

SR 520 – Portage Bay Bridge & Roanoke Lid Project

Seattle Design Commission

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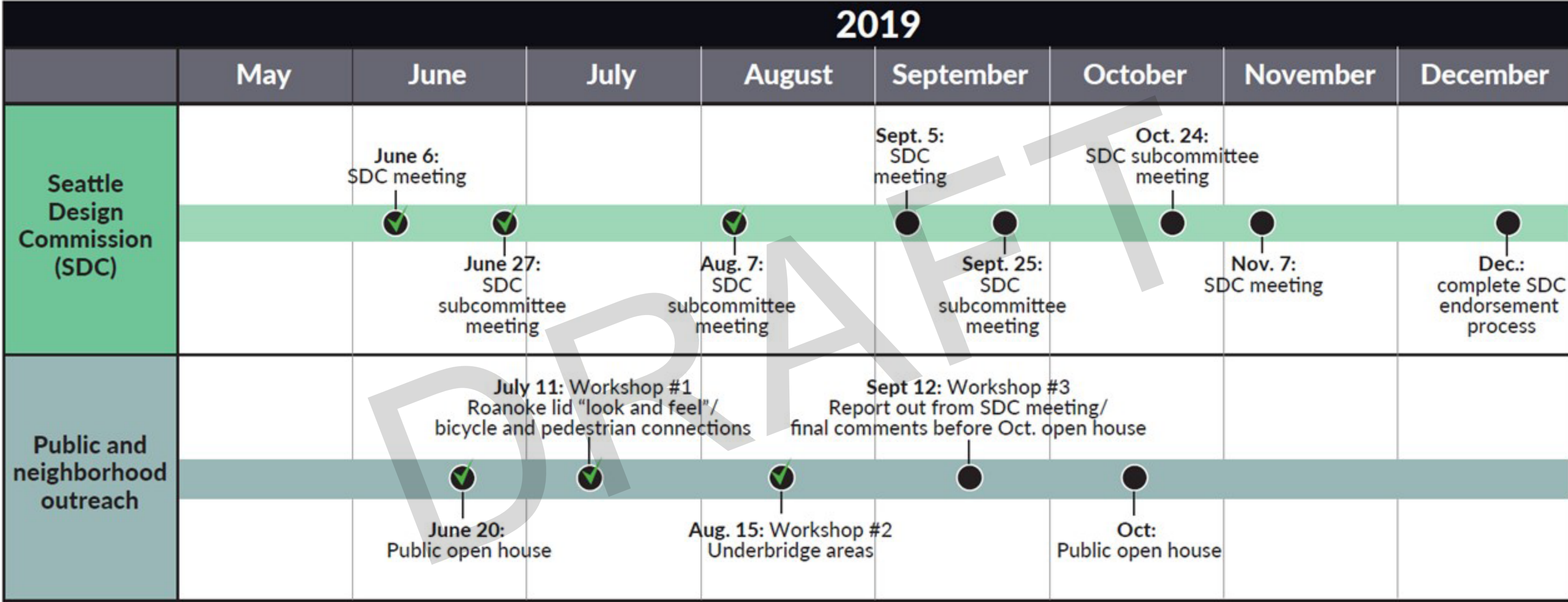
Sept. 5, 2019

Presentation Outline

- Welcome, Introductions and Updates
 - Recap of recent public outreach
- Bill Dawson Trail under bridge area
- Portage Bay Bridge
- Boyer under bridge area
- Roanoke lid area



Schedule Update



- NOTE:**
- Ongoing bi-weekly coordination meetings with SDOT, Parks, and OPCD
 - Ongoing SDC subcommittee coordination during throughout 2020.

Community Stakeholder Workshop update

Public open houses

- ✓ June 2019 – kicked off outreach process
- October 2019 – report back on feedback received through workshops and online open house

Community Stakeholder Workshops (CSW)

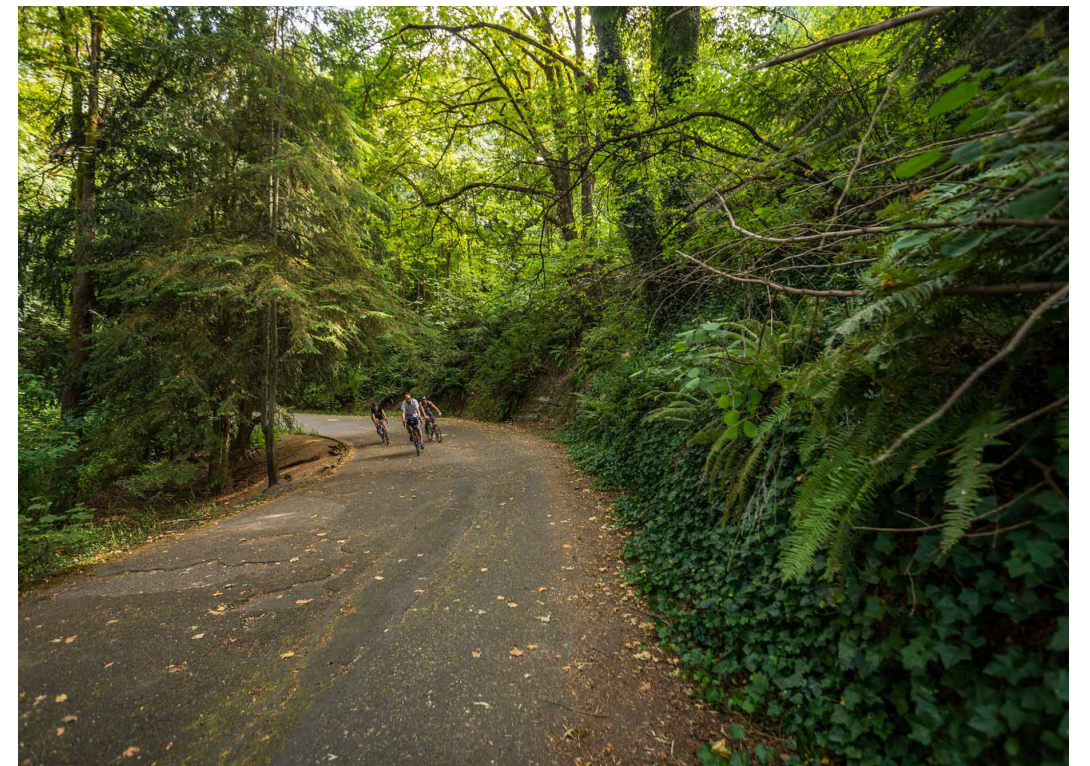
- ✓ CSW #1: Approx. 45 participants
 - Roanoke lid area
 - Bicycle and pedestrian connections
- ✓ CSW #2: Approx. 24 participants
 - Boyer area
 - Bill Dawson Trail area
- CSW #3 (Sept. 12)
 - Report out on feedback received prior to October open house

Online open house (ongoing through October)



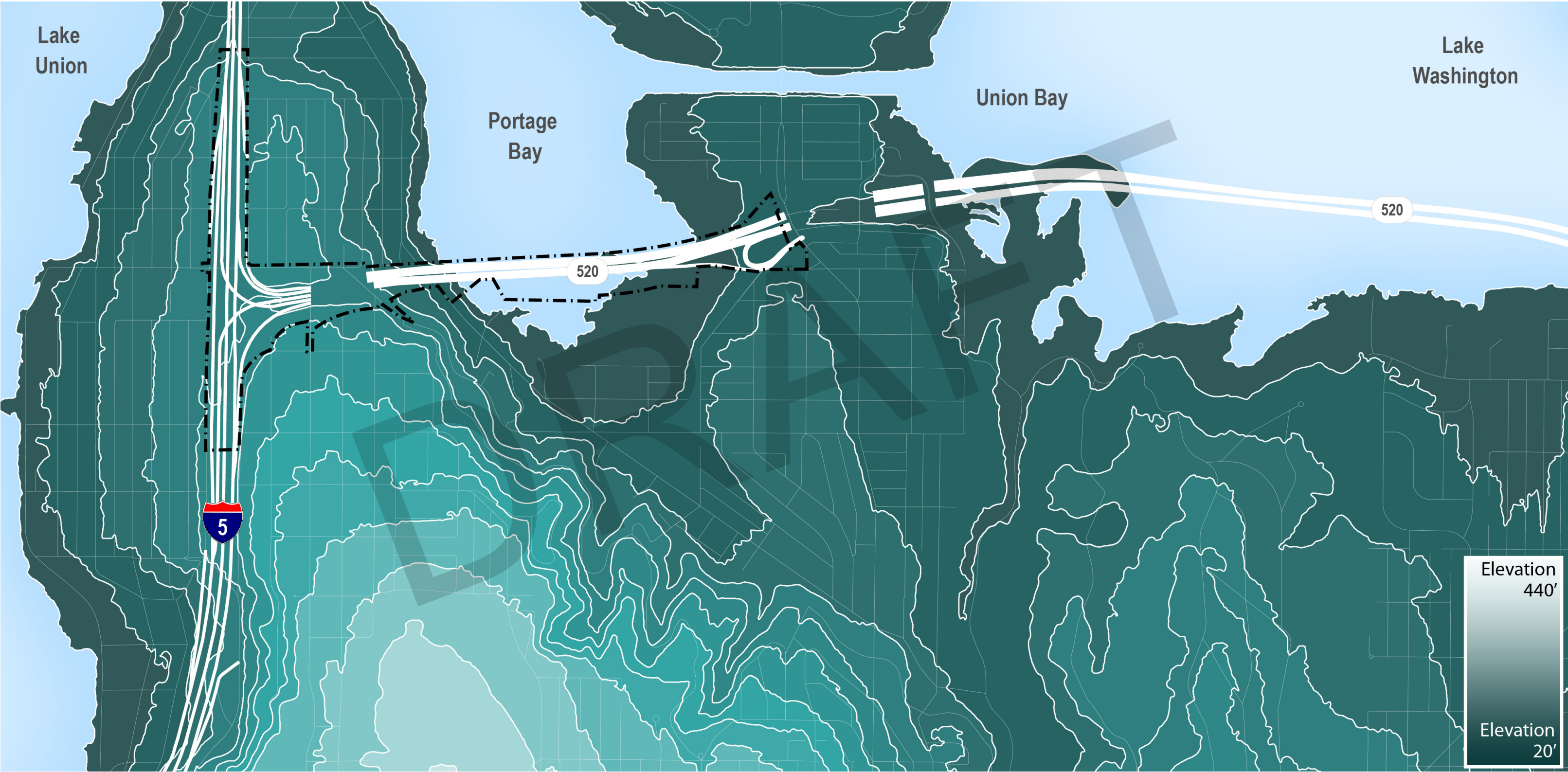
Vision: Nature Meets City

- Practical Solutions
- Sustainability
- Balance Aesthetics, Sense of Speed, and Functionality
- User Experience

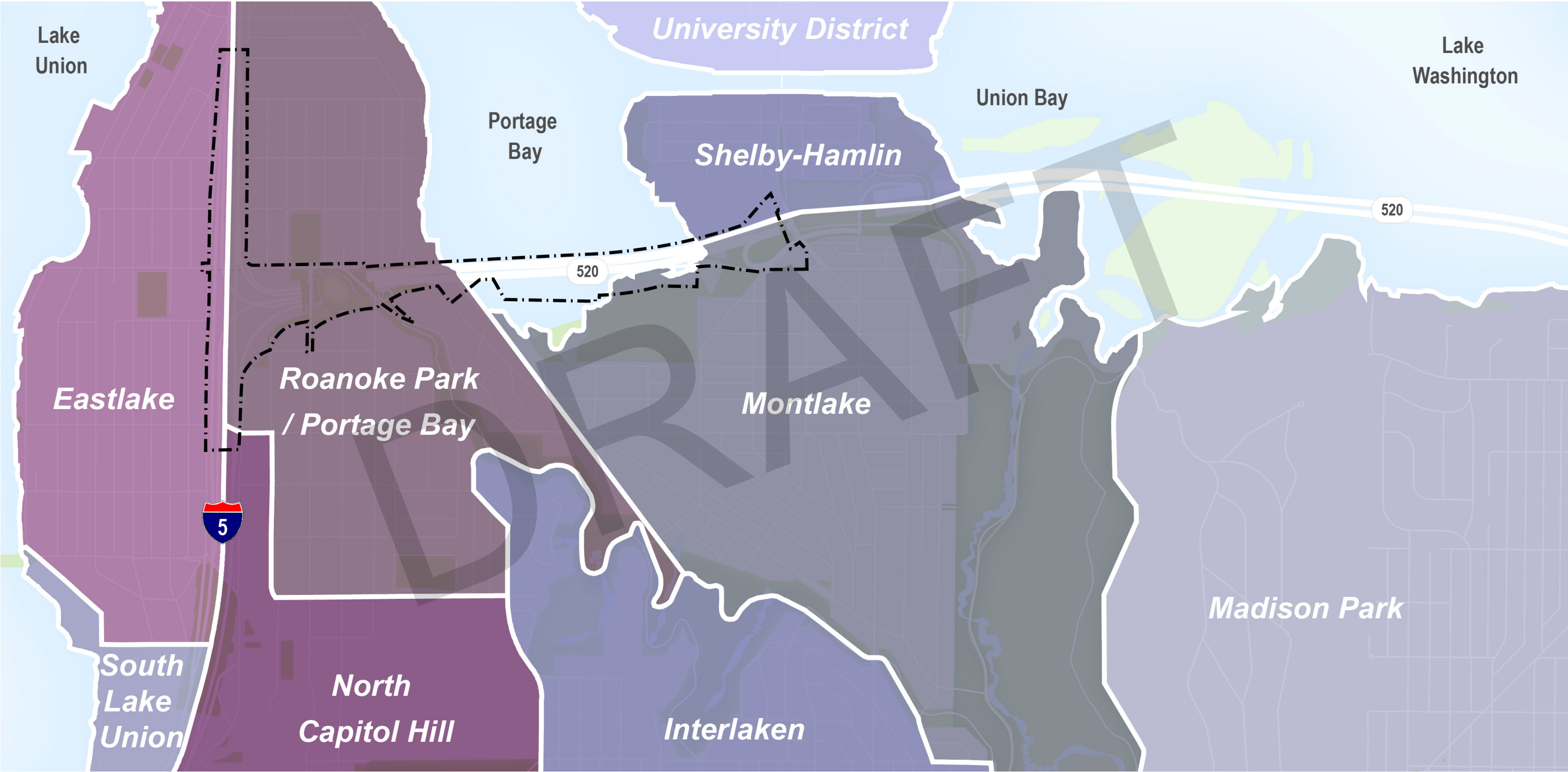


This aerial map illustrates the proposed Portage Bay Park in Seattle, Washington. The park's boundary is marked by a red dashed line, encompassing a large green area adjacent to the city. Key geographical features include Lake Union to the north, Lake Washington to the east, and Union Bay to the south. The map also shows the Portage Bay area, which includes a marina and surrounding residential developments. Highway 520 is visible as a major road running horizontally across the middle of the map, and Interstate 5 (I-5) is shown as a vertical highway on the left side. The city of Seattle is visible in the background, with its dense urban landscape and various green spaces.

