Alaska Railroad 2010 Program of Projects

stablished in 1923, the Alaska Railroad Corporation (ARRC) is the last of the full-service railroads in the United States, offering both freight and passenger services. From tidewater at Whittier and Seward to the heart of Interior Alaska, our route covers more than 500 miles. ARRC is a state-owned corporation, but it does not receive state funding to operate. ARRC relies on passenger, freight and real estate revenues to operate its trains and maintain tracks and facilities. About \$43.1 million is budgeted in new spending for capital improvements in 2010. Detailed project fact sheets are also available online at www.AlaskaRailroad.com.

Federally-funded Projects

ARRC receives federal grant funding for capital infrastructure improvements and capital rehabilitation. Funding has been received from the Department of Defense (DOD), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), Federal Highway Administration (FHWA), Transportation Security Administration (TSA), Federal Emergency Management Agency (FEMA), U.S. Forest Service (USFS) as well as other federal agencies. Most FTA, FHWA and FEMA funded projects require 9% to 25% matching funds from the Alaska Railroad. In 2010 ARRC expects to receive continuing FTA formula funding to support an estimated \$14.3 million program of federally-funded capital activities. The Alaska Railroad is contributing 9% of this amount.

Although ARRC receives no direct funding from the state for capital or operating expenses, the State of Alaska Division of Homeland Security has provided the match for FEMAfunded disaster assistance projects that resulted from the 2008 Nenana area flooding. ARRC is also providing support to the Matanuska-Susitna Borough and the City of Seward to execute State of Alaska-funded capital projects.

Internally-funded Projects

In addition to the match for federal funds, ARRC internal funds (funds generated by corporate freight, passenger and real estate revenues) support ARRCs ongoing expense activities as well as an annual capital program. In 2010, internal funds will provide \$19.1 million toward capital improvements and capital rehabilitation activities.

Bond-funded Projects

In 2006, ARRC sold \$76.1 million in revenue bonds with another \$89 million bond sale in 2007. These funds are primarily used to accelerate track rehabilitation efforts. About \$9.7 million will be spent in 2010. Bonds are repaid with FTA formula fund appropriations.



Frequently used acronyms:

- ARRC = Alaska Railroad Corporation
- ARRA = American Recovery & Reinvestment Act
- FEMA = Federal Emergency Management Agency
- FTA = Federal Transit Administration
- FRA = Federal Railroad Administration
- FHWA = Federal Highway Administration
- DOD = Department of Defense
- EA = Environmental Assessment
- EIS = Environmental Impact Study
- STB = Surface Transportation Board

Seward Coal Loading Facility

ARRC acquired the Seward Coal Loading Facility in 2003 and made subsequent improvements in order to increase facility efficiency, driving down the cost of operation, thus making Alaska's coal resources more competitive in the global market. ARRC completed an EA of proposed improvements and upgrades in 2004. FRA provided the original \$9.54 million grant, with \$8.3 million spent on acquisition and associated studies and \$1.24 million used for inspections, repairs and improvements. ARRC is underwriting ongoing maintenance and capital improvements. In response to community concerns over coal dust problems resulting from unusual dry, windy weather in early 2007, ARRC modified operations and spent \$150,000 in 2007/2008 to enhance existing dust suppression and safety systems. ARRC also hired industry experts to analyze and recommend future capital improvements as operations warrant and funding allows.



A coal ship docks at the Seward Coal Loading Facility.

Seward Depot Improvements

A new restroom facility will be constructed next to the Seward Depot. The 24.5-by-26-foot building will house separate men's and women's facilities and will include modern plumbing and electrical systems. Also, a power hook-up will be installed beside the track near the depot, allowing trains to plug-in to support onboard food and beverage service. This will eliminate the need for locomotives to run their engines to supply power while parked at the depot. The \$750,000 budget is funded 100% by ARRA Stimulus money via FTA.



ARRC's West (left) and East docks in Seward.

