

Baring Bridge #509A

EXISTING CONDITIONS / PROJECT URGENCY

BRIDGE DESCRIPTION

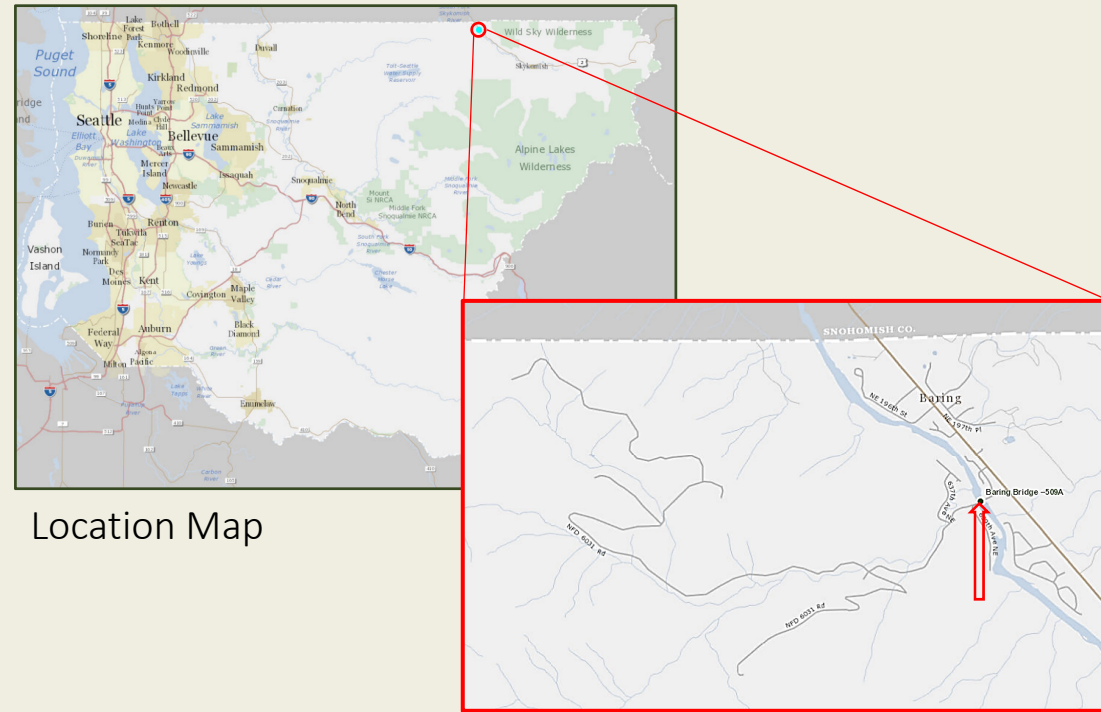
- 340' timber suspension bridge
- 272' main span
- Single lane, 8' curb to curb
- 4 steel main cables, 2 original and 2 retrofit
- Timber substructure and timber superstructure
- 3 south approach spans 2 north approach spans
- Posted for **10 tons**
- **5 MPH** speed limit
- One of King County's landmark structures

