



SOUTH LAKE UNION STREET CONCEPT PLANS

Prepared for City of Seattle, April 2013

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EXECUTIVE SUMMARY

South Lake Union is rapidly evolving as one of Seattle's most dynamic neighborhoods. The South Lake Union Street Concept Plans focus on the portion of the neighborhood west of Westlake, creating a guide for a streetscape that will be a key amenity of the neighborhood.

The area covered by this document is between 9th Avenue and Dexter Avenue, from Denny Way on the south to Mercer Street on the north. It includes Denny Park and the recently constructed UW Medicine campus. Significant new development is expected in the next few years and the South Lake Union Street concept plans will provide a vision for the streetscape that will be built out over time.

The street concept plans take advantage of major opportunities for creating needed public amenity. These opportunities have been identified in several planning efforts done previously, including the South Lake Union Framework Plan, the Thomas Street Streetscape Concept Design, and the South Lake Union Mobility Plan.

There is a particular opportunity to create a signature shared-use street on 8th Avenue North, running along three blocks of primarily residential frontage between Denny Park and UW Medicine. In addition, with the Alaskan

Way Viaduct Replacement project, three streets—John, Thomas, and Harrison—will be reestablished as connections between South Lake Union and Seattle Center/Uptown.

The plans also take into account opportunities for better connection in the networks of bicycles and for transit that may be added in the future, based on the work done in the South Lake Union Mobility Plan and the revisions to the Seattle Bicycle Master Plan. Dexter Avenue and 9th have potential for improvement in the citywide as well as local bicycle network. The design for Harrison Street allows for future east-west transit connections.

The street concept plans include geometries and functions for each street, and a palette of materials for paving, plantings and street furnishings.

The designs for 8th Avenue North include a concept for “street rooms” that offer seating and space for activities along the block. Vehicles are allowed in the center of the street, but the narrow lane and the material quality will slow movement and discourage unnecessary traffic. The landscape extends the presence of mature sweet gum trees on the central block to the other blocks. The street room on the central block is a larger

space, offering variety in the sizes and types of activities that can take place along the street. Parking is allowed near the intersections, with some parallel parking alternating with the street room space. Each block has no more than 24 parking spaces.

Designs for the reconnected east-west streets draws on previous planning for the area and from the design work done for the reconstruction of these streets west of Aurora. Thomas and John Streets are identified as Green Streets, and Thomas is part of the Lake to Bay Loop.

The implementation of these plans will set a new standard of quality for a park-like residential zone in a dense urban neighborhood. The aspiration is to build a new model for mixed-use right-of-way that supports healthy and attractive places to live and work.

WHAT IS A STREETScape CONCEPT PLAN?

These street plans provide a vision and guidance to the improvements to the right-of-way so that incremental improvements by both private and public actors results in an excellent and functional public realm that fits in a particular location. These plans were produced in conjunction with the Seattle Department of Planning and Development and the Seattle Department Transportation, with input from the South Lake Union Community Council and adjacent property owners. The street concept plans are intended for adoption as an appendix to Seattle's Right-of-Way Improvement Manual, Chapter 6.

Implementation of the plan can occur over time through direct capital investment by the City or other public entities. Property owners may voluntarily implement the plan for the portion of the plan adjacent to their property, and are encouraged to do so with redevelopment of adjacent parcels. Elements of the plan may be used as development incentives through the South Lake Union incentive zoning program. Landscape elements in the right-of-way will be counted toward project Green Factor requirements. Because the concept plans have been approved by the City once adopted, the Street Improvement Permit process may be facilitated for project applicants.



PROJECT SCOPE OF WORK

INTRODUCTION + VISION

SITE CONTEXT

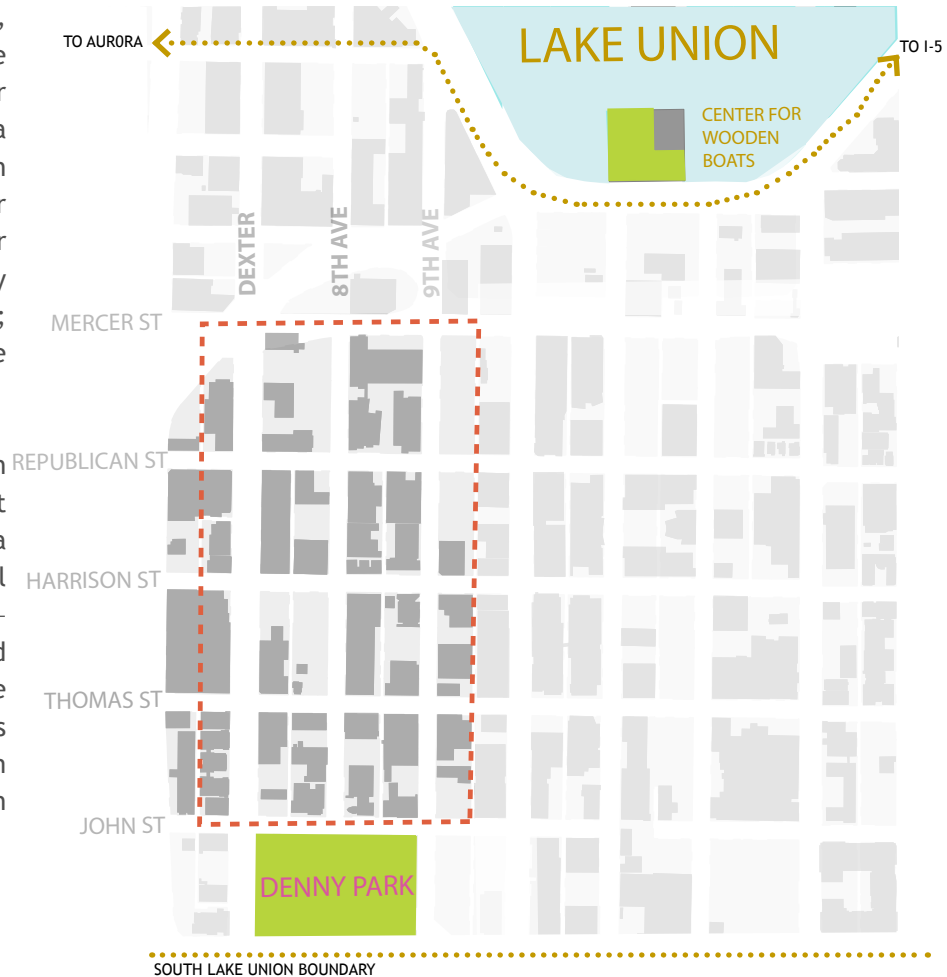
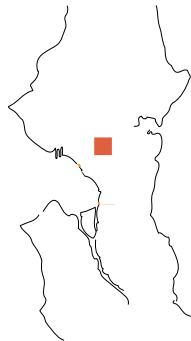
South Lake Union, one of ten Center City neighborhoods, has attracted exceptional growth over recent years. This growth is a result of City policies and investments by both private and public sectors. South Lake Union has become a dense mixed-use neighborhood reflecting policies created in the 1990's, adding thousands of new housing units and thousands of new jobs in fields including biotechnology, global health, and information technology.

South Lake Union is adjacent to Capitol Hill to the east, but separated by Interstate 5. The Uptown neighborhood, to the west, is currently separated by a depressed section of State Road 99 (Aurora), but will be reconnected with the completion of the Alaskan Way Viaduct Replacement project, which reestablishes three east-west streets between the Uptown and South Lake Union neighborhoods. The growing Belltown and Denny Triangle neighborhoods lie to the south, between South Lake Union and Downtown.

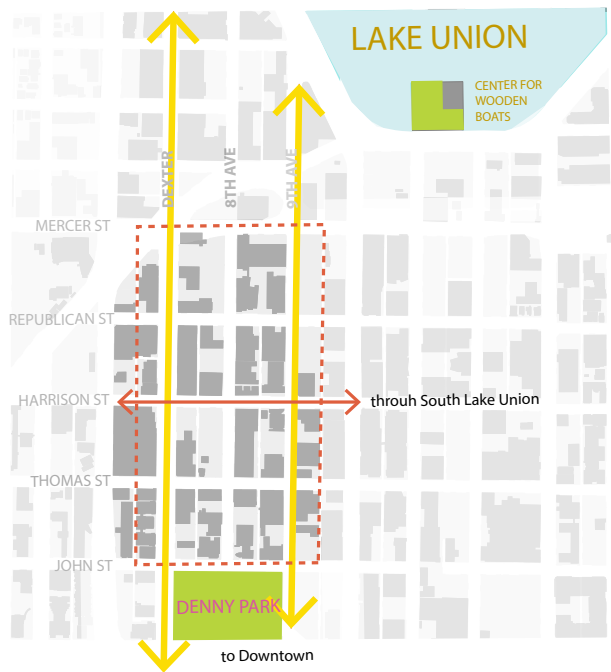
Seattle's street grid shifts on Denny Way, the neighborhood's south edge. Westlake Avenue cuts through the

city grid in the Denny Triangle area, connecting Downtown and South Lake Union. The South Lake Union Streetcar began operation in 2007, adding a new transportation option between Downtown and South Lake Union. Mercer Street, the north edge of the site for this plan, has been rebuilt as a two-way boulevard in the Mercer East project; the Mercer West project will extend the two-way boulevard past Seattle Center.

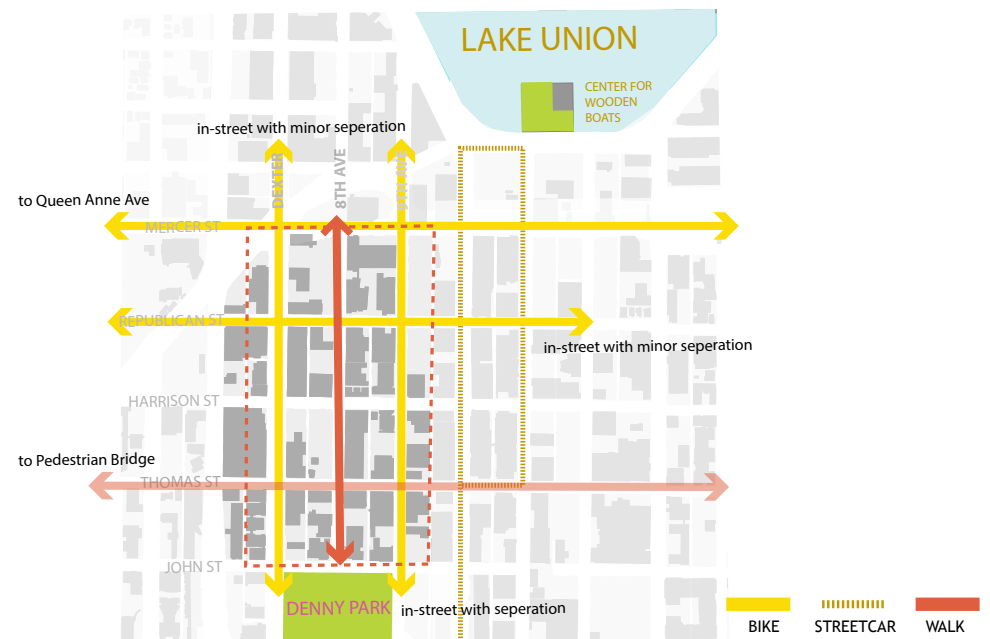
The new density in South Lake Union calls for a quality public realm that provides neighborhood open space with a variety of scales and characters. Several significant parks serve the community—Denny Park, Cascade Playground, and the recently constructed 12-acre Lake Union Park. The network of streets is also a critical piece of the public realm as a set of connections and as places in themselves.



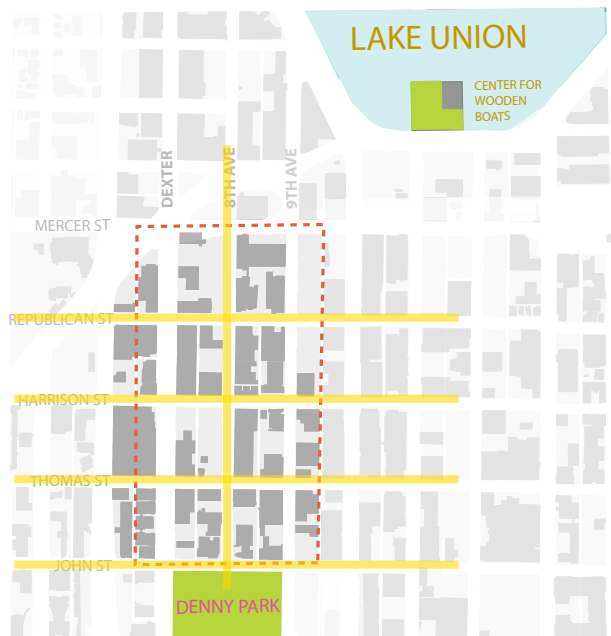
TRANSIT CONNECTIONS



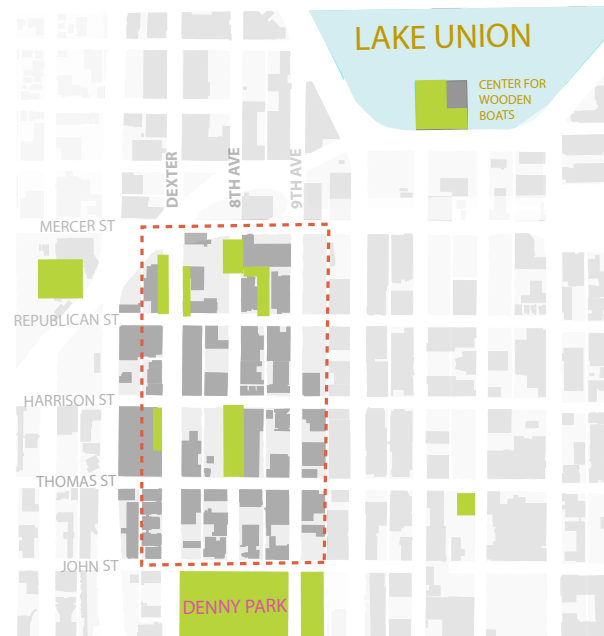
FUTURE PEDESTRIAN + BIKE CONNECTIONS (proposed 2013 bike master plan)



ABOVE GRADE POWER LINES



OPENSOURCE + TREE CANOPY



INTRODUCTION + VISION

EXISTING PLANS

A number of planning documents have served as a guide for South Lake Union's development. These documents have coordinated various aspects of the vision and implementation of development, and the addition of the Street Concept Plans draws directly on these plans and guidelines.

SOUTH LAKE UNION URBAN DESIGN FRAMEWORK (2011)

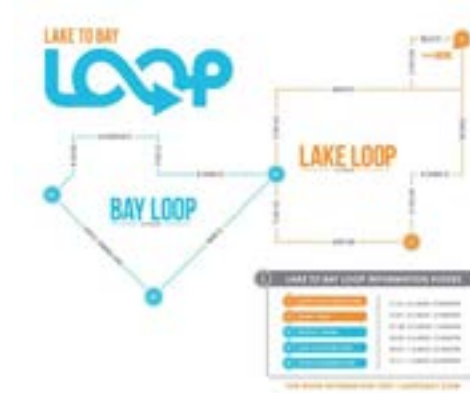
The Framework Plan sets out priorities for public open spaces and amenities, for land uses and for street designations. This plan influenced alternatives for potential rezoning of the neighborhood and the proposed zoning ordinance for South Lake Union. In the Framework Plan, 8th Avenue was shown as a shared use street with limited traffic and ground-related housing set back from the property line. Neighborhood-serving commercial uses were suggested at street corners.

THOMAS STREET STREETScape CONCEPT DESIGN (2011 draft)

The Department of Planning and Development looked at the design of Thomas Street from Elliott Avenue to Fairview Avenue. With much of Thomas Street designated as a Green Street, this concept design anticipates the upcoming changes with the reconnection across Aurora and builds on the South Lake Union Framework Plan.

LAKE TO BAY LOOP

A strong connection from Lake Union to Elliott Bay has been a long-term desire for the Center City neighborhoods. With the pedestrian/bike overpass to the Elliott Bay waterfront, this connection is closer to being realized. The proposed route runs along Thomas Street, from Myrtle Edwards Park across the train tracks and Elliott Avenue, and through Seattle Center. With the reconnection of Thomas Street after the Viaduct Replacement Project, the route will connect to South Lake Union and continue to Lake Union via Terry Avenue North. Thomas Street takes on importance through Lake to Bay Loop plans, but also as a designated Green Street.



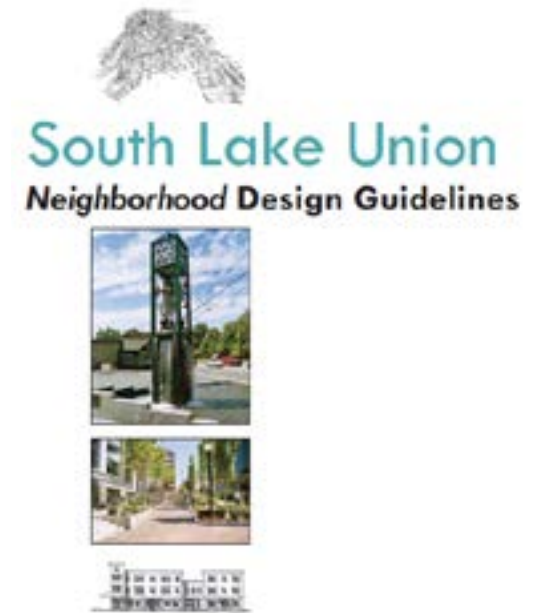
ALASKAN WAY VIADUCT REPLACEMENT PROJECT

The removal of the Alaskan Way Viaduct along Seattle's central waterfront will create a tunnel running from the Stadium District south of Pioneer Square to the Uptown neighborhood adjacent to South Lake Union. The north portal will emerge just north of Harrison Street, and Aurora Avenue North will become part of the at-grade street system. John, Thomas, and Harrison Streets will become newly established connections between Uptown/Seattle Center and South Lake Union.