Seward East and West Dock Investments

ARRC built a new East Dock in Seward in 2000, and a section of the 640-by-200-foot East dock was expanded to 320 feet wide in 2007. Begining in 2001, the West Dock and Terminal building have been substantially improved to support intermodal passenger activity. In 2009-2010 a 2,000-foot security fence is being installed around the East Dock, with the \$162,400 project funded by ARRA Stimulus money. State revenues from the Cruise Ship Tax will help fund dredg-ing around the docks to accommodate larger ships.

Chugach National Forest Whistle Stop Service

ARRC and the U.S. Forest Service (USFS) are partners in developing a whistle stop service in the Chugach National Forest. Plans call for five recreational sites between Portage and Moose Pass that will be accessible by rail and interconnected by trail. Sites include passenger rail platform, passenger shelter, toilets and interpretive signage. Other features may include picnic, camping and wildlife viewing facilities. The project also calls for purchase of the self-propelled diesel multiple unit (DMU) rail car. The first stop site at Spencer was completed late summer 2007 and a DMU was delivered in spring 2009. The USFS recently completed preliminary design and engineering for the Grandview stop site and construction is possible in 2010, pending funding. \$1.8 million for Spencer funded by USFS and ARRC. The \$5.35 million DMU was funded \$4.7 million by USFS and \$648,000 by FTA and ARRC. Estimated \$14 million is needed to finish infrastructure and recreational facilities at all five sites. Funding is not yet identified.



The bi-level self-propelled "DMU" railcar is delivered in 2009.

Whittier Master Planning

ARRC is pursuing a Whittier Master Plan to improve railroad infrastructure. Recent projects: 1) built a pedestrian underpass (2002); 2) built an equipment maintenance facility (2002); 3) improved Delong Dock (2002); 4) built barge slip side-loading structures (2002); 5) demolished the old transit shed (2003); 6) built a cruiseship passenger spur and platform (2004); 7) improved security with a yard office at the entrance, seasonal yard fence and video cameras (2006/07); and 8) demolished the marginal wharf (2008). Barge Slip major modification began in 2009 with a \$870,000 ramp extension and track/ground work funded by ARRC. The stern (front) unloading area will be replaced in 2010 with the \$4 million cost split between ARRC and Lynden. Future actions recommended by the Master Plan include: a) construction of improved intermodal passenger and public use facilities; b) railyard reconfiguration and track improvements to separate freight and passenger activity; and c) additional security measures including lighting and detection equipment for passenger facilities.



The barge slip and marginal wharf in Whittier.

Anchorage Rail Capacity Improvements MP 110-114

ARRC is investigating alternatives to increase capacity along the main line track from the Anchorage International Airport Spur (near MP 110) to the Anchorage Rail Yard (MP 114), in order to alleviate congestion, enhance safety, increase operational efficiency, and prepare the railroad to better handle future passenger and freight train demands. Alternatives fully analyzed in the EA include: **a**) no action and **b**) double track the entire corridor. A siding and double track of part of the corridor (between Westchester Lagoon and the Anchorage Yard) were also originally considered as alternatives, but were later dismissed because they would not accomplish the needed capacity improvements. A draft EA is expected to be sent to the FTA for consideration in 2010. \$1 million budget for the EA and public involvement is funded 80% by FTA and 20% by ARRC. The double track option is estimated to cost \$40 million; funding is not yet identified.

Ship Creek Intermodal Transportation Center

ARRC is pursuing an Intermodal Transportation Center (ITC) and associated improvements (pedestrian amenities, transit infrastructure, parking, track modifications, etc.) in the Ship Creek area. The ITC will facilitate connections from one transportation mode to another - rail, public transit, air, marine, bus, taxi, private vehicle, bicycle and pedestrian ---and improve links to Anchorage's downtown business district to meet passenger transit needs over the next 30 years. Phase One, completed 2007-2009, included utility relocation, new track construction and track rehabilitation. Part of Phase Two (2a) will get underway in 2010 to include Anchorage Historic Depot exterior improvements, electrical upgrades and boiler replacement. Future phases will construct a service / office building, a new departure lounge over the tracks and a pedestrian skybridge connecting to downtown. Approximately \$26 million for conceptual and environmental work, preliminary design, and Phase One was funded 91% by the FTA and 9% by ARRC. Phase 2a cost of \$7.425 million funded by ARRA Stimulus money. Total cost is estimated at \$60 million (2005 dollars). ARRA Stimulus money is also funding \$300,000 in 2009-2010 to install an additional 1,000 feet of security fencing just east of the depot to maintain a public safety barrier.



