



Urban Streetscape and Design Standards

WEST SACRAMENTO BRIDGE DISTRICT IMPLEMENTATION PLAN

September 16 2009
updated October 2023



TABLE OF CONTENTS

1. INTRODUCTION TO THE DESIGN STANDARDS

Purpose	5
Intent	5
Components	6
Building Frontage and the Order of Streets.....	6
How to Use the Standards	7
Administration	7

2. THE REGULATING PLAN

How to Use the Regulating Plan	8
Regulating Plan	8
Overview of Street Types	9

3. STREETScape STANDARDS

Purpose	15
Street Types	15
Organization of StreetscapeStandards	16
Zones of the Sidewalk	17
Standards for “Through Streets”	
1. Riverfront Retail Street	18
2. Riverfront Transition	20
3. Grand	22
4. Fifth Street	26
5. Riverfront View Streets	27
6. Local Streets	34
Standards for “Access Streets”	
Zones of Privacy on Access Streets	38
“Stubbed” Access Streets	39
Riverfront View Universal Streets	40
Connecting Access Streets	45
Loop Roads	46
Internal Universal Streets	48

General Streetscape Standards	51
1. Plant Strip Treatment	54
2. Materials	50
3. Furnishings and Utilities	59
4. Access and Service	61
5. Corners and Crossings	65
6. Bicycles	69

4. BUILDING DESIGN STANDARDS

Intent	71
Organization	71
How to Use These Standards	71
Building Frontage and the Order of Streets	72
Building Frontage Descriptions	73
Allowable Building Frontages by Street Type	74
Land Use Requirements	76
Standards for Frontage Types	77
Building Setbacks Along the Waterfront Promenade	83
Building Frontage Requirements	84

5. SUSTAINABILITY GUIDELINES

Intent	85
Guidelines	85

1. INTRODUCTION TO THE DESIGN STANDARDS

PURPOSE

The purpose of these Urban Streetscape and Design Standards is to establish guidelines that will direct the aesthetic character of the Bridge District, the specific treatments of its streets and sidewalks, and the uses and form of its buildings.

INTENT OF THE DESIGN STANDARDS

The intent of these design standards is to ensure that new development and redevelopment within the Bridge District creates a unified and cohesive public environment within the new district. Each street and each of the buildings along that street should create a clear sense of identity and character for that street, and reinforce that street's "role" within the larger district network. Streetscape and building design within the Bridge District should be oriented to the pedestrian, and should work together to create a high quality public realm as it is experienced from the sidewalk.

Because the identity of a neighborhood or district is largely determined by its streets (and how buildings relate to and contribute to the character of those streets), these design standards are organized by street type. Each street within the Bridge District will have a unique character and place within the larger network of streets. The streetscape and building design standards in the following sections are intended to reinforce the unique character that is envisioned for each particular street.

COMPONENTS

The design standards are divided into five sections:


- **Section 1** explains the intent, organization, process, and administration of the design standards.
- **Section 2** introduces the **Regulating Plan** for the Bridge District. The Regulating Plan illustrates the “Vision” for the district, defining each street’s character and role within the greater street hierarchy, and explaining in greater detail the intent of each street type. Each of the streetscape and building design standards in Sections 3 and 4 are “keyed” to this Regulating Plan.
- **Section 3** outlines the **streetscape design standards** for each of the street types identified in the Regulating Plan. The streetscape design standards focus primarily on the design of the pedestrian realm (the sidewalk or public access easement).
- **Section 4** outlines the **building design standards** for the district, which directly relate to and are unique for each street type within the framework of the Regulating Plan. The building design standards focus on that part of the building that most directly impacts the public realm, namely, the ground floor facade as it is experienced from the sidewalk.
- **Section 5** recommends **sustainability guidelines** intended to ensure the long-term viability of the district. These guidelines relate to individual building siting and design considerations, as well as larger-scale public measures that may be undertaken during streetscape planning and design.

BUILDING FRONTAGE AND THE ORDER OF STREETS

The design and development standards within this document are organized around the district’s street hierarchy, and streets within the Regulating Plan are presented in descending order of prominence. Buildings must have their primary frontage oriented to the highest order street facing the lot. For the purposes of this document, “building frontage” is defined as a building’s front, street-facing, ground level facade, which must include the primary building entrance (i.e., the “front door”). For example, all buildings along Grand must have their front doors oriented to and directly connected to the sidewalk along that street. Buildings on corner lots must have their primary frontage facing the higher order street. For example, a building on the corner of Grand and Fifth Street would have Grand as its primary “frontage.” If a property owner chooses, however, lots with two street frontages may orient buildings to the corner in lieu of facing the higher order street only.

Buildings that front both Riverfront and Grand, however, may choose to orient their primary building entrance to either of these two streets (despite Riverfront being the higher order street), if the building’s design would most benefit from doing so. Buildings must still comply with building frontage standards along both street frontages.

Higher order to lower order streets

- 
- 1. Riverfront Retail Street
 - 2. Riverfront Transition
 - 3. Grand
 - 4. Fifth Street
 - 5. Riverfront View Street
 - 6. Local Street
 - 7. Internal Universal Street

HOW TO USE THE STANDARDS

The standards applicable to a given parcel may be determined by:

1. First look to the Regulating Plan in Section 2 to determine the type of street on which the parcel fronts.
2. Once the street type is determined, look to Section 3 for the streetscape design standards applicable to that street type
3. Look to Section 4 for the building design standards (building frontage, setbacks, ground floor design) applicable to lots fronting that particular street type.

Note that parcels located at corner intersections must comply with the standards for each street type on which the property fronts.

The sustainability guidelines in Section 5 are intended to encourage new development within the Bridge District to employ siting and building design practices that minimize the ecological impact of the built environment. For the present, these guidelines are voluntary.

ADMINISTRATION

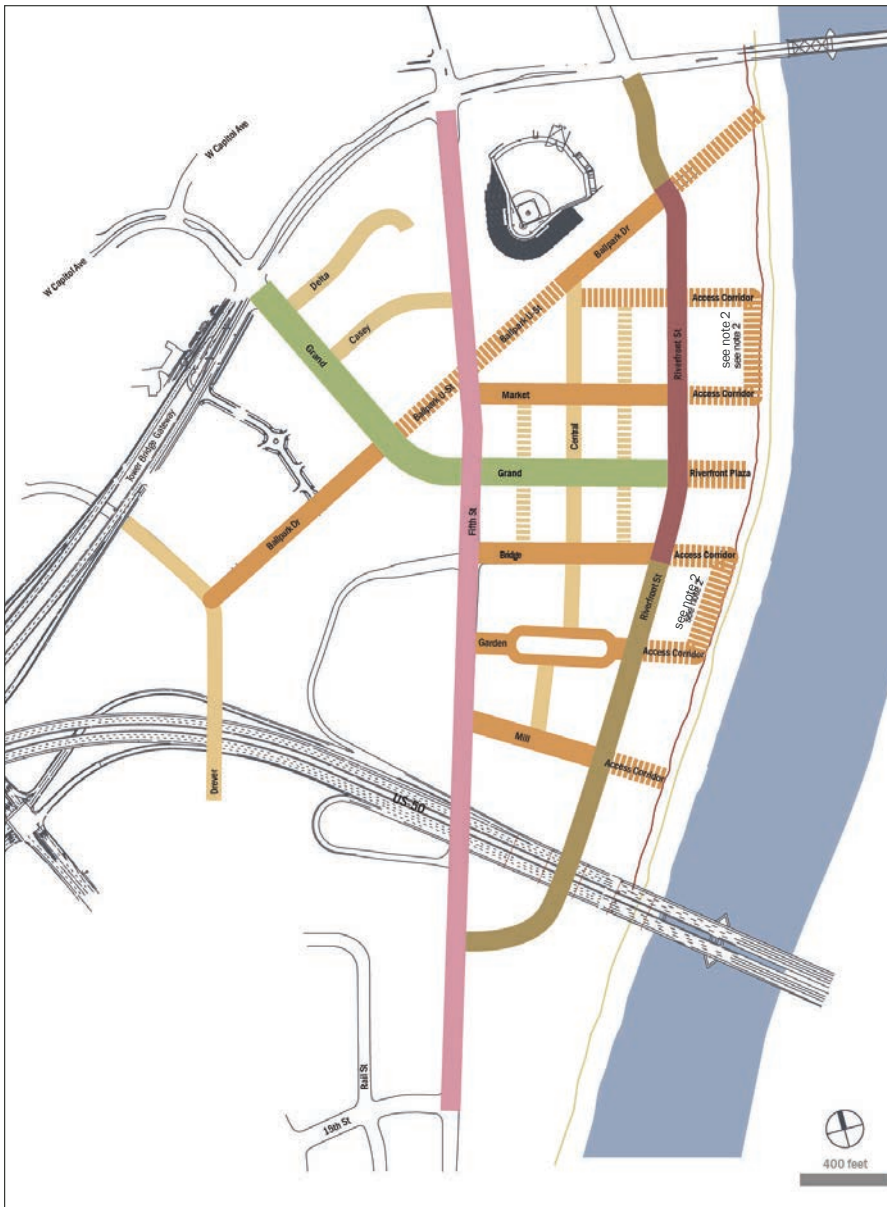
The standards presented in this document will guide all development and redevelopment approvals within the Bridge District planning area. These standards are guided by the regulating plan, which uses the street hierarchy to dictate desired architectural development in the planning area. In the event that a contradiction occurs between the West Sacramento Zoning Ordinance and this code, this code will rule. Standards within the West Sacramento Zoning Ordinance not explicitly addressed by this document will remain applicable to development within the district.

2. THE REGULATING PLAN

HOW TO USE THE REGULATING PLAN

The Regulating Plan for the Bridge District (below) organizes each street within the planning area into one of 7 street types: Riverfront Retail Street, Riverfront Transition, Fifth Street, Grand, Riverfront View Streets, Local Streets, and Internal Universal Streets. While specific right-of-way dimensions may vary within a specific street type, the character and role of that street will be consistent. As described in Section 1, the streetscape and building design standards outlined in Sections 3 and 4 are organized by these street types, and are thereby “keyed” to this regulating plan. See the following section for a detailed description of each of these street types.

THE REGULATING PLAN



REGULATING PLAN KEY

- 1. Riverfront Retail Street
- 2. Riverfront Transition
- 3. Grand
- 4. Fifth Street
- 5a. Riverfront View Streets
- 5b. Riverfront View Universal Streets ^{1,2}
- 6. Local Street
- 7. Internal Universal Street

¹ In addition to the mapped Riverfront View Universal Streets, blocks between Riverfront and the waterfront may provide at least one additional Riverfront View Universal Street to provide additional access. The exact location of these additional streets within the block may be determined by the property owner.

² Loop Roads are an optional subtype of Riverfront View Universal Streets, and provide circulation between Riverfront and the Waterfront Promenade. The intent of these loop roads is to provide vehicular access to and from individual buildings along the waterfront, as well as providing access to the waterfront itself. Loop roads shall not connect to Riverfront Plaza or to the Ballpark Drive/Tower Bridge Universal Street, nor may they connect to more than two Riverfront View Universal Streets.

OVERVIEW OF STREET TYPES

The following describes the desired character for each of the unique street types within the Bridge District. These statements inform the streetscape and building design standards associated with each street type found in the district.

1. Riverfront Retail Street

Riverfront will be the primary pedestrian retail street within the district, and accordingly, will serve in many ways as a “center” of the Bridge District. It is anchored by Ballpark Drive at the north, and Triangle Street to the south. Riverfront Retail Street is envisioned as a pedestrian-oriented street, and may provide both destination and neighborhood-serving dining and retail. A new streetcar line planned for Riverfront will further emphasize its importance within the district. Buildings will be mixed-use, providing retail uses at the ground floor (required), with residential and/or office uses on upper floors. Accordingly, the streetscape design is intended to create an interesting, inviting, and safe environment for large numbers of pedestrians, and will reinforce the retail function of the street. Building design standards will focus on creating retail-friendly buildings that encourage and enhance pedestrian activity.



2. Riverfront Transition

Riverfront Transition links the retail-oriented uses along Riverfront to its intersection with Fifth Street, and is intended to encourage residential and office uses. The transition between the two zones is largely the result of the US 50 overpass. Small scale retail and light commercial uses are encouraged to locate in this area due to the reduced level of pedestrian amenities and distance from the Grand intersection. This segment is seen primarily as a connection to the uses proposed along Fifth Street.



3. Grand

Grand is the civic street within the Bridge District. It will serve as the gateway into the district, linking existing civic uses west of the district to the West Sacramento Riverfront. To highlight this ceremonial procession to the river, Grand will be wide, with special paving and curbs, tree-lined, with a median and sustainable bio-swale for part of its dimension. The street will provide a large, fine-leafed tree canopy to shade walkways and the street, and the streetscape character will re-enforce this “green” vision. Public art is especially encouraged along Grand. This park-like setting lends itself to quieter residential and smaller-scaled retail uses in contrast to the busy retail found along Riverfront.



4. Fifth Street

This street, inland and parallel to Riverfront, is envisioned as a higher volume vehicular route in contrast to the pedestrian-oriented nature of Riverfront. While ground floor retail uses are certainly encouraged, these streets may be primarily characterized by office and residential uses. Although building mass may be similar (or possibly greater) than along Riverfront, the overall feeling of these streets will be a less intense contrast to the active street life of Riverfront.



5a. Riverfront View Streets

In contrast to the more intense Riverfront and Fifth Street, which run parallel to the river, Riverfront View Streets run perpendicular to the river, framing views toward it and providing easy and direct pedestrian connections to the Riverfront Promenade. These east-west streets are envisioned as a quiet contrast to the busier, north-south running streets, and their function as riverfront access corridors particularly lend themselves to neighborhood residential uses and smaller-scaled, neighborhood serving commercial uses.



5b. Riverfront View Universal Streets

On the east side of Riverfront, Riverfront View Streets become multi-modal “Universal Streets.” These Riverfront View Universal Streets are intended to accommodate pedestrians and bicycles as well as provide vehicular access to individual buildings and/or the Riverfront Promenade within the same street space. The streetscape requirements will reinforce the shared nature of these streets through paving, bollards, landscape and street furniture placement. All building frontage types are permitted on Riverfront View Streets (see Section 4 for details).

Like Riverfront View Streets, Riverfront View Universal Streets are envisioned as a quiet contrast to the busier, north-south running streets, and their function as riverfront access corridors particularly lend themselves to neighborhood residential uses and smaller-scaled, neighborhood serving commercial uses.



6. Local Streets

Local streets are smaller in scale than other streets in the district, and are envisioned as serving primarily residential uses. Accordingly, the streetscape treatments and building design along Local Streets should re-enforce the quiet nature of these streets.



7. Internal Universal Streets

Internal Universal Streets are intended to break up large blocks in order to create smaller, more pedestrian-friendly block sizes. They will provide vehicular and pedestrian/bicycle access to the interiors of blocks within the same, shared street space. Driveways and parking areas should preferably be accessed off of these streets, and building service functions are encouraged to occur along Internal Universal Streets rather than other, higher function streets. Buildings are encouraged to provide frontage along Internal Universal Streets. In instances where buildings do front the street, retail uses (such as outdoor dining) may spill out onto the street. The streetscape requirements will reinforce the shared nature of these streets through paving and curb treatments, and street furniture placement.



This page intentionally left blank

3. STREETScape STANDARDS

PURPOSE

The purpose of the streetscape design standards is to facilitate each street within the Bridge District (both public and private) creating an ordered and well-designed public realm, an inviting environment for pedestrians, and a functional environment for vehicular traffic and transit. The streetscape standards reinforce the unique character of each street type of the Regulating Plan.

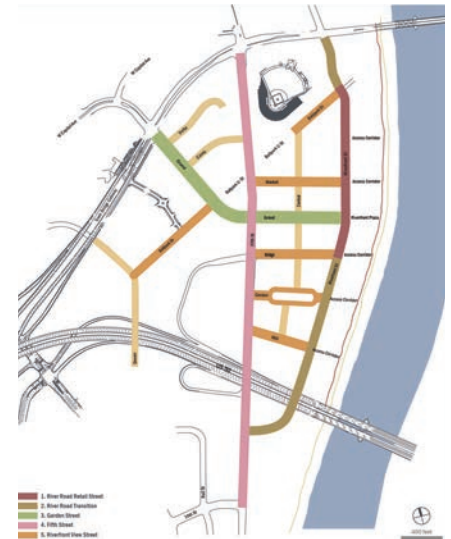
STREET TYPES

There are two types of streets within the Bridge District: “through streets” and “access streets.”

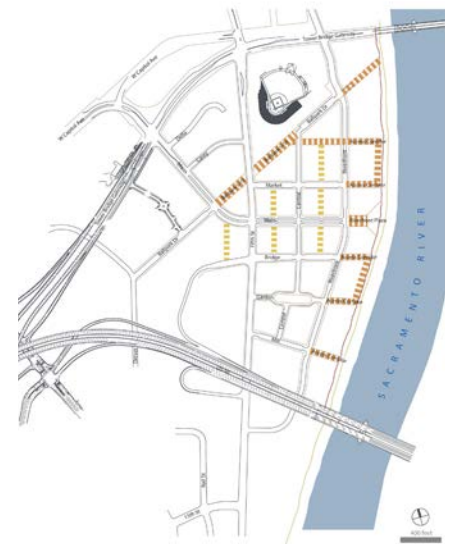
Through streets are the backbone of the districts’s gridded street system. They provide vehicular access to and through the district. These streets are designed to accommodate vehicular and bicycle traffic in the roadway, and pedestrian traffic along the sidewalk.

Note that buildings along Riverfront are required to provide retail uses along the ground floor, while buildings along segments of Grand must be “retail convertible” along the ground floor. See page 76 for specific requirements.

Access streets are intended to break large blocks into smaller, more pedestrian-friendly sized blocks and development parcels. They provide multi-modal connections through and into blocks and parcels, connecting to through streets on both sides (or alternatively, to through streets on one side, and to the Waterfront Promenade on the other). Access streets within the Bridge District may be one of two types: *Riverfront View Universal Streets* or *Internal Universal Streets*. In the case of Riverfront View and Internal Universal Streets, multiple modes are accommodated in the same, uncurbed roadway space (see pages 37-50 for details).



THROUGH STREETS



ACCESS STREETS

ORGANIZATION OF STREETScape STANDARDS

The streetscape standards are organized into three subsections. **Subsections A and B** are primarily focused on *the pedestrian realm*, and illustrate how the pedestrian zone of the right-of-way (the area between the curb and the building face) shall be allocated for the furnishing zone, the clear (passage) zone, and the building frontage zone of the sidewalk. In some instances, buildings may be required to be set back behind the property line in order to provide for an adequate building frontage zone along the face of the building. **Subsection A** outlines the standards for all “through streets” in the Bridge District, while **Subsection B** describes the standards related to multi-modal “access streets.”

Subsection C outlines, in matrix form, general streetscape standards applicable to both through streets and access streets relating to the following topics:

- *Plant Strip* - These standards outline the plant strip treatment to be used along each street type (i.e., tree grates versus landscaped beds), suggested tree species and street tree spacing recommended for individual streets, and other landscape requirements as applicable.
- *Materials* - These standards provide specifications for street surface and parking zone paving materials, the individual zones of the sidewalk, pedestrian crosswalks, and curbs.
- *Furnishings and Utilities* - These standards regulate the location of elements such as street furniture such as benches, trash cans, newspaper boxes, and utility devices such as backflow valves, utility boxes, etc.
- *Access and Service* - These standards establish whether curb cuts and driveways are permitted along the street type, and provides curb cut spacing standards where driveways are permitted. This section also outlines whether service functions (i.e., garbage and recycling collection) are permitted along the particular street type.
- *Corners and Crossings* - These standards illustrate where bulbouts are required, and provides guidelines on their dimensional layouts (including general dimensional requirements at intersections where future streetcar stops may occur). This section also outlines standards relating to the location and dimensions of mid-block bulbouts, and includes standards for pedestrian crosswalks.
- *Bicycles* - This section illustrates where bicycle routes are planned for the district, and outline various standards relating to bicycle safety and identification.

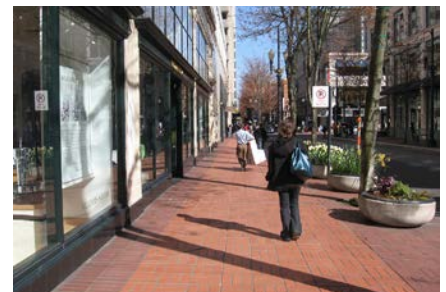
THE ZONES OF THE SIDEWALK

A sidewalk is typically divided into three distinct “zones.” The streetscape standards which follow include standards relating to dimensions, materials, and furnishings for each of these three zones.

