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October 17, 2005

VIA HAND DELIVERY

Ms. Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
1925 K Street, N.W., Room 504
Washington, D.C. 20423

Re: Finance Docket No. 34658, The Alaska Railroad Corp. -- Petition For Exemption From 49 U.S.C. §10901 To Construct and Operate a Rail Line Between Eielson Air Force Base (North Pole, Alaska) and Fort Greely (Delta Junction)

Dear Ms. Rutson:

On behalf of The Alaska Railroad Corporation, enclosed please find for your information a document entitled "Summary of Planned Freight and Passenger Operations", which is dated October 14, 2005. This Summary reflects the current estimate of the number of trains anticipated to operate on the proposed rail line extension.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Kathryn Kusske Floyd".

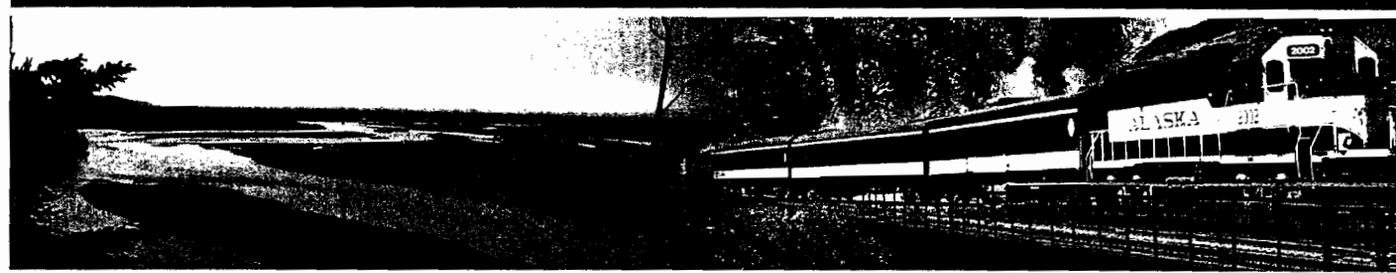
Kathryn Kusske Floyd

Enclosures

cc: David C. Navecky, SEA ✓
Alex Chavrid, FRA (w/encl., via hand delivery)
David Valenstein, FRA (w/encl., via hand delivery)
Eileen Reilly, ARRC
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Summary of Planned Freight and Passenger Operations *Alaska Railroad Northern Rail Extension Project*



Finance Docket No. 34658
Document Control No. 05-1700-003 Rev. 1





**Alaska Railroad Corporation
Northern Rail Extension Project**

**Summary of Planned Freight
and Passenger Operation**

STB Finance Docket Number: 34658
Document Control Number: 05-1700-003

Revision 1

Alaska Railroad Corporation
327 West Ship Creek Avenue
Anchorage, Alaska 99501

October 14, 2005



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1.0 Introduction

The Alaska Railroad Corporation (ARRC) is proposing to extend its mainline from the vicinity of Eielson Air Force Base (EAFB) to the Delta Junction/Fort Greely area. The proposed Northern Rail Extension Project would connect the largest military training complex in the nation with Fort Wainwright and other U.S. Department of Defense (DoD) facilities, as well as the strategic Port of Anchorage, providing connections to facilities that are a vital component of our Nation's national security interests, homeland defense readiness, and worldwide defense posture. The Northern Rail Extension Project supports the following:

- Reliable and secure land access to the large Tanana Flats-Donnelly training range complex and to military property, facilities, and installations.
- Greater opportunity for the DoD to conduct large-scale, joint/combined training exercises in Alaska for the U.S. and partner forces located throughout the continental U.S. and the U.S. Pacific Command by tying four major military installations in Alaska together with the range complex and the strategic Port of Anchorage.
- Commercial freight movements for businesses and communities in or near the rail corridor, reducing the reliance on the Richardson Highway.
- A safe, scheduled, predictable alternative mode of transportation between Fairbanks/North Pole and Delta Junction for Alaska National Guardsmen, contractors, dependent families, and civilians who wish to commute in either direction for work, shopping, medical, or educational reasons.

This report summarizes the freight and passenger operations that ARRC expects on the Northern Rail Extension. This summary is intended to estimate the daily number of trains (both passenger and freight) that may be operated on the new rail line after the initial start-up period. This report also discusses the potential commodities that may be transported. ARRC anticipates the U.S. Army Alaska (USARAK) would be the primary customer on the new rail line. As USARAK's requirements are developed and training needs change, the operating plan will be updated to reflect associated changes in the ARRC's operation.

This summary of Planned Freight and Passenger Operation reflects ARRC's current estimate of the number of trains anticipated to operate on the new rail line. This estimate is based on available information and anticipated needs, including reasonable assumptions of potential DoD transportation requirements.



