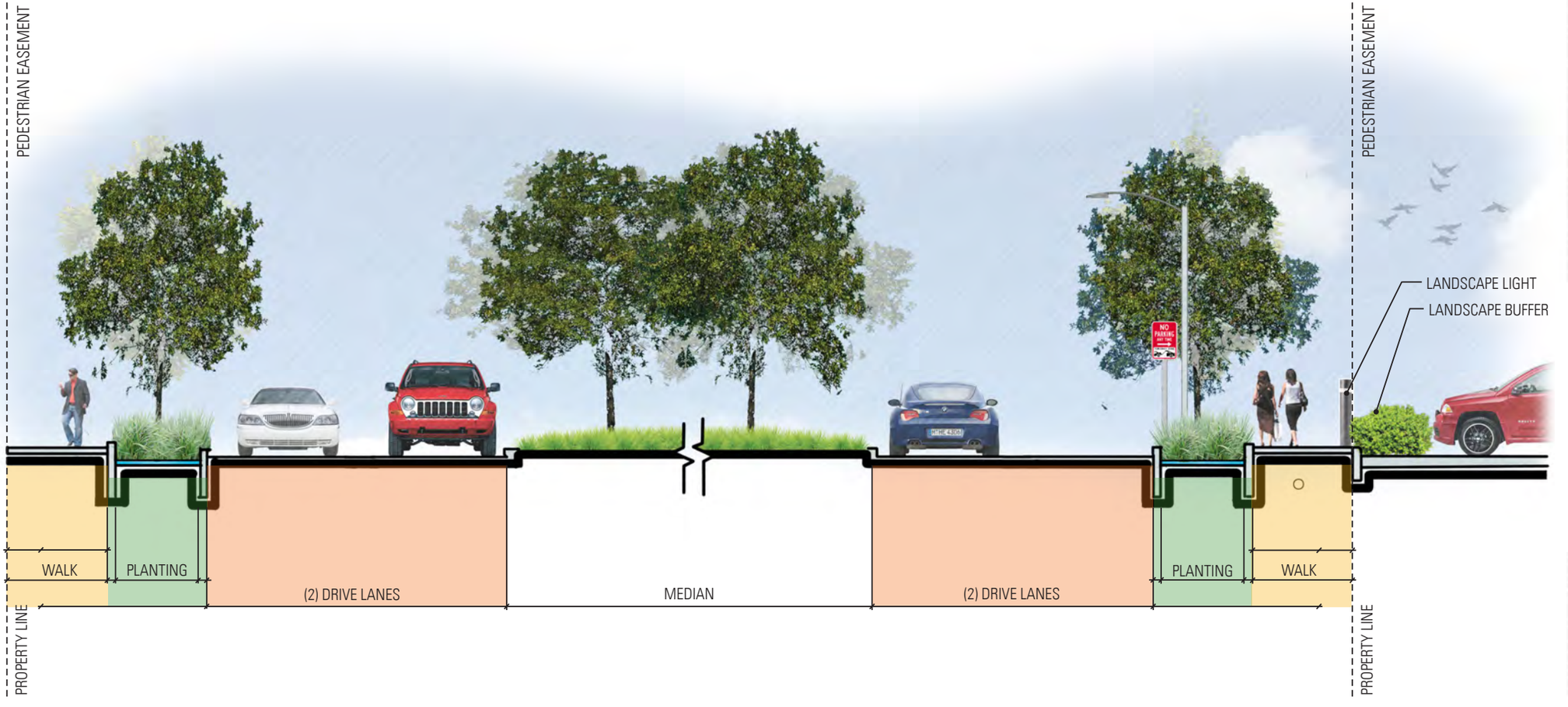
5.2 Recommended Right-of-Way Section 80' Right-of-Way



