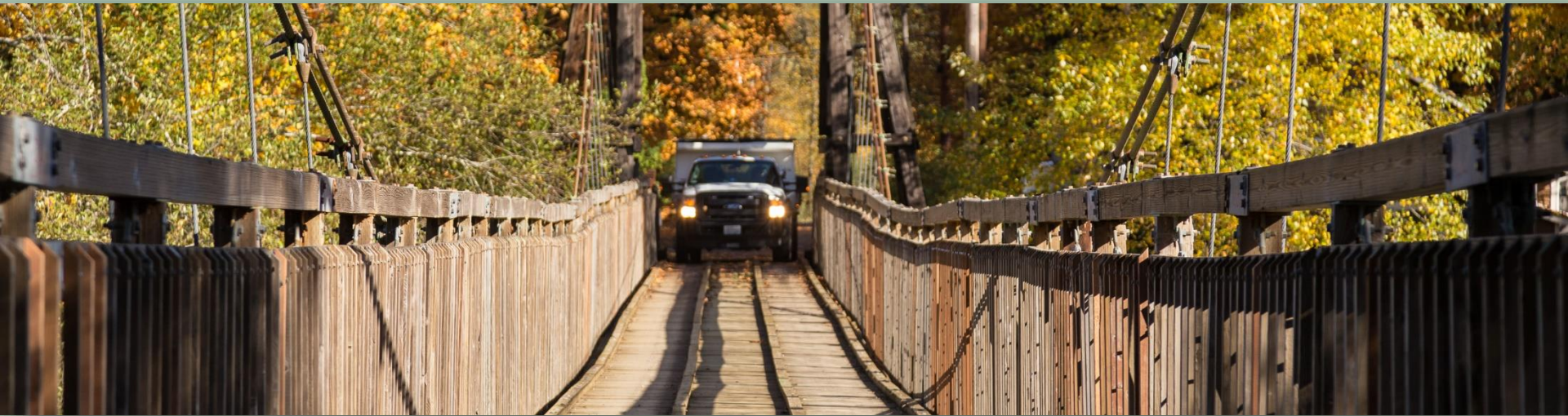




King County
Department of
Local Services

BARING BRIDGE #509A



KING COUNTY
LANDMARKS COMMISSION BRIEFING

October 22, 2020



King County

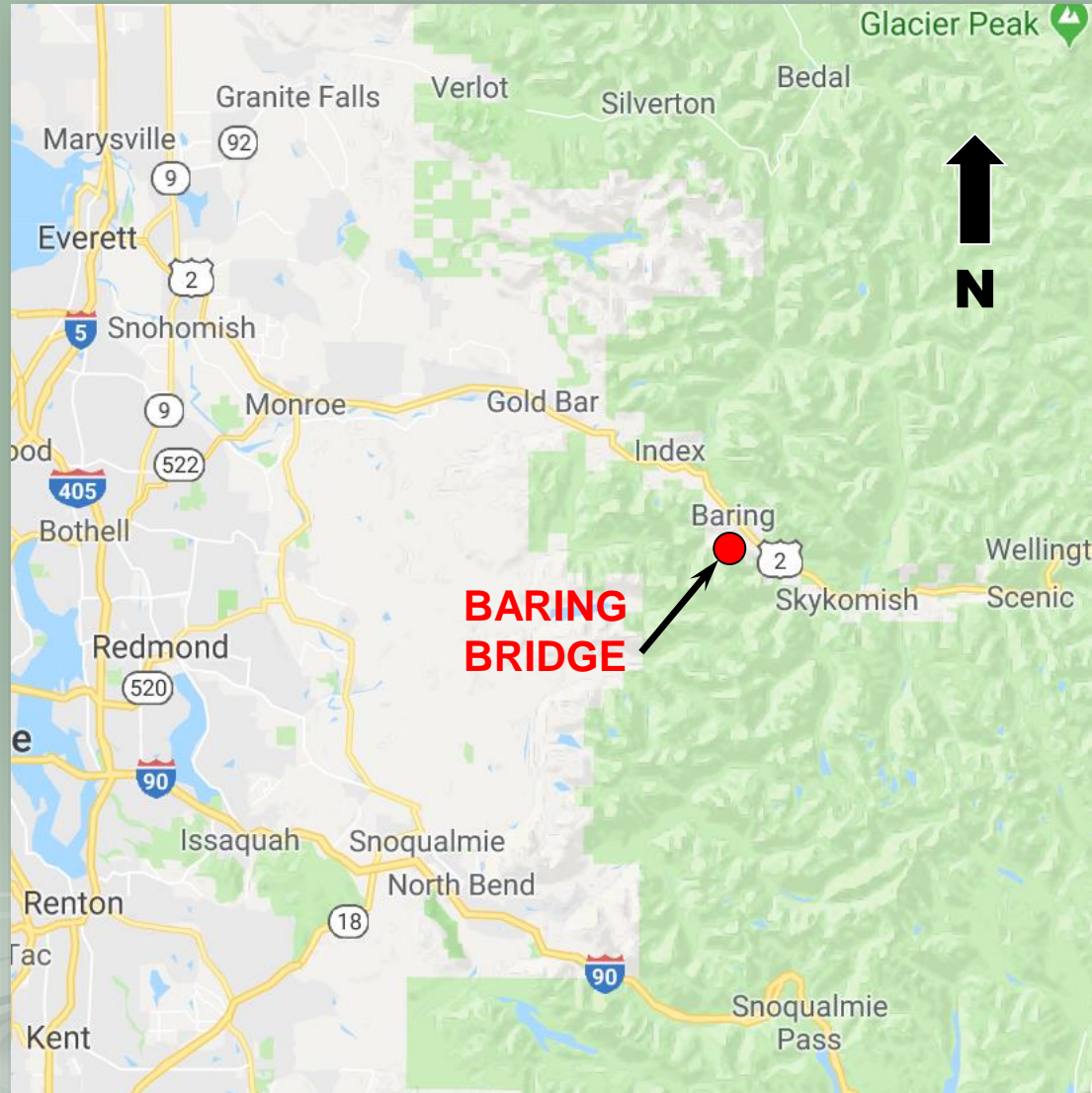
Department of Local Services
Road Services Division