The Anchorage Historic Depot will be integrated into the ITC.

Historic Freight Shed LEED-certified Renovation

The Alaska Railroad (ARRC) is renovating a historic freight shed in Anchorage's Ship Creek District. It is Alaska's first historic building to be reconstructed with the high environmental standards established by Leadership Energy and Environmental Design (LEED) criteria. Originally built in 1941, the 36,000-square-foot heavy timber facility will offer a "green" commercial office space in lower downtown, featuring a raised heated walkway and ample parking. The building core-and-shell was completed late 2009 and site construction will wrap up in summer 2010. Space is now available for lease. The \$10.1 million renovation is funded by ARRC.



Architectural cross-cut rendition of the Historic Freight Shed.

South Wasilla Rail Line Relocation

ARRC plans to straighten curves along the main line track in South Wasilla, between ARRC MP 154 and 158. The track relocation would eliminate five at-grade crossings, reduce derailment risk, reduce operational and maintenance costs, and allow for faster train speeds. An EA of alternative relocation routes was completed in 2005. Land acquisition should be complete in 2010. \$246,000 for conceptual engineering and the EA and \$2.72 million for preliminary engineering and land acquisition, funded by FTA with matching funds from ARRC. \$1.9 million to continue right-of-way land acquisition funded 91% by FHWA and 9% by ARRC. Total cost for construction of Phase One (MP 154 to 156) is estimated at \$30 million.



A large curve in the track slows train speeds in south Wasilla.

Southcentral Commuter Rail Study Update

ARRC has commissioned a phased update to the 2000-2001 Southcentral Rail Network Commuter Study & Operation STH CENTRAL RAIL

Plan. Phase One (2009) updated ridership estimates and service levels. The more detailed Phase Two will be implemented in support of a Regional 105 Transportation Authority (RTA), which is essential to coordinating commuter rail and other com-muter options. Alaska lawmakers are considering legislation to authorize an RTA. 2000-2001 study cost \$200,000, funded 80% by FTA and 20% by ARRC. \$225,000 is budgeted for the update, funded by FTA and ARRC.



Potential Port MacKenzie Rail Extension routes

Port MacKenzie Rail Extension

The Mat-Su Borough and ARRC are partners in proposing a new rail line connecting Port MacKenzie to the existing main track at a point between Meadow Lakes and north of Willow. Three main routes were developed in 2007, ranging from 30 to 45 miles long, depending on a connection near Big Lake, Houston or Willow. Extensive public involvement activities were conducted in summer and fall 2007 to obtain citizen and agency input. In early 2008, ARRC submitted an application to the STB, the federal agency with authority over rail extensions in the United States. STB is conducting the environmental impact study (EIS) as required by the National Environmental Policy Act (NEPA). STB hired a third party contractor (ICF International) to begin the EIS in early 2008; completion is expected in 2010. The State of Alaska has appropriated \$27.5 million to support the NEPA process. Cost of design and construction is estimated at up to \$300 million, depending on route selection. Design and construction funding is not yet identified.

Talkeetna Depot Restoom Facility

ARRC will construct a 26-by-24.5-foot building about 20 feet from the existing Talkeetna Depot to provide separate men's and women's restroom facilities for passengers and employees. With modern plumbing and electrical systems, the new facility will eliminate the need to rent port-a-potties. The \$500,000 budget is funded by ARRA Stimulus money.

