

BURIEN URBAN CENTER

STREETSCAPE DESIGN PLAN

APRIL 2021

Burien

URBAN CENTER STREETSCAPE DESIGN PLAN

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MIG

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Sidewalk seating and bike corral (Source: MIG)

1. Introduction

Public streets define Burien's downtown and provide many critical benefits to the community that span from connectivity, to commerce and local culture. The Urban Center Streetscape Design Plan provides direction for transforming public streets into inviting, functional and safe public spaces as envisioned by Burien's Urban Center Plan. Based on this vision, the Streetscape Plan combines direction from previous plans such as the Transportation Master Plan and Downtown Mobility Study and focuses on the streetscape within Burien's urban center boundary. This document includes the following five sections:

- **Introduction**, including the context and vision for streets;
- **Design Principles**, that provide overarching direction for more specific recommendations;
- **Street Types**, with recommendations for specific streets;
- **Streetscape Guidelines**, that establish guidance for specific street elements; and
- **Implementation**, that summaries potential costs and funding.

Background

In 1999, the City of Burien developed the Downtown Burien Streetscape Design Plan to shape the physical characteristics of public rights-of-way in Burien's Urban Center to better accommodate pedestrians and to reflect Burien's role as a growing urban center. In 2020, the Burien City Council adopted the Urban

Center Plan (UCP). The UCP defines a 429-acre subarea of the City and provides a vision of the subarea's future, providing policies and strategies for development in the Urban Center, including public streets (Figure 1). As the City implements the vision, including updates to zoning and other policies, an updated streetscape plan will help provide guidance into the future and align current conditions with desired improvements.

City staff has prepared a Background Report (Appendix A) to assist with the development of an updated streetscape plan for the Urban Center. The Background Report summarizes regulations and project outcomes from previously developed Planning documents related to downtown Burien and identifies areas for further improvements that should be addressed in the Urban Center Streetscape Design Plan.

Figure 1: Urban Center Streetscape Design Plan Area



Streets and the Urban Center Vision

A complete and connected street front provides a safe, useful, and comfortable experience for people walking, biking, taking transit as well as for driving. Connected streets and uninterrupted sidewalks can also improve safety by encouraging foot traffic, street activity, and street surveillance.

STREET CHARACTER

Most of the major streets within the Urban Center boundary have sidewalks, but local streets south of SW 153rd Street and residential uses west of Ambaum Boulevard SW lack sidewalks. There are large expanses of off-street parking lots, curb cuts, and blank walls that detract from a welcoming pedestrian street front and walkable downtown.

There are minimal accommodations for cyclists, with the exception of separated bike lanes existing on portions of SW 156th Street and along a segment of 4th Avenue SW. A lack of sidewalks and safe routes for cycling were also some of the major issues cited during the Urban Center Plan community visioning sessions along with improving overall walkability, adding pedestrian amenities, and establishing greater connections to the various destinations within and around the Urban Center.

STREET HIERARCHY

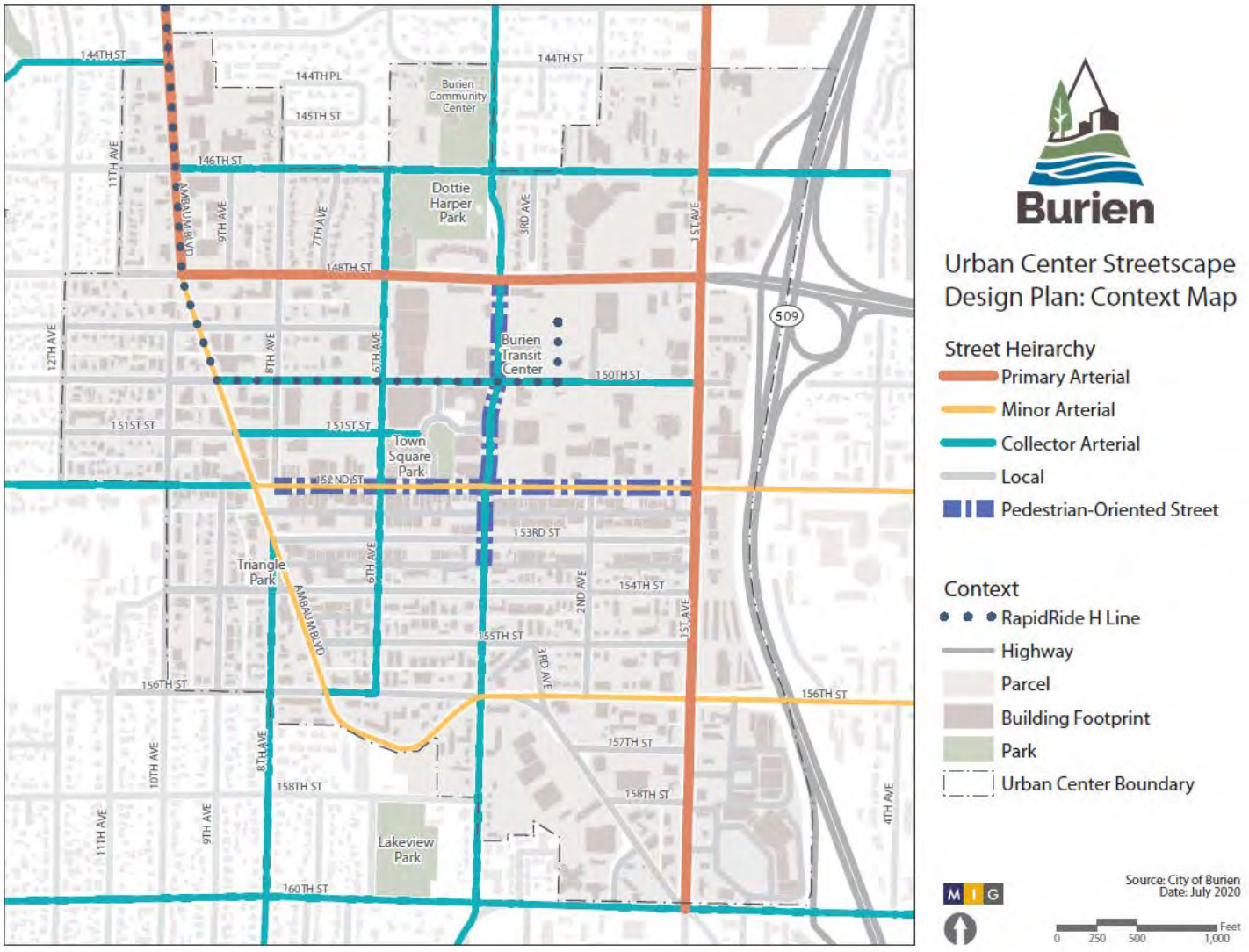
The Transportation Master Plan (TMP) guides the city's transportation investments and ensures that transportation decision making is coordinated with Burien's adopted Land Use Element of the Comprehensive Plan. The TMP describes the function and design of public streets into a classification hierarchy. Map 1 shows the classification of existing streets in the Urban Center.

While the majority of streets are intended to receive lower traffic volumes and speeds (local streets) there are several busier streets that provide major linkages through the downtown including SW 152nd Street (collectors and arterials). The busiest streets form a distinctive boundary around the Urban Center's core. Ambaum Boulevard (to the west), SW 148th Street (to the north) and 1st Avenue South (to the east) are all wider streets intended to receive some of the highest traffic volumes.

The 1999 Streetscape Plan identified 4th Avenue South and SW 152nd Street as pedestrian-oriented streets triggering more specific standards for wide sidewalks and buildings designed at a pedestrian scale. The planned RapidRide H Line bus rapid transit line running north and south along Ambaum Boulevard SW will also

connect to the Burien Transit Center along SW 150th Street and bring new transit stations with access to more efficient transit to city-wide and regional destinations.

Map 1: Context Map



The Vision

The Urban Center Vision articulates community values and also provides policy guidance informing how future growth should take place. The design of public streets and role of the street front were some of the most important aspects of the Urban Center Vision based on community engagement results. Along with land use and the economy, the resulting Urban Center Vision places an emphasis on the importance of streets and connectivity into the desired future of the Urban Center.

> The Vision for a Connected, Green, and Healthy Urban Center: Streets and public spaces in the Urban Center are clean, safe, and welcoming with convenient connections and green parks and street fronts. The built environment is easy to get around by walking, biking, or riding transit. Together, residents, businesses, and city advocates and partners contribute to a healthy community and environment.

SUPPORTING VISION PRINCIPLES

A connected, green, and healthy Urban Center should direct new development around a green, active street network and transit, parks and public spaces. New development should integrate public spaces and landscaping as part of site design, and streets should be designed for people, commerce, and active transportation.

- Connect existing parks with green, multi-modal streets and safe and welcoming intersections and downtown gateways.
- Design streets and buildings to prioritize and enhance the pedestrian experience, especially along key streets in the Urban Center such as 4th Avenue SW, SW 151st Street, SW 152nd Street, and SW 153rd street.
- Promote residential uses close to transit, employment, parks, and services to encourage walking, biking, and transit use.



Pedestrian connection (Source: MIG)

2. Design Principles

There are several specific design principles that provide a framework for designing, building and retrofitting streets.

Community conversations during the Urban Center Plan development process resulted in identifying different values, needs and opportunities related to public streets. The following principles describe the purpose and intent of the street types and design guidelines that follow, supporting the overarching vision for streets and multimodal connectivity in the Urban Center.

Urban Center Street Design Principles

- MAKE STREETS ACCESSIBLE
- CREATE SAFE STREETS
- DESIGN FOR PEOPLE (PEDESTRIANS AND CYCLISTS)
- INTEGRATE NATURAL SYSTEMS AND THE SURROUNDING NEIGHBORHOOD
- MAKE STREETS EASY TO NAVIGATE AND IDENTIFY
- USE STREETS TO SUPPORT LOCAL BUSINESSES
- MANAGE VEHICLE ACCESS POINTS AND PARKING

Make streets accessible

As streets become more walkable, bike-able and transit oriented, they must also be functional and inclusive for people of all ages and abilities. Sidewalks, curb ramps, parking, street crossings, landscaping elements, resting places and public art in the Urban Center must be designed to meet minimum Americans with Disabilities Act (ADA) standards, while striving to reduce barriers to create environments for everyone.

Create safe streets

Streets in the Urban Center should be designed to enable safe access for all users, regardless of age, ability, or mode of transportation. Drivers, transit users, pedestrians and bicyclists should be able to interact and use the same streets, while minimizing conflict. Several existing streets currently lack sidewalks, curbs and safe crossing opportunities. Amenities that increase safety should include a range of design treatments, including:

- Buffered sidewalks;
- Crosswalks with contrasting materials or colors;
- Directional and identification signage;
- Pedestrian-scale lighting; and
- Curb extensions or bulb-outs.

Design for people (pedestrians and cyclists)

Streets in pedestrian-oriented areas of the Urban Center should provide spaces where people feel safe and welcome. Pedestrian and bicycle-friendly streets are characterized by a number of elements, including:

- Shorter block lengths;
- Well-marked crosswalks;
- Curb extensions;
- Frequent intersections;
- Fewer or consolidated access and egress points into the street;
- Landscaping; and
- Appropriately-scaled signage and lighting.

Streets that are more auto-oriented will also benefit from many of these elements, encouraging slower speeds and attention to other road users.

Integrate natural systems and the surrounding neighborhood

All streets in the Urban Center should be designed holistically, where built features integrate with natural systems. From pervious pavement and flow-through planters that manage storm-water run-off, to street trees that provide shade, every streetscape element should embody sustainable design and reflect the characteristics of the local environment.

Make streets easy to navigate and identify

The Urban Center street network should be easy to navigate by users of all transportation modes. Along local streets within the Urban Center, wayfinding should be at a pedestrian scale using streetscape elements such as gateways, public art, use of notable landmarks and directional signage at intersections and route changes. The Downtown Burien Wayfinding Signage Plan provides specific direction on the design and location of wayfinding signage around Downtown.

Use streets to support local businesses

The street front plays an important role in strengthening the local economy, especially within the Urban Center. Visitors, shoppers, and even potential investors want a rich, experiential setting in which to shop—a place that is attractive and lively, a place that creates a long-lasting positive memory. A system of wide, connected sidewalks, street trees, and other street elements create the necessary framework for active commerce.

Manage vehicle access points and parking

Street design should minimize conflicts between pedestrians and automobiles, through management of curb cuts and access points along the street. Vehicular access to each commercial or business site should be consolidated to the extent practicable, prioritizing safe and direct access for pedestrians, cyclists and transit users. Each development should consider the layout of on-site parking and loading areas, vehicular, bike, and pedestrian circulation patterns with the adjacent street in mind.



Shared street and plaza (Source: MIG)

3. Street Types

Based on the Design Principles, street type guidelines respond to unique conditions found in the Urban Center and support the vision for safe and welcoming streets. There are five street types and accompanying design guidelines to provide inspiration for future street and connectivity improvements throughout the Urban Center's core (Table 1). Each street type reflects Transportation Master Plan (TMP) policies related to classification and mode priority, while addressing existing conditions and potential future development envisioned in the Urban Center Plan. The Urban Center Street Types do not influence or supersede the Roadway Functional Classifications in the Comprehensive Plan.

Table 1: Overview of Street Types

Urban Center Street Type	Burien TMP Designations for Street Type Locations*			Typical Characteristics	
	Transit Priority	Pedestrian Priority	Auto/Truck Priority	Approximate Right-of-Way Width	Travel Lanes (includes turn lane)
A. Main Street	Mixed	Yes	No	60'	2
B. Main Street with Turn Lane	Yes	Yes	No	60'	3
C. Main Street with Back-in Parking	Yes	Yes	No	84'	2
D. Green Street	Mixed	Yes	No	54' - 60'	2
E. Through-block Connection	N/A	N/A	N/A	25' min.	N/A

*Burien Transportation Master Plan

The Urban Center Plan calls for a greater mixture of people living and working in the city center with streets that are designed around people walking, biking and taking transit. Town Square provides a visionary example for what future streets will look like in the Urban Center. The increase in street activity requires design treatments that calm traffic while creating safer conditions for all users. As noted in the Design Principles, all street types include a combination of curb extensions (and crossings), wider sidewalks and consistent landscaping, and human-scaled signage and lighting.

