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I. EXECUTIVE SUMMARY

A. Background

This report examines the feasibility of reinstating Amtrak's *Pioneer* route, which operated from 1977 to 1997 between Chicago, Illinois and Seattle, Washington via Denver, Colorado and Salt Lake City/Ogden, Utah. Amtrak was directed to perform this study by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law 110-432), which reauthorized Amtrak and tasked Amtrak, the Federal government, states, and other rail stakeholders to improve intercity passenger rail service.

Section 224 of PRIIA requires Amtrak to undertake studies of reinstating the *Pioneer* route, and of reinstating or expanding service, or adding stops, on several other routes. Amtrak is to submit these studies to Congress by October 16, 2009.

B. Route History

When the *Pioneer* was established in June of 1977, it operated from Salt Lake City and Ogden to Seattle. At Ogden, Amtrak's *San Francisco Zephyr* provided connecting service to/from Denver and Chicago for *Pioneer* route passengers. In 1980-81, new bi-level Superliner equipment was placed in service on the *Pioneer,* which allowed the train to offer convenient "through car" service to Chicago via the *Zephyr* and eliminated the need for passengers to physically change trains in Ogden.

In 1983, the *San Francisco Zephyr* was renamed the *California Zephyr* and rerouted over the Denver and Rio Grande Western Railroad between Denver and Salt Lake City (Rio Grande Route). This shifted the *Pioneer-Zephyr* connection to Salt Lake City. In June 1991, after lengthening of the *California Zephyr* schedule made it impractical to maintain the Salt Lake City connection, Amtrak extended the *Pioneer* east from Ogden over the Union Pacific Railroad (UP) line through Wyoming (Overland Route) to connect with the *California Zep*hyr in Denver.

In 1993, frequency of *Pioneer* service was reduced to tri-weekly due to reductions in Amtrak's Federal appropriation. Further reductions in Federal operating support resulted in the train's discontinuance in May 1997.

C. Route Options

For introducing the *Pioneer*, Amtrak evaluated seven options along four routes, with schedule-based variations. On the basis of total potential ridership, annual operating costs, net operating impact, and fare box recovery, the highest ranking options per route are presented in this study.

Option 1 (Salt Lake City-Seattle Option): Salt Lake City to Seattle, with through Chicago-Seattle cars operating on the *California Zephyr* via the Rio Grande Route (now owned by Union Pacific) east of Salt Lake City.

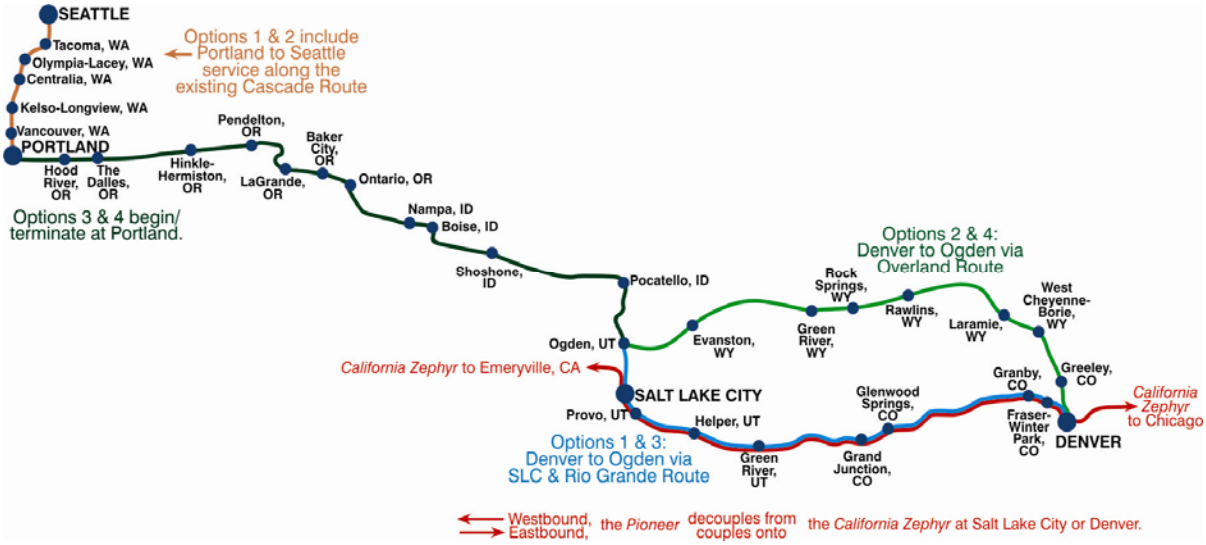
Option 2 (Denver-Seattle Option): Denver to Seattle via the UP Overland Route; through Chicago-Seattle cars exchanged with the *California Zephyr* in Denver.

Option 3 (Salt Lake City-Portland Option): Salt Lake City to Portland, with through Chicago-Portland cars operating on the *California Zephyr* via the UP Rio Grande Route east of Salt Lake City.

Option 4 (Denver-Portland Option): Denver to Portland via the UP Overland Route; through Chicago-Portland cars exchanged with the *California Zephyr* in Denver.

D. Route Map

Map of the *Pioneer* Route and Study Options



E. Operating Plan

For each of the four options, the report assumes that the reintroduced *Pioneer* would operate daily, and would be comprised of a locomotive and four Superliner cars: Coach, Coach/Baggage, Sleeper, and Diner/Lounge.

F. Ridership & Revenue

- The factors that determine ridership and revenue include price, schedule, population, economic activity, and competition from other modes of travel. Using ridership/revenue models that incorporate relevant factors, Amtrak projects that the various *Pioneer* options would produce a net Amtrak ridership increase of between 82,000 and 111,000 passengers annually, with a corresponding increase in passenger revenue (including food and beverage revenue) of $7.6 million to $13.1 million annually. Ridership and revenue by option are as follows:
- Option 1 (Salt Lake City-Seattle Option): 102,000 passengers and $11.6 million revenue
- Option 2 (Denver-Seattle Option): 111,000 passengers and $13.1 million revenue
- Option 3 (Salt Lake City-Portland Option): 82,000 passengers and $7.6 million revenue
- Option 4 (Denver-Portland Option): 95,000 passengers and $9.2 million revenue

G. Financial Performance

Projected direct operating costs are:

- Option 1 (Salt Lake City-Seattle): $36.6 million
- Option 2 (Denver-Seattle): $46.2 million
- Option 3 (Salt Lake City-Portland): $35.9 million
- Option 4 (Denver-Portland): $44.7 million

These expenses are comprised primarily of labor costs for train and engine crews and on-board service (OBS) employees, fuel, and mechanical costs.