The furnishing zone is that area of the sidewalk directly adjacent to the curb, and is the area where street trees, vegetation beds, and street furniture such as pedestrian scale lighting, benches and bike racks are located. Business signage (such as A-frame or sandwich boards) may also be located in the furnishing zone.

The clear zone is the through zone of the sidewalk. This is the walking zone of the sidewalk, and as such shall be clear of any furnishings or signage at all times. Along busy retail streets, the clear zone shall be wider than along quieter residential streets in order to accommodate higher volumes of pedestrian traffic.

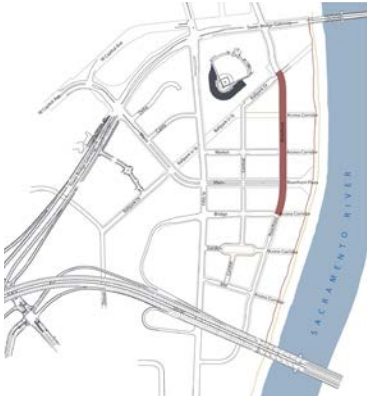
The building frontage zone is the area directly adjacent and parallel to the building face. This area serves as a buffer between the clear zone and the building itself, and may contain business signage and outdoor dining (when wide enough). Note that the minimum required building frontage zone for most streets is typically 3 feet. This is wide enough to accommodate a single row of dining tables. If a larger outdoor dining area is desired along the sidewalk, the building must provide a greater setback in order to provide for a larger building frontage zone.



<p>building frontage zone 3-10 feet</p>	<p>clear zone 5-15 feet</p>	<p>furnishing zone 4-9 feet</p>
--	--	--

3.A. Standards for Through Streets

1. Riverfront Retail Street



Concept

Riverfront Retail Street is envisioned as a pedestrian-oriented district, and may provide both destination and neighborhood-serving dining and retail. It is anchored by Ballpark Drive to the north, and Riverfront Plaza to the south. **Retail uses are required along the ground floor** along Riverfront Retail Street (see Section 4, “Building Design Standards” for details). The streetscape design is intended to create an interesting, inviting, and safe environment for large numbers of pedestrians, and will reinforce the retail function of the street. See page 68 for intersection paving requirements.

The pedestrian zone of the right-of-way shall be allocated as follows:

1. Furnishing Zone:

Curb: The curb zone will consist of a 6-inch curb and a 1.5-foot “disembarkment zone.”

Plant Strip: Street trees are to be provided in 6’ X 6’ tree wells.

2. Clear Zone:

The clear zone shall be 8 feet.



19'	8'	13'	13'	8'	19'
sidewalk	parking	travel lane/ streetcar	travel lane/ streetcar	parking	sidewalk
roadway					
80' ROW					

RIVERFRONT STREET CROSS-SECTION:
BALLPARK DRIVE TO BRIDGE

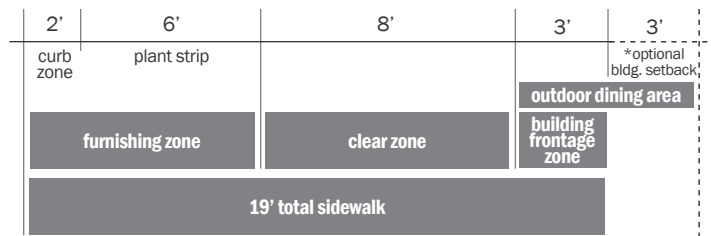


2'	6'	8'	3'
curb zone	plant strip		
furnishing zone		clear zone	building frontage zone
19' total sidewalk			

RIVERFRONT: THE PEDESTRIAN REALM
BALLPARK DRIVE TO BRIDGE

3. Building Frontage Zone:

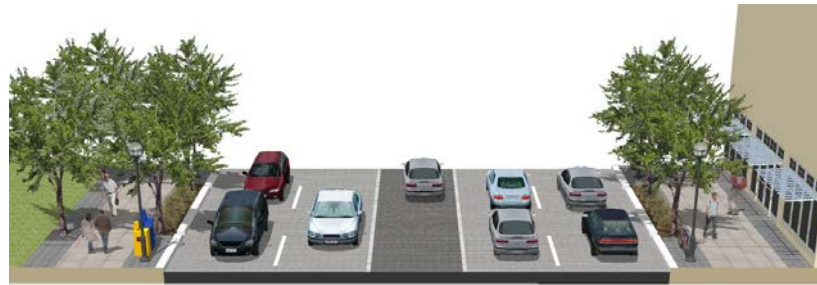
The building frontage zone shall be 3 feet. Buildings may be set back behind the right-of-way an additional 3 feet in order to create a 6-foot zone for outdoor dining.



RIVERFRONT: THE PEDESTRIAN REALM (WITH OPTIONAL BUILDING SETBACK)
BALLPARK DRIVE TO BRIDGE

* 3 feet of optional, additional building setback is permitted along the ground floor. This additional 3 feet may be combined with the 3-foot building frontage zone to create a 6-foot outdoor dining area. When this option is exercised, The 6-foot dining area may be delineated from the clear zone through landscaping, transparent fencing, or a supported, lightweight shade structure. Building walls are not permitted. The 6-foot outdoor dining area must provide shading overhead. The shading may be transparent (glass awnings or canopies), semi-transparent (trellises), or opaque (canvas awnings or canopies), and may be supported with brackets along the building face, or through vertical, columnar supports.

2. Riverfront Transition (north)



17'	13'	11'	12'	11'	13'	17'
sidewalk	travel lane/ streetcar	travel lane	turn lane	travel lane	travel lane/ streetcar	sidewalk
roadway						
96' ROW						

RIVERFRONT TRANSITION CROSS SECTION #1:
TOWER BRIDGE GATEWAY TO BALLPARK DRIVE

Concept

Both the north and south segments of Riverfront Transition will serve as a transition between the more intense retail environment along Riverfront Retail Street and the rest of the neighborhood. While the north segment of Riverfront Transition is expected to be more relatively intense due to its proximity to the ball park, pedestrian activity is expected to be less intense along the southern segment due to the impacts of the US 50 overpass and its distance from the prime intersection with Grand. Small scale retail and light commercial uses are encouraged to locate along the Riverfront Transition areas. Accordingly, the streetscape shall be visually consistent with Riverfront, with slight modifications appropriate to a less intense street.

The pedestrian zone shall be allocated as follows:

1. Furnishing Zone:

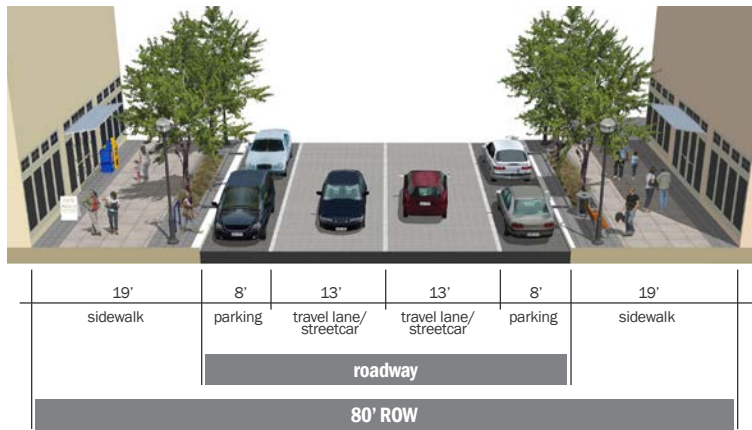
Curb: The curb zone shall consist of a 6-inch curb. Along Riverfront Transition South (Triangle Street to 5th Street) an additional 1.5-foot “disembarkment zone” should be provided.



6"	6'	7' 6"	3'
curb	plant strip		
furnishing zone		clear zone	building frontage zone
17' total sidewalk			

RIVERFRONT TRANSITION #1: THE PEDESTRIAN REALM
TOWER BRIDGE GATEWAY TO BALLPARK DRIVE

2. Riverfront Transition (south)



RIVERFRONT TRANSITION CROSS-SECTION #2
BRIDGE STREET TO THE FIFTH STREET INTERSECTION

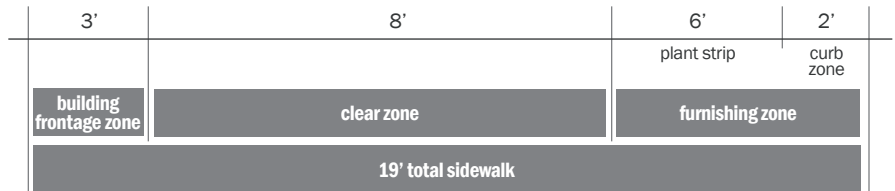
Plant Strip: A 6-foot stormwater planter shall be provided within the plant strip. (See “d. Plant Strip” for dimensions and spacing of stormwater planters, and standards for plantings and street tree spacing.)

2. Clear Zone:

Along Riverfront Transition North (Tower Bridge Gateway to Ballpark Drive), the clear zone shall be 7 feet, 6 inches. Along Riverfront Transition South (Bridge Street to Fifth Street), the clear zone shall be 8 feet.

3. Building Frontage Zone:

The building frontage zone shall be 3 feet.



RIVERFRONT TRANSITION #2: THE PEDESTRIAN REALM
BRIDGE STREET TO THE FIFTH STREET INTERSECTION

3. Grand



Concept

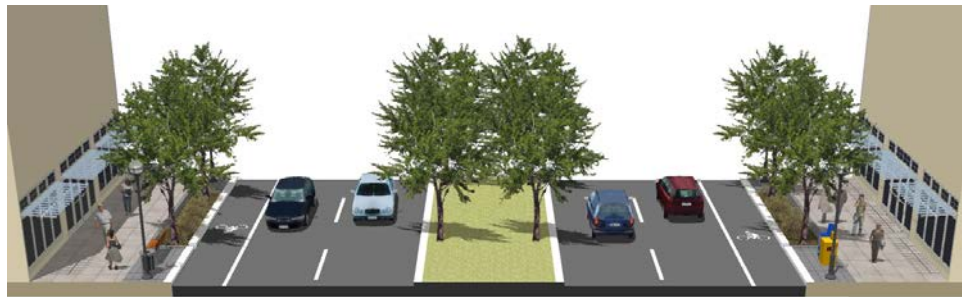
Grand is the civic street within the Bridge District. It will serve as the gateway into the district, linking existing civic uses west of the district to the West Sacramento Riverfront. To highlight this ceremonial procession to the river, Grand will be wide, with special paving and curbs, and with a tree-lined median and sustainable bio-swale for part of its dimension. The street will provide a large, fine-leaved tree canopy to shade walkways and the street, and the streetscape character will re-enforce this “green” vision. Grand consists of four distinct, though visually consistent segments. Details for segments 1-3 (spanning from Tower Bridge Gateway to Riverfront Plaza) may be found within this section. See page 44 for streetscape requirements for Riverfront Plaza. See page 68 for intersection paving requirements.

The pedestrian zone shall be allocated as follows:

1. Furnishing Zone:

Curb: Along Grand cross segments #1 and #2, a 6-inch curb will be provided.

In order to place greater emphasis on the central importance of Grand as the principal “spine” connecting West Sacramento to the waterfront, Grand segment



2'	15'	6'	11'	12'	18'	12'	11'	6'	15'	2'
	sidewalk	bike lane	travel lane	travel lane/streetcar		travel lane/streetcar	travel lane	bike lane	sidewalk	
	roadway			median		roadway				
108' ROW										

GRAND #1 CROSS-SECTION
TOWER BRIDGE GATEWAY TO BALLPARK DRIVE



8'	7' 6"	6"
	plant strip	curb
clear zone	furnishing zone	
15' total sidewalk		

GRAND #1: THE PEDESTRIAN REALM
TOWER BRIDGE GATEWAY TO BALLPARK DRIVE

#3 (between Fifth Street and Riverfront) is to be designed as a “curbless” street, whereby the travel lanes and the sidewalks are at or near the same grade. This treatment will emphasize the pedestrian-oriented nature of Grand as it approaches Riverfront.

Along this segment, a sloped, shallow, mountable, 1-foot “curb” will be provided (see page 56 “Curbs” for details).

Plant Strip: Stormwater planters

3. Grand



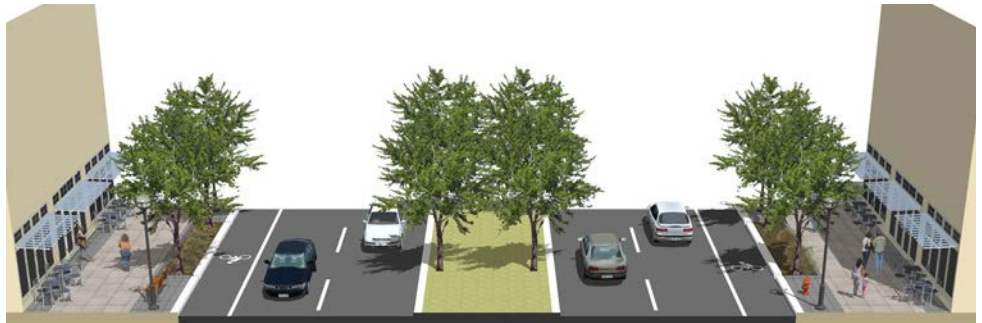
within the plant strip will manage street run-off while maximizing opportunities for green vegetation along Grand. See “Plant Strip Treatment” on page 52 for further detail.

Along Grand segment #2 (between Ballpark Drive and Fifth Street), the plant strip may vary in width as the central median transitions from Grand north of Ballpark to Grand east of Fifth. The plant strip may range from 6 feet to 14 feet, and as it widens, may accommodate a double row of trees as it approaches Fifth Street. Note, however, that while the width of the plant strip may vary, the width of the clear zone in this segment should remain consistent.

Along Grand segment #3 (between Fifth Street and Riverfront), stormwater planters will collect runoff from the sidewalk, while a continuous trench drain along the mountable curb will collect street-level runoff.

2. Clear Zone:

Along Grand segments #1 and #3, the clear zone shall be a minimum of 8 feet, and along Grand segment #2, the clear zone shall be a minimum of 10.5 feet.



19'	6'	11'	13'	16'	13'	11'	6'	19'
sidewalk	bike lane	travel lane	travel lane/streetcar	median	travel lane/streetcar	travel lane	bike lane	sidewalk
	roadway				roadway			
116' ROW								

GRAND #2 CROSS-SECTION
BALLPARK DRIVE TO FIFTH STREET



6"	6'-14'	10' 6"	3'
curb	plant strip		building frontage zone
furnishing zone		clear zone	
20' total sidewalk			

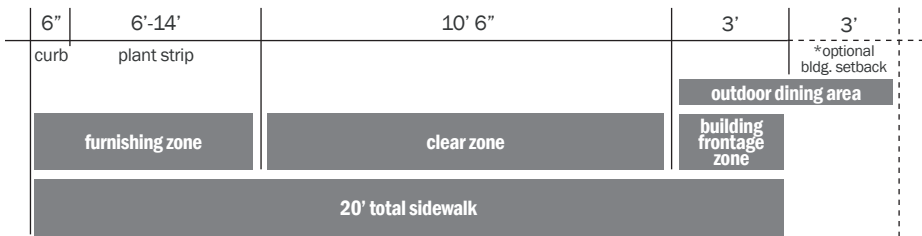
GRAND #2: THE PEDESTRIAN REALM
BALLPARK DRIVE TO FIFTH STREET

3. Building Frontage Zone:

No building frontage zone is shown for Grand segment #1.

Along Grand segment #2, a 3-foot building frontage zone is required. Buildings may be set back behind the right-of-way an additional 3 feet in order to create a 6-foot zone for outdoor dining.

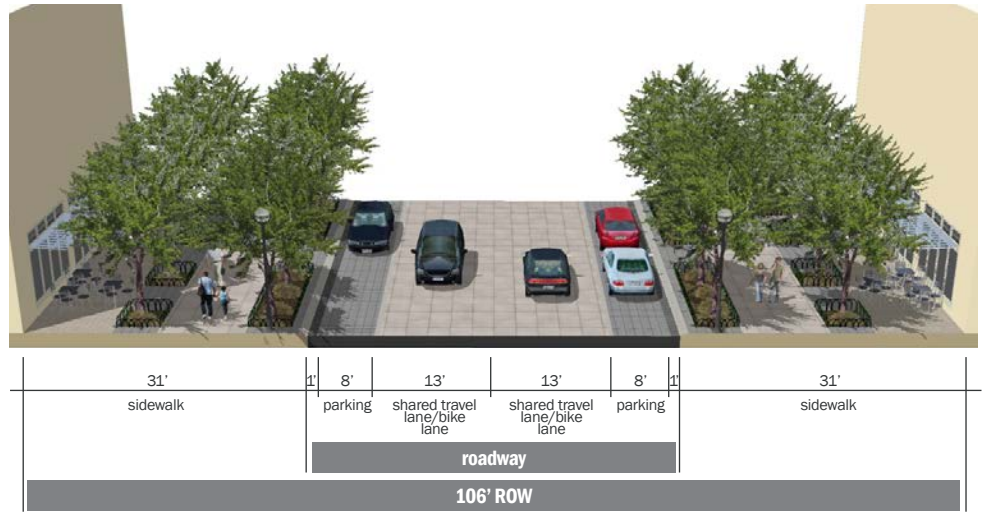
Along Grand segment #3, the building frontage zone shall be a minimum of 10 feet, in order to accommodate outdoor dining and other outdoor retail activities. This zone shall be visually separated from the clear zone by a five-foot landscape zone, which shall be designed to collect stormwater runoff from the sidewalk.



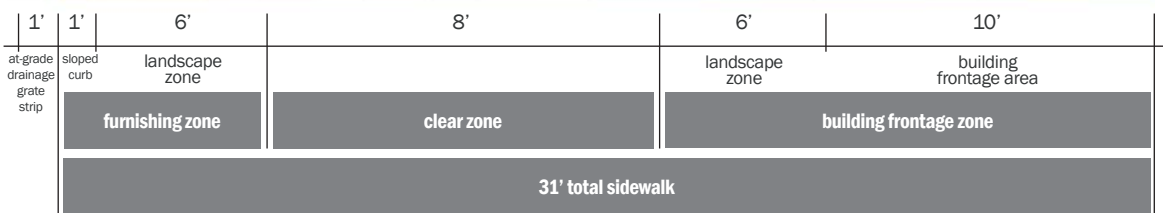
**GRAND #2: THE PEDESTRIAN REALM (WITH OPTIONAL BUILDING SETBACK)
BALLPARK DRIVE TO FIFTH STREET**

* 3 feet of optional, additional building setback is permitted along the ground floor. This additional 3 feet may be combined with the 3-foot building frontage zone to create a 6-foot outdoor dining area. When this option is exercised, The 6-foot dining area may be delineated from the clear zone through landscaping, transparent fencing, or a supported, lightweight shade structure. Building walls are not permitted. The 6-foot outdoor dining area must provide shading overhead. The shading may be transparent (glass awnings or canopies), semi-transparent (trellises), or opaque (canvas awnings or canopies), and may be supported with brackets along the building face, or through vertical, columnar supports.

3. Grand

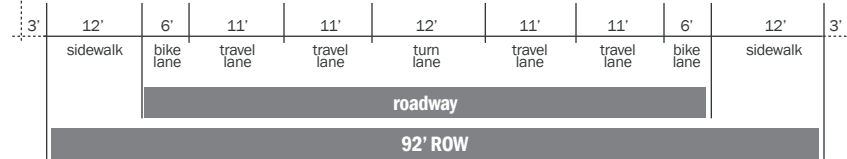
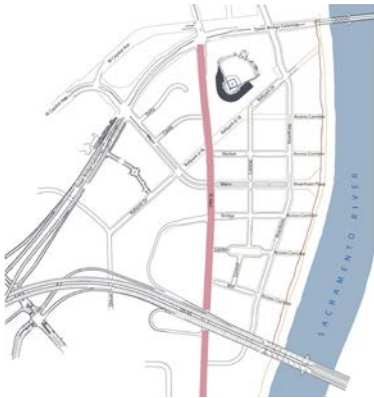


GRAND #3 CROSS-SECTION
FIFTH STREET TO RIVERFRONT



GRAND #3: THE PEDESTRIAN REALM
FIFTH STREET TO RIVERFRONT

4. Fifth Street



FIFTH STREET CROSS-SECTION
TOWER BRIDGE GATEWAY TO RIVERFRONT

Concept

Fifth Street is expected to serve as a higher volume vehicular route in contrast to the pedestrian-oriented nature of Riverfront. While ground floor retail uses are certainly encouraged, these streets may be primarily characterized by office and residential uses. The streetscape design is intended to create a pedestrian friendly environment while recognizing that pedestrian volumes may be lower than on Riverfront or Grand.

The pedestrian zone shall be allocated as follows:

1. Furnishing Zone:

Curb: 6-inch curb.

