

Milepost 379-380 Track Erosion Mitigation

Purpose

The Alaska Railroad (ARRC) seeks to mitigate mainline track embankment erosion along the Nenana River between ARRC Milepost (MP) 379 and MP 380. This remote area is about 19 miles north of Healy and 12 miles south of Anderson, away from residential communities.

The ARRC track parallels the Nenana River for nearly 100 miles between Cantwell and Nenana. Over time, the river has shifted, and in some areas runs forcefully up against the railroad's riverside embankments. MP 380 is one such location. Although the segment is situated 40-50 feet above the river, water colliding with the embankment at a sharp angle, continuously worsening erosion. Hence, this segment of track is susceptible to washout. The Alaska Railroad provides the only rail transit service linking southcentral and interior Alaska communities. Track washout near Ferry effectively severs this transit service until repairs can be made.

The project will protect critical state infrastructure, reducing the risk of washout and disrupted service. Maintaining the railroad in a state of good repair also enhances the safety of the traveling public, railroad customers and employees.

Project Scope

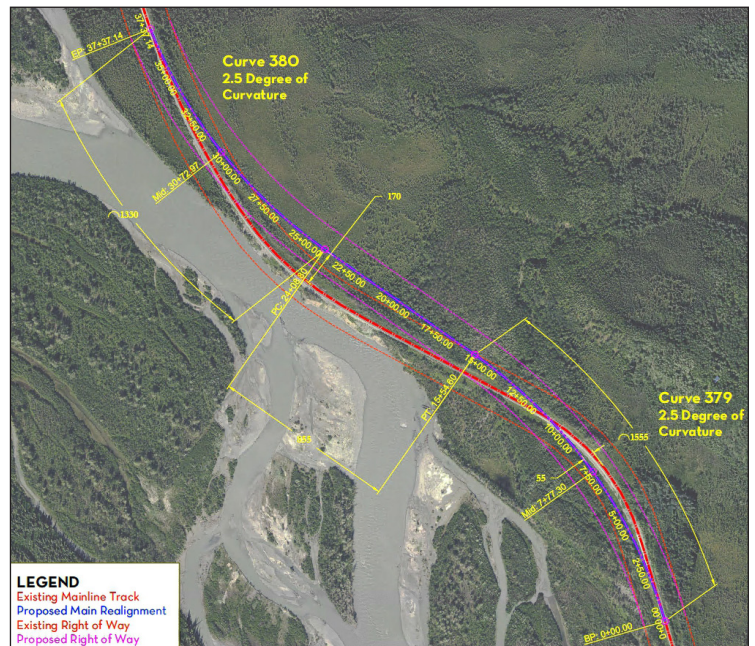
Mitigation alternatives under evaluation include:

- Relocate the tracks up to 170 feet away from the river, outside the current right-of-way (ROW) and onto adjacent land owned by the State of



Railroad track embankment is eroding from Nenana River forces.

Project Area Map and Realignment Option



Realignment outside the right-of-way would allow for a straighter track.

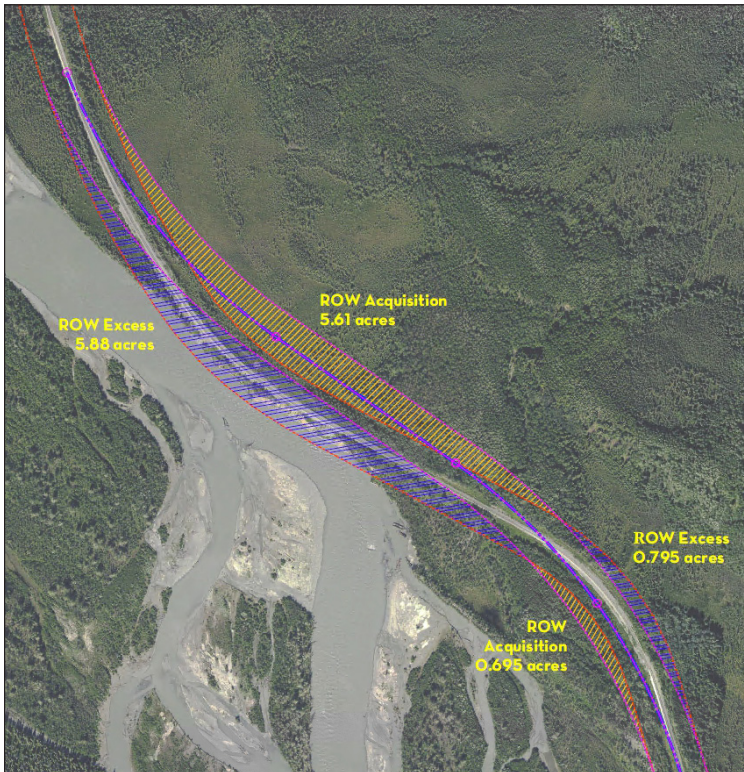
Alaska. This action would eliminate the angle at which the river collides with the railroad embankment, minimizing future erosion.