The projected direct operating loss (revenue minus direct operating costs) is:

- Option 1 (Salt Lake City-Seattle): $25.0 million
- Option 2 (Denver-Seattle): $33.1 million
- Option 3 (Salt Lake City-Portland): $28.3 million
- Option 4 (Denver-Portland): $35.5 million

H. Implementation/Capital Costs

The reintroduction of the *Pioneer* would require significant capital/mobilization expenditures for infrastructure improvements, new equipment, station restoration, and employee training and qualifying.

UP, which owns all but a small portion of the *Pioneer*'s route between Denver/Salt Lake City and Portland, provided Amtrak with an initial analysis of capacity improvements, track upgrades and connection restorations that UP deemed necessary to accommodate the *Pioneer*'s operation. The analysis was based upon capacity modeling on a portion of the route, utilizing assumptions developed by UP, and judgments of UP planners with regard to the remainder of the route.

UP's initial analysis identified $200 million in proposed infrastructure investments if *Pioneer* service is restored between Salt Lake City and Portland, and a total of $309 million in investments if the *Pioneer* operates via the Overland Route between Denver and Portland. Amtrak and UP agreed that UP's analysis should be deemed preliminary, and it is not binding on either party. If a decision is made to reinstitute the *Pioneer*, Amtrak and UP would need to conduct further collaborative analyses, including capacity modeling and simulation of the entire route, and negotiate an agreed-upon level of investments.

A projected $13.5 million in additional capital investments would be required to directly serve the city of Boise, Idaho via the "Boise Cutoff." Potential capacity investment requirements on two line segments over which a restored *Pioneer* might operate have not been quantified. On the Portland-to-Seattle line owned by BNSF Railway, capacity requirements would depend upon the level of state-funded *Cascades* service and investments at the time of *Pioneer* restoration, and no investments should be required if the *Pioneer* replaces an existing frequency. On the segment of the Rio Grande Route between Salt Lake City and Ogden, any capacity requirements would depend upon which of the two alternate routes owned by UP and the Utah Transit Authority (UTA) is selected.

Regarding stations, if the *Pioneer* serves the same communities as it did before its 1997 discontinuance, restoration of service via the Rio Grande Route is projected to require investments of $9.5 million to $10.3 million at the twelve intermediate stations between Salt Lake City and Portland for state of good repair work and ADA requirements. Total expenditures of $16.1 million for 19 stations (including seven additional stations between Denver and Ogden) are projected if the *Pioneer* operates via the Overland Route.

Restoration of daily service on the three long distance routes Amtrak has been directed to study by PRIIA—the North Coast *Hiawatha*; the Chicago-Seattle *Pioneer*; and the *Sunset Limited* between New Orleans, Louisiana and Sanford/Orlando, Florida—would require approximately 100 additional Superliner cars. However, that equipment does not exist today. Amtrak has 20 repairable "wreck status" Superliner

cars, which it plans to restore to service in order to alleviate equipment shortages on existing Western long distance trains.

Reinstatement of daily *Pioneer* service would require a total of four to six locomotives and 23 to 26 Superliner cars, depending upon the option selected. Most or all of this equipment would have to be purchased new, at a projected cost of $141 million for Option 1 (Salt Lake City-Seattle), $123 million for Option 2 (Denver-Seattle), and $138 million for Options 3 or 4 (Salt Lake City-Portland or Denver-Portland).

Pioneer restoration would also require one-time expenditures for employee training and for qualifying train and engine crews over the selected route. These costs are estimated at approximately $4.9 million for Option 1 (Salt Lake City-Seattle); $6.6 million for Options 2 (Denver-Seattle) and 4 (Denver-Portland); and $4.5 million for Option 3 (Salt Lake City-Portland).

In total, the identified capital and mobilization costs are as follows:

- Option 1 (Salt Lake City-Seattle): $382 million
- Option 2 (Denver-Seattle): $478 million
- Option 3 (Salt Lake City-Portland): $379 million
- Option 4 (Denver-Portland): $493 million

The actual capital costs of service restoration are subject to significant uncertainty for the reasons noted above.

I. Financial Summary and Key Metrics

The relative ridership and financial performance of the four options can be summarized as follows:

- **Option 1 (Salt Lake City to Seattle via the Rio Grande Route)** has higher ridership, lower operating costs, the lowest subsidy requirement, and the highest fare box recovery.

- **Option 2 (Denver to Seattle via the Overland Route/Wyoming)** has the highest ridership, highest operating costs, a higher subsidy requirement, and a moderate fare box recovery.

- **Option 3 (Salt Lake City to Portland via the Rio Grande Route)** has the lowest ridership, lowest operating costs, a lower subsidy requirement, and lower fare box recovery.

- **Option 4 (Denver to Portland via the Overland Route/Wyoming)** has lower ridership, higher operating costs, the highest subsidy requirement, and the lowest fare box recovery.

Below is a summary of the key projected financial and performance metrics for the four options:

Projected Performance (dollar figures are in millions)	Option 1 (Salt Lake City to Seattle)	Option 2 (Denver to Seattle)	Option 3 (Salt Lake City to Portland)	Option 4 (Denver to Portland)
Capital/ Implementation Costs	$373.9	$469.8	$370.5	$484.8
Passenger Revenue	$11.6	$13.1	$7.6	$9.2
Direct Costs	$36.6	$46.2	$35.9	$44.7
Direct Operating Contribution/(Loss)	($25.0)	($33.1)	($28.3)	($35.5)
Fare box Recovery	31.7%	28.4%	21.2%	20.6%
Annual Ridership	102,000	111,000	82,000	95,000
Passenger Miles/ Train Mile	131	100	103	77

The projected fare box recoveries for the various *Pioneer* options are significantly lower than the average fare box recovery for Amtrak long distance trains in FY2008 (51.8%). Fare box recovery for the two Seattle options (Options 1 and 2) is lower than on all but one of Amtrak's 15 existing long distance routes, and the Portland options have a lower fare box recovery than any Amtrak long distance route.