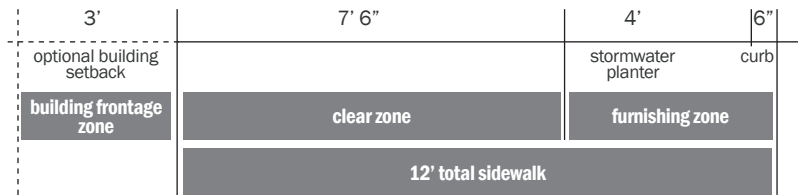
Plant Strip: 4foot constructed stormwater planter to be provided within the plant strip. (See “d. Plant Strip” for dimensions and spacing of stormwater planters, and standards for plantings and street tree spacing.)

2. Clear Zone:

The clear zone of the sidewalk shall be 7 feet, 6 inches.

3. Building Frontage Zone:

No building frontage zone is required, however, buildings may be set back 3 feet behind the right-of-way in order to create a building frontage zone.



FIFTH STREET: THE PEDESTRIAN REALM
TOWER BRIDGE GATEWAY TO RIVERFRONT

5A. Riverfront View Street



16'	8'	12'	12'	8'	16'
sidewalk	parking	travel lane	travel lane	parking	sidewalk
roadway					
76' ROW					

RIVERFRONT VIEW STREET CROSS-SECTION #1:
MILL STREET

Concept

Riverfront View Streets are envisioned as a quiet contrast to the busier, north-south running streets, and are intended to provide district residents easy and direct pedestrian connections to the Riverfront Promenade. Their smaller scale lend themselves to neighborhood residential uses and neighborhood serving commercial uses, and the streetscape standards are intended to reinforce this purpose.

The pedestrian zone shall be allocated as follows:

1. Furnishing Zone:

Curb: A 6 inch curb shall be provided. Along Riverfront View Street sections #1, #6, and #7, an additional 1.5 feet shall be provided beyond the curb to provide a disembarkment zone between parked vehicles and street tree wells.

Plant Strip: 4-foot street tree wells are to be provided.

2. Clear Zone:

See cross sections for various clear zone requirements for Riverfront View Streets.



2'	6'	5'	3'
curb zone	plant strip		building frontage zone
furnishing zone		clear zone	
18' total sidewalk			

RIVERFRONT VIEW STREET #1: THE PEDESTRIAN REALM
MILL STREET

5A. Riverfront View Street



12'	8'	12'	12'	8'	12'
sidewalk	parking	travel lane	travel lane	parking	sidewalk
roadway					
64' ROW					

RIVERFRONT VIEW STREET CROSS-SECTION #2:
GARDEN (NORTH AND SOUTH OF GARDEN PARK)

3. Building Frontage Zone:

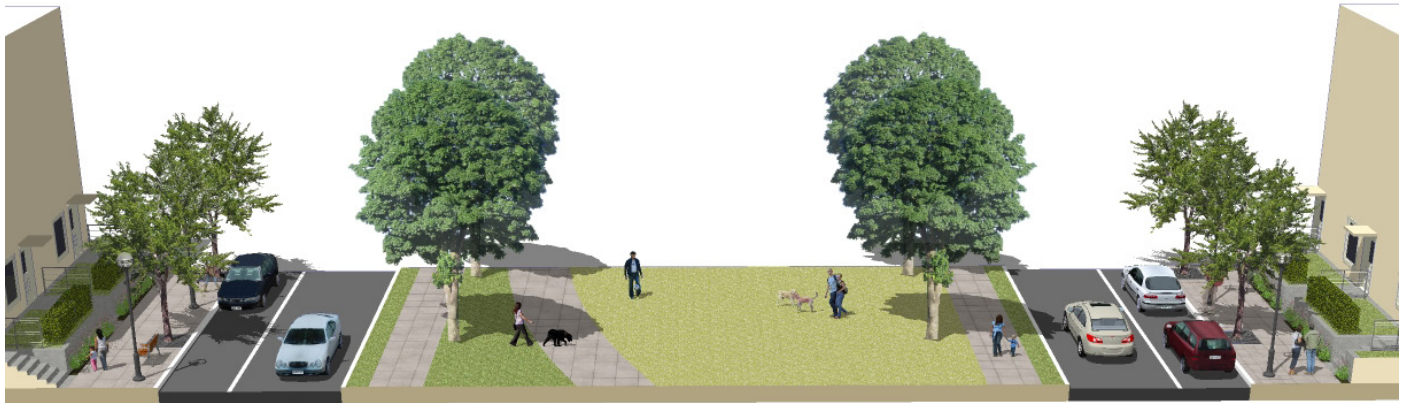
The building frontage zone along Riverfront View Street section #1 shall be 3 feet. All remaining Riverfront View Streets are not required to have a building frontage zone.



6'	4'	7'-6"
curb	plant strip	
furnishing zone		clear zone
12' total sidewalk		

RIVERFRONT VIEW STREET #2: THE PEDESTRIAN REALM
GARDEN (NORTH AND SOUTH OF GARDEN PARK)

5A. Riverfront View Street



10'	8'	12'	8'	80'	8'	12'	8'	10'
sidewalk	parking	travel lane	emergency access zone*	park	emergency access zone*	travel lane	parking	sidewalk
roadway				median		roadway		
140' ROW								

RIVERFRONT VIEW STREET CROSS-SECTION #3:
GARDEN STREET PARK



* Note: An 8-foot wide emergency access zone will be provided on the inside edge of Garden Street Park consisting of a one-foot, shallow, sloped mountable curb, grass strip, and permeable paver walkway.



6"	4'	5' 6"
curb	plant strip	
furnishing zone		clear zone
10' total sidewalk		

RIVERFRONT VIEW STREET #3: THE PEDESTRIAN REALM
GARDEN STREET PARK

5A. Riverfront View Street



13'	8'	11'	11'	8'	13'
sidewalk	parking	travel lane	travel lane	parking	sidewalk
roadway					
90' ROW					

RIVERFRONT VIEW STREET CROSS-SECTION #4
MARKET (BETWEEN FIFTH STREET AND RIVERFRONT)



6"	4'	5'	3'
curb	plant strip		
furnishing zone		clear zone	building frontage zone
15' total sidewalk			

RIVERFRONT VIEW STREET #4: THE PEDESTRIAN REALM
MARKET (BETWEEN FIFTH STREET AND RIVERFRONT)

5A. Riverfront View Street



10'	8'	11"	11'	11'	11'	8'	10'	
sidewalk	parking	travel lane	travel lane	travel lane	travel lane	parking	sidewalk	
roadway								
80' ROW								

RIVERFRONT VIEW STREET CROSS-SECTION #5
BRIDGE STREET (BETWEEN FIFTH STREET AND RIVERFRONT)



8"	6"	1' 6"	5'	3'
parking and planters	curb	furnishing zone	clear zone	building frontage zone
10' total sidewalk				

RIVERFRONT VIEW STREET #5: THE PEDESTRIAN REALM
BRIDGE STREET (BETWEEN FIFTH STREET AND RIVERFRONT)

5A. Riverfront View Street



17'	8'	6'	11'	11'	6'	8'	17'
	parking	bike	travel lane	travel lane	bike	parking	
sidewalk		roadway				sidewalk	
84' ROW							

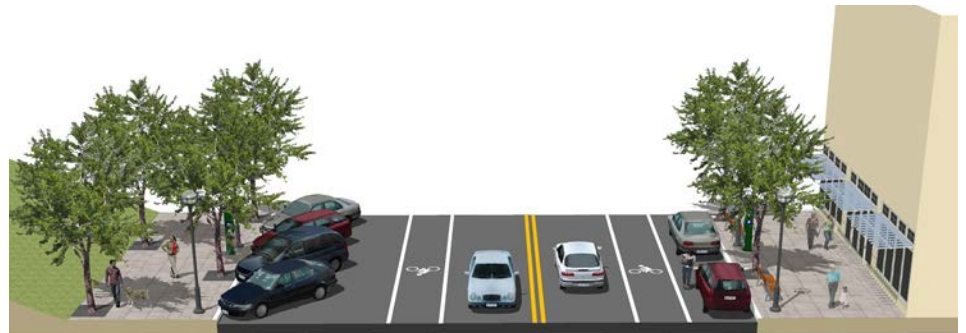
RIVERFRONT VIEW STREET CROSS-SECTION #6:
BALLPARK DRIVE (FROM DREVER STREET TO GRAND)



6"	6'	7' 6"	3'
curb	plant strip		
furnishing zone		clear zone	building frontage zone
17' total sidewalk			

RIVERFRONT VIEW STREET #6: THE PEDESTRIAN REALM
BALLPARK DRIVE (FROM DREVER STREET TO GRAND)

5A. Riverfront View Street



17'	19.8'	6'	12'	12'	6'	8'	17'	
sidewalk	parking	bike	travel lane	travel lane	bike	parking	sidewalk	
roadway								
97' 8" ROW								

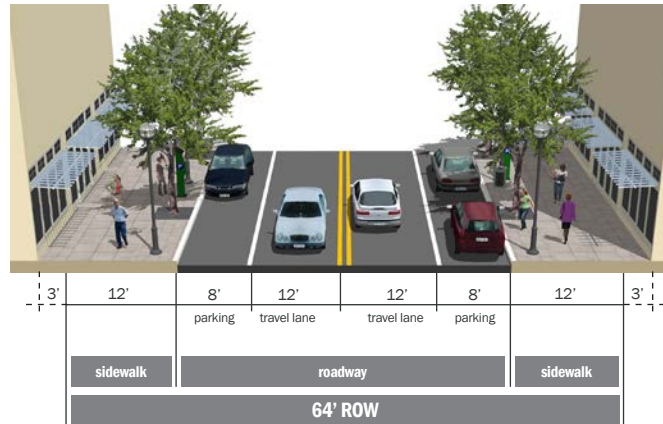
RIVERFRONT VIEW STREET CROSS-SECTION #7:
BALLPARK DRIVE



6"	6'	6' 6"	3'
curb	plant strip		
furnishing zone		clear zone	building frontage zone
16' total sidewalk			

RIVERFRONT VIEW STREET #7: THE PEDESTRIAN REALM
BALLPARK DRIVE

6. Local Street

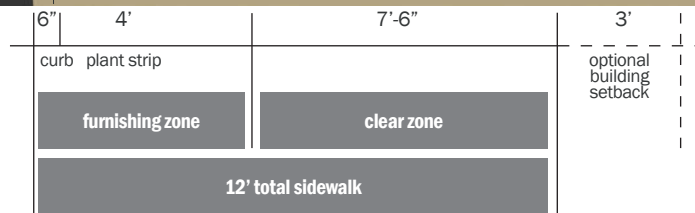


LOCAL STREET #1:
CENTRAL STREET

Concept

Local streets are smaller in scale than other streets in the district. Most are envisioned as serving primarily residential uses. Accordingly, the streetscape design is intended to re-enforce the quiet, residential nature of these streets. Because it traverses higher intensity retail areas, however, buildings along Central Street will likely be larger in scale, as the street provides a direct connection from the ballpark, through the core of Grand, and on to Garden Park. The streetscape along Central Street, therefore, is intended to complement this higher intensity environment.

The pedestrian zone shall be allocated as follows:



LOCAL STREET #1: THE PEDESTRIAN REALM
CENTRAL STREET

1. Furnishing Zone:

Curb: A six inch curb shall be provided.

Plant Strip: Along Local Street #1, 4-foot street tree wells are to be provided within the furnishing zone of the sidewalk

Along Local Streets #2 and #3, vegetated beds with street trees are to be provided within the furnishing zone of the sidewalk.

2. Clear Zone:

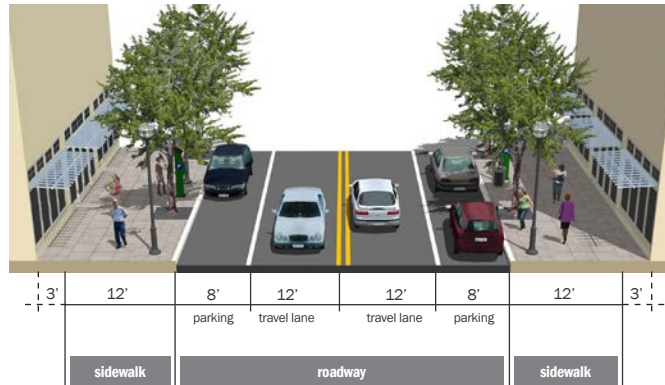
See cross sections for various clear zone requirements for Local Streets.

3. Building Frontage Zone:

Local Streets are not required to have a building frontage zone. However, an optional 3-foot building setback may be employed to create a building frontage zone.

Previous material has been removed. Page left intentionally blank.

6. Local Street



3'	12'	8'	12'	12'	8'	12'	3'
		parking	travel lane	travel lane	parking		
sidewalk		roadway				sidewalk	

LOCAL STREET #3:
CASEY

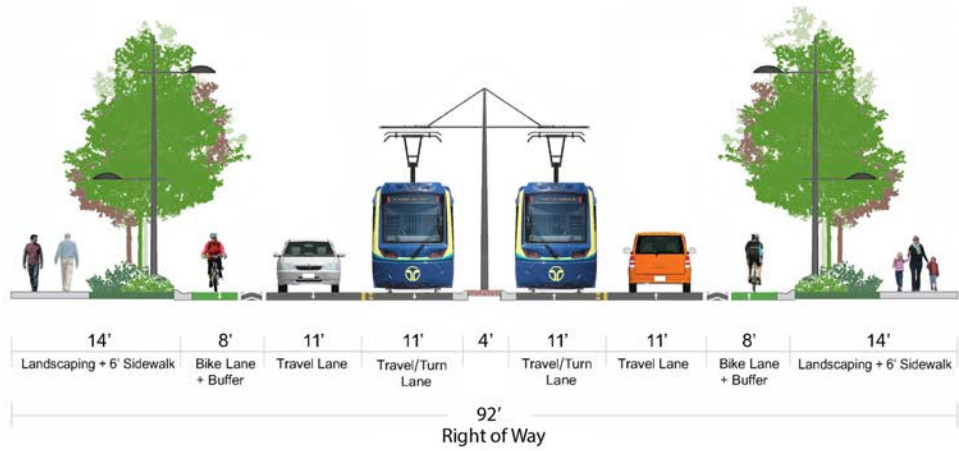


6"	4'	7'-6"	3'
curb	plant strip		optional building setback
furnishing zone		clear zone	
12' total sidewalk			

LOCAL STREET #3: THE PEDESTRIAN REALM
CASEY

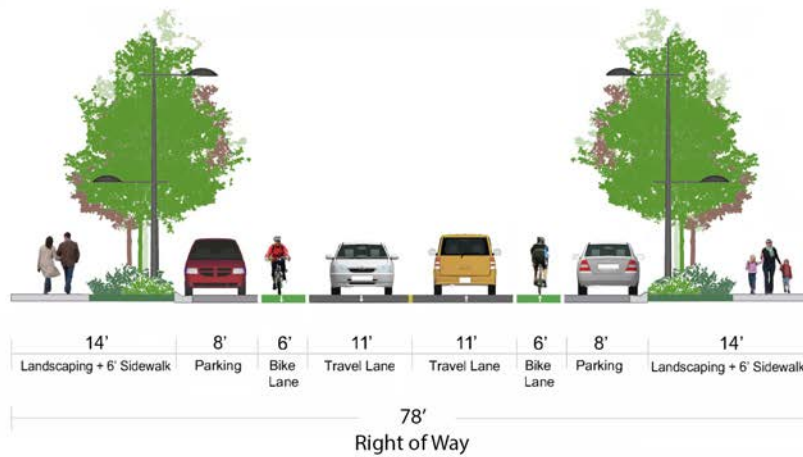
DREVER STREET

BETWEEN BALLPARK DRIVE AND TOWER BRIDGE GATEWAY



DREVER STREET/BALLPARK DRIVE INTERSECTION

BETWEEN SOULE STREET AND BALLPARK DRIVE

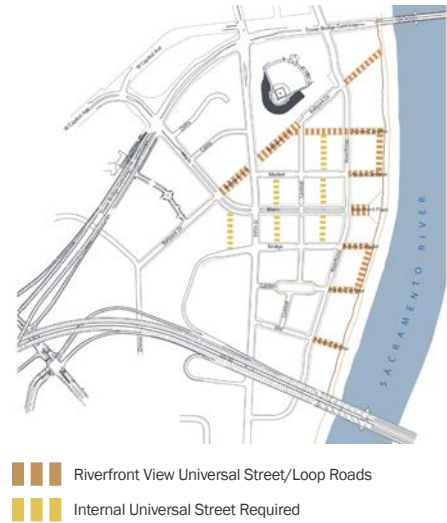


3.B. Standards for Access Streets

Access streets within the Bridge District are multi-modal streets, accommodating pedestrians and bicycles as well as limited vehicular access within the same street space. Accordingly, Access Streets will be designed to enhance and visually communicate the shared nature of these streets.

Access Streets may be one of two types. **“Stubbed” Access Streets** connect to other public rights-of-way on only one end of the street, terminating in a hammerhead. *Riverfront View Universal Streets* are Stubbed Access Streets (and are the only permitted type of stubbed streets within the Bridge District). They are intended to provide vehicular access into adjacent parcels while providing bicycle and pedestrian access to the Riverfront Promenade.

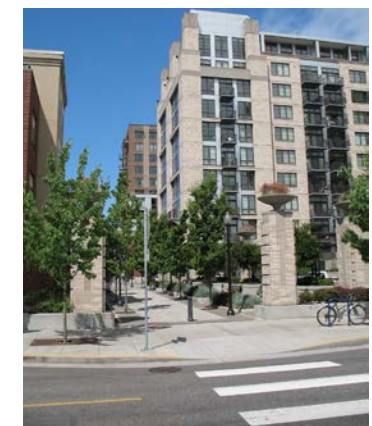
“Connecting” Access Streets connect on both ends of the street to other public rights-of-way, thereby providing circulation into and through blocks. Connecting Access Streets include *Loop Roads* (a type of Riverfront View Universal Street) and *Internal Universal Streets*.



“ZONES OF PRIVACY” ON ACCESS STREETS

Because Access Streets will not have a separated roadway and sidewalk, they must be carefully designed so as to provide a safe travel way for all modes. The streetscape requirements are intended to reinforce the shared nature of these streets through paving, bollards, landscape and street furniture placement. The design elements serve to visually define the 3 zones within the Universal Streets. These zones are:

- **The public zone** - Each Universal Street requires a minimum 20 foot public easement, which may shift up to 5 feet in either direction of the centerline. This 20 feet serves as the “public zone,” or the clear zone where the public is encouraged to walk. This zone may also be used by vehicles to access buildings.
- **The semi-private zone** - This “no structure zone” buffers the public zone from the private zone, and shall be visually defined through differing pavement treatments and/or landscape buffers. The semi-private zone may range from 4 feet to 10 feet. Retail uses fronting Universal Streets may at times use the semi-public zone for outdoor dining activities (though no permanent structures are permitted). This zone may provide a structured “sidewalk” for pedestrians, as well as a landscape strip to separate the sidewalk area from the public zone, where cars may be present. Street trees are required in Riverfront View Universal Streets, and shall be planted within this semi-private zone.
- **The private zone** - The private zone is that area immediately adjacent to the building frontage. the private zone may range from 3 feet to 16 feet (to accommodate outdoor dining). Design elements are intended to visually communicate the private nature of this area. Depending on the building frontage type, certain building elements (such as porches, stoops, or terraces) may project into the private zone, and balconies may project over it (see a.3 for specifics). See “Building Design Standards” p.65 for allowable building frontage types.

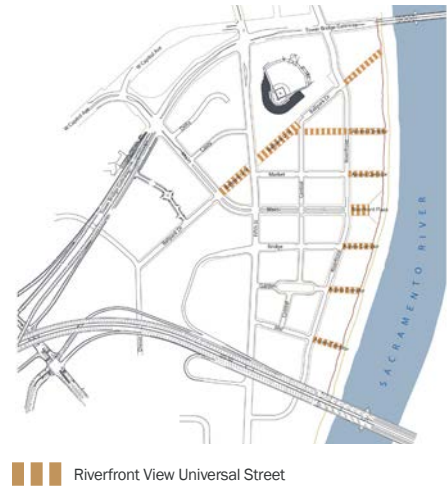


20'				
public access easement				
private zone	semi-private zone	public zone	semi-private zone	private zone
building projections allowed	no structure zone			building projections allowed

“STUBBED” ACCESS STREETS

Riverfront View Universal Streets are essentially extensions of the public Riverfront View Streets through private properties. They are intended to serve primarily as pedestrian and bicycle linkages to the Riverfront Promenade while also allowing emergency vehicular access. Riverfront View Universal streets are typically 60-foot private streets, with a 20-foot public easement along the centerline. Active uses such as individual residential front doors, cafes, and neighborhood retail uses are invited to line them. The preservation of visual connectivity and ease of pedestrian / bicycle access from within the district to the Riverfront Promenade and its open space will be key design principles in the consideration of development proposed along these streets. Riverfront View Universal Streets accommodate two-way traffic, and terminate at the Promenade.

