ALASKA RAILROAD

PROJECT FACTS

Communication Sites and Infrastructure

Purpose and Scope

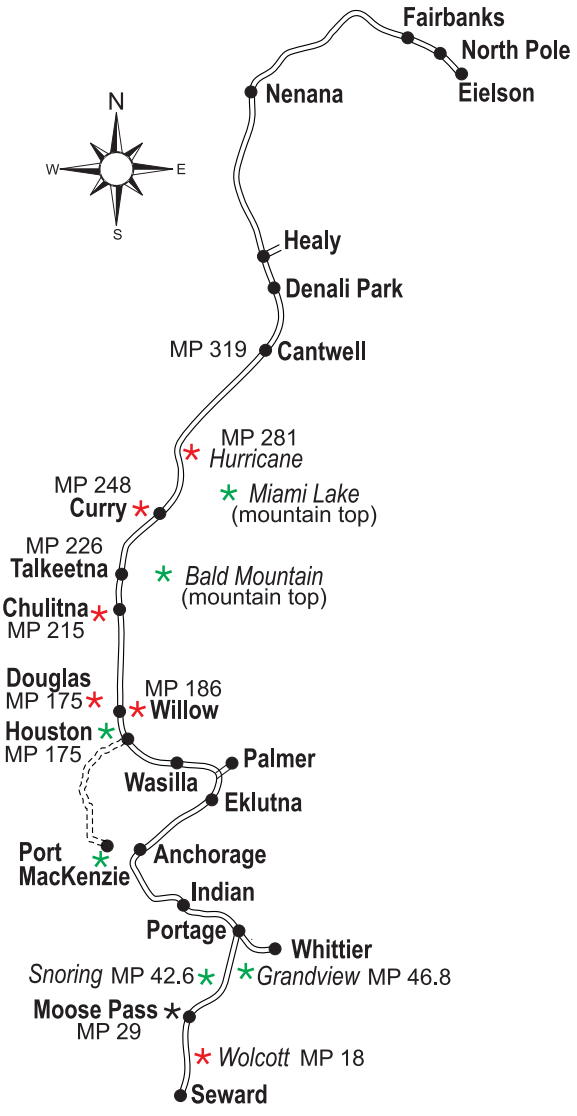
The Alaska Railroad (ARRC) relies heavily on on a robust communications infrastructure to support railroad operations. Communications equipment is installed most often within the ARRC right-of-way or railroad reserve land. Operational communications include ARRC employee voice and data radio, between signal and switch indications and railroad operations/dispatch centers, and advanced technology that supports Positive Train Control (PTC) systems. Communication sites are typically outfitted with a tower and attached antenna and/or dish, shelter space to house a generator and other on-site supplies, radios and equipment such as fuel storage tanks.

The ARRC is in the process of upgrading its communications infrastructure to support the Federal mandate for PTC. PTC will improve the safety of train operations by reducing human factor errors. It requires moving large amounts of data between trains, wayside equipment and the Anchorage Dispatch Center. The only practical way to move this PTC data is with data radios and a supporting backhaul communications system. PTC is currently being deployed, with initial operations scheduled for 2016 and full implementation rolling out thereafter. However, this PTC infrastructure will benefit operations and safety as soon as it goes in service.

Costs and Funding

The cost to erect a communications tower and associated facilities ranges from $350,000 to $850,000, depending on location, commercial power availability, tower height, the number of

Communication Site Locations



March 25
2015

shelters and fuel tanks. Funding is typically provided by the project requiring the communications use. For the PTC project, the funding could come from the State of Alaska or ARRC revenues.