- Reestablish and armor 1,500 feet of existing river embankment. This short-term remedy has the greatest

environmental impact to the river, and the greatest cost over a 50-year period.

- Realign the track within the existing ROW. This option still requires reestablishing the existing embankment due to the narrow railroad ROW in this area.
- A combination or variation of the options.

Project Area Map - Realignment Option



Project Status

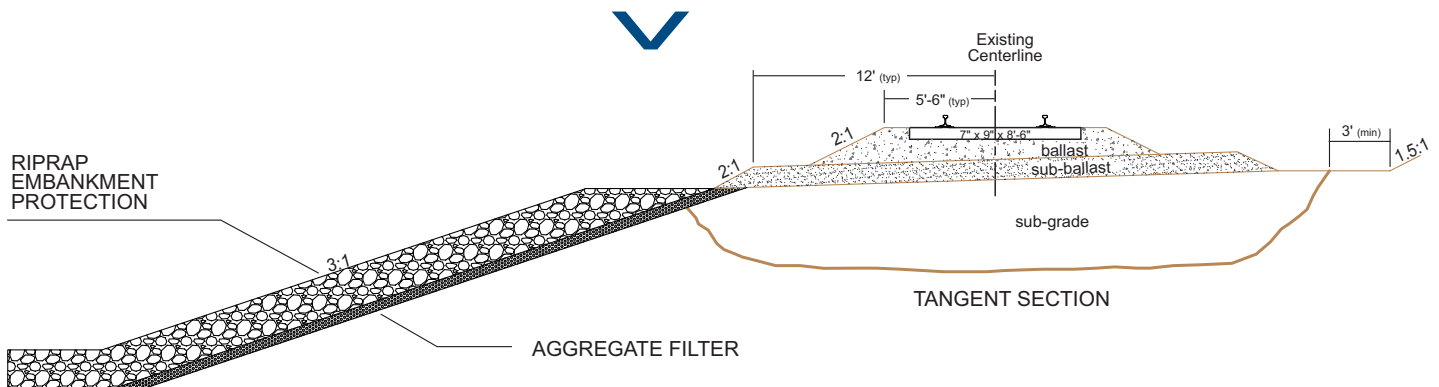
- The ARRC has completed a site survey and exploratory geotechnical investigations.
- Environmental review, including historic data studies, is underway. Results will help determine the feasibility and effectiveness of erosion mitigation options.
- Concept development and analysis is underway.
- Once a mitigation concept is approved, project design will be further developed and permitting will be secured for project-related tasks.
- The project will move into construction, based on engineering and study findings, as well as grant funding.

Cost and Funding

The estimated cost of engineering and environmental work is \$375,520, funded by the Federal Transit Administration (FTA) with a 20% cash match from the Alaska Railroad. Preliminary engineering will help estimate the cost of final design and construction; and ARRC may seek federal funding to help underwrite these later activities.

Relocating the track outside the right-of-way would likely require a legal transfer of adjacent land from the Alaska Department of Natural Resources to the ARRC.

Reestablish and Armor Existing Embankment



Reestablishing the existing embankment would require substantial fill, filter rock and riprap.