J. Public Benefits

The reintroduction of the *Pioneer* would strengthen the nation's passenger rail system by enhancing network connectivity and providing direct service between the Intermountain West and the Pacific Northwest. It would restore passenger rail service to communities whose already limited public transportation options have diminished since the *Pioneer*'s discontinuance twelve years ago due to cutbacks in intercity bus and rural air service. The *Pioneer* service would also provide environmental and energy efficiency benefits. Rail passenger service is 19% more energy efficient than air travel and 28% more energy efficient than auto travel, and emits several times less carbon dioxide per passenger mile than either of these modes.

Economic benefits attributable to restoration of *Pioneer* service would include short term increases in manufacturing and construction jobs driven by initial capital investments. The permanent Amtrak jobs created to operate the service, increased food and lodging expenditures due to vacation travel, and Amtrak purchases of goods and services, would produce long term economic benefits throughout the region.

K. Timeline

Of the many actions that would have to be taken before reinstitution of *Pioneer* service, the one with the longest identified projected lead time is the design, procurement and construction of new Superliner bi-level passenger rail cars. This would require approximately four years from the date on which funding is made available.

L. Conclusion and Next Steps

Restoration of the *Pioneer* would enhance Amtrak's route network and produce public benefits, but would require significant expenditures for initial capital costs and ongoing operating costs not covered by fare box revenues. While PRIIA recognizes the importance of Amtrak's existing long distance routes, it does not provide funding for capital or operating expenses associated with expanding service beyond current levels. Amtrak supports strengthening and improving the national network of long distance trains but will need significant additional funding to expand operations beyond today's current services.

Thus, Amtrak recommends that federal and state policymakers determine if intercity passenger rail service along the former *Pioneer* route should be reintroduced and, if so, that they identify the preferred option for service restoration and provide the required levels of capital and operating funding to Amtrak. Upon such a decision, Amtrak will aggressively work with Federal and state partners to restore the *Pioneer* service.

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II. INTRODUCTION

A. Purpose of the Report

The Passenger Rail Investment and Improvement Act of 2008 (PRIIA)(Public Law 110-432), enacted on October 16, 2008, reauthorized Amtrak and gave Amtrak, the Federal government, states, and other rail stakeholders a mandate to improve intercity passenger rail service. Section 224 of PRIIA directs Amtrak to conduct studies of reinstating service, expanding service, or adding stops on various routes.

Among these routes is the former *Pioneer* route between Seattle and Chicago that Amtrak operated from 1977 to 1997. Section 224 directs Amtrak to determine the feasibility of restoring passenger rail service along the *Pioneer* route or along segments of the route. Amtrak must complete these studies "within 1 year after the date of enactment of this Act."

This report fulfills the requirements of Section 224 with respect to the *Pioneer* route. It identifies the potential ridership, revenue, operating costs and capital expenditures required for restoration of the *Pioneer* as a daily service for four routing options that encompass all or portions of the route the *Pioneer* served prior to its 1997 discontinuance. Under these options, the *Pioneer* would originate at either Denver or Salt Lake City, and would terminate at either Seattle or Portland (with connecting Amtrak service to Seattle). In all cases, the *Pioneer* would connect with Amtrak's *California Zephyr*, either in Denver or Salt Lake City, and provide through coach and sleeping car service from Chicago to Seattle or Portland.

This study was performed with the assistance of and with input from key stakeholders, most notably representatives from the Federal Congressional delegation for the states of Colorado, Wyoming, Utah, Idaho, Oregon, and Washington; Departments of Transportation from these states; the City of Boise; and planning and operating staff from the Union Pacific Railroad (UP). Amtrak's public outreach efforts to these and other stakeholders, and the input they provided, are summarized in Section IX.

B. *Pioneer* Route History

Prior to May 1971, service along the *Pioneer* route was provided by UP trains, primarily the *City of Portland* (Chicago-Portland) and *Portland Rose* (Kansas City-Denver-Portland). These trains' routes were not included in the U.S. Department of Transportation-designated initial Amtrak route network, leading to their discontinuance on April 30, 1971. Amtrak's *San Francisco Zephyr*, which operated between Chicago and Oakland, California, continued to provide passenger rail service between Denver and Ogden via UP's Overland Route through Wyoming.

As a result of grassroots activity and efforts by state and Congressional elected officials, Amtrak instituted a daily train, named the *Pioneer,* between Salt Lake City and Portland/Seattle in June 1977. This new service followed the UP route through

eastern Oregon and southern Idaho, linking the Pacific Northwest's principal cities with the Intermountain West. At Ogden, the *Pioneer* connected to the *San Francisco Zephyr*, providing service (albeit with a change of trains) to Denver and Chicago.

The *Pioneer* began service with single-level Amfleet coaches designed for short distance trains; a food service car offered tray meals, snacks and sandwiches. Sleeping car service began in July 1978. Initial intermediate stops included Tacoma, East Olympia, Centralia, Kelso-Longview, and Vancouver, Washington; Portland, Hood River, The Dalles, Hinkle, Pendleton, La Grande, Baker City, and Ontario, Oregon; Nampa, Boise, Mountain Home, Shoshone, and Pocatello, Idaho; and Brigham City and Ogden, Utah. Stops at Cache Junction (Logan), Utah and Cascade Locks, Oregon were added later, and subsequently removed. The stops at Mountain Home and Brigham City were also later discontinued.

During the years 1979 through 1981, Amtrak re-equipped its Western transcontinental trains with bi-level Superliner cars. In April 1981, Superliner equipment came to the *Pioneer*, including a diner providing full meal and snack service. A through Chicago-Seattle coach and sleeping car operated on the *San Francisco Zephyr* east of Ogden, allowing passengers to travel to points on the *Zephyr*'s route without having to change trains.

Beginning July 1983, a major change to the *Pioneer* took place. The *San Francisco Zephyr* was rerouted between Denver and Salt Lake City via the scenic Denver and Rio Grande Western Railroad (Rio Grande Route) and renamed the *California Zephyr*. The *Pioneer*'s connection to the *California Zephyr* was moved to Salt Lake City.