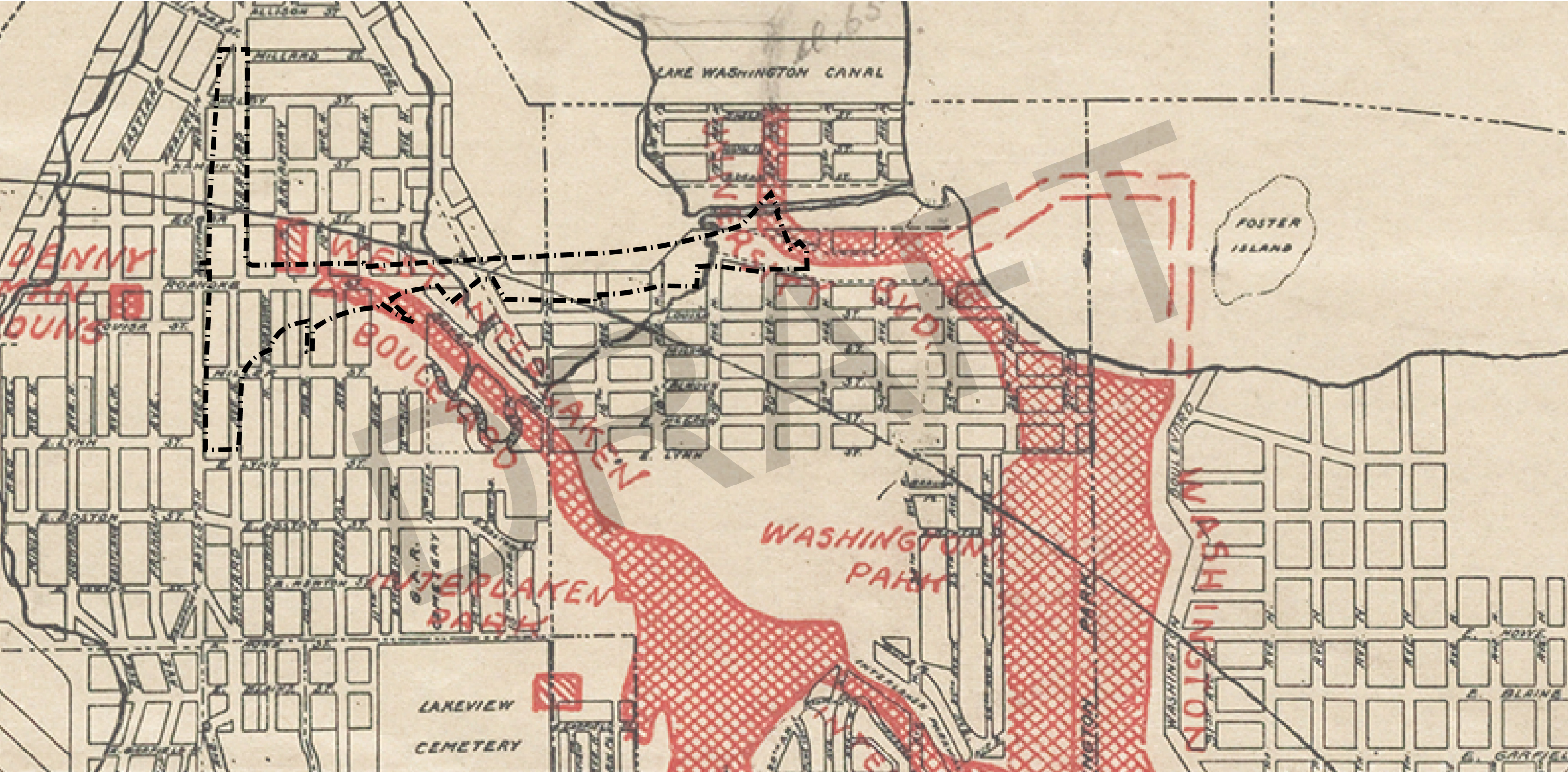
Context: Topography



Context: Neighborhoods



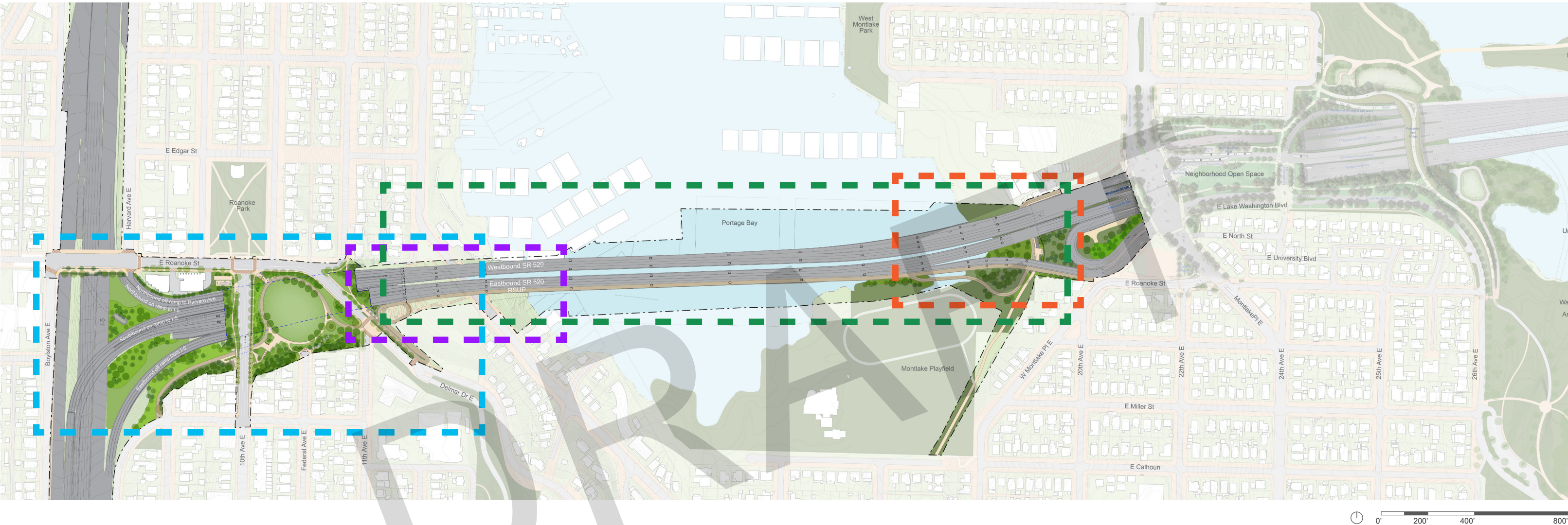
Context: Olmsted Legacy



Context: Olmsted Legacy



Portage Bay Bridge and Roanoke Lid



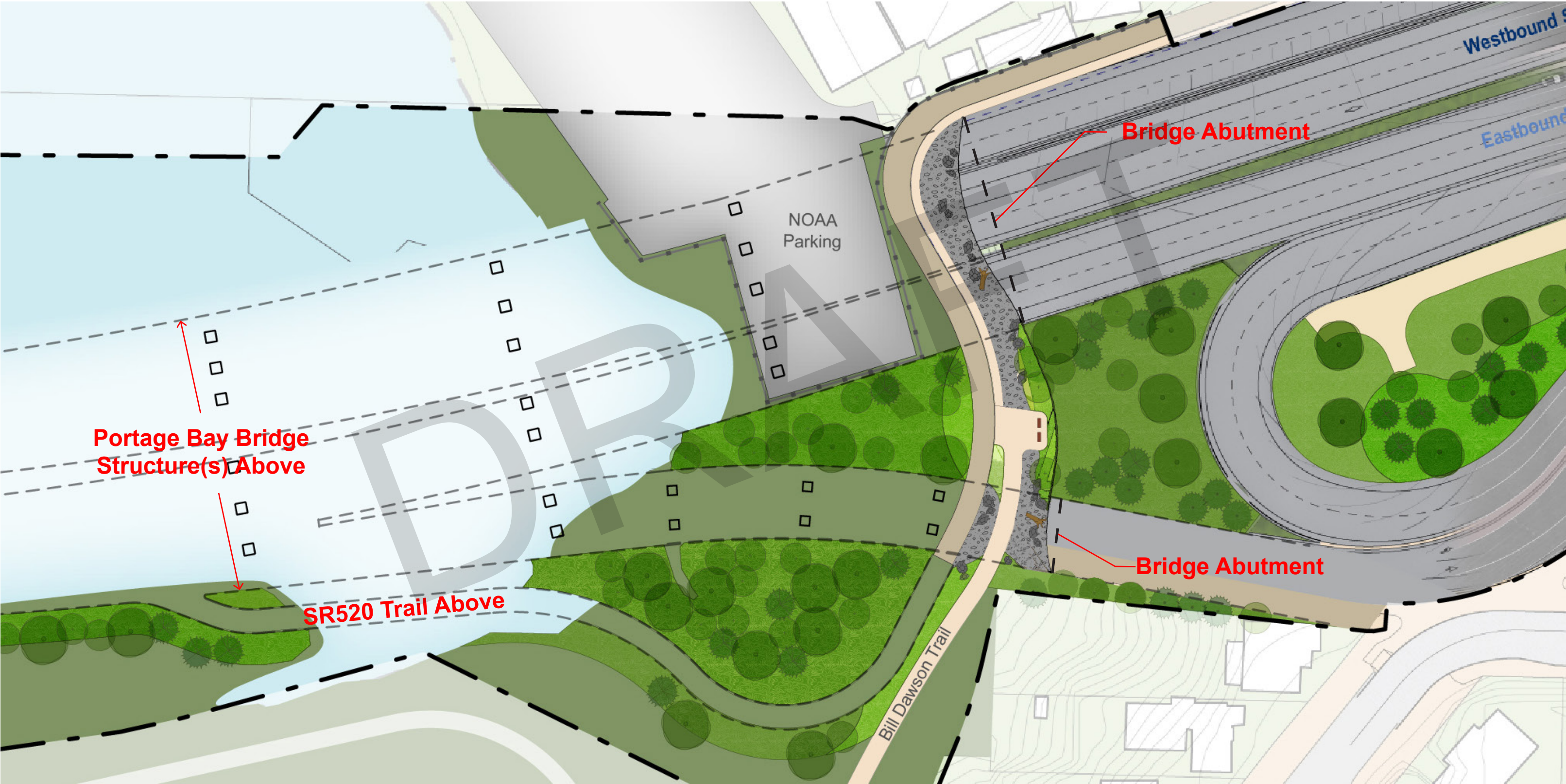
ROANOKE LID
AND 520 CROSSING

BOYER
UNDER
BRIDGE

PORTAGE
BAY
BRIDGE

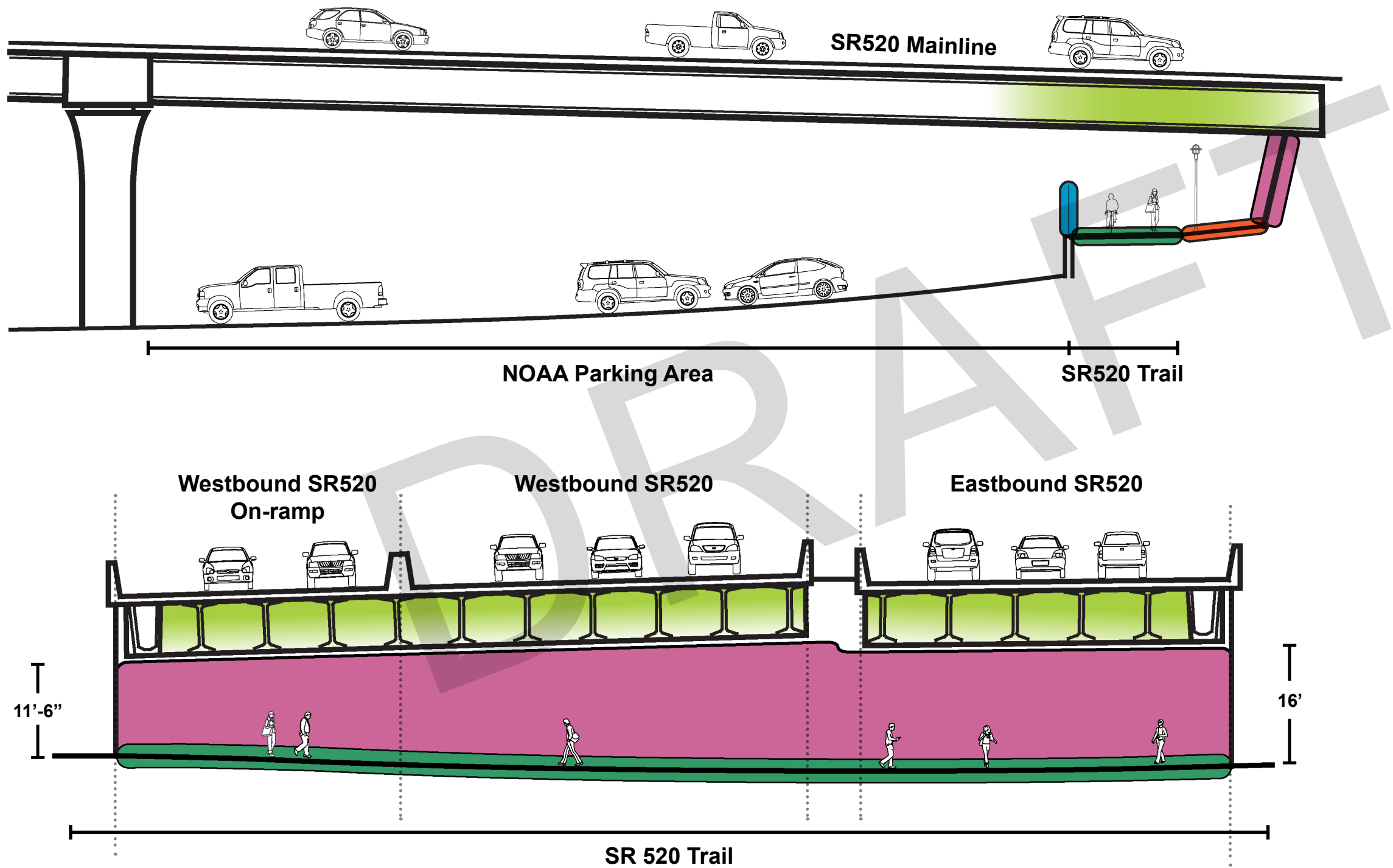
BILL DAWSON
UNDERBRIDGE

Bill Dawson Underbridge



Bill Dawson Underbridge

- Lighting
- Ground Plane
- Abutment
- Path
- Fencing



Underbridge Precedents

Lighting



Ground Plane

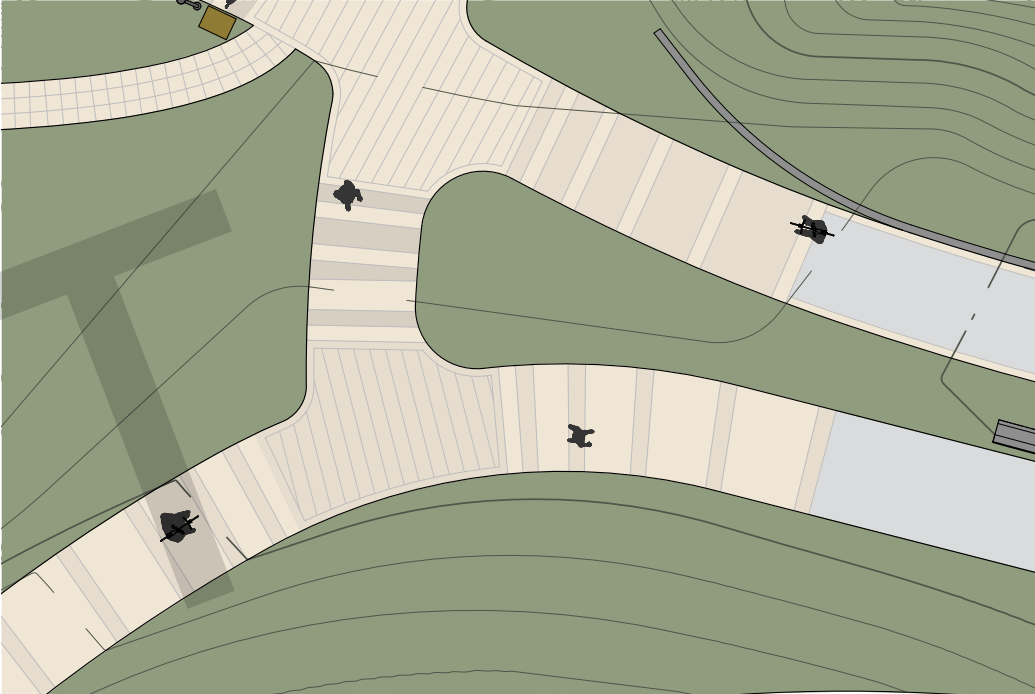


Underbridge Precedents

Abutment



Path, Ramp, and Stairs



Fencing



Bill Dawson Trail Area Planting Framework



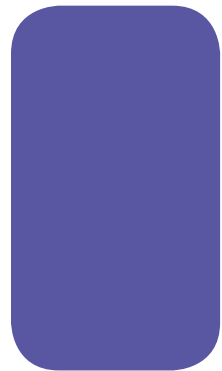
- LEGEND**
- Neighborhood Transition
 - Green Gateway
 - Critical Area Restoration

Planting Framework



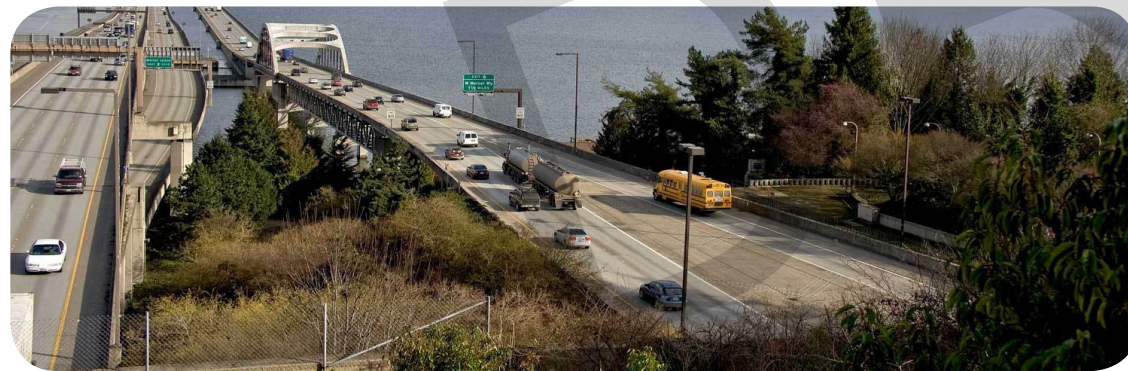
Neighborhood Transitions

- Restores natural areas
- Buffers residences



Critical Area Restoration

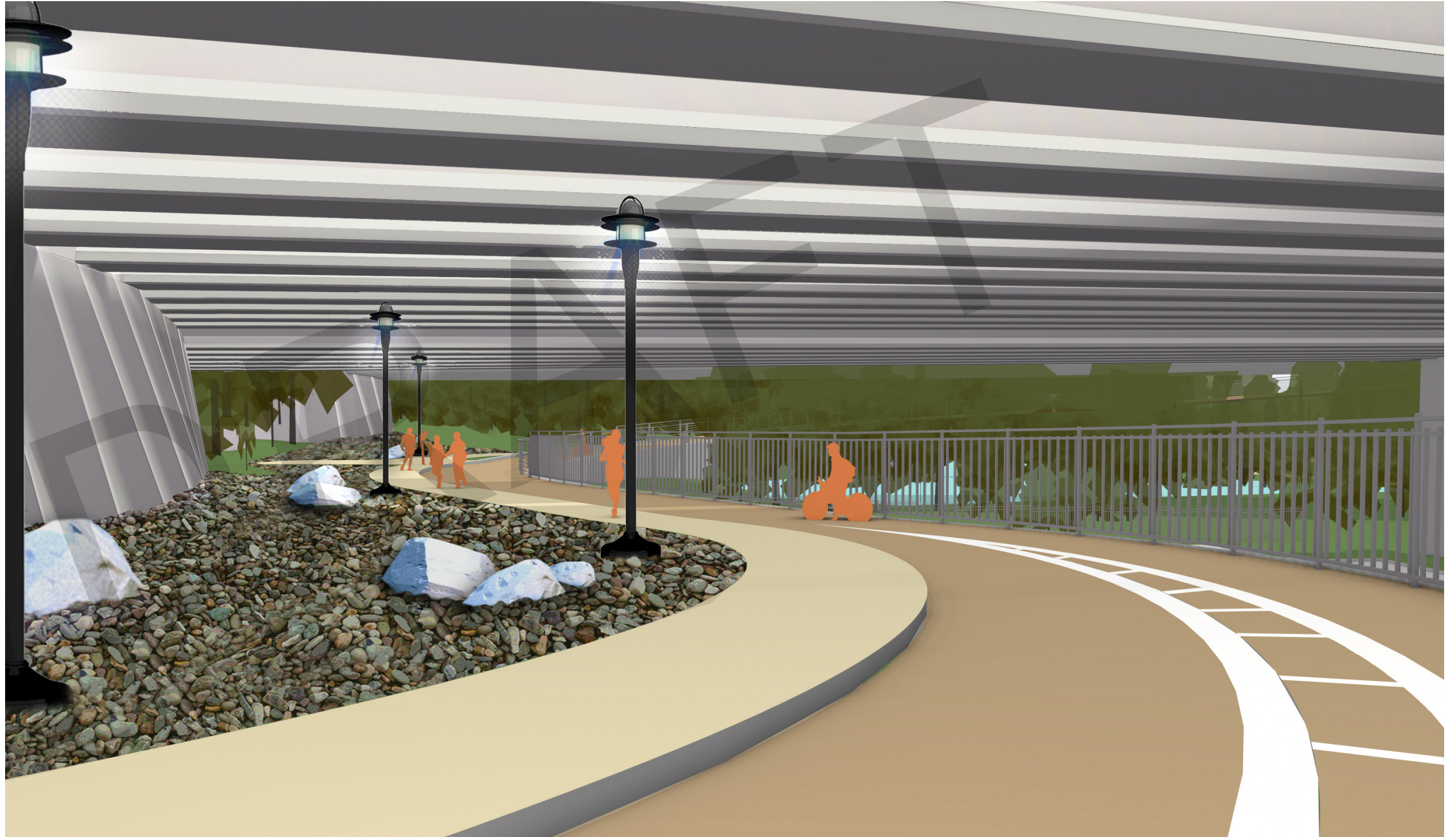
- Restores and enhances habitat function of shorelines, wetlands and steep slopes