Potential Locations

Map 2 shows the potential location of future street types in the Urban Center. The map identifies suitable street type locations in areas that will receive the greatest mixture of surrounding land uses based on the Urban Center Plan. Areas with a greater mixture of uses have potential to generate more foot traffic and require more transportation choices such as walking, biking or using transit. Streets without a specific street type designation in Map 2 but within the Urban Center boundary should follow designations in the Transportation Master Plan along with Streetscape Guidelines in Chapter 4.

Some proposed streets such as Urban Center Green Street extensions may not be feasible with potential redevelopment. Through-Block Connections may be more suitable and provide flexibility in site design and connectivity.

Dimensions and Design Considerations

LANE WIDTH

The street types use 11' travel lanes which are adequate in urban settings such as Burien's Urban Center. Widths greater than 11' should not be used as they may cause unintended speeding and assume valuable right-of-way at the expense of other modes.[1]

BICYCLE BOULEVARDS

The Transportation Master Plan notes that most of the bicycle network found in the Urban Center will be in the form of bicycle boulevards: streets that are designed to give priority to nonmotorized users and discourage through traffic. Rather than allocate separate space in the street specifically for cyclists, bike boulevards communicate non-motorized preference through the roadway

[1] NACTO Urban Street Design Guide

design, signage, and traffic calming. It is expected that these roadways will require only modest improvement, namely signage, and intersection enhancements.[2] All four proposed public street types assume the use of bicycle boulevards or sharrows to accommodate cyclists.

ON-STREET PARKING

Parking is an important part of Burien's Urban Center and the proposed street types aim to maintain the existing on-street parking supply while balancing street width needs for other transportation modes. Where on-street parking is included, typical width for parallel on-street parking is eight feet and 16' for diagonal parking. Wide parking lanes can also serve as loading zones or as interim flexible space as addressed in the design guidelines. Where additional right-of-way is available, the provision of additional on-street parking should be considered where practicable.

TRANSIT

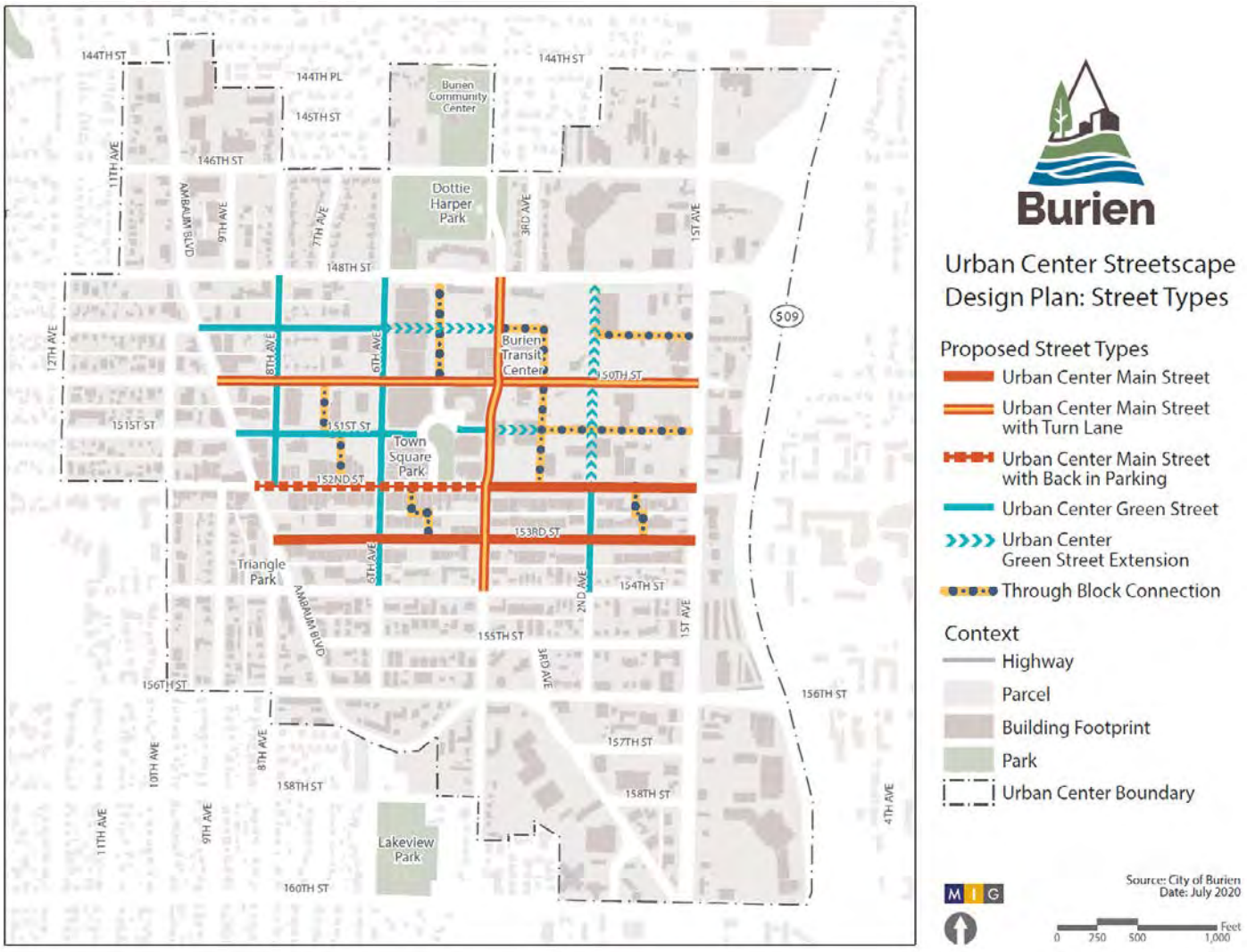
The street types are intended to provide typical right-of-way sections and proposed transit improvements including the RapidRide H Line along SW 150th Street are not included. Any street improvements along SW 150th Street will need to address the approved design of future transit improvements including bus type, lane design and transit stop configuration.

Conformance with Other Standards

These street types should serve as a guide for designing appropriate streetscape environments while also responding to the surrounding land use context and transportation network. As guidelines, the street types are intended to provide general direction for future street design decisions and will require conformance with other applicable City standards including the City of Burien Transportation Master Plan (2013) and Road Design and Construction Standards (2016). Actual design may vary from the street type guidelines when applying adopted standards in evaluating street dimensions and site-specific constraints including utilities, property ownership, and other related factors.

[2] Locate shared roadways on low traffic volume (not more than 3000 to 5000 vehicles per day) and low traffic speeds streets not exceeding 25 mph. Source: City of Burien Transportation Master Plan.

Map 2: Street Types



Note: Proposed street locations are approximate and adjustments may be needed based on additional planning and design.

A. Urban Center Main Street

INTENT

Pedestrian priority streets that provide primary connections through the downtown and accommodate multiple modes including bicyclists and transit users, as well as on-street parking. Streets have wide sidewalks with consistent street furnishings, street trees and landscaping to provide a welcoming and comfortable experience.

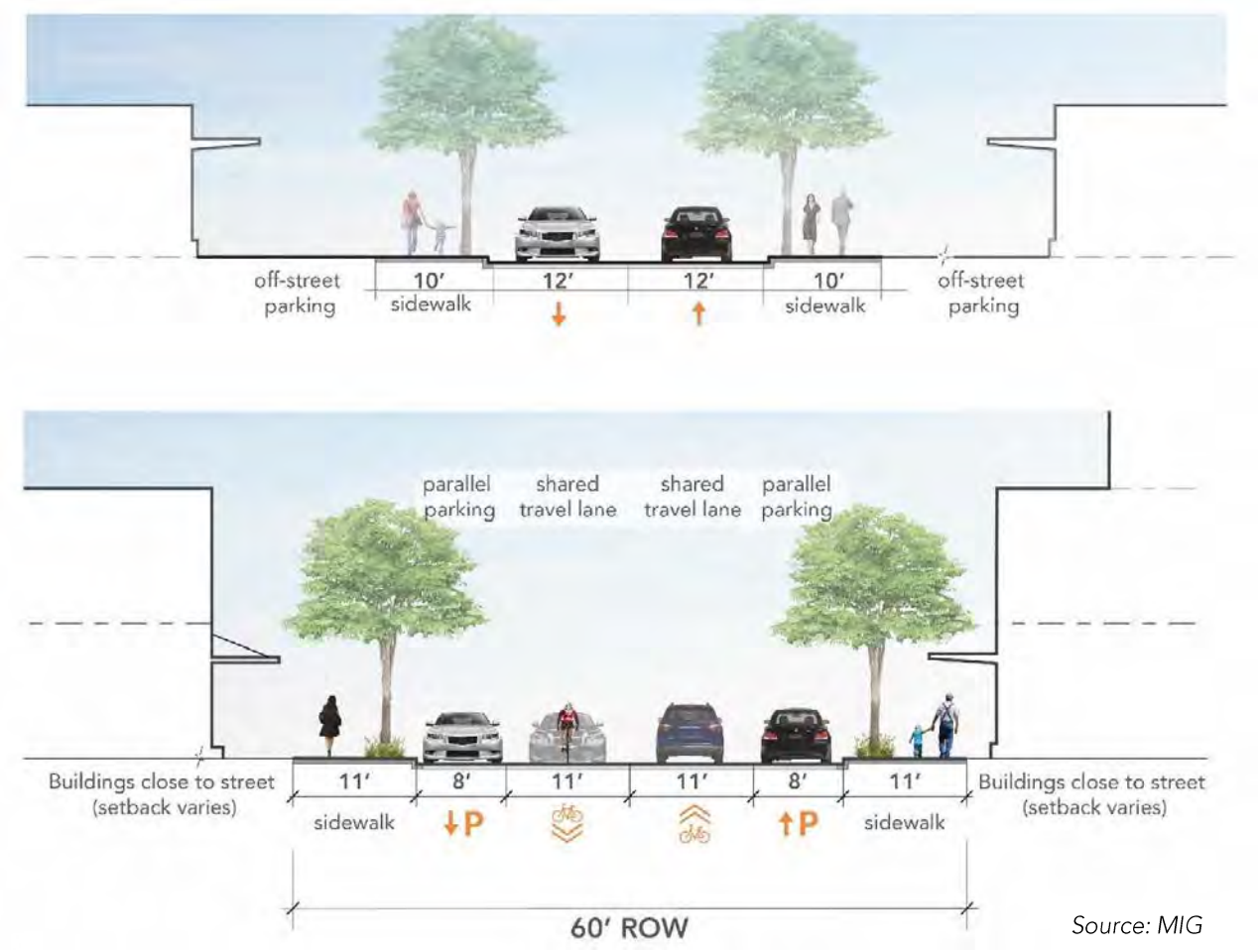
SUITABLE LOCATIONS

- SW 152nd St. (1st Ave S. to 4th Ave. SW)
- SW 153rd St.

GUIDELINES

ROW	Travel Lanes	Bike Facilities	Parking	Landscaping/ Street Trees	Sidewalks	Setbacks
60'	2	Shared	8'	Street tree planters with seating wall	11'	Varied (buildings close to street)

Figure 2: Existing Typical Section (Top) and Proposed Typical Section (Bottom)



Source: MIG

B. Urban Center Main Street with Turn Lane

INTENT

Pedestrian and transit priority streets that provide primary connections through the downtown and accommodate multiple modes including bicyclists and transit users. Streets have wide sidewalks with consistent street furnishings, street trees and landscaping to provide a welcoming and comfortable experience. Additional sidewalk width comes from full use of unimproved right-of-way.

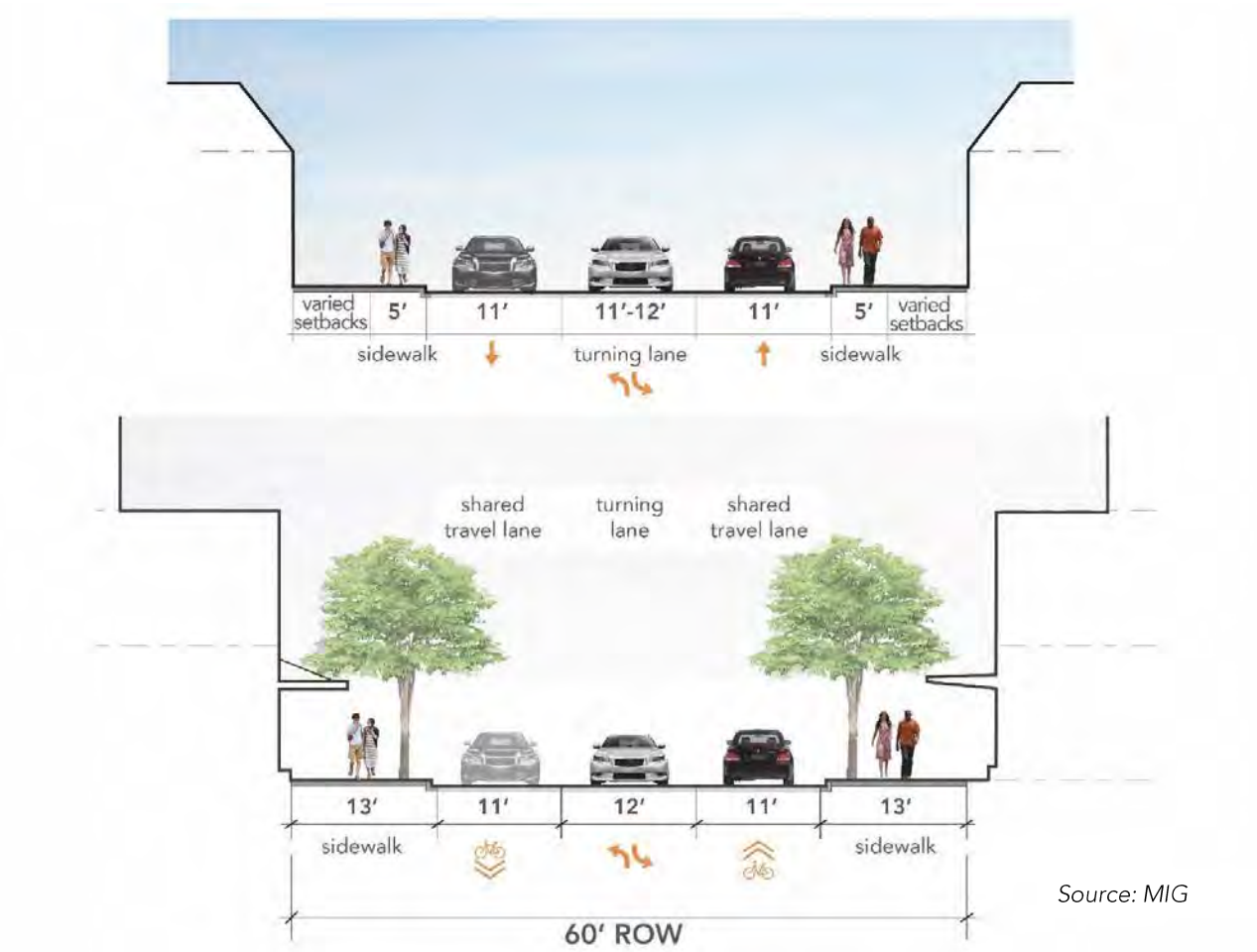
SUITABLE LOCATIONS

- SW 150th St.
- 4th Ave. SW (north of SW 154th St.)