As part of the Washington State Department of Transportation's north portal design, street designs were created for Harrison and Thomas Streets west of Aurora. These designs were vetted with SDOT and other stakeholders, and are referenced in this plan's design for both streets.

SOUTH LAKE UNION DESIGN GUIDELINES (2005, revised 2012)

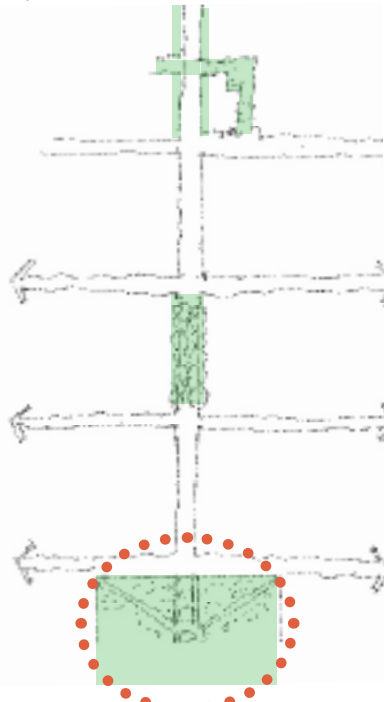
These guidelines tailor Seattle's Citywide Design Guidelines to the issues of highest importance to the neighborhood. Of particular relevance to this project is the guidance for residential areas along the street: "Consider designing the entries of residential buildings to enhance the character of the streetscape through the use of small gardens, stoops and other elements to create a transition between the public and private areas." guideline PL3.



CHARACTER GIVING SPACES

DENNY PARK

Context-based design looks for the positive attributes and unique characteristics of every site circumstance. In this neighborhood, several character-giving spaces serve as a starting point for street concepts. Seattle's oldest park, Denny Park, was donated to the City by David Denny and his wife in 1864. Its current formal design came after the regrades, which by 1930 left Denny Park flattened. The park is an urban oasis that has until recently been on the fringe of Downtown's activities. Recently, a play area and dog facilities has been added to the park. Proposed development is certain to bring new life to Denny Park.

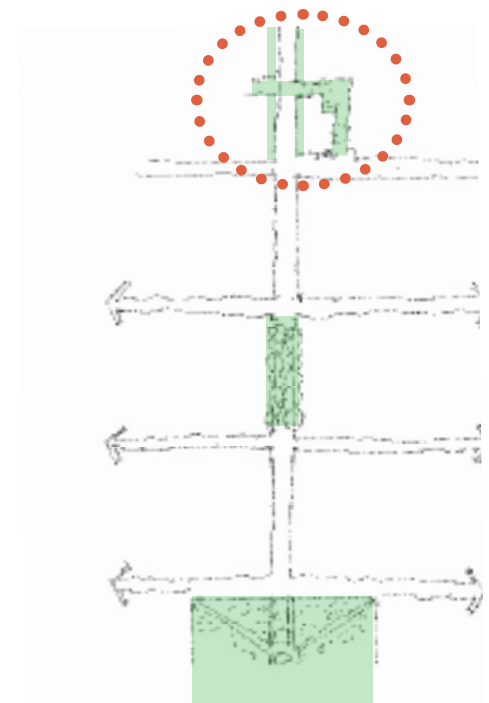
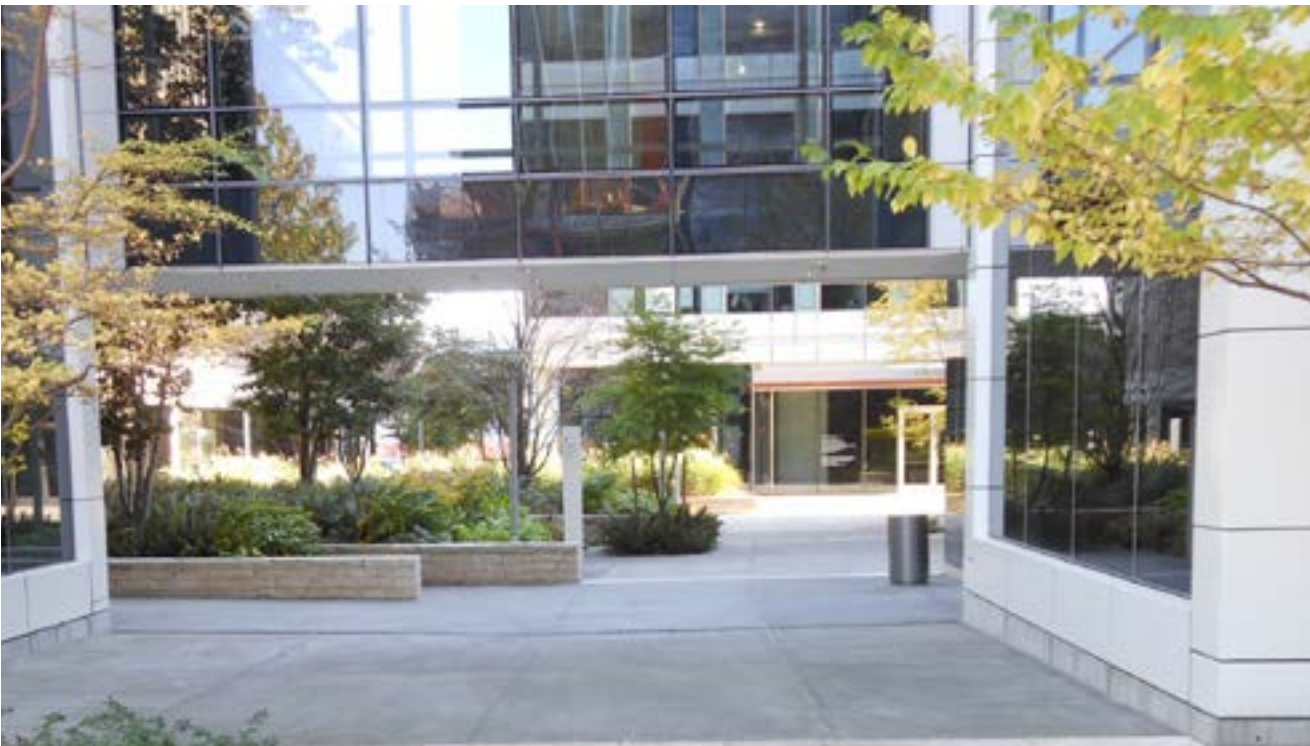


VIEW OF DENNY PARK

CHARACTER GIVING SPACES

UW MEDICINE

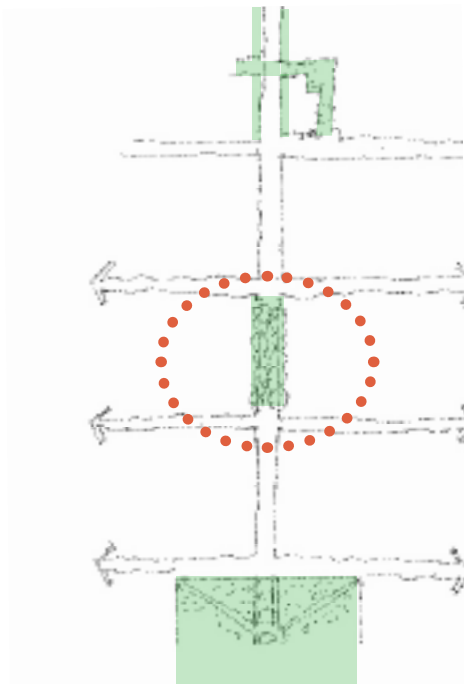
Significant spaces have been added with the development of the University of Washington Medicine complex north of Republican. These spaces are internal to the blocks, but open up to both 8th Avenue and Republican Street. They set a standard of design excellence and should be part of the contributing spirit to the street concept plans.



CHARACTER GIVING SPACES

TREE CANOPY

The block of 8th Avenue between Thomas and Harrison is a memorable segment of full street tree canopy. The fall color of the trees is particularly fine and adds to the character of this block as a proposed shared use residential street with pedestrian priority.



8th Ave between Thomas and Harrison

STREETSCAPE VISION AND GOALS

STREET CHARACTER

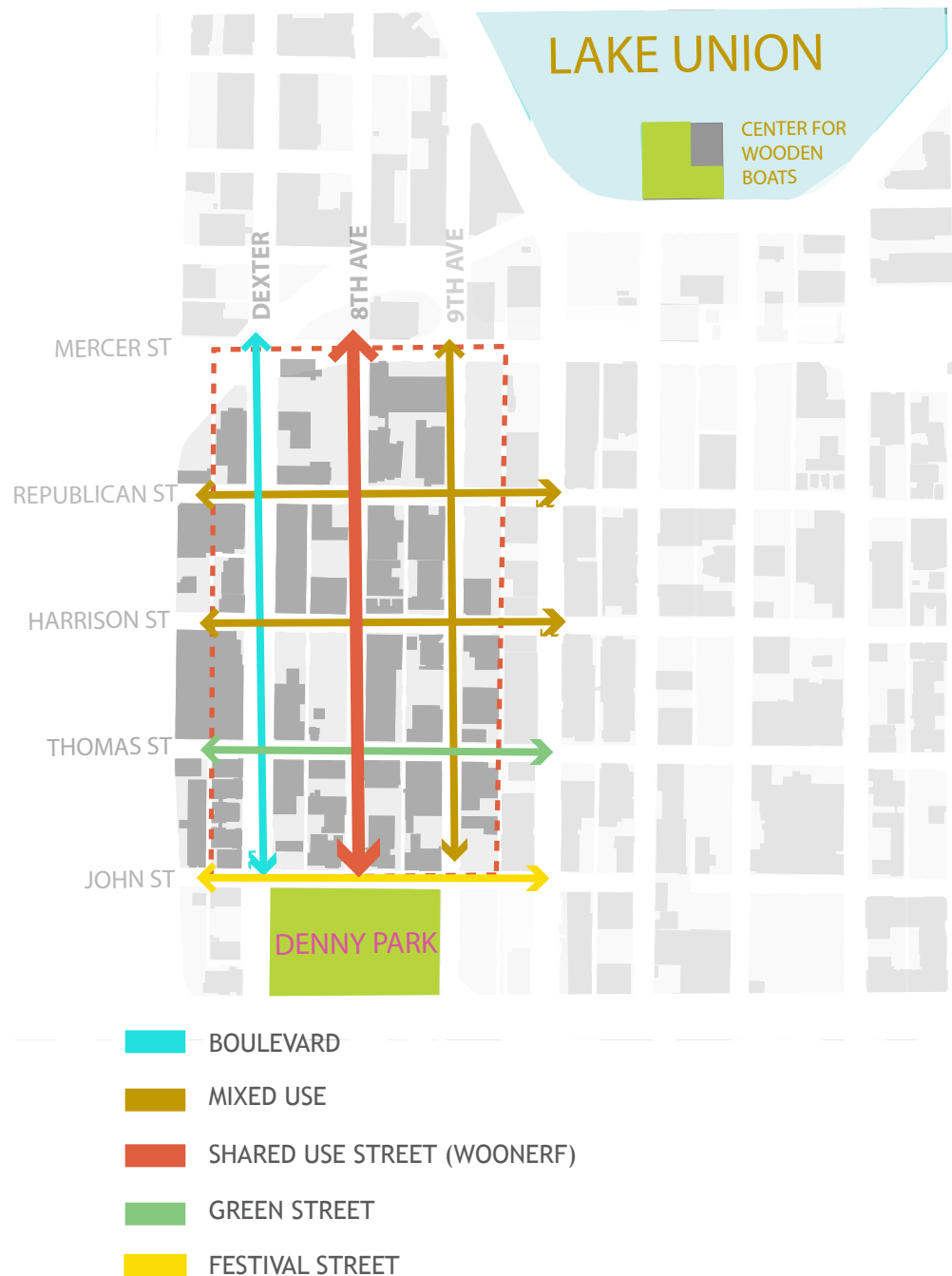
The South Lake Union Framework Plan classifies streets according to the desired character of the street. In the project area, 8th Avenue North is designated as a Woonerf, or shared-use street. The plan defines this character type by an emphasis on pedestrian and bicycle use. Capacity for cars is substantially reduced, and may be restricted to deliveries and emergency vehicles.

Thomas Street is a green street, which also prioritizes bicycle and pedestrian mobility over automobiles. Traffic calming measures are encouraged, and a green street character may include an ecological focus by capturing rainwater, providing habitat or trees with significant canopy.

John Street, designated a festival street, should be designed with an ability to close the street for events.

Republican, Harrison and 9th are shown as mixed-use streets, which are secondary routes to and through the neighborhood. They may have transit, and serve a variety of of land uses. Standard sidewalk and landscape would be adequate.

Dexter, and a boulevard, has a higher intensity of transportation use for all modes. Landscaping, tree canopy and pedestrian safety measures are suggested in order to provide comfortable, human scale spaces along a wide street.





II. STUDY AREA STREETSCAPE CONCEPTS

1. "Heart of the District"

8th Ave
John Street

2. "East -west streets"

Thomas Street
Harrison Street
Republican Street

3. "Edge Streets"

9th Ave
Dexter Ave

1 “Heart of the District”

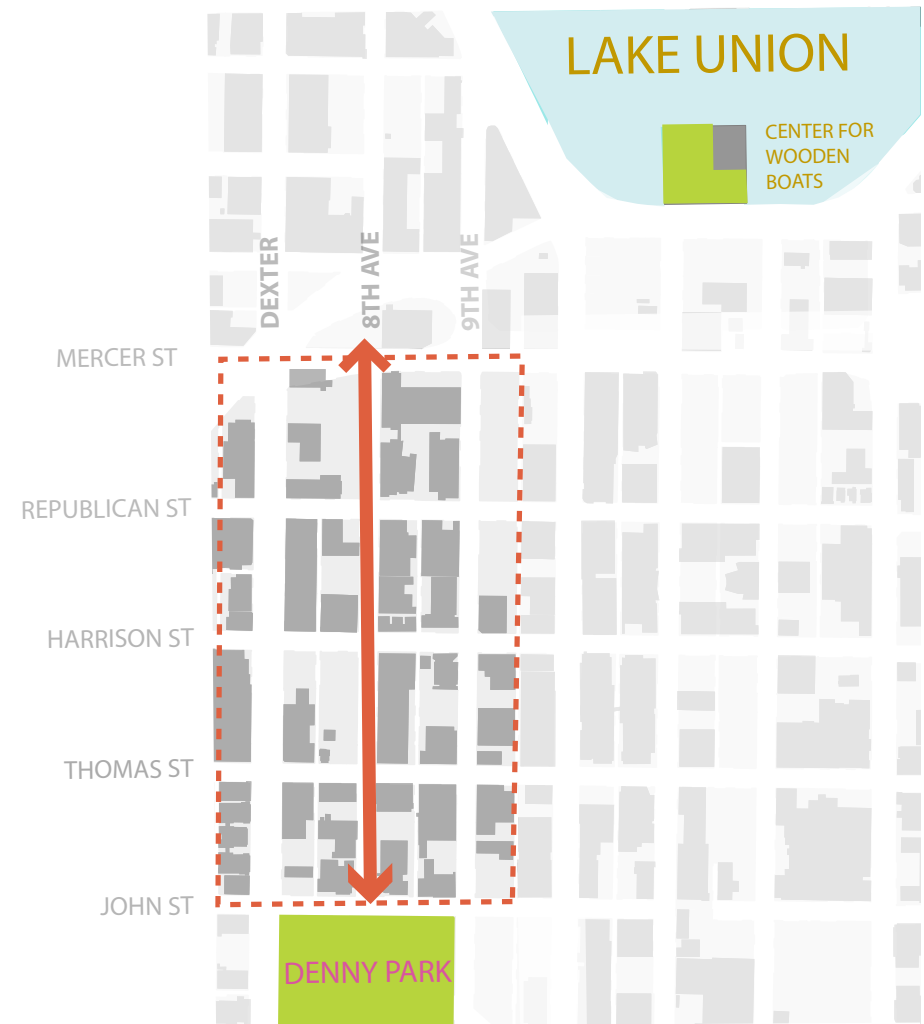
STUDY AREA STREETSCAPE CONCEPTS

8TH AVENUE NORTH

A residential shared-use street is different than a retail shared-use street, with activation that comes primarily from the people in the neighborhood itself rather than shoppers, employees and tourists. The design needs to invite a full range of participants, but in order to be well-activated, neighborhood residents must make good use of the space. Different users will have a range of activities-walking the dog, play areas where there are families, possibly peapatches or more active recreation for others. It will be beneficial to allow as many of the uses desired by residents possible in the right-of-way.

The 8th Avenue design refers to the character giving spaces as a starting point. Denny Park has a formal character, very large trees, and a long history. Elements of the park such as the distinctive pedestrian lights are recommended to extend the feel of the park northward. Seattle City Light would need to approve the use of the lights featured in the Park. A second

influence is the beautiful mature canopy of the sweetgum trees between Thomas and Harrison. Continuing this species will provide continuity along the four blocks between the Park and Mercer Street. Third, there are excellent open spaces in the UW Medicine campus at the north end of the segment of 8th Avenue. The character of these spaces is quite different than Denny Park, but a worthy bookend.