Green Gateway

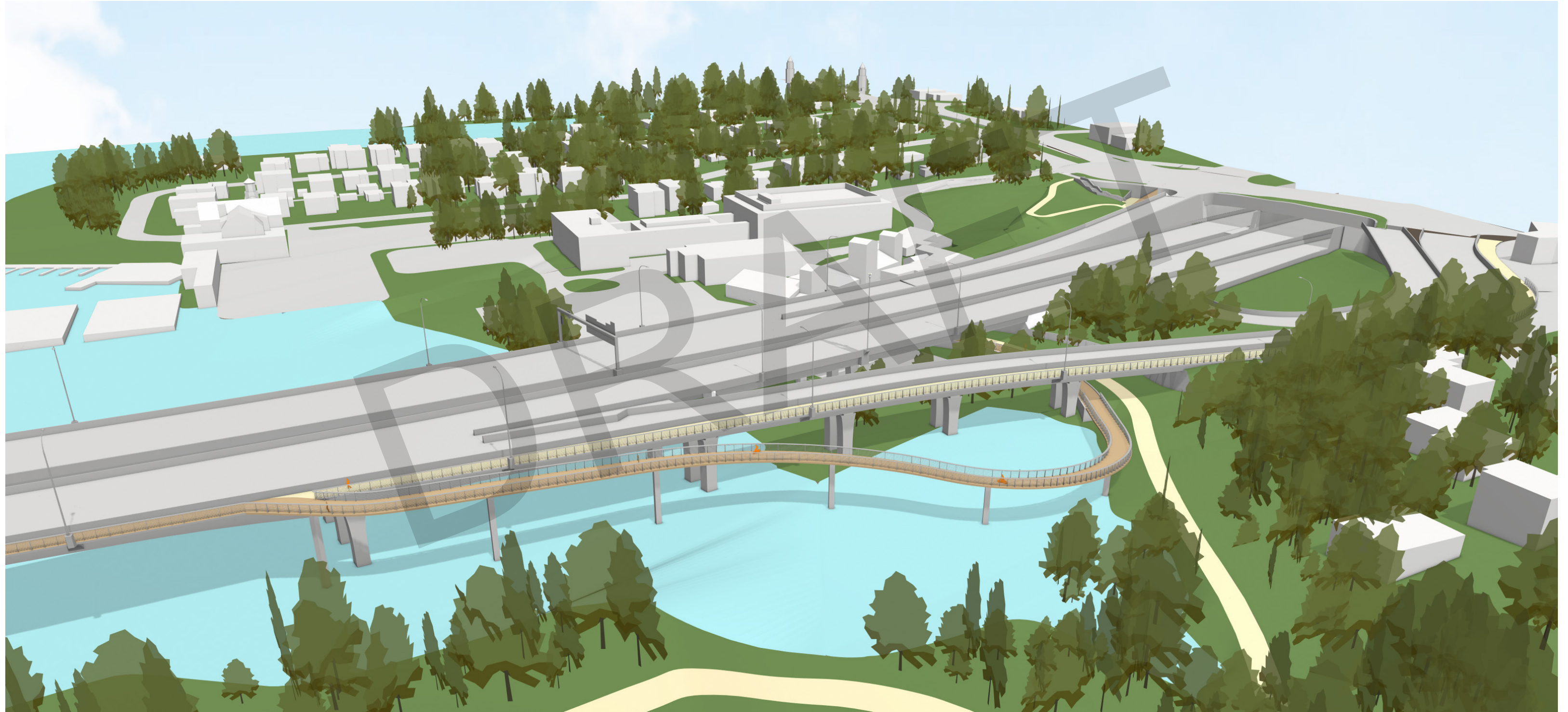
- Strategic massings to anchor infrastructure and frame views

Bill Dawson Underbridge



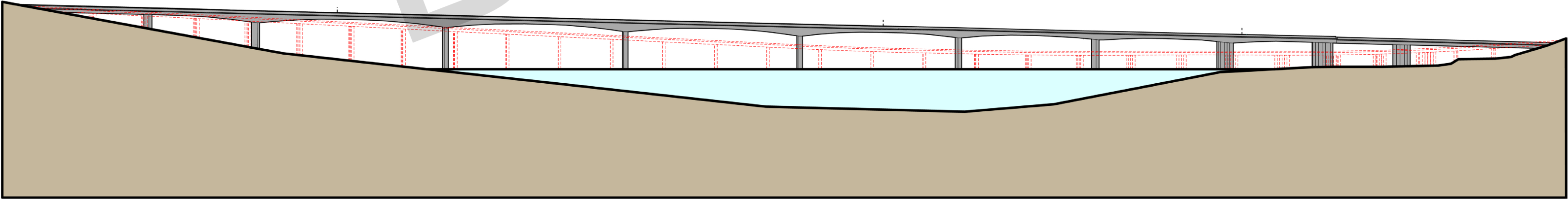
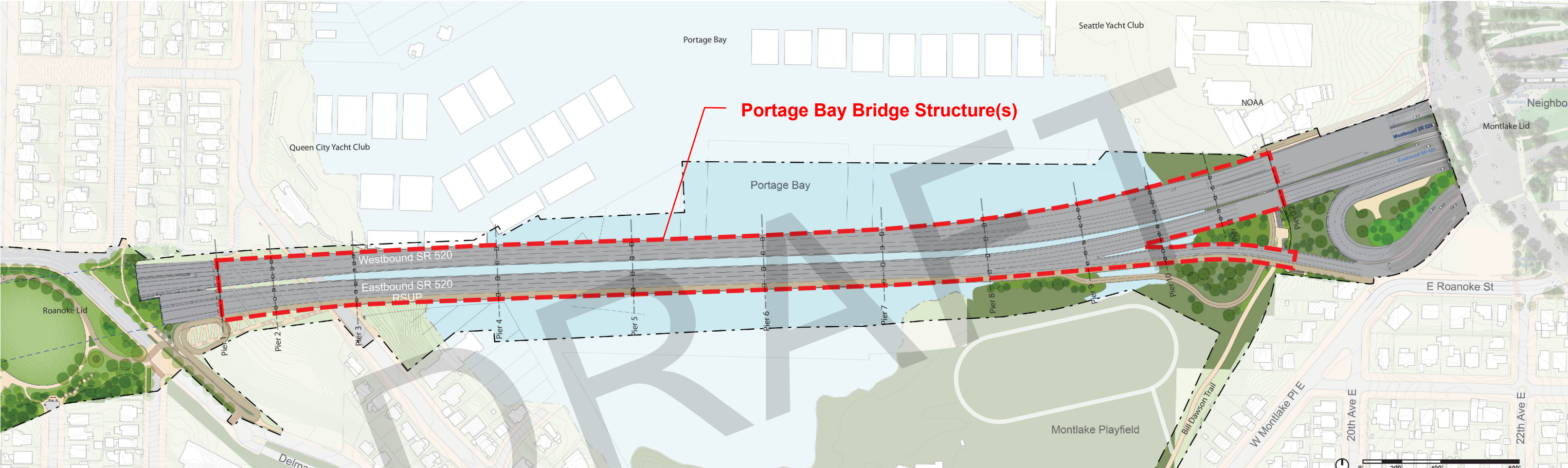
SR520 Trail Connections

Bill Dawson Trail



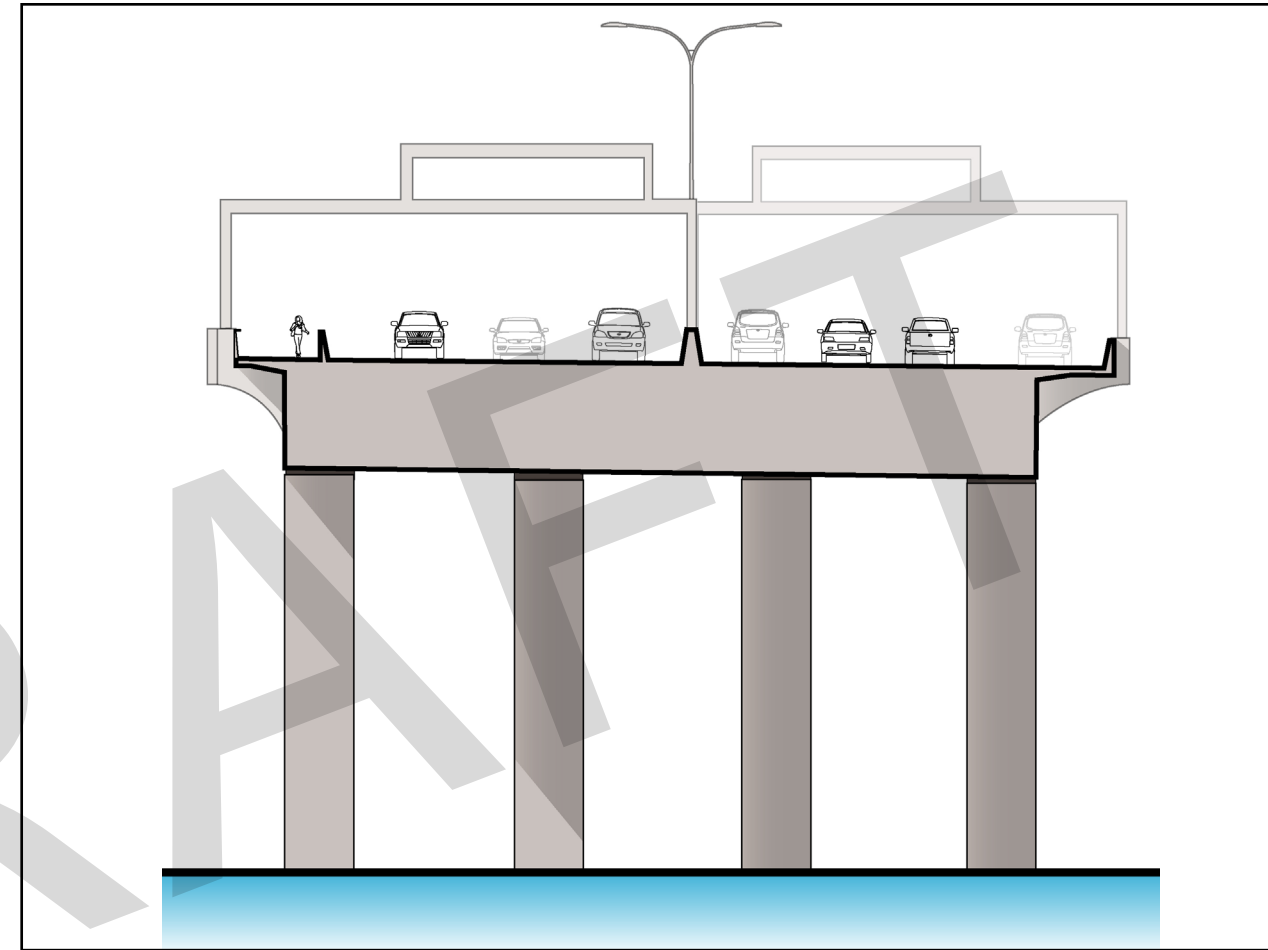
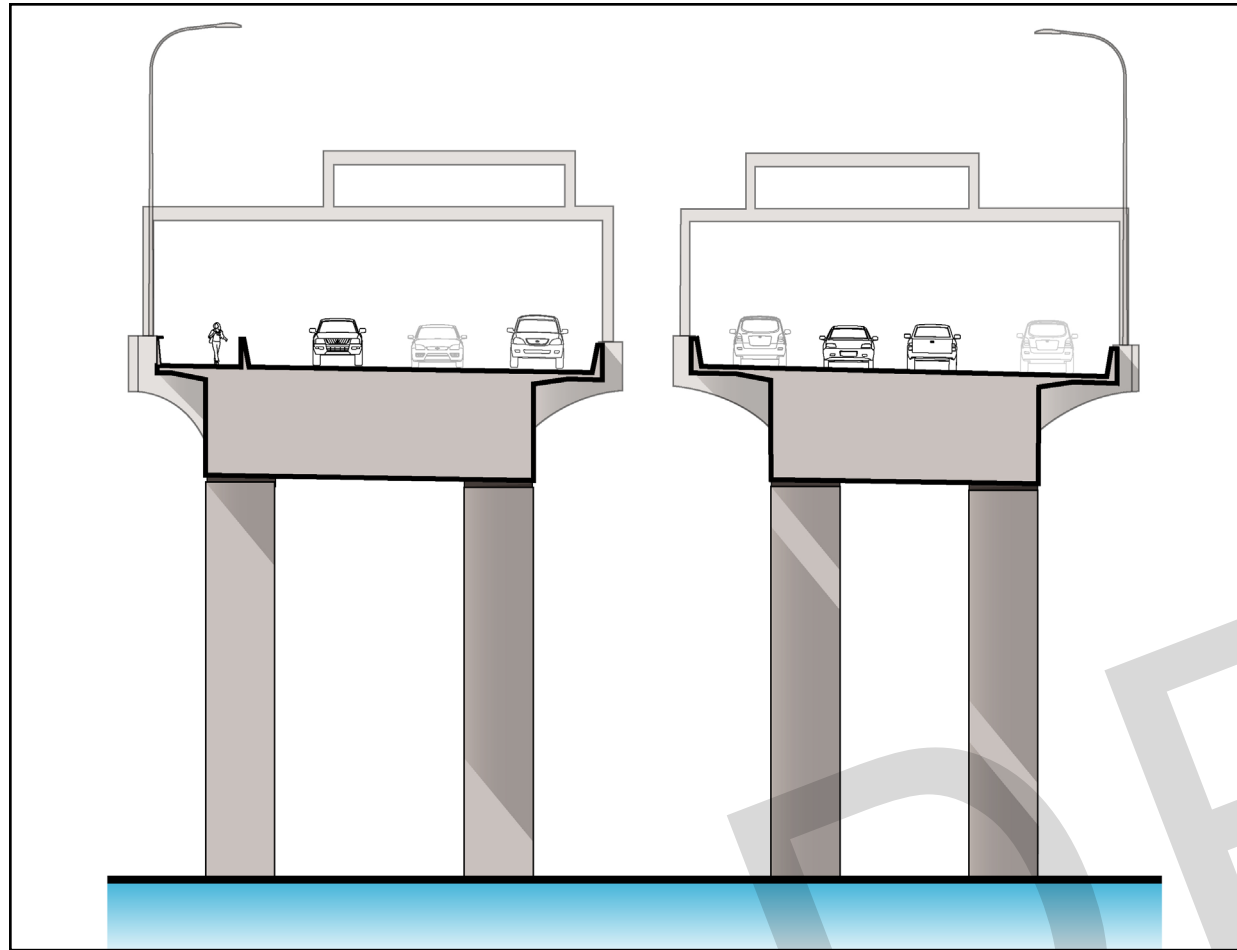
Portage Bay Bridge

Bridge Overview



Portage Bay Bridge

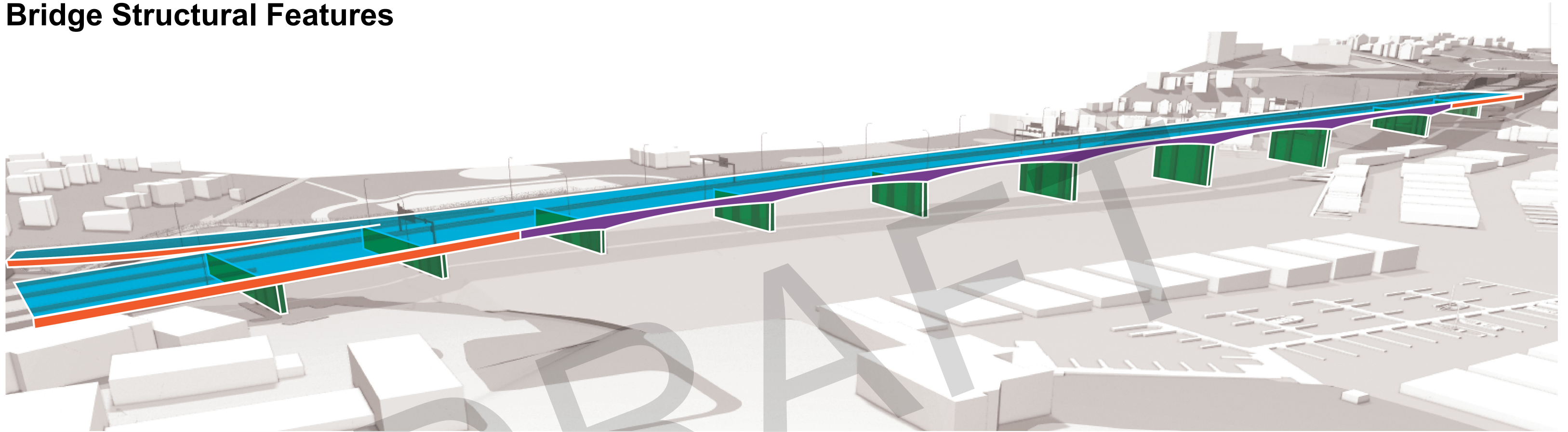
Dual and Single Structure Considerations



- Environmental Impacts
- Community Impacts
- Bridge Geometry
- Utilities
- Traffic Systems and Lighting