Between June 1977 and the late 1980s, the eastbound *Pioneer* left Seattle between 7:00 AM and 8:00 AM, arriving in Ogden or Salt Lake City 23 to 24 hours later. Westbound, after a 23 to 24 hour journey from Ogden/Salt Lake City, the train arrived in Seattle between 9:00 PM and 9:30 PM. (See Exhibit A, *Historic Schedule Table*, for details.) This schedule pattern provided daytime or near daytime service at Seattle, Portland and Salt Lake City in both directions.

During the late 1980s, host railroad operational issues began impacting the on-time performance of the *California Zephyr.* In response, time was added to the *California Zephyr*'s schedule, resulting in an earlier eastbound departure and later westbound arrival at Salt Lake City. Maintaining the *Zephyr-Pioneer* connection at Salt Lake City required a 5:20 AM departure time for the *Pioneer* from Seattle eastbound, and a later Seattle arrival time westbound, which diminished the train's market appeal.

In June 1991, Amtrak addressed this problem by rerouting the *Pioneer* over Union Pacific's Overland Route between Ogden and Denver via Wyoming. Operation via the Overland Route, which is significantly faster than the Rio Grande Route through Colorado, allowed Seattle arrival/departure times to return to more marketable hours. A bus connection was provided between Ogden and Salt Lake City.

This service pattern continued until November of 1993, when reductions in Amtrak's federal appropriation resulted in the *Pioneer* service being reduced to tri-weekly. In a subsequent restructuring, service on both the *California Zephyr* and the Chicago-St. Paul-Seattle *Empire Builder* was reduced to four times per week.

In 1997, reductions in Amtrak's federal funding necessitated further service cuts. Amtrak decided to discontinue the *Pioneer* and the Salt Lake City-Los Angeles *Desert Wind*, and to restore both the *Empire Builder* and *California Zephyr* to daily operation. Utilizing limited funding to provide daily service on long distance routes with the highest ridership was expected to generate increased passenger and mail and express revenues, and to create efficiencies that would reduce the cost of operating Amtrak's long distance network.

C. Historic Ridership

Outlined below is a summary of annual ridership on the *Pioneer* for the 1984 through 1993 period during which data are available and the *Pioneer* generally operated daily. The table excludes local ridership between Seattle and Portland, but (due to Amtrak accounting practices at the time) includes an indeterminate number of *California Zephyr* passengers who traveled between points east of Denver in the Chicago-Seattle through cars. The years (1992-93) during which the *Pioneer* operated Denver-Seattle via the Overland Route are highlighted.

Table 1 - *Pioneer* Historic Ridership

Fiscal Year	Ridership	Average Trip Length (Mi)	Average Riders per Train	Pass. Miles per Train Mile
FY84	134,000	820	184	139
FY85	124,000	837	170	132
FY86*	117,000	848	160	126
FY87*	100,000	956	137	121
FY88	118,000	953	162	143
FY89	118,000	1,048	162	157
FY90	111,000	1,118	152	158
FY91**	126,000	-	-	-
FY92	**156,000**	**1,026**	**214**	**135**
FY93	**138,000**	**1,088**	**189**	**127**

* *Pioneer* operated tri-weekly during selected off-peak periods.

** Mixed route: *Pioneer* re-routed via Wyoming summer of 1991. Route metrics not shown due to significant mileage difference between the two routes.

Average ridership per train reflects the total number of passengers traveling over some portion of the route on an average *Pioneer* trip, while passenger miles per train mile represent the average number of passengers generated for each train mile operated. The historical ridership figures show that the 1991 reroute through

Wyoming increased total ridership, but the additional miles through an area with low population reduced the passenger miles per train mile.

D. Competing Modes

The competitiveness of travel by highway did not change markedly along the *Pioneer*'s route during the train's 20 years of operation, and that remains the case today. The parallel Interstate Highways were largely completed when the *Pioneer* began operation in 1977. The highway mileages and rail mileages between points along the *Pioneer*'s route are generally comparable, except to/from Seattle, where the rail route is longer. Highway trip time reductions attributable to the elimination of the 55-mph national speed limit have been offset by increased highway congestion, particularly in urban areas.

However, airline competition along the *Pioneer*'s route changed dramatically during the 20 years that the *Pioneer* operated, due to deregulation. In 1977, air service between Denver and Portland/Seattle, and between Salt Lake City and the Pacific Northwest, was limited to just three to four round trips a day, and all passengers paid the same (undiscounted) fare. Deregulation of new entry and of fares in the early 1980s, the proliferation of budget airlines, and the development of revenue management and variable fares tied to demand, resulted in much lower air fares between major cities for non-business travelers that were very competitive with Amtrak coach fares. The number of airline flights also increased dramatically. Southwest Airlines' entry into the Salt Lake City, Boise, Portland and Seattle markets shortly before the *Pioneer*'s 1997 discontinuance accelerated these trends.

At the same time, there was a significant decline in both airline service and intercity bus service in smaller communities along the *Pioneer* route. Major airlines withdrew from small cities like Twin Falls and Pocatello, Idaho following airline deregulation, and were replaced by regional airlines that flew small planes and charged higher fares. The number of intercity bus trips along the *Pioneer* route decreased from six daily round trips in 1977 to three in 1995.