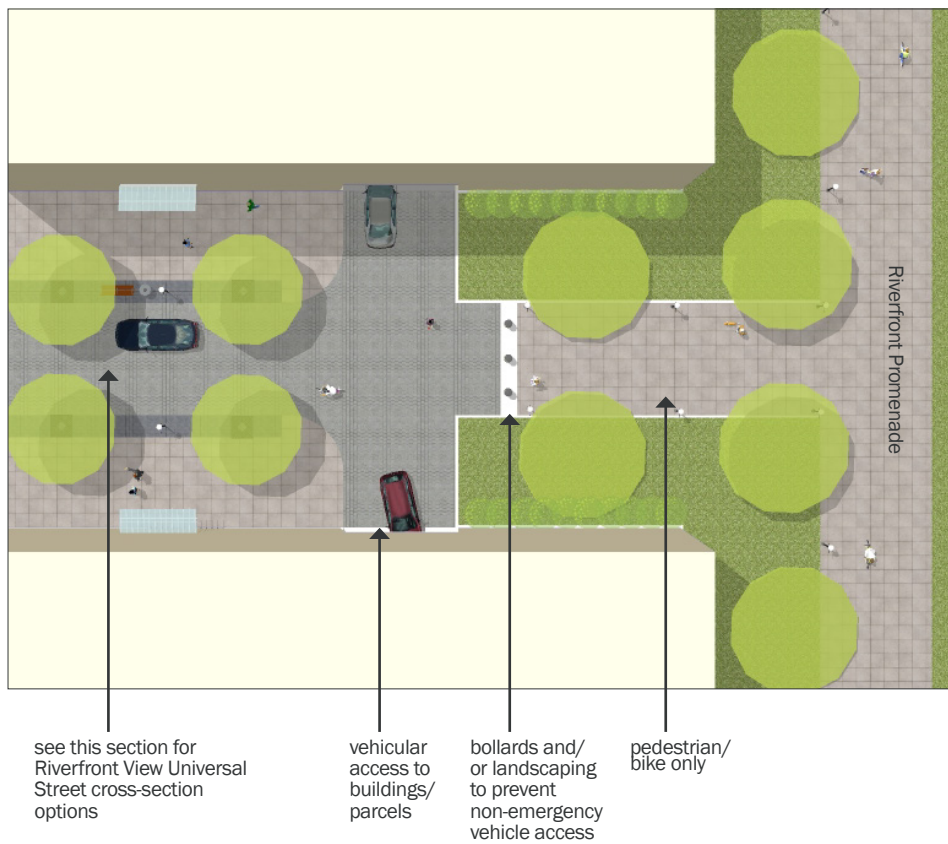
In addition to the mapped Riverfront View Universal Streets at right, blocks between Riverfront and the waterfront may provide one additional Riverfront View Universal Street along each block face. The exact location of these additional streets within the block may be determined by the property owner. Additional Riverfront View Universal Streets are not required to connect to the promenade or to other Riverfront View Universal Streets. If they do not connect, they may be entirely private, with an optional public access easement. Additional Riverfront View Universal Streets may be dedicated to the public, provided that they connect to the waterfront and they comply with City standards.



5B. Riverfront View Universal Street

Vehicular Circulation on Riverfront View Universal Streets

When Riverfront View Universal Streets (which are curbsless, by definition) are used to provide vehicular access to buildings or parcels, a mid-block “hammerhead” must be provided no further than two-thirds the distance through the block (or 250 feet, whichever is shorter), as measured from Riverfront, to prevent vehicles from accessing the Waterfront Promenade. The hammerhead may utilize removable bollards or landscape features to serve as a barrier preventing non-emergency vehicles from accessing the Promenade. While the Universal Street shall continue through to the Waterfront Promenade, it shall be dedicated to pedestrians only for the remaining distance.



5B. Riverfront View Universal Street

Riverfront View Universal Street Concept

Riverfront View Universal Streets are intended to accommodate pedestrians and bicycles as well as provide vehicular access to individual buildings within the same street space. The streetscape requirements are intended to reinforce the shared nature of these streets through paving, bollards, landscaping. While Riverfront View Universal Streets are intended to provide pedestrian access to the Riverfront Promenade, they may not provide vehicular access to the Waterfront, and must culminate in a “hammerhead.” (See page 40 for details).



The public zone, semi-private zone, and private zones shall be allocated as follows:



1. The public zone:

A 20 foot public easement is required. This 20 feet serves as the “public zone” of the street. The required 20 feet may shift 5 feet in either direction off of the ROW centerline.

5'	6'	4'	20'	4'	6'	5'
outdoor use / bigg frontage area	walkway	landscape	public access easement	landscape	walkway	outdoor use / bigg frontage area
private zone	semi-private zone		public zone	semi-private zone		private zone
50'						

RIVERFRONT VIEW UNIVERSAL STREET #1:
BALLPARK U-STREET (EAST OF RIVERFRONT)

2. The semi-private zone:

Within Riverfront View Universal Streets #1 (50 feet) and #2 (60 feet), the semi-private zone shall measure at least 10 feet in width. This allows for a structured “sidewalk” for pedestrians, as well as a landscape strip to separate the sidewalk area from the public zone, where cars may be present. Outdoor dining may at times spill out into the semi-private zone. Street trees are required, and shall be planted within this semi-private zone.

5B. Riverfront View Universal Street



OPTIONS FOR RIVERFRONT VIEW UNIVERSAL STREET #2:
STATE, MARKET, BRIDGE, GARDEN, AND MILL U-STREETS (60' RIGHT-OF-WAY)

3. The private zone:

Depending on the building frontage type, certain building elements (such as porches, stoops, or terraces) may project into the private zone, and balconies may project over it (see a.3 for specifics). See “Building Design Standards” p.65 for allowable building frontage types. Outdoor dining, landscaping, and other elements permitted/encouraged within the building frontage zone of the sidewalk may occur within the private zone of the Universal Street.

In Riverfront View Universal Street #1 (50 feet), the Private Zone may be no greater than 5 feet. This is intended to allow for adequate space to provide a pedestrian walkway and street trees in the semi-private zone.

In order to maximize safety by ensuring that there are adequate “eyes” on the street, primary building entrances must front Riverfront View Universal Streets. When residential uses are located along Riverfront View Universal Streets, primary living spaces (i.e., active living areas) shall be located along the street. See Section 3 (“Building Frontages”) for other building frontage requirements.



10'	6'	4'	20'	6'	4'	10'
outdoor use area	walkway	landscape	public access easement	landscape	walkway	terrace/porch/stoop
private zone	semi-private zone		public zone	semi-private zone		private zone



10'	10'	20'	10'	10'
terrace/porch/stoop	landscape	public access easement	landscape	terrace/porch/stoop
private zone	semi-private zone	public zone	semi-private zone	private zone

5B. Riverfront View Universal Street



10'	6'	4'	20'	4'	6'	10'
walkway/potential outdoor use area	walkway	landscape	public access easement	landscape	walkway	walkway/potential outdoor use area
private zone	semi-private zone		public zone		semi-private zone	private zone
60'						

RIVERFRONT VIEW UNIVERSAL STREET #3:
BALLPARK U-STREET WITH BALLPARK SITE



	10'	6'	4'	20'	4'	6'	10'
potential development site	walkway/potential outdoor use area	walkway	landscape	public access easement	landscape	walkway	walkway/potential outdoor use area
	private zone	semi-private zone		public zone		semi-private zone	private zone
	60'						

RIVERFRONT VIEW UNIVERSAL STREET #3:
BALLPARK U-STREET WITH DEVELOPMENT ON BALLPARK SITE

5B. Riverfront View Universal Street Riverfront Plaza



15'	21' 3"	
outdoor use area	walkway	
private/semi-private zone	public zone	plaza

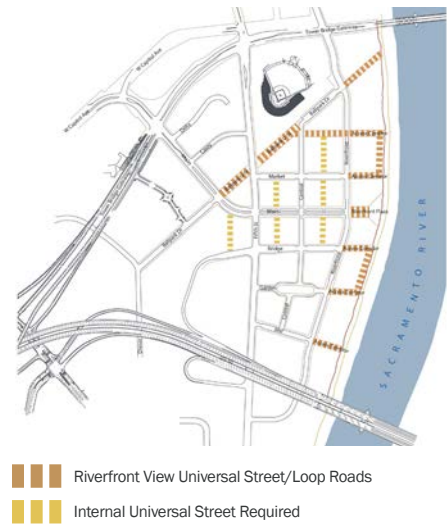
RIVERFRONT PLAZA

CONNECTING ACCESS STREETS

“Connecting” Access Streets connect on both ends of the street to other public rights-of-way, thereby providing circulation into and through blocks. Connecting Access Streets may be one of two types:

Loop Roads are a subtype of Riverfront View Universal Streets, and provide circulation between Riverfront and the Waterfront Promenade. Like other Riverfront View Universal Streets, Loop roads are 60-foot private streets, with a 20-foot public easement along the centerline. While Riverfront View Universal Streets accommodate two-way traffic and terminate at the Promenade, Loop Roads are one-way streets. Loop Roads originate at Riverfront, travel parallel to the Waterfront Promenade, and eventually loop back to Riverfront. The intent of these loop roads is to provide one-way vehicular access to and from individual buildings along the waterfront, as well as to provide access to the waterfront itself. Loop roads shall not connect to Riverfront Plaza or to the Ballpark Drive/Tower Bridge Universal Street, nor may they connect to more than two Riverfront View Universal Streets.

Internal Universal Streets, required within the central blocks of the Bridge District, are intended to provide connections through and into these large blocks (the exact location of Internal Universal Streets with these blocks may be determined by the property owner). Internal Universal Streets must connect to a minimum of two different public rights-of-way. Vehicular parking and service access to the interiors of blocks and buildings should be accessed off of these streets. Lots fronting Internal Universal Streets must provide a minimum of 50% of building frontage along the Universal Street (see Section 4 “Building Design Standards”). Internal Universal Streets are multi-modal, and in addition to providing vehicular and service access to buildings, they should provide easy pedestrian and bicycle access between the public streets that they connect. The continuation of public street qualities (such as sidewalk paving materials) will be an important consideration of development proposed along these streets.



5C. Loop Roads (east/west)

Concept

Loop Roads are a subtype of Riverfront View Universal Streets, and provide circulation between Riverfront and the Waterfront Promenade. Like other Riverfront View Universal Streets, Loop roads are 60-foot private streets, with a 20-foot public easement along the centerline, originating at Riverfront, travelling parallel to the Waterfront Promenade, and eventually looping back to Riverfront. The intent of these loop roads is to provide vehicular access to and from individual buildings along the waterfront, as well as providing access to the waterfront itself. These roads are designed to be interesting and inviting to pedestrians and offer a connection to the waterfront.

Loop roads shall not connect to Riverfront Plaza or to the Ballpark Drive/Tower Bridge Universal Street, nor may they connect to more than two Riverfront View Universal Streets.



1. The public zone:

A 20 foot public easement is required. This 20 feet serves as the “public zone” of the street. The required 20 feet may shift 5 feet in either direction off of the ROW centerline. 8 feet must be dedicated to on-street parking, and 12 feet must be dedicated to shared roadway space.

2. The semi-private zone:

The semi-private zone shall measure at least 12 feet in width. This allows for a structured “sidewalk” for pedestrians, as well as a landscape strip to separate the sidewalk area from the public zone, where cars may be present. Outdoor dining may at times pill

10'	6"	4'	8'	12'	4'	6"	10'
outdoor use area	walkway	landscape	parking	shared roadway	landscape	walkway	terrace/porch/stoop
private zone		semi-private zone		public zone		semi-private zone	private zone
60'							

LOOP ROAD CROSS SECTION
PERPENDICULAR TO WATERFRONT

out into the semi-private zone. Street trees are required, and shall be planted within this semi-private zone.

3. The private zone

Buildings must be set back a minimum of 3 feet to provide for a building frontage zone.

5C. Loop Roads (north/south)

The cross sections below illustrate two options for how loop roads (and their adjoining sidewalks) may be designed in areas where they are adjacent to the Waterfront Promenade. A 58-foot setback is required from the crest line, in which no structures, shrubs, or trees may be placed. Landscaping in this area may be grasses only.



	20'	5	10'	12'	13'
crest line	promenade walkway	furnishing strip	utility corridor with swale and parking with pervious pavers	loop road	sidewalk and plant strip
	58' setback				
	no build zone (no structures, shrubs, or trees)				

PROMENADE LOOP ROAD CROSS SECTION #1:
PARALLEL TO WATERFRONT

7. Internal Universal Street

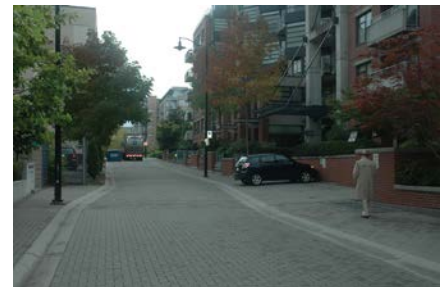
Internal Universal Streets are required within the central blocks of the Bridge District, and are intended to provide connections through and into large blocks, providing vehicular and pedestrian/bicycle access to the interiors of blocks within the same street space. The exact location of Internal Universal Streets within these blocks may be determined by the property owner. However, Internal Universal Streets should align with other Internal Universal Streets in order to create a legible, connected pedestrian and vehicular system. Driveways and parking areas should preferably be accessed off of these streets, and building service functions are encouraged to occur along Internal Universal Streets rather than other, higher function streets.

Because the intent of these streets is to increase connectivity within the central blocks, Internal Universal Streets must connect to a minimum of two public rights-of-way. Skywalks may span across an Internal Universal Street (for example, to connect a parking garage with a building).

Lots fronting Internal Universal Streets must provide a minimum of 50% of building frontage along the Universal Street (see Section 4 “Building Design Standards”). In instances where buildings do front Internal Universal Streets, retail uses (such as outdoor dining) may spill out onto these streets. The streetscape requirements will reinforce the shared nature of these streets through paving and curb treatments.



INTERNAL UNIVERSAL STREETS ARE ENCOURAGED TO ALIGN WITH OTHER INTERNAL UNIVERSAL STREETS IN ORDER TO CREATE A LEGIBLE, CONNECTED PEDESTRIAN AND VEHICULAR SYSTEM.



7. Internal Universal Street

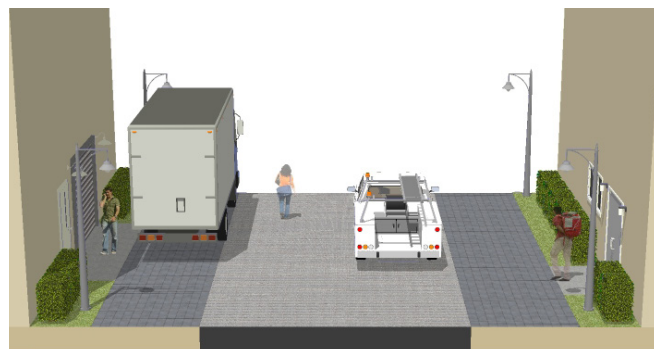


2'-5'	7'-6"-10'	20'	7'-6"-10'	2'-5'
outdoor use / bldg frontage area	walkway/ landscape/ service pulloff	public access easement	walkway/ landscape/ service pulloff	outdoor use / bldg frontage area
private zone	semi-private zone	public zone	semi-private zone	private zone

INTERNAL UNIVERSAL STREET WITH RETAIL FRONTAGE (45' RIGHT-OF-WAY)

Internal Universal Street Concept

Internal Universal Streets are required in the core blocks of the Bridge District, as indicated by the map above, and are intended to break up large blocks and provide vehicular and pedestrian/bicycle access to and through the interiors of blocks within the same street space. Because they are utilitarian in nature, driveways and parking areas should preferably be accessed off of these streets, and building service functions are encouraged to occur along Internal Universal Streets rather than other, higher function streets.



2'-5'	7'-6"-10'	20'	7'-6"-10'	2'-5'
outdoor use / bldg frontage area	walkway/ landscape/ service pulloff	public access easement	walkway/ landscape/ service pulloff	outdoor use / bldg frontage area
private zone	semi-private zone	public zone	semi-private zone	private zone

INTERNAL UNIVERSAL STREET WITH SERVICE (45' RIGHT-OF-WAY)

The exact location of the Internal Universal Street within the block may be determined by the property owner (though they are encouraged to align with other Internal Universal Streets in order to create a legible, connected pedestrian and vehicular system.) The streetscape requirements are intended to reinforce the shared nature of these streets through paving and landscaping treatments.

The public zone, semi-private zone, and private zones shall be allocated as follows:

7. Internal Universal Street

1. The public zone:

A 20 foot public easement is required. This 20 feet serves as the “public zone” of the street. The required 20 feet may shift 5 feet in either direction off of the ROW centerline.

2. The semi-private zone:

The semi-private zone shall measure at least 8 feet and no more than 10 feet in width. This allows for a service pulloff area, and creates opportunities for landscaping and a structured “sidewalk” area for pedestrians. Outdoor dining and other retail activities may at times extend into this semi-private zone. Street lighting may be provided in this zone or in the private zone. Other street furniture (such as benches and trashcans), must be provided in this semi-private zone.

3. The private zone:

The private zone shall measure at least 2 feet and no more than 5 feet in width. This “building frontage zone” shall be visually distinct from the semi-private zone. This may be accomplished through the use of landscaping or hardscaping. Street lighting may be provided in this zone or in the semi-private zone.

Depending on the building frontage type, certain building elements such as porches, stoops, awnings, canopies, and balconies may project into the private zone. Outdoor dining and other retail activities may at times occupy this private zone.

3.c. General Streetscape Standards

1. PLANT STRIP TREATMENT

Within the Bridge District, one of four plant strip treatments may apply to the furnishing zone of the sidewalk, as follows:

1. Tree grates

To re-enforce the “urban” character of certain, higher-intensity streets, trees within the plant strip are to be contained within either 4X4 or 6X6 tree wells with cast iron grate coverings (see image at right). Tree grates are particularly appropriate for those streets intended to accommodate high volumes of pedestrian traffic and on-street parking, or where sidewalk width is limited, as they maximize the overall, walkable surface area of the sidewalk. Where streetscape standards call for 4-foot tree grates, the tree should be an ornamental species suited to 4-foot well sizes.



EXAMPLE OF CAST IRON STREET TREE WELLS.

2. Stormwater planter

Because they occupy more space within the sidewalk, this plant strip treatment is appropriate for less intense street types. Stormwater planters are landscaped reservoirs used to collect, filter, and infiltrate stormwater run-off from the street. This system allows pollutants to settle and filter out as the water percolates through the planter soil and infiltrates into the ground. While stormwater planters help to achieve sustainability goals, they simultaneously serve as a visual amenity within the streetscape.

Stormwater planters may be approximately 15 to 28 feet in length, thereby allowing for two street within each planter. Approximately 4 - 6 linear feet shall be provided between stormwater planters to allow for pedestrian passage between the sidewalk and the curb zone alongside on-street parking spaces.



CONSTRUCTED STORMWATER PLANTERS MANAGE RUN-OFF WHILE PROVIDING A VISUAL AMENITY WITHIN THE STREETSCAPE

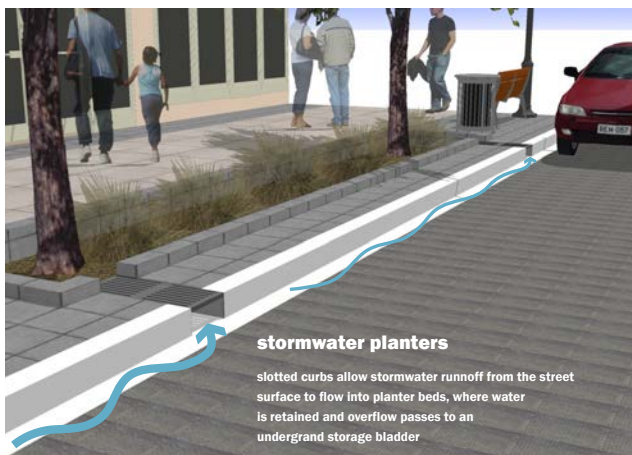


DIAGRAM ILLUSTRATES HOW STORMWATER FLOWS FROM THE STREET INTO PLANTERS VIA SLOTTED CURBS. WATER PERCOLATES NATURALLY INTO THE GROUND, AND OVERFLOW PASSES TO AN UNDERGROUND STORAGE BLADDER

Drought-tolerant, native ground cover and shrubs shall be provided within stormwater planters. Plant materials should be chosen for seasonal color variety as well as texture and visual interest.