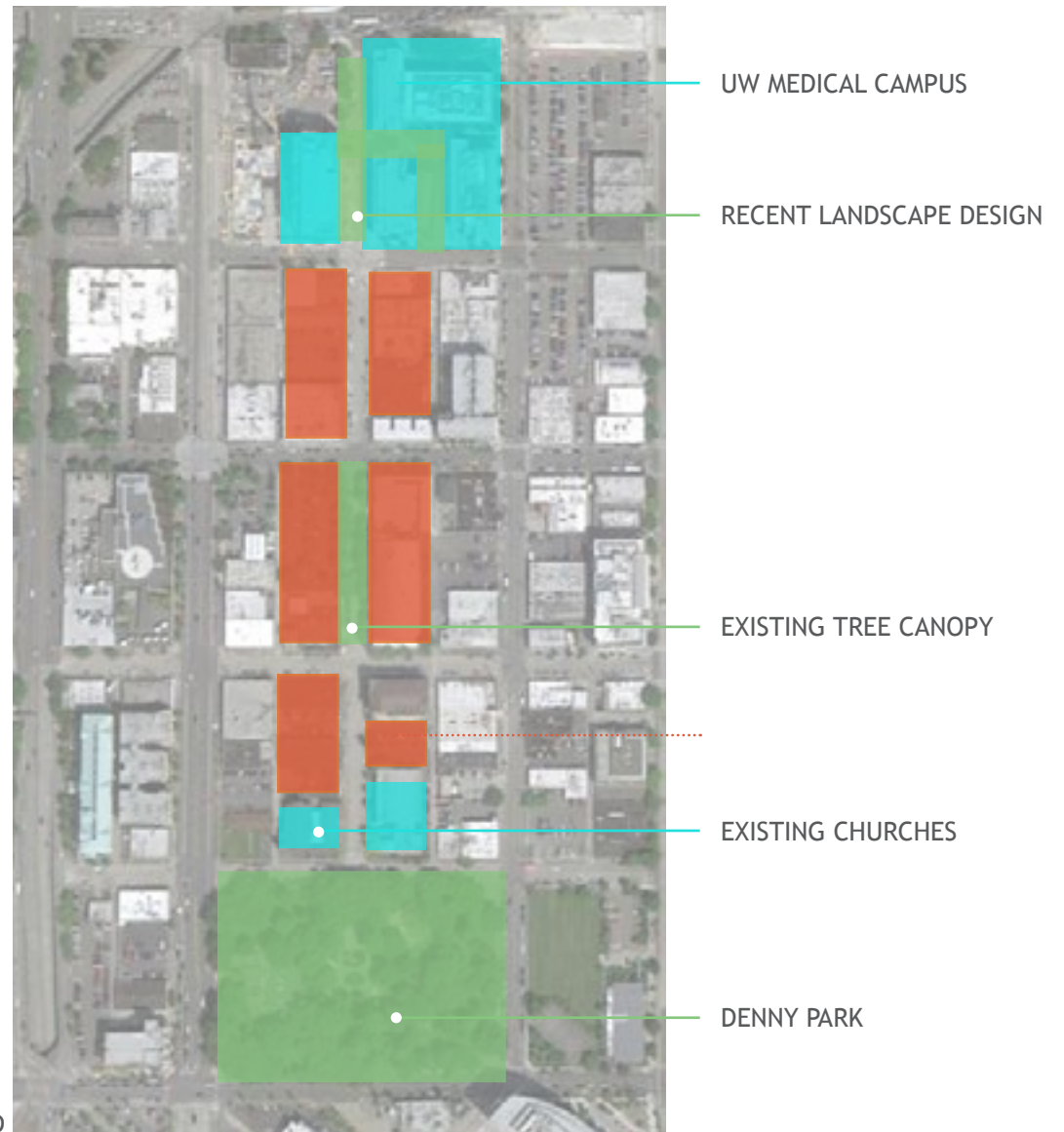
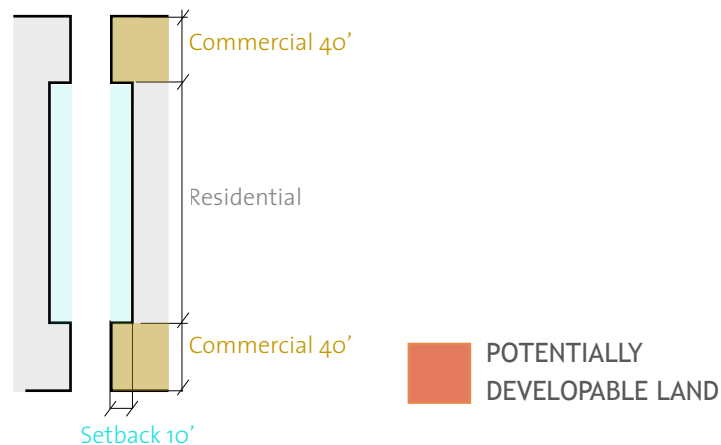
EXISTING CONDITIONS

CURRENT FUNCTIONS + CONDITIONS

Existing conditions along 8th Avenue North include two churches on the block nearest Denny Park, recent additions to the UW Medicine campus on the north end, and a significant amount of developable land. Proposed zoning for 8th Avenue emphasizes residential uses with an 85' base height and potential increase in height with incentives. In envisioning street-level townhouse style units with a 10-foot setback from the property line.

This setback gives the ground floor units some privacy and allows space for stoops or front yards and plantings. Neighborhood commercial uses are allowed at the corners, building out to the property line for 40 feet back from the intersection. This zoning would create a “dumbbell” footprint, with a residential feel on the interior block, and commercial corners.

Zoning footprint



STUDY AREA STREETSCAPE CONCEPTS

8TH AVENUE NORTH | SHARED-STREET

ENVISIONING 8TH AVE AS A SHARED STREET

8th Avenue is an excellent candidate for a shared-use street because of its low-volume, low-speed traffic, and the imminent increase in density with a need for quality open space. It is a mixed-use street, with proposed zoning that will result in commercial uses at the intersections, and a midblock condition with ground-related townhouses set back 10' from the property line.

Shared use streets allow a mix of uses within the right-of-way to safely co-exist--people walking, cycling, and driving. Importantly, people are comfortable using the space for “staying” activities--sitting, eating, playing, gardening, visiting neighbors and other desired uses by people who live nearby. Shared use streets are most successful when their use is in synch with the adjacent and nearby land uses. Unlike many shared-use situations, 8th Avenue will be primarily a residential street if proposed zoning changes are enacted. The level of use and activity will be successful if the design of the street serves the nearby residents and attracts them to use the open spaces.

There are four blocks in the project area, each 360 feet in length. The northernmost block

has recently been rebuilt by the UW Medicine projects. The shared-use strategy will therefore be applicable to the three blocks between John Street and Republican Street.

In considering 8th Avenue, the unique characteristics of the street begin with its connection to the park, and the presence of the lovely mature sweet gum trees on the block between Thomas and Harrison Streets. The design of Denny Park is one of Seattle's rare examples of a formal layout. The design of 8th Avenue can follow on that formality and the presence of the sweet gums by creating the feel of a linear park continuing northward from Denny Park.

This approach follows the geometries of the Thomas-Harrison Block, with an intimate-scale pedestrian sidewalk along the property line adjacent to a line of trees with a full canopy.

LAND USE DEVELOPMENT

- 1 Residential use has a 10' setback at mid-block
- 2 Commercial use should be 40' length at block corners

STREET LIFE ZONES

- 3 Flex zone is a multimodal portion of the street that accommodates people, bikes,, cars at a slower speed as well as fire access.
- 4 Street Life zone accommodates a variety of block activities including multiple opportunities for walking (ADA accommodating) sitting, playing, or connecting with neighbors; all within lush plantings and a full tree canopy.



STUDY AREA STREETSCAPE CONCEPTS

8TH AVENUE | COMPONENTS

CREATING A GREAT PLACE

- Shared-use street with focus on the pedestrian experience

- Street zoned for continuity of emergency access with flex zone for contextual response

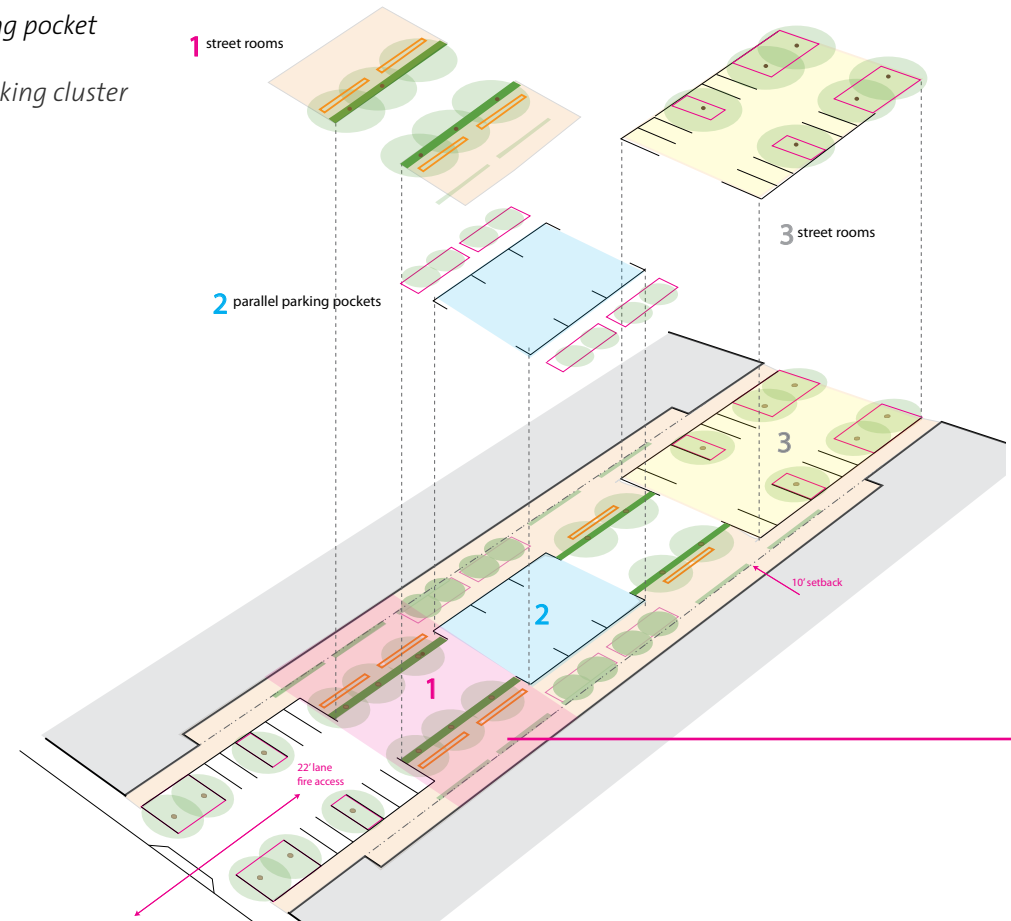
- Street trees to continue Sweetgum species; feel like a connection to Denny Park

- Lighting - use pedestrian lights same as Denny Park

Residential streets are the “front yards” of people that live along the street. They are typically quieter and greener, with ways to respect the privacy of adjacent ground level units. When residential shared use or pedestrian streets are in publicly owned land, it is important that the design ensure that the public feels welcome to use and enjoy the space

EXAMPLE DIAGRAM OF 8TH AVENUE COMPONENTS

- 1 *8th Ave street “rooms”*
- 2 *Parallel parking pocket*
- 3 *retail and parking cluster*



1 The “Street Room” Concept

The idea of a street room is to create a set of outdoor spaces that are scaled and furnished to foster use by residents and the public. While the sidewalk and the shared-use street are pleasant places to walk, street rooms offer places to sit and enjoy spending time. They also break up the linear street with eddies of space for landscaping, seating and other furnishings that may be permanent or seasonal.

Parking is located near the commercial use at the intersections, and this hardscape area can be either outdoor space associated with the commercial or parking. The outdoor space would be particularly appropriate on the sunny north side of the intersections.

Two types of street room concepts are recommended for 8th Avenue North. One has a series of smaller street rooms between the sidewalk and shared-use zone, the second creates a larger street room central to the block that encompasses the shared-use street zone



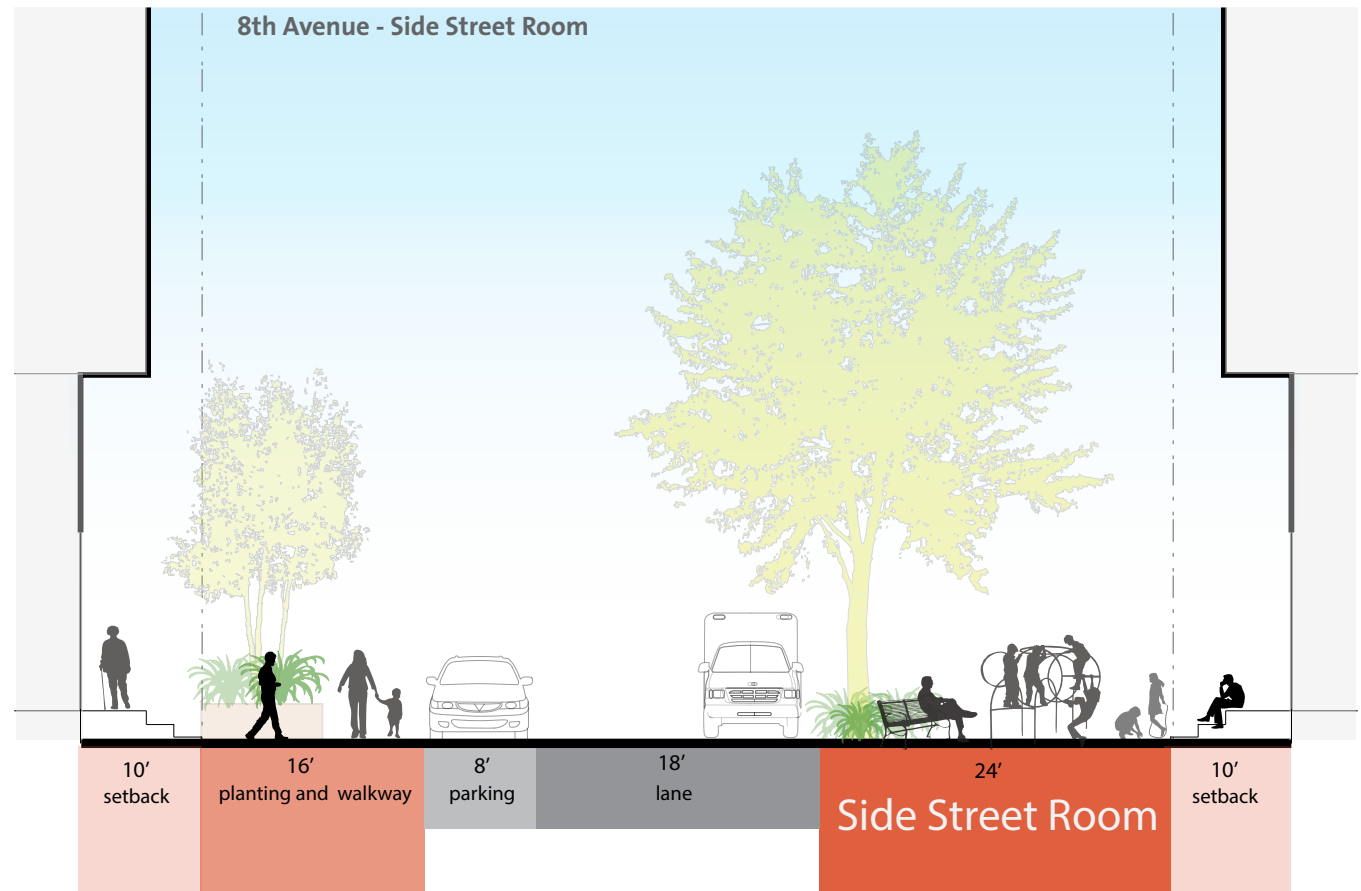
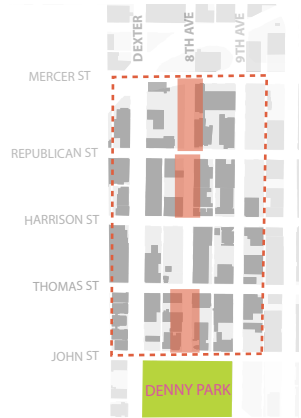
Examples of multiple types of uses for street rooms

8TH AVE PROPOSED CONFIGURATIONS

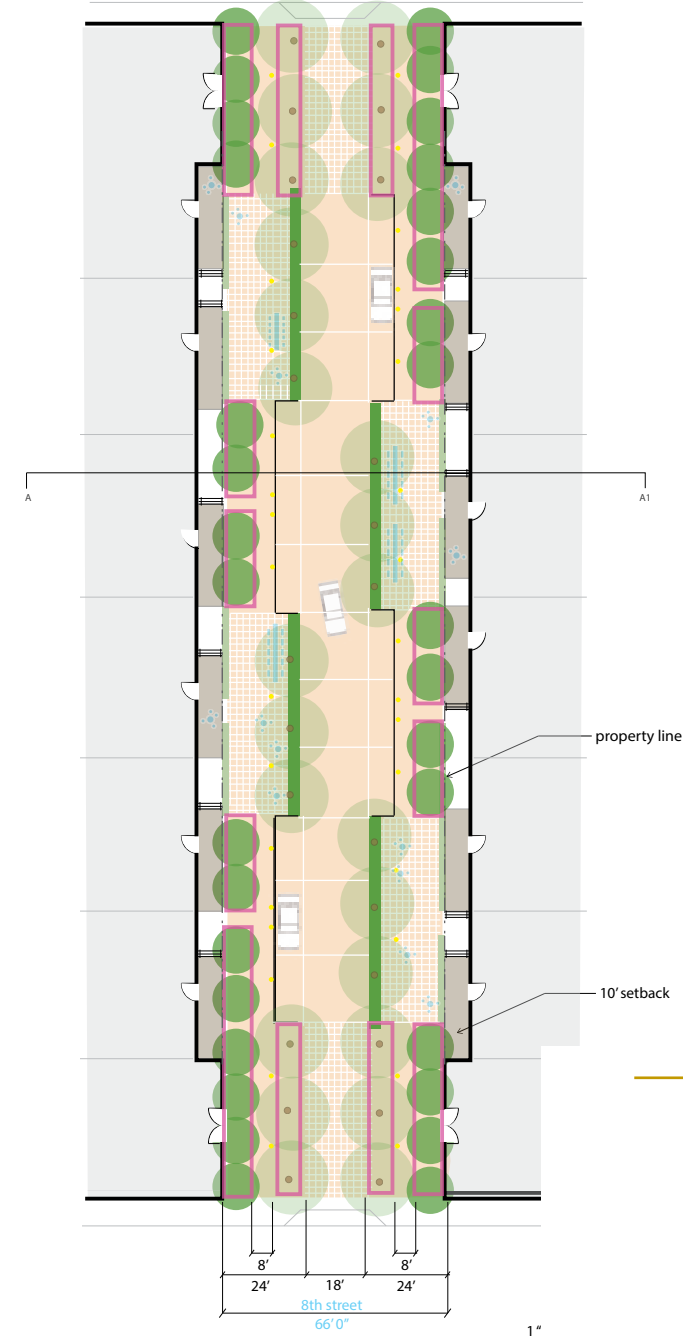
SIDE STREET ROOM CONFIGURATION

In the side room configuration, street rooms are pockets of space between the sidewalk and the shared-use portion of the street. They pull the line of street trees inward toward the center of the street, filling the volume of space along the street with canopy. As smaller spaces, they are scaled for individuals and small groups to feel comfortable. Because there are several of these spaces, they may take on more individual characters depending on the adjacent uses.

