UW Skybridge Review

Presentation to Seattle Design Commission
January 21, 2016

UNIVERSITY of WASHINGTON

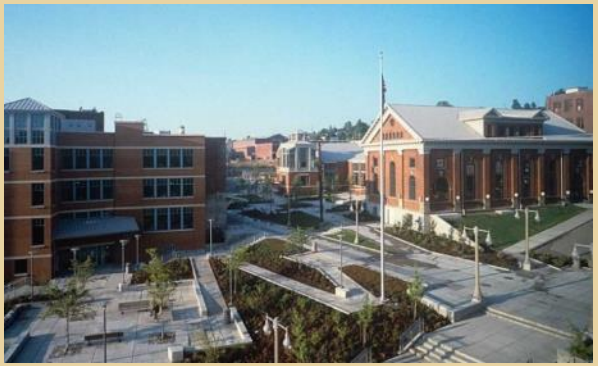
Presentation Overview

- The University of Washington
- The Campus Setting
- Requested Action
- Overview of UW Skybridges
- Policy Assessment
- Benefit Package
- Questions

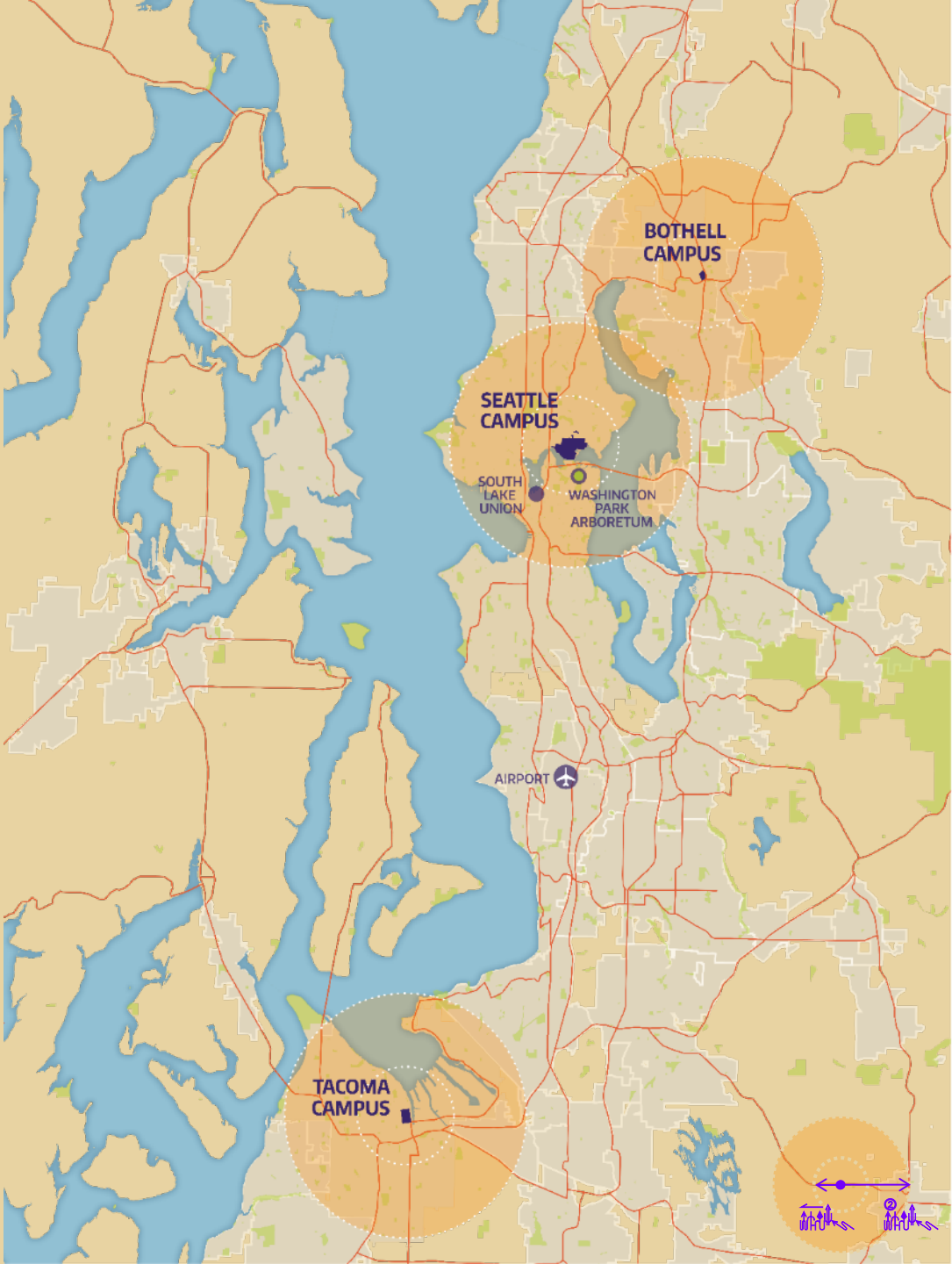
Regional Context

UW BOTHELL

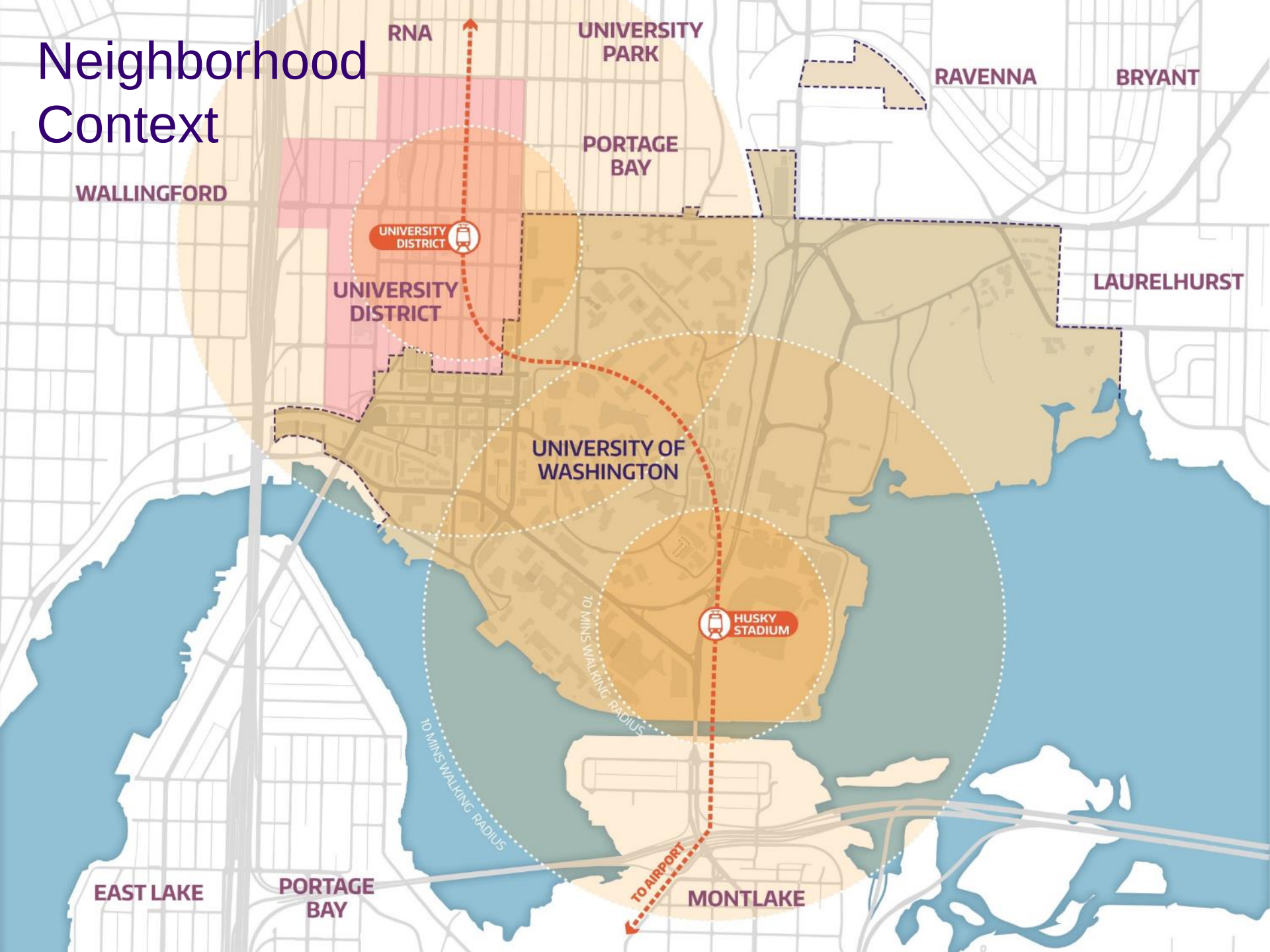
UW SEATTLE



UW TACOMA



Neighborhood Context



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The Campus Community

FTE Fall 2015

Students	46,100 FTE
Faculty/Staff	20,600 FTE

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Service to our Community

The UW provides over 346,000 hours of service to our local communities

- From mentoring preschool children to preparing low-income, first-generation or underrepresented students for doctoral study, UW programs serve approximately 14,000 students and collaborate with 50 departments in 11 schools.

Educational Outreach

UW's Educational Outreach programs serve over 49,000 local students annually

- UW Educational Outreach's programs serve over 49,000 local students each year.
- 280 companies have been started by UW faculty and students or with UW developed technology.
- The UW is the 3rd largest employer in Washington State, with over 30,200 benefits-eligible faculty and staff. The University also employs over 4,400 benefits-eligible graduate students.

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Cultural Events

UW's museums and performance venues draw over 20,000 visitors annually

- More than 20,000 visits to the campus for cultural events are hosted by the UW performance venues and museum every year.

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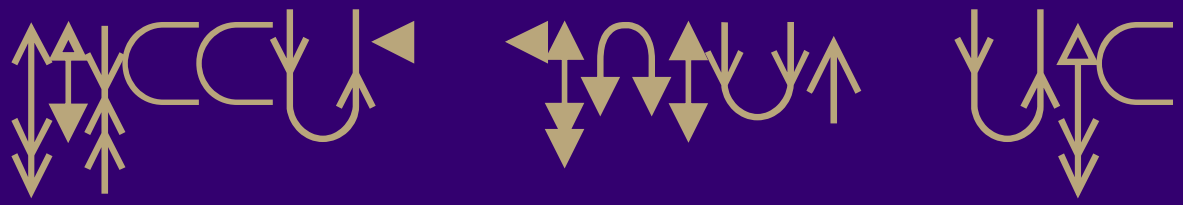
UW Athletics

UW Athletics hosts hundreds of sporting events, hosting over 300,000 visitors annually



Campus Facts

Acreage	**650 acres**
Buildings	**18,300,000 GSF**
Waterfront	**2.1 miles**
BGT	**1.8 miles**

Mode Split

- UW employees & students make at least 293,684 trips to campus in a typical week