2.0 Route Length and Geometry

The Northern Rail Extension Project would be a single-track railroad constructed from the east end of the Chena River Overflow Bridge (at milepost [MP] 20.18 of the Eielson Branch), on a new 80-mile-long alignment to the city of Delta Junction. Operations over the existing Eielson Branch between Milepost (MP) 20.18 and the newly constructed Fairbanks Intermodal Center (FIC) and the Fairbanks Yard add another 20 miles between Fairbanks and Delta Junction for operations originating or terminating in Fairbanks. The mass-transit service would cover a nominal distance of 100 miles for purposes of the Operating Plan.

Based on preliminary reconnaissance of the proposed Northern Rail Extension alignments, the gradient of this project is likely to be less than the ruling grade of ARRC's mainline between Anchorage and Fairbanks. A train assembled in Anchorage with sufficient horsepower to arrive safely and efficiently in Fairbanks would be able to reach any location on the Northern Rail Extension without additional locomotives.



3.0 Traffic Projections

Traffic projections for the Northern Rail Extension are based on providing the following services:

- Convenient and reliable support for military movements—Military deployments would include USARAK, as well as those of DoD Pacific Theater forces, Stryker Brigades in Hawaii and the Continental U.S., and international forces for training purposes. Military movements would also include regular U.S. Air Force personnel and supply movements to support the U.S. Air Force Blair Lakes bombing training facility¹, which lies within the Tanana Flats Training Area (TFTA). Proposed U.S. Army plans forecast an increase of training tempo as well. With the beddown in Alaska of an additional airborne brigade and an aviation brigade, the DoD will grow to well over 8,000 Army and Air Force personnel who will require regular access to the training areas.
- Support for commercial activities in the Tanana River Valley—The new rail line would haul freight composed of military supplies and equipment as well as common-carrier types of commodities to support commercial shippers, businesses, DoD facilities, and communities in the rail corridor.
- Passenger transportation—Potential ridership includes military personnel for training, military and civilian commuters to Delta Junction, passengers from Delta Junction to Fairbanks or North Pole for access to shopping, recreation, and medical services, and tourists on a seasonal basis. A convenient, affordable transportation option between Fairbanks and Fort Greely gives the population of Delta Junction and the National Guard and contractor personnel at Fort Greely a greater choice for housing, medical services, recreation and shopping.

Table 1 (following page) lists the projected number of trains per year required to provide each of these types of services.

¹ The U.S. Air Force at Eielson AFB maintains a crew all year at the Blair Lake Bombing Range Impact Area, whose duty it is to service targets and other on-site equipment.



Table 1. Annual Train Traffic Projections

Type of Service	Number of Trains per Year
Military	
USARAK Forces – Stryker Brigade Combat Training	56
DoD Forces outside of Alaska-between Port of Anchorage and the training complex	56
Regular DoD training movements	96
Commercial and Passenger	
Local freight service	200
Passenger (between Fairbanks Intermodal Center and Delta Junction)	1,440
Total²	
Total Trains	1,848
Trains per day (360 days/year)	5

Projections in Table 1 are based on the following general assumptions:

- Rail movement of the Stryker Brigade Combat Training (SBCT) for one brigade-level training exercise would require seven 6,000-foot-long trains (see Appendix A). Movements would occur between Fort Wainwright (near Fairbanks) and TFTA or Donnelly Training Area (DTA), and between Fort Richardson (near the Municipality of Anchorage) and TFTA or DTA. All personnel, cargo and vehicles (Stryker and support) would be transported by rail.³ Assuming USARAK would conduct the equivalent of four training exercises per year at the full brigade level (seven trains out and seven trains back per deployment), there would be a total of 56 trains per year on the Northern Rail Extension.

² Maintenance-of-way work trains would operate periodically on the rail line after start-up but are not included in the total.

³ A Stryker brigade is composed of approximately 1,500 pieces of equipment, including the Stryker armored combat vehicles, support vehicles, and cargo containers.