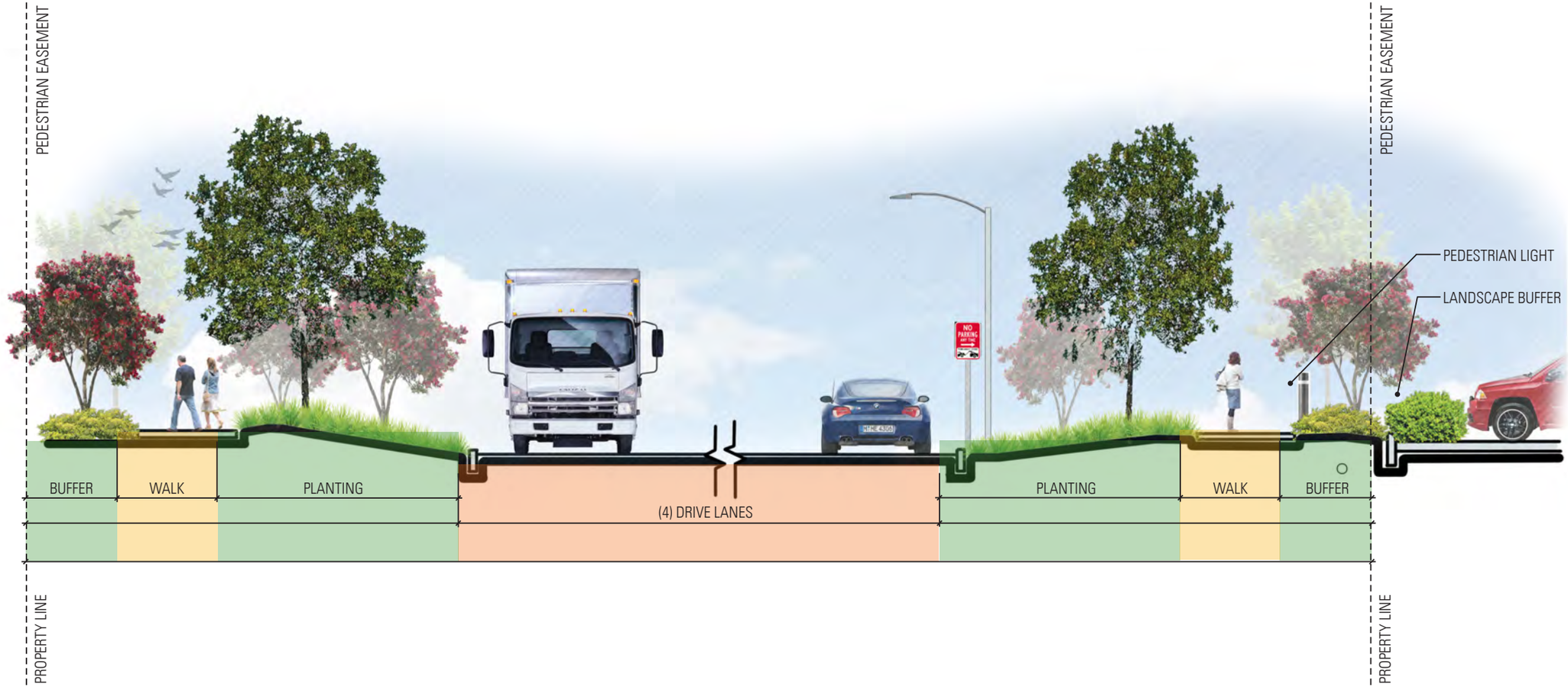
5.2 Recommended Right-of-Way Section 80' Right-of-Way



5.3 Recommended Right-of-Way Section 100' Right-of-Way



5.3 Recommended Right-of-Way Section 100’ Right-of-Way



6

"Human will can be imposed effectively on our cities so that the form they take expresses the highest aspirations of our civilization. ... Building cities is one of man's greatest achievements. ... A city's physical form is determined by the decisions made by the people who live in it."

Edmund Bacon
Design of Cities, 1967

6.1 Existing City of Houston Streetscape Controls

The existing codes and guidelines that govern streetscape development in the City of Houston are outlined in the adjacent chart.

Primarily, streetscape development is governed by City of Houston Ordinances and the City of Houston Infrastructure Design Manual. Additional input on select elements is provided in the City of Houston Code and State and Federal documents such as the Manual on Uniform Traffic Control Devices (MUTCD) and the AASHTO Policy on Geometric Design of Highways and Streets.

The Streetscape Resource Guide is included as a reference in the City of Houston Infrastructure Design Manual.