FUNCTIONALLY OBSOLETE

- 10 ton weight restriction
- Single lane 8' curb to curb

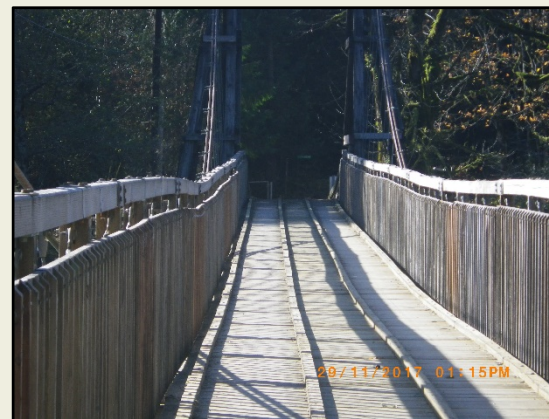
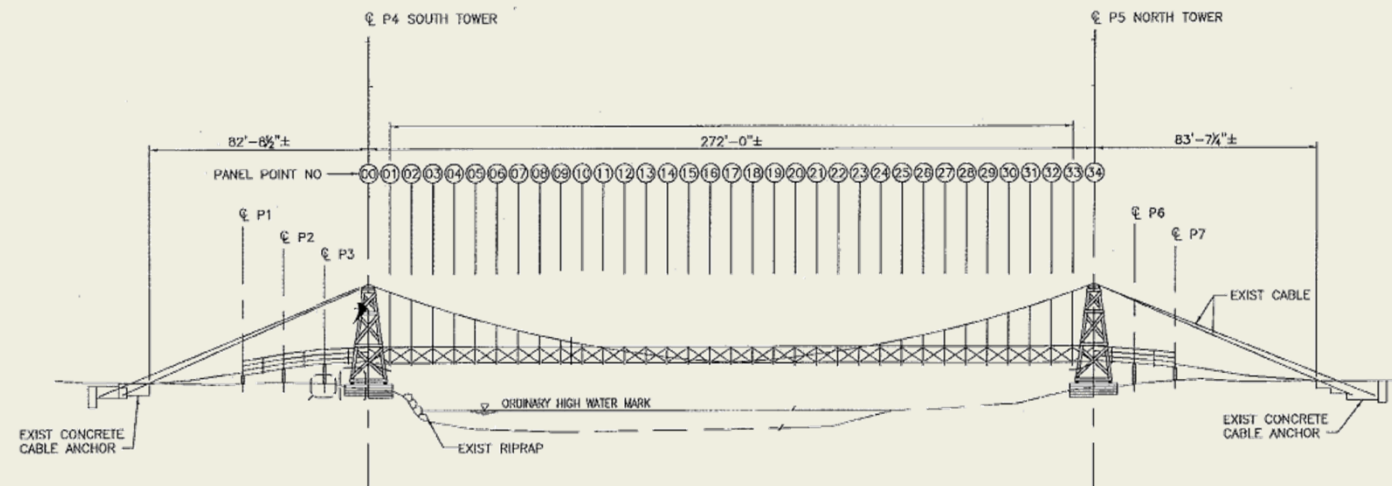
STRUCTURALLY DEFICIENT

- Sufficiency rating of 10/100
- Superstructure - 4
- Substructure - 4
- Structural Evaluation - 2



Location Map

Provides sole access to the community south of the Skykomish River.



Sag between panel points 12-21.

CHALLENGES

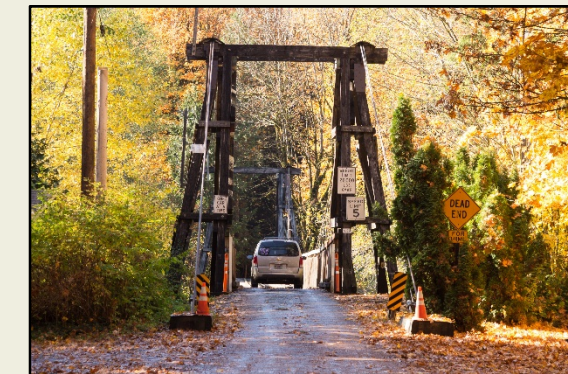
- Single lane bridge and sole access road
- Housing is present at all corners of the bridge
- Foundation issues due to the aquifer
- One of King County's landmark structures
- Large span length
- No piers in the river



Crushed timber sill support under Cap 5.



Rusted cables at the top of towers.



Single lane, 5 mph, 10 ton load limit.

HISTORY

Built in **1930** and rebuilt in **1952**

1975 - Closed and reopened with a 3 ton load posting due to the failure of main cable strands

1976 - Two new cables were added and north approach was replaced

1984 - Superstructure rehab including floorbeams, stringers, decking, and railings

1994-1995 - Major rehab including increasing size of floorbeams, replacing decking, enlarging concrete anchors, replacing steel rods with high strength cable, and enhancing the guardrail system

1995 - Posted for 10 tons

1999-2000 - Brackets added under the main cables to bypass rotten tower caps and redistribute the load to the columns. Tower rehabilitation including the replacement of many secondary members.

2010 - Replaced a North Tower column and two North Tower sills

2015 - Cable support brackets on towers were upgraded.

2017 - Emergency repair due to the discovery of advanced rot in the stringers. Replaced all main span stringers and decking, installed strapping plates around floorbeams, and reinforced South Tower sill and columns

\$18.9 million projected replacement cost

Projected construction in **2024-2026**