Baring Bridge # 509A

PROJECT LOCATION

- On Index Creek Road near town of Baring and US Route 2
- Timber suspension bridge over the South Fork of the Skykomish River





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Baring Bridge # 509A

Activity since last meeting

- August 2019 – Final Bridge Type, Size & Location (TS&L) completed
- September 2019 – Bridge listed in the National Register of Historic Places
- February 2020 – Completed Section 106 Inventory
- March 2020 – Began Final Design Phase
 - Geotechnical Borings
 - Geomorphic Survey
 - Hydraulic Report
 - Traffic Impact Analysis
 - Currently in 60% Design



Baring Bridge # 509A

BRIDGE HISTORY



photo taken by Asahel Curtis (~1910)

- 1899 Constructed as a mining bridge by private company
- 1911 Entered county inventory. Complete reconstruction of the bridge by Baring Cedar Company at county expense
- 1921 First record in county inspection log, closed to vehicles
- 1923 Pedestrians only, note in record
- 1924 Bridge closed by order of county
- 1930 New suspension bridge built on current location
- 1938 Bridge posted at 4 tons load limit
- 1948 Load limit reduced to 3 tons
- 1952 Bridge collapsed and rebuilt
- 1995 Load limit raised to 10 tons (20,000 pounds) Gross Vehicle Weight following substantial upgrade
- 1999 Designated a King County Landmark for both association with historic events (mining, logging) and the embodiment of a distinctive engineering type (timber suspension bridge)



Baring Bridge # 509A

REPAIR AND REHABILITATION HISTORY

- 1950 Repair of sills, cables and deck
- 1953 Truss stiffened, new decking, new anchorages
- 1958 Timber towers reconstructed
- 1962 Deck replaced
- 1976 Second pair of main cables added and with new anchorages, replaced North approach
- 1984 Floorbeams, stringers, decking, and railings replaced in kind. Suspender rods replaced with cables.
- 1995 Bridge strengthening with new floorbeams, decking, concrete anchors, new high strength hangers, and new bridge rail system.
- 1999 Added steel brackets to tower caps, tower repairs
- 2010 Replaced a column and foundation sills at North Tower
- 2015 Upgraded cable support brackets at the tower caps
- 2017 Emergency repair with replacement of stringers, new decking, steel banding timber floorbeams, and tower timber reinforcement
- 2018 Mudsill repairs at piers 3 and 5
- 2020 Completed a temporary scour repair and tower timber reinforcement



Photo of rail post-repair (1950)