Denali Park Passenger Train TurnaroundTrack

The ARRC proposes to reestablish track to allow trains to turn around at Denali National Park, which is currently not possible. To make room for a loop or a "wye" track, ARRC seeks to exchange a small parcel of land on the west side of the track for an equal sized parcel of Denali National Park land on the east side of the track. The land swaps require U.S. Congressional and Alaska State Legislative approval. A federal approval bill was passed and signed in 2007/2008. The National Park Service is overseeing an EA on alternative sites and configurations. Once the EA is complete, Alaska legislative approval will be sought. ARRC funded \$58,000 in 2007/2008 for conceptual work and to begin the EA. The cost of surveying, environmental work, design and construction is estimated at \$2 to \$3 million, funded by ARRC.

Healy Canyon Safety & Reliability Program

Healy Canyon lies between Denali Park Station and Healy. The tracks follow the Nenana River gorge on a narrow grade with two tunnels. The area has steep slopes and erosion-prone soil. ARRC proposed a series of projects to: 1) stabilize the track bed in Healy Canyon; 2) control the rock fall problems; 3) "daylight" (remove the top of) Moody Tunnel; 4) realign tracks around Garner Tunnel; and 5) realign the tracks to straighten the corridor. Total cost is estimated at approximately \$71 million. Garner Tunnel realignment was completed in 2005, and Moody Tunnel daylighting was completed in 2009. \$2.9 million in FRA funds were used to address track realignment and the slide zone around Garner Tunnel. \$5.2 million in FTA grants and FTA-backed revenue bonds were used for Moody Tunnel. About \$5.86 million is currently being spent to stabilize several areas in the canyon in 2009-2010, with a combination of funding from FEMA, FRA, ARRC and the Alaska Division of Emergency Services.

Nenana Rail Line Relocation

ARRC proposes to realign the railroad main track around downtown Nenana, following a route outside of the existing right-of-way, north of the airport and southeast of town, over the Parks Highway. The track structure through Nenana would be maintained to support port activities. ARRC completed an EA of three alternative realignment routes and a "no action" alternative in 2004. Right-of-way acquisition was complete in 2009. A hydrology study in 2009-2010 will contribute to final design. \$1 million budget for the EA funded 91% by the FTA and 9% by ARRC. \$1.04 million for land acquisition funded by 91% FHWA (administered through FTA) and 9% ARRC. \$350,000 for the hydrology study funded by ARRA Stimulus funding. Estimated \$29 million budget for construction and land acquisition. Funding for construction has not yet been identified.



A second track will be constructed parallel to the existing track by the Fairbanks Depot.

Fairbanks Depot Second Track

ARRC built a new depot in Fairbanks in 2005. Original plans called for two passenger tracks adjacent to the depot. The second track will be completed in 2010. The new 3,000foot track will provide staging for passenger trains, improving operations efficiency and reducing equipment wear-and-tear. The second track cost of \$1.2 million is funded by ARRA Stimulus money administered via an FTA grant.

Fairbanks Freight Intermodal Improvements

ARRC and ADOT/PF are improving the freight intermodal area of ARRC's Fairbanks rail yard to enable faster pick-up and drop-off by truck operators, and enhancing safety and security of train/truck operations. Improvements to Danby Street intersection area include: **a**) moving and improving at-grade crossings; **b**) constructing a centralized trailer parking area near the entrance and adjacent to Danby; **c**) paving Danby Street access; **d**) paving and striping the intermodal unloading area; and **e**) improving drainage. Design is complete and construction is scheduled for 2010. \$2 million budget funded 91% by FHWA, with ARRC and Alaska Department of Transportation providing a 9% match. Future improvements call for 100-foot high mast lighting to be added incrementally and funded annually by ARRC.



Fairbanks freight intermodal improvements will enhance the safety and efficiency of trailer on flat car (TOFC) operations.