- DoD Pacific Theater forces, international forces, and other Stryker Brigades will utilize TFTA and DTA for training purposes. Units will arrive at the Strategic Port of Anchorage and will travel by rail to the training areas. There will be up to four deployments per year by forces not stationed in Alaska, and each deployment will be at the brigade level, requiring seven 6,000-foot trains for movement between the Port of Anchorage and TFTA or DTA. Assuming four deployments a year with 28 trains in each direction (that is, seven trains out and seven trains back per deployment), there would be a total of 56 trains per year on the Northern Rail Extension.
- ARRC will operate trains on a “you call, we haul” basis to support both USARAK training and the U.S. Air Force at its Blair Lakes facility. Rail movements would consist of hauling units below the brigade level between the Port of Anchorage, Fort Richardson, Fort Wainwright or EAFB and TFTA or DTA. The units would be transported on one train, which would be up to 6,000-feet long per movement. Assuming four movements per month, 12 months of the year, with two trains per movement (one train out and one train back), there would be a total of 96 trains per year on the Northern Rail Extension. This includes a periodic supply train for the Blair Lakes facility⁴.
- Local freight service from the Fairbanks Yard would provide commercial freight service to communities along the Northern Rail Extension, including Delta Junction and Fort Greely. Freight service would be provided to a variety of customers and would potentially include petroleum products from the Flint Hills Resources North Star Refinery, building materials for Fort Greely and communities along the new rail line, and products and fertilizer for agricultural producers in the Eielson Road Agricultural Area and the Delta Junction Agricultural Area. Scheduled trains providing local freight service to and from Delta Junction would potentially run up to two days a week. Assuming service 50 weeks per year yields a total of 200 trains a year on the Northern Rail Extension.
- Passenger service would consist of two round-trips a day on diesel multiple unit (DMU) type passenger trains between the FIC and Delta Junction. The trains would operate at morning and afternoon change-of-shift times. Assuming operations 360 days of the year, there would be a total of 1,440 passenger trains per year on the Northern Rail Extension.

ARRC will support the transportation needs of the military and the rail users. The estimates discussed above include sufficient capacity to allow for normal growth in the shipping needs of the military and the community.

⁴ EAFB’s Blair Lakes forces are currently supplied in the winter via ice bridge and by helicopter during the rest of the year. Train movements calculated above include an assumption that EAFB would re-supply and support the Blair Lakes facility by rail.



4.0 Freight Commodities

The following table lists the types of commodities that ARRC expects to haul on the new rail line.

Table 2. Potential Commodities Transported on the Northern Rail Extension

Type of Service	Commodities
Military	Equipment
	Vehicles, including Stryker vehicles
	Fuel oil
	Munitions
	Troop food supplies
	Building supplies
Commercial	Petroleum products
	Building supplies
	Aggregate
	Fertilizer
	Agricultural products
	Forest products



5.0 Train Movements

The goal of alignment engineering and operations analysis is to minimize travel time from the FIC to the proposed end point at Delta Junction, to the extent practical. The travel time for passenger service would be generally the same as automobile travel time along the Richardson Highway (Highway 2), which roughly parallels the alignment of the rail extension. The maximum operating speed for the rail extension is currently planned for 79 miles per hour (mph) to provide timely service for passenger trains and 70 mph for freight traffic.⁵ The average speed of the passenger trains, including acceleration, deceleration, stops, dwell time at stations, and starts, is estimated to be 60 mph.

⁵ The Federal Railroad Administration establishes the standards for class of track and maximum allowable operating speed for both passenger and freight on each class of track (49 CFR 213). The desired operating speed for passenger and freight service on the Northern Rail Extension requires that the track be designed and constructed to Class 5 standards.



6.0 Freight Train Characteristics

Several types of freight trains are intended to operate over the rail extension, with all rail equipment subject to the Association of American Railroads (AAR) interchange rules. Typical equipment is likely to include 95-foot flat cars for DoD purposes, tank cars for fuel, box cars, aggregate cars, gondolas and 65-foot articulated flats (permanently coupled together in three-car and five-car blocks) for container movement. ARRC has stipulated a maximum train length of 6,000 feet. Should the DoD require standard AAR interchange-type equipment modified to facilitate movement of the SBCT, the ARRC and the DoD may find it advantageous to construct storage tracks near Fort Wainwright or TFTA for easy deployment of rail equipment.



7.0 Passenger Train Characteristics

ARRC has a long and fruitful history of providing passenger service. Currently, ARRC operates end-to-end service between the ports of Seward, Whittier, and Anchorage and between Anchorage and Fairbanks. Much of this service is correlated with the cruise ship schedules that operate primarily during the summer months.

The curvature that would allow passenger trains to operate at full speed (79 mph) with 4-inch super-elevation is anticipated to be 1 degree, 30 minutes. Should more restrictive curves become necessary to avoid geographical constraints or should sensitive habitats or other features be discovered during conceptual-level engineering, the overall run times may need to be adjusted.

Two types of passenger equipment are appropriate for the proposed passenger service:

- Traditional locomotive-hauled passenger coach equipment.
- DMUs, which are self-propelled as each piece of the equipment is equipped with a diesel motor.

Because other trains would share the use of the Northern Rail Extension mainline at the same time as the passenger service, each passenger train would need to meet the requirements of 49 Code of Federal Regulations (CFR) Part 238, which stipulates that all equipment be FRA-compatible. ARRC intends to use FRA-compatible DMUs to provide this service.



8.0 Sidings

Several sidings would be constructed to allow opposing trains to meet and pass each other on the single-track railroad with minimal delay, to provide space for the temporary holding of maintenance equipment, work trains and vehicles, and to serve other functions. The sidings would be about 6,700 feet in length (allowing for an “in-clear” length of 6,200 feet). The number of sidings would be based on the number of trains and other operational considerations.