Transit	40%
Walk	27%
Drive	18%
Bike	7%
Carpool	6%

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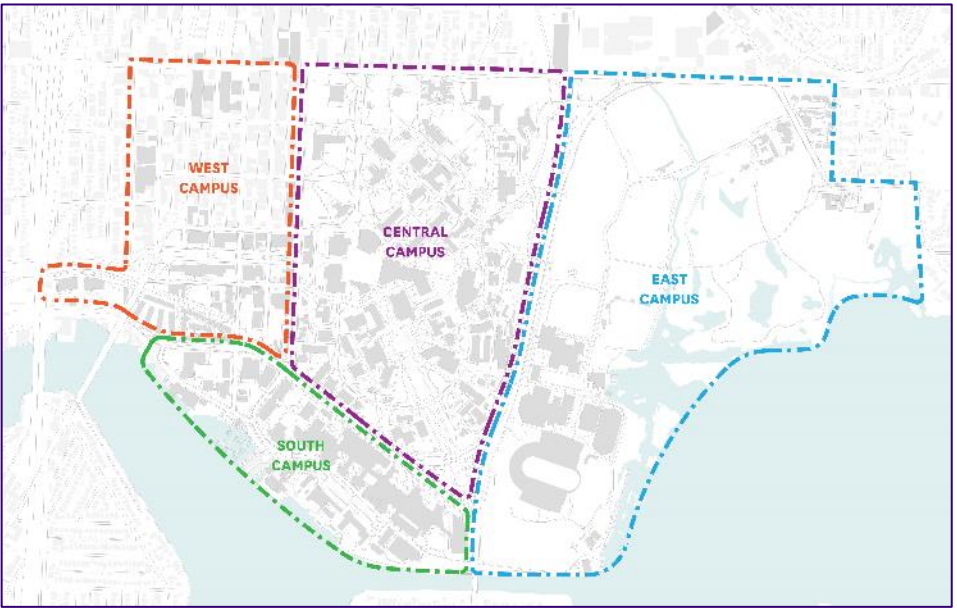
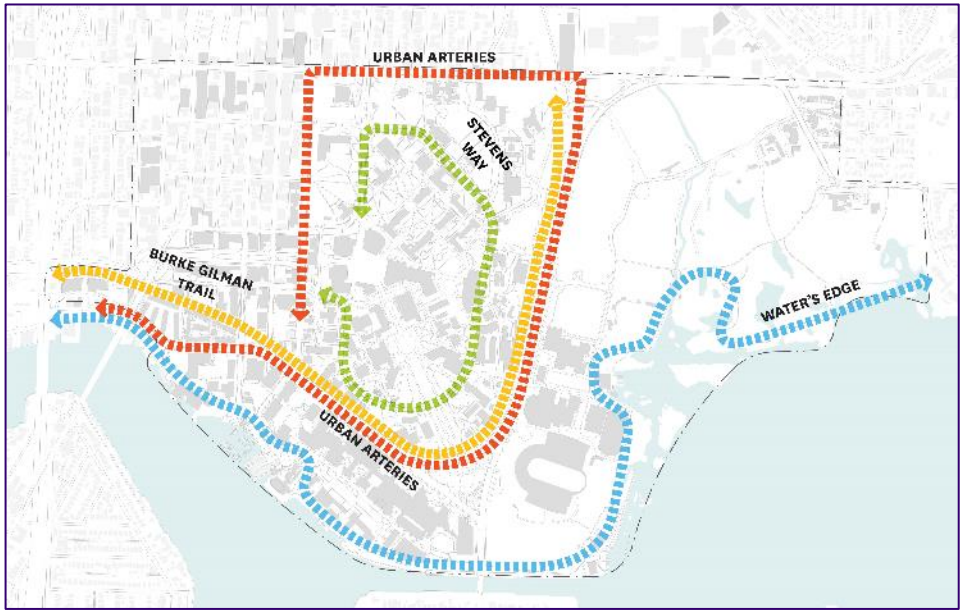
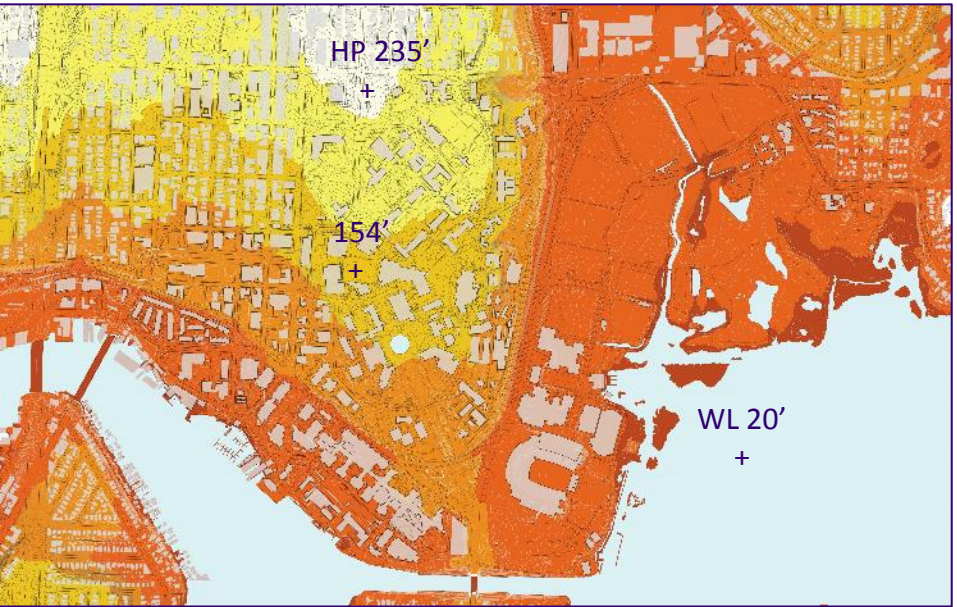
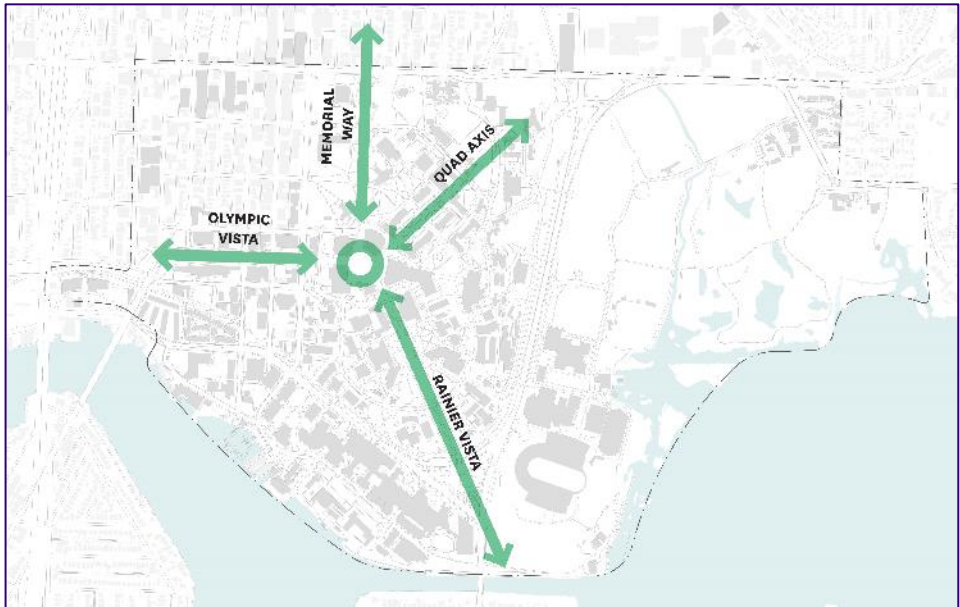
Campus Context