III. EXISTING RAILROAD OPERATIONS AND INFRASTRUCTURE

A restored *Pioneer* could operate via either of the two routes over which the train operated from 1977 to 1997:

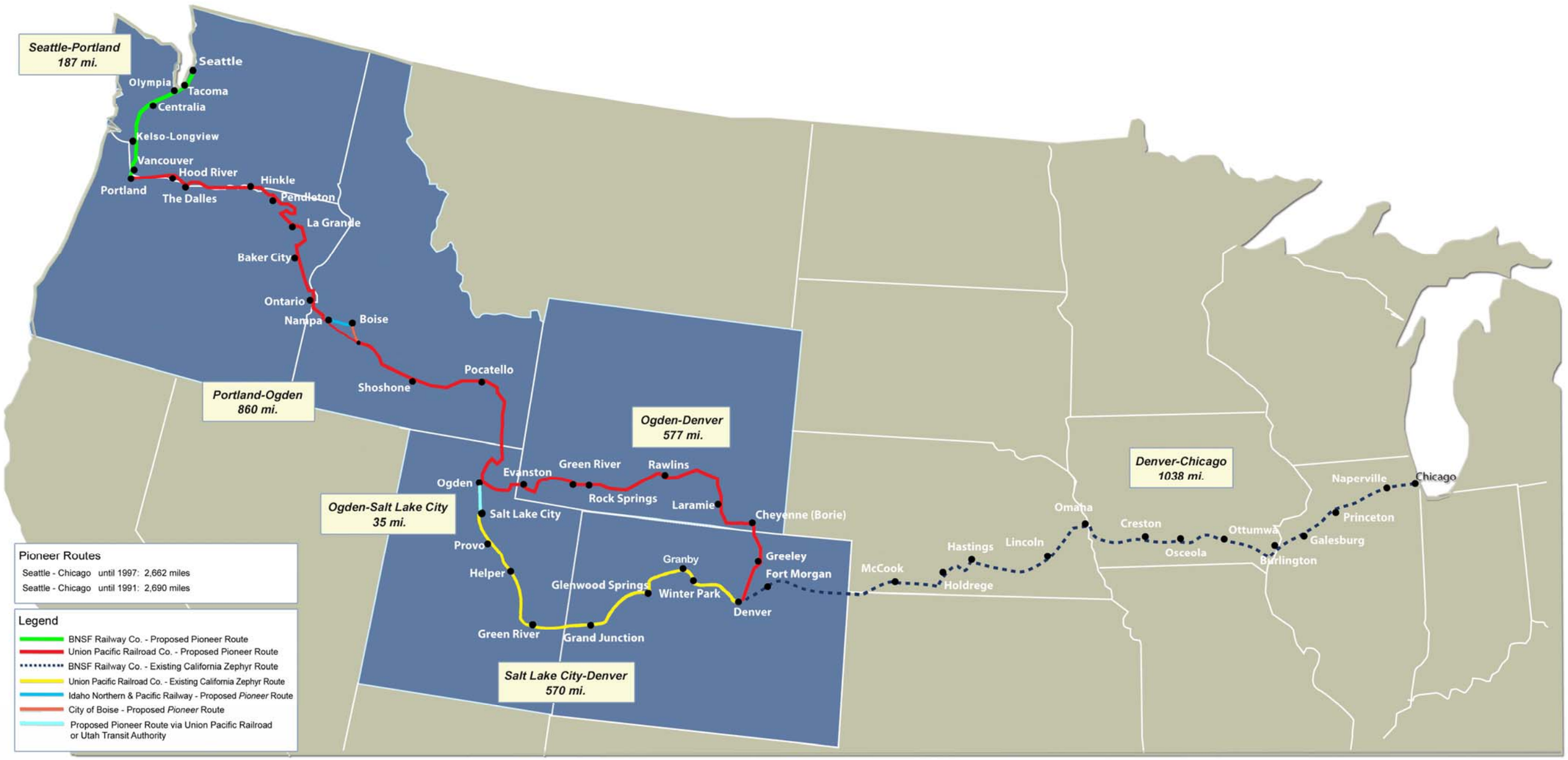
Overland Route: This is the route the *Pioneer* used from 1991 through 1997. The train would originate in Denver, with through cars operating on the *California Zephyr* between Chicago and Denver. It would operate between Denver and Ogden on UP's Overland Route though Wyoming. From Ogden to Portland, the *Pioneer* would operate over UP's Pacific Northwest Line and the Boise Cutoff; if it continued on to Seattle, it would operate over the BNSF Portland-Seattle line used by Amtrak's *Cascades* trains. This Overland Route is 1,624 miles long from Denver to Seattle, and 1,437 miles long between Denver and Portland.

Rio Grande Route: The Rio Grande Route represents the 1977-1991 route of the *Pioneer*. Through Chicago-Seattle cars would operate on the *California Zephyr* from Chicago to Salt Lake City via the Rio Grande Route (now owned by UP) through Colorado. The *Pioneer* would become a separate train at Salt Lake City, and would operate over either the UP or UTA line to Ogden to join the Overland Route and continue to Portland or Seattle. Route mileage on the Rio Grande Route is 1,652 miles from Denver to Seattle and 1,465 miles from Denver to Portland (including in both cases the 570 miles from Denver to Salt Lake City on which the *Pioneer* through cars would operate on the *California Zephyr*).

While the Rio Grande Route is only 28 miles longer than the Overland Route, the running time on the Rio Grande Route is about four hours longer (not including station dwell time at Salt Lake City) due to the steep grades and curvature as the rail line travels through Colorado's Rocky Mountains.

The following map shows the route options and track route miles for each major route segment.

PIONEER ROUTE PASSENGER PROJECT STUDY



The infrastructure and current operations on the rail lines over which a restored *Pioneer* would operate are described below.

A. Signal Systems

With the exception of the 44-mile Boise Cutoff between Orchard and Nampa, Idaho, the rail lines that a restored *Pioneer* would utilize are protected by wayside signal systems along the tracks. Centralized Traffic Control (CTC) is installed on approximately 70%-80% of both the Overland Route and the Rio Grande Route. The remaining trackage has a more limited Automatic Block Signal system (ABS), which provides less capacity per track.

CTC is a control system whereby a human dispatcher in a remote location directs trains over track segments, primarily via wayside signals and switches for passing sidings that the dispatcher controls. With ABS, trains operate pursuant to train orders given over the radio by the dispatcher, and switches are operated by train crews. Under both CTC and ABS, once a train enters a specific section or block, the signal system automatically displays signals that instruct other trains to operate at reduced speed or stop to ensure safe operations.

The Boise Cutoff currently lacks any signal system. It is considered Dark Territory operated under Direct Traffic Control (DTC): the dispatcher gives verbal permission for a train to enter a pre-defined block (track segment), and the train engineer verbally releases the block after exiting.

B. Current Freight and Passenger Operations

Table 2 below identifies the number of freight and passenger trains currently operating over the various line segments on the potential *Pioneer* routes, and the track ownership of each segment.