Potential siding locations would be planned for the entire alignment, but initially only those sidings needed to support the traffic levels identified above would be constructed. Once train volumes reached the forecasted volumes, additional sidings could be constructed to accommodate capacity. Criteria that dictate where the sidings can be placed include:

- The location of major bridges and other structures
- The terrain
- The presence of at-grade highway/road crossings
- Road access
- The ability to extend the sidings should they need to be lengthened
- Anticipated running time between sidings



Appendix A. Estimated Rail Traffic for Stryker Brigade Training Deployment

In order to estimate the expected military rail traffic associated with the deployment and training of a Stryker Brigade several sources were reviewed. Sources include a study of new rail load-out facilities for the Pennsylvania National Guard Stryker Brigade, the Record of Decision (ROD) on the Transformation of USARAK, the study completed by the University of Alaska Fairbanks (UAF) of providing access across the Tanana River to the training facilities, and the Final Environmental Impact Statement (EIS) for the Army Transformation in Hawaii. Table 3 lists the estimated number of vehicles, including Stryker vehicles, support vehicles, and twenty-foot equivalent unit (TEU) containers. The number of rail cars that would be required to move the brigade was estimated based on either a standard 60-foot flat car or a 93-foot flat car. Table 4 shows several different sources to estimate the potential number of brigade-size training deployments. Table 5 lists the location and number of Stryker Brigades to help estimate the number of potential training deployments to TFTA or DTA of non-USARAK Stryker Brigades.

Table 3. Estimate of number of Vehicles

Source	Strykers	Other Vehicles	Total Vehicles	TEU containers
Pennsylvania National Guard	310	1000	1310	120-200
USARAK (ROD)	322	1518	1840	
USARAK (UAF Study)	322	1173	1495	
2 nd Brigade Hawaii (EIS)	291	714 emission producing only	1005	
Estimate for Northern Rail Extension	322	1178	1500	150



Rail Car Length - Assume that 60' rail cars will be used

Strykers - Assume 2 Strykers per rail car

322 Strykers = 161 rail cars

Other Vehicles - Vehicle length from 15' to 35' assume 3 per rail car

1178 vehicles = 393 rail cars

Containers - Assume 2 TEUs per rail car

150 TEUs = 75 rail cars

Total Rail Cars = **629 rail cars**

Assume a 6000' train = 97 each (60' rail cars) and 2 each (70' locomotives)

Total Trains = 6.5 trains - **use 7 trains to deploy the Stryker Brigade for training**

Rail Car Length - Assume that 93' rail cars will be used.

Strykers – Assume 3 Strykers per rail car

322 Strykers = 107 rail cars

Other Vehicles - Assume 4 vehicles per rail car

1178 vehicles = 295 rail cars

Containers – Assume 4 TEUs (two 40-foot units) per rail car

150 TEUs = 38 rail cars

Total Rail Cars = 410 rail cars

Assume a 6000' train = 63 each (93' rail cars) and 2 each (70' locomotives)

Total Trains = 6.5 trains – **use 7 trains to deploy the Stryker Brigade for training**

Table 4. Number of Training Deployments Estimate

Units	Source	Brigade Level	Other Units	Totals
USARAK	Transformation EIS	2	2	4
USARAK	UAF chap. 12	2	2	4
Hawaii	ROD	4		4
Total Estimate				4

Assume that USARAK conducts all Stryker training at DTA or TFTA, which would equate to four brigade-level training deployments per year.



Table 5. Location of Stryker Brigades

Location	Number of Brigades
USARAK	1
Hawaii	1
Fort Polk, LA	1
Penn National Guard	1
Fort Lewis, WA	2
Total Number of Stryker Brigades	6

Assume that some of the units outside of USARAK would chose to conduct some training at the large Alaska training ranges.

Non-Alaska brigades = 5 at four per year = 20 brigade deployments.

Other non-USARAK brigades assume that 20% would be in Alaska = 4 per year



Appendix B. Acronyms

AAR	Association of American Railroads
ARRC	Alaska Railroad Corporation
CFR	Code of Federal Regulations
DMU	diesel multiple unit
DoD	U.S. Department of Defense
DTA	Donnelly Training Area
EAFB	Eielson Air Force Base
EIS	Environmental Impact Statement
FIC	Fairbanks Intermodal Center
FRA	Federal Railroad Administration
MP	Milepost
mph	miles per hour
ROD	Record of Decision
SBCT	Stryker Battalion Combat Team
STB	Surface Transportation Board
TEU	Twenty-foot Equivalent Unit
TFTA	Tanana Flats Training Area
UAF	University of Alaska Fairbanks
USARAK	U.S. Army Alaska