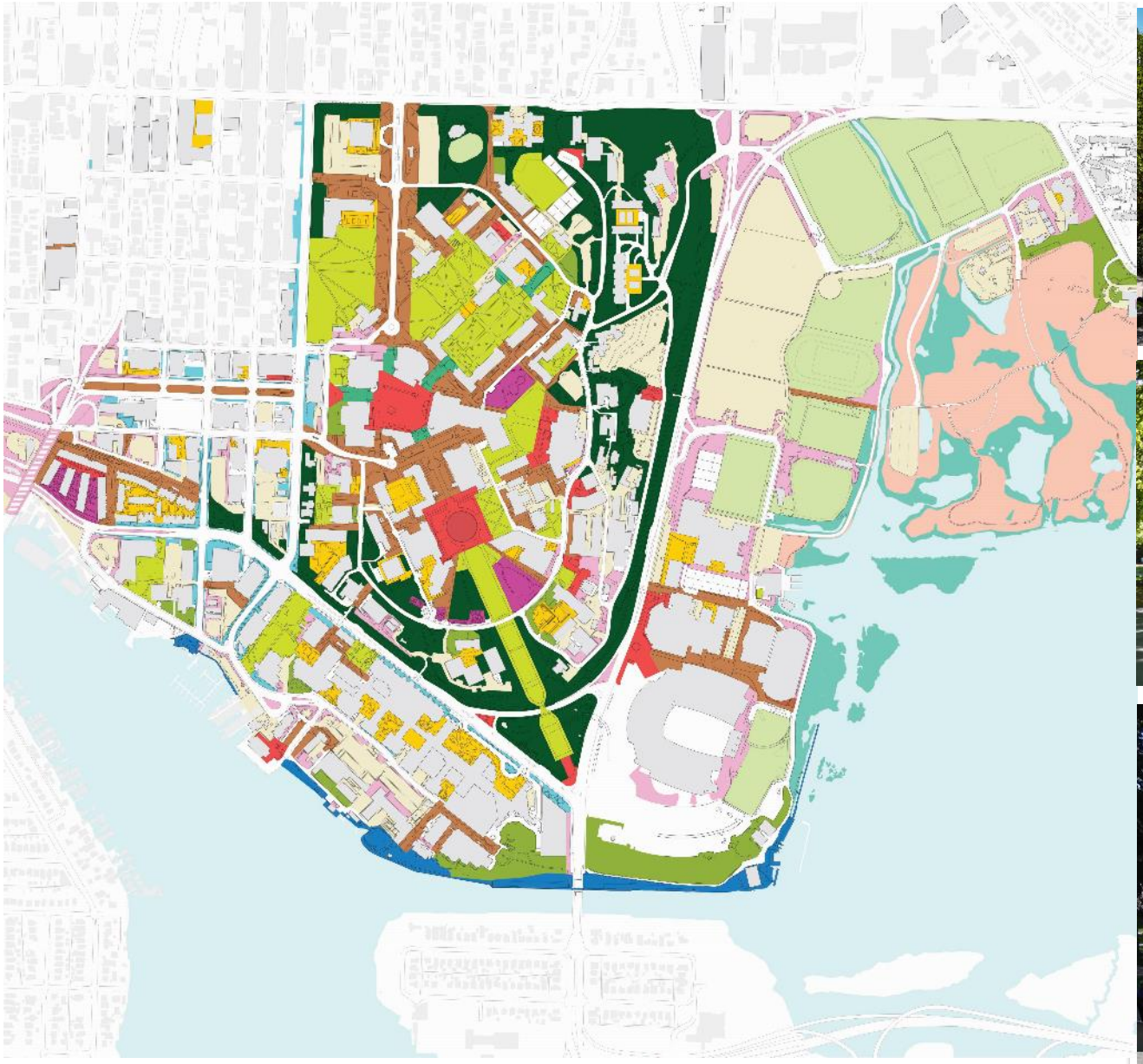




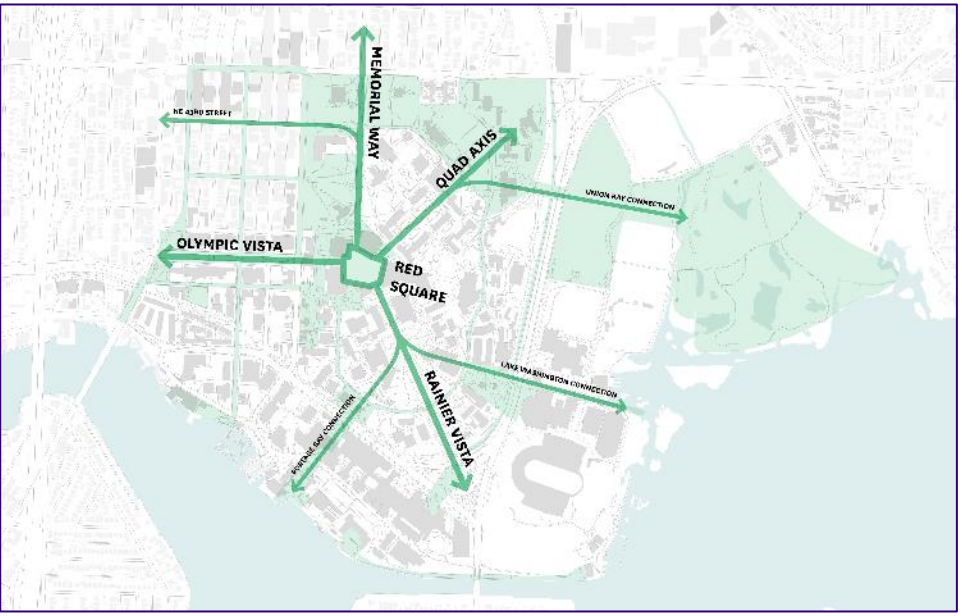


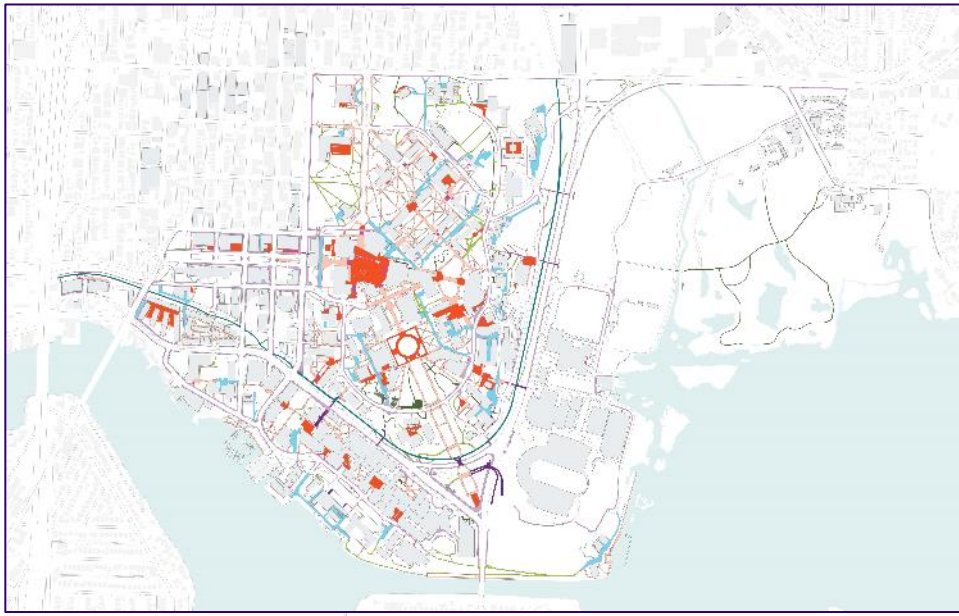


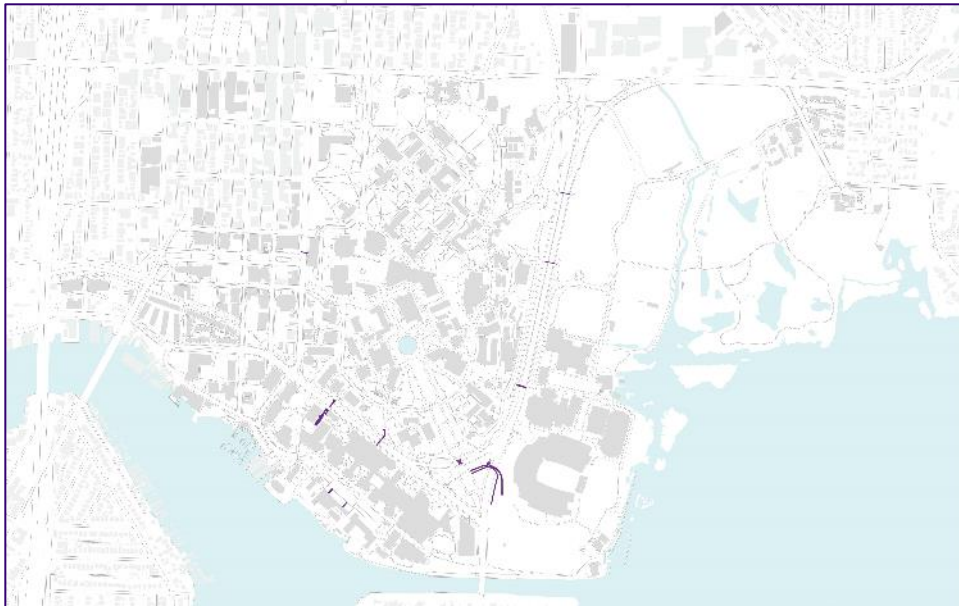
UW Landscape Mosaic

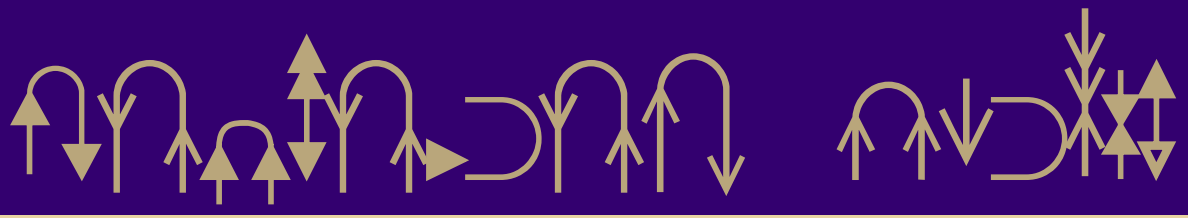


Campus Circulation









Why are we here today?

Proposal

- The University of Washington has 5 city-permitted pedestrian overpasses on campus, each with its own term limits.
- To make the renewal process more efficient and cost-effective, the University proposes to consolidate the individual permits into one term permit.

Public Benefit

- By July 2016, the University will have enhanced approximately 1/2 mile of the 1.8 miles of the Burke Gilman Trail with mode separation.
- In July 2015, Washington State Legislature passed a new transportation package that includes $16 million for Burke-Gilman Trail transit access, safety and efficiency improvements. This funding will be available in the 2025-27 biennium.

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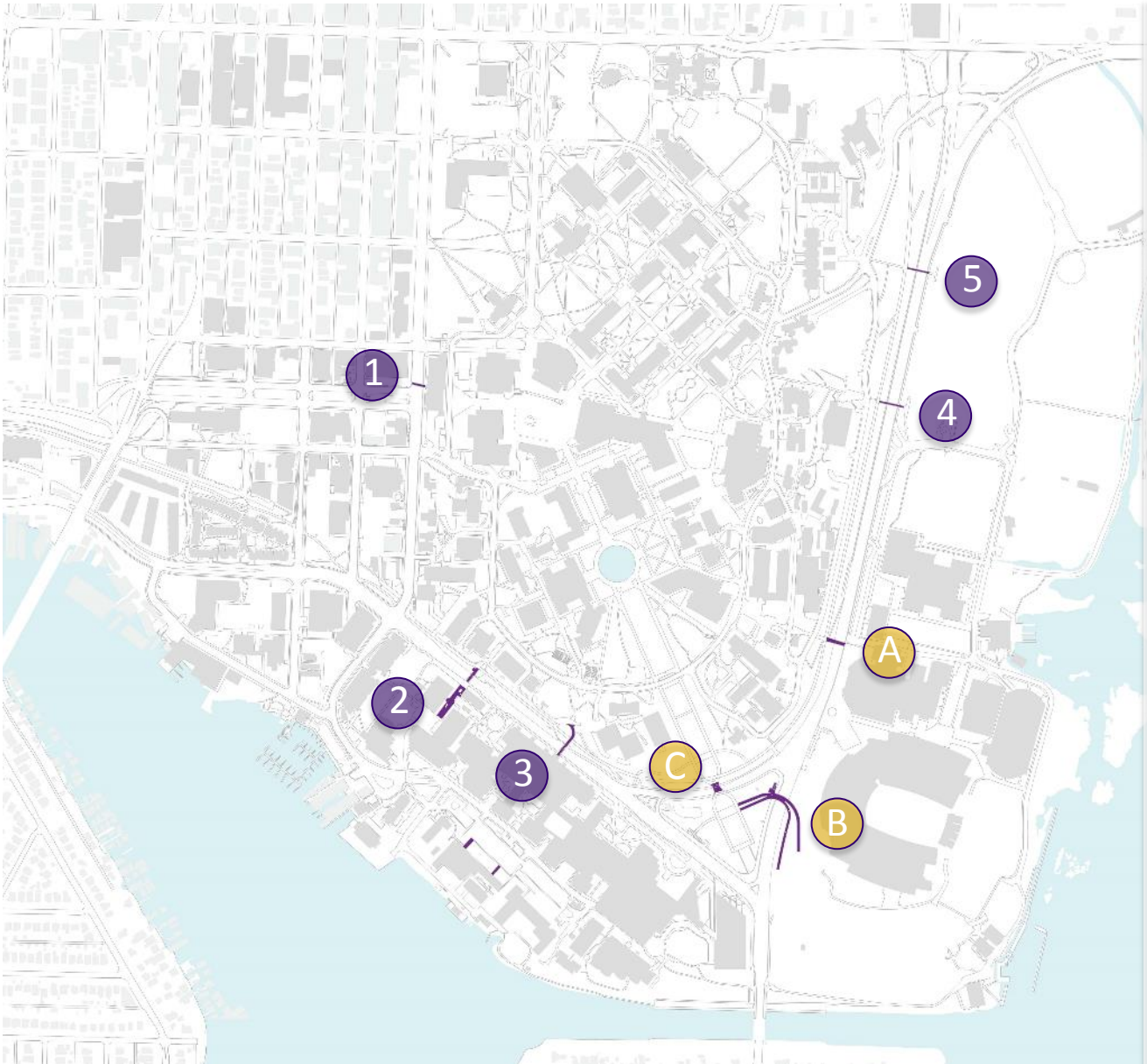
Pedestrian Overpasses at UW



5 Bridges under permit

1. 15th Avenue Bridge
2. Pacific/Hitchcock Bridge
3. Pacific/T-Wing Bridge
4. Montlake/Wahkiakum Bridge
5. Montlake/Whatcom Bridge

Bridges not under permit

- A Hec Ed Bridge
- B Sound Transit Bridge
- C Rainier Vista Bridge

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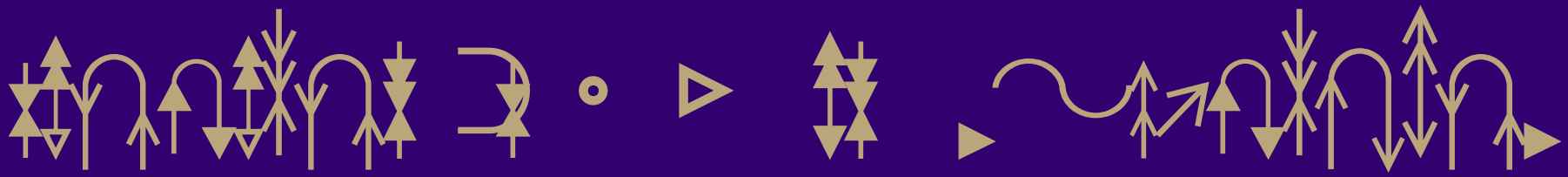