Baring Bridge # 509A

DESIGN CONSIDERATIONS

- Access during construction
- Hydraulic (flood plain/floodway) constraints for pier placement
- King County Historic Landmark
- Community input on location and bridge type
- Aesthetics – context sensitivity, proper fit for setting
- Environmental impacts and mitigation requirements
- Geometry of alignment and profile of approach roadways
- Challenging geotechnical and artesian aquifer conditions
- Minimizing right-of-way impacts
- Construction risks and temporary staging
- Construction duration
- Construction cost
- Bridge life cycle costs (maintenance, repair and inspection costs)



Selected Structure and Alignment

Structure

Steel Truss Bridge

Alignment

Build at existing location

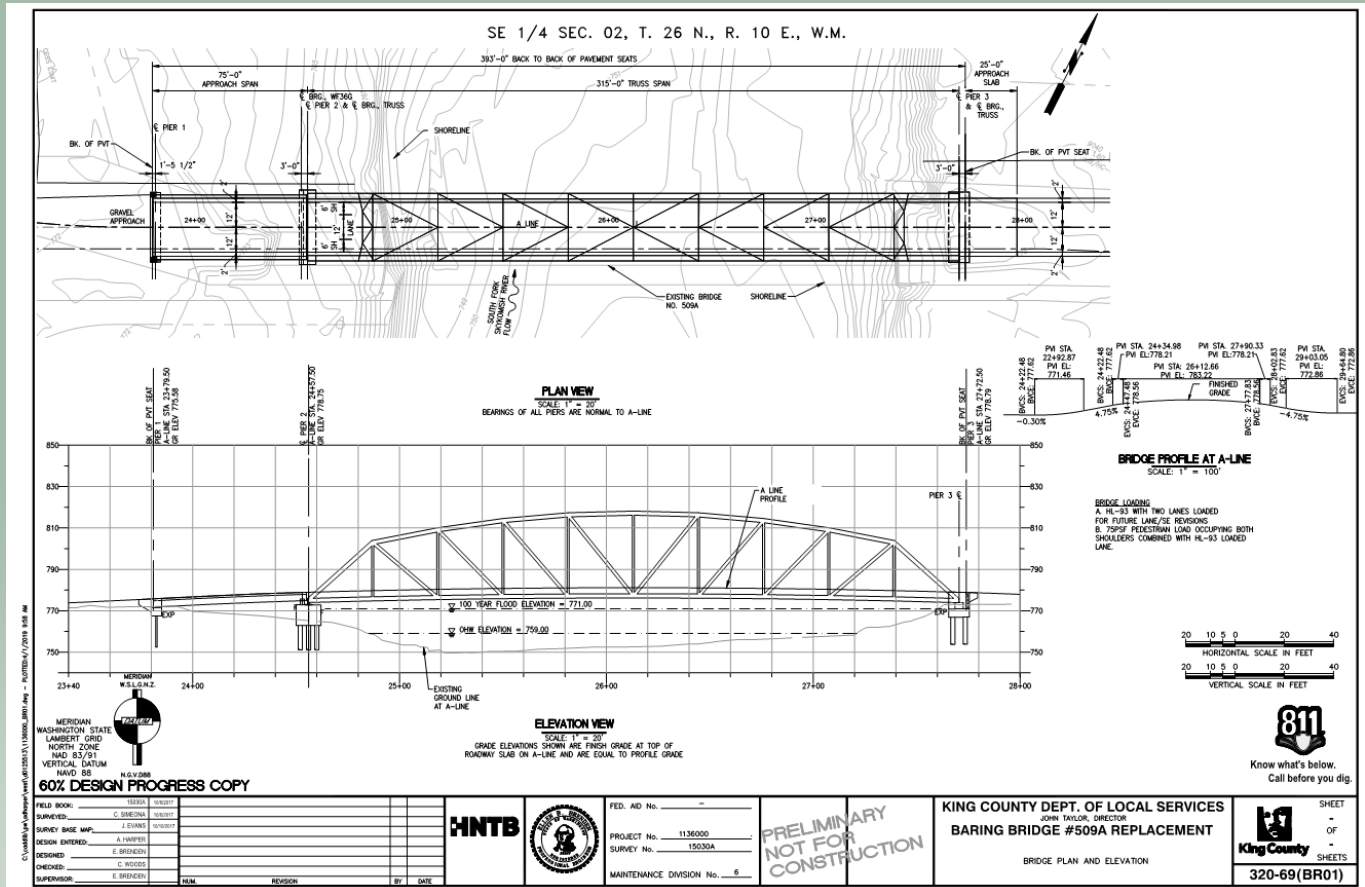
Remove existing bridge



Baring Bridge # 509A

Proposed Bridge Plan and Elevation