The vast majority of both the Overland and Rio Grande Routes are on freight railroad main line tracks. The Boise Cutoff and the UTA-owned line that is one of the alternatives between Salt Lake City and Ogden have only limited local freight operations, and there are no train operations on 20 miles of the Boise Cutoff. While no passenger trains operate on the UP line segments or the Boise Cutoff, the UTA line and the BNSF Portland-Seattle line over which the *Pioneer* would operate if it terminated in Seattle currently accommodate commuter train service and a large number of passenger trains, respectively.

Table 2 - Current Freight and Passenger Train Volumes on *Pioneer* Route

Routing Option	Between		Railroad	Current Trains per Day	
				Freight	Passenger
Overland Route	Denver	Cheyenne	UP	16	0
	Cheyenne	Rawlins	UP	70	0
	Rawlins	Granger	UP	70	0
	Granger	Ogden	UP	47	0
Overland/Rio Grande Routes	Ogden	Pocatello	UP	6	0
	Pocatello	Orchard	UP	27	0
Boise Cutoff	Orchard	Boise	Storage	0	0
	Boise	Nampa	INPR	2	0
Overland/Rio Grande Routes	Nampa	La Grande	UP	25	0
	La Grande	Hinkle	UP	24	0
	Hinkle	Portland	UP	27	0
Portland-Seattle	Portland	Vancouver	BNSF	10	12
	Vancouver	Tacoma	BNSF	33	10
	Tacoma	Seattle	BNSF	25	28
Rio Grande Route Alternatives	Salt Lake City	Ogden	UP	38	0
	Salt Lake City	Ogden	UTA	2	73

Sources: UP Trains per Day Volume Map, 2nd Quarter 2006 and Amtrak Pioneer Feasibility Study, July 15, 2009; BNSF average train count data; UTA schedules: Amtrak and Sounder schedule; and study team estimates.

The following is a description of the individual route segments:

1. Denver-Ogden (Overland Route)

   The 577-mile segment between Denver and Ogden, which the *Pioneer* would utilize if it originated in Denver, encompasses four UP subdivisions.

   a) UP Greeley Subdivision:

   The Overland Route follows the Greeley Subdivision for 98.6 miles between Denver and Speer, Wyoming (approximately eight miles southwest of Cheyenne). Maximum speed is 60 mph for all trains. This line is comprised of CTC-equipped single main track, with sidings spaced about every 11 miles. Current traffic volume is 16 trains per day.

   b) UP Laramie Subdivision

   This subdivision runs 173.3 miles from Speer to Rawlins, Wyoming. Maximum speed is 70-79 mph for passenger trains and 55-70 mph for freight trains. The subdivision has double and triple track with CTC, and handles 70 trains per day.

c) UP Rawlins Subdivision

This subdivision, which runs from Rawlins to Green River, Wyoming (134.5 miles), also sees 70 trains a day. It is double track with a maximum speed of 79 mph for passenger trains and 60-70 mph for freight trains. CTC is installed on portions of this segment, but the majority is equipped with ABS.

d) UP Evanston Subdivision

This double track subdivision runs 176.3 miles between Green River, Wyoming and Ogden. Maximum speed is 70-79 mph for passenger trains and 50-70 mph for freight trains. The section between Green River and Granger, Wyoming has 30 miles of CTC handling 70 trains per day. Between Granger and Ogden, there are 37 miles of CTC, 109 miles of ABS, and 47 trains per day. The track connection to Ogden Union Station formerly used by the *Pioneer* has been removed.

2. Ogden-Portland (Overland and Rio Grande Routes)

The 860 miles of the *Pioneer* route between Ogden and Portland traverse six UP subdivisions and the Boise Cutoff.

a) UP Ogden Subdivision

The Ogden Subdivision extends 111.4 miles from Ogden, Utah to McCammon, Idaho. Maximum speed is 60 mph for all trains, and there are approximately six trains per day. The subdivision has single track with ABS and 16 sidings.

b) UP Pocatello Subdivision

The *Pioneer* route follows UP's Pocatello Subdivision between McCammon and Pocatello, Idaho (24.5 miles). This segment has maximum speeds ranging from 20 to 55 mph for all trains; double or triple track; and CTC. It accommodates about 29 trains per day.

c) UP Nampa Subdivision

The *Pioneer* route runs over the Nampa Subdivision between Pocatello and Orchard, Idaho (209.3 miles). Maximum speed is 70 mph for all trains. This CTC-equipped segment sees 27 trains per day. It is mostly single track with sidings every eight miles and some sections of double track.

d) Boise Cutoff

UP's main line between Orchard and Nampa, Idaho follows a direct route that bypasses Boise, Idaho's capital and largest city. The *Pioneer* served Boise via a 44.3-mile secondary line between Orchard and Nampa known as the Boise Cutoff.

Following the *Pioneer*'s 1997 discontinuance, train operations ceased on the portion of the Boise Cutoff between Orchard and Shafer, Idaho (19.5 miles). That segment is now owned by the City of Boise (except for the UP-owned first mile near Orchard) and used for freight car storage under an agreement that would not inhibit restoration of the *Pioneer*. The remaining 24.8 miles between Shafer, Boise, and Nampa, where the Boise Cutoff rejoins UP's main line, is still owned by UP and leased to a short line railroad, Idaho Northern Pacific Railroad (INPR). The Shafer-Nampa segment, over which INPR operates a round trip freight train on weekdays, includes a mile-long siding west of Boise.

The Boise Cutoff has older jointed (bolted) rail rather than the welded rail found on most passenger lines and freight main lines. The switches connecting the Cutoff to UP's main line are hand-thrown with low speed turnouts. Track conditions on the Shafer-Nampa segment limit the maximum speed to 25 mph. Some portions of that segment, and of the Orchard-Shafer segment on which there are no current rail operations, have even lower speeds.

e) UP Huntington Subdivision

The Boise Cutoff rejoins the UP main line in Nampa, the location of a major UP Yard where locomotives are added to westbound freight trains and removed from eastbound freight trains.