The following matrix outlines the plant strip treatment to be used for each street type within the district. Unless otherwise noted, all multiples of a particular street type (i.e., Riverfront #1, Riverfront #2) will have the plant strip treatment indicated for the larger street type. Note that two plant strip treatment options exist for Riverfront View Streets, Riverfront View Universal Streets, and Internal Universal Streets. While Internal Universal Streets are not required to provide street trees, they may choose to do so through either of the two plant strip options shown.

Plant strip treatment by street type

	4' tree grates	Stormwater planter (see street cross section for dimensions)	6' tree grates or stormwater planter
1. Riverfront Retail Street			X
2. Riverfront Transition			X
3. Grand		X	
4. Fifth Street		X	
5a. Riverfront View Street	X	X	
Mill			X
Ballpark			X
Bridge	Bridge is an exception, and will provide tree planters within the on-street parking area.		
6. Local Street		X	
5b. Riverfront View Universal Street	X	X	
7. Internal Universal Street	X	X	

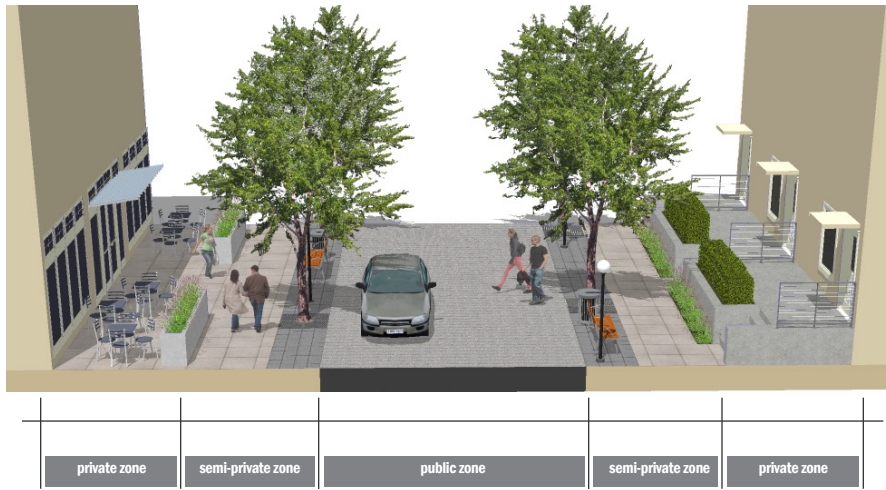


EXAMPLES OF STORMWATER PLANTERS AS APPLIED TO UNIVERSAL STREETS.

Landscape Plantings in Universal Streets

Within Riverfront View Universal Streets, landscaping shall be used to visually and physically differentiate the three “zones of privacy” (public, semi-private, and private). This required landscaping may take the form of (but is not limited to) street trees (in tree wells or stormwater planters), vegetated beds, and/or planters. The use of stormwater planters on universal streets is highly encouraged. See photographs on page 52 for examples of how stormwater planters may be applied to Universal Streets.

Street trees are required in Riverfront View Universal Streets.



ALONG RIVERFRONT VIEW UNIVERSAL STREETS, LANDSCAPING SHALL BE USED TO DIFFERENTIATE BETWEEN THE THREE ZONES. THIS REQUIRED LANDSCAPING MAY TAKE THE FORM OF STREET TREES (IN TREE WELLS OR STORMWATER PLANTERS), VEGETATED BEDS, PLANTERS, ETC.

Street tree species and spacing

Street trees must be chosen from the City of West Sacramento Master Tree List. Choice of street tree species and underplantings should be part of an overall landscape plan for the district. Within that plan, it is recommended that particular street tree species be chosen for particular street types in order to give each street type within the hierarchy its own unique personality and identity. Tree species should vary district-wide in order to ensure variety and the long-term health of trees within the district, but should ideally be a consistent specie along the axis of each given street type.

They shall be spaced a minimum of 15 feet and a maximum of 40 feet on center. Smaller species should be spaced more closely, and larger species may be more widely spaced. Street trees shall be placed so that they do not obstruct streetlights and traffic control devices (signs and signals). Canopies must grow a minimum of 8 feet above the sidewalk level in order to prevent street trees from obstructing pedestrian traffic and views to building signage.

2. MATERIALS

The standards in this section are intended to ensure that high quality materials are used within the streetscape in a manner that enhances the pedestrian experience and creates a visually rich and cohesive public realm.

Along certain streets, “special” paving materials may be used within the street and/or the sidewalk to reinforce that street’s unique sense of place and importance within the district. In addition to these aesthetic functions, special pavers may be used within certain high-traffic pedestrian streets as traffic calming devices.

Street paving materials

Streets within the Bridge District will provide one of two paving conditions. Most streets will provide uniform surface asphalt paving within the travel lanes and on-street parking areas. In contrast, higher order streets will provide textured pavers within the roadway. This paving treatment is intended to re-enforce the “special” nature of these streets. This textured treatment is especially appropriate for Riverfront and Grand, where a high degree of pedestrian traffic is expected. The texture within the roadway will slow traffic along these streets, creating a safer environment for pedestrians and encouraging activity along the sidewalk.

To maintain a more pedestrian-friendly environment and discourage speeding, traffic calming features that are both aesthetically pleasing and functional will be incorporated into the design of Riverfront Retail Street. These features may include, but are not limited to textured and/or colored pavements, chokers, chicanes, and raised crosswalks and bulbouts. These features would accommodate planned transit and streetcar facilities. Through traffic would be encouraged to use parallel streets (i.e., Fifth Street, Central), which are designed to accommodate higher traffic volumes.

Where pavers are used within the street, permeable paver units of a contrasting material, pattern, or color shall be used within the on-street parking area and center turn lane (in the case of Riverfront) in order to create a visual contrast between these areas and the travel lanes. These permeable pavers are also intended to help manage stormwater runoff.

Note: While irregular surfaces are required for certain street travel lanes, all pedestrian paths - sidewalk clear zones and crosswalks - must be smooth surfaced to facilitate ADA compliant pedestrian access.



“SPECIAL” PAVING CAN HELP TO VISUALLY DISTINGUISH KEY STREETS WITHIN THE PLANNING AREA, AND CAN SERVE AS A TRAFFIC-CALMING DEVICE. PERMEABLE PAVERS (BOTTOM) ACCOMPLISHES THESE GOALS WHILE HELPING TO MANAGE STORMWATER RUNOFF











TEXTURED AND/OR COLORED CROSSWALKS (ABOVE) AND RAISED CROSSWALKS (ABOVE RIGHT) INCREASE VISIBILITY AND ENCOURAGE DRIVERS TO SLOW DOWN



PLANTED CHICANES (ABOVE) AND BULBOUTS/CHOKERS (ABOVE RIGHT) VISUALLY NARROW THE ROADWAY AND REQUIRE DRIVERS TO MOVE MORE SLOWLY

The matrix below outlines the street paving materials appropriate to each street type. See page 68 for guidance on using special materials within intersections in key locations to create visual interest.

Paving Materials by Street Type

	Asphalt	Special pavers in the travel lane (with pavers of a different pattern/material/color in on-street parking areas and center turn lanes. Special pavers are encouraged to be permeable)	Traffic calming features required (including textured and/or colored pavers, chokers, chicanes, and raised crosswalks and bulbouts)
 1. Riverfront Retail Street		X	X
 2. Riverfront Transition		X	X
 3. Grand		X	
 4. Fifth Street	X		
 5a. Riverfront View Street	X		
 6. Local Street	X		
 5b. Riverfront View Universal Street		see "Materials in Universal Streets"	
 7. Internal Universal Street		see "Materials in Universal Streets"	

Curb materials

Streets within the Bridge District will provide a six inch wide curb comprised of cast-in-place concrete. Intersections noted as “Enhanced Intersection Treatments” in Section 5. “Corners and Crossings” will provide granite curbs within the intersection (see page 68).

In order to place greater emphasis on the central importance of Grand as the principal “spine” connecting West Sacramento to the waterfront, Grand between Fifth Street and Riverfront is to be designed as a “curbless” street, whereby the travel lanes and the sidewalks are near the same grade. This treatment will emphasize the pedestrian-oriented nature of Grand as it approaches Riverfront. Along this cross section, a sloped, shallow, mountable one-foot wide “curb” will be provided, which will be visually consistent with the one-foot curb provided along the northern portions of Grand.

In slight contrast to this sloped curb condition along Grand, all Universal Streets within the Bridge District will be entirely curbless, with no grade-separated sidewalk and roadway. Cars, bikes, and pedestrians will share the same roadway space. See page 53 and page 58 for standards relating to the use of landscape plantings and materials to differentiate the three “zones” of these curbless Universal Streets (see page 38 for description of “zones”).

Sidewalk paving pattern and materials

To provide definition to the pedestrian realm, sidewalk paving materials and patterns shall correspond to the three zones of the sidewalk. Along all streets in the district, the clear zone of the sidewalk shall be comprised of light surface, scored or stamped concrete (with smooth joints). This ensures that sidewalks are accessible for all users. The building frontage and furnishing zones of the sidewalk shall utilize the same scored or stamped concrete, but with a smaller pattern. This differentiation through pattern helps to define the clear zone, and creates visual interest along the sidewalk.

Along higher-order streets, special permeable pavers are encouraged in the furnishing zone to create a more unique sense of place along these important streets and to help manage stormwater runoff.

The matrix below outlines the sidewalk paving materials and pattern appropriate to each street type.

Sidewalk Paving Treatment by Street Type

	Standard treatment: Scored or stamped concrete sidewalks, with a smaller stamping pattern in the building frontage and furnishing zones	“Special” treatment: Scored or stamped concrete treatment, with permeable pavers in the furnishing zone
1. Riverfront Retail Street		X
2. Riverfront Road Transition		X
3. Grand		X
4. Fifth Street	X	
5a. Riverfront View Street	X	
6. Local Street	X	



CONCRETE IS THE STANDARD SIDEWALK TREATMENT THROUGHOUT THE DISTRICT. A LARGER PATTERN IN THE CLEAR ZONE BORDERED BY A SMALLER PATTERN IN THE BUILDING FRONTAGE AND FURNISHING ZONES HELPS TO GIVE DEFINITION AND CREATE VISUAL INTEREST



ALONG RIVERFRONT AND GRAND, SPECIAL PERMEABLE PAVERS SHALL BE USED WITHIN THE FURNISHING ZONE TO HELP VISUALLY DISTINGUISH THESE TWO IMPORTANT STREETS. THESE PERMEABLE PAVERS WILL ALSO HELP TO MINIMIZE STORMWATER RUNOFF

Materials in Universal Streets

Within Universal Streets, differentiation in the color and pattern of paving materials shall be used to visually differentiate the three “zones of privacy” (public, semi-private, and private). Permeable pavers are encouraged to be used to the greatest extent possible in all zones of the street. Within the public zone, paver units capable of carrying heavier loads should be used on a more substantial subgrade base.



ALONG RIVERFRONT VIEW UNIVERSAL STREETS, CONTRASTING MATERIALS SHALL BE USED TO DIFFERENTIATE BETWEEN THE THREE ZONES.



3. FURNISHINGS AND UTILITIES

All street furniture, including benches, trashcans, bicycle racks, lighting, newspaper boxes, water fountains, etc, must be located within the furnishing zone of the sidewalk. Additionally, business signage, such as A-frame or sandwich boards, must also be located within the furnishing zone. At no time may any of these items block the clear zone of the sidewalk.

Any service panels to underground utilities must also be located within the furnishing zone. Building utility items such as utility boxes, meters, and backflow preventers must be located entirely within the building in building service areas or in underground vaults.



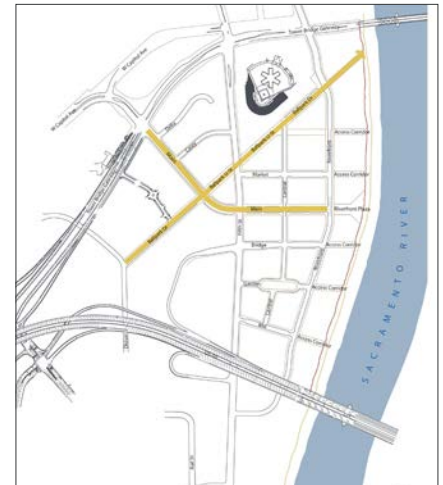
<p>building frontage zone 3-10 feet</p>	<p>clear zone 5-15 feet</p>	<p>furnishing zone 4-9 feet</p>
--	--	--

Public realm furnishings along “Streets of Civic Significance”

Within the Bridge District, two streets are of special significance, and as such, will warrant special public realm furnishings to highlight their special position within the street hierarchy.

Grand serves as the gateway into the district, linking existing civic uses west of the district to the West Sacramento Riverfront. The widest street in the district, it provides a ceremonial, tree-lined procession to the river. Ballpark is laid out in its axial alignment in order to frame and preserve views to Tower Bridge, which helps to give the Bridge District its unique sense of place.

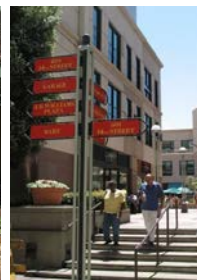
Special, place-making furnishings should be provided within the public realm along both of these streets. These may include public art, fountains or other water features, special signage, and/or special lighting.



Street of Civic Significance



FOUNTAINS AND WATER FEATURES



SPECIAL SIGNAGE



PUBLIC ART

4. ACCESS AND SERVICE (CURB CUTS)

Access standards are intended to guide the provision of curbcuts and driveways along each street type. While curb cuts to access driveways, parking areas, and/or building service areas may be permitted on certain street types, other, higher order street types may not allow for curb cuts. These standards are intended to re-enforce the pedestrian nature of streets by minimizing the visual impact that surface parking and access areas have on the building frontages along the sidewalk, and by reducing potential “conflict zones” where cars traverse across the pedestrian zone. Note that each of the frontage types in “Section 3. Building Design Standards” prohibits surface parking between the building facade and the property line/build-to line (though handicapped accessible parking may be permitted). See also Section 3 for minimum building facade requirements along the build-to line.

Likewise, standards relating to building services (garbage and recycling collection) are intended to ensure that the pedestrian nature of streets within the district is preserved by minimizing the negative aesthetic impact that these building functions can have on the pedestrian zone.

Access standards for through streets

The following matrix summarizes curb cut standards for through streets within the Bridge District.

	Condition 1: Curb cuts to access driveways, parking, and/or building service areas are not permitted. Curb cuts are permitted to provide access to Universal Streets.	Condition 2: A maximum of one curb cut is permitted per block face to access driveways, parking, and/or building service areas. Curb cuts may be no closer than 50 feet to a street intersection	Condition 3: Curb cuts are permitted, but must be spaced a minimum of XX feet apart. Curb cuts may be no closer than 50 feet to a street intersection.
1. Riverfront Retail Street	X		
2. Riverfront Road Transition		X	
3. Grand	X		
4. Fifth Street		X*	
5a. Riverfront View Street		X	
6. Local Street			X

* Where Riverfront View Streets intersect with Fifth Street to create a 3-way intersection, adjacent parcels must locate their access at the intersection so as to create a 4-way intersection.

Note that where Universal Streets are required, and along Riverfront Retail Street and Grand (where curb cuts are prohibited), all vehicular access to adjacent buildings or parcels (including access to parking areas and/or service bays) must occur off of a Universal Street, and may not occur off of any other, higher order street.

Where access is not required to be off of Universal Streets, and where curb cuts are permitted, access should be built to existing City standards.

Parking access

The following matrix summarizes those streets within the street hierarchy from which on-site parking may be accessed. Note that higher order streets will typically not permit parking access.

	Parking access permitted	Parking access NOT permitted
1. Riverfront Retail Street		X
2. Riverfront Road Transition		
Riverfront Road Transition North		X
Riverfront Road Transition South	X	
3. Grand		
Segment #1 (Tower Bridge Gateway to Ballpark)	X	
Segment #2 (Ballpark to Fifth Street)		X
Segment #3 (Fifth Street to Riverfront)		X
4. Fifth Street		X
5a. Riverfront View Street	X	
6. Local Street	X	
7. Internal Universal Street	X	

Access standards for Access Streets

1. Riverfront View Universal Streets

In addition to serving as pedestrian and bicycle connections to the Riverfront Promenade, Riverfront View Universal Streets are designed to accommodate vehicles needing access into individual buildings fronting these streets. Driveways leading to parking areas and/or service bays may be directly accessed off of Universal Streets. (However, service areas must be internal to buildings, and parking areas may not be visible from any street)

The map at right illustrates the determined location of Riverfront View Universal Streets within the Bridge District (though the exact location of Loop Roads is flexible). In addition to these mapped Riverfront View Universal Streets, blocks between Riverfront and the waterfront may provide one additional Riverfront View Universal Street to provide additional access. The exact location of these additional streets within the block may be determined by the property owner.

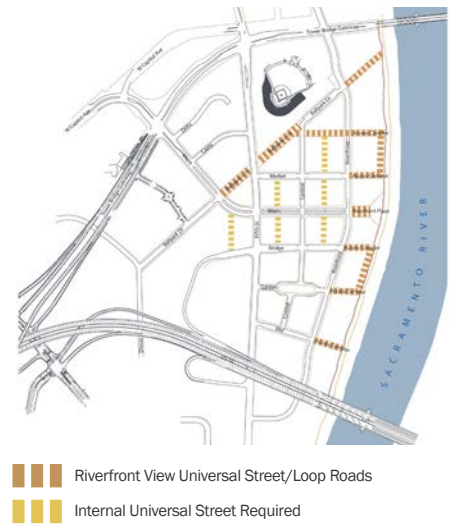
Where Universal Streets are required, and along Riverfront Retail Street and Grand (where curb cuts are prohibited), all vehicular access to adjacent buildings or parcels (including access to parking areas and/or service bays) must occur off of a Universal Street, and may not occur off of any other, higher order street.

2. Internal Universal Street

In addition to serving as pedestrian and bicycle connections within blocks, Internal Universal Streets are designed to accommodate vehicles needing access into individual buildings. Driveways leading to parking areas and/or service bays are encouraged to be accessed off of Internal Universal Streets, rather than other, higher order streets. Parking areas may be visible from Internal Universal Streets.

Internal Universal Streets are required in the core blocks (as shown at right). However, Internal Universal Streets are permitted in other neighborhoods of the Bridge District provided that they comply with the standards outlined in this document.

Where Universal Streets are required, and along Riverfront Retail Street and Grand (where curb cuts are prohibited), all vehicular access to adjacent buildings or parcels (including access to parking areas and/or service bays) must occur off of a Universal Street, and may not occur off of any other, higher order street.



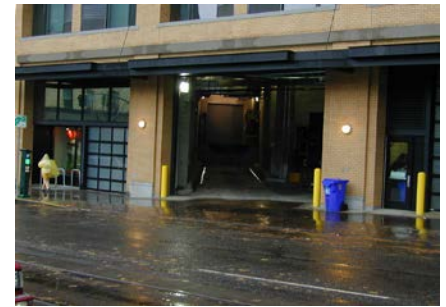
Building service standards

1. Municipal Services

All garbage and recycling storage and collection within the Bridge District must occur internally to the building (within internal service bays). Garbage and recycling containers are not permitted to be stored or placed along any street or sidewalk in the district.

Garbage and recycling collection routes shall take place along Internal Universal Streets, rather than other, higher order streets. These municipal building services are prohibited from occurring along higher-order, pedestrian-oriented streets within the district, and service bays are not permitted to front these streets. Garbage and recycling collection and other building services are permitted along private driveways.

The matrix below indicates where garbage and recycling collection services are permitted within the district.



BUILDING SERVICES SHALL OCCUR INTERNALLY TO THE BUILDING, AND SHALL MINIMIZE THE IMPACT ON THE PEDESTRIAN REALM

	Municipal services (and service bays) not permitted	Municipal services (and service bays) permitted
1. Riverfront Retail Street	X	
2. Riverfront Road Transition		X
3. Grand	X	
4. Fifth Street		X
5. Riverfront View Street		X
6. Local Street		X
7. Internal Universal Street		X (encouraged)

2. Deliveries

Building deliveries shall occur internally to the building within internal service bays (see image above). Building deliveries may occur within the street, provided that they are scheduled to occur at “off-peak” hours, such as early in the morning when delivery vehicles are less likely to impede upon pedestrian and automobile traffic. Deliveries are highly encouraged to take place within Internal Universal Streets, rather than other, higher order streets. Postal and courier delivery vehicles may park along any street when delivering packages.

3. Loading Zones

Official timed loading zones will be established and enforced within the on-street parking area of the street. On-street loading and deliveries may occur within these zones between the hours of 7 am and 11 a.m. In addition to other areas within the district, loading zones will be located along Riverfront Retail Street.

5. CORNERS AND CROSSINGS

The intent of standards relating to corners and pedestrian crossings is to ensure a high level of pedestrian safety is provided throughout the Bridge District.