Fairbanks Area Rail Line Relocation

ARRC is analyzing options to: a) realign and improve safety of the main line and branch track, including potential realignments outside the more populated areas of Fairbanks (previously known as the South Fairbanks Rail Realignment - SFRR); and **b**) realign and improve the Eielson Branch, from the new Fairbanks depot to the end of the branch near Eielson AFB (previously known as the Eielson Branch Rail Realignment - EBRR). In late 2006, the Fort Wainwright segment of the EBRR EA became a separate project, and in 2008, Fort Wainwright was put on hold. The Fairbanks Area Rail Line Relocation project combines the remainder of EBRR with SFRR, and will likely require an EIS. As a pre-cursor to the EIS, ARRC conducted an Alternatives Analysis (AA) in 2007-2008 that capitalizes on the findings of previous reconnaissance and engineering studies. The AA recommends a three-phased approach. ARRC also commissioned a North End Rail Public Transportation Study and Operation Plan to explore options for passenger rail and commuter service. Preliminary findings indicate low demand for Fairbanks-North Pole commuter service and results are inconclusive for Fairbanks-Denali service options. The analysis and study were funded by \$450,000 in grants from FHWA and FTA with 9% from ARRC. Funding sources are being sought for NEPA environmental work to include an EIS.



Northern Rail Extension

ARRC proposes to extend its main line track from North Pole / Eielson AFB, about 80 miles southeast to Delta Junction. The project would offer: a) commercial freight service supporting communities and commerce in the corridor; **b**) a passenger transportation alternative to the Richardson Hwy; c) support of military training; and d) support of regional tourism. ARRC initiated the conceptual development in 2004. The STB initiated an EIS in 2005. A draft EIS was released for public comment in December 2008. The final EIS was released in late 2009 and the STB approving a license to construct and operate a rail extension on January 5, 2010. Design and construction on Phase One, Tanana River Crossing, will get underway in 2010. The EIS, preliminary engineering and design is funded by \$16.5 million in DOD appropriations, administered by the FRA. Another \$44.2 million was appropriated in 2007 and another \$60 million was appropriated in 2008 for planning, engineering, environmental work, design and to begin construction on the first phase of the project. Rail line construction cost is estimated at \$650 to \$850 million; later phase funding is not yet identified.

Passenger Rail Cars and Locomotives

ARRC has a fleet of 52 passenger-related train vehicles, including 30 coaches, nine diners, six baggage cars, two business cars (for charter groups) and one self-propelled diesel multiple unit (DMU). ARRC also has 53 locomotives including the 28 SD70MAC locomotives (12 equipped with head-end-power to supply electricity to passenger equipment), 15 GP40s, eight GP38s and two cab/power cars. ARRC upgrades older equipment and buys newer equipment to meet current and future passenger demands. In 2010 three dining cars will be updated to accommodate "fast casual" dining and several passenger cars will get lighting, public addresss, battery and signage upgrades. The dining car \$535,500 rehabilitation budget is funded 91% FTA and 9% ARRC. Four GP40 locomotives will be overhauled to include installation of engine idle reduction systems, and installation of a Tier-0-plus kit to improve fuel efficiency and reduce emissions. Locomotive overhaul is funded \$1.622 million by ARRC and \$700,000 by ARRA Stimulus funding via the Environmental Protection Agency.



A passenger train along Turnagain Arm.

Collision Avoidance System

ARRC is developing a multi-phased program to design, develop, and implement a communication-based train control system that uses data radio communications between train dispatchers and train crews, or dispatchers and roadway workers. The Collision Avoidance System (CAS) project is comprised of a Computer Aided Dispatch (CAD) system, an on-board computer system, VHF packet data radio technology, and GPS locator technology. The CAS will provide improved information for decision-making, and will also detect infrastructure failure and potential operations violations quickly, and intervene when necessary. The CAS is being accomplished in phases, each achieving incremental safety benefits. The total cost is estimated to be more than \$70 million. To date, FRA has funded \$11.735 million; \$4.48 million has come from FTA-backed revenue bonds; and FTA grants (91% FTA and 9% ARRC) account for \$23.8 million. An additional \$2.5 million was provided to start Phase IV work in 2009-2010, funded by ARRA Stimulus funding.