The Side Street Room configuration allows some parallel parking to be tucked in between street rooms in the center portion of the block.



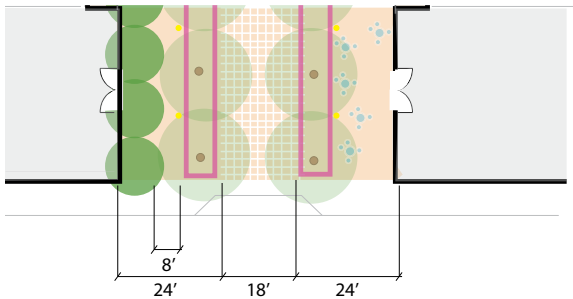
Side Street Room Concept



OUTDOOR DINING EXAMPLE



COMMERCIAL EXTENTION OPTION



8TH AVE PROPOSED CONFIGURATIONS

SIDE STREET ROOM CONFIGURATION





8TH AVE PROPOSED CONFIGURATIONS

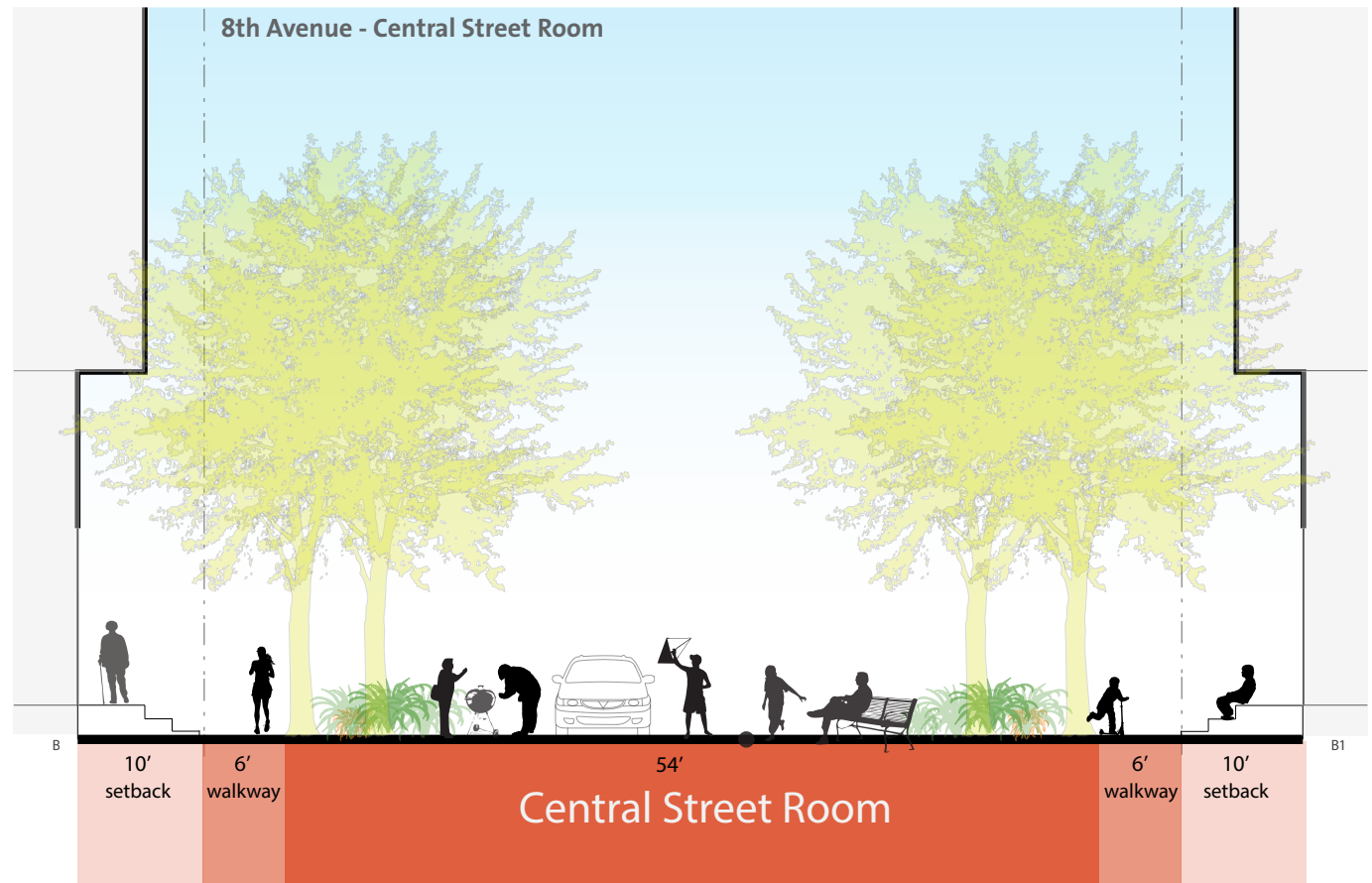
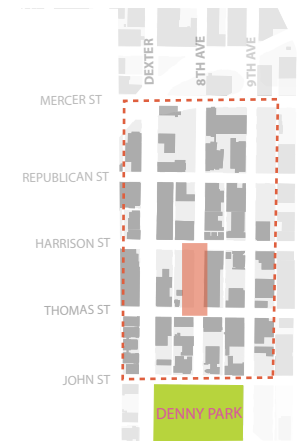
CENTRAL ROOM CONFIGURATION

The block between Thomas and Harrison has the beautiful Sweet Gum canopy, and the design of this streetscape responds to their presence. Additionally, the opportunity to develop both sides of 8th in one project affords maximum flexibility and integration in the design of the right of way.

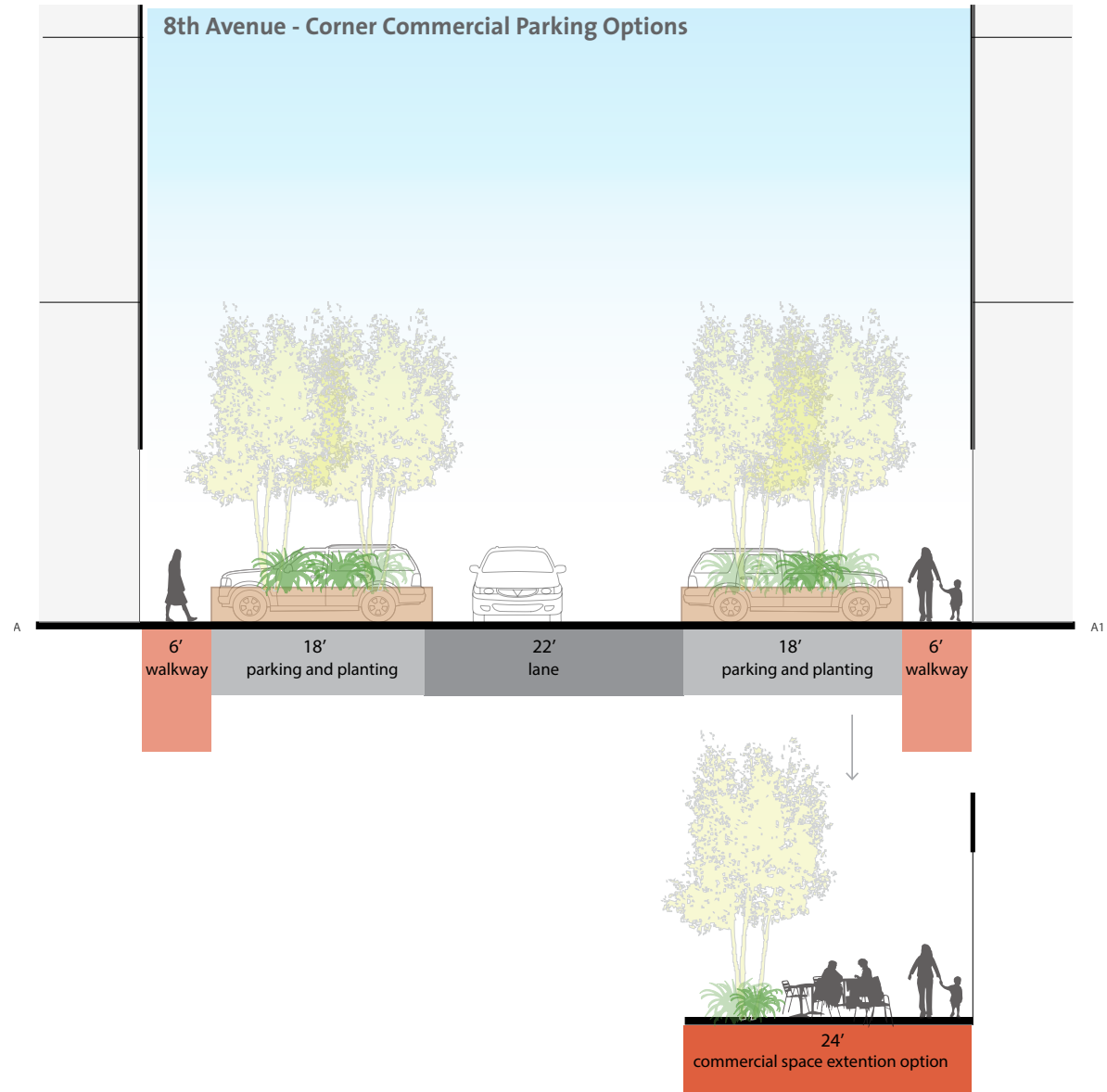
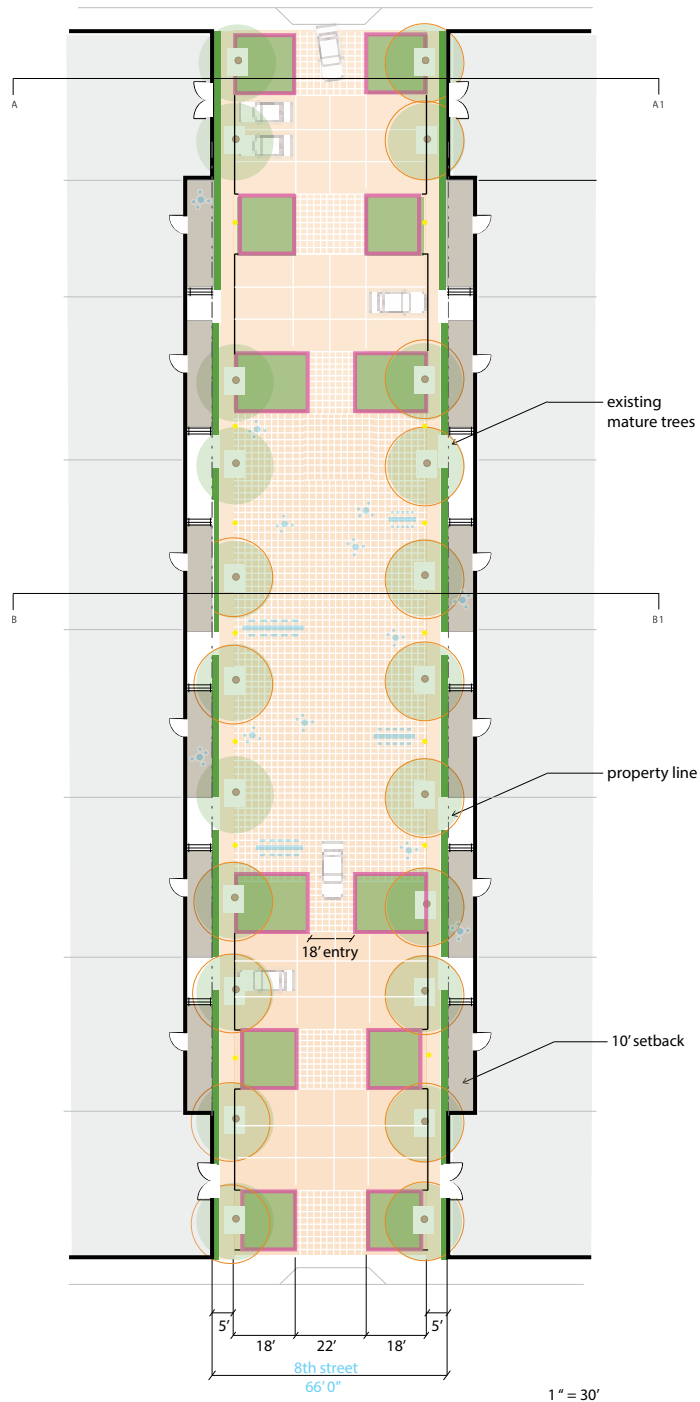
By focusing street parking in parking courts near the cross streets, the center of the block is left open as a truly shared street with many potential configurations.

New trees in this block are not needed except to keep the canopy constant; plantings would be lower in scale. This block is shown with parking near the intersections, and with a larger open space in the center of the block.

The larger space offers a variety of space and uses along the street, and would be in scale with the mature trees. The central open space can accommodate permanent and temporary street furnishings.



Central Street Room Concept



CENTRAL ROOM CONFIGURATION

Two variations of the central room configuration allow for different types of character and qualities in the street.

In the top scheme, the drive lane runs straight, down the middle of the right of way. Site elements define street rooms with dedicated programs; in this design: a neighborhood kitchen with social dining tables and community garden beds, and enclosed seating areas.

In the bottom scheme, the right of way is mostly open around a central “attractor” feature. The design does not define rooms or programs; rather, it provides flexible piazza-like space, open to the various activities that residents and visitors might bring to it.





8TH AVENUE | MATERIALS

HIGH QUALITY MATERIALS TO PROMOTE PEDESTRIAN ACTIVITY

The materials chosen for 8th Avenue should be of high quality and relatable at human scale. The intent is to create consistency throughout the shared street, to signal to cars that this is a pedestrian priority area and to be attractive for a variety of uses.



precedent example: South Lake Union

MATERIAL GUIDELINES

HARDSCAPE MATERIAL

Acceptable materials include concrete, unit pavers or hardscape of equal quality, such as granite

In street rooms and lane area, hardscape should be light and attractive -options could include small unit paving with patterning. Paving should note pedestrian priority, creating slower travel speeds for cars.

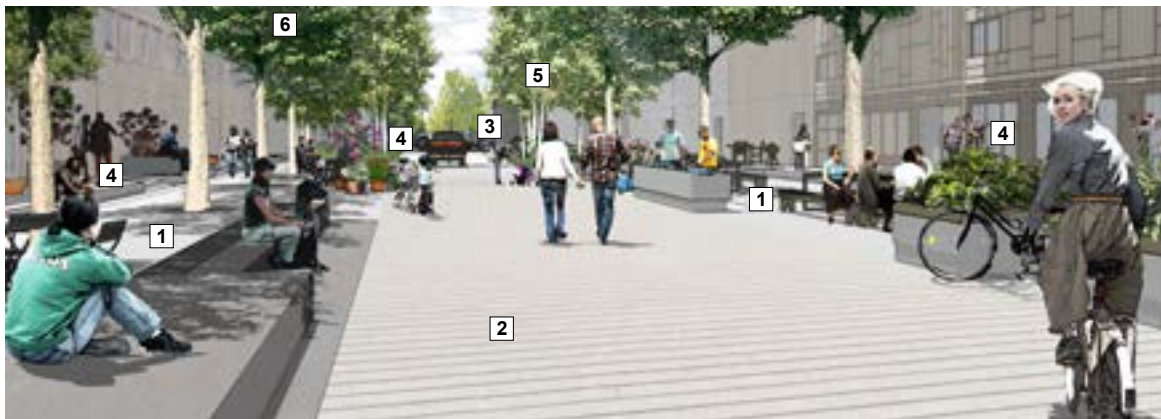
Parking areas should be consistent stamped concrete that marks parking spots without paint

LANDSCAPE MATERIAL

Landscape should incorporate the existing trees on the blocks, adding trees of the same species where needed to create a consistent canopy.

Lower buffer and stormwater plantings should be placed along the corners and throughout the blocks to add a soft greenscape. The plantings should be chosen from the City of Seattle Greenfactor planting list.