GUIDELINES

ROW	Travel Lanes	Bike Facilities	Parking	Landscaping/ Street Trees	Sidewalks	Setbacks
60’	2+ turn lane	Shared	none	Street trees	13’	0’

Figure 3: Existing Typical Section (Top) Proposed Typical Section (Bottom)



Source: MIG

C. Urban Center Main Street with Back-in Parking

INTENT

Pedestrian and transit priority streets that provide primary connections through the downtown and accommodate multiple modes including bicyclists and transit users. As recommended in the Mobility Plan, a wider right-of-way allows for back-in diagonal parking that motorists to see other users when pulling out of parking spaces and maximizes on-street parking availability. Streets have the widest sidewalks with consistent street furnishings, street trees and landscaping to provide a welcoming and comfortable experience.

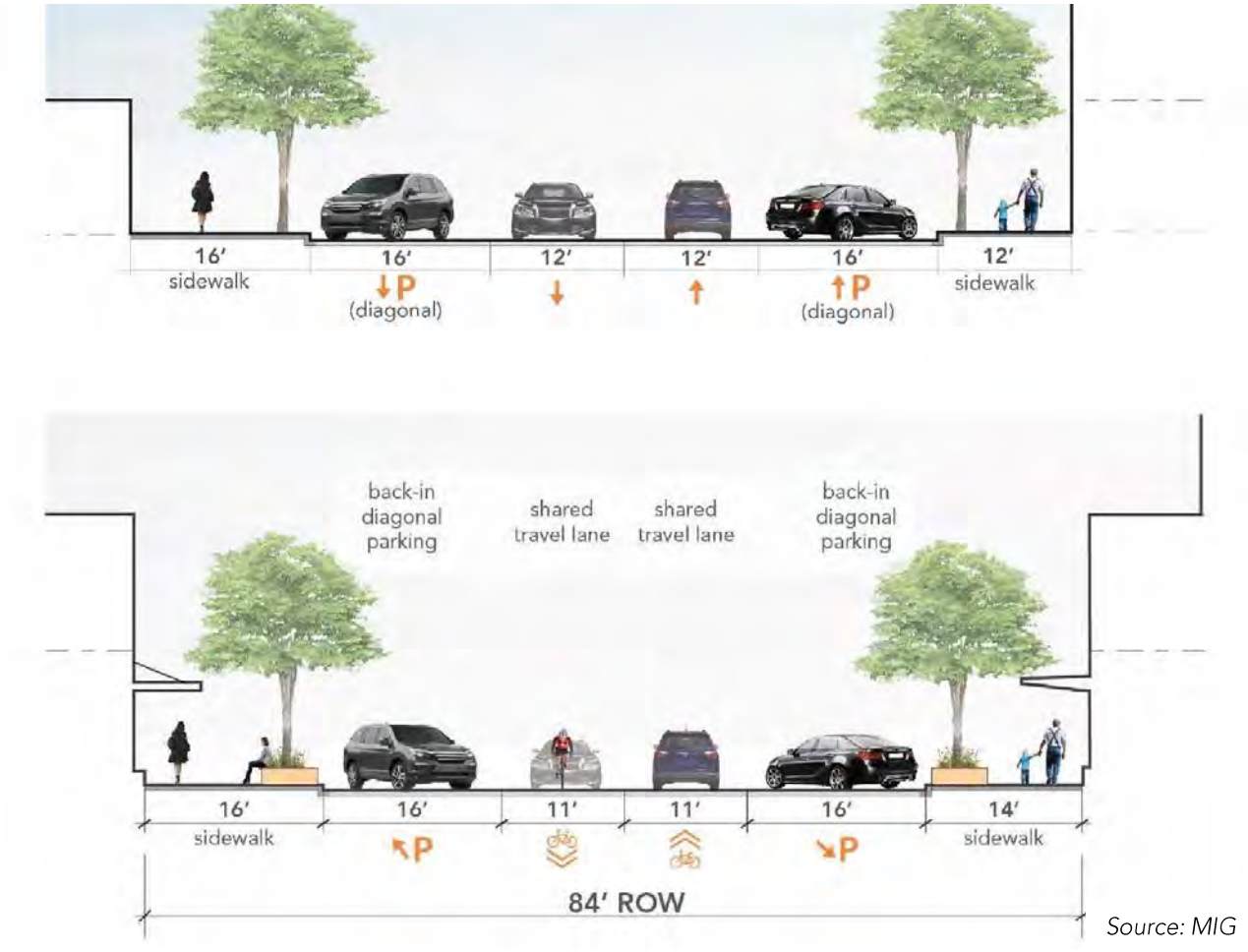
SUITABLE LOCATIONS

- SW 152nd St. (4th Ave. SW to Ambaum Boulevard SW)

GUIDELINES

ROW	Travel Lanes	Bike Facilities	Parking	Landscaping/ Street Trees	Sidewalks	Setbacks
84’	2	Shared	16’ diagonal (back-in)	Street tree planters with seating wall	16’ (south side) 14’ (north side)	0’

Figure 4: Existing Typical Section (Top) Proposed Typical Section (Bottom)



Source: MIG

D. Urban Center Green Street

INTENT

Pedestrian priority streets that provide secondary connections through the downtown and accommodate multiple modes including bicyclists and transit users. Streets have wide sidewalks with consistent street furnishings, green stormwater features, street trees and landscaping to provide a welcoming and comfortable experience. Adjacent buildings have street level entries with awnings and some retail uses

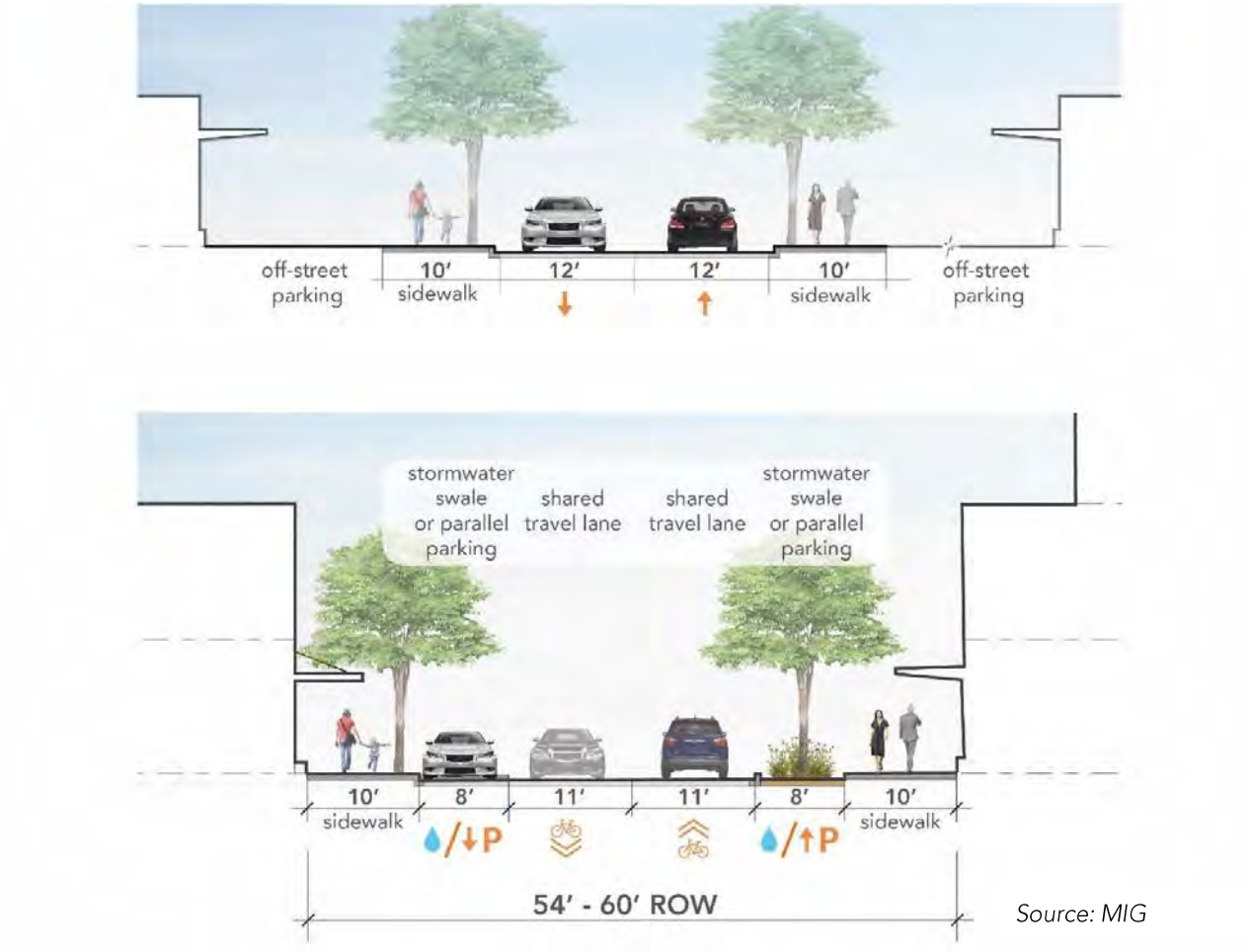
SUITABLE LOCATIONS

- 2nd Ave. SW
- 6th Ave. SW
- 8th Ave. SW
- SW 149th St.
- SW 151st St.

GUIDELINES

ROW	Travel Lanes	Bike Facilities	Parking/ Stormwater	Landscaping/ Street Trees	Sidewalks	Setbacks
54'-60'	2	Shared	8'	Street trees/ stormwater vegetation	8'-11'	0'

Figure 5: Existing Typical Section (Top) Proposed Typical Section (Bottom)



Source: MIG

E. Urban Center Through-Block Connection

INTENT

Pedestrian and bicycle passageways through long blocks that enhance connectivity, reduce travel distances, encourage non-motorized transportation and provide active open spaces. These connections also serve back-of-building functions and provide limited vehicular access except to access off-street parking.

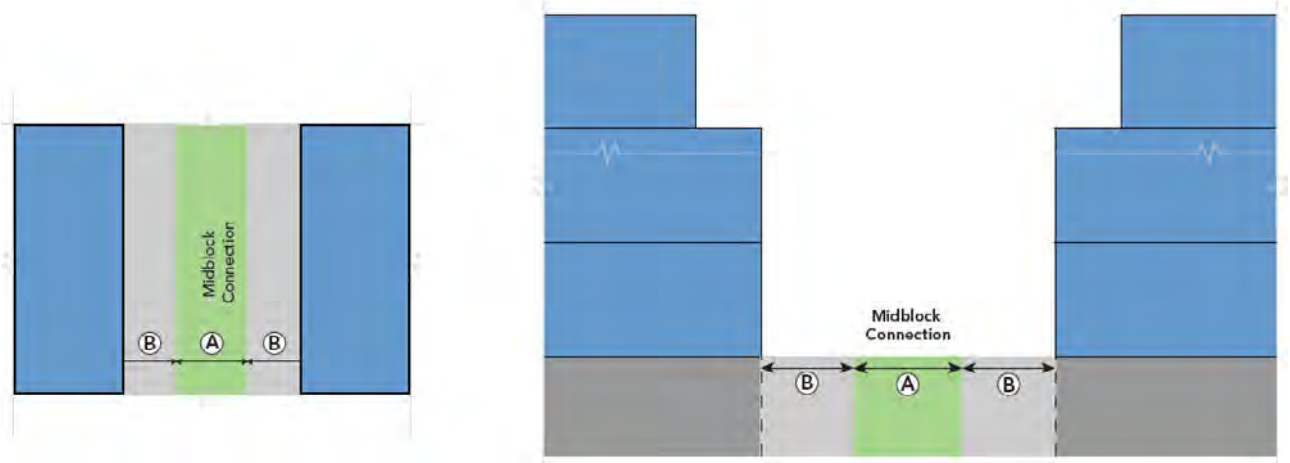
SUITABLE LOCATIONS

- SW 152nd St. to SW 153rd St. Alley
- SW 148th St. to SW 150th St. (between 1st Ave. S and 6th Ave. SW)
- 4th Ave. SW to 2nd Ave. SW extension (between SW 150th St. and SW 152nd St.) (Figure 7)

GUIDELINES

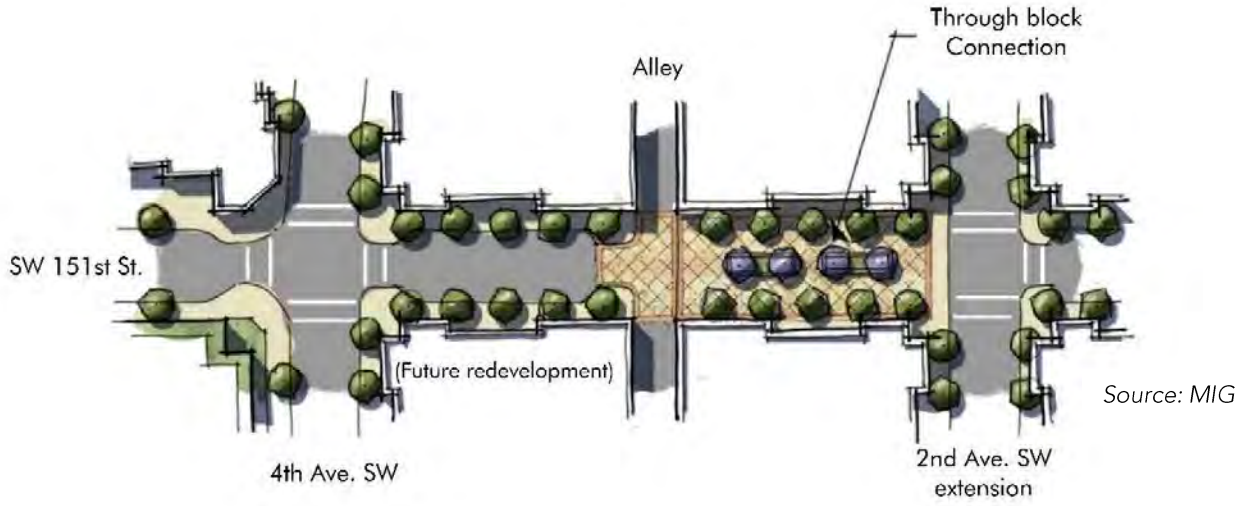
- 25' min. width (Figure 6) that includes:
  - 5' min. amenity zone for seating, lighting, landscaping, etc. (A)
  - 10' min. clear pathway pedestrian thoroughfare (B)
- 300' max. length (between public street/alley connection)

Figure 6: Typical Plan and Section Diagram (Proposed)



Source: MIG

Figure 7: Example Through-Block Connection on SW 151st St.