Portage Bay Bridge

Bridge Structural Features

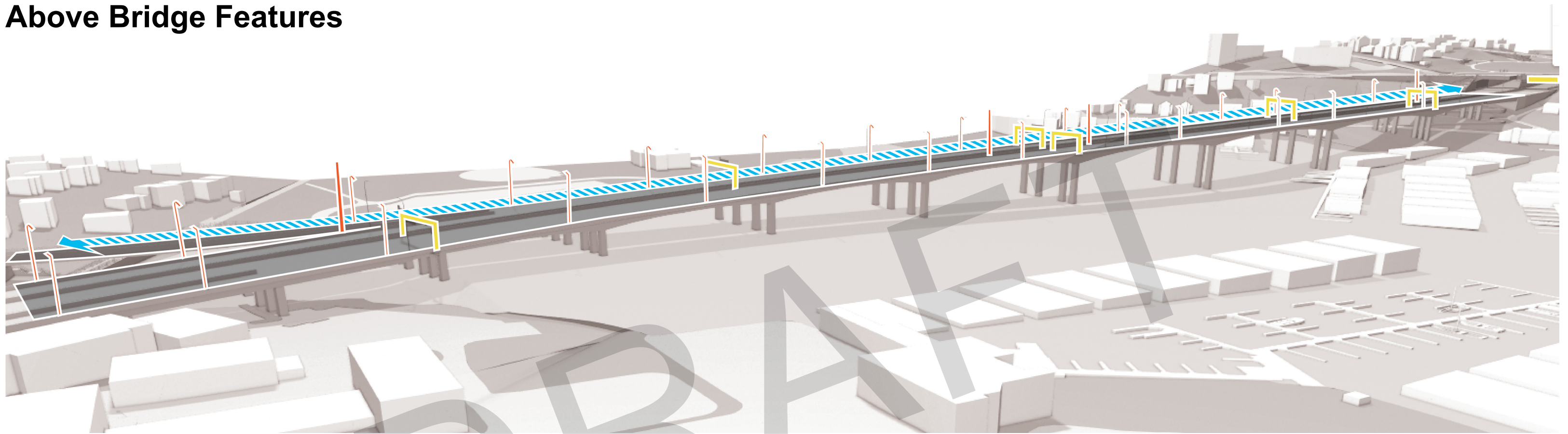


- **Structure**
 - Single or dual structure
- **Variable Depth Box**
 - 5 to 6 spans
- **Constant Depth Box or Girder**
 - 2 to 3 eastern spans (box or traditional girder), 1 western span (box)

- **Piers / Columns**
 - Pier 4 envelope, minimum span length, 2 columns per bent mid-bay, 3 columns per bent near shoreline and on land

Portage Bay Bridge

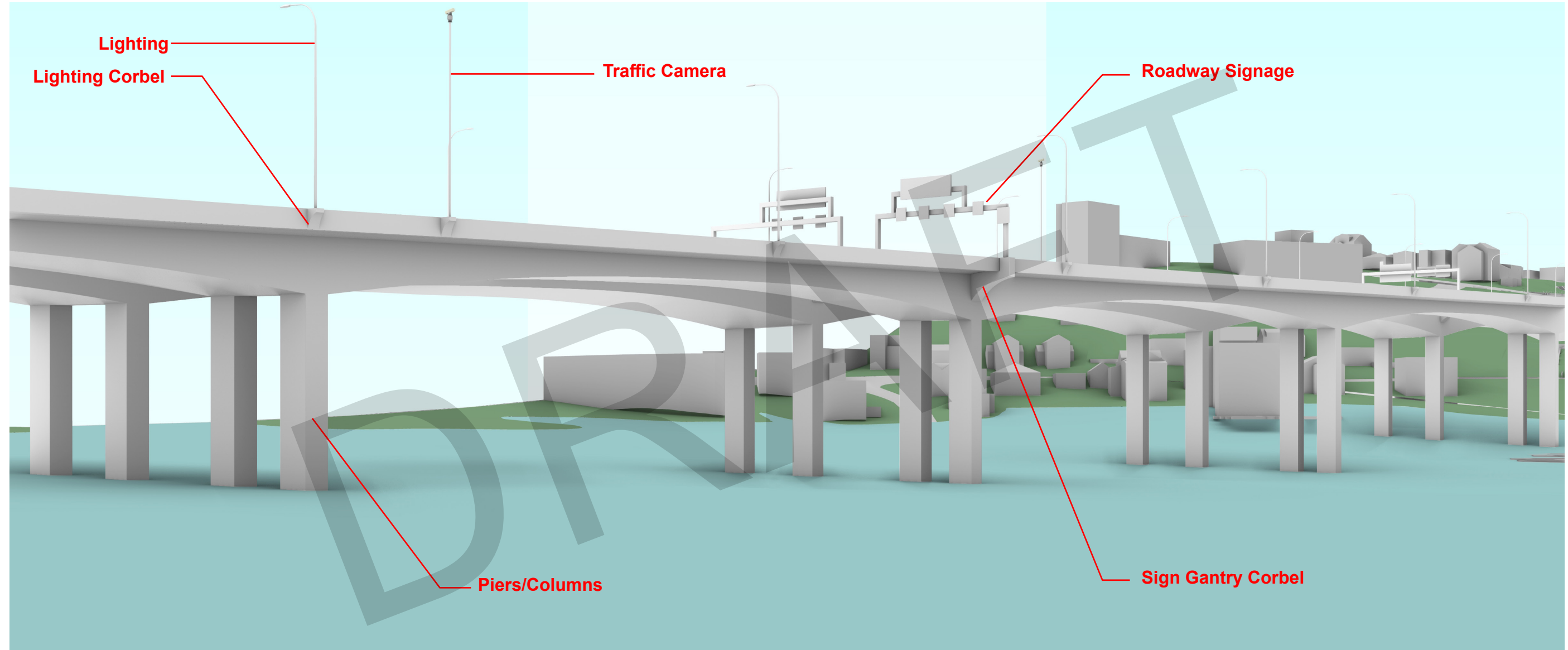
Above Bridge Features



- **Regional Shared-use Path**
- 14' wide, south side of south bridge
- **Highway Lighting**
- Full roadway illumination, wayfinding illumination for SR520 Trail
- **Highway Signing**
- Sign locations and type, utility platform location