8TH AVENUE MATERIAL QUALITY



2 LANE/STREET ROOM **3** PARKING AREA



5 BUFFER / STORMWATER PLANTING



1 STREET ROOM



4 RESIDENTIAL STOOPS



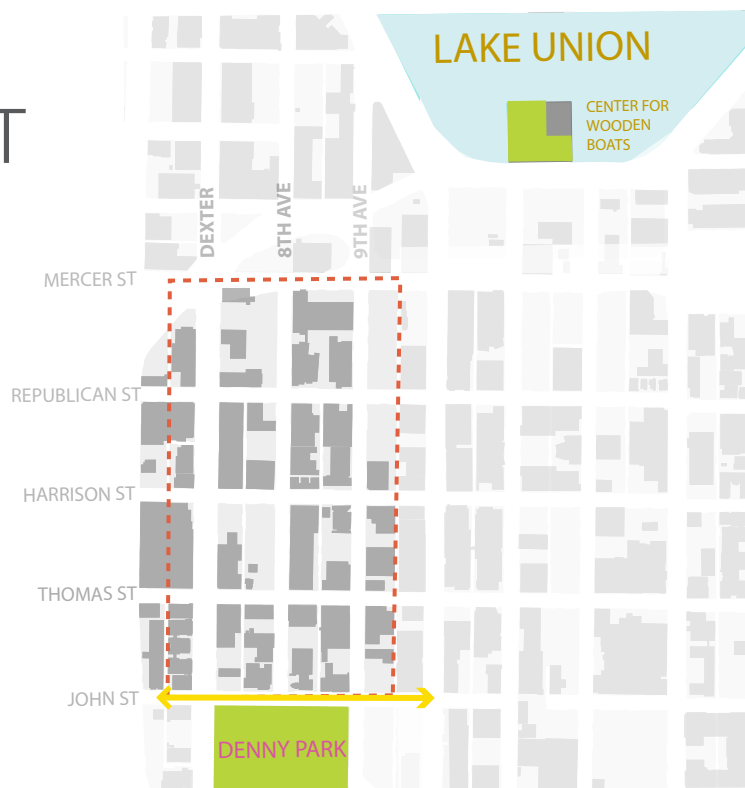
6 STREET TREES



STUDY AREA STREETSCAPE CONCEPTS

JOHN STREET CONCEPT

John Street, one of three east-west streets that will be reconnected as part of the Alaskan Way Viaduct Replacement Project, can provide an excellent walking street that connects Seattle Center and South Lake Union. The park and the churches alongside John in the project area offer quiet, attractive edges and a neighborhood feel. Because the park is along two blocks of John, the street already feels green. The angled parking that currently exists along the edge of the park is a useful function in an area that feels green without need to add more landscape to the street. The goal for John is to best extend the feel of Denny Park to the east and west, and to have the north side of the street support street trees outside of the power lines.



EXISTING CONFIGURATION + ISSUES



DESIGN INTENT

Dexter to 9th:

1-lane each way

Back-in angled parking on south side,
parallel parking on the north along park.

Other blocks:

1-lane each way

Parallel parking both sides.

Sidewalk and sparse street trees either side.

Compatibility as a Green Street per the ROW Improvement Manual

Take advantage of adjacency to Denny Park--extend the feel of the park.

It should be easy to close off the street

Parking reservoir useful; consider flexibility and better materials that make it feel like a forecourt to the park. Reconsider 10-hour parking in the neighborhood.

CHARACTERISTICS AND DESIGNATIONS

- John Street will be reconnected as part of the AWW project
- Non-arterial street; adjacent land uses include park, institutional, commercial, possible new residential
- Terminates at Seattle Center on the west, Terry Avenue North on the east at the Bungee Building
- Runs along the north edge of Denny Park between Dexter and 9th Avenue
- Along Denny Park, serves as parking reservoir with approximately 40 parking back-in angled parking spaces along the park edge.
- Identified by the SLU Framework Plan as a “Festival Street”, meaning it could be easily closed off for events.
- Two churches are across John Street from Denny Park.
- Space Needle and Pacific Science Center arches visible to the west from some vantage points.
- Overhead wires in some locations conflict with trees and limit ability to create a “green street”.



John Street - xxxx



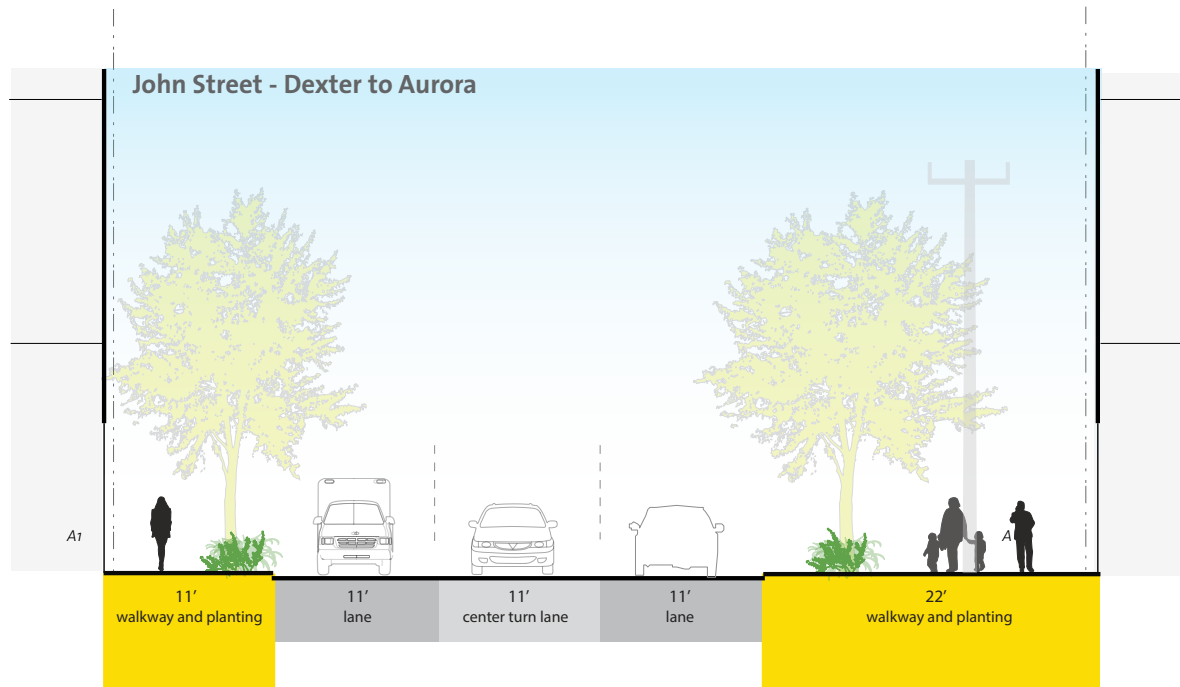
John Street -looking east along Denny Park



John Street -looking west along Denny Park

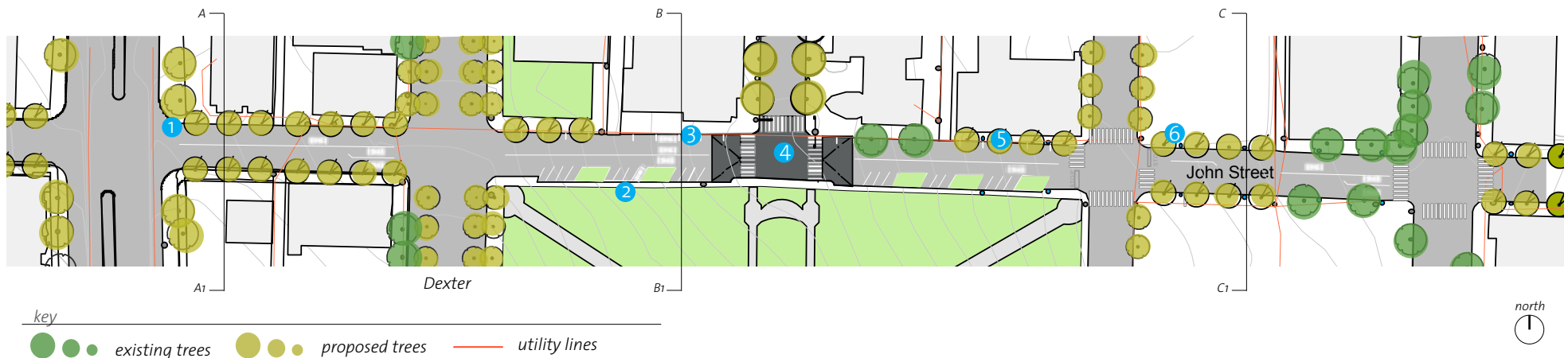
STUDY AREA STREETSCAPE CONCEPTS

JOHN STREET CONCEPT

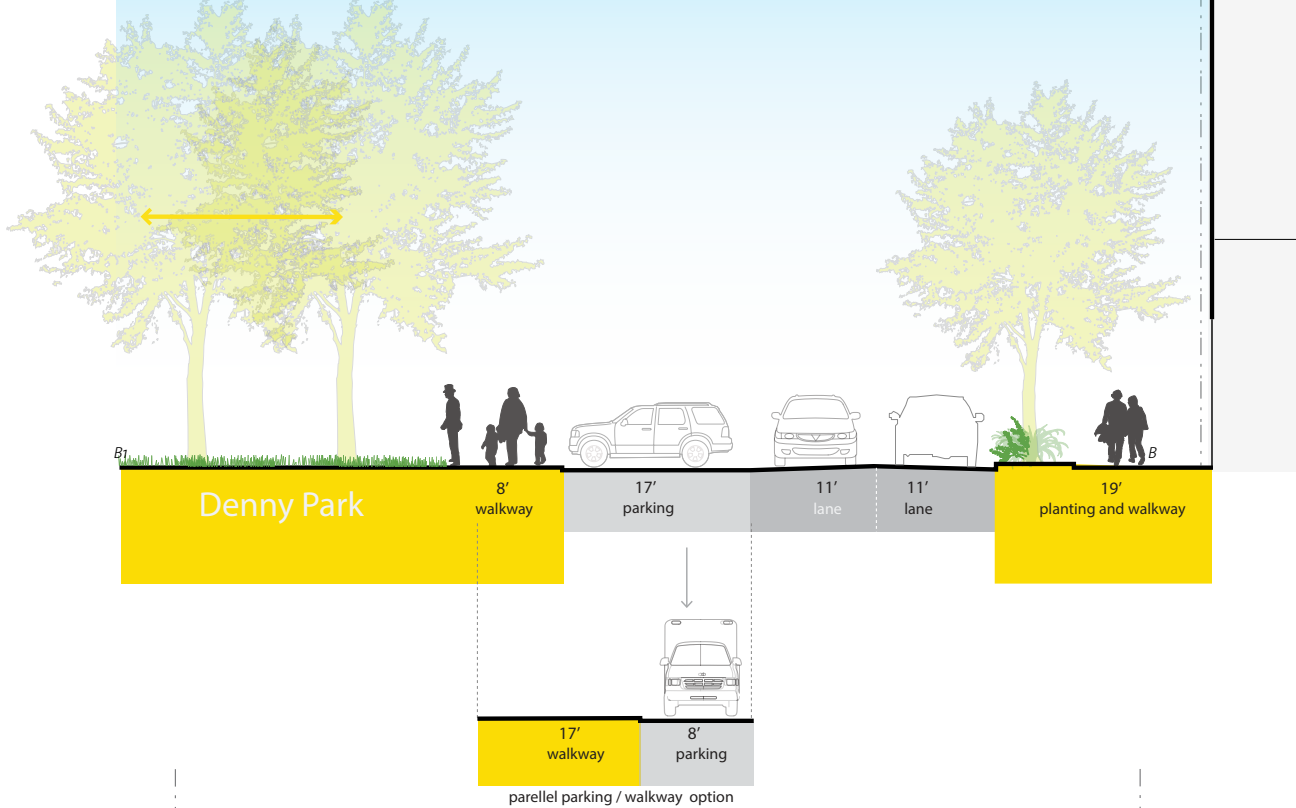


Proposed Configurations

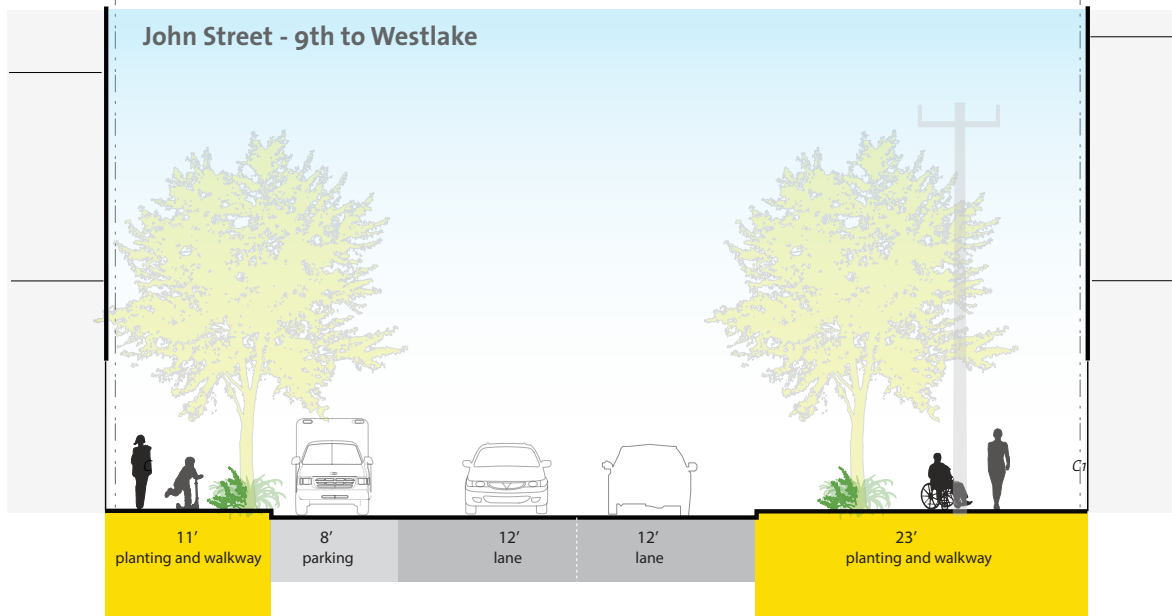
- 1 Retain south curb location, parallel parking along south curb, and 2 lanes of travel with center turn lane for this block
- 2 Retain south curb location and parking along Denny Park
- 3 Retain parallel drop off parking in front of both churches
- 4 Consider enhanced pedestrian crossing
- 5 Pull sidewalk to north lane edge unless otherwise noted
- 6 Increase area north of curb allowing for street trees



John Street - Denny Park looking west



John Street - 9th to Westlake



Aurora to Dexter

Strategy favors sunny side of street, using the same strategy proposed for Thomas Street. It allows trees to be planted if power lines remain.

Dexter to 9th

retain south curb location
one 11' travel lane in each direction
angled parking south side
retain north curb line at churches with drop-off parking
19' sidewalk/landscape elsewhere on north side

9th to Westlake

retain south curb location
one 11' travel lane in each direction
one 11' center turn lane
22' sidewalk/landscape on north side

2 “East-West Streets”

Thomas Harrison Republican

The street concept plans are intended to take advantage of opportunities that will come from the reconnection of John, Thomas and Harrison Streets as part of the SR 99/ Alaskan Way Viaduct Replacement project. South Lake Union will be reconnected for the first time in over fifty years to Seattle Center, the Uptown neighborhood and beyond. Thomas Street offers a connection as a Green Street and part of the Lake to Bay Loop all the way to Elliott Bay via the recently completed pedestrian bridge to the waterfront.

This reconnection will correct a gap in mobility for pedestrians, cyclists, vehicles and transit. These concept plans incorporate work done on related projects for these modes. The South Lake Union Mobility Plan indicates that Harrison is best suited to new transit connections, and that Thomas is favored for cyclists. The expected increase in vehicular traffic will need to be balanced with the other modes, and the street design should help in keeping traffic speeds compati-

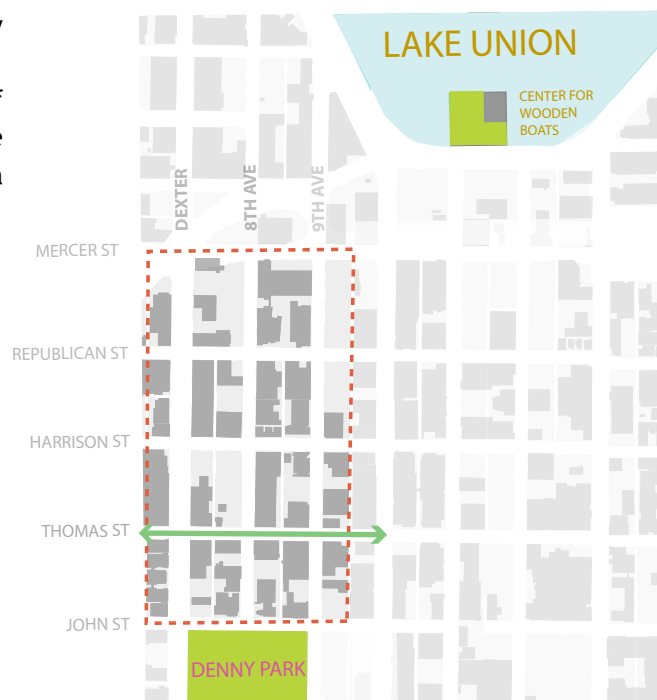
ble with pedestrian and bicycle use. For this reason, tabled intersections are recommended where the east-west streets cross the 8th Avenue North shared-use street.

These plans also build on the work done in the Thomas Street Streetscape Design, the streetscape plans for the Viaduct Replacement project, the South Lake Union Framework Plan.

STUDY AREA STREETSCAPE CONCEPTS

THOMAS STREET CONCEPT

Thomas Street's design emphasizes the north side of the street for pedestrians and green space on the sunny side of the street. Same strategy used west of Aurora--leaving south curb in place, allocating pedestrian space to the sunny side of the street. The concept plan would codify the extension of the same section east of Aurora through the project site.



EXISTING CONFIGURATION + ISSUES

1-lane each way,
Bikes ride in street
Parallel parking both sides.

