Bridge Program

PROJECT FACTS

Project Scope

The Alaska Railroad (ARRC) 500-plus miles of mainline and branch track includes about 160 bridges that cross barriers ranging from streams to gulches. Of these, 67 are constructed entirely of steel, 61 are constructed entirely from timber, 22 are constructed entirely of concrete, and the remainder are of mixed construction (i.e., the Matanuska River Bridge includes steel, concrete, timber spans).

The ARRC 2012 Bridge Program calls for major maintenance, overhaul and replacement needed to maintain corridor integrity, safety and efficiency. The long-term plan includes replacement of most, if not all, timber bridges.

Some existing railroad bridges have been identified as eligible for the National Register of Historical Places, either individually or as contributing elements to a potential historic district. As necessary, mitigation will be conducted according to agreements with the Alaska State Historic Preservation Officer (SHPO).

Purpose and Need

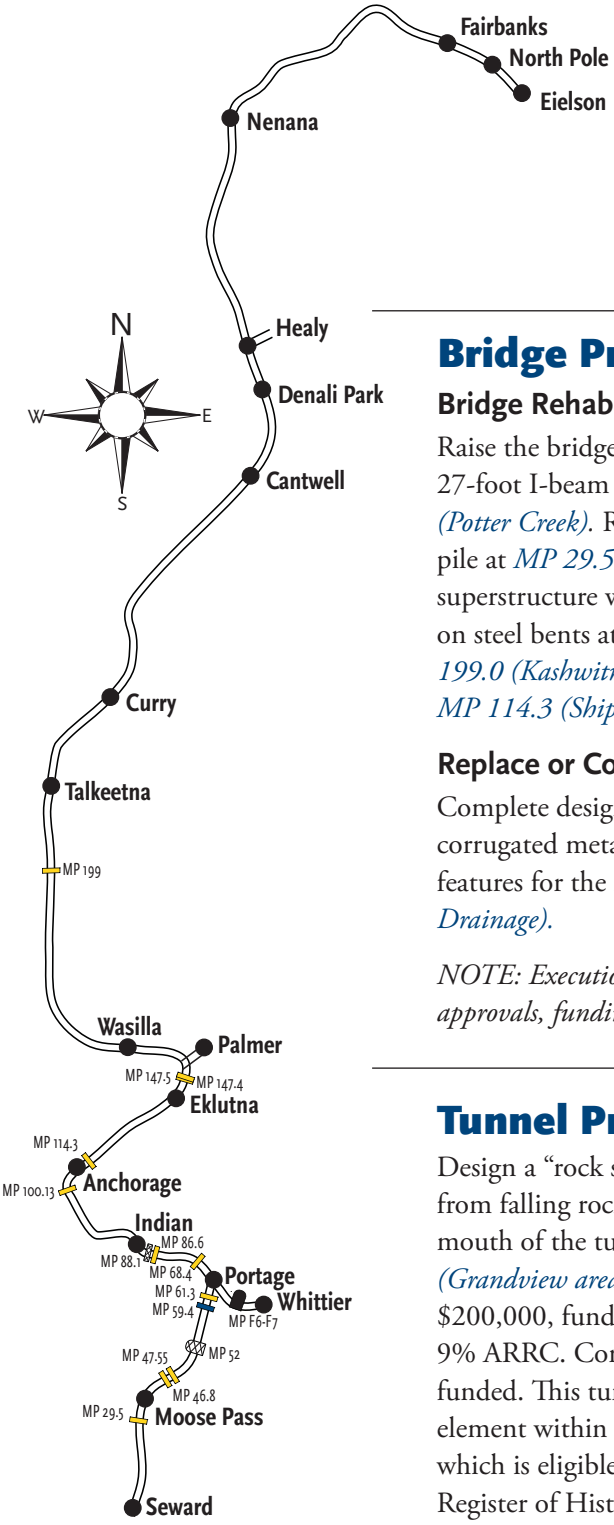
- Reinforcing or replacing some bridges and/or their components better accommodates the load demands of the railroad's more modern, yet larger and heavier, fleet of locomotives and trains.
- Replacing 50-year-old timber pile foundations addresses maintenance and safety concerns.
- Upgrading bridges affords an increase in train speed and operational efficiency.

Project Cost and Funding

$3.45 million budget in 2012, with $2.95 million funded by the Alaska Railroad and $500,000 from Federal Transit Administration (FTA) grants (91% FTA; 9% ARRC match).

A new bridge was constructed in the Skookum Creek drainage area, and went into service December 2011. A crane was used to drive piling, set the span and backload materials and equipment. Inset: crews weld caps to piles.

Timber piling and caps were replaced with steel pipe and pile caps on the bridge at MP 29.5 in 2011. In 2012, timber beams and ties will be replaced.



Bridge Program Projects

Bridge Rehabilitation

Raise the bridge at *ARRC MP 46.8 (Placer River).* Replace the existing 27-foot I-beam bridge span at *MP 47.55 (Placer River) and MP 100.13 (Potter Creek).* Rehabilitate timber bridge components with steel and sheet-pile at *MP 29.5 (Moose Pass)*; foundation work was completed in 2011 and superstructure will be completed in 2012. Rehabilitate timber components on steel bents at *MP 61.3 (Skookum Creek Drainage).* Truss repair at *MP 199.0 (Kashwitna River).* Strengthen pony trusses at *MP 86.6 (Bird Creek), MP 114.3 (Ship Creek),* and *MP 147.4 and 147.5 (Matanuska Flood Plain).*

Replace or Construct New Bridge

Complete design for a hydraulic structure to replace three 7-foot-diameter corrugated metal culverts at *MP 88.1 (Indian Creek).* Complete drainage features for the new new bridge built in 2011 near *MP 59.4 (Skookum Creek Drainage).*

NOTE: Execution of these projects will depend on agency coordination and approvals, funding and workforce availability.

Tunnel Projects

Design a "rock shed" to protect trains from falling rock and ice around the mouth of the tunnel near *MP 52 (Grandview area).* Design budget is $200,000, funded by 91% FTA and 9% ARRC. Construction is not yet funded. This tunnel is a contributing element within the Loop District, which is eligible for the National Register of Historical Places.

Rehabilitate the north and south portal stem walls on *Portage Tunnel*, a one-mile-long tunnel between *MP F6 and F7* along the Whittier Branch.

At the opening of the tunnel near MP 52, rubber tire pieces protect the rail as debris falls due to recent scaling operations to remove loose rock. A more permanent solution is a rock shed.