Source: MIG



Shared street and crossing (Source: MIG)

4. Streetscape Guidelines

The streetscape guidelines outline a range of considerations for planning, designing, constructing, and maintaining new facilities that meet the intent of the street types. The guidelines allow for flexibility to match conditions within the Urban Center, while providing inspiration, creativity and functionality in building or retrofitting streets and street elements. The following guidelines apply to all public streets in the Urban Center in combination with existing City standards including the Road Design and Construction Standards (2016). The guidelines will also serve to inform future updates to construction standards.

A. Sidewalks

Sidewalks provide opportunities for human interaction, while providing safe and efficient pedestrian travel. Sidewalks must be designed for universal accessibility, durability and drainage.

GUIDELINES

1. Create four clearly defined zones and use materials to delineate each zone (Figure 8).
    a. Frontage zone: An extension of the building where seating, signage and other uses can occur. This zone can have contrasting accents (such as dark aggregate or pavers) to distinguish between the pedestrian zone.
    b. Pedestrian through zone: An accessible pathway that parallels the street and should be a minimum of five to seven feet wide in residential settings, or wider (8+ feet) in commercial areas. With the highest

amount of traffic, this zone should use a smooth and durable surface such as cast-in-place concrete panels.

c. Street furniture/curb zone: Intended for street trees and grates, stormwater facilities, signage, street furniture and other pedestrian/bicyclist amenities such as trash/recycling and bicycle racks. This zone can include use of permeable pavement or pavers, or soft paving such as decomposed granite where appropriate.

d. Enhancement/buffer zone: The area that might include a variety of different elements dependent on location and street type, such as bump-outs, parklets, stormwater facilities, bike parking corrals, etc.

Figure 8: Sidewalk Zones



Source: NACTO Urban Street Design Guide

2. Provide adequate ADA access, including truncated domes and appropriate cross slopes. Use accessible textured paving materials such as decomposed granite, treated wood, stone pavers, etc., that contrast with the common ADA compliant surfaces to delineate special areas within a street environment and provide cues to visually impaired people.

3. Provide amenities and protection from the elements, such as trees, shelters, adequate street lighting, etc. Ensure all commerce areas provide protection from the elements, including sun, wind and precipitation. Provide ample shade trees, but also provide awnings or other overhead elements to protect against precipitation.

4. Ensure any signs, shade elements (such as umbrellas or trees), or other features are high enough to pose no hazard (6 feet 8 inches or higher).

5. In addition to seating related to business or service areas, incorporate seating along the pedestrian travel way to provide places to rest or "people watch."
6. Maintain sight lines and clear visual paths to encourage strolling and self-discovery.
7. On sidewalks in mixed-use commercial corridors, demarcate outdoor dining and retail areas with raised beds or pots instead of conventional railings to provide a desirable advertisement for uses such as restaurants, cafés, gardening stores, etc.
8. Use colored concrete sidewalks to demarcate transitions with intersections, public spaces and other areas where changes in traffic patterns will take place. Follow requirements in the Road Design and Construction Standards (2016) for colored concrete.

B. Crossings

Crosswalks, mid-block crossings and intersections are important in assuring the visibility and safety of pedestrians, bicyclists, dog walkers, children and individuals using wheelchairs. Clearly marked, articulated crossings are also used to direct pedestrians to designated crossing locations, ideally where people naturally assemble and have a desire to cross.

GUIDELINES

1. Place crosswalks as close as possible to the desire line of pedestrians, which is generally in line with the approaching sidewalks.
2. Provide curb extensions to replace the parking lane at crosswalks to reduce pedestrian crossing distances and improve visibility between pedestrians and vehicles (Figure 9).

Figure 9: Urban Center Main Street Mid-Block Crossing Example



Source: MIG

3. Design corner radii to minimize crossing distances and slow vehicular turning speeds. This can be achieved by designing corners based on needs of a typical passenger vehicle with a corresponding radii of 15 feet.
4. Where practicable, create pedestrian refuges if the crossing distance exceeds 40 feet (Figure 10).

Figure 10: Urban Center Main Street Mid-Block Crossing Example



Source: MIG

5. Make intersections as compact as possible and avoid free-flowing movements.

6. Consider using median refuges with raised crosswalks that also act as speed humps for cars, crosswalk paint striping, signage, change of pavement types/color, pedestrian activated RRFB (rectangular rapid flashing beacons), and landscaping that provides drivers cues that speeds are slowing.
7. Utilize access management practices to remove additional vehicular conflict points near the intersection.

C. Street Trees and Landscaping

Street trees and street landscaping are important aspects of the street front, providing a sense of enclosure, shade and greenery, natural beauty, among many other benefits. Yet the space leftover for street trees can be compromised due to all other street elements, resulting in narrow tree wells bound by hardscape and utilities.

GUIDELINES

1. Use the Urban Center Street Tree Plan (Appendix B) in selecting street trees within the Urban Center. The Street Tree Plan builds on the presence of established street trees in the Urban Center and provides updated guidance on tree species based on the 1999 Street Tree Concept.
2. Provide regularly spaced street trees in minimum four-foot wide tree grates or landscape areas. Street tree species shall be approved by the City.
3. Maintain street trees to be free of branches below 80 inches from the ground to prevent accessibility barrier and for surveillance purposes.
4. Provide trees in medians and along sidewalks to maximize sense of enclosure and calm.
5. Use planting techniques to capitalize on continuous fragrant blooms and scents of trees, herbs and flowers. These elements can be used sparingly to denote key nodes or more profusely and regularly along the sidewalk of important streets. Use different types of scented landscape elements to distinguish different streets or nodes.
6. Provide a two-foot buffer for planted areas from the adjoining parking lane where space allows to comfortably allow car doors to open and for passengers to enter and exit a car.
7. Pursue the installation of temporary potted plants and street trees on-streets without landscaping or street trees such as along SW 153rd Street until street improvements take place.

8. Use structural soil systems that limit soil compaction and that are installed underneath pavement to provide room for needed lateral tree root growth.
9. Tree grates shall be Urban Accessories, Model OT TITLE 24-RCT, cast iron ASTM A 48 class 35b or better, or approved equal (425) 487-0488 as required in the Road Design and Construction Standards (2016).
10. Irrigation systems shall conform to City of Burien 2016 Road Design and Construction Standards.
11. For curb extension landscaping, comply with 2016 Road Design and Construction Standards for curb extension plantings.

D. Stormwater Features

On-site stormwater management using low-impact development approaches (LIDA) provide a range of benefits and are an important part of creating greener streets in the Urban Center. Ultimately, different site conditions warrant different LIDA facilities. Selection should be based on criteria established by the City and King County requirements.

Figure 11: Integrated Stormwater Facility Example



Source: MIG

GUIDELINES

1. Use flow-through planters next to large buildings to move stormwater from a roof to a series of infiltration planters or rain gardens.
2. Use in-street flow-through planters and check dam infiltration planters along slopes to manage stormwater where it is generated.
3. Include trees and bioswales/rain gardens in sidewalk level planting areas and at street level to capture, filter, and infiltrate rainwater.
4. Allow curb cuts for inflow and outflow of the storm water runoff.
5. Include filter strips besides paved areas to slow the flow of storm water and reduce the volume of runoff.

6. Provide a rain garden to transform challenging street intersections into safe pedestrian and bicycle crossings (Figure 12).
7. Use water art not only to collect runoff, but to change public perceptions about runoff.
8. Install interpretive elements on the street that explain the benefits of urban trees, rain gardens and sustainable infrastructure.

Figure 12: Integrated Stormwater Facility Example



Source: Philadelphia Water Department

E. Street Furnishings

As development continues to make the Urban Center a compact urban environment, there is a need to improve the amount, quality, and design of street furnishings along streets and at intersections. The look and feel of street furnishings in the Urban Center should reflect the aesthetic and function of surrounding land uses as well as add visual interest and continuity.

GUIDELINES

Seating

1. Where seating is provided, incorporate a variety of seating to accommodate a range of physical abilities, as well as companion seating that enables wheelchair users to sit next to friends or family members.
2. Seating should be designed at a comfortable height between 16" and 18" with accommodations for universal access. The Road Design and Construction Standards (2016) provide two seating options that meet ADA requirements.

- Model Bench 58 manufactured by Du Mor, Inc., and distributed by Recreation Resources, Inc., Salem, OR or approved equal; and
- Victor Stanley model "Steelsites" RB-12 with arm rests manufactured by Victor Stanley or approved equal (Figure 13).

Figure 13: Victor Stanley Seating Option



Source: Victor Stanley

3. Benches and seating should be located in plazas and courtyards, near building entries, and at transit stops with considerations for accommodating universal access.
4. Fixed seating should be designed into planters, low dividing walls, retaining walls, and building façades where practicable; along with accommodations for universal access.

Lighting

1. Use full cut-off shielded (pointing downward) lighting fixtures to keep light directed at streets and sidewalks.
2. Retrofit existing metal halide and sodium lighting fixtures with shields and flat lenses.
3. Use only lighting sources with correlated color "temperature" no higher than 3000K, which minimizes blue spectrum light. Most lighting products provide this information on their package labeling.
4. Use pedestrian lighting that conforms with the Road Design and Construction Standards (2016).
   - Decorative pedestrian luminaire pole: Cyclone PD15 type (or approved equal) and shall have mounting height of 12 feet.

Figure 14: Pedestrian Lighting Example



Source: Cyclone Lighting

- Decorative luminaires: Cyclone Lighting Inc. CY1401-F1AP-PR3-LAC100HPS-QT-S1 (Figure 14).
- Housing Color: "Textured Burien Green" (Semi-Gloss, Kelly Moore #00-1088 RNT with anti-graffiti coating).

Bicycle Parking

1. For bicycle parking, install a consistent rack design in areas adjacent to building entries. Choose secure bike racks that function well and are aesthetically pleasing when no bikes are present.
2. When locating bike racks near building entries, ensure that racks do not interrupt the flow of pedestrians into the building.
3. Pursue more creative or artistic bicycle parking features in high visibility areas, such as near street corners or near public spaces.
4. Encourage the installation of bicycle parking corrals that replace a single auto parking space or that can provide and can generally fit 8 to 12 bicycles (Figure 15). Bicycle parking corrals should be located in areas with high bicycle parking demand such as near commercial spaces or the library.

Figure 15: Bicycle Parking Corral Example



Source: City of Berkeley, CA

Trash Receptacles

1. Trash receptacles shall be Model S-42 with S-2 spun steel dome, 36 gallon, steel, powder coat finish, color: black, as manufactured by Victor Stanley, Inc., and distributed by Wildwood Playgrounds, Portland, OR as required in the Road Design and Construction Standards (2016). (Figure 16)

Figure 16: Trash Receptacle Example



Source: Victor Stanley

2. Include recycling and compost receptacles where practicable and as regulated by policy.

Bollards

1. Decorative Bollards shall be one-piece, cast iron, non-removable bollard with cast-in attachment, Model # SJ-CI, San Jose Bollard or approved equal as required in the Road Design and Construction Standards (2016).

F. Identity and Signage

Outcomes of the Urban Center Plan showed a significant interest in public art and a common identity. Signage should also be used as a way to convey this identity while serving to direct users. The Downtown Burien Wayfinding Signage Plan provides specific direction on the design and location of wayfinding signage around Downtown. Together, identity and signage will help workers, shoppers, residents and students orient themselves, navigate and better understand the area's identity, layout, landmarks, transportation options and major destinations.

GUIDELINES

1. Where possible, integrate art as part of functional features— Murals and art pieces should describe something about the street's evolution, history or role in the city, preferably as part of a series of pieces that work together. Work with the Highline Heritage Museum to integrate local history into the streetscape.
2. Select materials and surfaces to create durable, low-glare, high-contrast and vandal-proof wayfinding elements.
3. Ensure that the placement height, distance, orientation, approach and print-size of wayfinding materials are accessible for intended users.
4. Provide appropriate non-English translation of wayfinding elements and/or provide access to translated content. Use internationally recognizable symbols in wayfinding elements.
5. Develop smart technology applications that can provide equivalent translation of wayfinding features into other languages, such as the digital pedestrian information kiosk identified in the Wayfinding Signage Plan.

G. Alleys

Southwest 152nd Street and Southwest 153rd Street alley are defining features of Downtown and several businesses already rely on alleys for access as well as

seating and space for customers. The Downtown Mobility Study references a need for lighting, organizing utilities, and trash storage in alleys to create more welcoming and functional spaces.

GUIDELINES

1. Maintain alleys for their primary purpose as service access such as deliveries and trash pick-up by consolidating trash receptacles and any storage.
2. Consider use of permeable pavement, especially for surfaces that will not require heavy loads, such as alley edges.

Figure 17: Alley Example



Source: Michael Hicks via. Flickr

3. Provide adequate pedestrian lighting to encourage visibility into and through alleys and increase surveillance during dark.
4. Encourage smaller, ambient lighting such as café string lighting to span buildings where practicable.
5. Add awnings or canopies over building entrances to provide protection from the elements and draw attention to building entries.
6. Integrate greenery into alleys by using potted plants or even green walls in areas that receive more sunlight.
7. Add signage at alley entrances to denote business names or points of interest and provide direction.

H. Flexible Space

Streets should be oriented for people who rely on these valuable public spaces for transportation, as well as a range of uses including play and recreation, gathering and celebrating, and commerce.