Automated Wheel Impact Load Detector

ARRC will install a wheel impact load detector (WILD) alongside the track on Fort Richardson, northeast of the Anchorage Yard. The WILD device will provide real-time wheel inspection of passenger train equipment as it rolls into and out of the Anchorage Rail Yard. The system will provide early detection of wheel defects, thereby facilitating immediate repair and replacement in order to mitigate derailment risk and avoid operational delays. \$1 million budget funded by ARRA Stimulus money administered via the FTA.

Bridge Program

ARRC's 500-plus miles of main line track include about 160 bridges that cross barriers ranging from streams to gulches. ARRC's 2010 Bridge Program calls for major maintenance, overhaul and replacement needed to maintain railroad integrity, safety and efficiency. In 2010, ARRC plans to complete replacement of two aging bridges (Little Goldstream Creek at MP 432.1 and Ship Creek at MP 115.1) and to design replacement of three culverts at Indian Creek (MP 88.1). Upgrades and rehabilitation are also planned for five other bridges. In addition, a "rock shed" will be installed at the Tunnel 50 miles north of Seward to protect against falling rock and ice. \$1.41 million bridge budget (\$740,000 by FTA; \$670,000 by ARRC) and \$1.5 million tunnel budget (91% FTA; 9% ARRC).



The bridge at MP 432.1 is being replaced, including new piling with thermopiles to keep melting permafrost frozen.



A July 2009 rock slide temporarily closed access through the tunnel about 50 miles north of Seward.

Historic Preservation

ARRC supports historic preservation efforts that are related to railroad assets and infrastructure. Some ARRC assets are historic properties and are listed on the National Register of Historic Places and more than 50 ARRC properties are eligible for listing on the National Register. ARRC often consults with state and federal historic preservation agencies to mitigate impacts from capital projects that may adversely impact historic assets. Mitigation often takes the form of educational materials, including brochures, interpretive signage, archived photos and documentation.

Track Rehabilitation

ARRC continues an aggressive track rehabilitation program in 2010 that calls for replacement of rail, ties and ballast in areas of critical need. Each year, ARRC



A Timber Trestle Bridge brochure will help preserve the history of these bridges. converts several miles of track into continuously welded rail, which dramatically decreases maintenance costs and improves ride quality. ARRC also replaces a portion of its nearly two million wooden ties (50,000 ties in 2010), and installs concrete ties along curves and other high-use stretches (none in 2010). ARRC also plans to resurface many miles of track using 70,000 tons of ballast rock. For 2010, \$9.7 million is funded through the sale of ARRC revenue bonds backed by FTA formula funds; \$7.6 million is funded by FTA grants (91% FTA; 9% ARRC); and \$300,000 is funded by ARRC. In addition, ARRA Stimulus funding in 2009 allowed ARRC to purchase \$11.8 worth of material and track welding services for use during 2010.



current as of 1/12/2010

Alaska Railroad Corporation 2010 Program of Projects

At the beginning of each calendar year, ARRC conducts project open house events in Anchorage, Fairbanks, the Mat-Su Valley and Seward to inform the public about the proposed Program of Projects (POP) for the year. While these events provide a good forum for residents to comment on any or all projects, the public is not limited to commenting at these events. Public input is accepted year-round, and in a variety of formats as outlined at the right. Detailed project descriptions are provided within fact sheets that are created for major federally-funded and internally-funded capital improvement efforts. These fact sheets are accessible at the Alaska Railroad web site **ww.AlaskaRailroad.com** (click on "Projects").

Public Input:

Public comment on any or all of these projects may be submitted via:

- Mail to: Capital Projects
 Alaska Railroad Corporation
 P.O. Box 107500
 Anchorage, AK 99510-7500
- E-mail to *public_comment@akrr.com*
- Fax to (907) 265-2365
- Call Stephenie Wheeler at (907) 265-2671 ARRC's TTY/TTD 265-2620 or voice 265-2494 or Alaska Relay TTY 800-770-8973 or voice 1-800-770-82555