Corners

Bulbouts are an extension of the sidewalk into the area of the roadway normally dedicated to on-street parking. Bulbouts significantly increase pedestrian safety by minimizing the roadway distance that pedestrians must cross (thereby minimizing their exposure to possible conflicts with vehicles). Additionally, bulbouts increase the overall visibility of pedestrians to passing cars by removing on-street parking near the intersection. Bulbouts bring pedestrians waiting to cross the street in front of on-street parking, thereby allowing drivers to see them around parked cars while also allowing pedestrians to more easily see moving vehicles.

1. Sidewalk Bulbouts at Intersections

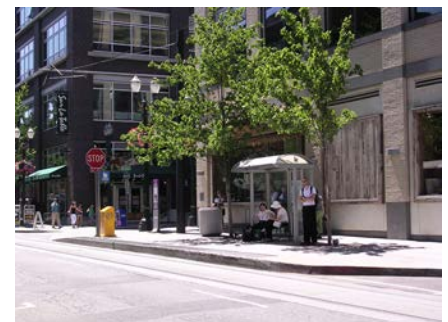
Sidewalk bulbouts are highly encouraged at all intersections where on-street parking is provided throughout the district.

2. Bulbouts at Streetcar Stops

Where a streetcar stop is planned, sidewalk bulbouts serve a dual function. While enhancing pedestrian crossing safety as described above, bulbouts may be extended linearly to provide for a raised, streetcar station area. The linear distance and height of the bulbout shall correspond with the dimensions of the streetcar.



SIDEWALK BULBOUTS AT INTERSECTIONS INCREASE VISIBILITY OF PEDESTRIANS AROUND PARKED CARS AND MINIMIZE CROSSING DISTANCES



WHERE STREETCAR STOPS ARE PLANNED, SIDEWALK BULBOUTS ARE EXTENDED LINEARLY ACCORDING TO THE LENGTH OF THE STREETCAR

3. Bulbouts at Universal Streets

Where Universal Streets meet and intersect with vehicular streets, bulbouts shall be provided on both sides of the intersecting street to facilitate pedestrian crossings. Bulbouts must meet ADA requirements.

To further calm traffic at these pedestrian bulbouts, a raised crossing may also be provided, whereby the street inclines slightly to meet the curb, providing a “raised table” at the crossing.



WHERE UNIVERSAL STREETS INTERSECT OTHER STREETS, BULBOUTS MUST BE PROVIDED ON BOTH SIDES OF THE INTERSECTING STREET TO FACILITATE PEDESTRIAN CROSSING. THE IMAGE ABOVE LEFT ILLUSTRATES THIS BULBOUT CONDITION WHERE A UNIVERSAL STREET ALIGNS WITH ANOTHER UNIVERSAL STREET (THIS CURRENTLY IS MAPPED TO OCCUR ONLY AT STATE STREET, THOUGH INTERNAL UNIVERSAL STREETS ARE ALSO ENCOURAGED TO ALIGN WITH ONE ANOTHER). THE IMAGE BELOW LEFT ILLUSTRATES A BULBOUT WHERE A UNIVERSAL STREET DOES NOT CONNECT WITH ANOTHER UNIVERSAL STREET.



BULBOUTS WHERE UNIVERSAL STREETS MEET VEHICULAR STREETS FACILITATE PEDESTRIAN CROSSINGS AND INCREASE VISIBILITY

Pedestrian Crossings

In order to maximize pedestrian safety and visibility, a well-marked crosswalk shall be provided at every intersection within the Bridge District. Pedestrian crossing areas shall provide a smooth surface in order to ensure ease of crossing for all users. Pedestrian crosswalk treatments within the district will be demarcated with typical crosswalk markings, in accordance with MUTCD 2003 Section 3B.17. Yellow, truncated domes shall be used at new or modified crosswalks in order to comply with ADA requirements.

See “Enhanced Intersections” on page 68 for pedestrian crosswalk treatments within “special” intersections.

Enhanced Intersections

The figure at right illustrates “special” intersections where high levels of pedestrian traffic are expected and/or where intersections effectively form “gateways” into the Bridge District. The following enhanced intersection treatments shall be employed within these intersections:

1. Enhanced Intersection/Pedestrian Crosswalk Treatment

At identified intersections, special paving treatments shall be used within the pedestrian crossing and the intersection to increase crosswalk visibility and create a visual “gateway” at important intersections. In these instances, roadway pavers/materials contrasting to those used within the travel lane shall be used within the crosswalk and intersection (preferably in a contrasting color or pattern) in order to increase its visibility.

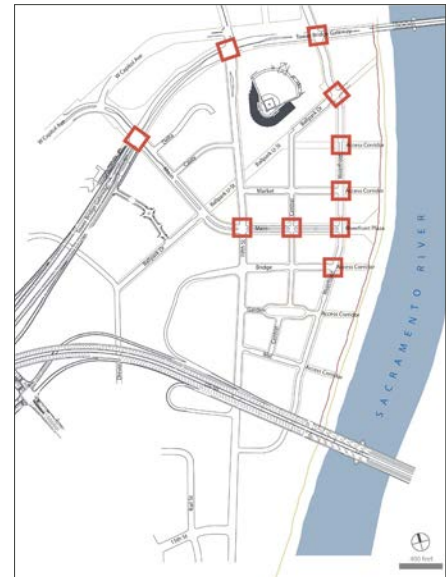
Consistent use of materials along the Riverfront Retail Street is also required. Consistent, high quality materials must be used within the intersection where Riverfront intersects with Ballpark, State U-Street, Market Street, Grand, and Bridge Street (see figure at right).


2. Curbs

Within identified enhanced intersections granite curbs shall be employed.

3. Sidewalks

At identified intersections, special sidewalk materials may be used to visually highlight the intersection.



 Enhanced intersection treatment



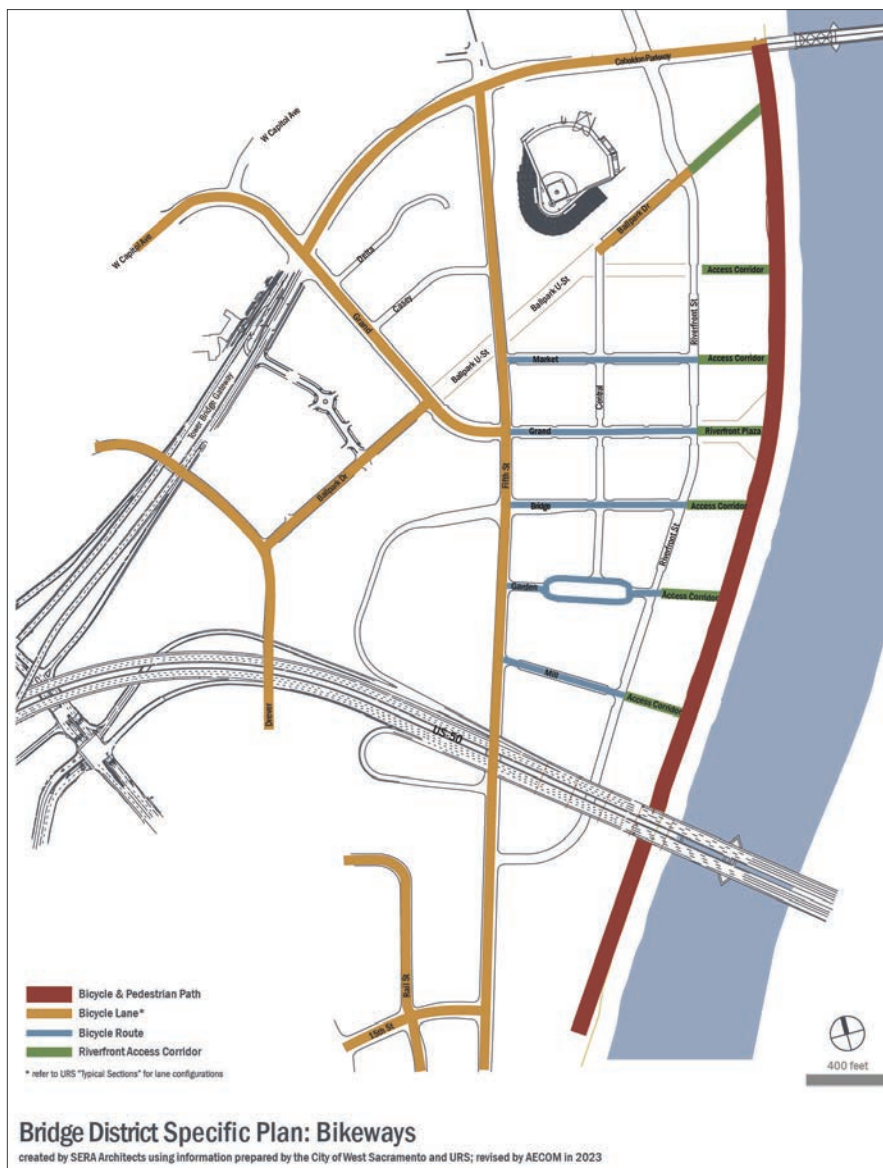
AT CERTAIN “SPECIAL” INTERSECTIONS, PEDESTRIAN CROSSWALKS WILL BE TREATED WITH THE SAME CONCRETE USED WITHIN THE CLEAR ZONE OF THE SIDEWALK. WHERE THIS OCCURS WITHIN STREETS WITH TEXTURED PAVERS, THE EDGE OF THE CROSSWALK SHALL BE BORDERED WITH CONTRASTING PAVERS TO THOSE USED WITHIN THE TRAVEL LANE

6. BICYCLES

The intent of the standards and guidelines relating to bicycle lane treatments in this section are intended to encourage bicycling as a mode of transportation, and to ensure the safety of all bicyclists within the Bridge District.

Bicycle network

The map below illustrates planned bicycle and pedestrian paths, bicycle lanes, and bicycle routes (where bikes and cars share the road) within the Bridge District.



Bicycle markings

Bicycle lane markings shall be consistent with Section 9C of the California Manual on Uniform Traffic Control Devices (MUTCD).

On designated bicycle routes (as indicated by the map on page 69), where bikes and cars share the roadway, consider utilizing a shared roadway bicycle marking in accordance with MUTCD 2003 California Supplement Section 9C.103. The Shared Roadway Bicycle Marking assists bicyclists with positioning on a shared roadway where there is on-street parallel parking, and alerts vehicles of the location a bicyclist may occupy within the traveled way. Additionally, it may reduce the chance of conflicts between bicyclists and open doors of parked vehicles.

Bicycle lane safety

When bicycle lanes are immediately adjacent to the curb with no on-street parallel parking between the curb and the sidewalk (as on Fifth Street and the western portions of Grand), consideration must be paid to the drainage elements along the curb to ensure that a high degree of safety is maintained for bicyclists.

Trench drains and drain inlets located along the curb and immediately adjacent to the bicycle lane shall be narrow enough so as not to protrude into the bike lane (see image at right). This ensures that bicyclists within the bicycle lane are not encouraged to serve left (into the traffic lane) around any protruding gutter seams.

Drainage gratings along the curb and immediately adjacent to the bicycle lane shall provide a tight pattern, or one that is perpendicular to the bicycle travel direction (rather than parallel). This ensures that bicycle wheels are able to safely traverse the pattern without the wheels getting caught.



“SHARROWS” CAN BE USED TO TO HELP POSITION BICYCLISTS ON STREETS WHERE THERE IS NOT A DEDICATED BIKE LANE



FAR TOP RIGHT: WIDE GUTTERS THAT EXTEND INTO THE BICYCLE LANE OFTEN CREATE A SITUATION IN BICYCLISTS RIDE CLOSER TO VEHICULAR TRAFFIC IN ORDER TO AVOID SEAMS.

FAR BOTTOM RIGHT: NARROW GUTTERS ALONG THE CURB ENCOURAGE BICYCLISTS TO RIDE FULLY WITHIN THE BICYCLE LANE AND FURTHER AWAY FROM VEHICULAR TRAFFIC.

NEAR RIGHT: ANOTHER OPTION MAY BE TO FULLY EXTEND THE PRE-CAST CURB ACROSS THE ENTIRE BICYCLE LANE, THEREBY VISUALLY DISTINGUISHING THE BIKE LANE FROM VEHICULAR TRAVEL LANES.



4. BUILDING DESIGN STANDARDS

INTENT

The intent of the building design standards is to ensure that the design treatment of the ground floor of buildings in the Bridge District adequately address the public realm, create an inviting environment for pedestrians, and enhance the public streetscape investment. They are intended to reinforce the character and intent of each individual street type, as described in Section 2 (“Regulating Plan”).

ORGANIZATION

Because the identity of a neighborhood or district is largely determined by its streets (and how buildings relate to and contribute to the character of those streets), the building design standards within this section are organized around the Bridge District Regulating Plan’s street hierarchy. The building design standards directly relate to and are unique for each street type, and are intended to reinforce the unique character envisioned for each of those street types.

Because the primary purpose of the building design standards is to foster the creation of a vibrant pedestrian realm, the standards focus on that part of the building that most directly impacts the public realm, namely, the ground floor facade as it is experienced from the sidewalk. Accordingly, the building design standards are organized around “frontage types” (see page 73 for an overview and comparison of the various frontage types permitted). Particular standards controlling items such as front setbacks, building frontage, ground floor height, ground floor transparency, primary building entries, awnings and canopies, porches and stoops, fences, and landscaping are then tied to and presented according to individual frontage types.

HOW TO USE THESE STANDARDS

Like the streetscape standards in the previous section, the building design standards are “keyed” into the regulating plan. To determine the standards applicable to any given parcel,

1. Look to the Regulating Plan in Section 2 to determine the type of street on which the parcel fronts.
2. Look to the matrix on pages 74-75 to determine the frontage types permitted along that particular street type. The particular building design standards applicable to each permitted frontage type are presented on pages 77-82.

Note that parcels located at corner intersections must comply with the standards for each street type on which the property fronts.


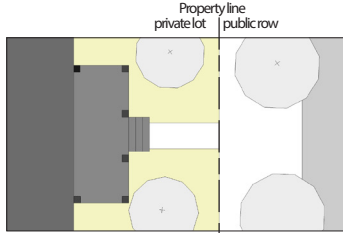
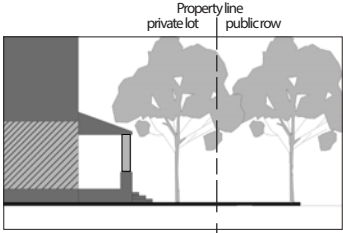

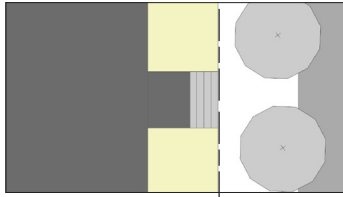
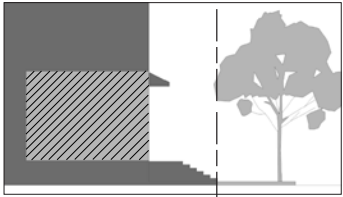

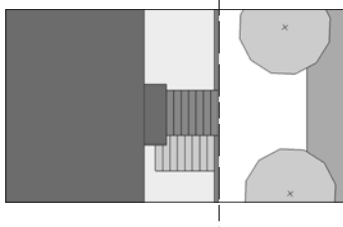
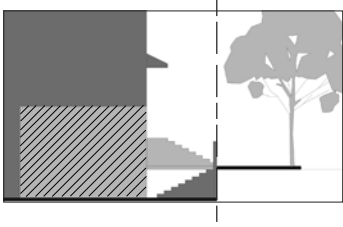

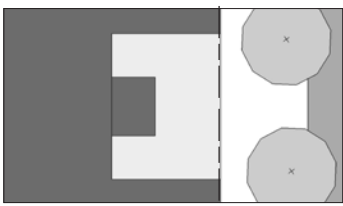
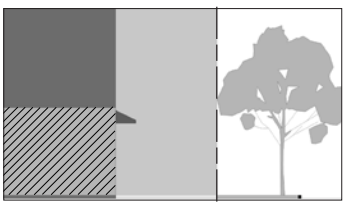


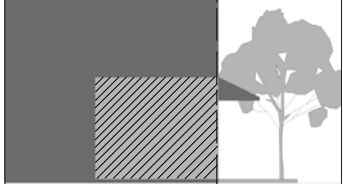


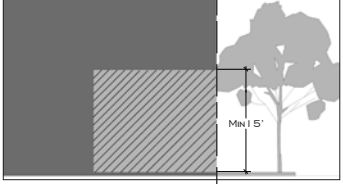
BUILDING FRONTAGE AND THE ORDER OF STREETS

“Frontage” is defined as a building’s front, street-facing, ground level facade, which must include the primary building entrance (i.e., the “front door”).

Streets within the Regulating Plan are presented in descending order of prominence, and buildings must be oriented to and have their front doors directly connected to the highest order street facing the lot. For example, all buildings along Grand must have their front doors oriented to and directly connected to the sidewalk along that street.

However, buildings on corner lots must have their primary frontage facing the higher order street. For example, a building on the corner of Grand and Fifth Street would have Grand as its primary “frontage.” If a property owner chooses, however, lots with two street frontages may orient buildings to the corner in lieu of facing the higher order street only.



Frontage Description	Example	Plan	Section
<p>Townhouse Porch</p> <p>This frontage type is characterized by a facade which is aligned on or close to the property line with the ground story elevated from the sidewalk to provide privacy for the ground floor uses. The entrance is accessed by a porch which is appended to the front facade. This frontage is suitable for ground floor residential uses</p>			
<p>Stoop</p> <p>A Stoop frontage is characterized by a facade which is aligned on or close to the property line with the ground story elevated from the sidewalk to provide privacy for the ground floor uses. The entrance is usually an exterior stair or landing which may be combined with a small roof. This frontage type is suitable for ground floor residential uses.</p>			
<p>Door Yard/Terrace/Light Court</p> <p>A Door Yard/Terrace or Light Court frontage is characterized by a facade that is set back from the street property line by an elevated terrace or a sunken light court. The Door Yard/Terrace or Light Court is suitable for ground floor residential and/or commercial uses (including outdoor dining)</p>			
<p>Forecourt</p> <p>A Forecourt frontage may be created by recessing a central portion of the facade for a portion of the building frontage. The Forecourt frontage should be used in conjunction with other frontage types (Linear or Linear Storefront). A Forecourt may be suitable for gardens and/or outdoor dining. A Forecourt is appropriate for residential or commercial uses.</p>			
<p>Linear Storefront</p> <p>A Linear Storefront frontage is characterized by a facade which is aligned close to or directly on the right-of-way line with the building entrance at sidewalk grade. Linear Storefront frontages have substantial glazing on the ground floor, and provide awnings or canopies cantilevered over the sidewalk. Building entries must either provide a canopy or awning and/or be recessed behind the front building facade. This frontage is appropriate for commercial retail uses.</p>			
<p>Linear</p> <p>A Linear frontage is characterized by a facade which is aligned close to or directly on the right-of-way line with the building entrance at sidewalk grade. Linear Storefront frontages have substantial glazing on the ground floor, but are not required to provide awnings or canopies over the sidewalk. Building entries must either provide a canopy or awning and/or be recessed behind the front building facade. This frontage is appropriate for residential or commercial uses.</p>			

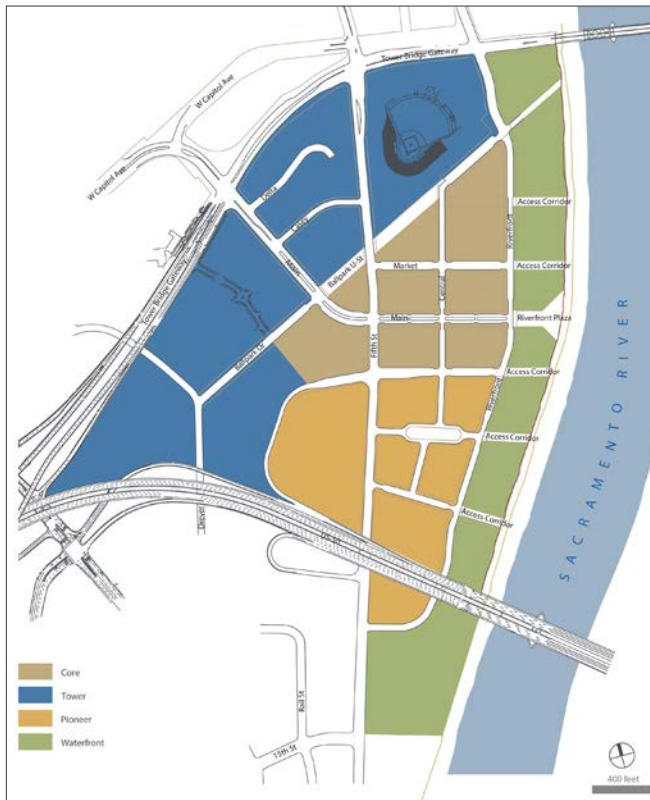
ALLOWABLE BUILDING FRONTAGES BY STREET TYPE

The matrix below outlines which building frontage types are permitted along each street type. The building design standards specific to each frontage type follow this matrix. Note that these standards are in no way intended to discourage building articulation along any given facade. Building facade articulation is encouraged in the district.