This Huntington Subdivision between Nampa and La Grande, Oregon (179.2 miles) handles approximately 25 trains per day. Maximum speed is 70 mph on CTC-equipped single track, with sidings located every seven miles.

f) UP La Grande Subdivision

This subdivision runs between La Grande and Hinkle, Oregon (105.4 miles), passing through the steep grades of the Blue Mountains. Maximum speed is 65 mph for all trains, and the line sees 24 trains per day. The entire subdivision has CTC, and its track configuration is a combination of double track and single track with sidings about every six miles. While sidings are fairly frequent, several are less than 8,000 feet, restricting their use by longer freight trains. Freight trains are also slowed by grades of at least 2% for 30 route miles.

g) UP Portland Subdivision

This subdivision runs between Hinkle and East Portland, Oregon (184.7 miles), passing along the Columbia River Gorge. Maximum speed is 70 mph, and there are 27 trains per day. The track is mostly CTC-equipped single track with sidings about every 9 miles; there are approximately 20 route miles of double track controlled by ABS between Biggs and The Dalles, Oregon.

The Portland Subdivision splits into two lines at Troutdale, Oregon. The *Pioneer* route follows the line to the south, known as the Graham Line, to Steel Bridge in East Portland.

h) East Portland to Portland Union Station

BNSF's Fallbridge Subdivision extends north from Union Station and UP controls the interlocking plant at the south end of the station as an extension of its Brooklyn and Portland Subdivisions. The connection formerly used by the *Pioneer* between the Graham Line and Steel Bridge was severed several years ago. If the connection is not restored, the *Pioneer* would have to run north of the Steel Bridge onto UP's Seattle Subdivision toward UP's Albina Yard, reverse direction, and operate backwards (via an existing connection) onto Steel Bridge and into Portland Union Station. Moreover, the train would be facing south; to continue to Seattle, it would have to make a round trip back across the Steel Bridge so that it could be wyed. These maneuvers would increase running time.

3. Portland-Seattle (Overland and Rio Grande Routes)

A restored *Pioneer* operating through to Seattle would operate over the BNSF Portland-Seattle line used by ten daily Amtrak trains (the *Cascades* trains and Los Angeles-Seattle *Coast Starlight*). The Portland section of Amtrak's *Empire Builder* also operates daily in each direction between Portland and Vancouver, Washington.

a) BNSF Fallbridge Subdivision

BNSF's Fallbridge Subdivision between Portland Union Station and Vancouver, Washington (9.9 miles) is double tracked and controlled by CTC. Amtrak's 12 trains account for most train operations between Portland Union Station and East St. Johns, Oregon; BSNF operates approximately 10 freight trains per day between East St. Johns, Oregon and Vancouver, Washington.

b) BNSF Seattle Subdivision

The BNSF Seattle Subdivision runs between Vancouver and Seattle, Washington (177 miles). The line is double tracked with CTC, and has sections of triple track north of Tacoma.

In addition to Amtrak's ten trains, approximately 33 BNSF and UP freight trains operate daily between Vancouver and Tacoma. From Tacoma to Seattle, there are 10 Amtrak trains; 18 weekday Sounder commuter trains; and approximately 25 freight trains.

4. Salt Lake City-Ogden (Rio Grande Route)

Two alternate routings exist on the 35-mile segment of the Rio Grande Route between Salt Lake City and Ogden; one is via the UP line over which the *Pioneer*

operated until 1991. The other is a parallel line belonging to the Utah Transportation Authority (UTA) over which the FrontRunner, UTA's commuter rail service, operates.

a) UP's Salt Lake City Subdivision

UP's Salt Lake City Subdivision is comprised of triple track between Salt Lake City and North Salt Lake City and double track from North Salt Lake City to Ogden, all equipped with CTC. UP operates approximately 38 freight trains per day over this line.

The track connection from UP's Salt Lake City Subdivision to Ogden Union Station (the *Pioneer*'s former Ogden stop) has been removed, and would have to be restored for a *Pioneer* operating via the Rio Grande Route to serve the station tracks at Ogden Union Station.

Alternatively, a crossover connection could be constructed between UP and UTA tracks about two miles south of Ogden to allow the *Pioneer* to stop at either UTA's Ogden multi-modal station or a new platform constructed along the UTA line adjacent to Ogden Union Station. Given that Amtrak's Superliner cars have floors that are 15 inches above the top of rail, UTA's plans to construct platforms that are 25 inches higher than the top of rail at the multi-modal station could be an impediment to using the UTA station for the *Pioneer*'s Ogden stop.

b) UTA Line

Rather than operating over UP's Salt Lake City Subdivision, the *Pioneer* could use the parallel UTA line between Salt Lake City and Ogden. The UTA line accommodates 73 weekday FrontRunner commuter trains that operate throughout the day (save for a four-hour nighttime window during which UTA performs track inspections and maintenance work and a round trip freight train operates over the line).

The UTA line is predominantly single track and has eight passing sidings, most at station locations. Use of the UTA line would require construction of a new connection to allow the *Pioneer* to access the Amtrak station in Salt Lake City. It would also require that Amtrak locomotives operating on the *Pioneer* be equipped with the GE Ultracab 2-cab signal system that UTA uses.

Both UP and UTA have expressed concerns about operation of the *Pioneer* over their respective Salt Lake City-Ogden lines.

C. Stations and Equipment Servicing Facilities

The 1997 discontinuance of the *Pioneer* eliminated Amtrak service at 19 intermediate stations the train served between Denver and Portland. These stations, referred to as the "Potentially Reinstated Stations," are discussed in Section IV. A restored *Pioneer* terminating in Seattle would also serve the four existing Amtrak stations on the *Cascades* route between Portland and Seattle-Kelso-Longview, Centralia, Olympia-Lacey, and Tacoma, Washington—where no facility modifications would be required to accommodate its operation.

In addition to these stations, the *Pioneer* served four major cities that Amtrak continues to serve today: Denver (1991-1997); Salt Lake City (1977-1991); Portland; and Seattle. These four cities are all potential endpoints at which a restored *Pioneer* would terminate and its equipment would be serviced. The Amtrak stations and servicing facilities in these cities are discussed below.