Portage Bay Bridge

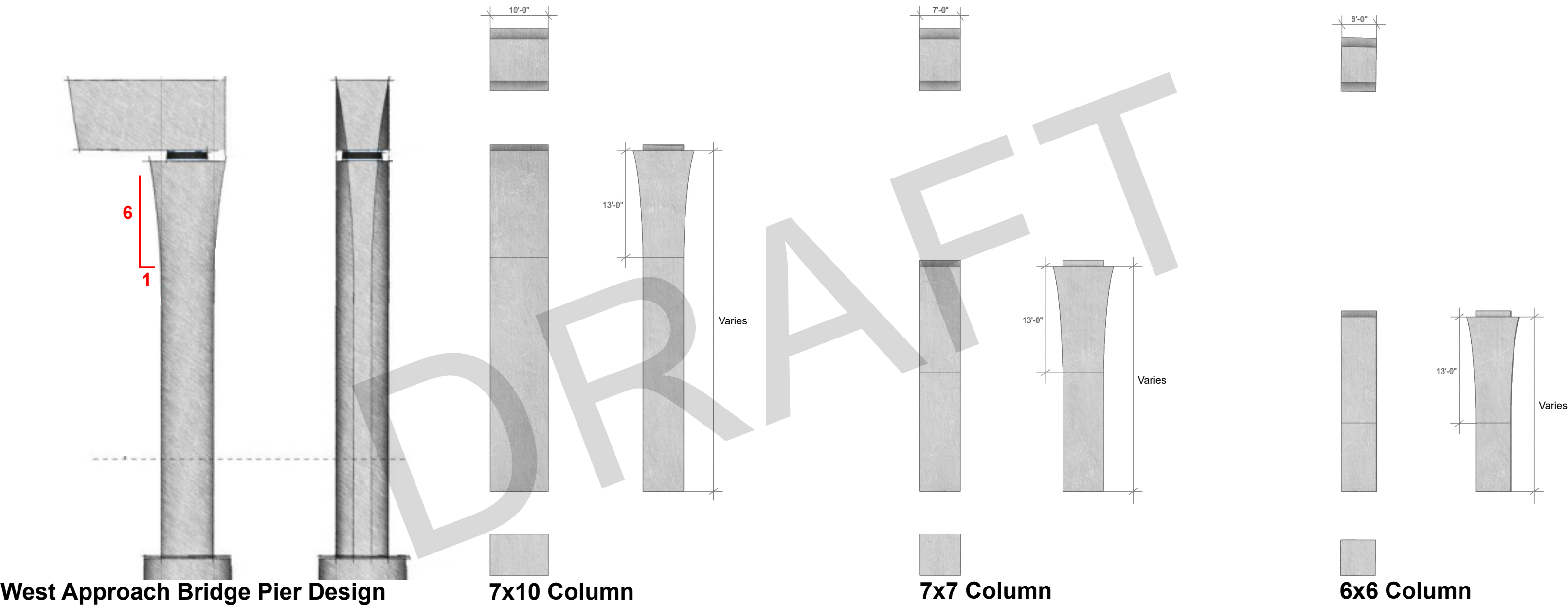
Bridge Design Features



View of Portage Bay Bridge Looking Southwest

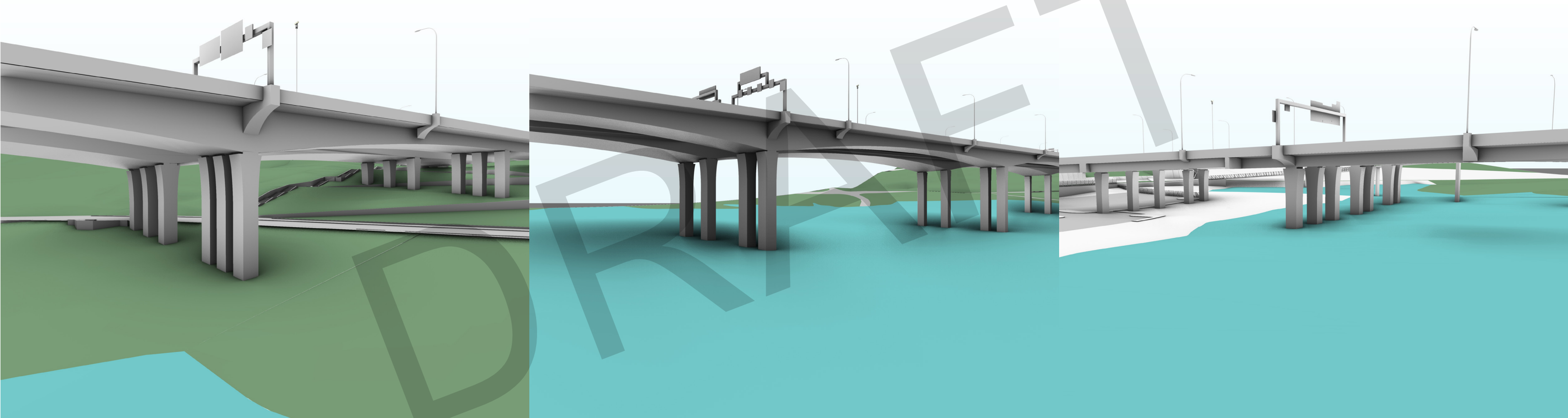
Portage Bay Bridge

Pier Typology



Portage Bay Bridge

Pier Typology



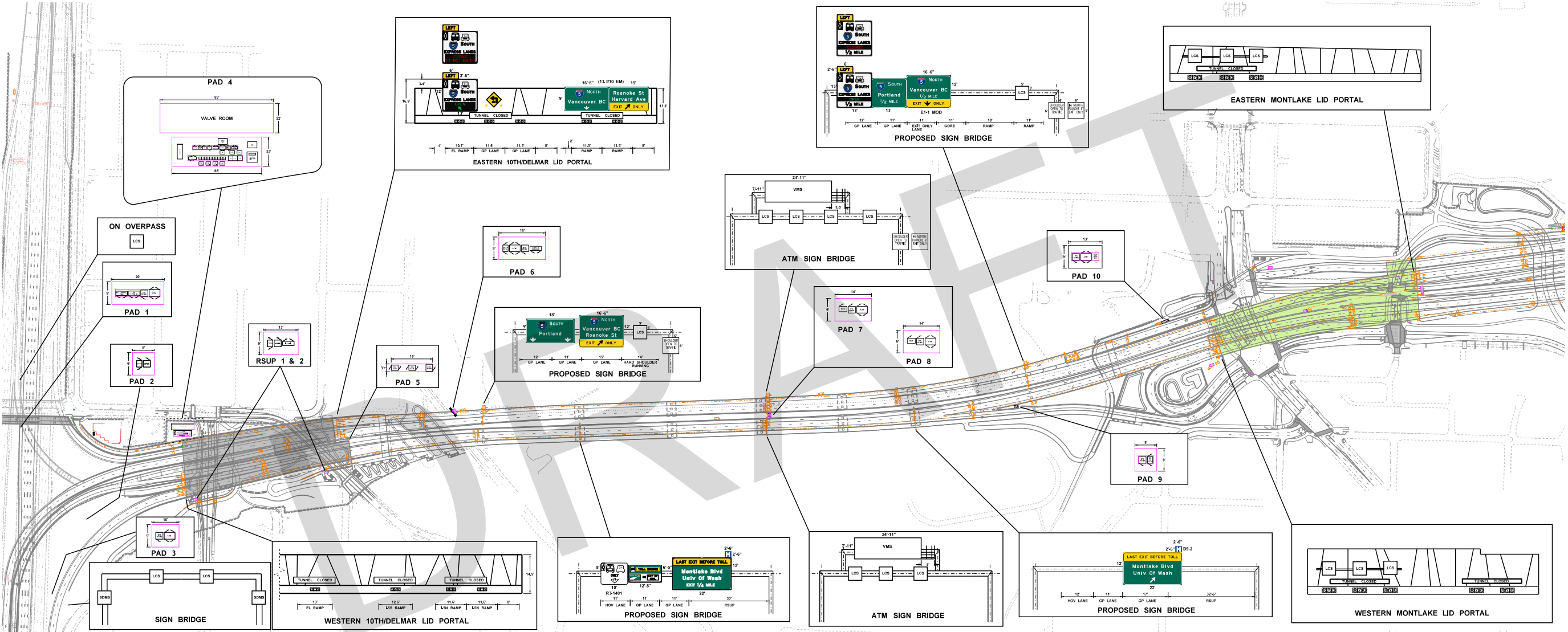
7x7 Column

7x10 Column

6x6 Column

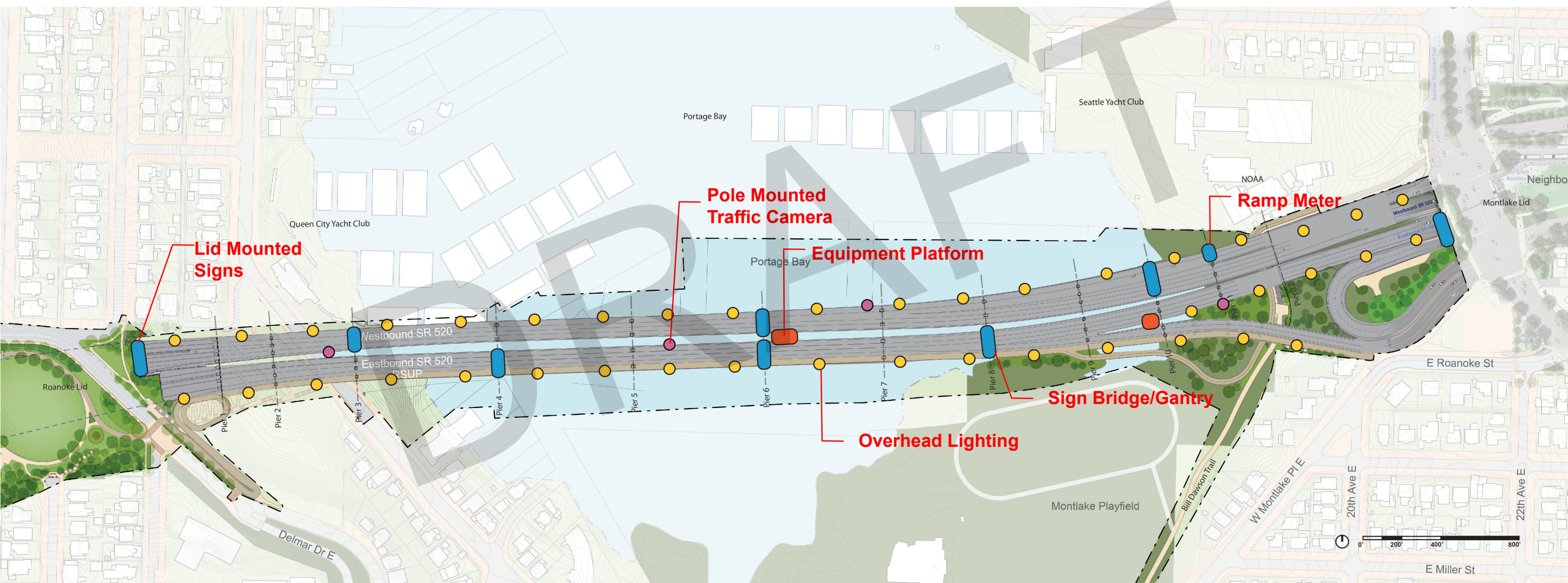
Portage Bay Bridge

Above Bridge Appurtenances



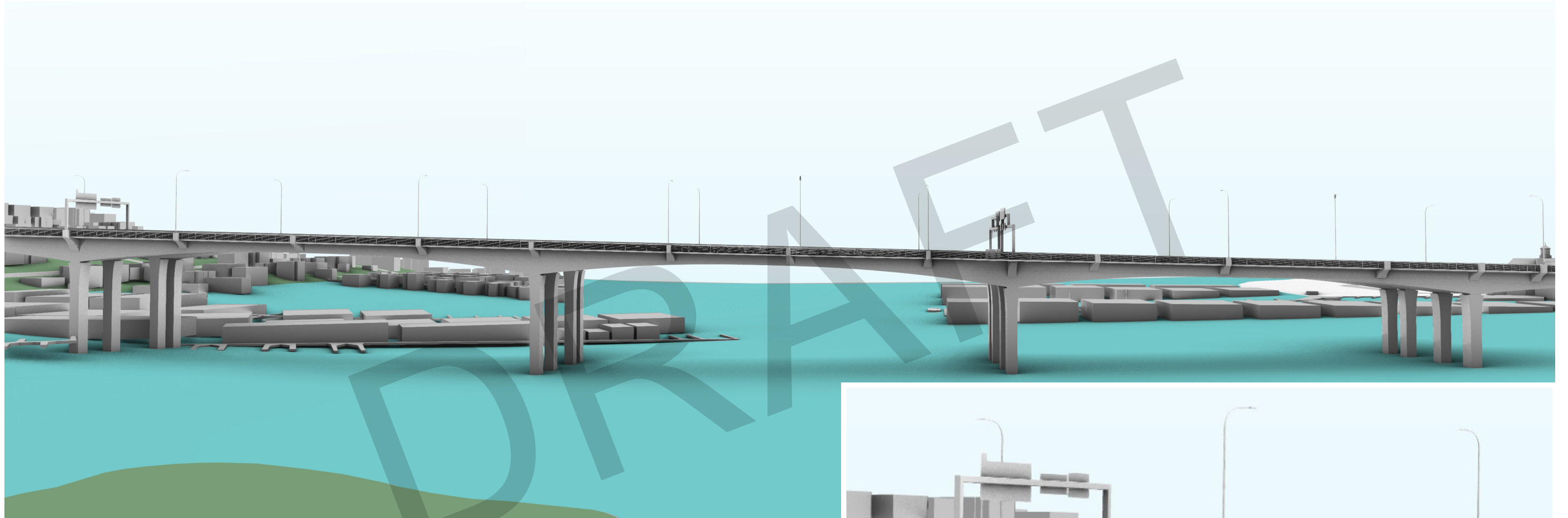
Portage Bay Bridge

Above Bridge Appurtenances

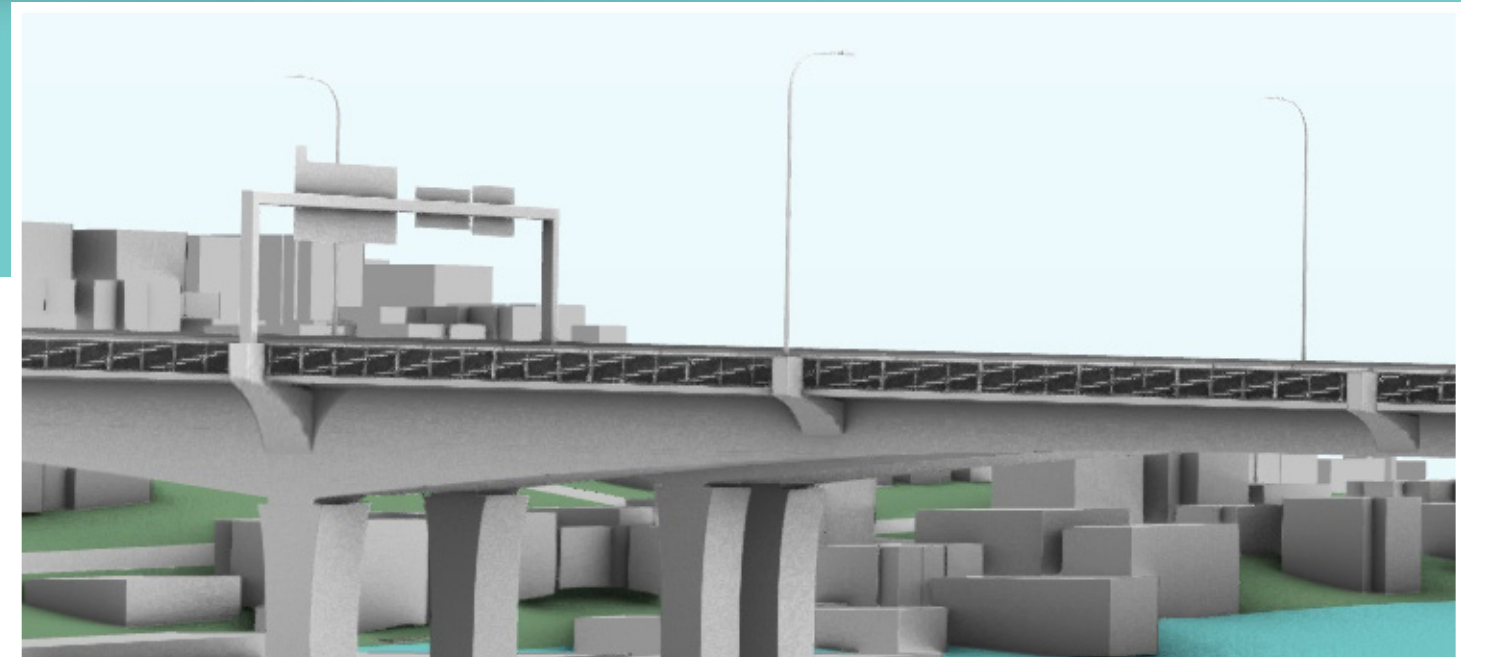


Portage Bay Bridge

Corbel Rhythm

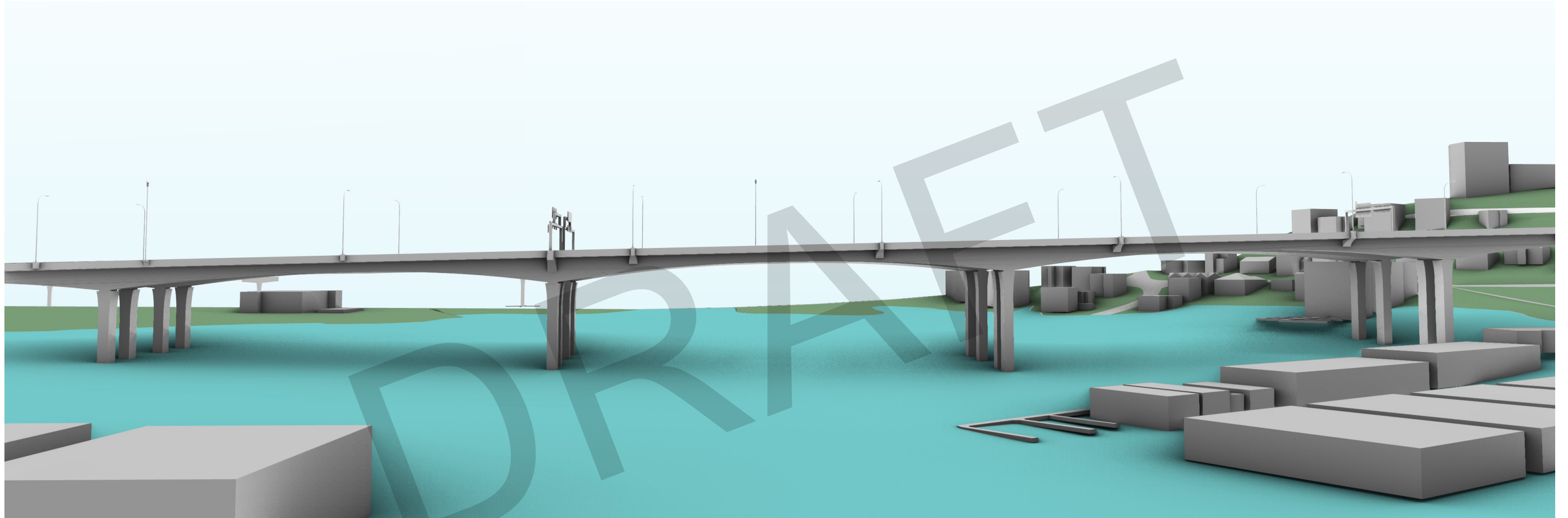


View from the south



Portage Bay Bridge

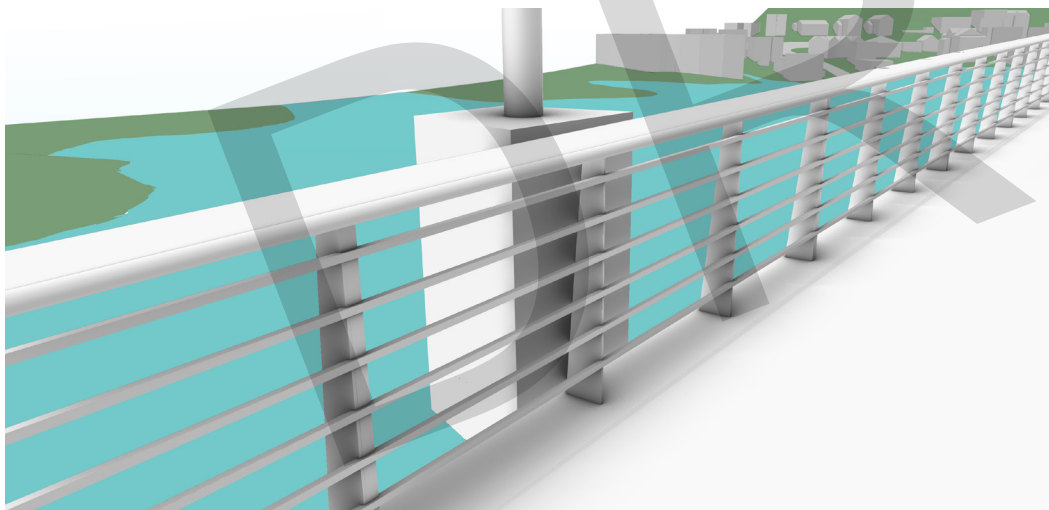
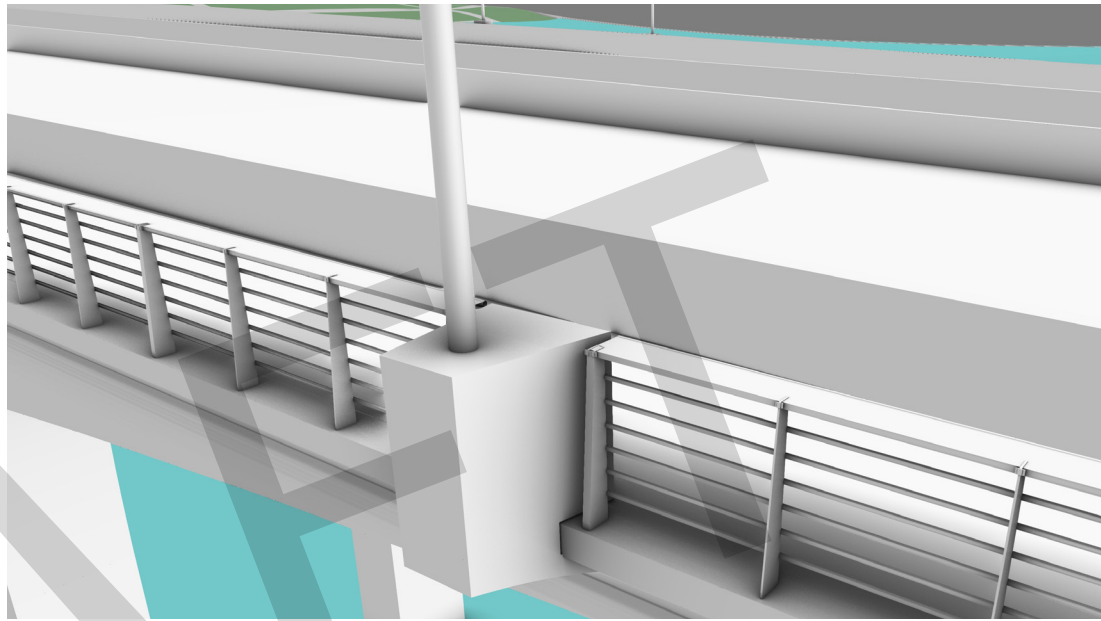
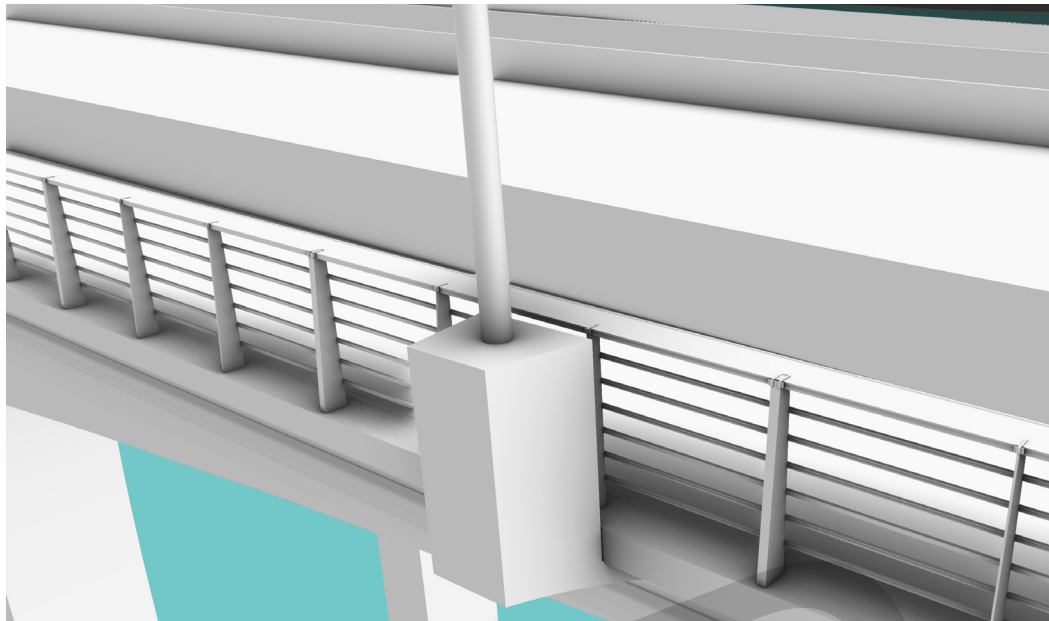
Corbel Rhythm