Streetscape Controls		Governed By		
		City of Houston Ordinance	City of Houston Code	City of Houston Design Guideline/Criteria
Pedestrian Realm	Building Line/Setback	Ch. 42		
	Landscape Buffer at R-O-W • Trees • Shrubs	Ch. 33		
	Sidewalk • Width, Pattern • Accessibility	Ch. 40 Ch. 42		Ch. 10
	Public Amenities • Furniture (Benches, Trash Receptacles, Bicycle Racks) • Public Art • Storefront Shade/Awnings/Canopies	Ch. 40 Ch. 42		
	Landscape Planting • Trees • Planters • Plants	Ch. 33 Ch. 42		
	Street Lighting	Ch. 40		Ch. 15
	Above-ground Utilities • Traffic Signal Poles • Pedestrian Push Button Poles • Traffic Control Boxes • Utility Junction Boxes • Utility Appurtenances (Fire Hydrants, Water Valves, etc.)	Ch. 37		Ch. 6 Ch. 15
	Drainage • Roof Drains • Bioswales	Ch. 47		Ch. 9
	Signage	Ch. 46		Ch. 15 Ch. 16
Shared Realm	Underground Utilities • Water Line • Wastewater Collection (Sanitary Sewer) • Storm Water	Ch. 47		Ch. 6-9
	Bikeways			
Travelway Realm	On-Street Parking	Ch. 26		
	Street Paving • Curbs (Type, Width & Height) • Pavement (Type, Thickness & Width)	Ch. 40 Ch. 42	Ch. 31	Ch. 10[5]
	Street Cuts	Ch. 40	Ch. 31	Ch. 12
	Medians • Geometry	Ch. 40 Ch. 42		Ch. 10
	Landscape in Medians	Ch. 33 Ch. 42		
	City of Houston CIP	www.houstontx.gov/cip		

6.2 Streetscape Resource Guide Design Checklist: a tool to guide stakeholder engagement

		Yes	No	Comments
2.0 PEDESTRIAN REALM	**1. Landscaping, Pedestrian Access, Walkways and Amenities**			
	1.1 Encourage walkability			
	1.2 Plan for pedestrian volume and activity			
	1.3 Use a pedestrian easement to increase pedestrian realm			
	1.4 Coordinate pedestrian paths • Plan for transit access • Plan for access to retail			
	1.5 Create an enhanced sense of community			
	1.6 Provide landscaping and street trees to • Supply shade • Screen unsightly views • Reduce stormwater runoff			
	2. Lighting			
	2.1 Provide appropriate light fixtures placement and spacing for pedestrian walkways and seating • Improve visibility • Increase the sense of personal safety • Enhance streetscape character • Coordinate with existing and proposed street trees to ensure continuous illumination • Direct all lights to pedestrian areas to prevent light pollution			
	2.2 Allow for street amenities such as benches, shelters, and trash receptacles to create a more inviting sense of place			
	2.3 Improve safety			
	3. Utilities			
	3.1 Focus on above-ground utilities during the planning and early design phase of projects			
	3.2 Minimize the number of above-ground utilities where possible			
	3.3 Align utilities with street lights and street signs for aesthetic appeal			
	3.4 Place above-ground utilities in landscaped areas out of pedestrian pathways			
	3.5 Verify correct utility placement during construction			
	3.6 Design for long-term maintenance of both underground and above-ground utilities			

		Yes	No	Comments
2.0 PEDESTRIAN REALM	**4. Drainage**			
	4.1 Design for low impact when possible • Reduce impervious area • Store stormwater • Use permeable surfaces where appropriate			
	4.2 Consider drainage inlets • Avoid sheet flow across sidewalks, down pedestrian ramps and in bicycle travelway • Design site detention storage to meet relevant safety criteria for pedestrians • Install internal drainage to allow drainage directly to the street to avoid pedestrian areas			
	5. Signage			
	5.1 Provide direction to key area destinations			
	5.2 Directional, informational and regulatory signage should be consolidated and grouped			
	5.3 Place signage outside of pedestrian pathways			
	5.4 Avoid obstruction of motorist views			
	6. Transit			
	6.1 Design transit stops for comfort • Shelter from rain, wind, cold, heat, sun and shade • Encourage cleanliness by designing for maintenance and providing trash receptacles • Provide a bench or leaning rail, space for a wheelchair, strollers and walkers			
	6.2 Design transit stops for capacity • Size for ridership and boarding needs • Design for line management as determined by ridership and boarding timing			
	6.3 Design for access • ADA accessible is a minimum standard • Adequate pathways so shelter does not interfere with pedestrian or bicycle facilities • Boarding areas are unobstructed • Bicycle parking			
	6.4 Provide critical information and wayfinding • Stop name and number • Route number, direction and destination • System logo • Nearby attractions • Real time displays and wait times			
	6.5 Provide for aesthetics • Landscaping and green elements • Signature stop designs • Public art			