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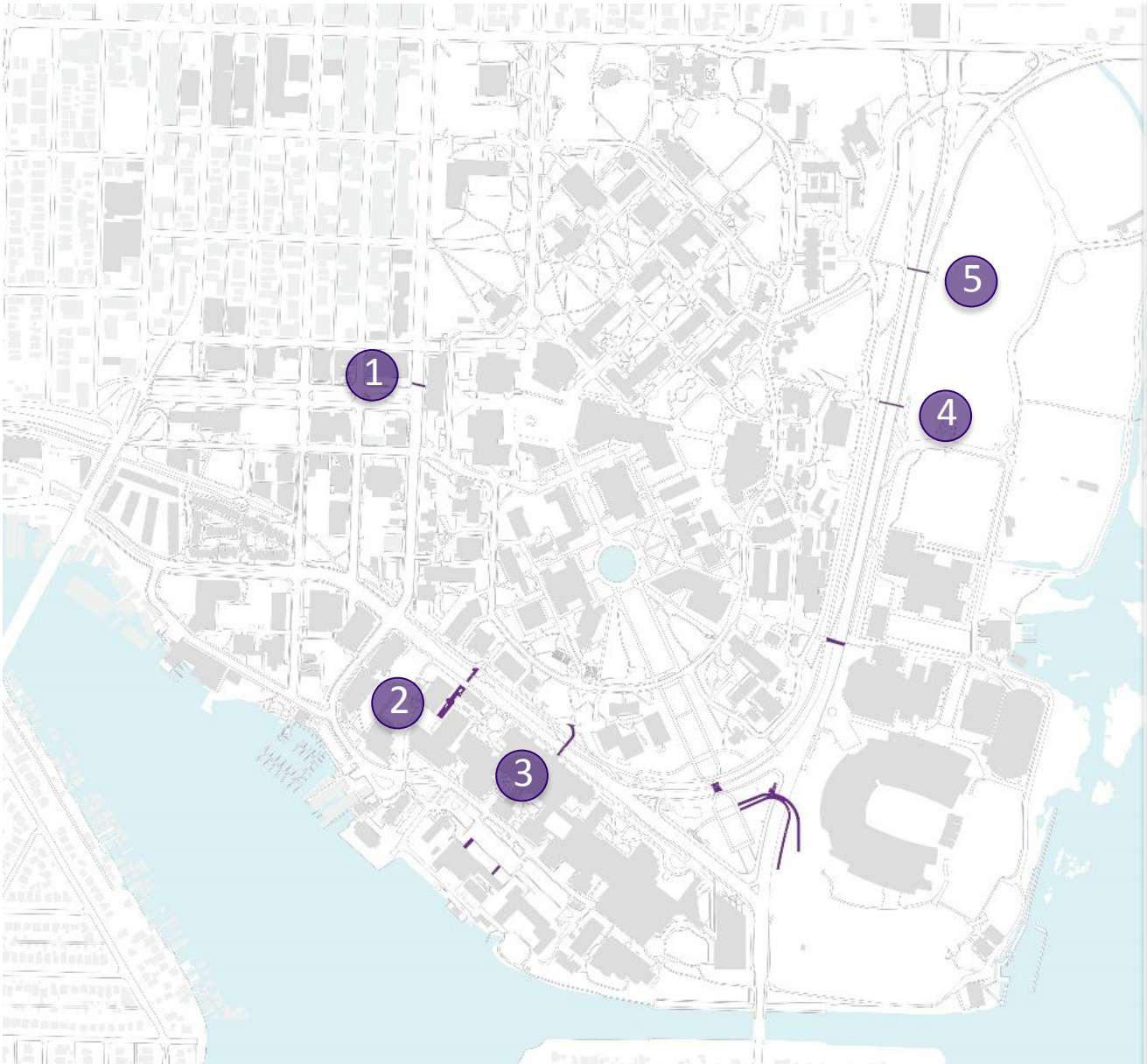
Pedestrian Overpasses



Critical Links

- Public overpasses are open to all pedestrians and bicyclists.
- Provide important linkages between central campus and facilities and businesses on the west, south and east portions of campus.
- Help accommodate significant grade changes.
- Together, these bridges accommodate over 25,000 pedestrians daily across three busy principal arterials.
- The cost of taking down 5 overpasses is $2.8 Million, and does not include any site restoration or establishment of new crossings, ADA access.

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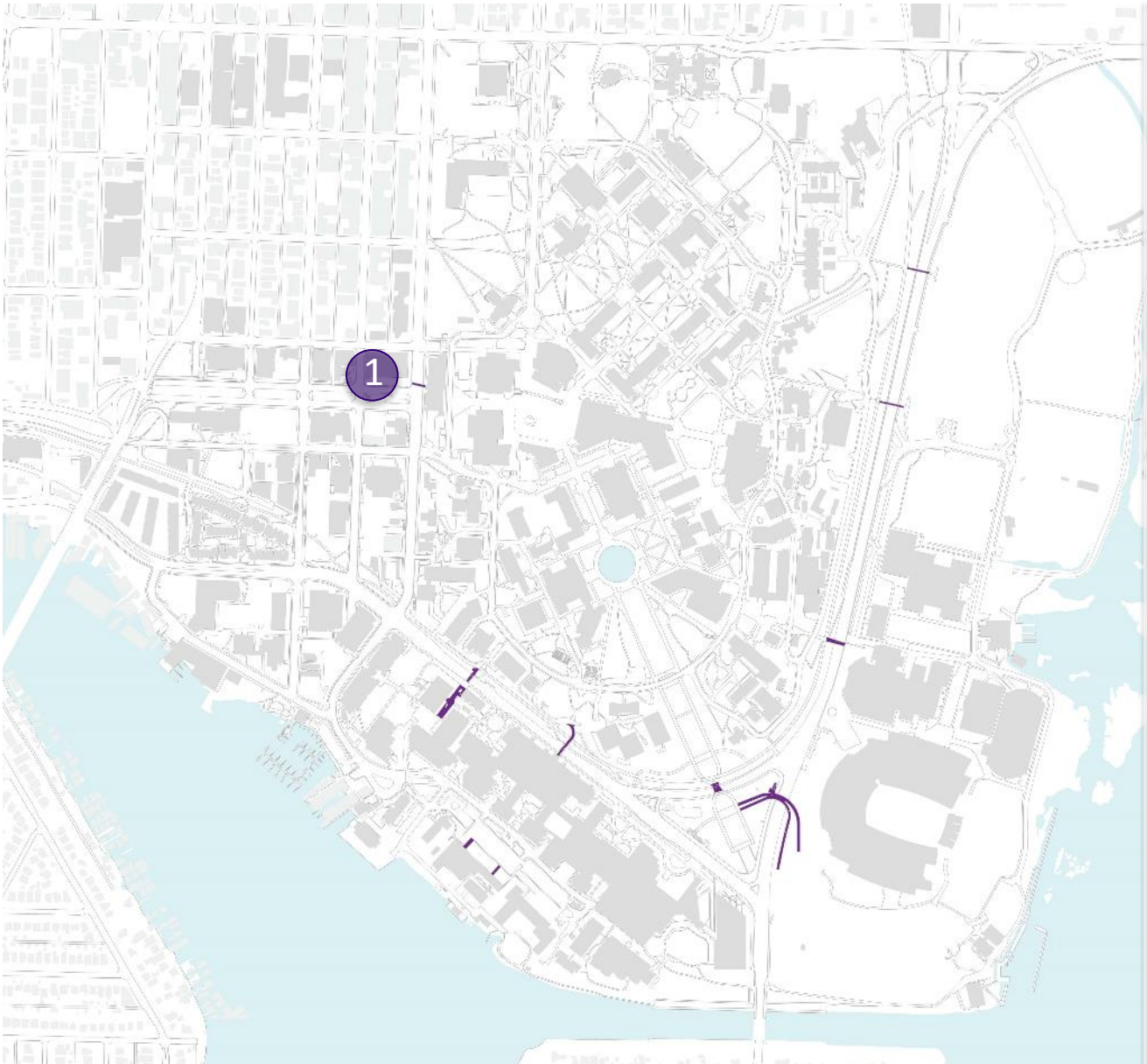
1 15th Avenue Bridge



- Carries over 10,000 pedestrians/day across 15th Avenue NE, a principal arterial used by 15,000 vehicles/day
- Connects two important public spaces– George Washington Plaza and Campus Parkway– as well as connecting central UW campus to businesses and residence halls to the West.
- Reduces potential pedestrian-vehicle conflicts and serves as a major vehicle entry point, with Central Plaza parking garage entrance located just north of the bridge crossing.
- Located at George Washington Plaza level where most pedestrian activity occurs.
- Steps down to Campus Parkway Plaza, where transit stops are located and pedestrian activity occurs.

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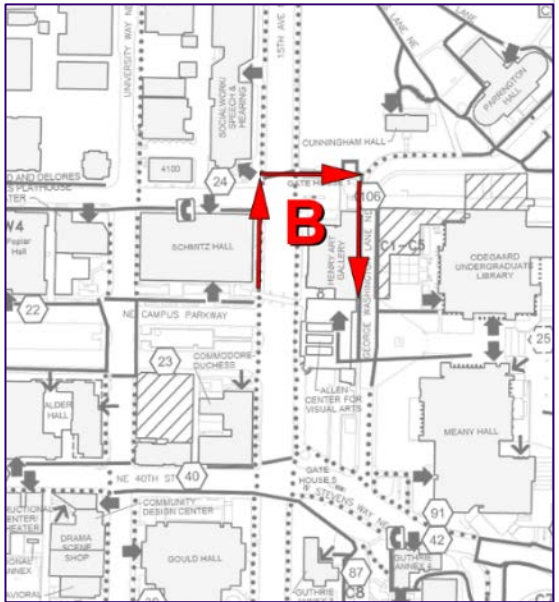
1 15th Avenue Bridge

- Demolition and removal of bridge is $588,000 and does not include costs for site restoration or establishment of new crossings, ADA access.
- Potential pedestrian-vehicle conflicts as 10,000 pedestrians now using bridge are required to cross 15th Avenue NE, an arterial used by 15,000 vehicles/day.