Status: 2014-2015 Projects

In Support of Positive Train Control

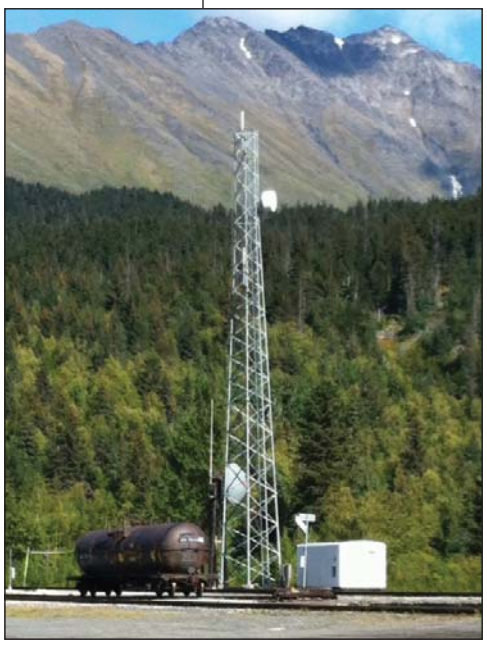
2014-2015 plans call for the installation or enhancement of several communications sites to support the improved communication that the PTC project requires:

Snoring – This project is located within the railroad right-of-way (ROW) about two miles south of Snoring, at ARRC Milepost (MP) 42.6. The project will erect a new 30-foot communication tower on a gravel pad with 2 VHF antennas, and will include an 8-by-16-foot communication shelter, solid oxide fuel cell, and two 1,000-gallon propane tanks. Construction began in 2014 and is scheduled for completion in 2015.

Grandview – This project is located within the railroad ROW about two miles north of Grandview, at ARRC MP 46.8. The project will erect a new 30-foot communication tower on a gravel pad with 2 VHF antennas, and will include an 8-by-16-foot communication shelter, solid oxide fuel cell, and two 1,000-gallon propane tanks. Construction began in 2014 and is scheduled for completion in 2015.

Bald Mountain – An existing communications shelter will be reutilized approximately 12 miles east of Talkeetna (ARRC MP 226) on top of Bald Mountain. Adjacent to the shelter a new 30-foot tower will be built with five VHF antennas and two microwave dishes. The site will include a gravel pad, solid oxide fuel cell and propane tanks. Construction is scheduled for 2015.

Miami Lake – The railroad will enhance a state-owned communications site located on top of a mountain near ARRC MP 271, east of Hurricane. Enhancements include removing the old 20-foot tower and replacing it with a similar sized but newer tower with 2 microwave dishes and 3 VHF antennas. A new 10-by-24-foot shelter will also be added. Due to its remote location, this site includes propane tanks to fuel the solid oxide fuel cell for power generation. Construction is scheduled for 2015.



Typical ARRC Communications Site with 100-foot tower and communications shelter. Mounted antennas support microwave and radio communications.

In Support of Port MacKenzie Extension

The ARRC is also working with the Matanuska Susitna Borough (MSB) to construct communications towers for the Port MacKenzie Rail Extension project to support railroad operations and PTC communications:

Port MacKenzie Rail Extension – Two communication tower sites will be constructed as part of the Port MacKenzie Rail Extension project. Construction is underway to build the 32-mile rail spur from Houston to the port. The towers will be located at either end of the extension, with one near Houston (ARRC MP 175), and one at Port MacKenzie. The 150-foot Houston tower has been completed and is in service. The 55-foot tower at Port MacKenzie will be constructed later when funding is available. These sites include an access road leading to an approximately 40-by-50-foot fenced compound with antennas attached to a communications tower and equipment shelters. This project is funded by the State of Alaska through the MSB.

Other Communication Site Projects

Communications upgrades will also occur at other existing communications sites, including Hurricane, Curry, Chulitna, Douglas, Willow, and Wolcott. This would include replacement or addition of antennas, power system upgrades, radios, and/or microwave dishes without significant changes to the existing tower. For example, the railroad will remove and replace one microwave dish, and install one to three new dishes or antennas on an existing communication tower on a peak near Curry. At Douglas, three new microwave dishes will replace an existing dish, plus a VHF antenna will be added. The railroad will also install 90-foot monopole towers near its Birchwood and Eklutna sidings to enhance communications..