		Yes	No	Comments
2.0 PEDESTRIAN REALM	**7. Path to Street/Sidewalk Connections**			
	7.1 Pathways should be continuous with no interruptions			
	7.2 Intersections should be well marked			
	7.3 Provide separations from vehicles by providing underpasses or bridges			
	7.4 Provide high visibility			
	7.5 Provide pedestrian and bicycle refuge on large streets			
	7.6 Reduce traffic speeds at junctions			
	7.7 Provide adequate lighting			
	7.8 Provide trash facilities			
	7.9 Bicycle and automobile parking when appropriate			
	7.10 Provide appropriate wayfinding			
	7.11 ADA compliance is a minimum			
	7.12 Plan for maintenance			
	8. Bike Facilities			
	8.1 Design for comfort • Cleanliness; plan for regular maintenance and trash receptacles • Provide adequate lighting and visibility for safety			
	8.2 Design for adequate capacity • The number of bicycle facilities and size should be determined by current and future users			
	8.3 Design for access • Provide easy access to pedestrians, transit or vehicular traffic • Unobstructed • Avoid interference with pedestrian, transit and vehicular traffic			
	8.4 Provide critical information and wayfinding • Location name • Nearby attractions and businesses			
	8.5 Provide for aesthetics • Landscape and green elements • Public art • Signature facility designs			

6.2 Streetscape Resource Guide Design Checklist: a tool to guide stakeholder engagement

			Yes	No	Comments
3.0 SHARED REALM	**1. Underground Utilities**				
	1.1	Consolidate the design of hardscape and utilities			
	1.2	Sidewalks should be free of impediments such as inlets and above-ground utilities			
	2. intersections				
	2.1	Plan intersections to provide visibility for pedestrians, cyclists and cars			
	2.2	Place utilities away from intersections and out of visibility triangles			
	2.3	Utility planning should take place during the design phase with locations shown on construction and installation drawings			
	2.4	Verify correct utility placement during construction			
	2.5	Provide easy access to pedestrian signal buttons			
	2.6	Provide aligned crosswalk facilities and flat staging for pedestrian/wheeled access and comply with all ADA requirements			
	2.7	Provide pedestrian refuge areas			
	2.8	Keep current and future needs in mind			
	3. Shared Curb Cuts				
	3.1	Minimize curb cuts			
	3.2	Provide adequate visual signals for pedestrians at curb cuts			
	4. Sustainability				
	4.1	Use native plants and minimize the use of turf grass			
	4.2	Plant trees			
	4.3	Use light fixtures that minimize light pollution. Light should be directed down toward surfaces needing light			
			Yes	No	Comments

4.0 TRAVELWAY REALM	**1. On-Street Parking**				
	1.1	Provide adequate distance from intersections to street parking to assure pedestrian visibility			
	1.2	Provide adequate access to pedestrian pathways			
	1.3	Provide sufficient distance from travel lanes for safe ingress/egress • Consider landscape separation for automobile traffic			
	1.4	Consider the elements near on-street parking that significantly impact the safety and quality of the parking • Drainage • Streetlights • Pedestrian lights • Bulb outs • Visibility when backing out			
	2. Medians				
	2.1	Provide pedestrian refuge when possible			
	2.2	Consider using median area for storm water cleaning by utilizing bio-drainage methods			
	3. Bicycle Travelway				
	3.1	Provide a separated bike lane or side path when the speed of cars is greater than 30 mph			
	3.2	Bicycle Travelway should be a minimum of 6 feet			
	3.3	Provide good connectivity			
	3.4	Design intersections for the safety of bicyclists, pedestrians and vehicular traffic			
	3.5	Provide appropriately designed bike staging areas at intersections			
	3.6	Provide adequate lighting			
	3.7	Provide adequate sight lines			
	3.8	Lane markings should be clear			
	3.9	Provide good wayfinding information			
	3.10	Prior to design or installation identify appropriate streets for bike travelways			

NOTES:
These guidelines are in addition to all city, state, and federal requirements.

6.3 Glossary

Above-ground Utility
Utilities such as a pole-mounted telephone, telegraph, or power line.

Accessible Route
A continuous unobstructed path connecting all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures.

Amenity
Something that helps to provide comfort, convenience, or enjoyment

Bioswale
A long, channeled depression or trench that receives rainwater runoff (as from a parking lot) and has vegetation (such as grasses, flowering herbs, and shrubs) and organic matter (such as mulch) to slow water infiltration and filter out pollutants.

Hardscape
Structures (such as fountains, benches, or gazebos) that are incorporated into a landscape

Impervious Surface
Surface composed of any material that impedes or prevents natural infiltration of water into the soil. Impervious surfaces shall include but are not limited to roofs, solid decks, driveways, patios, sidewalks, parking areas, tennis courts, concrete or asphalt streets, or compacted gravel surfaces.