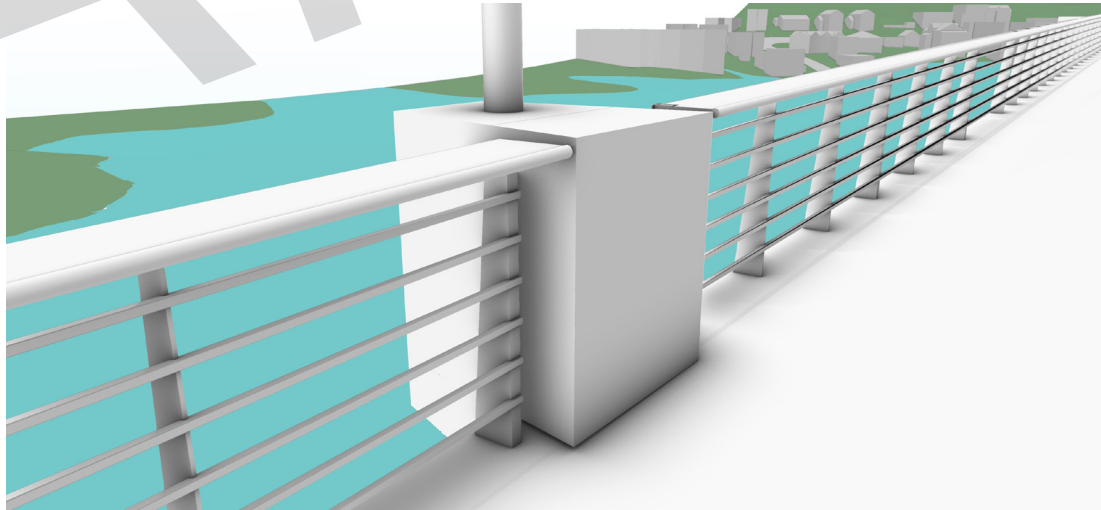
View from the north

Portage Bay Bridge

Corbel Railing Detail



Continuous Railing



Interrupted Railing

Portage Bay Bridge

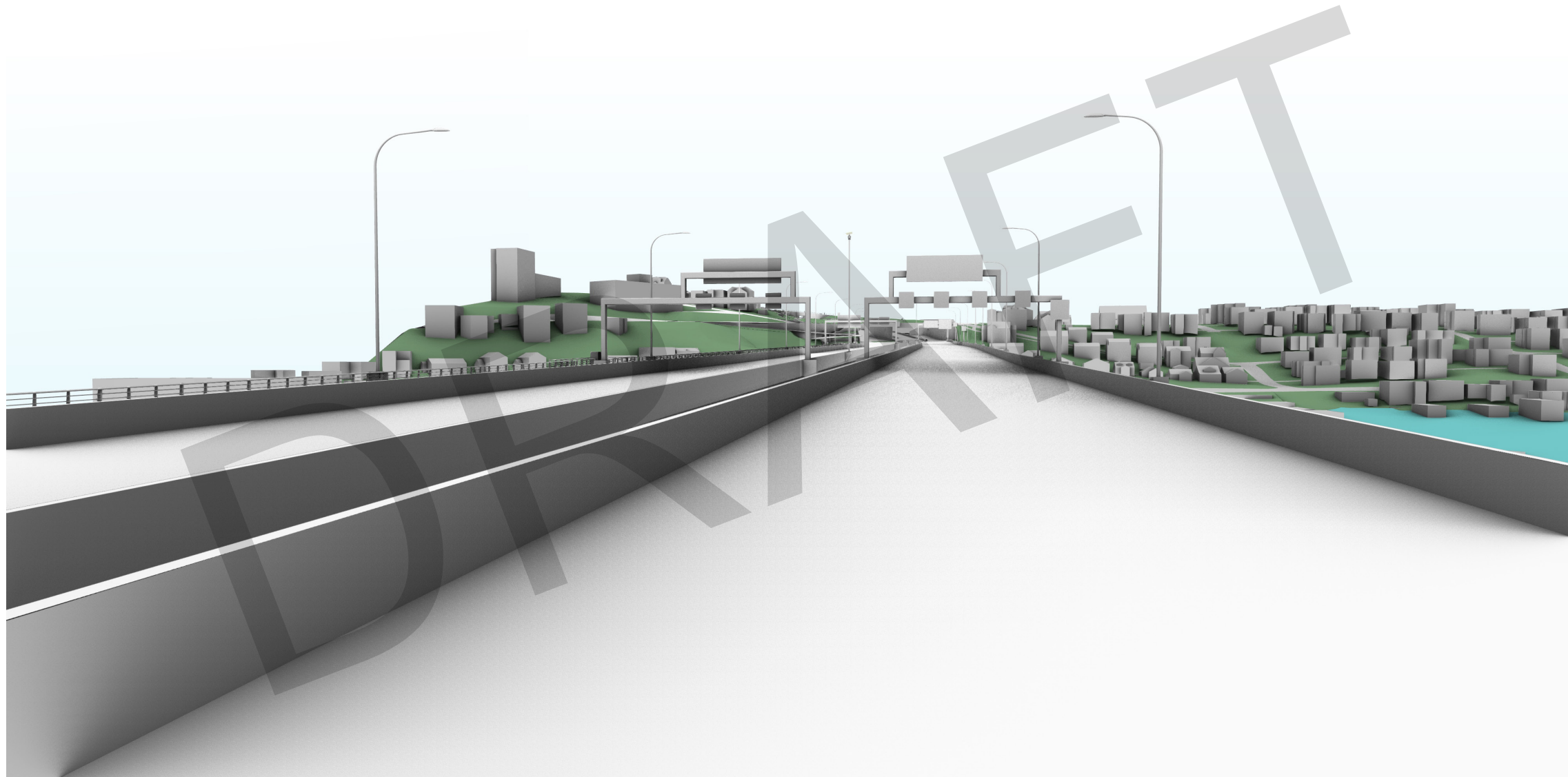
Deck View



View Looking East

Portage Bay Bridge

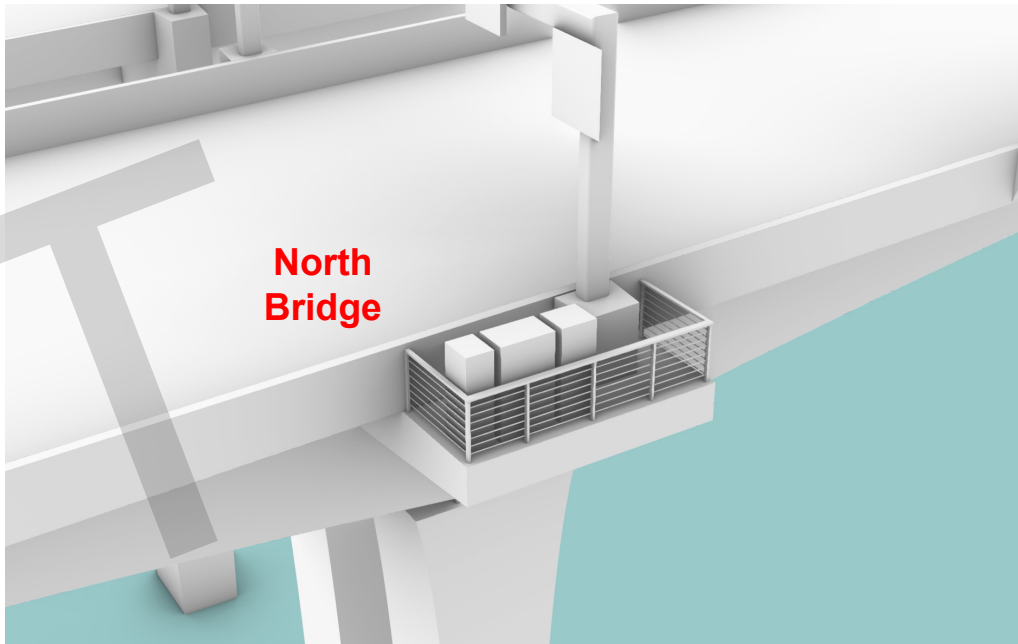
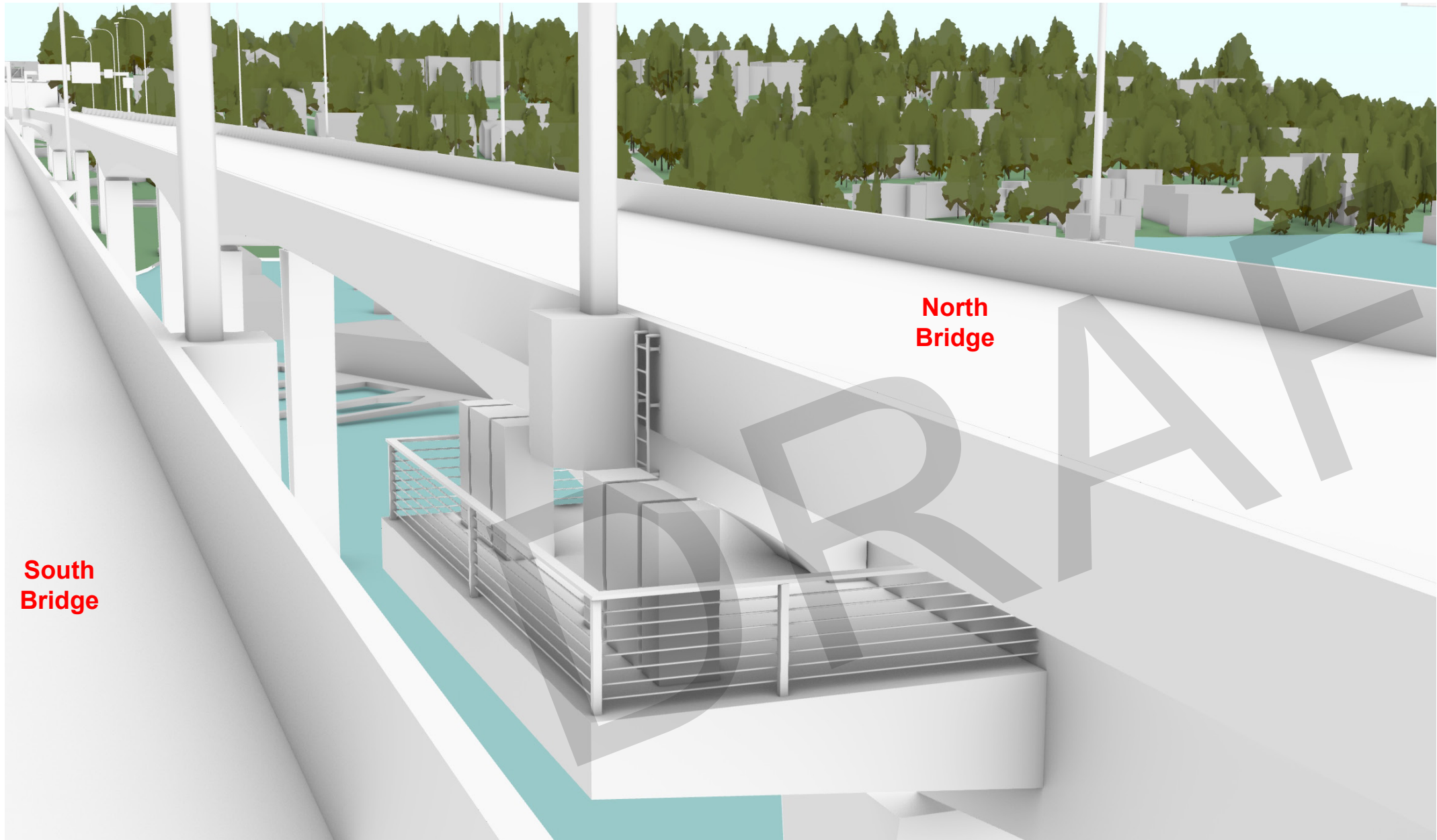
Deck View



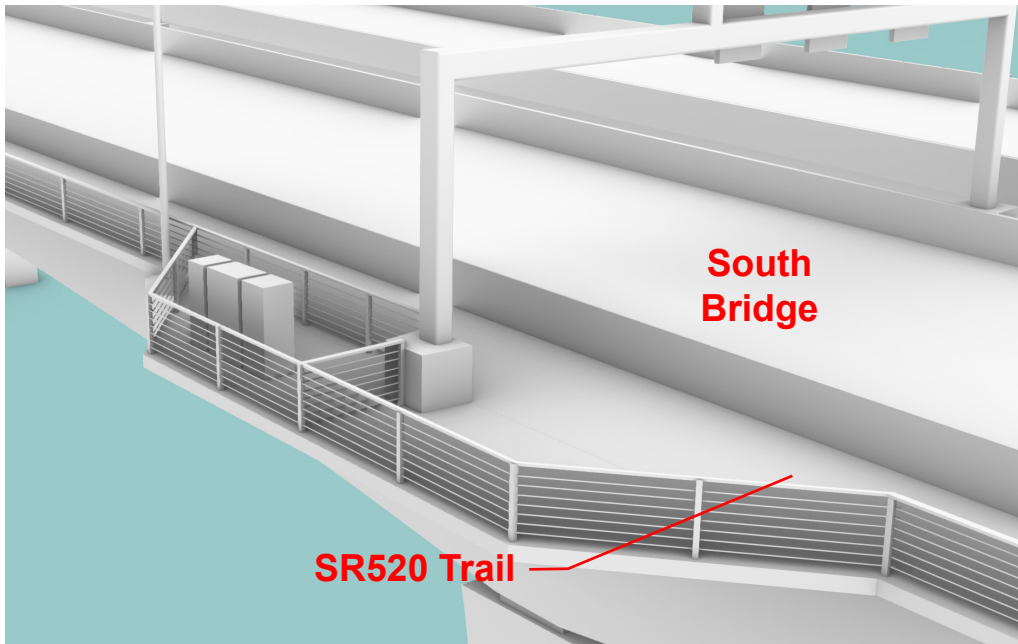
View Looking West

Portage Bay Bridge

Potential Utilities Platform Conditions



Platform North



Platform South B

Platform Center (Basis of Design)