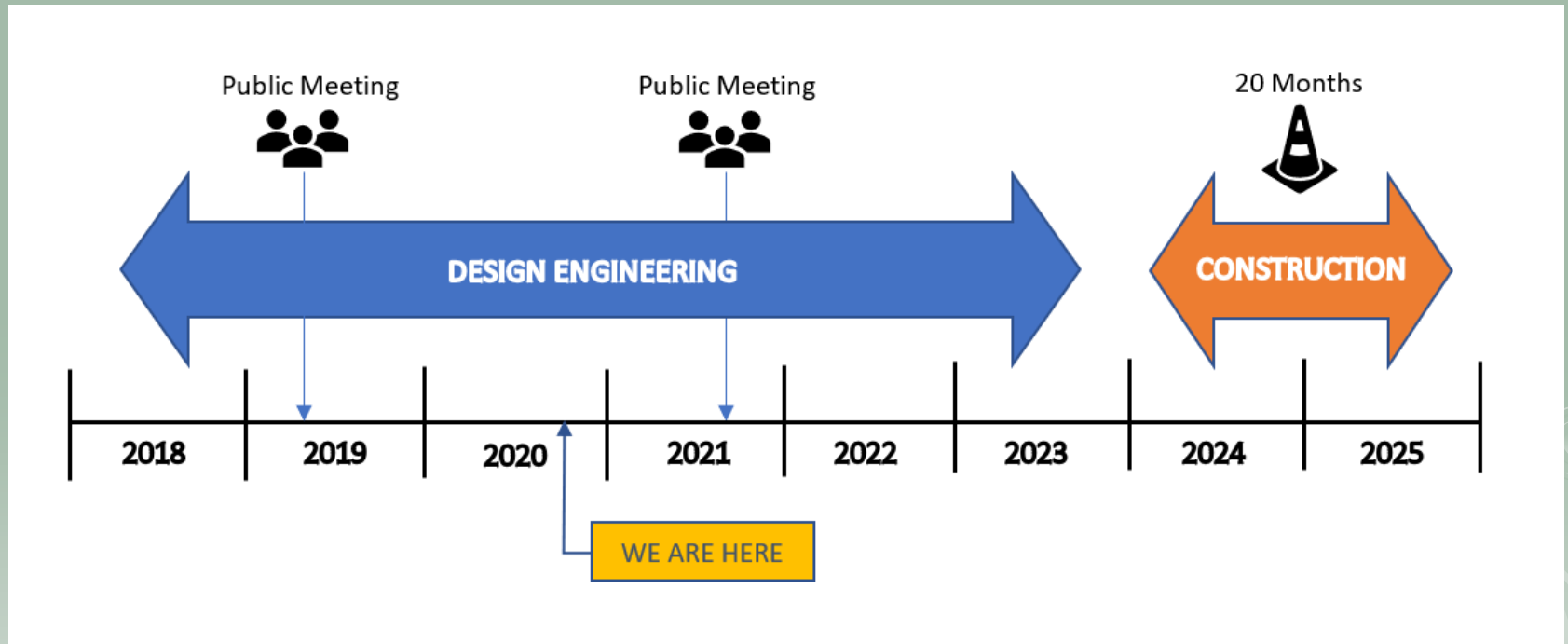
- Single lane and pedestrian facilities on Bridge with potential to reconfigure to 2 lanes
- Two lanes on approaches
- Clearance over flood plain
- Designed to meet all legal loads





Baring Bridge # 509A

Current Project Schedule





PLANNED NEXT STEPS

- Review 60% design
- Review Draft Geotech/Geomorphic Report
- Apply for Type III Certificate of Appropriateness



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Baring Bridge # 509A

Mitigation Ideas

- Reuse of main cable(s) as decorative element on pedestrian railing
- Paint truss unobtrusive color (National Park Service Brown)
- Weathering steel railings on bridge and approaches
- Pedestrian accessible interpretive signage
- Donate funds to the King County Landmarks Commission
- HistoryLink webpage
- Community event



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THANK YOU