1 15th Avenue Bridge



- Overpass is not an ADA accessible path.
- Rerouting of ADA accessible path:

Alternative A: 835 linear feet (vertical distance traveled not calculated)

Note:

186 pedestrians cross in this location in peak AM

359 pedestrians cross in this location at peak PM hour

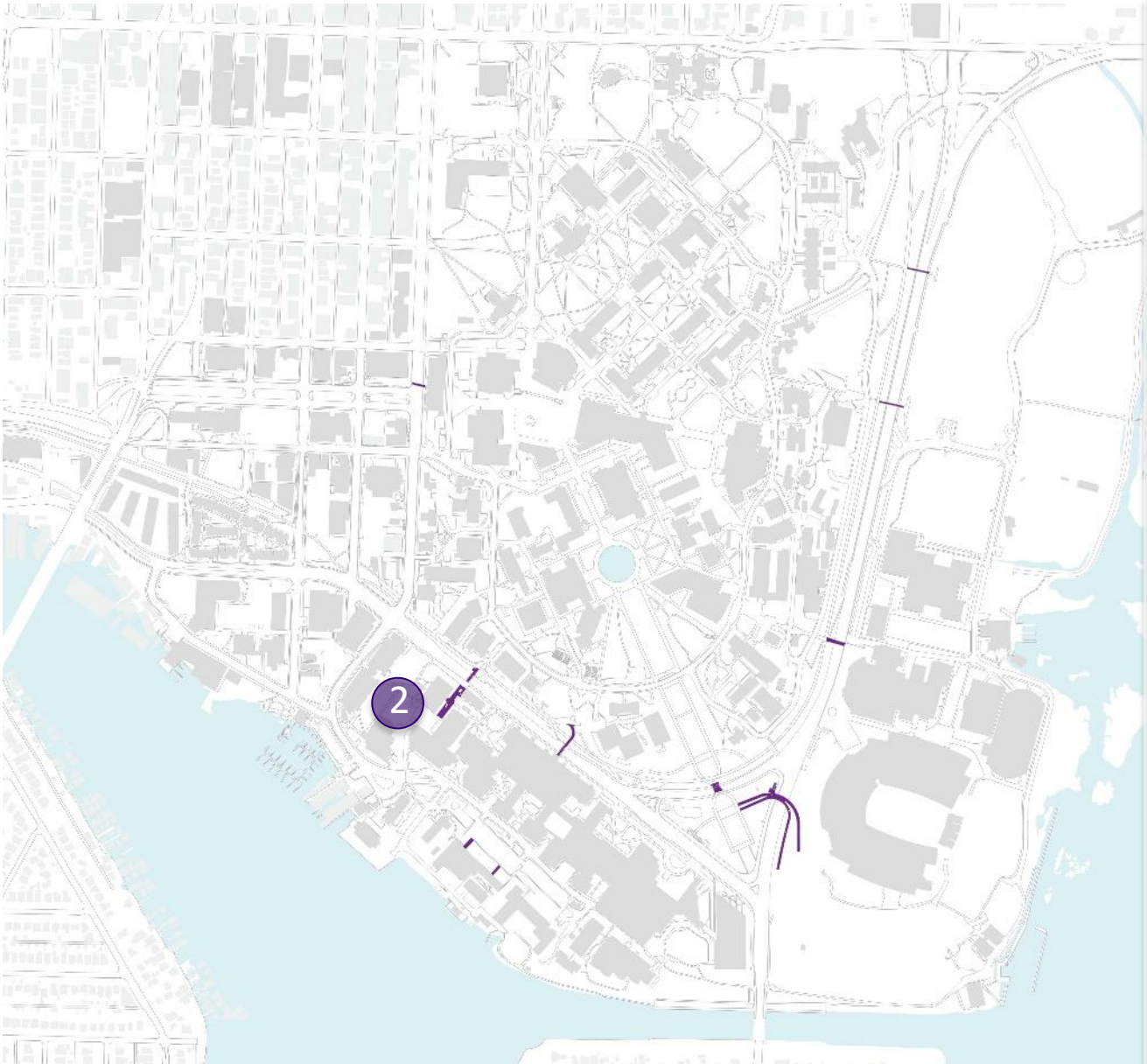
Alternative B: 605 linear feet (vertical distance traveled not calculated)

Note:

211 pedestrians cross in this location in peak AM

298 pedestrians cross in this location at peak PM hour

2 Pacific / Hitchcock Bridge



- Carries over 6,000 pedestrians/day across NE Pacific Street, a principal arterial used by 24,900 vehicles/day.
- Connects the Burke-Gilman Trail and Lewis Lane (Kincaid Hall) to Health Sciences Center and businesses along Boat Street.
- Offers the only ADA access to Kincaid Hall from north of Pacific Street that does not require significant out-of-direction travel.
- Located at the Burke-Gilman level, where most pedestrian activity occurs– providing connection over steep slope, where no street-level development is located or planned.
- Crosses over transit stop- signalized at grade pedestrian crossing between transit stops is available for pedestrians already at street level.

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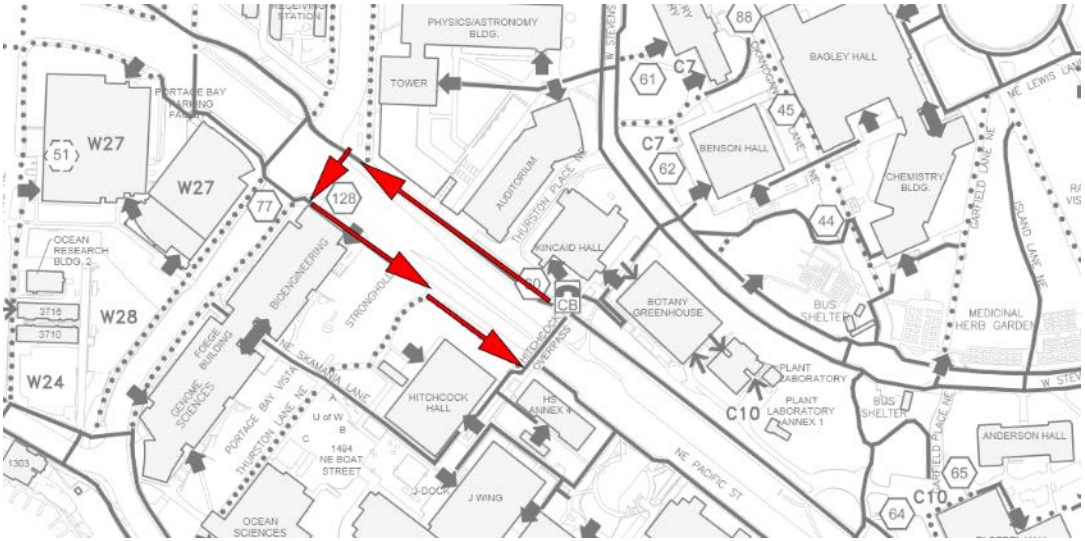
2 Pacific / Hitchcock Bridge

- Demolition and removal of bridge is $535,000 and does not include costs for site restoration or establishment of new crossings, ADA access.
- Potential pedestrian-vehicle conflicts as 6,000 pedestrians now using bridge are required to cross NE Pacific Street, an arterial used by 24,900 vehicles/day.

2 Pacific / Hitchcock Bridge



- **Rerouting of ADA accessible path:**

  1,075 linear feet (vertical distance traveled not calculated)

3 Pacific / T-Wing Bridge

- Carries over 4,700 pedestrians/day across NE Pacific Street, a principal arterial used by 24,900 vehicles/day.
- Connects the Burke-Gilman Trail and Garfield Lane directly to Magnuson Health Sciences Center (bridge aligns with building floor level).
- Grade separated from the Burke-Gilman Trail.
- Provides connection over steep slope, where no street-level development is located or planned.

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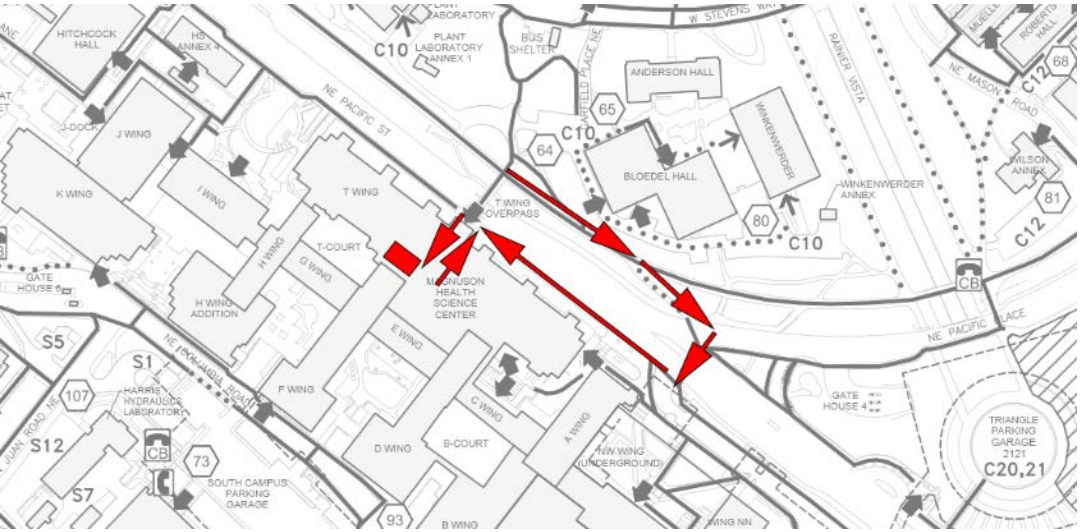
3 Pacific / T-Wing Bridge

- Demolition and removal of bridge is $887,000 and does not include costs for site restoration or establishment of new crossings, ADA access.
- Potential pedestrian-vehicle conflicts as 4,700 pedestrians now using bridge are required to cross NE Pacific Street, an arterial used by 24,900 vehicles/day.

3 Pacific / T-Wing Bridge



- Rerouting of ADA accessible path:
  - 1,125 linear feet (vertical distance traveled not calculated)

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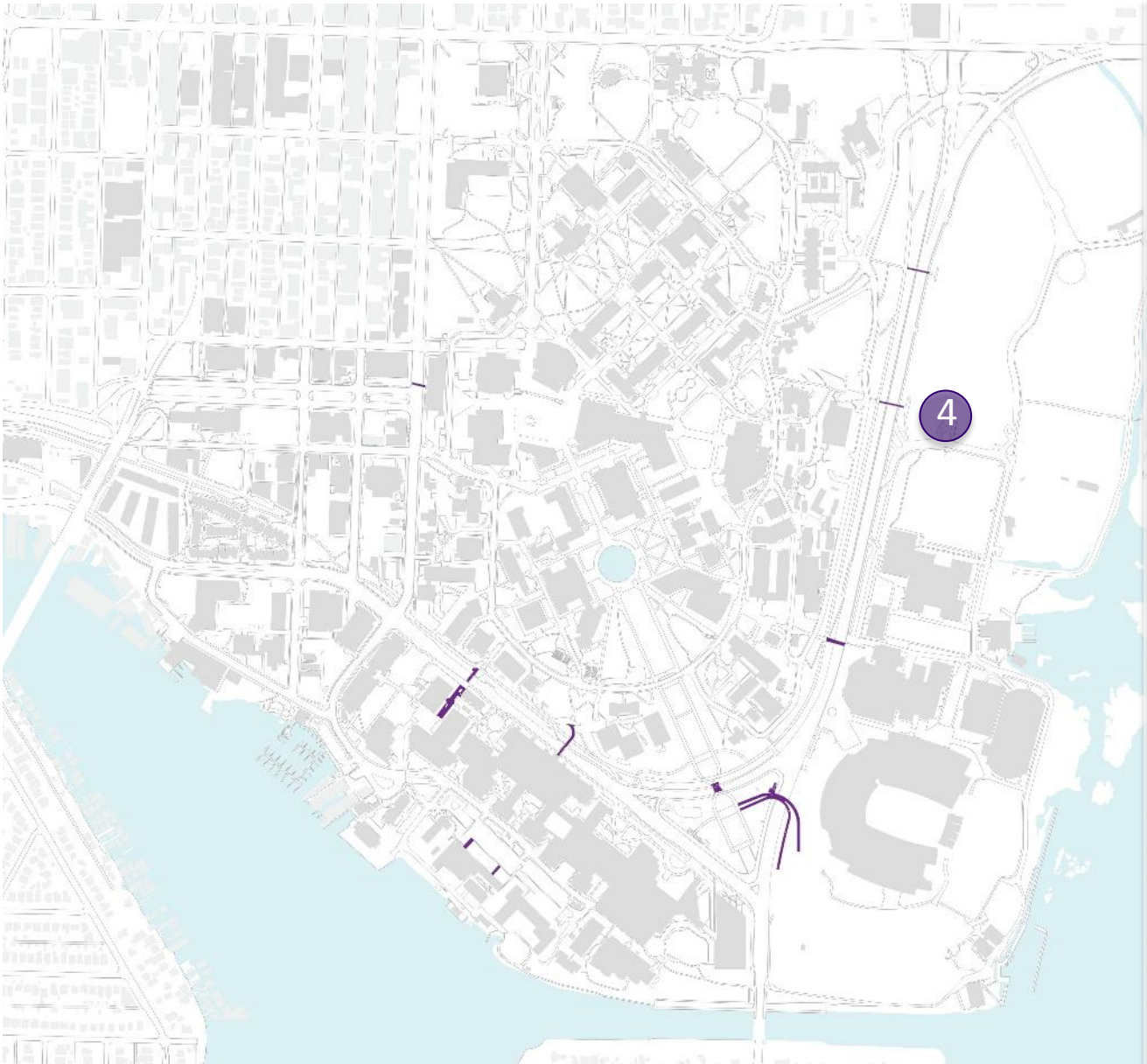
4 Montlake / Wahkiakum Bridge