DESIGN INTENT

Formalize the section of the street as designed from 5th to Aurora.

Consider higher quality materials as a green street and ways to activate the edges.

Include places to sit and other amenities
Autumn Blaze Maples being used on the Thomas Street section east of Aurora

South side trees will need to be smaller variety of maple if overhead utilities remain.

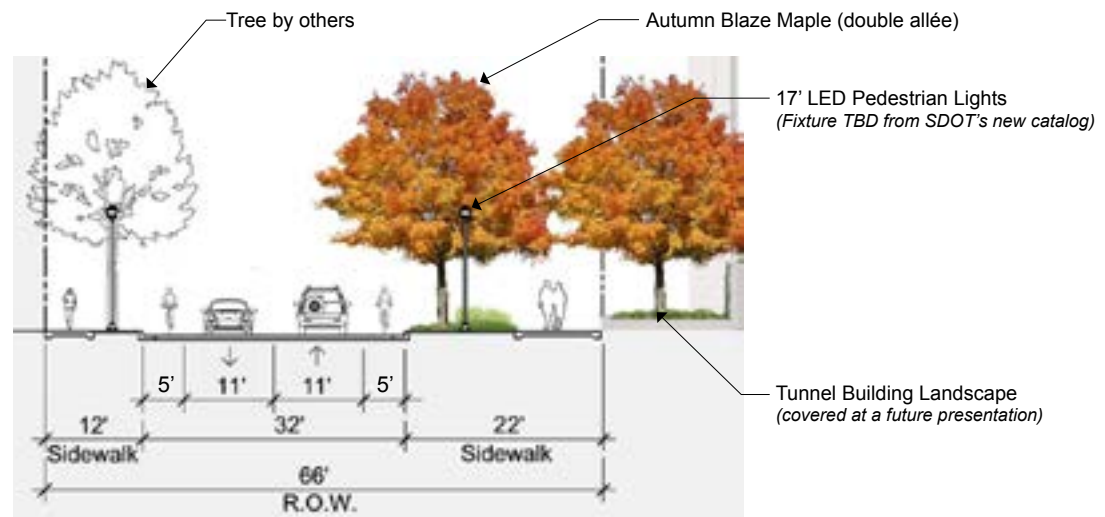
17-foot tall, LED pedestrian lights from SDOT catalog same as North Portal

CHARACTERISTICS AND DESIGNATIONS

- Will be reconnected as part of the AWW project
- Non-arterial street; adjacent land uses primarily commercial not intended for general retail sales; likely new mixed-use
- Goes through Seattle Center as a pedestrian route to the west; connects to waterfront via new pedestrian bridge; to the east, Thomas stops at Terry Ave N at Bungee building with steep topography.
- Major component of the Lake to Bay Loop
Portion of Thomas Street designed for AWW project and the Mercer West project have two lanes, bicycle lanes in either direction, retain the curb on the south side and favor green and/or pedestrian space on the north side.
- Proposed to be a bike street
- Close to on axis with the Space Needle
- Overhead wires in some locations conflict with tree and limit tree canopy and views to Space Needle.



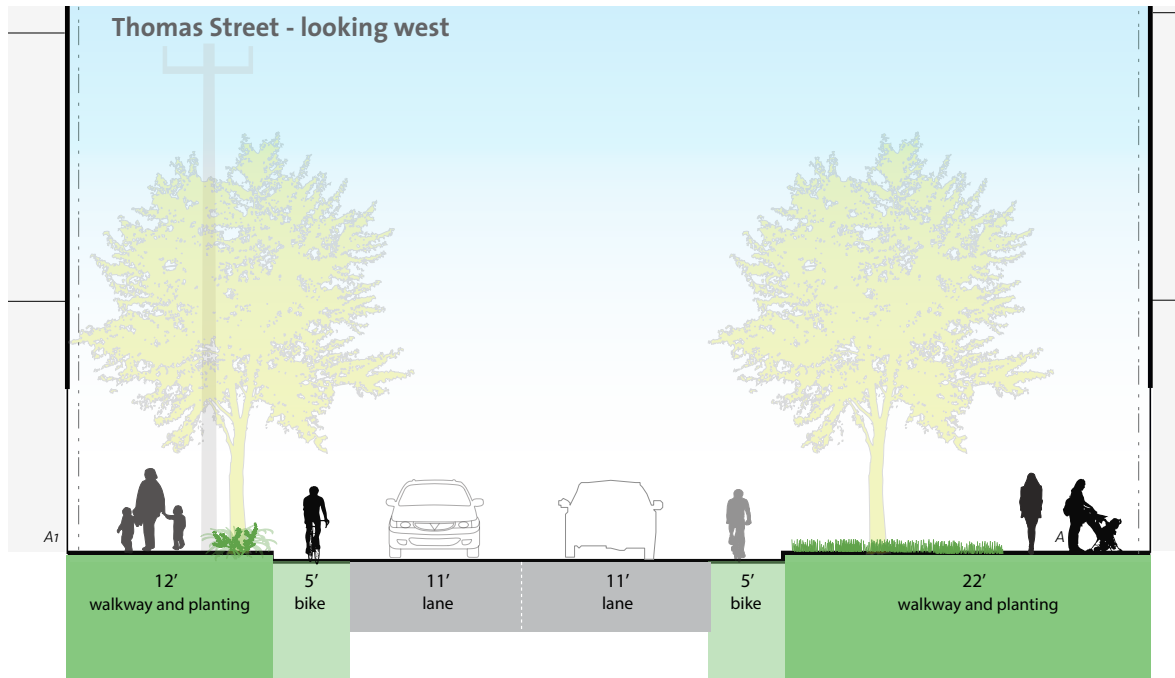
Thomas Street - at 8th looking west



Thomas Street section from North Portal Tunnel

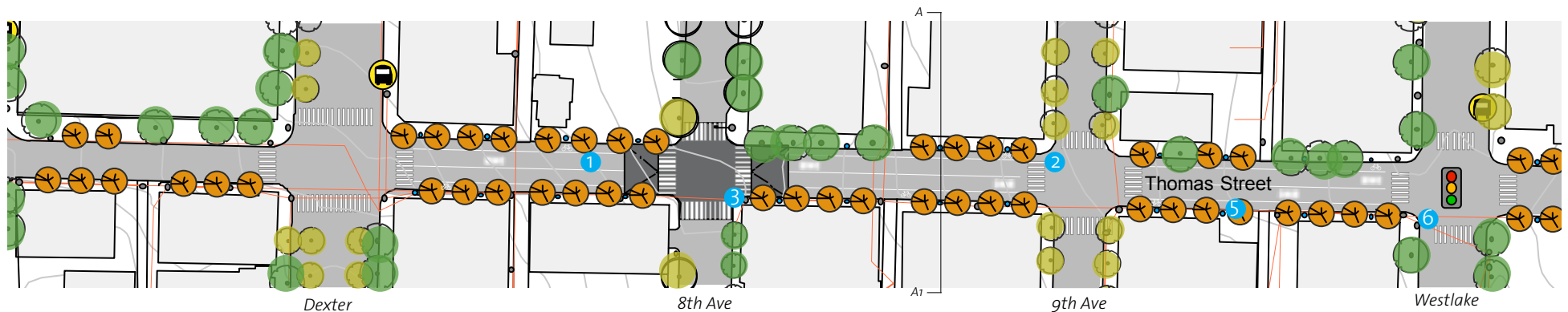
STUDY AREA STREETSCAPE CONCEPTS

THOMAS STREET CONCEPT



Proposed Configurations

- 1 1-travel lane each way
- 2 5' bike lanes each way
- 3 No parking and table intersection at 8th Ave
- 4 Pedestrian lights, 12-16' high
- 5 Autumn Blaze Maples preferred for consistency with other plans
- 6 Encourage undergrounding utilities



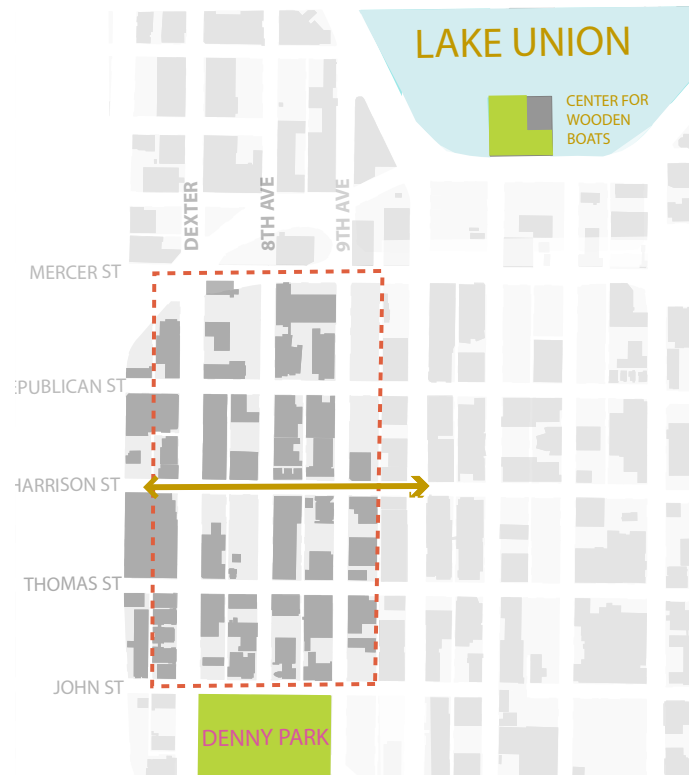
key

● existing trees ● proposed trees ● Autumn Blaze Maples — utility lines



HARRISON STREET CONCEPT

Harrison Street's design allows flexibility so that transit may be accommodated over time. The four-lane section may be used for on-street parking or for an extra travel lane for peak hour and transit if needed. Because Harrison is expected to take cars heading for SR 99, the level of traffic on Harrison will likely be the highest for the three new cross streets. Eleven foot sidewalks will include street trees and landscape zones where appropriate.



EXISTING CONFIGURATION + ISSUES

- 1-lane each way
- Parallel parking both sides
- Sidewalk and street trees either side

DESIGN INTENT

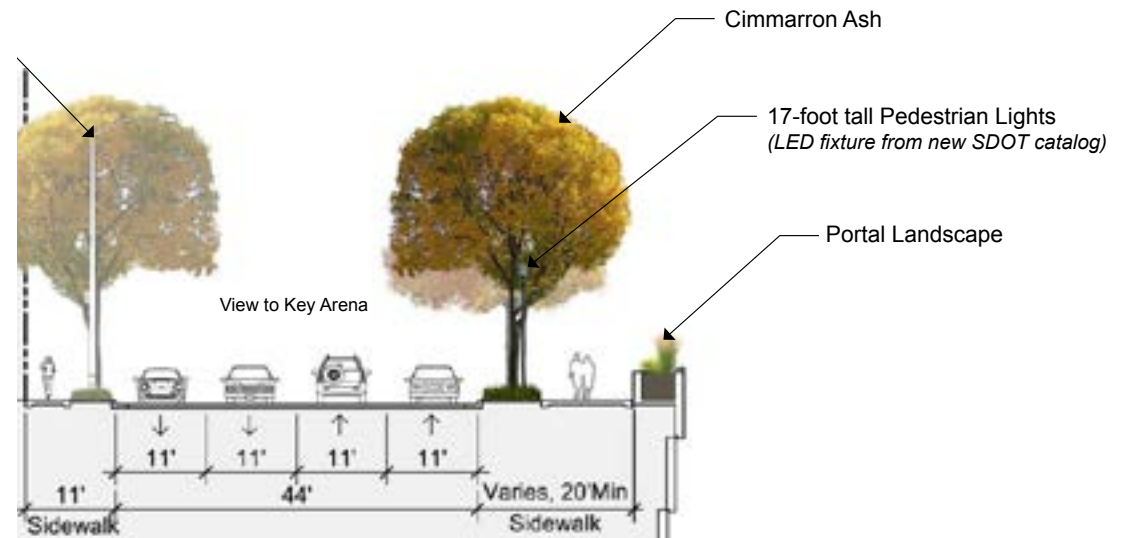
- Formalize the section of the street as designed from 5th to Aurora.
- Consider higher quality materials as a green street and ways to activate the edges
- Include places to sit and other amenities
Autumn Blaze Maples being used on the Thomas Street section east of Aurora
- South side trees will need to be smaller variety of maple if overhead utilities remain.
- 17-foot tall, LED pedestrian lights from SDOT catalog same as North Portal

CHARACTERISTICS AND DESIGNATIONS

- Will be reconnected as part of the AWW project
Harrison is currently not designated as an arterial, but is likely to be designated as a Minor Arterial after it is connected across Aurora.
- Will take significant traffic to and from SR 99
Stops at Seattle Center on the west, but will bring cars into and out of major garage in the future.
- Goes through to Fairview on the east side.
- Identified in the SLU mobility study as a new transit street once connected.
- De-emphasized for bikes because of heavier traffic and turning movements on to SR 99.
- On axis with Key Arena.



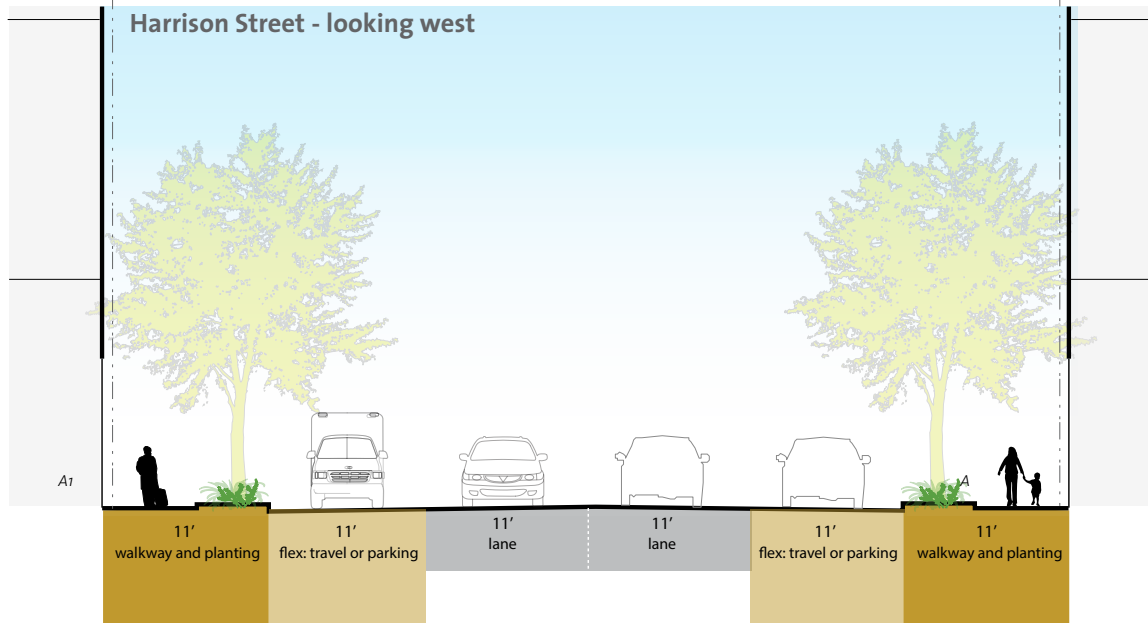
Harrison at Dexter looking west



Harrison Street - section references from North Portal project

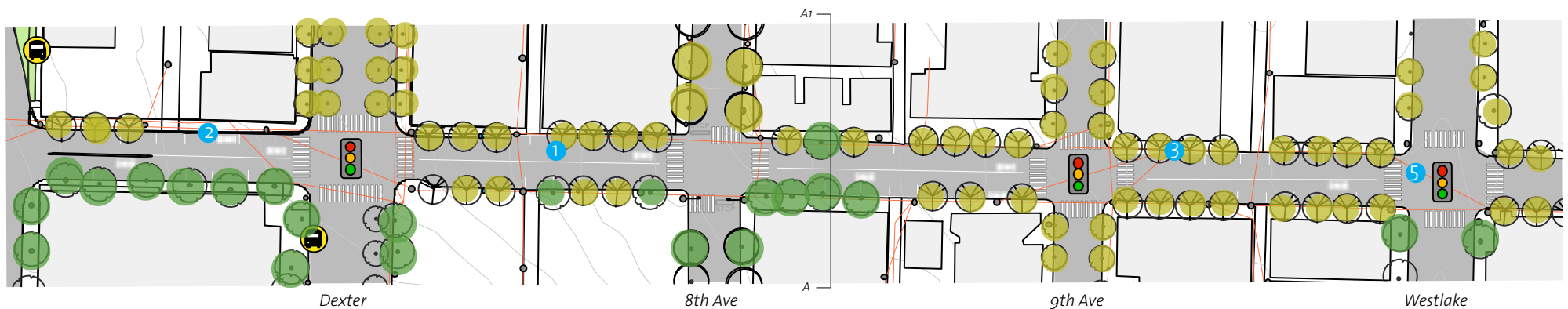
STUDY AREA STREETSCAPE CONCEPTS

HARRISON STREET CONCEPT



Proposed Configurations

- 1 1 travel lane each way at 11'
- 2 curbside areas are sized as travel lanes, but may be used as parking if not needed for levels of traffic/transit
- 3 11' sidewalk with planting area - keep existing trees where healthy and add new Cimmarron Ash trees where possible
- 4 Encourage building setbacks near transit stops
- 5 Encourage undergrounding of utilities



key

existing trees

proposed trees

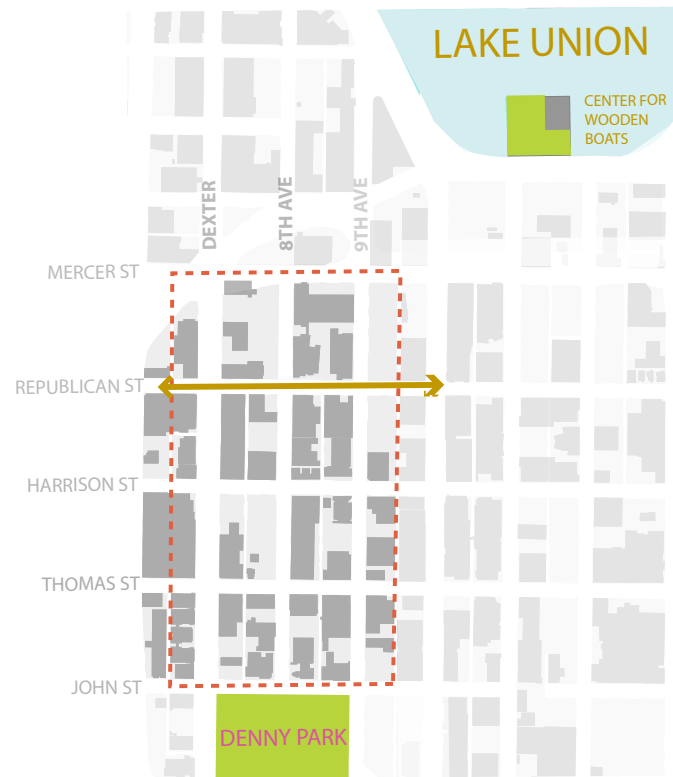
utility lines



STUDY AREA STREETSCAPE CONCEPTS

REPUBLICAN STREET CONCEPT

The South Lake Union segment of Republican Street runs from Broad Street on the west to Eastlake on the east, separated from Capital Hill by I-5. Republican will not be reconnected by the reconstruction of Aurora, but will take traffic exiting northbound SR 99 heading east. Parts of the north side of Republican have been improved with the construction of the UW Medicine buildings.