GUIDELINES

1. Establish a flexible use zone between the necessary travel lane and pedestrian path. Use materials or color to both distinguish the use zone from the vehicular travel way and connect it to the pedestrian area. These zones could include the parking lane, adjoining travel lane that is potentially closed during off-peak periods, and a wide and generous median in shared-use streets.
2. Use the flexible zone to create one to two larger plazas, minimum 20 feet by 30 feet to allow performances, smaller festivals or vendor cart areas. Protect expanded pedestrian space with reflective barriers such as freestanding delineators or traffic barrels.
3. To meet temporary physical distancing requirements, identify restaurant clusters and designate 'dining street' zones where on-street parking or a travel lane is temporarily closed for pedestrians and for outdoor dining.
4. Lower the speed limit for traffic to no more than 25 mph on streets suitable for temporary changes. Encourage speed limits of 20 mph or less to minimize impacts of traffic on the social character of the street.
5. Incorporate utility infrastructure, such as electrical outlets, water source, grease drains, etc., into the street for use by mobile businesses.
6. Use City-approved spray chalk or traffic tape to delineate temporary spaces.
7. Consider creating level streets with flexible barriers such as bollards, planting strips, etc. to demarcate the curb zone instead of the traditional curb. This will allow for easier transition and redesign of the travelled way and intersection.
8. Consider light separation to note changes in the street or travel lane, including for temporary changes. Light separation includes: traffic cones, freestanding delineator posts, traffic barrels, sawhorses, movable parade barricades ("French barricades"), small planters, and traffic control barricades such as A-frames.



Shared pedestrian connection (Source: Indianapolis Cultural Trail)

5. Implementation

The implementation of streetscape improvements to meet the goals and objectives of the Urban Center Streetscape Design Plan can be achieved a variety of ways. In the near-term, interim lower cost capital projects such as parklets and enhanced crosswalks can be used to transform existing auto-centric roadways to create a more pedestrian friendly and multimodal streetscape. Long-term, capital projects can range from partial retrofits to full reconstructions of the public right of way. This chapter documents a range of estimated planning level construction costs to implement the proposed Street Types based on the proposed typical cross sections and design intent statements.

Implementation Costs

There are several assumptions used to base planning level construction cost estimates for each street type. Appendix C provides a list of the assumptions used to develop the per linear foot construction cost range for each street type.

PLANNING LEVEL CONSTRUCTION COST ESTIMATES

The per linear foot cost range to provide full right of way reconstruction for each street type is based on the typical sections and information documented in Chapter 3. As the City identifies specific projects to move forward for implementation the City should develop project specific estimates of probable construction costs that reflect the scope of desired improvements. For example, an existing street section may have additional width or adjacent redevelopment opportunity to add stormwater features, back-in parking, or other elements. See Appendix C for a detailed breakdown of linear foot costs.

Table 2: Planning Level Construction Cost Estimates by Street Type

Urban Center Street Type	Typical ROW	Cost per Linear Foot	
		Low	High
Urban Center Main Street	60’	$2,940	$3,680
Urban Center Main Street with Turn Lane	60’	$2,810	$3,510
Urban Center Main Street with Back-in Angle Parking	84’	$3,500	$4,380
Urban Center Green Street	60’	$3,200	$4,000

The cost to provide green stormwater infrastructure for the Urban Center Green Street is expected to reduce additional costs to provide required water quality treatment from new/replaced roadway surfaces, which is typically required for mitigating stormwater runoff from new/replaced roadway surfaces, but is not included in the linear foot cost range. See Appendix C for cost estimate assumptions.

Costs are not provided for Urban Center Through-block Connections as these connections are located outside of the public right of way and the planning and budgeting for these corridors should occur after a partnership has been developed with the property owner to better understand the specific site constraints and impacts where connections are proposed.

Funding Sources

There are several funding sources the City can pursue to implement redevelopment of the Urban Center streetscape. Table 3 summarizes selected funding sources with the best potential for Burien. Most of the following resources are applicable to projects throughout the Urban Center study area, while others may only be used for specific routes or project types.

Table 3: Selected Potential Funding Sources

Funding Option	Overview	Applicability
Pedestrian and Bicycle Safety Program	Funding to enhance safety and mobility for people who choose to walk or bike.	Entire study area
Safe Routes to School	Funding to improve safety and mobility for children by enabling and encouraging them to walk and bicycle to school. Funding from this program is for projects within two-miles of primary, middle and high schools (K-12)	Entire study area
Highway Safety Improvement Program	Funding to reduce fatal and serious injury crashes by implementing the Washington state Strategic Highway Safety Plan (Target Zero).	Designated highways
Transportation Alternatives Program	Funding for programs and projects defined as transportation alternatives, including on- and off-street pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and improved mobility, community improvement activities and environmental remediation; recreational trail program projects; and safe routes to school projects.	Entire study area
Congestion Mitigation Air Quality Improvement Program	Funding for transportation projects and programs that help meet the requirements of the Clean Air Act. Eligible activities include transit improvements, travel demand management strategies, traffic flow improvements, public fleet conversions to cleaner fuels, projects to improve incident and emergency response or improve mobility, expanded authority for transit operations, and support for installation of facilities serving electric or natural gas fueled vehicles.	Entire study area
Regional Mobility Grants	Grant funding that supports local efforts to improve transit mobility and reduce congestion on our most heavily traveled roadways.	Entire study area

Table 3: Selected Potential Funding Sources

Funding Option	Overview	Applicability
First Mile Last Mile Connections Grants	Grant funding to improve the beginning or end of an individual trip to fixed route public transit services.	Entire study area
Public Works Board Loan Programs	Various loan options for projects that provide public health, safety, environmental and other benefits.	Entire study area
Urban Arterial Program	Funding for projects that enhance arterial safety, support growth and development, improve mobility and physical condition.	Designated arterials
Complete Street Program	Funding street improvements that demonstrate accommodating all users, including pedestrians, access to transit, cyclists, and motorists of all ages and abilities.	Entire study area
Transportation Benefit Districts (RCW 36.73)	Allows governments singly or jointly to impose taxes and fees to fund off-site transportation infrastructure improvements.	Entire study area

Source: Infrastructure Assistance Coordinating Council (infrafunding.wa.gov).

Implementation Steps

The cost and scale of redeveloping the entire Urban Center streetscape will require a long-term approach with several different funding sources, policy changes, partnerships and ongoing community and stakeholder support. The following provides key steps to help implement the Streetscape Design Plan.

CONTINUE COMMUNITY DISCUSSIONS

The Urban Center Plan, and this resulting Streetscape Plan, is based on a community supported vision for Burien's Downtown. Future streetscape improvement projects and project priorities must include the participation of effected residents, businesses and other stakeholders. Following project selection and funding, communication should continue to inform the public about potential impacts, construction timing and ongoing maintenance and operations. This should include involvement with organizations such as the Seattle Southside Chamber of Commerce.

UPDATE DOWNTOWN DESIGN STANDARDS

Chapter 19.47 (Downtown Design Standards) provides a range of design requirements and guidelines related to the street front in Downtown Burien. These include direction for many of the streetscape elements addressed in this Streetscape Design Plan such as the design of pedestrian and vehicle circulation and relationship to the street front. Most of this chapter implements the direction of the 1999 Plan which will be replaced with this Streetscape Design Plan.

The Municipal Zoning Code focuses attention on 4th Avenue South and SW 152nd Street as pedestrian-oriented streets based on the guidance of the 1999 Plan. The City should revisit the application of pedestrian-oriented street requirements as all proposed street types are intended to become pedestrian-oriented overtime. The City should prioritize an update to Chapter 19.47 to clarify provisions of the Streetscape Design Plan that should be codified, or that should be referenced in the Streetscape Design Plan.

REVISIT TRANSPORTATION PROJECT PRIORITIES

While the City continues to make street improvement progress along 4th Avenue Southwest and SW 152nd Street, all other streets that have a street type designation will also experience redevelopment as envisioned in the Urban Center Plan. In coordination with Public Works, Sound Transit, and other agencies, the City should update priority projects identified in the Transportation Master Plan and identify future transportation project priorities based on anticipated redevelopment projects, major transit improvements, and other criteria. The Urban Center Plan identifies specific opportunity sites as a starting point for prioritizing more specific streetscape and through-block connection improvements.

INCENTIVIZE IMPROVEMENTS

The through-block connections shown in the Street Types Map (Map 2) should serve as the guide to implement future connectivity improvements to break up large blocks. The City should leverage the Streetscape Design Plan to leverage dedication of these routes or to incentivize future improvements. Currently, the existing code lacks any incentives to support the development of through-block connections. Incentive-based tools allow new development in specified locations to voluntarily achieve extra floor area by providing public benefits such as a new public plaza or public connection.

In the City of Newcastle, Washington, Chapter 18.36 of the development code allows for an increase in floor area ratio in exchange for different public benefits

that stem from new development, including the provision of a through-block connection such as a pedestrian esplanade or public/private access road. The City of Ellensburg, Washington allows for a density bonus increase for the provision of off-street trails with new development. The bonus ranges from between five to 20 percent depending on type or trail and trail surface. Any development incentives should include specific goals and objectives included in the comprehensive plan.

LEVERAGE PARTNERSHIPS

The rising costs of materials and land acquisition, complexity and availability of land assembly and maintenance needs require an organized and wide-reaching partner base to sustain implementation. Similar to the proposed through-block connections, urban trail systems in cities such as Atlanta and Indianapolis are proving how critical partnerships are in planning, expanding and sustaining urban trails and non-motorized connections.

In Atlanta, multi-use trails are a component of the Atlanta BeltLine, a sustainable redevelopment project led by a nonprofit that incorporates parks, trails and transit along a 22-mile railroad corridor. Atlanta BeltLine Inc. (ABI) is the non-profit entity that oversees the planning and execution of this vision, though the project components are owned by the City of Atlanta.

In Indianapolis, the Indianapolis Cultural Trail is an eight-mile urban bike and pedestrian trail in the downtown that uses an urban trail system as a way to highlight, connect and celebrate the unique cultural and historical heritage of the city. Funding and support is made possible by a public-private partnership and led by the Central Indiana Community Foundation, the City of Indianapolis and a variety of non-profit organizations.

BURIEN URBAN CENTER

STREETSCAPE DESIGN PLAN

Appendix A: Urban Center Street Tree Plan

The Urban Center Street Tree Plan provides guidance on selecting street trees that best support the character and intent of each street in the Urban Center Streetscape Plan. Based on the Street Tree Concept from the 1999 Downtown Streetscape Design Plan, this updated Street Tree Plan recognizes the presence of established street trees in the Urban Center while providing renewed guidance on recommended tree species.

Purpose and Applicability

The City of Burien's Road Design and Construction Standards (2016) provide standardized requirements for street trees including location, planting, and tree gates. The purpose of the Street Tree Plan is to provide guidance on the types of preferred street tree species when combined with planting requirements of the Road Design and Construction Standards. The Street Tree Plan applies to streets identified in the Burien Urban Center Streetscape Plan and as identified by street name in this document.

Street Trees by Street

1ST AVENUE SOUTH

Intent: Larger columnar trees that reinforce this important transportation corridor and create a consistent and unifying easter edge to the Urban Center and entrance to Downtown.

Options

Common Name	Botanical Name
• Bowhall columnar maple	*Acer rubrum 'Bowhall'*
• Hornbeam	*Carpinus betulus 'Franz Fontaine'*
• Columnar ginko	*Ginko biloba 'Princeton Sentry'*
• Musashino columnar zelkova	*Zelcova serrata 'Musashino'*

4TH AVENUE SOUTHWEST

Intent: Large shade trees that create a sense of enclosure and reinforce the pedestrian-oriented nature of this walkable street.

Options

Common Name	Botanical Name
• Autumn blaze maple	*Acer freemanii 'Autumn Blaze'*
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore/London plane	*Platanus x acerifolia 'Bloodgood' or 'Yarwood'*

SOUTHWEST 148TH STREET

Intent: Large boulevard trees symbolic of this major Downtown edge and entrance.

Options

Common Name	Botanical Name
• Autumn blaze maple	*Acer freemanii 'Autumn Blaze'*
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore/London plane	*Platanus x acerifolia 'Bloodgood' or 'Yarwood'*

SOUTHWEST 150TH STREET

Intent: Shade trees that create shaded sidewalks while adding flowering trees for seasonal color, every fourth tree.

Options: Shade Trees

Common Name	Botanical Name
• Homestead elm	*Ulmus 'Homestead'*
• Japanese zelkova	*'Greenvase' or 'Village Green'*

- Honey locust — *Gleditsia triacanthos 'Shademaster' 'Skycole' or 'Harve'*

Options: Flowering Trees

Common Name	Botanical Name
• Redbud Crab Apple	*Malus x zumi 'Calocarpa'*
• Lavalle Hawthorn	*Crataegus x lavallei*
• Red horsechestnut	*Aesculus x Carnea 'Briotii'*

SOUTHWEST 152ND STREET

Intent: Trees that calm traffic and create a green street edge, creating a sense of openness at the eastern and western entrances to Downtown, and a greater sense of enclosure towards the intersection of 4th Avenue Southwest.

Options: Between 1st Ave. and 2nd Ave. SW

Common Name	Botanical Name
• Raywood ash	*Fraxinus oxycarpa ' Raywood'*
• Honey locust	*Gleditsia triacanthos 'Shademaster' 'Skycole' or 'Harve'*
• Sweet gum	*Liquidambar styraciflua 'Rotundiloba'*

Options: Between 2nd and 6th Ave. SW

Common Name	Botanical Name
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore	*Plantanus acerfolia*
• Autumn blaze maple	*Acer freemanii 'Autumn Blaze'*

Options: Between 2nd and 6th Ave. SW

Common Name	Botanical Name
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore	*Plantanus acerfolia*

- Autumn blaze maple — *Acer freemanii 'Autumn Blaze'*

Options: Flowering trees between 4th Ave. SW and Ambaum Blvd.

Common Name	Botanical Name
• Eastern redbud	*Cercis Canadensis*
• Hedge maple	*Acer campastre 'Evelyn'*
• Japanese Stewartia	*Stewartia pseudocamellia*
• Akebono Flowering Cherry	*Prunus x Yedoensis 'Akebono'*

SOUTHWEST 153RD STREET

Intent: Large shade trees that create a sense of enclosure and provide a more consistent tree lined streetfront over time.

Options:

Common Name	Botanical Name
• Autumn blaze maple	*Acer freemanii 'Autumn Blaze'*
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore/London plane	*Platanus x acerifolia 'Bloodgood' or 'Yarwood'*

AMBAUM BOULEVARD SOUTHWEST

Intent: Broad columnar trees that define this multi-modal transportation route and gateway to Downtown.