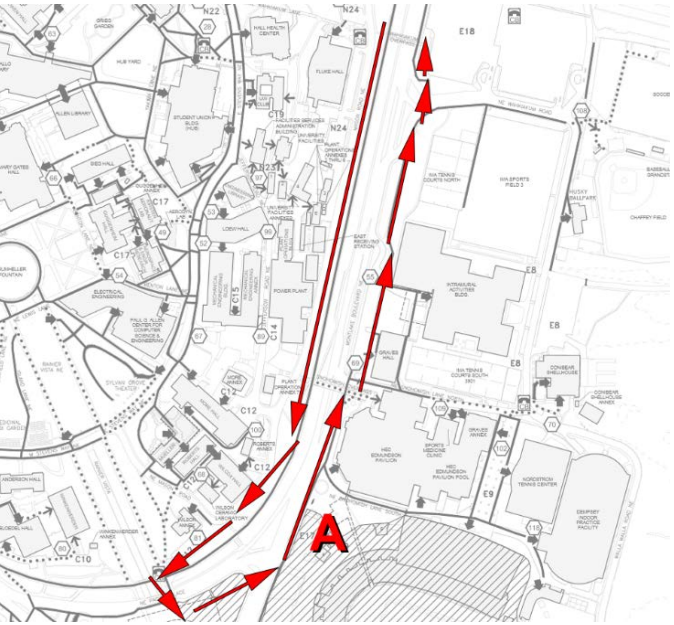


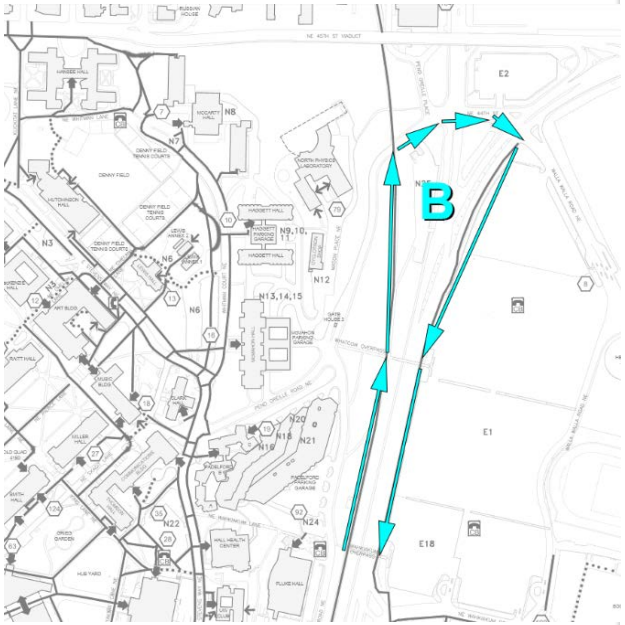
- Carries over 5,100 pedestrians/day Montlake Boulevard NE, a principal arterial used by 48,300 vehicles/day – pedestrian crossings. are higher on days with sports events.
- Connects the Burke-Gilman to E1/E18 parking lot, the UW athletic complex, and the Union Bay Natural Area.
- West end of bridge is located at the Burke-Gilman level, where most pedestrian activity occurs– providing connection over steep slope, where no street-level development is located or planned.
- East end of bridge steps down to parking lot, where no street-level development is located or planned.

4 Montlake / Wahkiakum Bridge

- Demolition and removal of bridge is $410,000 and does not include costs for site restoration or establishment of new crossings, ADA access.
- Potential pedestrian-vehicle conflicts as 5,100 pedestrians now using bridge are required to cross Montlake Boulevard NE, a principal arterial used by 48,300 vehicles/day.

4 Montlake / Wahkiakum Bridge





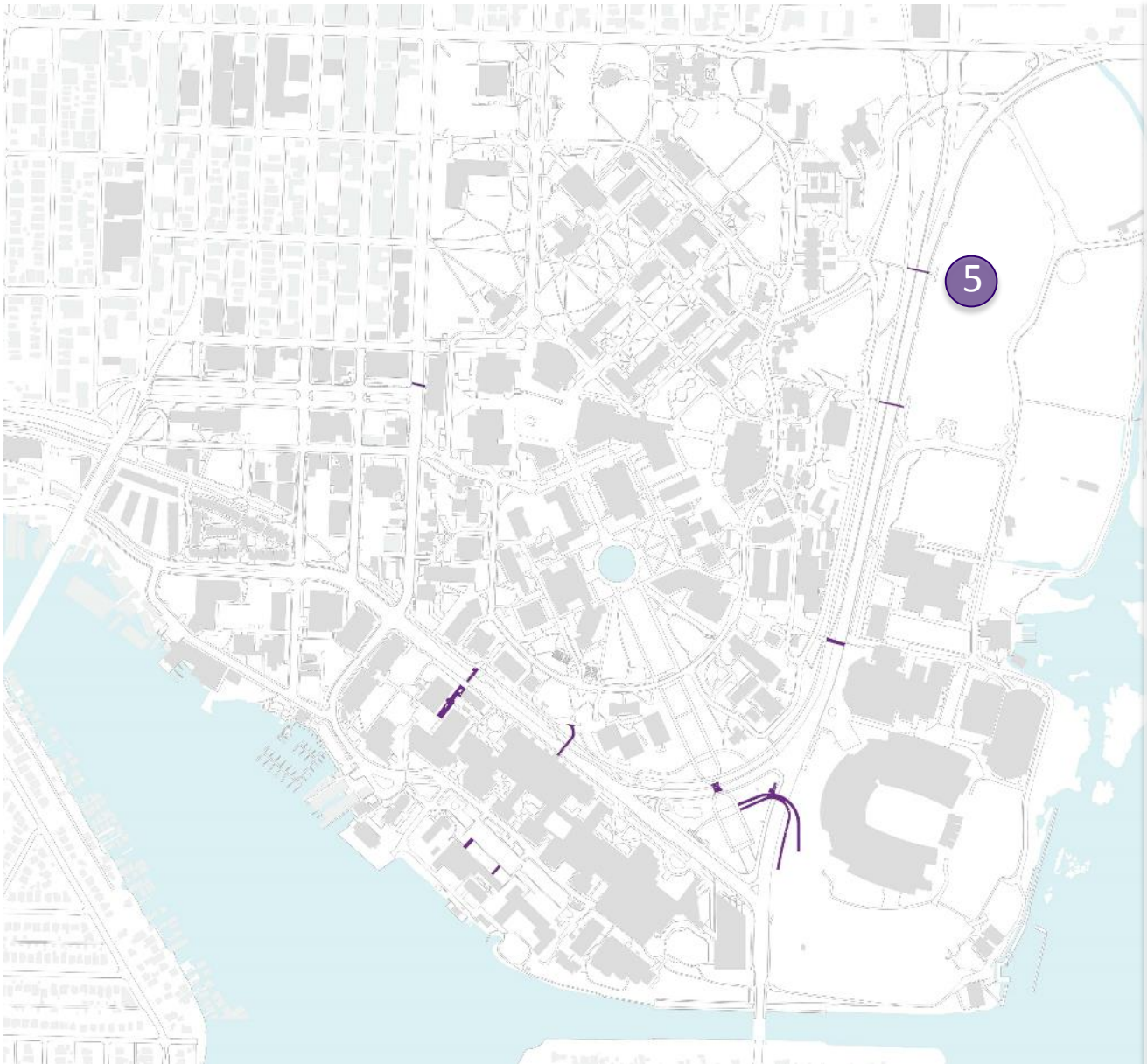
- Rerouting of ADA accessible path:

  Alternative A: 4,020 linear feet (vertical distance traveled not calculated)

- Rerouting of non-ADA accessible path:

  Alternative B: 3,510 linear feet (vertical distance traveled not calculated)

5 Montlake / Whatcom Bridge



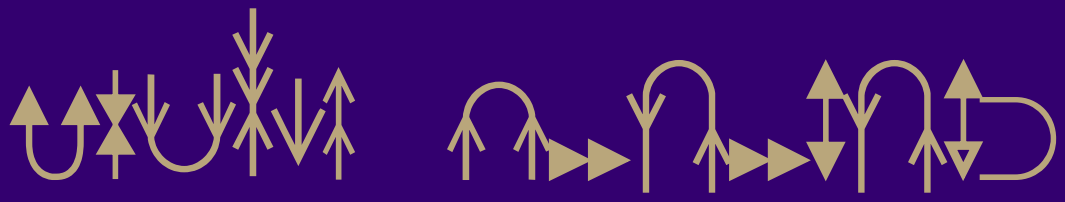
- Carries over 2,000 pedestrians/day Montlake Boulevard NE, a principal arterial used by 48,300 vehicles/day – pedestrian crossings are higher on days with athletic events.
- Connects the Burke-Gilman to E1 parking lot, the UW athletic fields, the golf driving range, and the intramural fields.
- Located at the Burke-Gilman level, where most pedestrian activity occurs – providing connection over steep slope, where no street-level development is located or planned.
- Steps down to parking lot, where no street-level development is located or planned.

5 Montlake / Whatcom Bridge

- Demolition and removal of bridge is $410,000 and does not include costs for site restoration or establishment of new crossings, ADA access.
- Potential pedestrian-vehicle conflicts as 2,000 pedestrians now using bridge are required to cross Montlake Boulevard NE, a principal arterial used by 48,300 vehicles/day.

5 Montlake / Whatcom Bridge

- Rerouting of non-ADA accessible path:
  - 2,100 linear feet (vertical distance traveled not calculated)



Policy Assessment Alternatives

Existing bridge structures are adequate. No changes are proposed.

- Vertical clearances all accommodate vehicle heights greater than 14-feet, the legal maximum vehicle height in Washington State.
- No conflicts exist with utilities, lighting, traffic control devices or structures.
- All have received seismic structural retrofits since their original construction.

The 15th Avenue and both Pacific Street bridges are integrated with adjacent structures – removal would result in adverse structural impacts.

Policy Assessment Alternatives

Streetscape of all three corridors is dominated by steep terrain, buildings, and mature trees (and/or other vegetation).

- Bridges do not interfere with view corridors as defined in SMC 23.49.024 or SMC 25.05.675P.
- Existing built and natural features provide shade and shadow along corridors, which is minimally affected by bridges.
- Bridges are lower in elevation and blend in with existing streetscape.
- Bridges provide important visual clues to motorists that they are traveling through the UW Campus and not around it.

Policy Assessment Alternatives

Bridges do not adversely effect street level activity or commerce, and encourage enjoyment of neighboring land uses.