	Townhouse Porch	Stoop	Door Yard/ Terrace/ Light Court	Forecourt	Linear Storefront	Linear
1. Riverfront Retail Street					X	
2. Riverfront Transition				X	X	X
3. Grand						
Segment #1 (Tower Bridge Gateway to Ballpark)	X	X	X	X		
Segment #2 (Ballpark to Fifth Street)				X	X	X
Segment #3 (Fifth Street to Riverfront)					X	X
4. Fifth Street				X	X	X
5. Riverfront View Street	X	X	X	X	X	X
Segment #3 (Garden Street)	X	X	X	X		
6. Local Street (see "Neighborhoods" figure on page 75)	X	X	X	X	X	X
Core						
Tower						
Pioneer						
Waterfront						

* see p.81 for building setback requirements for buildings fronting the Riverfront Promenade or adjacent loop roads.

	Townhouse Porch	Stoop	Door Yard/ Terrace/ Light Court	Forecourt	Linear Storefront	Linear
7. Internal Universal Street	Buildings not required to comply with Building Frontage Types (though they may chose to do so). See page 84 for minimum building frontage required along street-facing property line. Buildings along Internal Universal Streets must provide a minimum of 30% window glazing along the street-facing, ground floor facade of the building, and are encouraged to locate building entries and other building activities along the Internal Universal Street frontage, but are not required to do so.					
Riverfront Promenade/ Loop Road *	X	X		X	X	X



THE FIGURE ABOVE ILLUSTRATES THE NEIGHBORHOODS WITHIN THE BRIDGE DISTRICT. FRONTAGE TYPES ALONG LOCAL STREETS SHALL BE DETERMINED BY THE NEIGHBORHOOD WITHIN WHICH THE STREET FALLS (SEE CHART "ALLOWABLE BUILDING FRONTAGES BY STREET TYPE")

LAND USE REQUIREMENTS

While the standards in this section regulate the design of the ground floor building facade and establish standards for how buildings relate to the streets that they front, they do not address the individual uses within buildings.

To some degree, land use along a given street may be implied (but not entirely dictated) by the building frontage types permitted. For example, the “Forecourt,” “Linear Storefront,” and “Linear” frontage types are suited for commercial ground floor uses, such as office or retail (or even ground floor lobby spaces for residential uses on upper floors). The “Townhouse Porch” and “Stoop” frontage types, on the other hand, are more appropriate for residential uses. These are rules of thumb, however, as commercial uses may certainly take place within “Townhouse Porch” and “Stoop” frontage types (and likewise, uses are flexible for other frontage types as well).

However, while land use throughout the district is typically flexible, along **Riverfront Retail Street**, all buildings must provide retail uses at the ground floor. Note that only the “Linear Storefront” frontage type is permitted along this street. The standards associated with this frontage type (front setbacks, ground floor building height, windows, primary entry doors, and awnings and canopies), ensure that buildings will be designed to accommodate required retail uses. Up to 20%, or 12% (which ever is less) of any one building frontage along Riverfront Retail Street may be dedicated to ground floor residential lobbies. Where additional, optional Riverfront View Universal Streets open onto Riverfront Retail Street, the remainder of the blockface must be comprised of retail uses, and ground floor residential lobbies will not be permitted.

Buildings along Riverfront Retail street are encouraged to be mixed-use. While retail is required at the ground floor, residential and/or office uses are encouraged to occur on upper floors. This mixed-use environment contributes to the overall vibrancy of the street, creating a “24/7” district with complementary land uses.

While retail uses are not required along **Grand** between Fifth Street and Riverfront, all ground floors along this segment are required to be “retail convertible.” Because the only frontage types permitted along this segment are “Forecourt,” “Linear Storefront,” and “Linear” frontage types, no further regulation is necessary to ensure the retail convertibility of structures. The standards tied to each of these frontage types (setbacks, ground floor building height, windows, primary entry doors, and awnings and canopies) ensure that any structures built along this segment of Grand will be suitable to any present or future retail uses.

Ground floor retail uses required along Riverfront Retail Street



RETAIL USES ARE REQUIRED ON THE GROUND FLOOR ALONG RIVERFRONT RETAIL STREET. NOTE THAT ONLY THE LINEAR STOREFRONT FRONTAGE IS PERMITTED ALONG THIS STREET TYPE. THE BUILDING DESIGN STANDARDS ASSOCIATED WITH THIS FRONTAGE TYPE ARE SPECIFICALLY DESIGNED TO ACCOMMODATE GROUND FLOOR RETAIL USES.

“Retail convertible” ground floors required along Grand



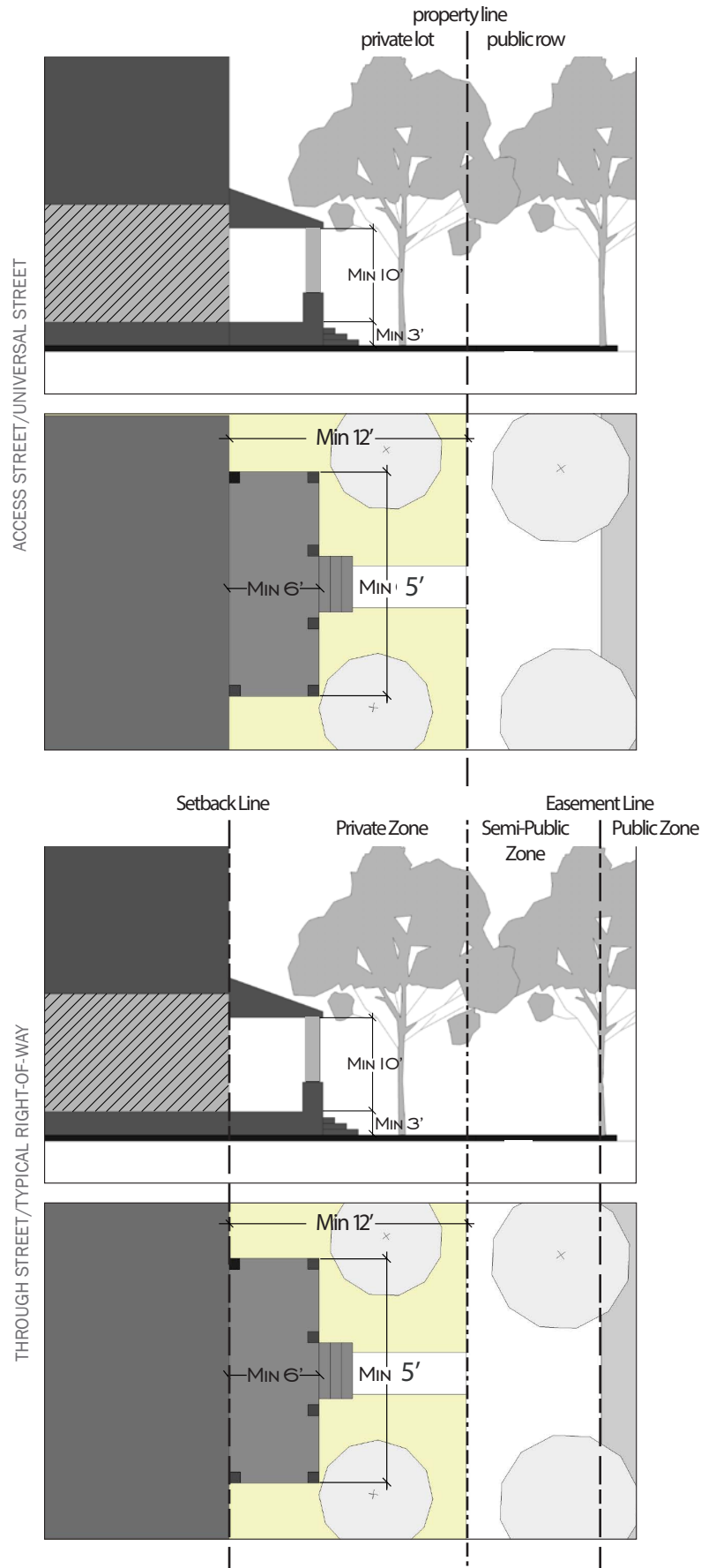
GROUND FLOORS ALONG GRAND BETWEEN FIFTH STREET AND RIVERFRONT MUST BE DESIGNED TO BE “RETAIL CONVERTIBLE.” NOTE THAT THE ONLY FRONTAGE TYPES PERMITTED ALONG THIS STREET TYPE ARE FORECOURTS, LINEAR STOREFRONTS, AND LINEAR FRONTAGE TYPES. THE BUILDING DESIGN STANDARDS ASSOCIATED WITH EACH OF THESE FRONTAGE TYPES ENSURES THAT THE GROUND FLOOR IS CAPABLE OF ACCOMMODATING RETAIL USES.

STANDARDS FOR FRONTAGE TYPES

A. Townhouse Porch

Townhouse Porch frontages shall conform to the following standards:

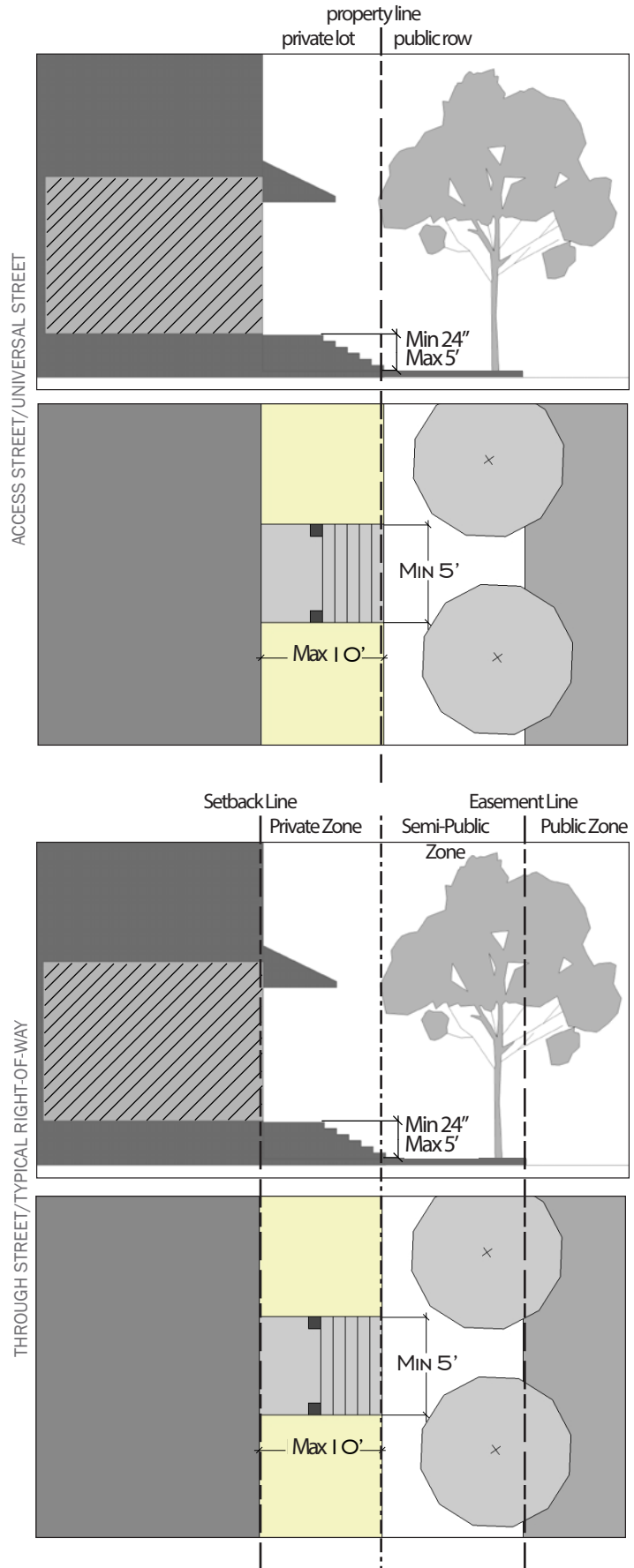
1. **Primary street setback:** The porch may be built along the front property line, or set back a maximum of 12' to accommodate a front garden.
2. **Porch Dimensions:** Porches must conform with the following (note: porch dimensions may vary from the standards below to accommodate wheelchair ramps, if necessary):
 - a. Minimum of 10' tall (clear).
 - b. Minimum of 6' deep (clear).
 - c. Porch height may be a maximum of 3' above grade.
 - d. Minimum 5' frontage.
3. **Columns:** Columns supporting porches must be at least XX' by XX', and must provide a defined "base" and a "top."
4. **Windows:** There must be 30% of windows along the ground floor, street-facing facade. Windows must be vertically oriented (at a ratio of 2:1). Vertical windows may be grouped together to create square-shaped windows. Windows must provide trim measuring at least 3".
5. **Primary Entry Doors:** In order to provide adequate "eyes" on the street, ground floor residential uses must provide individual building entries to individual residential units. Building entries must face the street and be a minimum 30% transparent.
6. **Fences:** Fences are permitted within the front setback, but may be no greater than 36" in height, and must be a minimum of 20% transparent.
7. **Landscaping:** Landscaping must be provided in the front setback area, ideally with drought-tolerant, native plant species.



B. Stoop

Stoop frontages shall conform to the following standards:

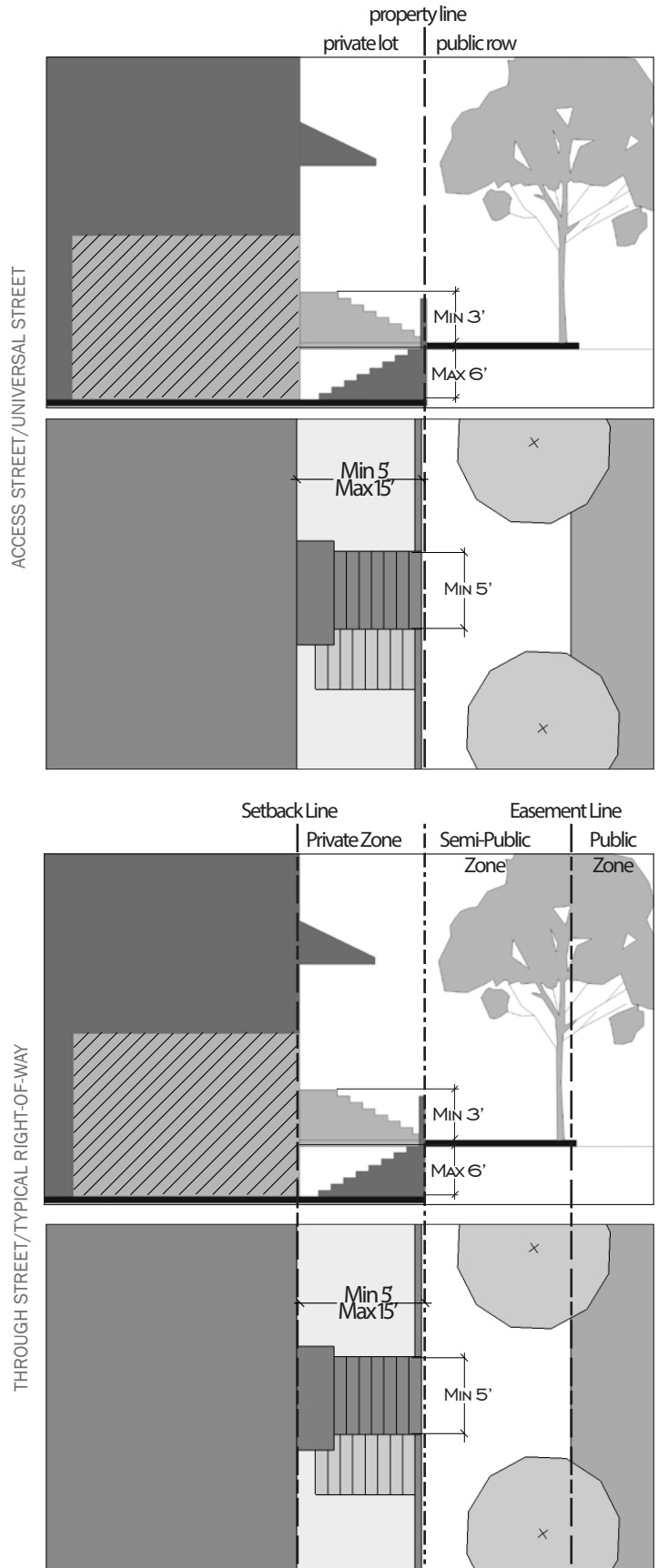
1. **Primary street setback:** The front facade of the building must be set back behind an elevated stoop, which may directly abut the front property line, or be set back up to 3' to accommodate a front gate and/or landscaping.
2. **Stoop Dimensions:** Stoops must conform with the following (note: stoop dimensions may vary from the standards below to accommodate wheelchair ramps, if necessary):
 - a. Must rise a minimum of 24 inches and a maximum 5' above grade.
 - b. Minimum 5' wide.
3. Stoop frontages may be combined with a small roof.
4. **Windows:** There must be 30% of windows along the ground floor, street-facing facade. Windows must be vertically oriented (at a ratio of 2:1). Vertical windows may be grouped together to create square-shaped windows. Windows must provide trim measuring at least 3".
5. **Primary Entry Doors:** In order to provide adequate "eyes" on the street, ground floor residential uses must provide individual building entries to individual residential units. Building entries must face the street.
6. **Fences:** Fences are permitted along the front property line, but may be no greater than 36" in height, and must be a minimum of 20% transparent.
7. **Landscaping:** Landscaping must be provided in the front setback area, ideally with drought-tolerant, native plant species.



C. Door Yard/Terrace or Light Court

Door Yard/Terraces or Light Courts shall conform to the following standards:

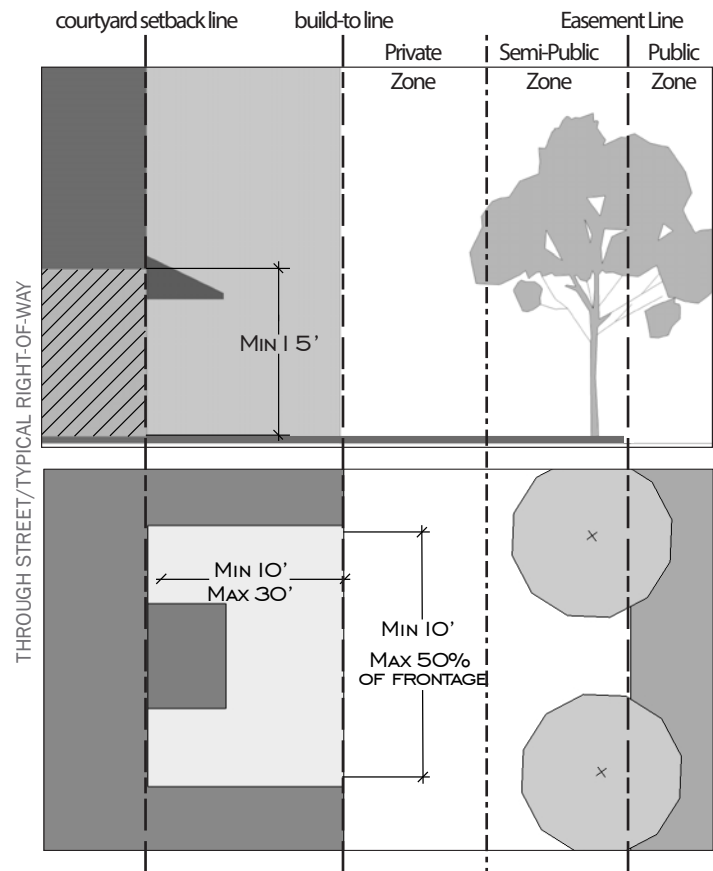
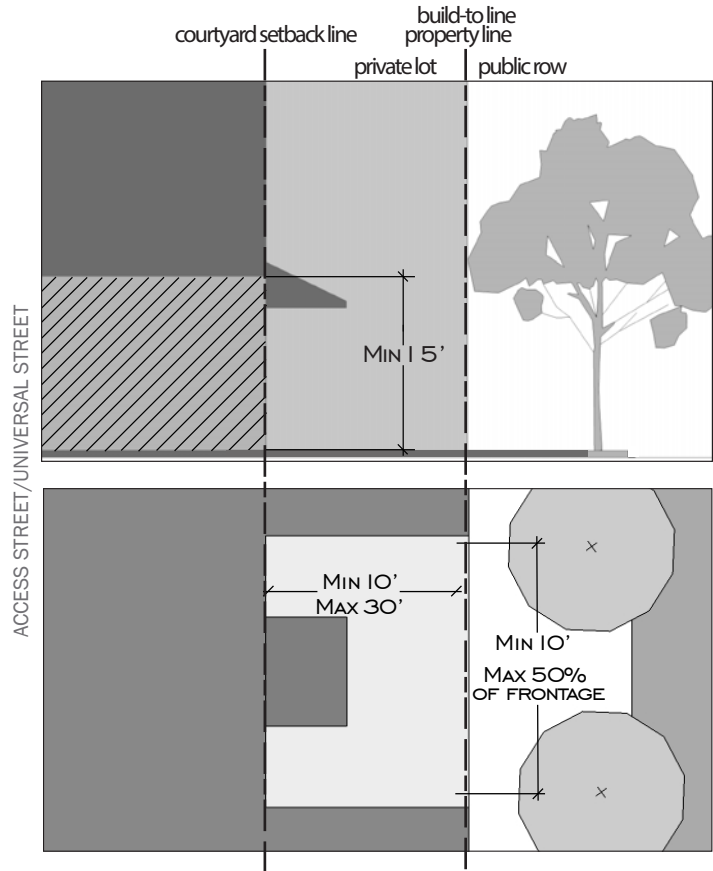
1. **Primary street setback:** The front facade of the building must be set back a minimum of 5 feet and a maximum of 15 feet behind an elevated terrace or sunken light court. The terrace and/or sunken light court must directly abut the front property line.
2. Basements accessed by a lightcourt may not be more than 6' below the sidewalk.
3. The stoop above the lightcourt may rise to a maximum of 3' above grade, and be a minimum of 5' wide (note: stoop dimensions may vary from these standards to accommodate wheelchair ramps, if necessary).
4. Windows: There must be 30% of windows along the ground floor, street-facing facade. Windows must be vertically oriented (at a ratio of 2:1). Vertical windows may be grouped together to create square-shaped windows.
5. **Primary Entry Doors:** In order to provide adequate "eyes" on the street, primary building entries must face the street.
6. **Fences:** Fences are permitted within along the front property line, but may be no greater than 36" in height, and must be at a minimum 20% transparent.