EXISTING CONFIGURATION + ISSUES

- 1-lane each way
- Bikes ride in street
- Parallel parking both sides
- Sidewalk both sides, sparse street trees

DESIGN INTENT

- Consistency with Commercial Connector Street per ROW Improvement Manual
- Pleasant neighborhood street with moderate traffic
- Extend design language of UW Medicine zone
- Encourage undergrounding of power by new development

CHARACTERISTICS AND DESIGNATIONS

- Republican Street is designated as a Minor Arterial. It will not be reconnected across Aurora.
- Will carry some traffic exiting 99 northbound Republican is the south edge of the UW Medicine buildings, and there is a transit stop for the shuttle near 8th Avenue
- The view to the west looks to and through the end of one of the Gates Foundation buildings.
- Power poles on south side will limit street trees unless utilities are undergrounded with development.
- High quality streetscape and connection to internal green spaces along the UW Medicine block will be extended with new development by UW.



Street edge along UW Medicine at shuttle stop



Republican Street - looking east



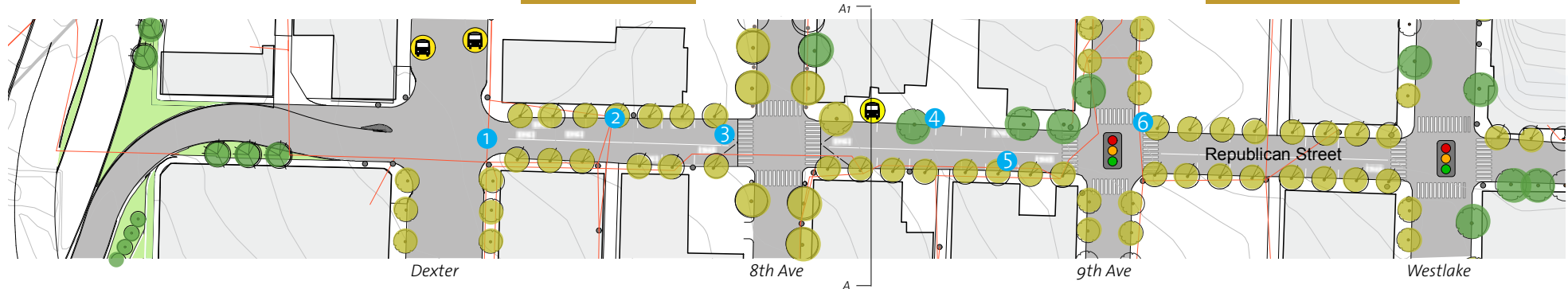
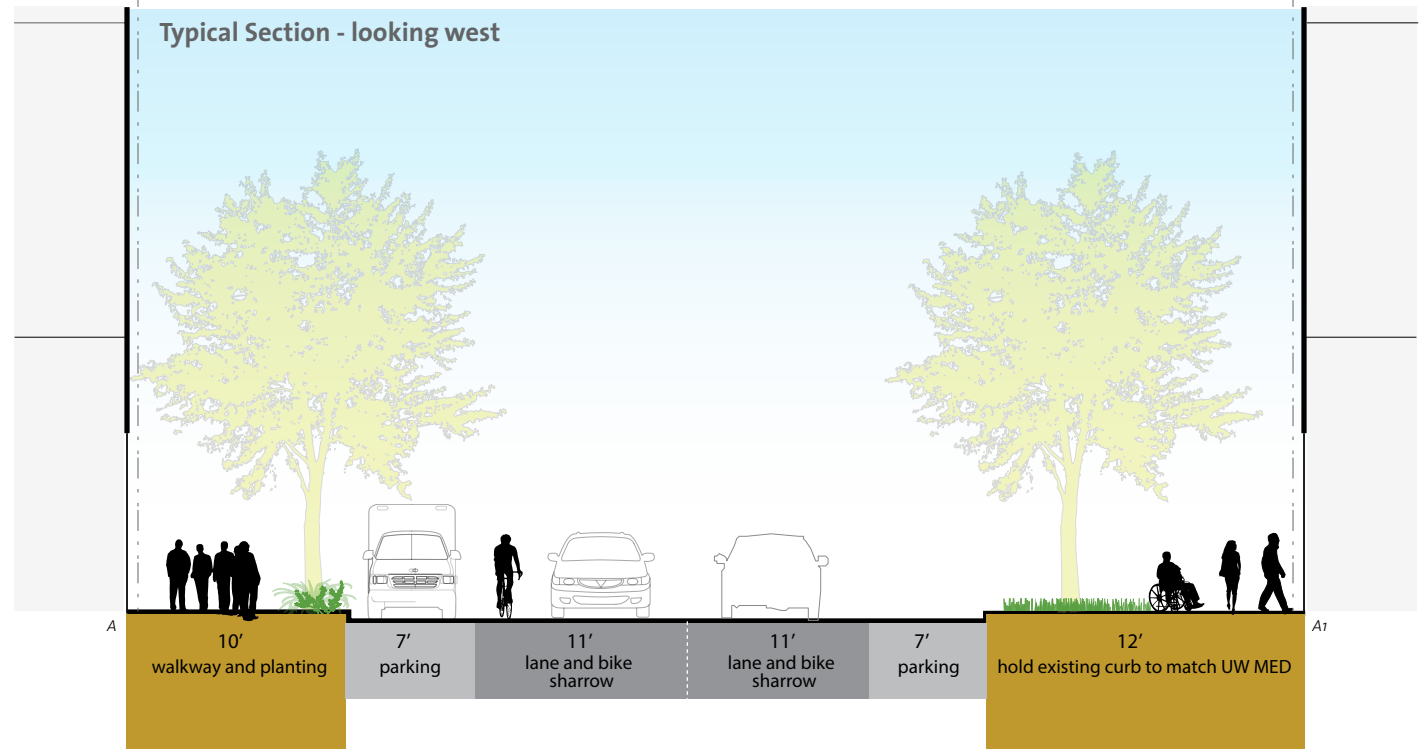
Republican Street - looking west

STUDY AREA STREETSCAPE CONCEPTS

REPUBLICAN STREET CONCEPT

Proposed Configurations

- 1 11' travel lanes; one each direction
- 2 7' parallel parking both sides
- 3 Bicycles allowed in street; consider painted sharrow signage
- 4 Keep north curb line set by UW Med development.
- 5 Extend landscape character from UW Medicine on north side of street
- 6 Encourage undergrounding of utilities with development



key

● ● ● existing trees ● ● ● proposed trees — utility lines



3 “Edge Streets”

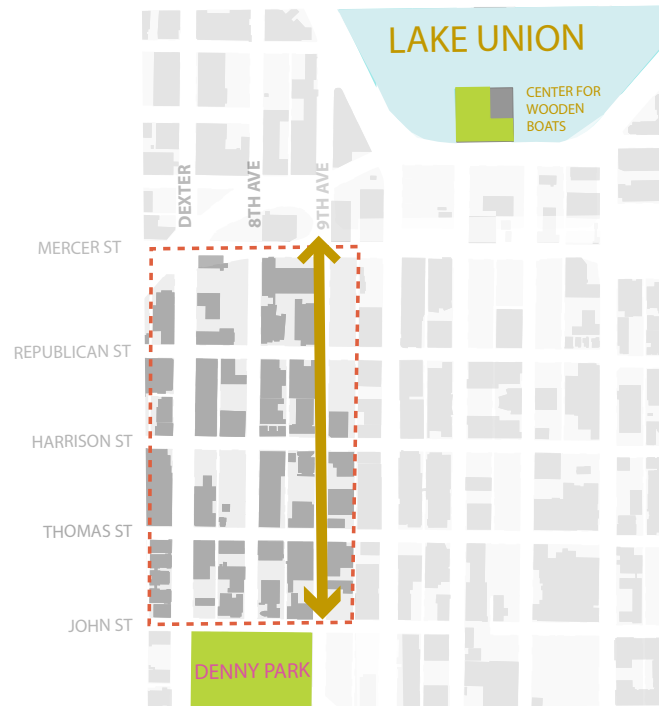
STUDY AREA STREETSCAPE CONCEPTS

9TH AND DEXTER CONCEPT

These streets are not the heart of the project area, but edges that may be included in the documentation if it helps provide clarity for future developers and benefit for the neighborhood.

9TH AVE

Ninth Avenue North is identified as a major bicycle route by the revised Seattle Bicycle Master Plan. It connects to the Cheshiahud Lake Union Loop to the north, and will be a connection to Belltown and Downtown via Bell Street. It is also designated as a Principal Arterial and a Minor Transit Street. The proposed section shows an 11-foot lane in each direction, with bike lanes on either side. A 15-foot zone on either side provides a walk zone and an option for plantings or parallel parking.



EXISTING CONFIGURATION + ISSUES

- 1-lane each way
- Bike lanes both directions
- Parallel parking both sides
- Sidewalk both sides.

DESIGN INTENT

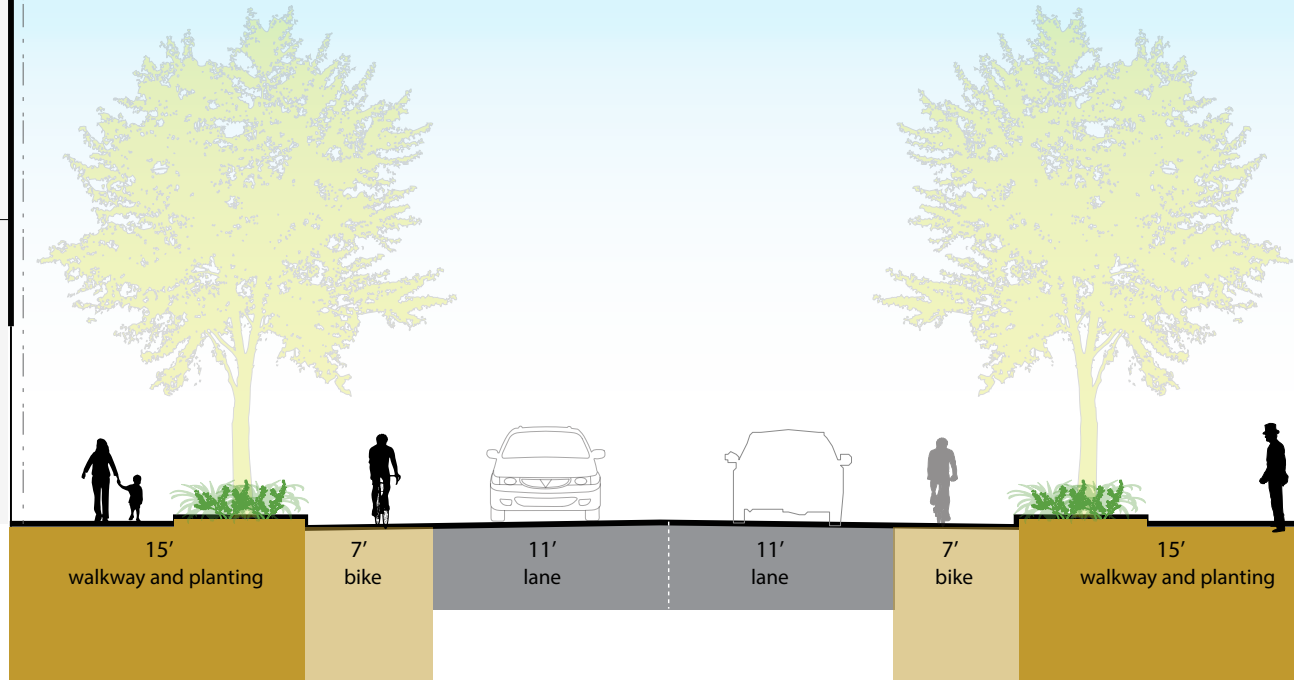
Compatibility as a Green Street per the ROW Improvement Manual

Take advantage of adjacency to Denny Park-- extend the feel of the park.

It should be easy to close off the street

Parking reservoir useful; consider flexibility and better materials that make it feel like a forecourt to the park. Reconsider 10-hour parking in the neighborhood.

9th Avenue - proposed section looking north



PROPOSED CONFIGURATION

- 1-lane each way
- Bike lanes in both directions
- Options for parking vs. landscape

CHARACTERISTICS AND DESIGNATIONS

9th is designated as a Principal Arterial and a Minor Transit Street.

New mixed-use and institutional development has been completed recently, and more is under construction. Further development is expected.

Street trees primarily on west side, tall power lines on east side



9th Avenue - looking north along Veer Lofts

STUDY AREA STREETSCAPE CONCEPTS

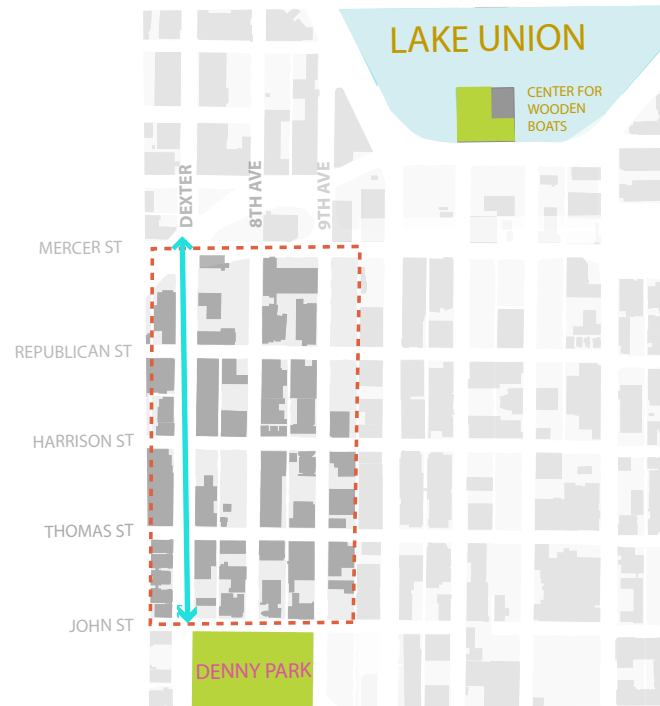
9TH AND DEXTER CONCEPT

DEXTER

Dexter is of particular interest because of its untapped potential, its unusual width, and its role as a significant piece of the city's cycling infrastructure. This concept proposed a separated cycle track to run along the the length of the street.