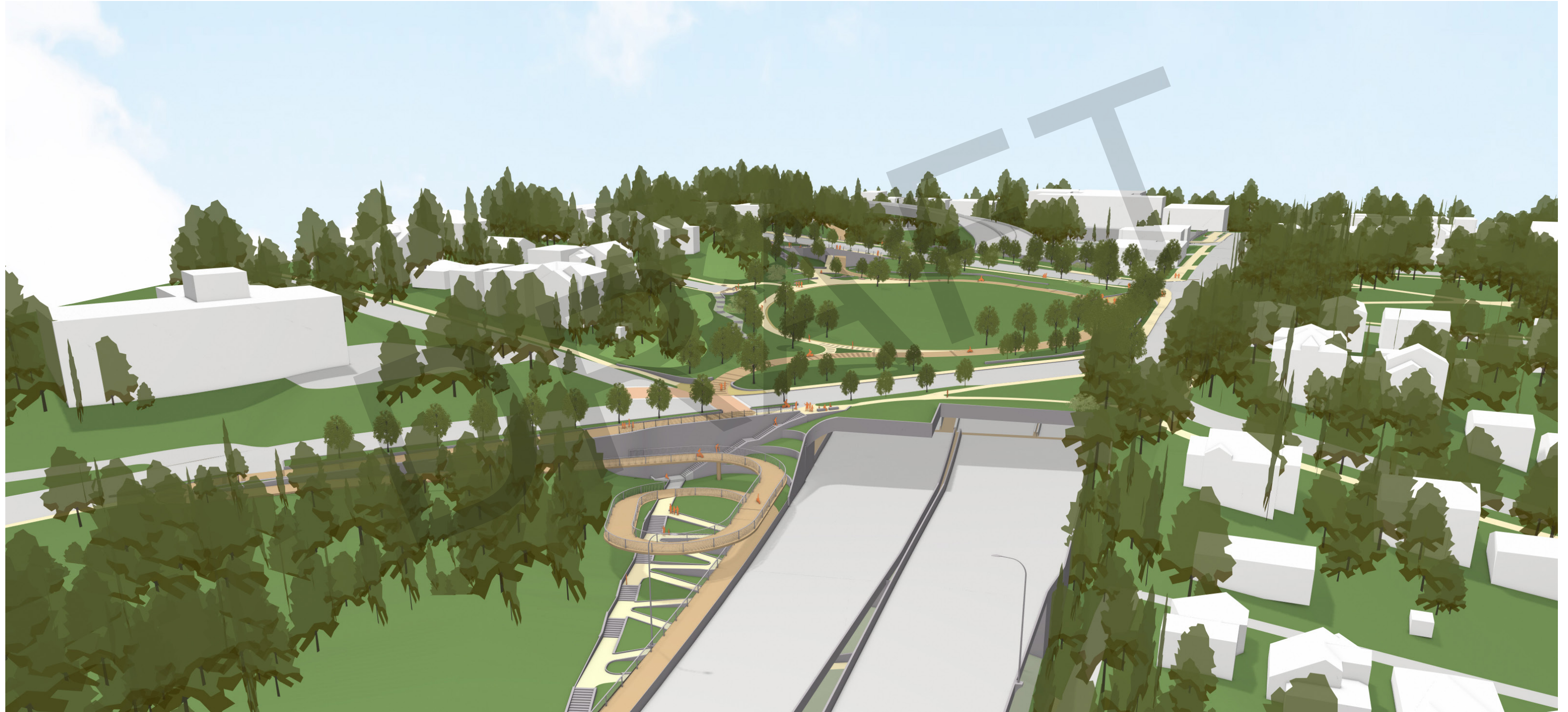
Portage Bay Bridge



Bill Dawson and Bridge Discussion

SR520 Trail Connections

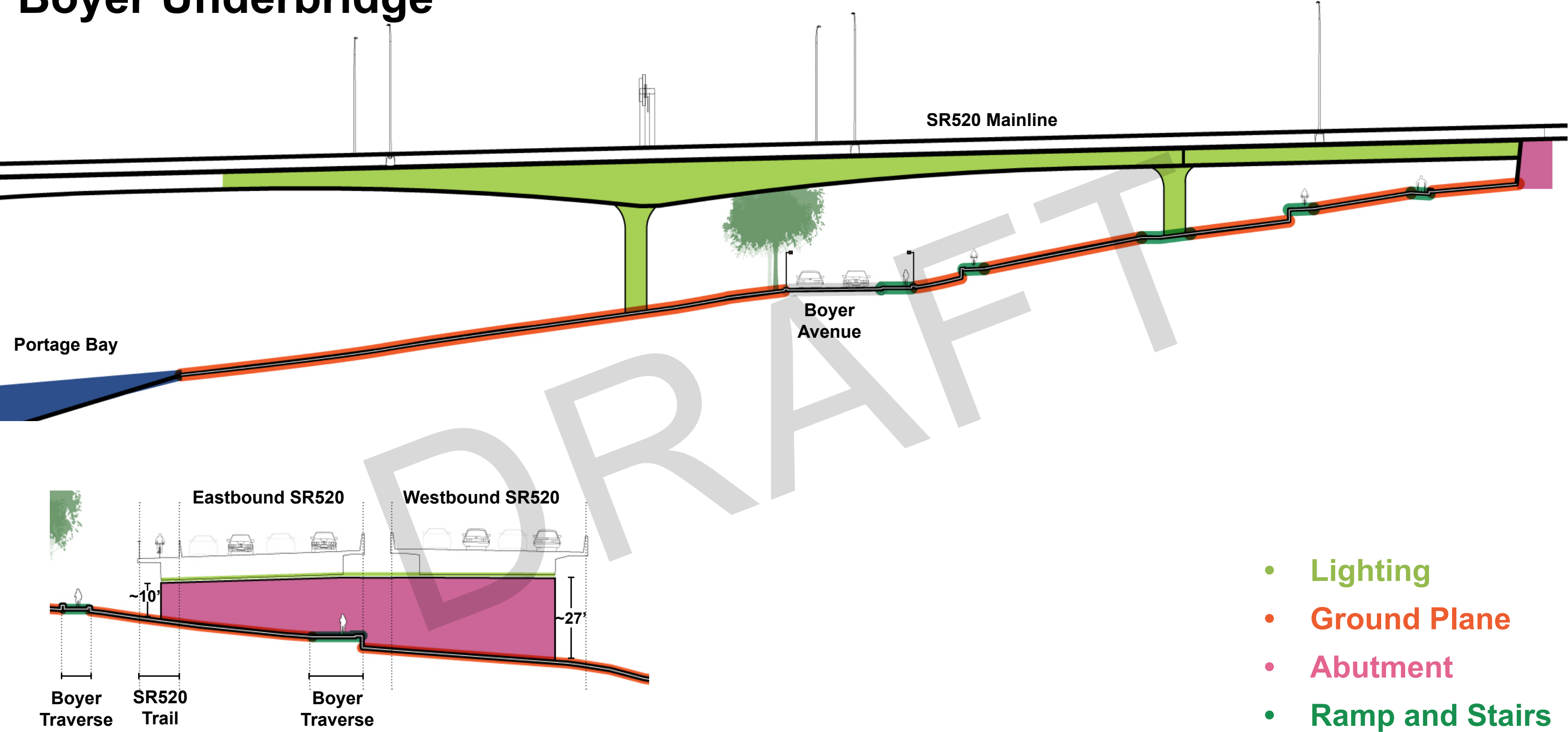
Delmar Drive



Boyer Underbridge



Boyer Underbridge



Underbridge Precedents

Lighting



Ground Plane

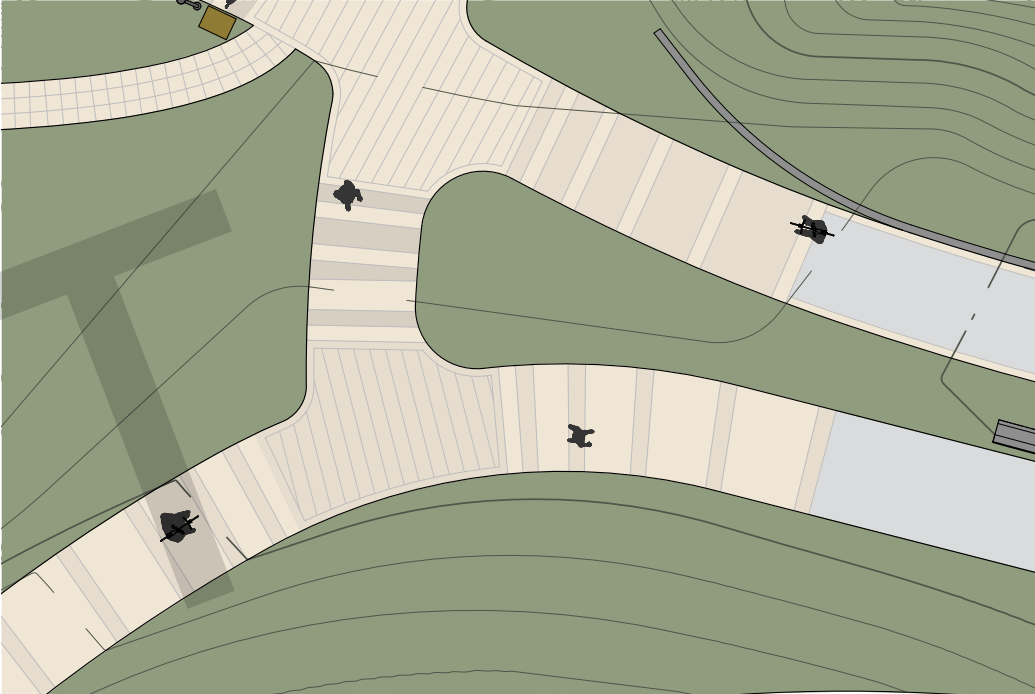


Underbridge Precedents

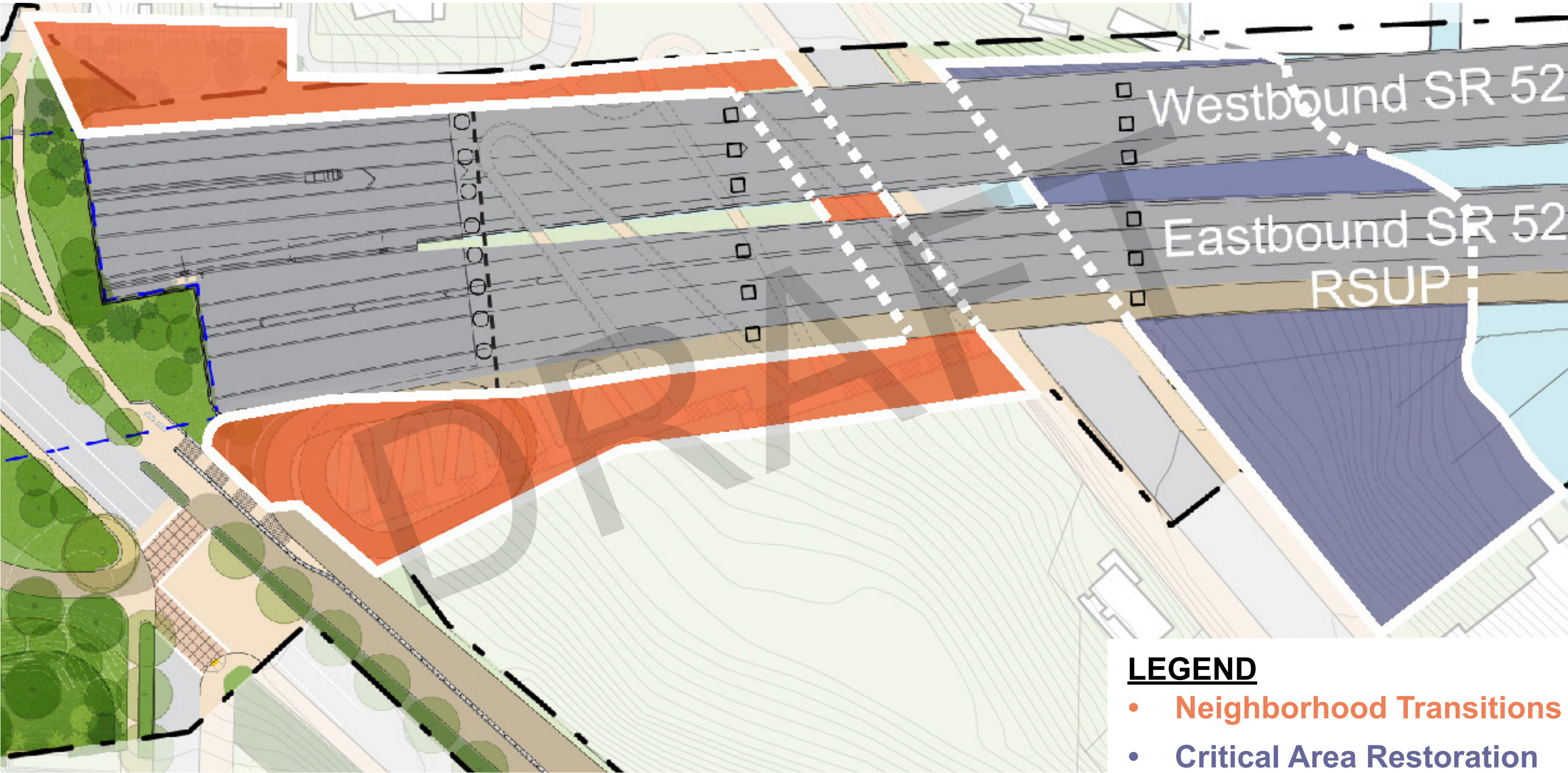
Abutment



Path, Ramp, and Stairs



Boyer Underbridge Area Planting Framework

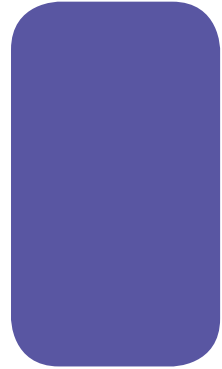


Planting Framework



Neighborhood Transitions

- Restores natural areas
- Buffers residences



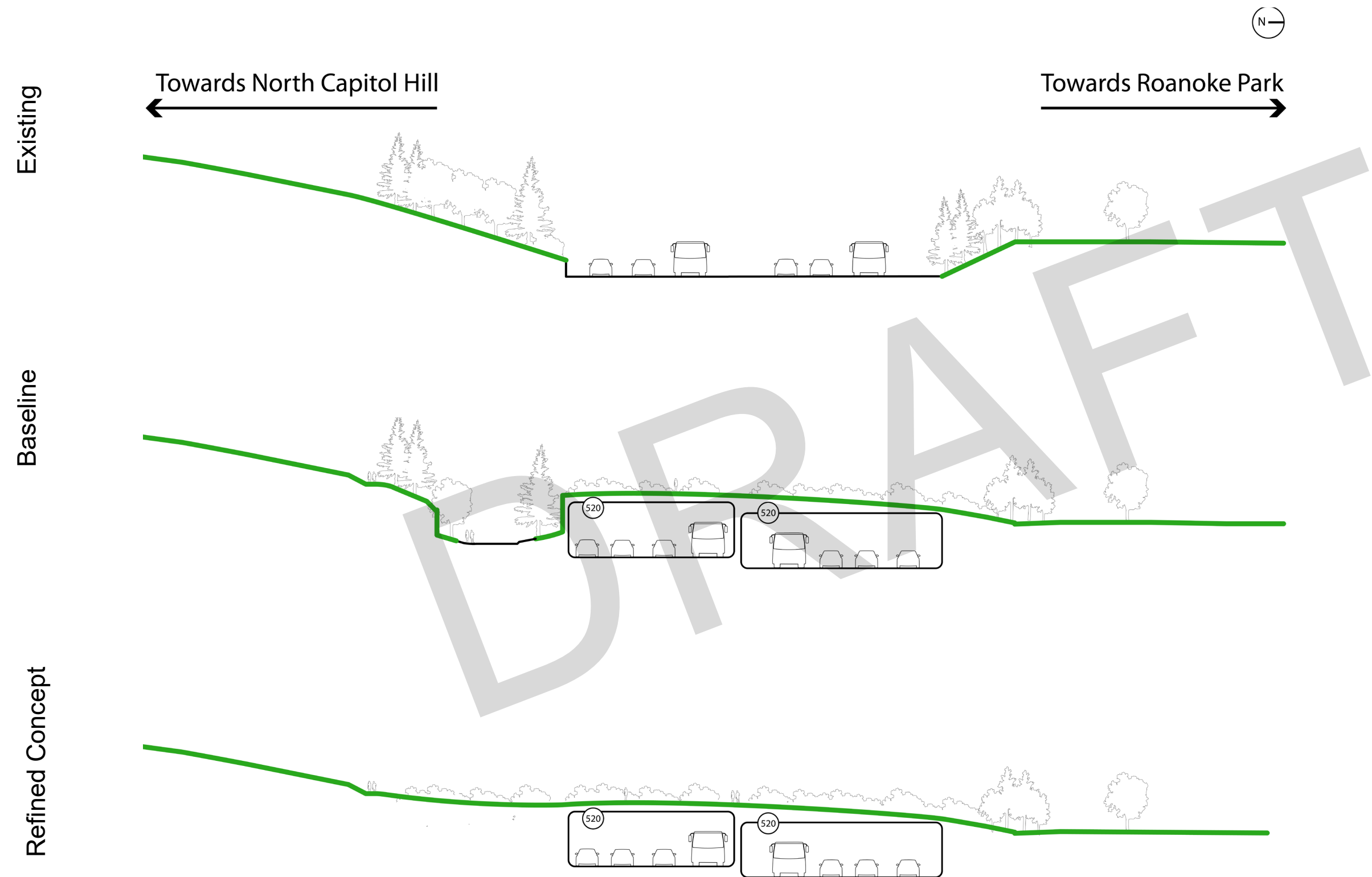
Critical Area Restoration

- Restores and enhances habitat function of shorelines, wetlands and steep slopes

Boyer Underbridge



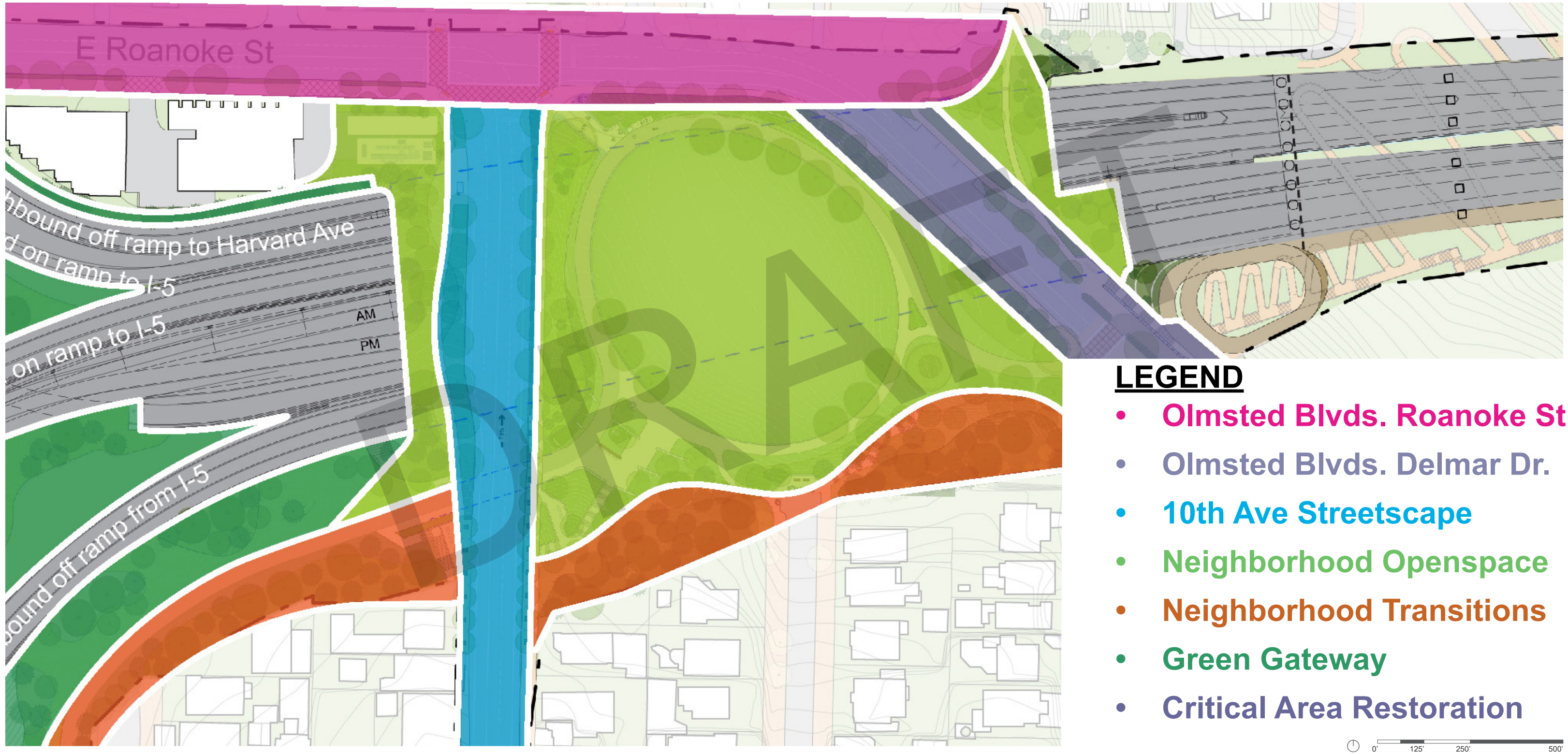
“Repairing the Wound” ~ Sam Assefa, Director OPCD



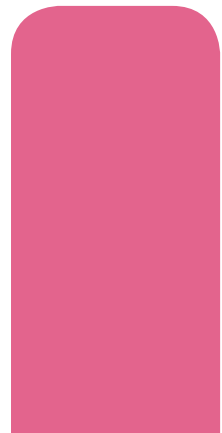
Neighborhood Open Space User Diagram



Roanoke Lid Area Planting Framework

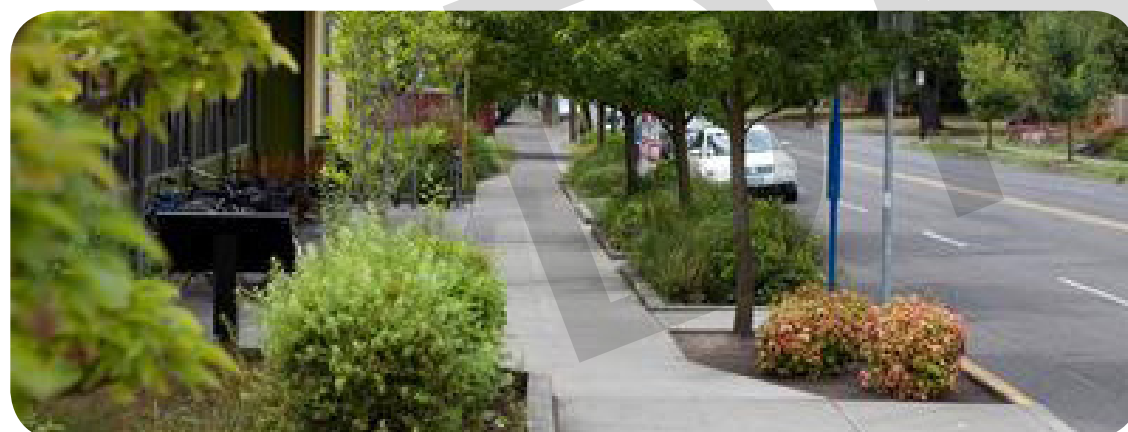
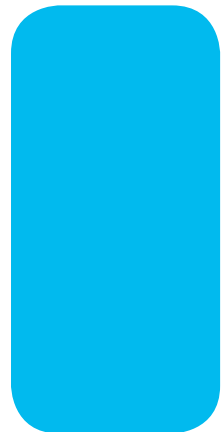
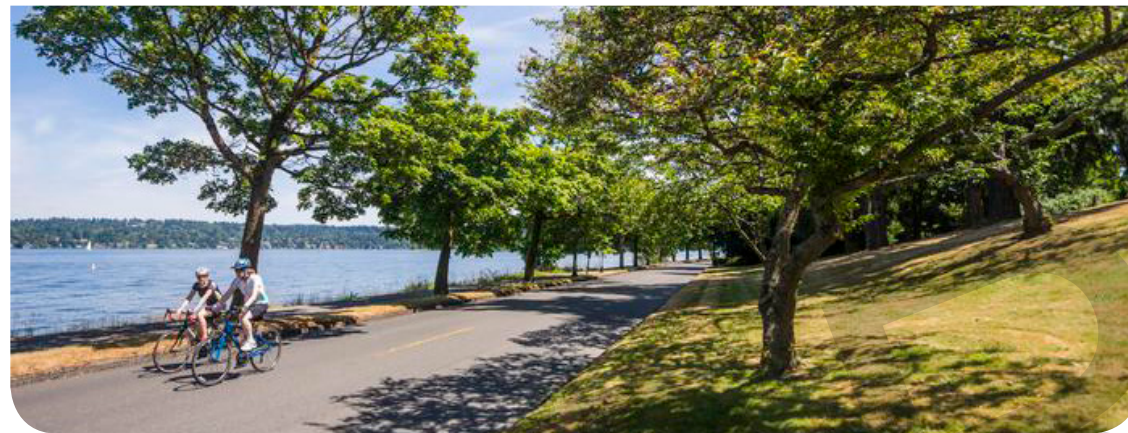
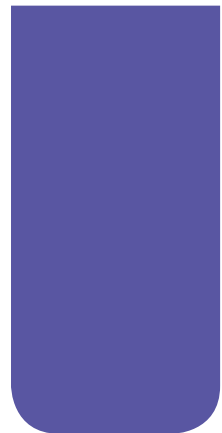


Planting Framework



Olmsted Boulevards

- Organic layouts respond to adjacent landscapes
- Subtle organization and hierarchy
- Respects natural environments and transitions



10th Ave Streetscape

- Predictable & safe

Planting Framework



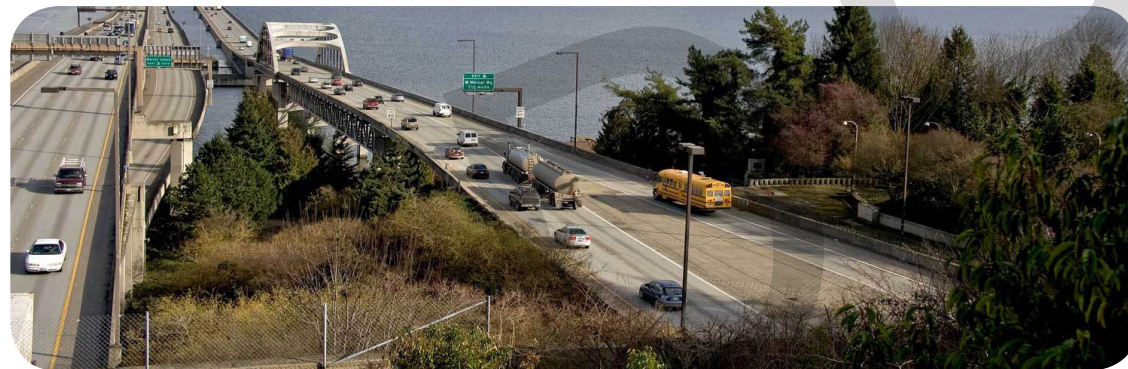
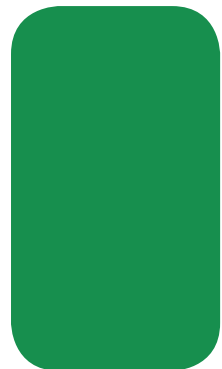
Neighborhood Open Space