- All are located where steep terrain and/or built features limit street-level activity
- Bridge ends are generally located at levels (e.g. George Washington Plaza, Burke Gilman Trail) where the majority of pedestrian activity occurs.
- All bridges support City and University policies to encourage walking and biking by providing critical links in the U-District's non-motorized circulation system.
- Bridges connect campus to major activity centers that include university housing, medical facilities, athletic facilities, other UW facilities, and businesses.

Policy Assessment Alternatives

Reasonable alternatives are limited.

- On 15th Avenue NE, at-grade crossing of more than 10,000 daily pedestrians currently accommodated by bridge would significantly reduce mobility and safety conditions for both non-motorized and vehicular travelers.
- Alternative to other bridges constrained by steep grades on main campus side of street.

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Policy Assessment Alternatives

Accessibility for elderly and handicapped.

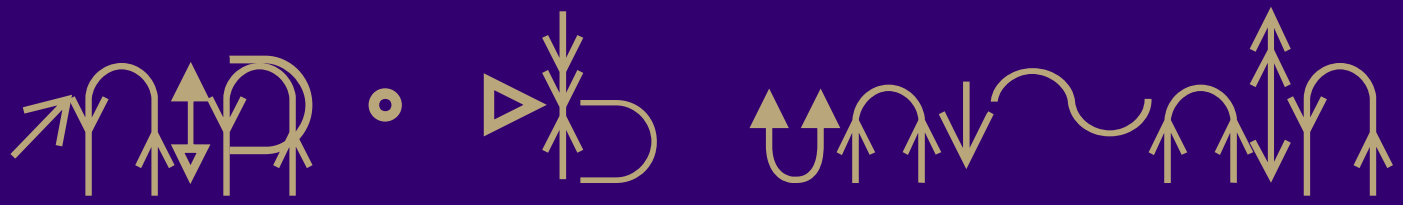
- Pacific/Hitchcock Bridge offers only direct ADA access to Kincaid Hall from north of Pacific.
- Only the Hitchcock and T-Wing bridges are considered ADA accessible.
- ADA-compliant parking provided on central campus, as alternative to parking in east satellite lots accessed by Montlake bridges.

Policy Assessment Adverse Impact

- Cost of demolishing overpasses is $2.8M, and does not include costs for site restoration or establishment of new crossings, ADA access.
- **Removal of the overpasses would create potential pedestrian/vehicular conflicts as over 28,000 pedestrians per day cross three busy principal arterials. And pedestrian crossings are higher on days featuring athletic events**
- Negative impact on transit speed and reliability if overpasses were taken down.

King Country Metro, Sound Transit & UW Shuttle Service:

Area	Intersection	Direction	Daily Vehicles	Service
Schmitz	15th/Campus	S	525	Sound Transit
Hitchcock	Pacific/15th	NW	934	KCM/ST
Montlake	?	SE	26	Sound Transit



Benefits Package

The Burke Gilman Trail

1887: Corridor Rail Service Begins
1974: Converted to Public Trail

14.1 miles: Total length of BGT
1.8 miles: Total length owned by UW

- Trail improvements will be done in 5 segments.
- Phase 1 will be completed in July 2016

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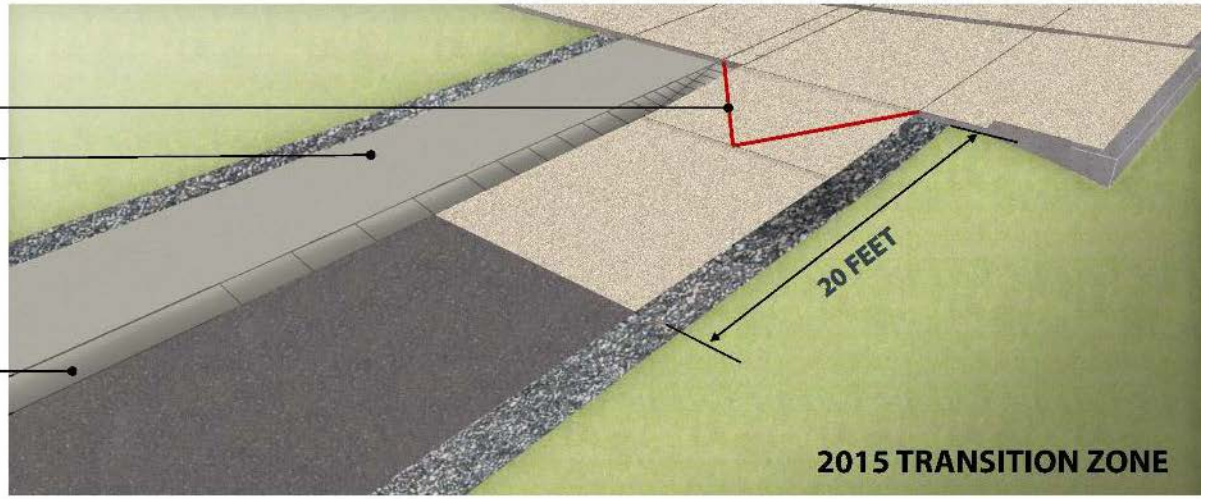
Benefits Package

The Burke Gilman Trail

Specific Benefits:

- Improved Safety
- Wider Trail
- Pedestrian and Bike Separation
- Creation of major and minor mixing zones, and overlooks that help organize trail to protect both bikes and pedestrians
- New Bike Shelters and Enclosures
- New Planting Palette
- New Trail Surfaces
- New Trail Furnishings: Lighting, Handrails, Emergency Phones and Benches

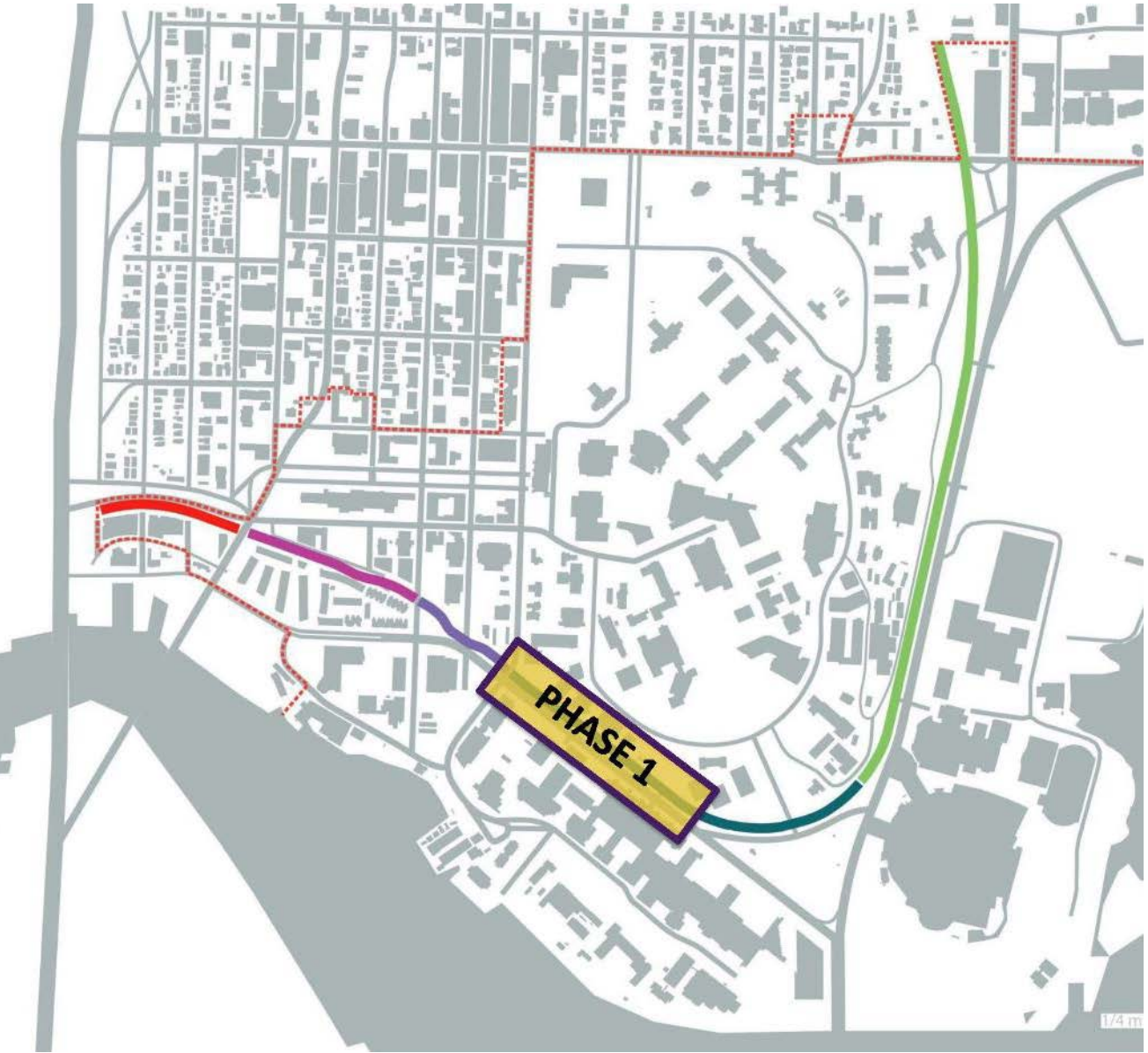
Benefits Package



FOR TRAIL USERS APPROACHING A MIXING ZONE:

TRANSITION ZONE MATERIAL DIFFERS FROM ASPHALT INDICATING A CHANGING CONDITON: SPEED TABLE SLOWS BICYCLES; MIXING ZONE PAVEMENT CLEARLY IDENTIFIES INTERSECTION ZONE

Benefits Package



The Burke Gilman Trail

Phase 1

- Spans from 15th Ave and Pacific to the Rainier Vista
- Includes two of the 5 Pedestrian Overpasses: T-Wing and Hitchcock
- Trail width widened from 12-14' total to 12' bike lane and 9' pedestrian path
- Incorporates 'mixing zones' to bring awareness of crossing traffic a major intersections