Options:

Common Name	Botanical Name
• Bowhall columnar maple	*Acer rubrum 'Bowhall'*
• Hornbeam	*Carpinus betulus 'Franz Fontaine'*
• Columnar ginko	*Ginko biloba 'Princeton Sentry'*
• Musashino columnar zelkova	*Zelkova serrata 'Musashino'*

OTHER URBAN CENTER STREETS (GREEN STREETS)

Intent: A mix of shade and columnar trees that reinforce the role of Urban Center Green Streets; streets oriented around people with opportunities for integrated stormwater design and wider shaded sidewalks.

Options: Shade trees

Common Name	Botanical Name
• Autumn blaze maple	*Acer freemanii 'Autumn Blaze'*
• Sycamore maple	*Acer pseudoplantanus*
• Sycamore/London plane	*Platanus x acerifolia 'Bloodgood' or 'Yarwood'*

Options: Columnar trees

Common Name	Botanical Name
• Bowhall columnar maple	*Acer rubrum 'Bowhall'*
• Hornbeam	*Carpinus betulus 'Franz Fontaine'*
• Columnar ginko	*Ginko biloba 'Princeton Sentry'*
• Musashino columnar zelkova	*Zelkova serrata 'Musashino'*

BURIEN URBAN CENTER STREETSCAPE DESIGN BACKGROUND REPORT

PREPARED APRIL 2020

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INTRODUCTION

The Puget Sound Regional Council (PSRC) designates Urban Growth Centers to support the Growth Management Act and strategically focus density and a mixture of land uses in areas with potential to accommodate regional growth. Downtown Burien is one such subarea that has been designated as an Urban Growth Center by the PSRC. As downtown Burien develops and continues to grow into its role as a growth center for the Puget Sound Region, an updated and innovative way of looking at streetscapes in the downtown area should be adopted to assist in accommodating that transformation.

Staff has identified the need for a downtown Burien streetscape plan that guides future improvements to the street system, reflects Burien's role as a growing urban center and provides streets that are welcoming and attractive to pedestrians and all modes of travel, provides efficient vehicular circulation, increases public safety, supports businesses, and provides for efficient maintenance.

The purpose of this report is to identify the key streetscape and urban design elements to be addressed in a future streetscape plan for downtown Burien, examine the context of existing documentation and regulations affecting downtown streets designs and use, analyze other jurisdictions' approaches to streetscape planning and design, and recommend the next steps to be taken in formulating a streetscape plan that fulfills Burien's vision for downtown.



Above: 2020 Urban Center Plan study area

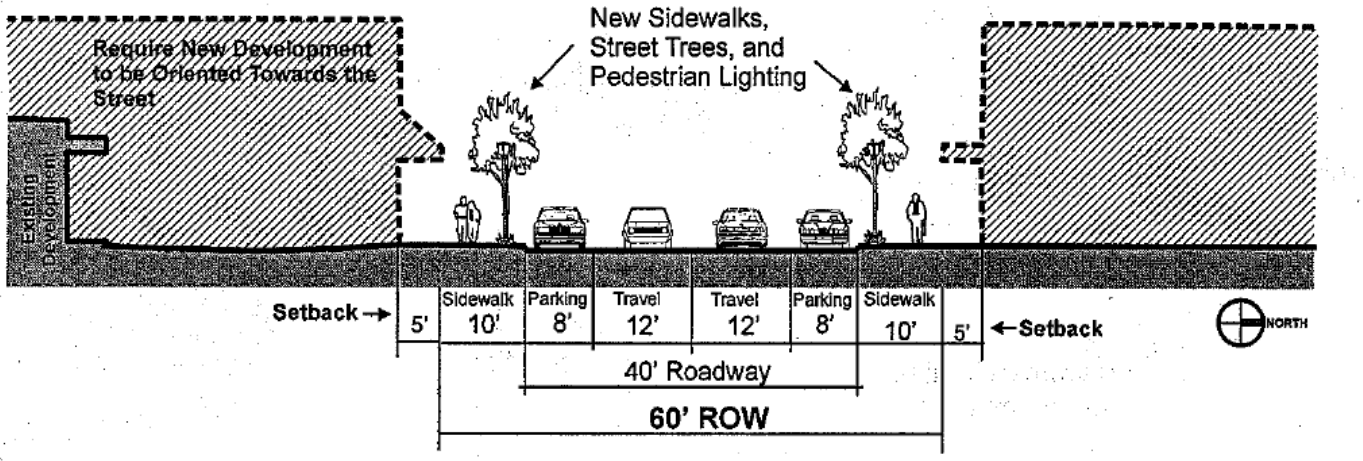
KEY ELEMENTS

Public and private streets represent a significant component of urban life. We use them every day to get from place to place, to access residences and businesses. More than most people realize, our perception of our community is largely determined by a number of seemingly small individual components of the built environment. For example, features as simple as the presence of street trees, the location of curbs, or the design of building frontages have the potential to influence how comfortable a pedestrian feels or how rapidly vehicles drive. Following are some of the streetscape design elements that should be addressed in a streetscape plan.

Street Right-of-Way Design

Not surprisingly, the design of the street right-of-way itself is of vital importance when considering overall streetscape systems within a neighborhood. Sidewalk and pedestrian pathways, travel lane dimensions, parking location and access, location and type of plantings, paving treatments, bike lanes are common factors addressed in street design that affect the community's perception of a place. How the interface between the street, sidewalk, and pedestrian amenities relate to a building and its location on the site are also integral components of quality street design. Thoughtful street design has the potential to create an environment that is welcoming to pedestrians and cyclists and invites the public to enjoy the street while maintaining efficient circulation.

Under current regulations, the Zoning Code categorizes downtown streets as either Type A or Type B Pedestrian Oriented Streets. However, the current street type system is limited and primarily regulates private developments' relation to the street front rather than regulating the street design itself. The Streetscape Design Plan provides an opportunity to refine the Zoning Code's street classification system so that downtown streets may be improved in a manner consistent with the community's vision for downtown Burien.



Above: Right-of-Way section proposal for SW 152nd Street from the 1999 Downtown Streetscape Design Plan

Building Frontages

Building frontages make up the interface between the public realm and private realm[1] and play an important role in the success of a downtown subarea. Pedestrian-oriented building frontages can attract and encourage pedestrian travel and activity, providing safety through "eyes on the street". For example, building fronts that provide a variety of features such as window displays and front porches provide human scale; arcades and overhanging second stories provide a sense of comforting enclosure for pedestrians. Building frontages can also include semi-private plazas and pedestrian connections between buildings on larger sites. By considering building frontages as part of the overall streetscape, private property owners can help make the streets of downtown Burien more inviting and attractive.

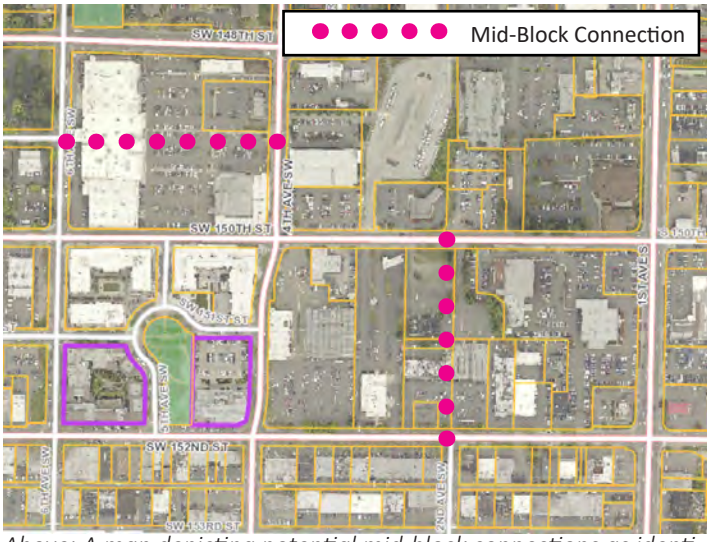


Above: pedestrian oriented building frontage along SW 152nd St.

Mid-Block Connections

Excessively long city blocks tend to be uninviting to pedestrians. Long city blocks increase the time it takes for pedestrians to reach their destination. Shorter block lengths allow for greater ease of circulation and provide more opportunities for ground floor commercial and retail, which provides interest and economic opportunities for a downtown area. Because of Burien's historic development patterns, many downtown city blocks are larger than the ideal size for pedestrian circulation and do not provide the amount of storefront perimeter of a typical urban downtown street grid. Existing properties were platted decades ago in anticipation of a destination shopping center. Today, this pattern poses a challenge for providing street connections. The City and community has identified opportunity sites for mid-block connections, and the streetscape design plan should identify ways to incentivize developments to provide those connections.

Previously prepared planning documents have identified opportunity sites in downtown Burien that could provide mid-block connections. These sites should be evaluated for feasibility under current conditions, and additional opportunities for mid-block connections in the Urban Center should be identified, if applicable.



Above: A map depicting potential mid-block connections as identified in the 1999 Downtown Streetscape Design Plan

[1] For this report, "the public realm" includes any space that is free and open to everyone. The "private realm" consists of buildings, structures, and private or quasi- public open spaces.

Alleys

Functional alleys play an important role in shaping the urban streetscape. Alleys provide space for necessary building functions such as vehicular access, trash storage, and loading. By providing alleys and rear property access, parking access can be moved away from the front of the building. In this way, buildings can prioritize visibility and pedestrian access directly from the street frontage, contributing to a more pedestrian friendly streetscape and better business visibility without compromising customer service parking. Alley maintenance and public safety should be taken into consideration when making recommendations on alley design. The City may explore Burien's current roadway standards to allow for broader use of alleys where feasible; any recommendations on alley use as part of the Streetscape Plan should receive input from Burien Public Works.



Above: Existing alley conditions on SW 153rd Alley between 4th Ave SW and 6th Ave SW

EXISTING DOCUMENTS & REGULATIONS

Throughout the past two decades, streetscape and urban design have been important considerations in visioning Downtown Burien's future. A number of planning documents, goals, and policies have been established to ensure that Downtown Burien develops in a manner consistent with the City's vision of downtown, consisting of memorable, well-designed streetscapes that are accessible, safe and attractive to all modes of travel.

Comprehensive Plan

The Burien Comprehensive Plan contains a number of policies related to the physical quality of downtown Burien's public realm. The general picture painted by the Comprehensive Plan policies is a downtown that is not only built to accommodate the pedestrian, but to promote enjoyment of downtown streets. Specifically, the Comprehensive Plan provides policies that encourage pedestrian amenities downtown, promote pedestrian and mid-block connections, and recommend the development of a downtown street design plan to benefit business, provide access for all modes of travel and abilities, and support public safety.

Comprehensive Plan Policies*
Related to Downtown Burien Streetscape

- ***Pol. BU 1.5:*** *Pedestrian facilities and amenities that help define downtown Burien's distinctive qualities are encouraged*
- ***Pol. DB 1.3:*** *The City should encourage provision of "gateways" and landscaping at points around the community which distinctively identify the entrances to downtown*
- ***Pol. DB 1.6:*** *The City should offer development incentives for developers to incorporate public amenities into their project*
- ***Pol. DB 1.8:*** *Downtown should support walking, transit, and automobiles. The City should prepare a detailed downtown master plan to address right-of-way standards, design guidelines, infrastructure needs, and public facilities needs/locations*
- ***Pol. DB 1.10:*** *Public art should be integrated into public and private developments downtown*
- ***Pol. DB 1.11 & 1.12:*** *Landscaping and open space should be integrated into downtown development*
- ***Pol. DB 1.14:*** *Streets should be designed to accommodate vehicles and pedestrians. Vehicular traffic speeds should be regulated to facilitate pedestrian saftety and movement*
- ***Pol. DB 1.15:*** *The City should prepare a downtown street plan, including minimum 8' wide sidewalks and pedestrian-oriented street furnishings*
- ***Pol. DB 1.19:*** *Encourage pedestrian-attactive uses to extend onto sidewalk, such as cafe seating*
- ***Pol. DB 1.20:*** *Encourage pedestrian amenities along buildings that front sidewalks*
- ***Pol. SC 1.1:*** *Provide pedestrian connection wherever is appropriate and feasible*
- ***Pol. SC 1.7:*** *Establish guidelines for pedestrian walkway widths, types, and materials based on location and land use*
- ***Pol. SC 1.16:*** *Provide mid-block pedestrian and vehicular linkages through properties in the downtown core*

**Policies from the Comprehensive Plan are summarized here and are not quoted directly.*

2020 Urban Center Plan

Adopted by the City Council in 2020, the Burien Urban Center Plan (UCP) assesses the current conditions of a 429 acre sub area including the downtown and provides a vision for Burien moving into the future. Public outreach events were conducted to gather community input on visioning the future of the Urban Center. The plan provides policy and strategy recommendations regarding future development within the Urban Center and identifies opportunity sites for redevelopment as summarized below:

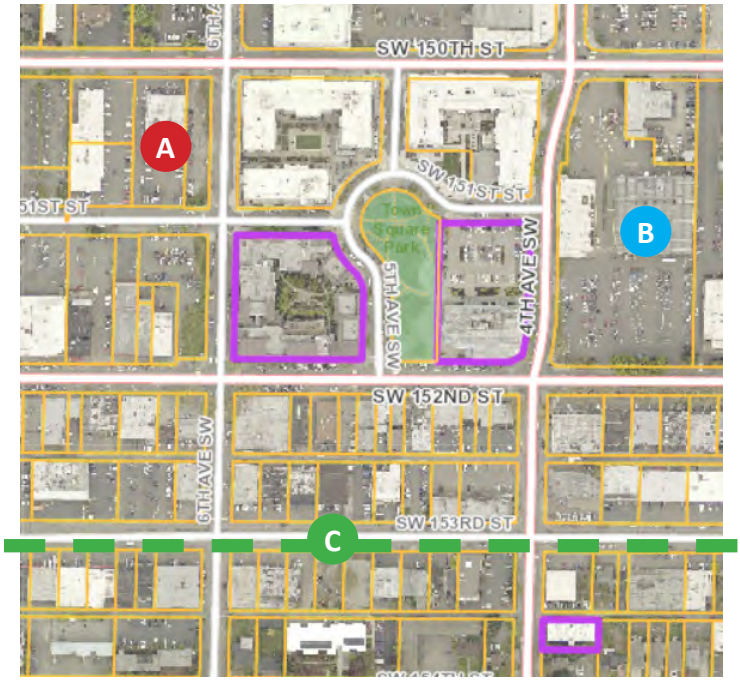
A Post Office Site – Provide a north-south mid-block connection to reduce overall block size to less than 300 feet per frontage, provide site access from 6th Avenue;

B Dollar Tree/Grocery Outlet Site – Incorporate frontage improvements to relate to the 4th Avenue Green Corridor, require ground floor retail with structured parking wrapped with building frontage, create a new 3rd Avenue to provide north/south mid-block connection;

C Southwest 153rd Street Corridor – Visually narrow the street to provide a safer pedestrian environment and slow travel speeds, Utilize alley spaces and build on mural motif, encourage active ground floor uses with continuous weather covering along building frontages

Another significant outcome of the UCP is the provision of downtown placetype options with varying building scale, connectivity, and public space characteristics. Based on the Urban Center Concept developed in the UCP, there would be a mixture of mixed-use, employment, and residential placetypes located within the urban center. The land use planning changes associated with the placetypes concept would shape the growth of Burien's Urban Center which is important to consider when developing a streetscape design plan. The physical character of the public street right-of-way should plan for these emerging changes to the land use patterns in the Urban Center.