View of Dexter Avenue at Harrison

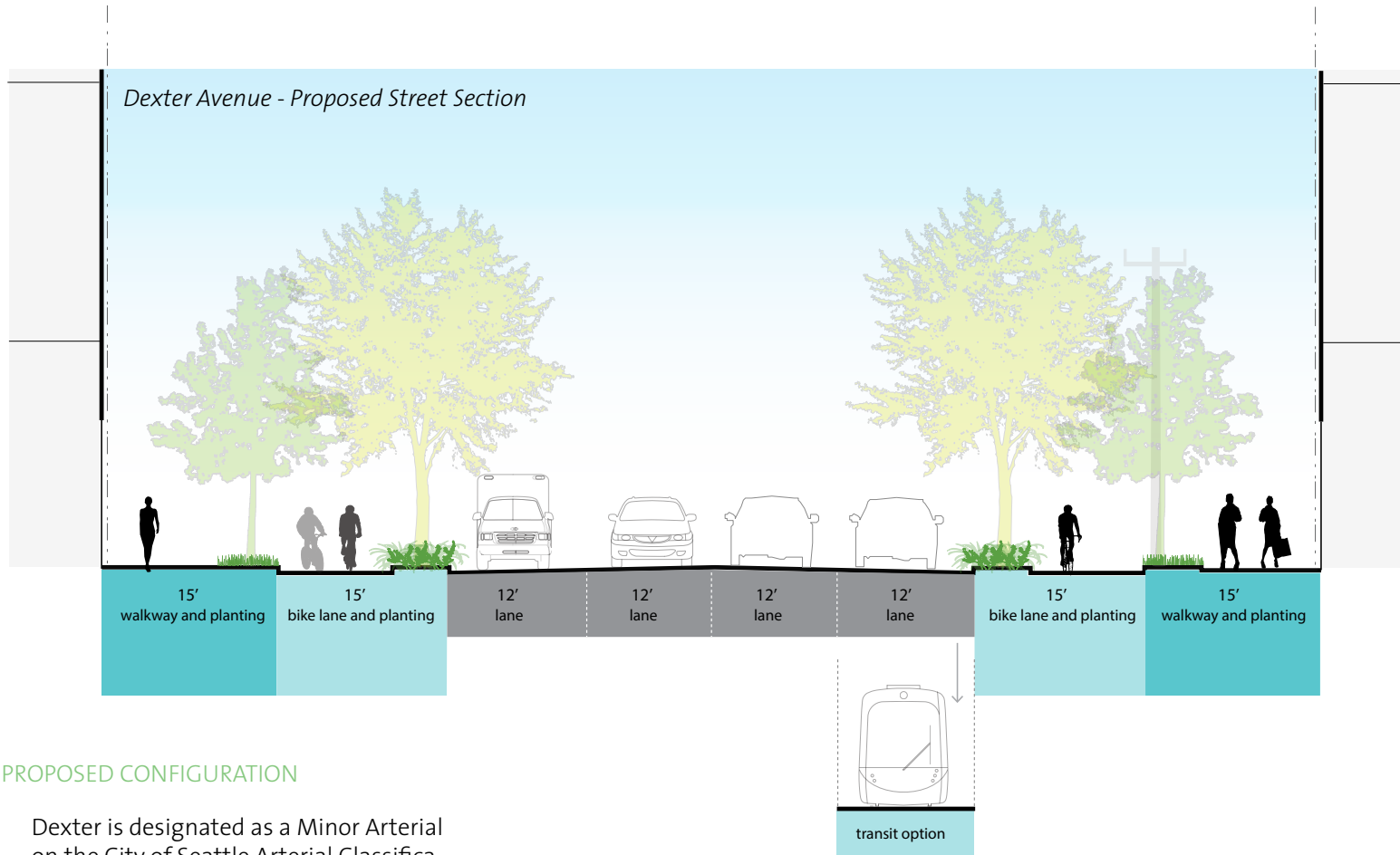


EXISTING CONFIGURATION + ISSUES

- 2-lanes each way
- Parallel parking both sides
- Sidewalk on both sides, street trees spotty
- Utility lines and cobra-head lighting

DESIGN INTENT

- Boulevard with excellent bicycle facilities
- Comfortable pedestrian crossing east to west
- Transit stop amenities



PROPOSED CONFIGURATION

Dexter is designated as a Minor Arterial on the City of Seattle Arterial Classifications Map, and an On-Street Urban Trail in the Transportation Strategic Plan Bicycle Classification Map, and a Major Transit Street on the Transit Classification Map

2-lanes each way

Parallel parking both sides

Sidewalk on both sides, some street trees

Utility lines and cobra-head lighting

CHARACTERISTICS AND DESIGNATIONS

Dexter is designated as a Minor Arterial on the City of Seattle Arterial Classifications Map, and an On-Street Urban Trail in the Transportation Strategic Plan Bicycle Classification Map, and a Major Transit Street on the Transit Classification Map



Dexter Avenue - existing conditions



III. Streetscape Design Elements

Intersections + Midblock Uses
Cycle Tracks

STREETSCAPE DESIGN ELEMENTS

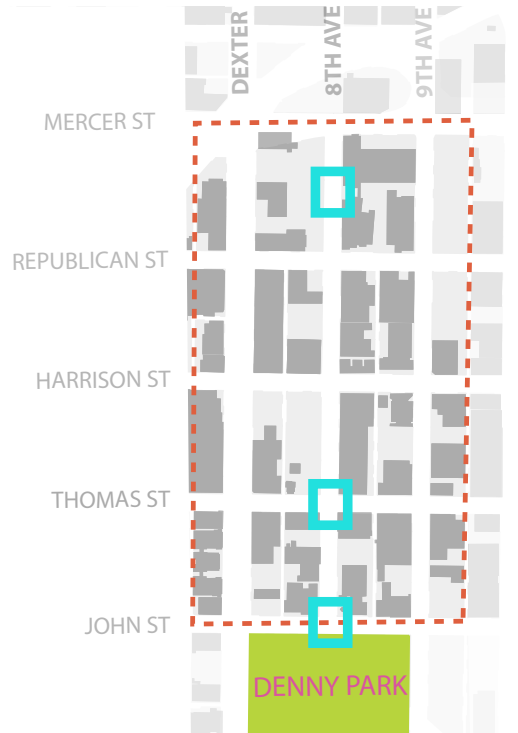
INTERSECTIONS AND MIDBLOCK USES

Intersection design along 8th Avenue should be considered in terms of the potential shared-use function of 8th. There are different intersection conditions along 8th, and three places may merit special treatment..

The numbered locations on the graphic at right show possible locations for pedestrian-friendly raised “table” style intersections. A gentle rise from the east-west cross streets to 8th Avenue would prioritize pedestrians at these locations.

A tabled intersection at 8th and John would highlight the connection to the park and set the tone for 8th Avenue, but development may not occur adjacent to this intersection. If a tabled intersection is used at Thomas Street, it would need to be considered in terms of the bicycle function and engineered to be bicycle-friendly. At UW Medicine, a tabled intersection would facilitate movement of people and material between UW buildings.

In lieu of tabled intersections, pavement treatment could highlight the pedestrian function along 8th Avenue.



Example residential street table intersection - New Haven, CT



8th Avenue at Thomas Street



8th Ave midblock at the UW Medical Center

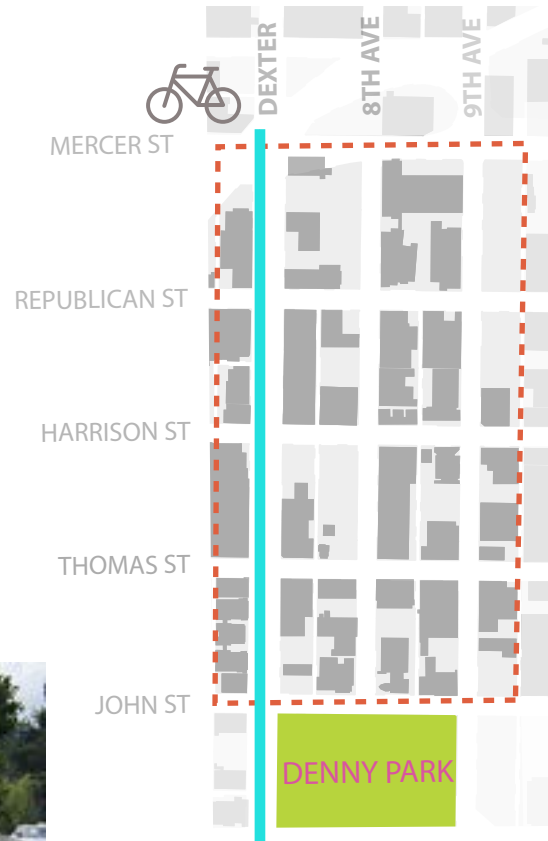
STREETSCAPE DESIGN ELEMENTS

CYCLE TRACKS

Given that cycle tracks are under consideration south of Denny connecting to Dexter, it may be desirable to look at the possibility of similar treatment for cyclists along the portion of Dexter along the project area. Presumably, design of any cycle tracks would be consistent with those under consideration south of Denny. Along Dexter, it will be important to design for safe pedestrian crossing of any cycle facility, and the incorporation of transit stops on Dexter.



Example Cycle Track - Botaga



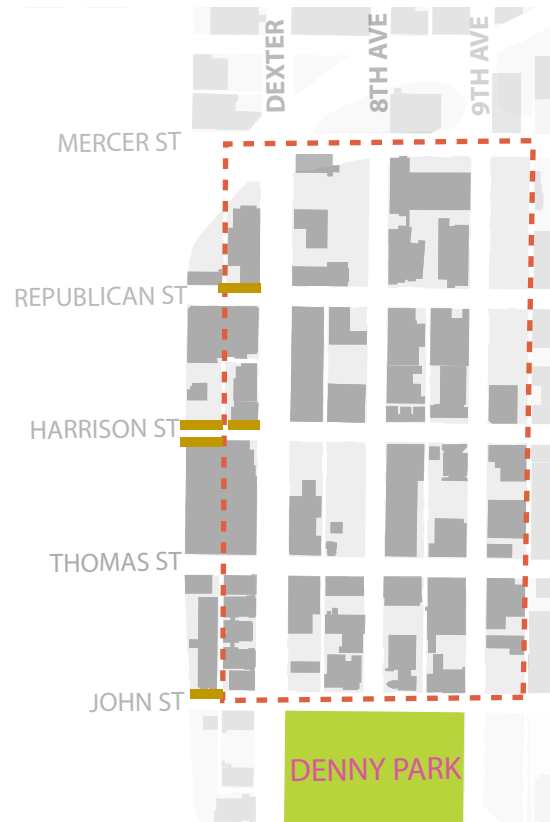
Example Cycle Track

APPENDIX

BUS LAYOVER POSSIBILITIES

We have reviewed the project area and the North Downtown Seattle Bus Layover Project Phase II, dated June 2009. From a land use standpoint, the neighborhood is better suited for bus layover space in the near term than it will be as relatively dense development occurs. The competition for space in the streets of the project area will make it increasingly difficult to find spaces for bus layover.

The report suggested locations along Republican and John Streets. On these streets, the areas with least impact on land uses and the pedestrian realm are between Aurora and Dexter Avenue. There are several blank facades along those blocks so the layover spaces would not conflict with front doors and visibility, but there are often service access locations that would limit layover space. One possibility is layover space along Harrison Street. This would work until such time that Harrison needs all four lanes dedicated to vehicle movement. Dexter Avenue is another possibility for near and potentially longer term.



Harrison Street may have some opportunities for bus layover as an interim solution where there are no conflicts with land use or existing curb cuts.



The block between Aurora and Dexter has several long facades with little pedestrian access and may be best suited for near to mid-term layover space.

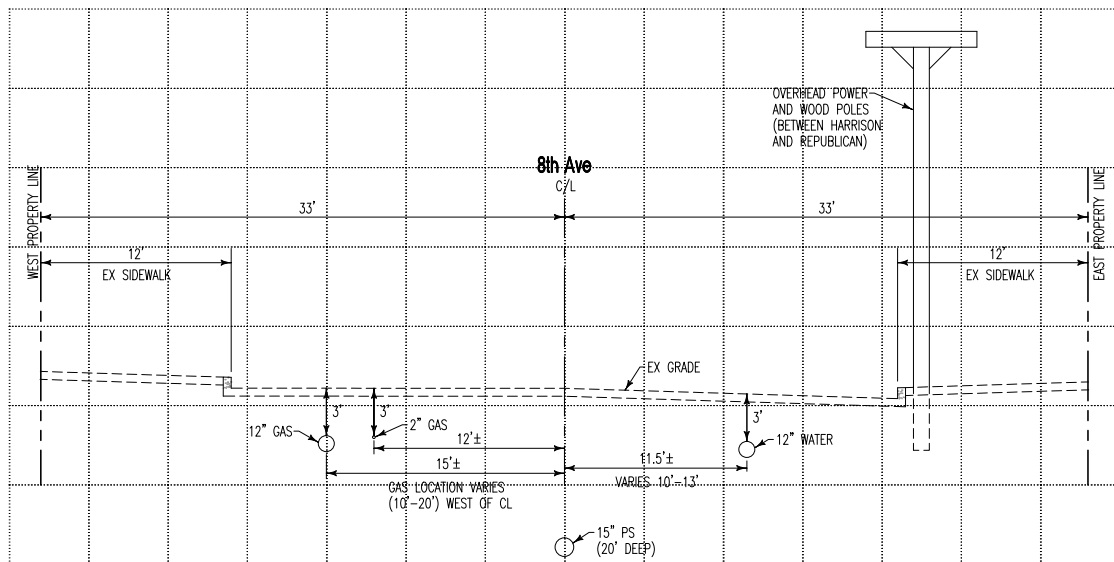


APPENDIX

CIVIL ISSUES

Coughlin Porter Lundeen has advised the team on civil issues in the project area. They are actively involved in multiple projects in the project area and know the issues well. We are also aware that Seattle City Light does not have plans to underground the 26kV lines in the area. However, developers may underground the utilities. .

COUGHLIN PORTER LUNDEEN
STRUCTURAL · CIVIL · SEISMIC ENGINEERING



Scale: 1"=5'
Typical Existing 8th Avenue Section
(Between John and Republican)

Project: South Lake Union - 8th Avenue		Designed By: SSN	Date: 11/21/12
Project No.:	Client: Weinstein A U	Checked By: SMR	Sheet: 1 of 1
413 PINE STREET · SUITE 300 · SEATTLE, WA 98101 · P: 206/343-0460 · F: 206/343-5691		www.cplinc.com	

PROJECT RECORD

DATE:	11/28/12		
TO:	Lesley Bain	FROM:	Coughlin Porter Lundeen
COMPANY:	Weinstein AIU	PROJECT:	8 th Avenue design
CPL PROJECT #:			

Utilities

A typical cross section of 8th Ave between John and republican is attached to this memorandum. Utility locations vary per block, but typically there is a 15-inch combined sewer that runs down the centerline of the street. This line is roughly 20-feet deep and serves as both the sewer and storm collection point down 8th. On the west side of the street there are several gas lines. These lines are roughly 3-feet deep and vary between 10-20 feet west of the centerline. On the east side of the street there is a 12-inch water main. This line is 3-feet deep and varies between 10-13 feet east of the centerline. There are no overhead lines except for local power to street lighting on the blocks between John and Harrison. The block between Harrison and Republican has overhead 26KV electrical lines that run along the curb line on the east side of the street.

Sewer/Storm:

8th Avenue has a 15-inch combined sewer that runs from south to north down the centerline of the street. The main is roughly 20-feet deep as it runs down 8th. Any street work that replaces or creates over 10,000sf of impervious area will trigger detention requirements in the right of way. Every 10,000sf of new or replaced impervious area requires 700cf of detention. This detention volume can be offset by using GSI such as rain gardens or porous pavement to mitigate runoff rates. Water quality treatment is not required in this area because it drains to a combined sewer.

Water:

A water main runs down the east side of 8th Avenue. The main is 10-13 feet east of the street centerline and sits roughly 3-feet below ground. If the curb on 8th is moved further out into the street it could sit relatively close to this water main. Curb placement and drainage structures on the east side of 8th will require careful coordination with this water main.

Overhead Lines:

The lighting down 8th Avenue is powered by overhead lines from John Street to Harrison Street. Overhead power to the lighting is the only overhead utility for these two blocks. While undergrounding overhead power to lights we typically see a requirement to run 2-2" and 2-3" conduits down each side of the street. For a residential street, with no plans for future intersection signalizations, this requirement may be reduced to 2-2" conduits. One conduit would feed power to the lights and the other would serve as a backup. The existing poles appear old and they may not serve the required lighting for the road improvements so new light poles may also be required.

The block between Harrison Street and Republican Street has overhead 26kv electrical lines on the east side of the street. These lines were recently undergrounded north of Republican with an underground duct bank. That duct bank was installed three to five feet below the road surface and consisted of 2-2", 2-3", and 10-5" conduits. The duct bank was roughly 1'-7" wide and 4'-0" high. It's likely that the overhead lines on 8th could be undergrounded with a new duct bank similar in size. Typically SCL requires at least one new 8X18 vaults at each corner of a block when undergrounding overhead power. In addition to installing the new duct bank, several new vaults would be required at the corner of 8th and Republican and 8th and Harrison.

Gas Lines:

A local 2" line and a 12" high pressure gas line run down the west side of 8th Avenue. Between John and Harrison the 2" gas line runs typically 12-feet west of the centerline and the 12" gas line runs typically 15-feet west of the centerline. The lines move further west between Harrison and Republican and typically run between 15-20 feet west of the centerline. Both gas lines are roughly 3-feet deep so these relatively shallow lines may interfere with future curb placement and rain garden installation.

Green Stormwater Infrastructure (GSI)

The South Lake Union Urban Design Framework released in 2010, classifies 8th Avenue as a woonerf street. The design framework goes on to define a woonerf as a street that may act as a linear open space, utilizing ROW for active or agricultural uses like P-Patches. 8th Avenue is also classified as a street suitable for infiltration facilities. Green stormwater infrastructure used on typical streets that allow infiltration includes rain gardens, porous sidewalk pavement, and new tree planting. With 8th Avenue being an active agricultural space with limited car access we are presented with the opportunity to explore some other GSI items that aren't typically used in streets. Those items are dispersion, porous pavement in the roadway, and cistern reuse.

Sheet Flow Dispersion:

Up to 20-feet of impervious area can be fully dispersed through a 10-foot vegetated buffer. Typical Seattle sidewalks don't have large enough planters to provide full dispersion, but 8th Avenue may provide a unique opportunity to use this GSI element. Dispersion would be a good candidate to mitigate sidewalks that are near locations where rain gardens can't be installed. The east side of 8th Avenue has a relatively shallow water main that may interfere with rain garden installation. This makes dispersion more desirable in that area.

Porous Pavement:

Currently the City of Seattle has only approved porous concrete sidewalks for use as GSI. Porous pavement is not typically approved for roadways because of concerns for long term reliability under traffic loading. With 8th Avenues limited vehicle traffic we have the opportunity to explore using porous pavements in the sidewalk and roadway. Pavement systems that could be used in the roadway include grasspave, porous pavers, and porous concrete. Porous pavement can collect runoff from up to three times the area of the facility. This presents the opportunity to sheet flow or direct runoff in runnels from typical impervious areas over to porous pavement pockets.

Cisterns:

If 8th Avenue is to be used for active agriculture such as a P-Patch application, small cisterns might be useful for irrigation needs. An easy way to collect water and direct it to a cistern is to collect water from canopies along the sidewalk. This application would allow for above ground cisterns and wouldn't require a pump. The cisterns could be equipped with an overflow that directs water through a runnel or sheet flows to porous pavement.