



# Track Rehabilitation

## PROJECT FACTS

### Project Scope

The Alaska Railroad (ARRC) continues an aggressive track rehabilitation program in 2012 as part of an ongoing effort to upgrade the main line, sidings and yards from Seward to Fairbanks. The program calls for replacement of rail, ties and ballast in areas of critical need railbelt-wide. For engineering and maintenance purposes, ARRC divides the main line track into four districts:

- MP 0 (Seward) to MP 117 (south of Eagle River)
- MP 117 to MP 210 (north of Montana Siding)
- MP 210 to MP 345 (south of Denali Park)
- MP 345 to Eielson AFB

### Project Cost and Funding

The 2012 track rehabilitation budget is \$31.23 million. Funding comes from approximately \$14.2 million in Federal Transit Administration (FTA) grants (91% FTA and 9% ARRC; \$7.4 million in 2012 grants and \$6.86 million from prior years); \$8 million from the sale of revenue bonds that are backed by the FTA; \$6.3 million of internal ARRC funding; and \$2.7 million from a legal settlement. Funding supports:

- Replacing rail and eliminating joints (welding)
- Replacing wood ties
- Surfacing
- Repair previous deficient track work originally funded by federal grants (settlement).



*A tie crane operator positions a new tie during tie replacement operations in spring 2011. Inset: A track laborer replaces a missing spike on the track north of Wasilla.*

### Rail Program

Rail is replaced when it has worn away in curves, or when it has become severely battered in tangent sections. The 2012 Rail Program will replace worn rail joints with continuously welded rail (CWR). The conversion to CWR dramatically decreases maintenance costs, and improves ride quality. Focus will be on corridors from Cantwell to Denali Park and areas from Nenana to Fairbanks. Work will include evaluation of track geometry and rail flaw detection.

### Tie Program

The 2012 Tie Program calls for installation of 45,000 wood cross ties on the main line track. The Alaska Railroad tracks include nearly 2 million ties. Since 1996, ARRC has replaced nearly 900,000 ties — or just over 45% of all ties. Heavy tie renewals in the late 1990s resolved critical main

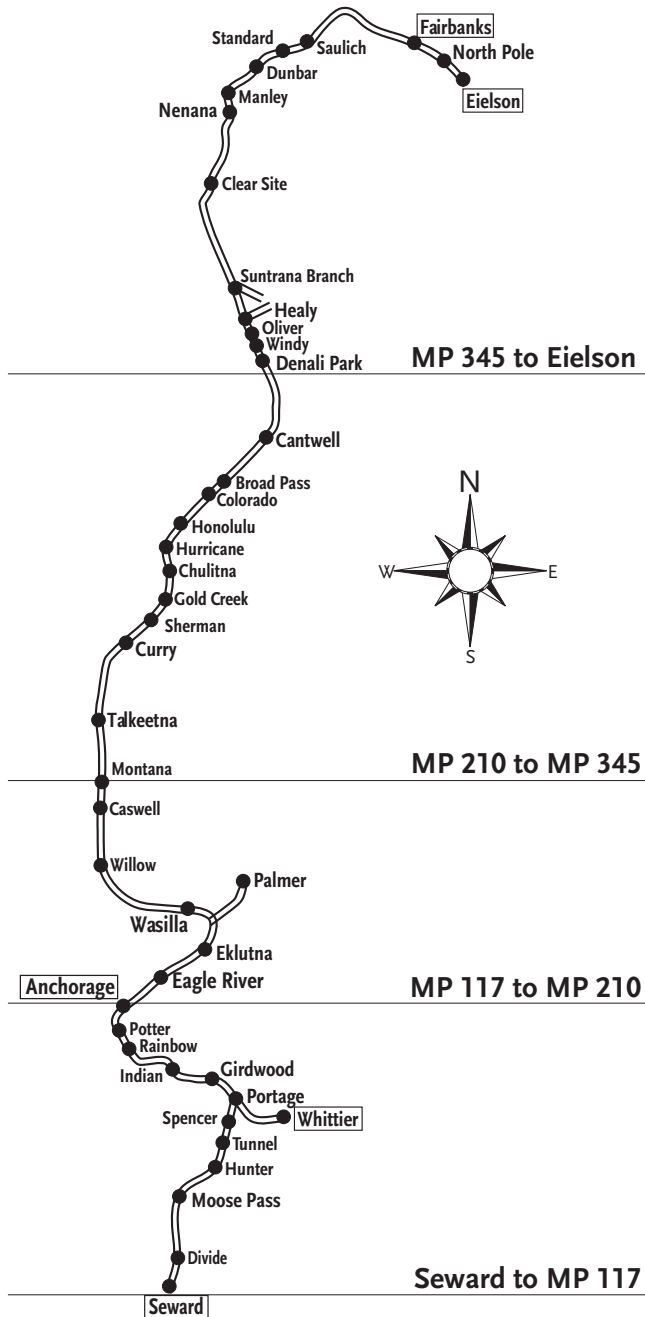
track issues; however, the tie population is generally old, so renewals are needed to keep up with the ongoing loss of older ties. Emphasis in 2012 will be from Seward to Portage.

## Ballast Surfacing

The bed of a railroad track is comprised of several layers. The top layer is called ballast, which is made up of small, jagged rocks that fit snugly together, forming a stable bed that can withstand the tremendous weight of a train while still providing drainage. The 2012 Ballast and Surfacing Program calls for the use of about 50,000 tons of ballast rock. Surfacing will occur throughout all districts as needed, as well as following behind the tie replacement program.

## Shoulder Maintenance

ARRC is undertaking a shoulder maintenance program, from Eagle River to Fairbanks, to enhance track safety by providing the necessary embankment support for the rail and the heavier and faster moving trains used today. As necessary, culverts providing drainage from one side of the embankment to the other side would be extended. Shoulder maintenance will occur throughout all districts as needed.



A tie remover/inserter has powerful mechanized arms (close-up, right) that can extract old, and install new, ties from either side.