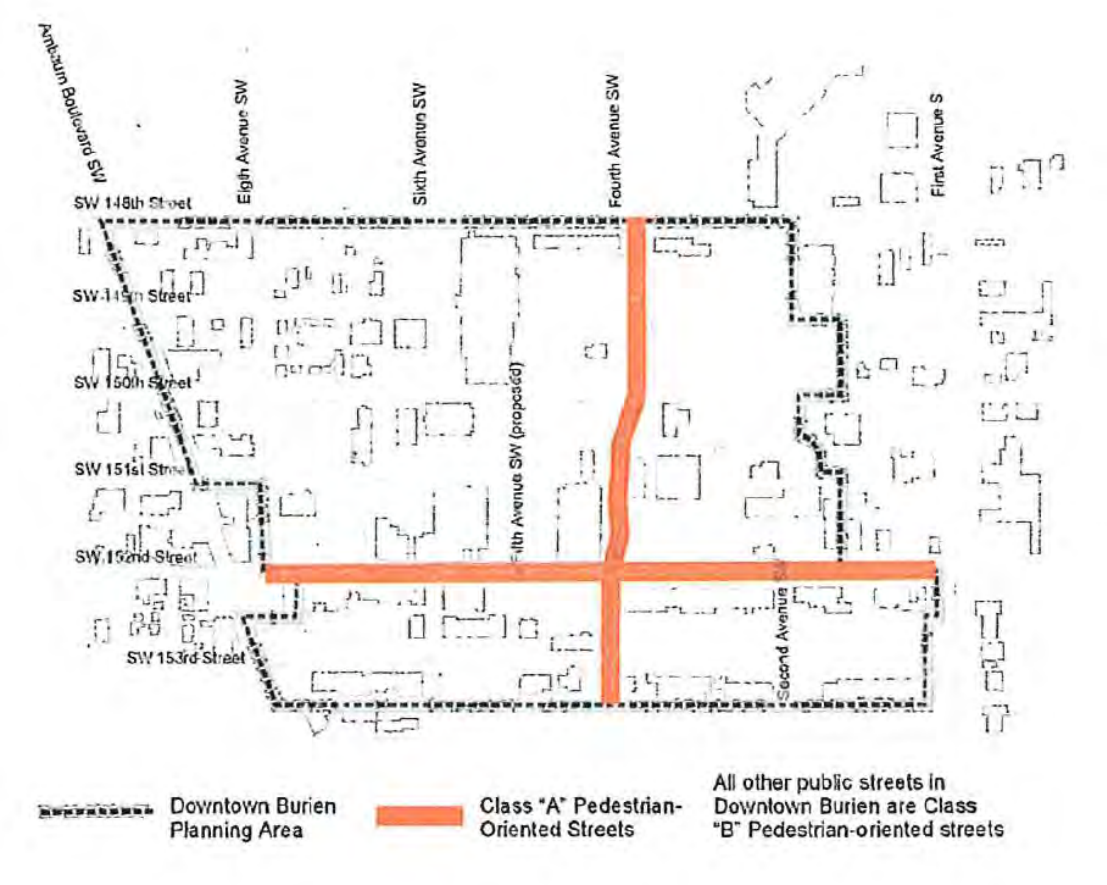
The UCP identifies a focus on reducing single-occupant vehicle trips to 60% of the total mode share. The Streetscape Design Plan can contribute to achieving that target mode split by creating a downtown that is accessible and attractive to all modes of transportation and people of varying levels of mobility. There are a number of policy and strategy recommendations that resulted from the drafting from the UCP that directly relate to streetscape design, and these recommendations should be considered during the development of the Streetscape Design Plan. Additionally, the data collected from the UCP's public outreach process will provide current community input vital to developing streetscape design with the community's interests and goals in mind.



1999 Downtown Design Standards (BMC 19.47)

The Downtown Design Standards, which were adopted as part of the Burien Zoning Code in 1999, implement Comprehensive Plan policies related to the physical characteristics of downtown Burien with design objectives and regulations that are administered during development and permitting processes. The intent of the design standards is to promote quality development and reinforce the City's identity in the downtown area.

While the design standards primarily regulate private development, they impact the overall streetscape by influencing frontage design and site access through the classification of Type A and Type B Pedestrian-Oriented streets. 'Type A' streets refer to SW 152nd Street and 4th Avenue SW, with all other downtown streets classified as 'Type B'. The Design Standards regulate development orientation to provide for buildings fronting the street with minimal setbacks (BMC 19.47.050) and to move parking away from the street and minimize vehicular driveways so as to enhance the pedestrian experience on sidewalks (BMC 19.47.070). Additionally, there are design standards that encourage ease of pedestrian access on-site and increase pedestrian linkages between the public right-of-way and private development. The new downtown streetscape plan should complement the existing Downtown Design Standards codified in BMC 19.47, however, the Zoning Code's current downtown street classification system should be refined to provide a more specific and comprehensive vision of the design public right-of-ways in the urban center.



Above: Pedestrian-oriented street map from the 2000 Downtown Burien Design Manual

1999 Downtown Burien Streetscape Design Plan

In 1999 as part of the visioning process for downtown Burien, the City developed the Downtown Burien Streetscape Design Plan. The Streetscape Plan provides street design recommendations for specific streets in downtown Burien and proposes locations for new mid-block connections. The 1999 Streetscape Design Plan emphasizes redeveloping Southwest 152nd Street, and many of the recommendations made by the plan have come to fruition, contributing to the 'main street' feel of present day Southwest 152nd Street.

A number of other streets in the downtown area were slated for improvements, but such designs were not implemented to the extent that Southwest 152nd Street was. The focus areas of the 1999 plan includes Old Burien (SW 152nd Street between 10th Avenue SW and Ambaum Boulevard SW), the Southwest 153rd Street corridor, the 4th Avenue Southwest Corridor, and northwest area streets. Many of the recommendations made by the 1999 plan may still be applicable today but should be reconsidered in the modern context before implementation, and the geographic scope of analysis should be broadened to include roadways and sites outside of the Downtown Commercial zoning designation.

*What recommendations from the 1999 plan have **not** been implemented?*

Completion of Downtown Street Grid

- Improvements along SW 151st Street between 5th and 8th Avenues South
- 2nd Avenue Southwest connection between SW 148th and SW 152nd Streets
- SW 149th Street connection between 2nd and 6th Avenues South

SW 152nd Street Corridor

- Parallel parking between 1st and 4th Avenues South
- Landscaped median between 4th Avenue South and Ambaum Boulevard
- Crosswalk between 9th and 10th Avenues South
- Curb bulb-outs on east side of 10th Avenue South

SW 153rd Street Corridor

- Cross street (2nd and 6th Avenues South) sidewalk improvements between SW 152nd and SW 154th Streets
- Cross street (2nd and 6th Avenues South) street trees and planting strips between SW 153rd and 154th Streets

2016 Downtown Mobility Study

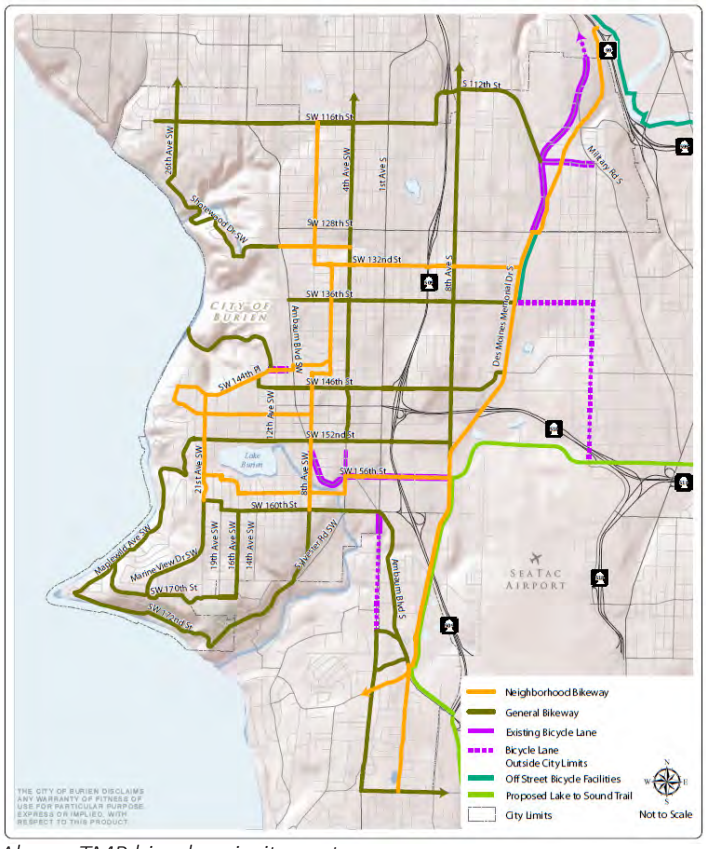
The Downtown Mobility study was developed with the goal of improving transportation options to and through Downtown Burien with a specific focus on bicycle/pedestrian mobility, transit connectivity, and parking. The development of the study involved a public outreach process that asked the participants to identify assets and issues related to downtown. The outreach data was used to determine the public's priorities regarding the streetscape of Downtown Burien. Some of the major assets identified were the downtown's small town feel, access to transit, walkability, and potential for growth on Southwest 153rd Street. Among the major issues identified were a lack of walkability outside the downtown core, a hostile environment for pedestrians along the Ambaum corridor, and a need for better wayfinding.

The Downtown Mobility Study makes recommendations based on community input in the form of 'Big Moves'. The 'Big Moves' consist of policy, regulatory, and design recommendations to promote parking supply efficiency, pedestrian/cyclist access for all ages and levels of mobility, increased transit access, and streetscape design that appeals to all modes of transportation.

The 'Big Moves' recommendations made by the Downtown Mobility Study should be evaluated for applicability when developing a streetscape plan for downtown Burien. Additionally, the public outreach data collected in conjunction with the Downtown Mobility Study should be utilized to help shape the streetscape plan around the community's priorities.

2012 Transportation Master Plan

The Transportation Master Plan (TMP) is a long-range plan that guides Burien's transportation improvements and serves as the backbone of the Transportation Element of Burien's Comprehensive Plan. At the heart of the TMP is the multimodal transportation system concept, which assigns different travel modes (walking, driving, cycling, etc.) to different segments of the overall transportation network, providing ease of access for all modes of transportation while reducing conflict between modes. The TMP addresses existing gaps in the pedestrian network and identifies pedestrian priority streets for planned future improvement. Unsurprisingly, downtown Burien is acknowledged as a priority for pedestrian improvements, and locations for sidewalk additions are identified in the TMP. Similar analysis was done for the city's bicycle network, and the TMP makes recommendations on the location of bicycle network improvements.



Above: TMP bicycle priority route map

Burien Roadway Standards

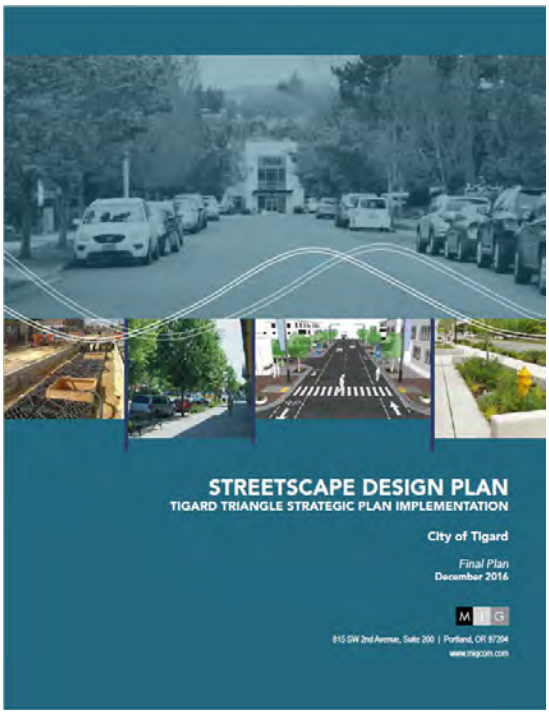
The 2016 Road Design and Construction Standards (Road Standards) regulate the design and engineering of roadways within the City of Burien. Originally adopted in 2008, the Road Standards primarily incorporated King County Code. The Road Standards include technical specifications for roadways and related right of way improvements. Any recommendations made in a streetscape plan for downtown Burien must consider the specifications defined in the Roadway Standards.

Chapter 5.11 of the Road Standards provides specific streetscape features to be provided in the downtown area. Any streetscape design recommendations made as part of a streetscape plan should be compatible with the Roadway Plan's existing regulations regarding downtown. Additionally, street furnishings specified in the updated streetscape plan should be consistent with those defined by Chapter 5.11 of the Road Standards. Chapter 2.09 of the Road Standards specifies geometries and access for alleys, a street design feature that should be analyzed in the streetscape context for its potential to take vehicular access off of the primary street.

When planning for the future of downtown Burien's streetscape, it is also important to consider cases in which downtown development has deviated from the Road Standards. Town Square is an example of a project that was able to depart from some of the requirements of the Road Standards for the overall benefit of the project within the context of downtown. Through an extensive public process, the Town Square design was developed and implemented and could be used to determine what successful features for design components are most desirable. If Town Square serves as a model for downtown development, the City may evaluate other standards to be consistent with the updated vision for the downtown and surrounding areas, rather than relying on departures from the standards.