Native Plants
A native plant is one that occurs naturally in a particular region, ecosystem, or habitat without direct or indirect human intervention.

Permeable
Capable of being permeated : penetrable; especially : having pores or openings that permit liquids or gases to pass through

Public Utility
1. a service (such as light, power, or water) provided by a public utility
2. equipment or a piece of equipment to provide such service or a comparable service service used by the public.

Right-of-Way or R.O.W.
1. a: legal right of passage over another person's ground
2. a: the area over which a right-of-way exists
   b: the strip of land over which is built a public road
   c: the land occupied by a railroad especially for its main line
   d: the land used by a public utility (as for a transmission line)

Streetscape
1. the appearance or view of a street
2. a work of art depicting a view of a street

Sustainability
1. of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged, including sustainable techniques, sustainable agriculture, etc.
2. of, or relating to, a lifestyle involving the use of sustainable methods or part of a sustainable society

Turf Grass
Any of various grasses (such as Kentucky bluegrass or perennial ryegrass) grown to form turf

6.4 References and Other Resources

Users of this Guide may find additional information with good examples related to a variety of streetscape elements by reviewing these additional sources.

ADA Standards for Transportation Facilities U.S. Dept of Transportation, Federal Transit Administration, (Washington, D.C., 2006)

AASHTO, Guide for the Planning, Design, and Operation of Pedestrian Facilities, (American Association of State Highway and Transportation Officials) July 2004,

Americans with Disabilities Act (ADA), Federal Regulations

A Policy on Geometric Design of Highways and Streets, American Assoc. of State Highway and Transportation Officials (AASHTO's "Green Book") (6th Edition, 2011)

Building Healthy Places Tool Kit, Urban Land Institute (ULI), Center for Active Design (2015)

City of Dallas Development Code, Section 51

City of Houston Infrastructure Design Manual

City of Houston Major Thoroughfare and Freeway Plan

City of Houston Sign Code, Chapter 46

City of Houston Tree & Shrub Ordinance

City of Houston Urban Transit Corridor Ordinance, Chapter 42

City of Seattle Right-of-Way Improvements Manual – Streetscape Design Guidelines

City Repair's Placemaking Guidebook, City Repair (Victor Dover, John Massengale) (2nd Edition, February 2011)

Creating a Vibrant City Center (Cy Paumier, Urban Land Institute) (January 2004)

Designing Walkable Urban Thoroughfare: A Context Sensitive Approach: An ITE Recommended Practice (2010)

Global Street Design Guide, NACTO (2016)

Great Streets Development Program, City of Austin

Guide for Development of Bicycle Facilities (AASHTO, 1999)

Guidelines for Bicycles and Pedestrian Facilities in Texas, Texas Transportation Institute (June 1997)

Harris County On-Premise Signs Regulations

Harris County Tree & Shrub Regulations

How to Turn a Place Around, Project for Public Spaces (December 2000)

Institute of Transportation Engineers

International Building Code (incorporates Uniform Building Code)

Making Toronto's Streets, Paul M. Hess, University of Toronto, Beth Ryerson, Millroy University (Sept 2006)

Manual on Uniform Traffic Control Devices, FHWA (MUTCD – USDOT) (2009)

Pedestrian and Streetscape Guide, Georgia Dept. of Transportation (2003)

Pedestrian Crossing Guidelines for Texas, Sharon Turner, Paul Carlson, Texas Transportation Institute (December 2000)

Pedestrian Malls, Streetscapes and Urban Spaces, Harvey Rubenstein (John Wiley & Sons, New York, 1992)

Separated Bike Lane Planning and Design Guide - Federal Highway Administration (May 2015)

Texas Manual on Uniform Traffic Control Devices (TxMUTCD) (Revision 2, 2011)

The Wayfinding Handbook, David Gibson (Princeton Architectural Press) (First Edition, January 2009)

Transit Street Design, National Association of City Transportation Officials NACTO (2016)
Urban Bikeway Design Guide, National Association of City Transportation Officials NACTO (2014)

Urban Intersection Design Guide, Texas Transportation Institute (Februrary 2005)

Urban Street Stormwater Guide, National Association of City Transportation Officials NACTO (2017)

Urban Street Design Guide, National Association of City Transportation Officials NACTO (2013)

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This Guide was developed by Scenic Houston through the oversight of an Advisory Committee comprised of experts in streetscape planning and private real estate development. As this Guide was developed, Advisory Committee members met with City of Houston officials to ensure the content was compatible with the City's regulations and policies.

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