

Constraints & Opportunities

 Construction
 Civil
 Environmental

CONSTRAINT
OPPORTUNITY

AREAS OF INTEREST/IMPACT

- University Bridge – North Approach Concrete Span**
see General Structural notes for constraints & opportunities
- Potential property use**
 - 1 Option for construction jobsite.
- NE Northlake PI**
 - 2 Close (temporary) road and back entrance to UW Building. Building loading dock can be access from the West.
- Burke Gilman Trail**
 - 3 Construction disruptions to trail use.
 - 3 Shift trail to NE 40th St. Utilitize the Burke Gilman Trail as jobsite staging and setup crane access.
- Sidewalk on East side of bridge and landscaping**
 - 4 Close sidewalk, use area for crane setup to service bridge.
- UW Dorms**
 - 5 Potential working hours and noise level restrictions.
- Miscellaneous items under bridge**
 - 6 Remove during bridge replacement construction.

SPECIFIC ITEMS OF INTEREST/IMPACT

- 7 **Extent of Shoreline Jurisdiction** – just outside of study area.
- 8 **Ramp Access Points (gates)** – access to fenced in storage area.
- 9 **Wall of Death (art installation)** – may need to be disassembled and relocated during construction, reassembled at end of project.
- 10 **Crosswalk** – doesn't have compliant ADA Ramps. If we touch, will need to upgrade.
- 11 **Critical Area** – Slope greater than 40%.
- 12 **Old Stairway** – if impacted will be difficult to replace in kind.
- 12 **Fall protection** may need to be upgraded. Could improve access between Burke-Gillman Trail and University Bridge.
- 13 **Impacted trees** – Tree removal and replacement requirements.
- 14 **Meandering Opportunity** – Create a meandering trail connection here to make more accessible.
- 15 **Ramps** – not ADA compliant, if impacted will need to upgrade.
- 16 **Driveway Access Points (gates)** – access to fenced in storage area.
- 17 **Multiple overhead tines and guide wires** along north side of NE Northlake Way/NE Pacific St. and low overhead wires from bridge to the Northlake Building.
- 18 **Shoreline Access** – Provide access to shoreline street end.



NORTH

Not to Scale

General Structural

CONSTRAINTS

- Existing vertical clearance at NE 40th St. is signed at 12'-3".
- Adjacent streets either side of bridge.
- Fencing around storage areas beneath the bridge.
- Architectural features of existing bridge substructure.
- Performance of existing superpent.
- Age and condition of existing concrete and reinforcement (carbonation and chlorides).
- Subsurface utilities - limits on foundation siting.
- Size/capacity of existing foundations.
- Limited confinement/ductility of existing substructure.
- Overhead Cantenary System (OCS) is under study by KC Metro for modification and proposed dead end pole to be anchored on Bent 14. Maintaining bus service (including future Rapid Ride J Line) during bridge construction. If replace bridge/superstructure, opportunity to upgrade and redesign the OCS.
- Traffic volumes, bike/pedestrian access if staged construction needed.
- Bridge mounted utilities - protect or temporarily relocate.

OPPORTUNITIES

- Utilize existing seismic retrofit.
- Slabs under bridge provide good surface for manlifts or scaffolding.
- Utilize infill between existing columns for lateral stiffness.
- Use of CFRP strengthening or section enlargement to increase girder capacities.
- Column jacketing for column confinement.
- Staged construction of ~1/2 width per stage for bridge/superstructure replacement.

Utilities

- PSE (gas)
- Lumen (underground)
- Lumen (longhaul)
- 108" RCP King Co. Sewer Main
- 18" RCP SPU Sanitary Main
- 15" RCP SPU Drainage Main
- 12" Cast Iron Water Main

General utilities on/near the Bridge that will need to be relocated (temp or permanent):

- Bridge drains
- Trolley lines and pull boxes on side of bridge
- Power line for under bridge lighting
- Under bridge lighting