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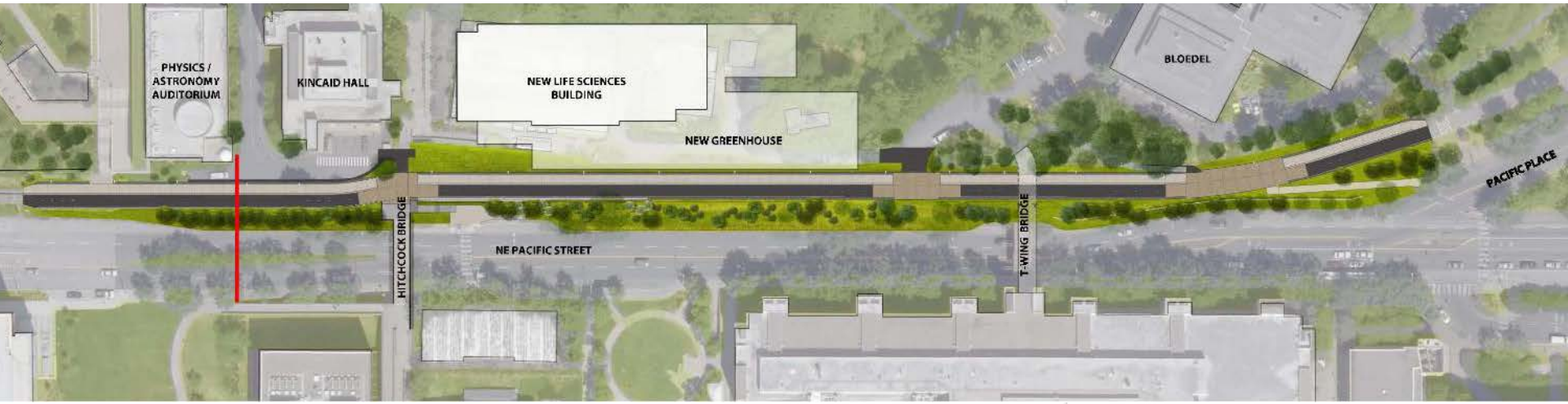
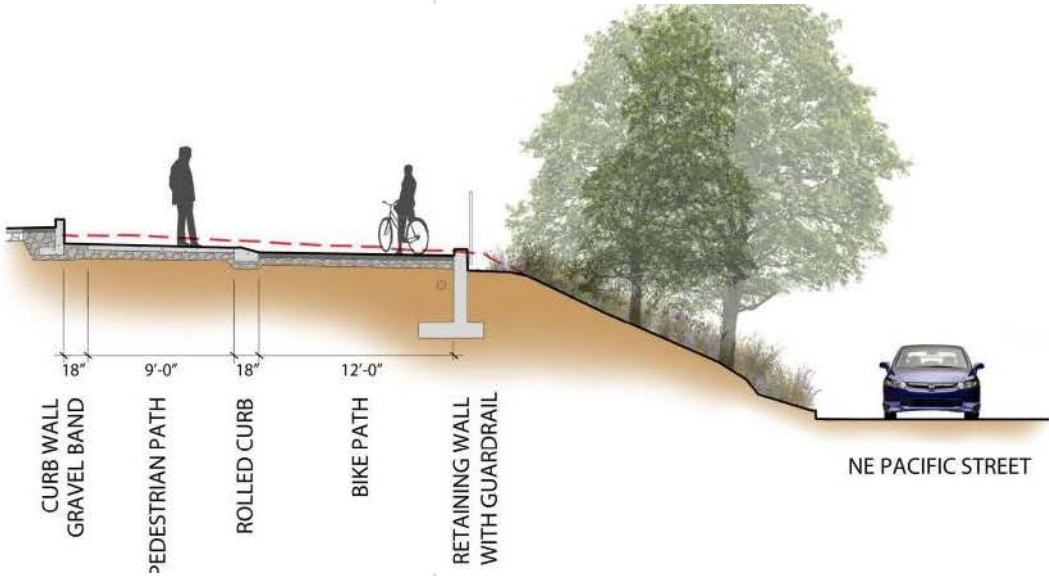
Benefits Package



EXISTING CONDITION



Benefits Package

The Burke Gilman Trail

Hitchcock Bridge Overpass

- Better access to Pacific Ave bus stops
- Better sightlines along path at bridge abutment
- Seamless connection to future Life Sciences Building

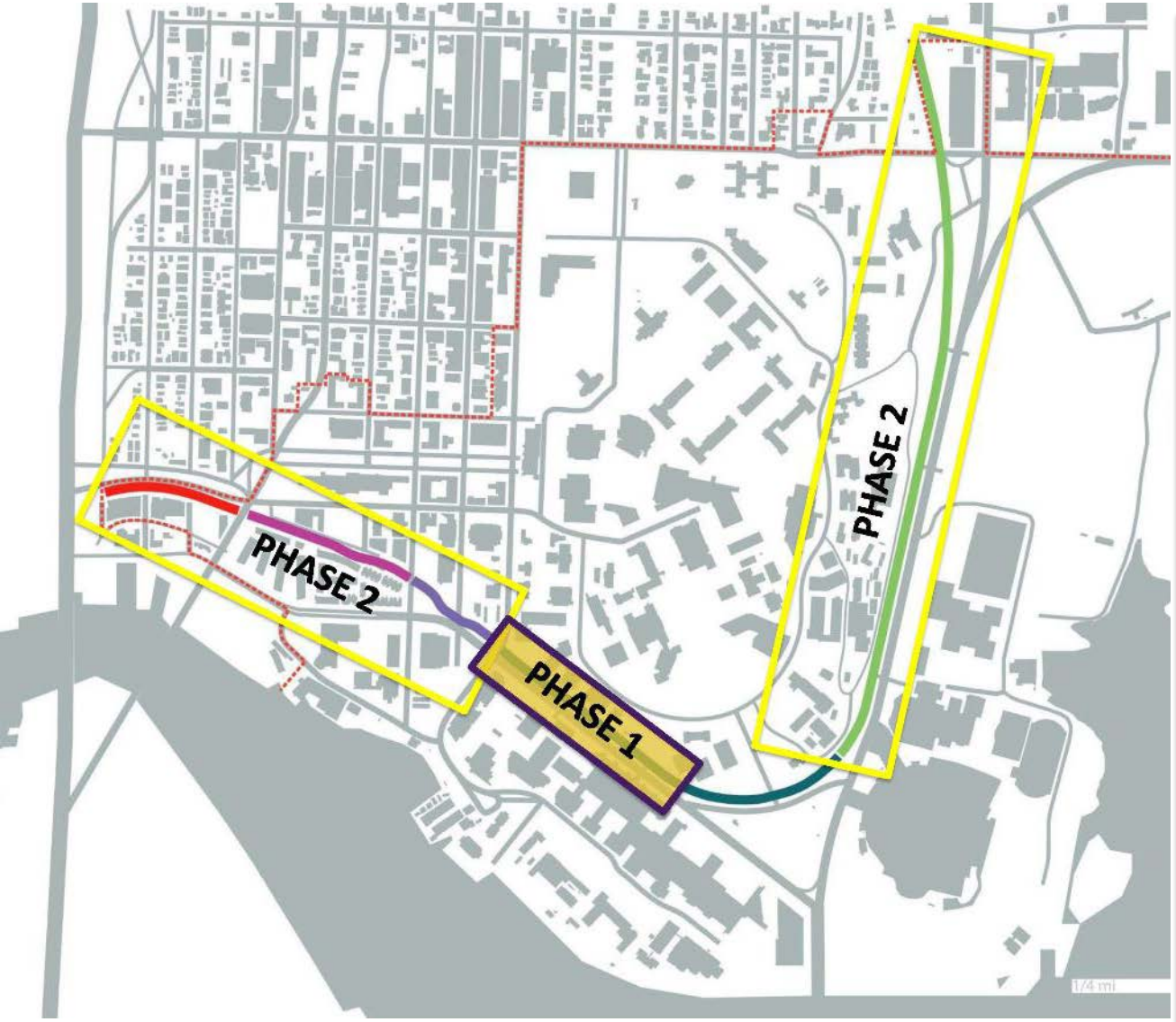
Benefits Package

The Burke Gilman Trail

T-Wing Overpass

- Bicycle shelter – 48 spaces
- Bicycle enclosure – 102 spaces
- 8 ft plus wide accessible connecting pathways

Benefits Package



The Burke Gilman Trail

Future Phase

- Will create mode separated bike path
- Lighting will be provided throughout the length of the trail
- "Mixing zones' will incorporate cross travel, seating, and other amenities like bike racks and blue phones.

Current Design by Place Studio

Benefits Package

The Burke Gilman Trail

Future Phase

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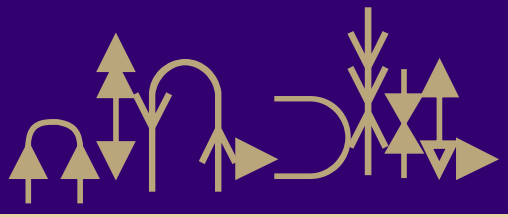
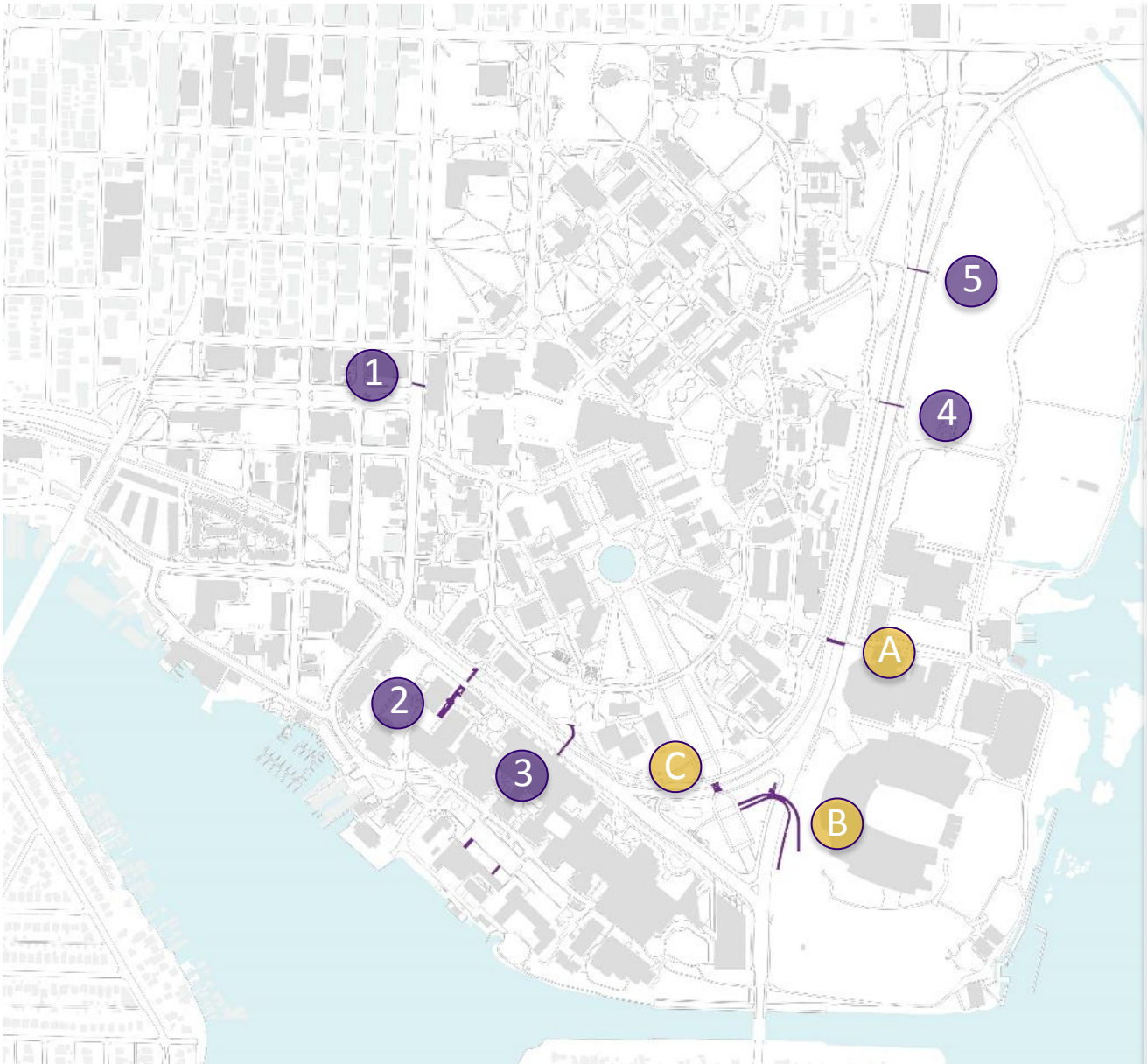


Pedestrian Overpasses at UW



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2. Pacific/Hitchcock Bridge
3. Pacific/T-Wing Bridge
4. Montlake/Wahkiakum Bridge
5. Montlake/Whatcom Bridge

Bridges not under permit

- A Hec Ed Bridge
- B Sound Transit Bridge
- C Rainier Vista Bridge

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