- Maintains visibility for prospect
- Flexible for varying uses



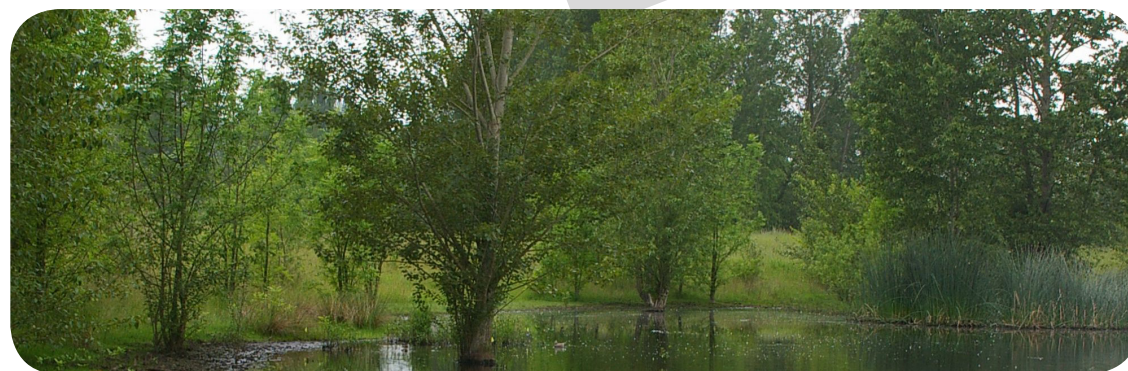
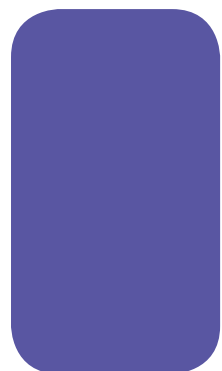
Neighborhood Transitions

- Restores natural areas
- Buffers residences



Green Gateway

- Strategic massings to anchor infrastructure and frame views



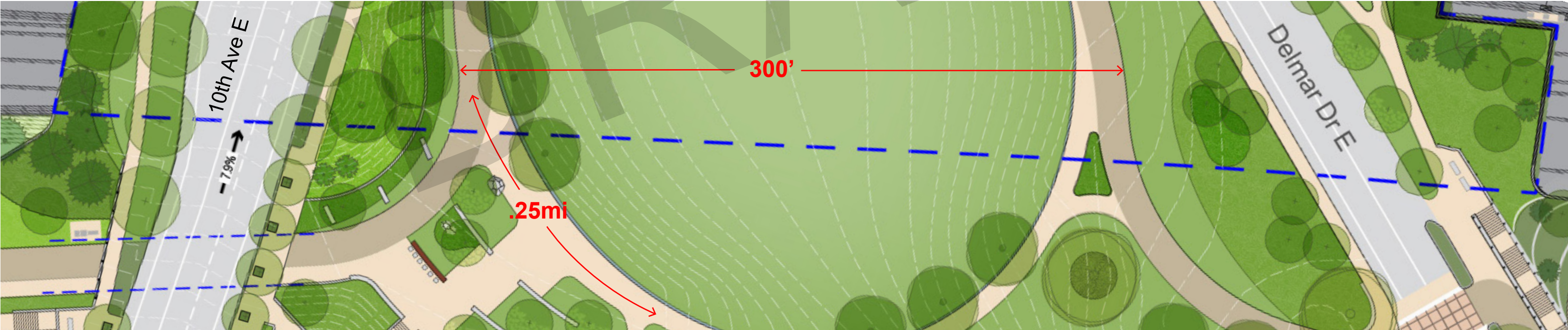
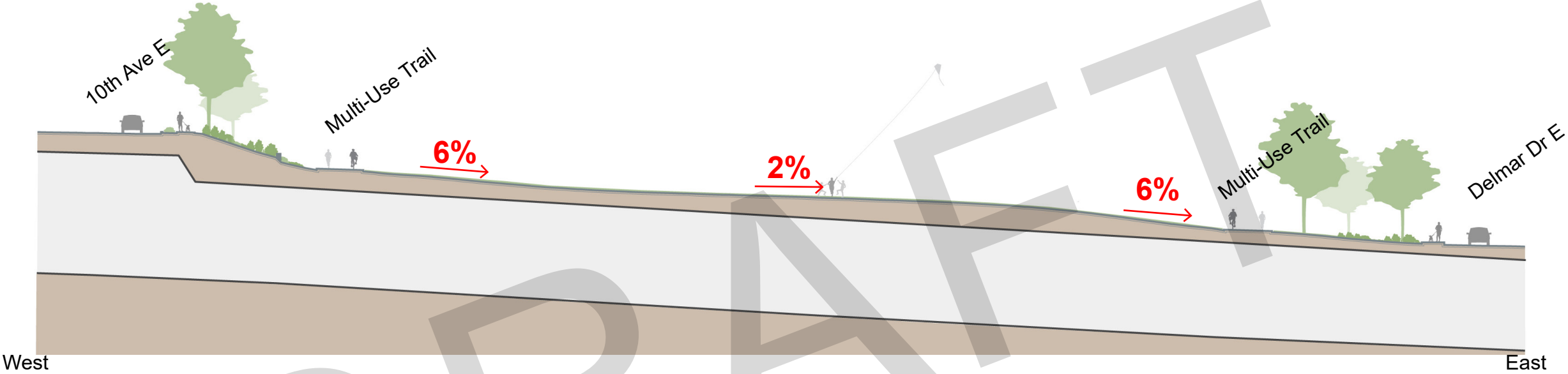
Critical Area Restoration

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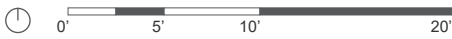
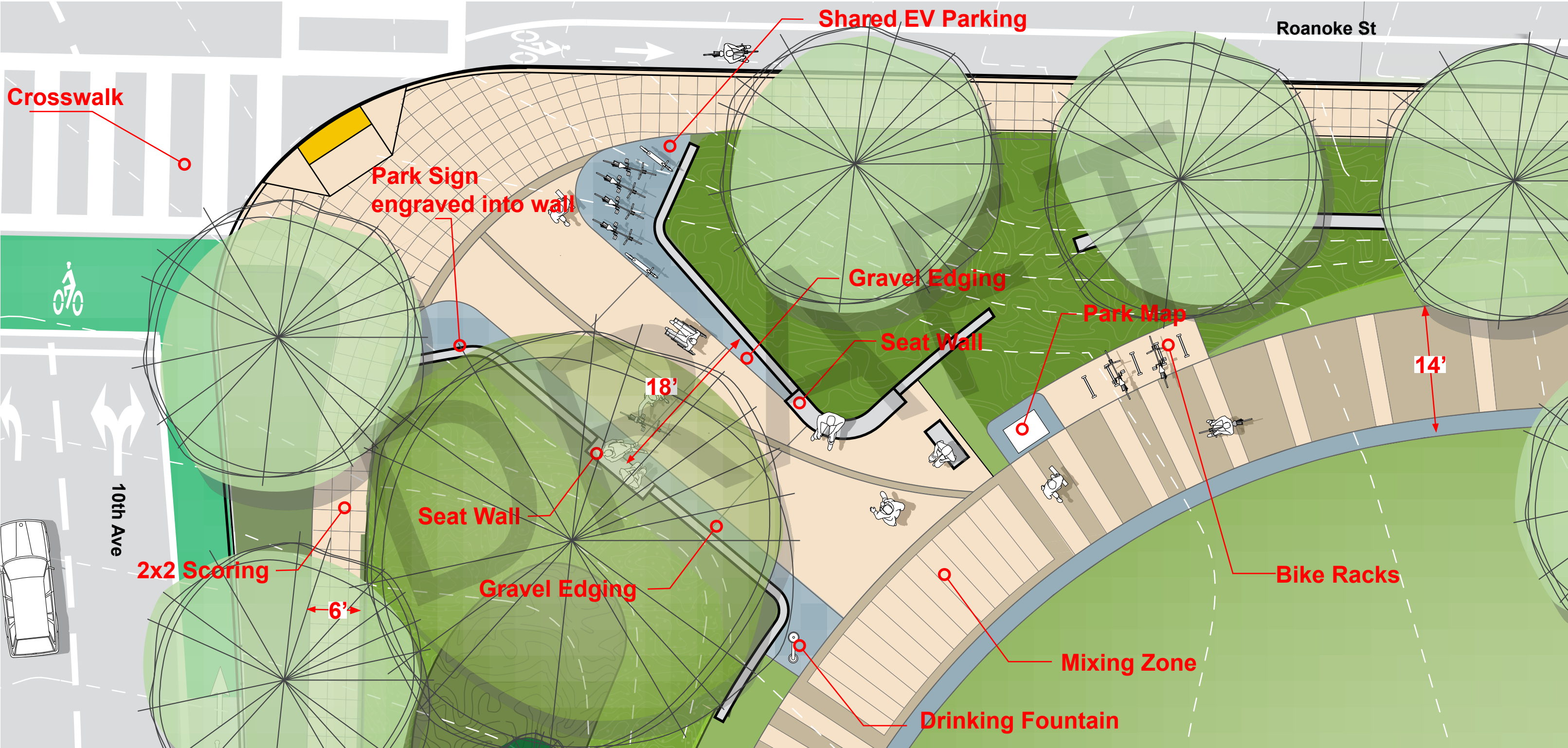
Neighborhood Open Space



Neighborhood Open Space



Neighborhood Open Space Gateway



Neighborhood Open Space Gateway



Neighborhood Open Space Gateway



Outlooks and Overlooks



10th Ave Outlooks, Overlooks, and Undercrossing

View



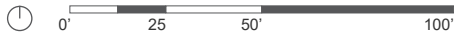
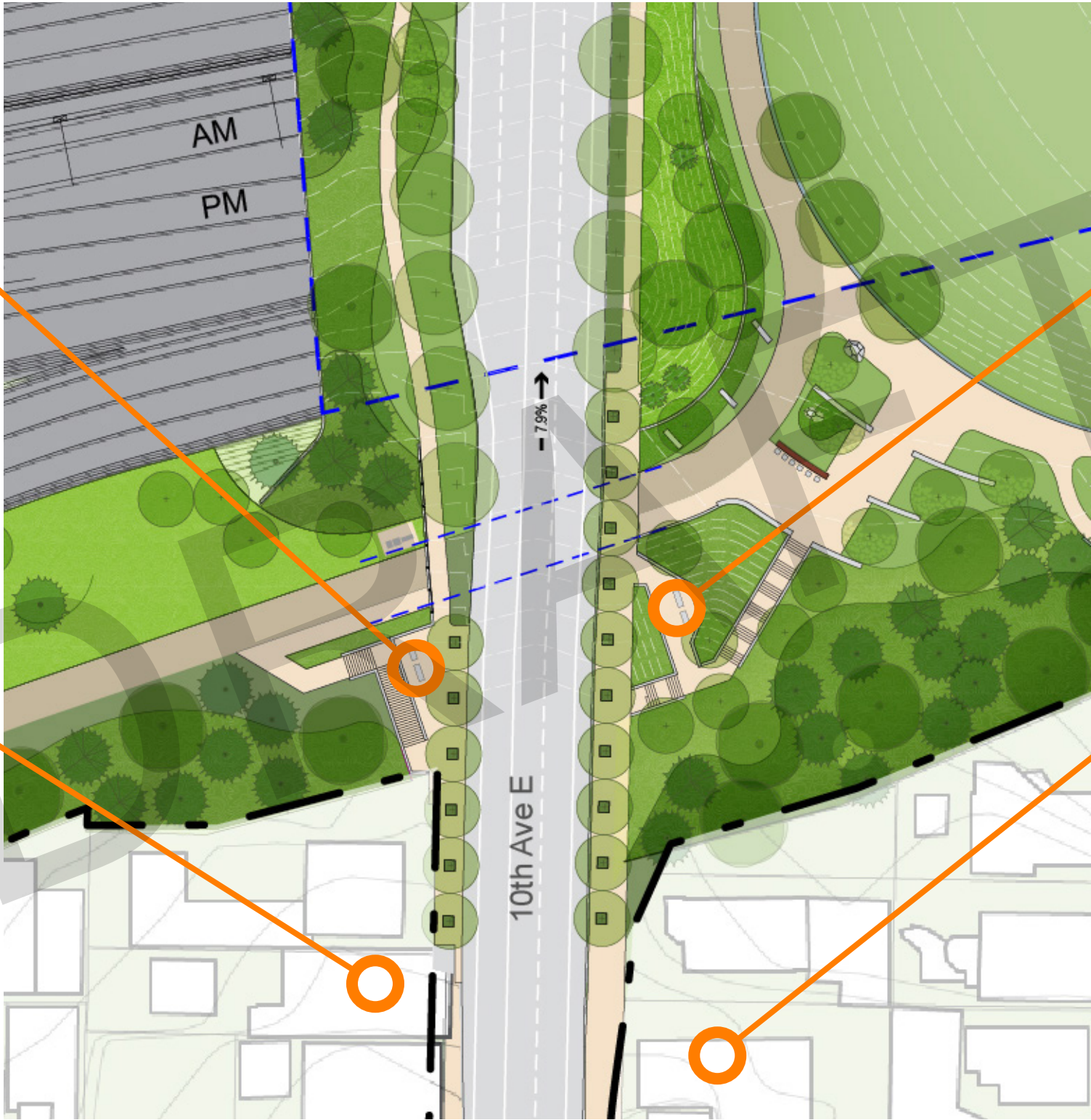
10th Ave West



View



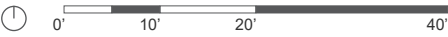
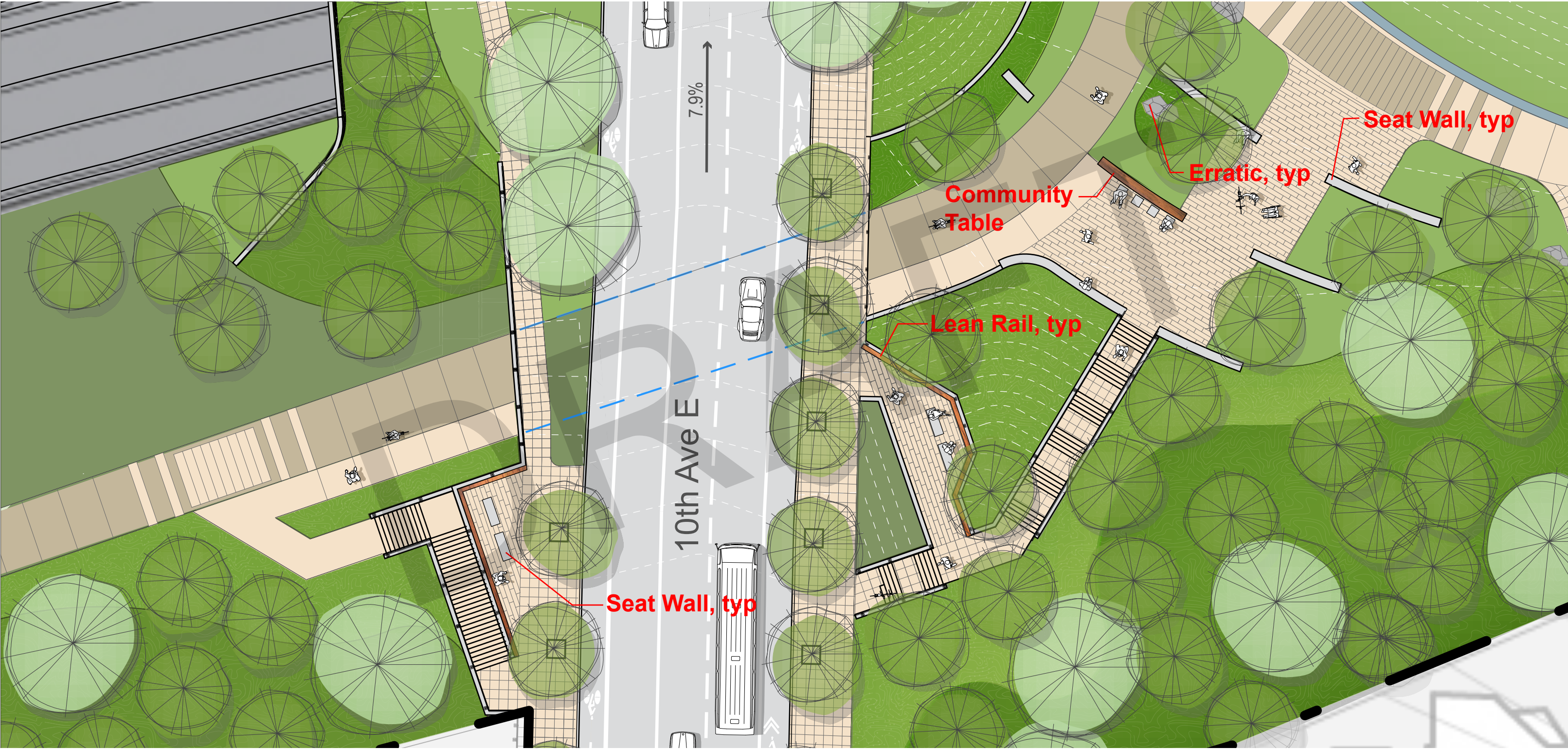
10th Ave East



Outlooks



Outlooks



10th Ave Outlook Looking South West



10th Ave Outlook Looking North East



Outlooks



Federal Ave Overlook Looking South East

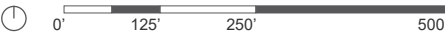


Federal Ave Overlook Looking North West



Roanoke Lid Discussion

Roanoke Lid



This aerial map illustrates the proposed SR 520 project area in Seattle. The map shows the existing SR 520 highway and the proposed SR 520 project alignment, which includes a new bridge over Portage Bay. The project alignment is shown in a light blue color, with the existing SR 520 in a darker blue. The map also shows the surrounding urban area, including the city of Seattle and the city of Bellevue. Key features include the SR 520 bridge, the SR 520 interchange, and the SR 520 interchange. The map also shows the surrounding urban area, including the city of Seattle and the city of Bellevue. Key features include the SR 520 bridge, the SR 520 interchange, and the SR 520 interchange. The map also shows the surrounding urban area, including the city of Seattle and the city of Bellevue. Key features include the SR 520 bridge, the SR 520 interchange, and the SR 520 interchange.



Connections East