PRECEDENT ANALYSIS

Two examples from other communities





2016 Tigard Triangle Streetscape Design Plan

Tigard, OR

In 2016, the City of Tigard developed the Tigard Triangle Streetscape Design Plan with the goal of implementing streetscape elements from the Tigard Triangle Strategic Plan and establishing a pedestrian-oriented mixed-use district to transform an area generally consisting of large scale, auto-oriented development. The Streetscape Design Plan analyzed the existing conditions and drew on stakeholder input to make streetscape design recommendations to achieve the community's vision of the Tigard Triangle.

To ensure that community input was heard, the Streetscape Design Plan drew upon the data collected from the Strategic Plan's outreach to technical experts and community members including residents and bicycle and pedestrian advocates. To expand upon existing outreach data, a walking tour of the Tigard Triangle and a one-day internal workshop were hosted to focus discussion on streetscape design within the study area. The Streetscape Design Plan establishes the streetscape context within the Tigard Triangle by assessing existing right-of-way conditions, addressing topics such as sidewalks, parking options, topography, drainage, landscaping, and street furnishings.

To provide a framework for streetscape recommendations, the Streetscape Design Plan uses planning principles from the Strategic Plan to inform general design principles. The design principles included in the Tigard Triangle Streetscape Design Plan are shown below.

Design Principles - 2016 Tigard Triangle Streetscape Design Plan

- *Easy to navigate and identify by foot, car, bus, and bike*
- *Friendly to pedestrians and bicyclists*
- *Fun places along the way*
- *Accessibility*
- *Safety*
- *Sustainable design/context sensitive*
- *Vehicular access management*
- *Parking management*

Using these design principles as a guide, the Streetscape Design Plan makes specific recommendations in the form of street typologies. The four street typologies (pedestrian, access, transitional, and stormwater) each have distinct design attributes and provide a different function to the community. While the street types have detailed design qualities and specific dimensions, the typologies are not recommended for any specific locations within the Tigard Triangle; it is likely assumed that the assignment of street types to specific streets will be determined outside the scope of this plan.

In addition to street type recommendations, the Streetscape Design Plan also provides recommendations in the form of a Materials Palette Menu. The menu outlines a list of options for designing and constructing new facilities in harmony with the street type recommendations. The Materials Palette Menu is intended to be applied flexibly between the different street types and to provide inspiration when implementing street design in conjunction with the Streetscape Design Plan. The Materials Palette Menu addresses the following items: sidewalk improvements, crossings, street trees & structural soils, on-street parking, street & pedestrian lighting, LIDA stormwater, street furnishings, and branding & identity.

What can we learn from Tigard's example?

Just as Tigard's Streetscape Design Plan provided focus and implementation strategies for aspects of their Strategic Plan, so too can a downtown Burien streetscape design plan focus the Urban Center Plan into actionable items specifically related to streetscape design. The Tigard Triangle Streetscape Design Plan effectively assesses the existing context of streetscapes and identifies the desired outcomes for street design within the study area. The Tigard Triangle Streetscape Design Plan also provides solid, actionable recommendations in the form of street types. However, the plan does not apply the street types to specific roadways in the Tigard Triangle. When Burien develops a current downtown streetscape plan, the plan should tie recommendations to specific sites and roadways to the extent possible.

2011 Overlake Village Street Design Guidelines

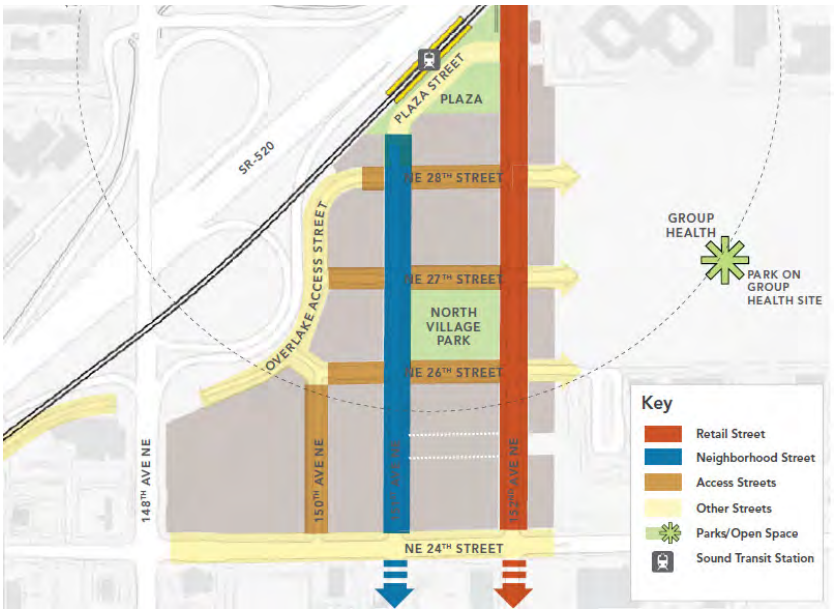
Redmond, WA

The City of Redmond, Washington developed the Overlake Village Street Design Guidelines to identify the necessary standards to develop a successful new neighborhood in harmony with the new light rail station planned for the Overlake Village neighborhood. The Street Design Guidelines provide a detailed plan for the design and implementation of streetscape improvements in the area adjacent to the future Overlake Village light rail station.

Generally, the structure of the Overlake Village Street Design Guidelines begins with broader planning concepts and builds to specific design specifications. To establish context, the Street Design Guidelines detail the land use and circulation frameworks that support the design recommendations consistent with the previously developed Overlake Master Plan. Based on the overall framework, the plan identifies the preferred location and dimensions of essential design elements such as development block dimensions, streets, parking/loading, transit, bicycle/pedestrian facilities, and stormwater facilities.

The Street Requirements chapter of the plan regulates the location, dimension, and design of the streetscape through the assignment of street types (retail street, neighborhood street, access street, and other street). The plan standard section dimensions for roadway types, and specifies where and how the section dimensions may vary from the standard. The Redmond Zoning Code incorporates the Street Requirements chapter of the design guidelines as an appendix, so the streetscape standards are easily enforceable. Further narrowing in scope, the plan defines street and sidewalk design requirements. The Design Details chapter segments roadway and sidewalk sections into distinct zones based on street type. For example, the retail street type segments the sidewalk section into a building zone, pedestrian zone, furnishing/landscaping zone, protected bikeway zone, and automobile door zone. The design details also specify the types of pedestrian and lighting fixtures to be installed as well as construction/design details for right of way construction.

The City of Redmond also considered implementation strategy when developing the Overlake Village Street Design Guidelines. The Implementation Strategy section of the guidelines identifies priority projects and sources of funding estimates project costs and timelines.



Left: Overlake Village Street Design Plan street type concept map

What can we learn from Redmond's example?

The Overlake Village Street Design Guidelines provide an example of a detailed streetscape plan in an urban subarea that is slated for dense development in the near future and is also designated as a Growth Center by the PSRC. Burien can glean certain aspects of Redmond's subarea streetscape plan when developing our own downtown streetscape plan. The strength of the Overlake Village Street Design Guidelines lies in the document's specificity and ability to be implemented. The plan creates a clear image of what the Overlake Village streetscape will look like as the area develops. While this plan works in the context of Overlake Village, it should not be mirrored as a template for the development of a downtown Burien streetscape plan.

Overlake Village is able to develop from scratch on a number of large vacant parcels, whereas downtown Burien is largely occupied by existing businesses that are to remain as part of the downtown streetscape. Downtown Burien's context as a historic downtown makes parcel redevelopment and frontage improvements less predictable in their implementation and requires greater flexibility that should be acknowledged in a planning document. Additionally, Burien's resources in the preparation of a downtown streetscape design plan differ from the City of Redmond's. While Burien is able to work from a number of existing planning documents concerning the downtown subarea, it may not be feasible for Burien to prepare a plan with the level of detail that was considered in the Overlake Village Street Design Guidelines.

NEXT STEPS

The next steps are to determine a scope of work and begin the development of a streetscape plan for downtown Burien. The streetscape plan should make use of existing analysis from the aforementioned planning documents and processes, where appropriate, while filling in design gaps where they exist and explore possible adjustments as necessary.

The Burien Urban Center streetscape design plan should recommend design treatments related to specific sites and roadway segments rather than general recommendations. An effective approach may be to use the general street type concept, in which different roadway segments are assigned different street types based on their context, with each street type having varying right-of-way geometries, travel lane/sidewalk dimensions, and street furnishings.

The Burien streetscape plan should be closely related to the Urban Center Plan with the goal of carrying forward strategies and policy recommendations identified by the UCP. The land use placetypes concept will shape future development in downtown Burien, and the downtown streetscape plan should identify the placetype concept as a framework that guides streetscape design.

Development feasibility should also be heavily considered when developing a streetscape design plan for Burien's Urban Center. The plan should make recommendations on methods to attract development that is in harmony with the streetscape plan (i.e. incentives to provide mid-block street connections at larger sites).

Appendix C: Cost Assumptions

Assumptions used to develop estimated planning level construction cost per linear foot by street type include the following.

General

1. Per linear foot costs assume full reconstruction of the full right of way based on the typical cross sections shown in Chapter 3.

2. Per linear foot costs do not include costs associated with intersection improvements or transitioning to/from existing street cross sections. Intersection costs vary depending on the type of traffic control and can be developed after specific projects have been identified.

3. Per linear foot costs include temporary controls for mobilization, construction survey, traffic control, temporary erosion and sediment control.

4. Unit costs used are based on WSDOT's Unit Bid Analysis tool, the City of Seattle's 2020 APWA Unit Cost Report, and bid tabulations from recent construction projects in King County. Costs are 2020 dollars and should be escalated and adjusted when developing future project specific costs.

5. Per linear foot costs are estimated construction costs only and do not include City project management, administrative, design and other soft costs.

Hardscape

1. City design standards do not provide typical pavement sections and require project specific designs based on the type and volume of traffic (e.g. presence of transit) and subsurface soil conditions. Roadway pavement sections assumed for this cost exercise assumed 6-inch depth hot mix asphalt over 12-inch depth crushed surfacing for all street types.

2. Costs for curb, gutter and sidewalk are based on requirements outlined in the City's 2016 Road Design and Construction Standards

3. An allowance for striping and channelization is included in the per linear foot costs based on a percentage of the overall costs for each typical section.

Utilities

1. Replacement and relocation of existing public utilities (water, sewer, storm drain) and franchise utilities (overhead and underground distribution for electrical, communication, gas, etc.) are not included in per linear foot costs except as noted below.

2. An allowance for adjustments to surface utilities is included in the per linear foot cost, based on a percentage of the overall costs, to accommodate adjustments to existing water meters, hydrants, meter boxes and other utility appurtenances.

3. Per linear foot costs include new catch basins, assuming 150-foot spacing, and connections to the existing storm drain main to accommodate surface runoff along new gutter alignments.

4. Allowances for stormwater mitigation of new/replaced hard surfaces are not included (i.e. flow control or water quality treatment). These costs should be developed on a project by project basis based on applicable stormwater requirements and the drainage basin where the project is located.

5. Green street cost includes one 7-foot by 20-foot bioretention cell for each 150 linear feet of curb along each side of the street.

Landscape and Street Trees

1. Assume 40-foot spacing of street trees on each side of the street, planted with six cubic yards of structural soil and located in 5-by 10-foot planting areas with irrigation.

Street Furnishings and Lighting

1. Per linear foot costs include a bike rack and bench at 150-foot spacing and garbage receptacle at 300-foot spacing.

2. Assumes 50-foot spacing for pedestrian light poles and fixtures.

Table C-1: Construction Unit Costs Per Linear Foot/Square Foot of ROW

Typical Demo Cost	**Unit Cost**		**Unit**
Remove Curb (assume both sides of street) - $20/LF per curb	$	40.00	LF
Remove Asphalt Pvt/Conc Walk (assume 100% ROW) - $30/SY	$	4.00	SF
Removal of Structures and Obstructions - assume $10,000/300LF	$	33.33	LF

Storm Drain	**Unit Cost**		**Unit**
Catch Basin (2 per 150-feet) - $5,000/ea	$	66.67	LF
12-inch CB Connection (25 lf pipe per CB) - $100/lf	$	33.33	LF
Total	***$***	***100.00***	**LF**

Asphalt Road Pavement	**Unit Cost**		**Unit**
HMA, 8" depth - $250/Ton	$	12.53	SF
Base Course, 12" depth - $80/CY	$	2.96	SF
Total	***$***	***15.49***	**SF**

Curb and gutter	**Unit Cost**		**Unit**
Curb and gutter - $50/lf per curb	$	100.00	LF
Base Course, 4" depth - $80/CY	$	2.93	LF
Total	***$***	***102.93***	**LF**

Sidewalk	**Unit Cost**		**Unit**
Concrete walk, 4" thick - $100/SY	$	11.11	SF
Base Course, 4" depth - $80/CY	$	0.98	SF
Total	***$***	***12.09***	**SF**

Landscape and Street Trees	**Unit Cost**		**Unit**
Plants	$	10.00	SF
Topsoil	$	5.00	SF
Irrigation	$	6.00	SF
Cost per 5'x10' planting area	*$*	*1,050.00*	*EA*
Planting area total (planters on both sides of street, 40' spacing)	*$*	*52.50*	*LF*
Tree	$	1,000.00	EA
Structural Soil, 6 CY/Tree - $120/CY	$	750.00	EA
Tree Fence	$	1,000.00	EA
Cost per tree	*$*	*2,750.00*	*EA*
Tree total (assumes trees on both sides of street, 40' spacing)	*$*	*137.50*	*LF*
Irrigation Controller - allowance $9,000/ 300 lf block	$	30.00	LF
Total (landscape, tree, and irrigation)	**$**	**220.00**	**LF**

Furnishings		Unit Cost		Unit
Bike Rack (2 per 150-feet) - $1,000/ea		$	13.33	LF
Bench (2 per 150-feet) - $3,000/ea		$	40.00	LF
Trash receptacle (1 per 300-feet) - $3,000/ea		$	10.00	LF
	Total	***$***	***63.33***	**LF**

Pedestrian Lighting		Unit Cost		Unit
Pole, fixture and LED luminaire (1 per 50 feet) - $10,000/ea		$	400.00	LF
	Total	***$***	***400.00***	**LF**

Green Infrastructure		Unit Cost		Unit
7' wide bioretention along 20 LF (assume 1 cell/150 LF) - $14,000/cell		$	186.67	LF
	Total	***$***	***186.67***	**LF**

Note: see page 1 of this appendix for the list of assumptions used to develop planning estimates.