D. Forecourts

Forecourts shall conform to the following standards:

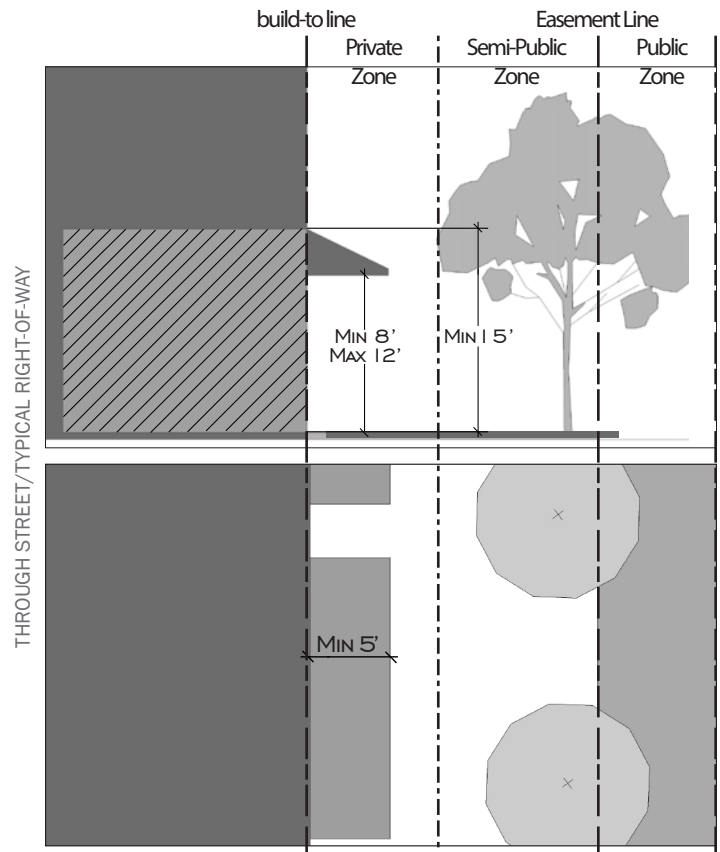
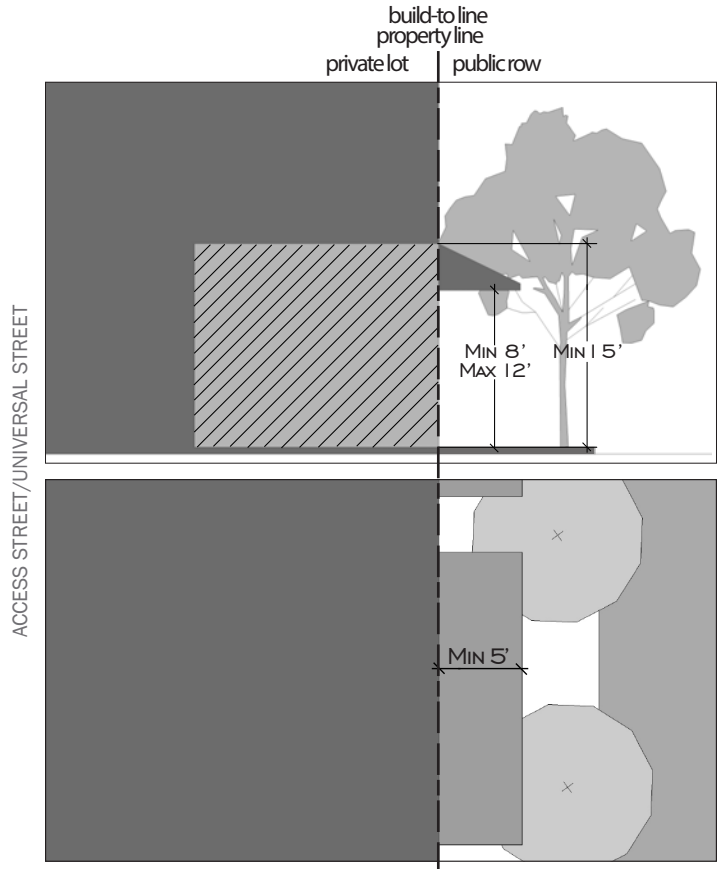
1. **Primary street setback:** The front facade of the building must be built to the front property line for at least 50% of the overall building frontage. The remaining 50% of building frontage may be used to create a recessed courtyard in the central portion of the facade.
2. Forecourts must be set back from the build-to line/front building facade a minimum of 10' and a maximum of 30'.
3. Forecourts must span a minimum of 10' along the front facade, and may comprise no more than 50% of the overall building frontage.
4. The Forecourt frontage shall incorporate other frontage types (Linear or Linear Storefront).
5. **Ground floor height:** In order to accommodate current or potential future retail uses, the ground floor must measure a minimum of 15 feet, floor to floor.
6. **Minimum building depth:** Buildings must be a minimum of 50' deep in order to accommodate retail uses on the ground floor.
7. Forecourts may not be covered, and may be landscaped and/or hardscaped.
8. **Windows:** Transparent windows must be provided along at least 60% of the forecourt-facing ground floor facade.
9. **Primary Entry Doors:** In order to provide adequate "eyes" on the street, primary building entries must face the street and be a minimum 40% transparent.
10. **Fences:** Fences and walls with pedestrian openings are permitted within the courtyard setback, but may be no greater than 36" in height, and must be a minimum of 20% transparent.



E. Linear Storefront

Linear Storefront frontages shall conform to the following standards:

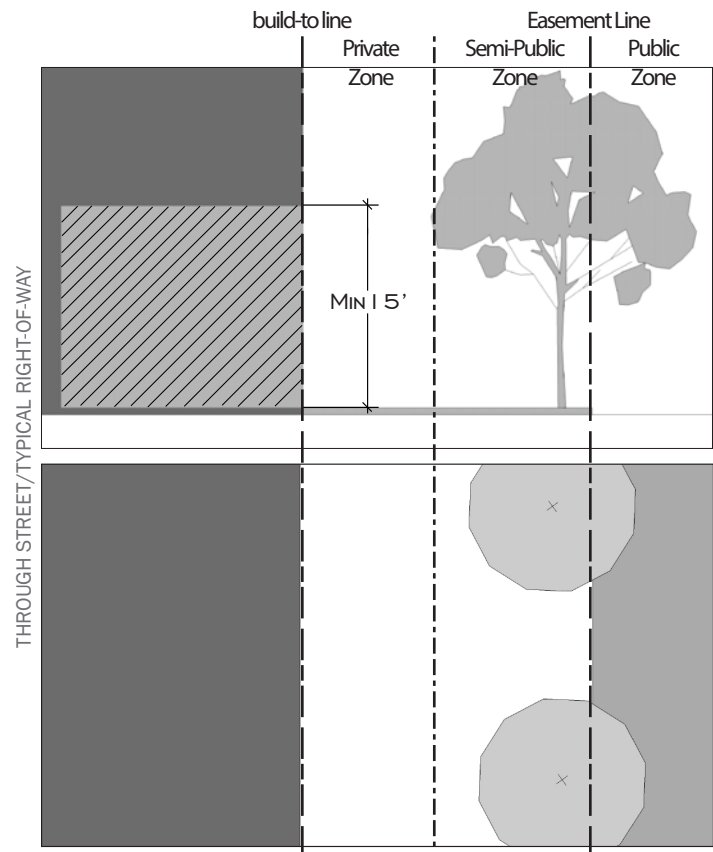
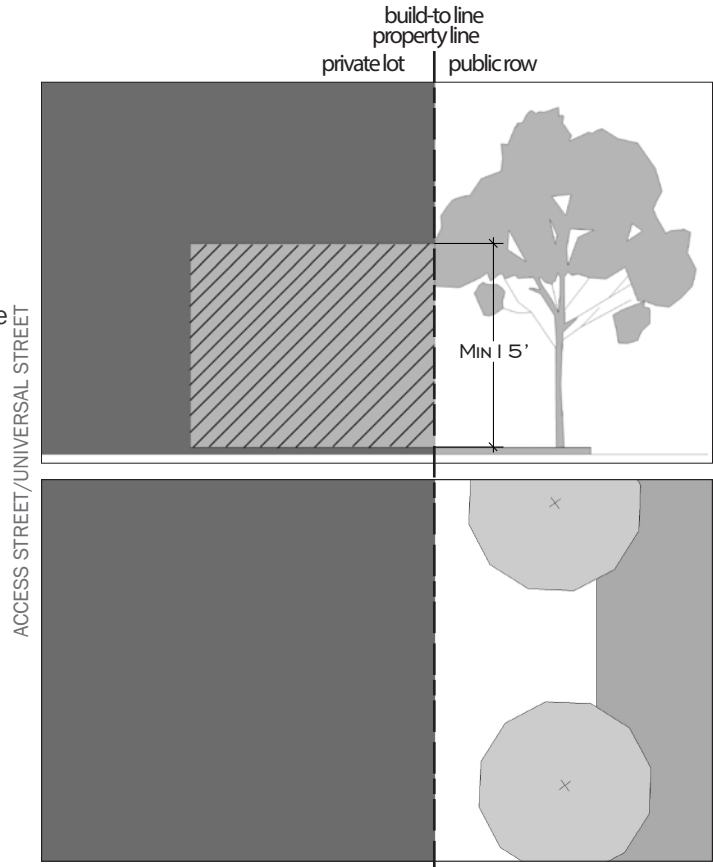
1. **Primary street setback:** The front facade of the building must be built to the front property line.
2. **Ground floor height:** In order to accommodate current or potential future retail uses, the ground floor must measure a minimum of 15 feet, floor to floor.
3. **Minimum building depth:** Buildings must be a minimum of 50' deep in order to accommodate retail uses on the ground floor.
4. **Weather Protection:** Awnings/canopies must be provided for a minimum of 50% of the overall building frontage, and must comply with the following:
 - a. Awnings/canopies must project a minimum of 5' over the sidewalk.
 - b. Awnings/canopies must provide a minimum of 8' and a maximum of 12' of vertical clearance over the sidewalk.
5. **Building Entrances:** Building entrances must either be covered by an awning or canopy, or be covered by being recessed behind the front building facade. If an awning or canopy is provided, it must meet the dimensional standards provided above. If a recessed entry is provided, it must be recessed behind the front facade a minimum of 3'.
6. **Windows:** Transparent ground floor windows must be provided along a minimum of 60% of the ground floor, street-facing facade.
7. **Primary Entry Doors:** In order to create a sidewalk environment conducive to retail uses and provide adequate "eyes" on the street, primary building entries must face the street and be a minimum 40% transparent.



F. Linear

Linear frontages shall conform to the following standards:

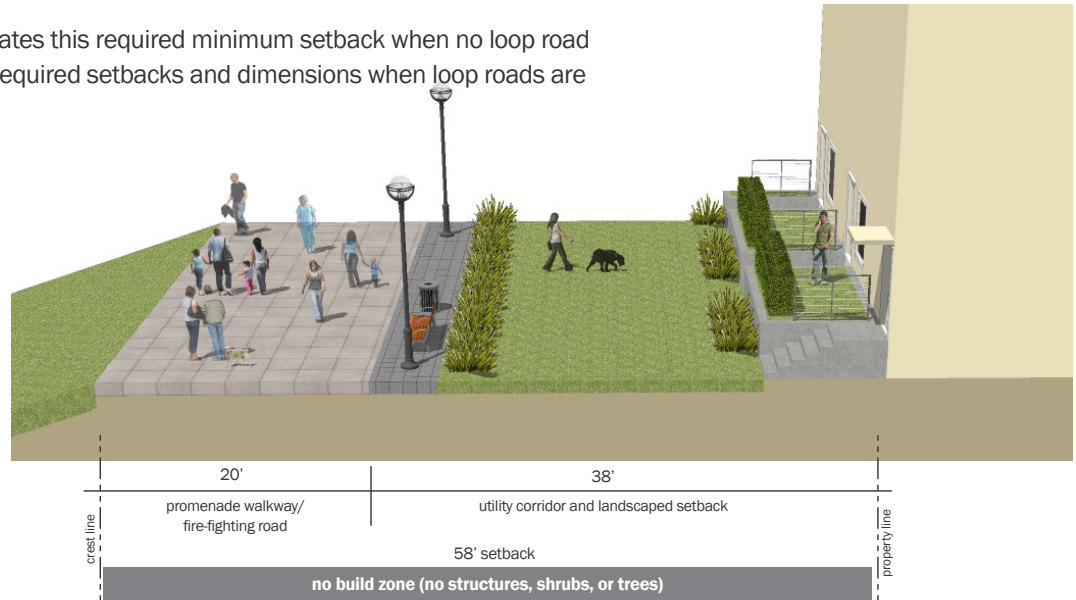
1. **Primary street setback:** The front facade of the building must be built to the front property line.
2. **Ground floor height:** In order to accommodate current or potential future retail uses, the ground floor must measure a minimum of 15 feet, floor to floor.
3. **Minimum building depth:** Buildings must be a minimum of 70' deep in order to accommodate retail uses on the ground floor.
4. **Building Entrances:** Building entrances must either be covered by an awning or canopy, or be covered by being recessed behind the front building facade. If an awning or canopy is provided, it must meet the dimensional standards provided above. If a recessed entry is provided, it must be recessed behind the front facade a minimum of 3'.
5. **Windows:** Transparent ground floor windows must be provided along a minimum of 60% of the ground floor, street-facing facade.
6. **Primary Entry Doors:** In order to create a sidewalk environment conducive to retail uses and provide adequate "eyes" on the street, primary building entries must face the street and be a minimum 40% transparent.



BUILDING SETBACKS ALONG THE WATERFRONT PROMENADE

Buildings fronting the Waterfront Promenade or its adjacent loop roads must be set back a minimum of 58 feet from the crest line. Building frontages, shrubs, and trees must be set back behind this 58-foot “no-build zone.” Certain building frontage elements such as porches, stoops, and balconies, and certain landscaping elements may encroach into this required 58’ setback, but is subject to the permitting process....(language?).

The diagram below illustrates this required minimum setback when no loop road is present. See p. 41 for required setbacks and dimensions when loop roads are present.










REQUIRED SETBACK FOR BUILDINGS FRONTING PROMENADE

BUILDING FRONTAGE REQUIREMENTS: INTENT

The building frontage requirements are intended to ensure that an adequate “building wall” is created along streets. Higher order streets which are intended to be pedestrian, rather than automobile-oriented, should provide a “solid” building face in order to enhance visual interest along the sidewalk and provide an aesthetically pleasing sense of enclosure. Along lower-order, less pedestrian-oriented streets however, solid building facades may not be required along the entire length of the lot. Areas not dedicated to building frontage may be dedicated to screened parking, access, and/or landscaping.

BUILDING FRONTAGE REQUIREMENTS

The following table establishes the minimum building frontage (stated as a percentage of the total street-facing lot width) required along the street-facing property line/build-to line along each street type (see “Building Frontage Types” for the build-to line associated with each building frontage type).

Minimum building frontage required along front property/build-to line	
 1. Riverfront Retail Street	100% of lot width
 2. Riverfront Road Transition	
Riverfront Road Transition North	100% of lot width
Riverfront Road Transition South	75% of lot width
 3. Grand	
Segment #1 (Tower Bridge Gateway to Ballpark)	75% of lot width
Segment #2 (Ballpark to Fifth Street)	75% of lot width
Segment #3 (Fifth Street to Riverfront)	100% of lot width
 4. Fifth Street	75% of lot width
 5. Riverfront View Street	75% of lot width
 6. Local Street	50% of lot width
 7. Internal Universal Street	50% of lot width

5. SUSTAINABILITY GUIDELINES

INTENT

The intent of sustainability guidelines is to establish a framework that will assist individual building projects in reducing their environmental impact, and in contributing to the overall development's sustainability goals.

GUIDELINES

Many of the proposed development regulations follow the guidelines established in the LEED for Neighborhood Design Program (the City of West Sacramento intends to submit the Bridge District for LEED ND status). Issues that should be considered at an individual building level, include the following:

- **Building Siting 1: Smart Location**

Purpose: This guideline sites buildings in a manner that takes advantage of public transit to reduce vehicle trips and miles travelled.

Guideline: Locate the project near existing or planned transit and so that 50% of the dwelling units/businesses are within a ¼ mile walking distance of transit.

- **Building Siting 2: Design for Solar Access**

Purpose: This guideline sites buildings in a manner that minimizes costly heating and cooling loads.

Guideline: Optimize solar access to reduce energy operating costs, provide better daylight, and present greater opportunities for using renewable energy system. Protect critical existing ecological areas.

- **Day-Lighting**

Purpose: This guideline achieves advanced energy efficiency by creating optimum conditions for the use of passive and active solar strategies.

Guideline: Incorporate day-lighting in buildings as a means of providing direct operational savings in reduced demand for electric lighting. Day-lit spaces contribute to increased occupant productivity and reduce illness and absenteeism.

- **Energy Performance**

Purpose: This guideline identifies and promotes energy efficient products that reduce greenhouse gas emissions and maximizes energy efficient through building envelope upgrades that better control air infiltration, heating and cooling systems ducts systems, and water heating equipment.

Guideline: Encourage high performance building envelopes, efficient lighting and controls systems, and efficient mechanical systems. Building wall and roof construction, as well as glass types and shading all contribute substantially to a building's energy performance. Efficient lighting and equipment systems reduce energy operating costs. Climate specific design provides both increased comfort and reduced energy operating costs. Climate specific design considerations can also reduce mechanical system requirements.

- **Stormwater Management**

Purpose: This guideline limits disruption and pollution of natural water flows by managing stormwater run-off.

Guideline: Encourage integrated stormwater management planning; treat stormwater runoff on-site through the use of bio-swales and landscape plantings. Encourage the use of green roofs, permeable pavers and other strategies to reduce impermeable surface area. Consider the potential to store and re-use rainwater on site for landscape irrigation.

- **Water Use Efficiency**

Purpose: This guideline limits or eliminates the use of potable water or other natural surface or subsurface water resources available on or near the project site for irrigation.

Guideline: Encourage landscaping that favors native or low-water intensity plantings and use efficient irrigation systems; encourage use of low-flow fixtures in buildings. Consider capturing the water that falls on buildings' roofs to reuse on-site. Consider reusing gray-water onsite for non-potable uses such as toilet flushing, clothes washing, and landscape irrigation.

- **Materials and Resources**

Purpose: This guideline encourages the reduction of what is generated by building occupants that has to be hauled and disposed in landfills and establishes minimum air quality standards that contribute to the comfort of inhabitants.

Guideline: Encourage the use of materials from within the region, and, where possible, reuse existing materials promote indoor environmental quality. Encourage the use of low-toxicity paints and sealants.

- **Construction Practices**

Purpose: This guideline reduces the use of finite materials, especially materials that contribute to pollution.

Guideline: Develop construction standards that reduce construction-related pollution and encourage recycling and comprehensive construction waste management policies.