1. Denver Union Station

Denver Union Station is currently served by the *California Zephyr* operating daily in both directions. The station is equipped to perform federally mandated inspections and limited equipment servicing, and has a wye track (Prospect Wye) used by the *California Zephyr* on which a *Pioneer* terminating at Denver could be turned for its return trip. The Denver Regional Transportation District (RTD), which owns Denver Union Station, is pursuing plans to develop the station as a public transportation hub, plans that include reconfiguration of the station's tracks to accommodate four new commuter rail lines. An agreement between Amtrak and RTD ensures that, following the completion of the reconfiguration, there will be sufficient station and layover trackage and servicing capability at Denver Union Station to support a restored *Pioneer.*

2. Salt Lake City Amtrak Station

Amtrak's service at Salt Lake City is also provided by the *California Zephyr.* The Salt Lake City Amtrak Station, which replaced the no longer rail-served station facility used by the *Pioneer*, has two through tracks and provisions for limited equipment servicing. The current track configuration could accommodate the *Pioneer* and the contemplated switching operations between the *Pioneer* and *California Zephyr*, as long as the eastbound and westbound *Zephyrs* were not in the station at the same time, a problem that would occur only if the westbound train was very late. UP's Grant Tower Wye could potentially be used to turn *Pioneer* locomotive and food service cars that would lay over in Salt Lake City; however, UP has not addressed this in its capacity analysis and has made no provision in the proposed infrastructure to accommodate this movement. Amtrak has an agreement with Utah Transit Authority (UTA) for a UTA-funded replacement station.

3. Portland Union Station

   Thirteen daily Amtrak trains utilize this station. It has five tracks, one of which is used for through freight operation. The station has limited equipment servicing capabilities and a nearby wye track (East Portland Wye). It currently performs turnaround servicing for the *Empire Builder* and *Cascades* trains.

4. Seattle King Street Station

   King Street Station serves 14 daily Amtrak trains and 26 weekday Sounder commuter trains. It has four through tracks and three stub tracks. Both Amtrak and Sounder trains lay over and are serviced at Amtrak's Seattle Maintenance Facility south of the station, which is being upgraded under a multi-phase program.

IV. STATIONS

Until 1991, the *Pioneer* served 12 intermediate stations between Salt Lake City and Portland on the Rio Grande Route. In 1991, the *Pioneer* was rerouted to the Overland Route through Wyoming, which added service at seven additional intermediate stations between Denver and Ogden, Utah. The *Pioneer* continued to serve these 19 stations until it was terminated in 1997 and Amtrak service at these stations was eliminated.

A. The Potentially Reinstated Stations

Resumption of Amtrak service at the 19 Overland Route stations the *Pioneer* served at the time of its discontinuance would require capital investments to bring station facilities up to a state of good repair (or replace them) and to make them compliant with the *Americans with Disabilities Act of 1990* (the "ADA"). If *Pioneer* service is restored over the Rio Grande Route, then only 11-12 of these stations would require improvements. These 19 stations, referred to as the "Potentially Reinstated Stations," are shown in Table 3 below.

Table 3 - Potentially Reinstated Stations

Overland Route Only	**State**	**Current Station Site User**
Greeley	CO	Greeley Convention and Visitors Bureau
Borie (Cheyenne)	WY	No longer exists
Laramie	WY	Albany County Railroad Heritage Museum
Rawlins	WY	Not in use
Rock Springs	WY	Model railroad museum
Green River	WY	UP office
Evanston	WY	Museum
Overland and Rio Grande Routes	**State**	**Current Station Site User**
Ogden	UT	Multiple museums and gift shop
Pocatello	ID	UP office
Shoshone	ID	Not in use
Boise	ID	Community events
Nampa	ID	UP office
Ontario	ID	Not in use
Baker City	OR	City Parks Dept office
La Grande	OR	UP office
Pendleton	OR	No longer exists
Hinkle	OR	N/A
The Dalles	OR	Greyhound bus
Hood River	OR	Mt. Hood Railroad (tourist railroad station; offices)

The majority of these stations were built by private railroads long before the creation of Amtrak in 1971. Several of these structures are listed in the National Register of Historic Places.

It is important to note that these stations are presented in this report for illustrative purposes only. Whether a reinstated *Pioneer* would stop in all of these communities, or would serve other communities, has not been determined. A number of those who commented on the draft report urged that stops be added in additional communities that the *Pioneer* did not previously serve. As many of the Potentially Reinstated Stations are currently used by freight railroads or have been sold or leased to private entities for non-railroad purposes (e.g., museums, community centers, etc.), this report also does not mean to imply that these particular stations would be used as station stops if the *Pioneer* is reinstated with stops in these communities.

B. Station Restoration Requirements

Whether Amtrak uses the existing Potentially Reinstated Station structures or builds new ones, it must ensure that they are in a state of good repair and are ADA compliant before it reinstates service to these communities. Amtrak has developed an extensive process for assessing and completing work necessary to develop or restore stations. This process allows Amtrak to equip the stations it serves to meet ADA accessibility requirements and provide the level of service appropriate for their size and location.

1. ADA Requirements—Overview of the ADA Law and Standards

a) Americans with Disabilities Act of 1990

Amtrak strives to maintain the rail stations it serves in a state of good repair and ensure that they are readily accessible to, and usable by, passengers with disabilities as required by section 242(e)(2) of the *Americans with Disabilities Act of 1990 (42 U.S.C. 12162(e)(2))*. In February of 2009, Amtrak submitted to Congress "A Report on Accessibility and Compliance with the Americans with Disabilities Act of 1990" (Stations ADA Report). The report describes the ADA requirements applicable to Amtrak and details Amtrak's plan for making the 481 stations Amtrak currently serves compliant with the ADA.

The Stations ADA Report does not include restoration assessments and development plans for the Potentially Reinstated Stations, since Amtrak does not currently serve them. This section, therefore, will focus on the improvements necessary if service is to be resumed to these stations.

b) Construction and Alteration of Rail Stations

The ADA precludes Amtrak from "[building] a new station for use in intercity rail transportation that is not readily accessible to and usable by person with disabilities, including individuals who use wheelchairs" (42 U.S.C. 12162(e)(1)). Whether Amtrak uses the existing station structures or builds new facilities in or near the towns in which the Potentially Reinstated Stations are located, these structures will likely be deemed "new stations" for purposes of the ADA. As such, Amtrak cannot serve them unless and until that they are made fully

ADA compliant; and thus it is Amtrak who will bear the full measure of the costs associated with this effort.

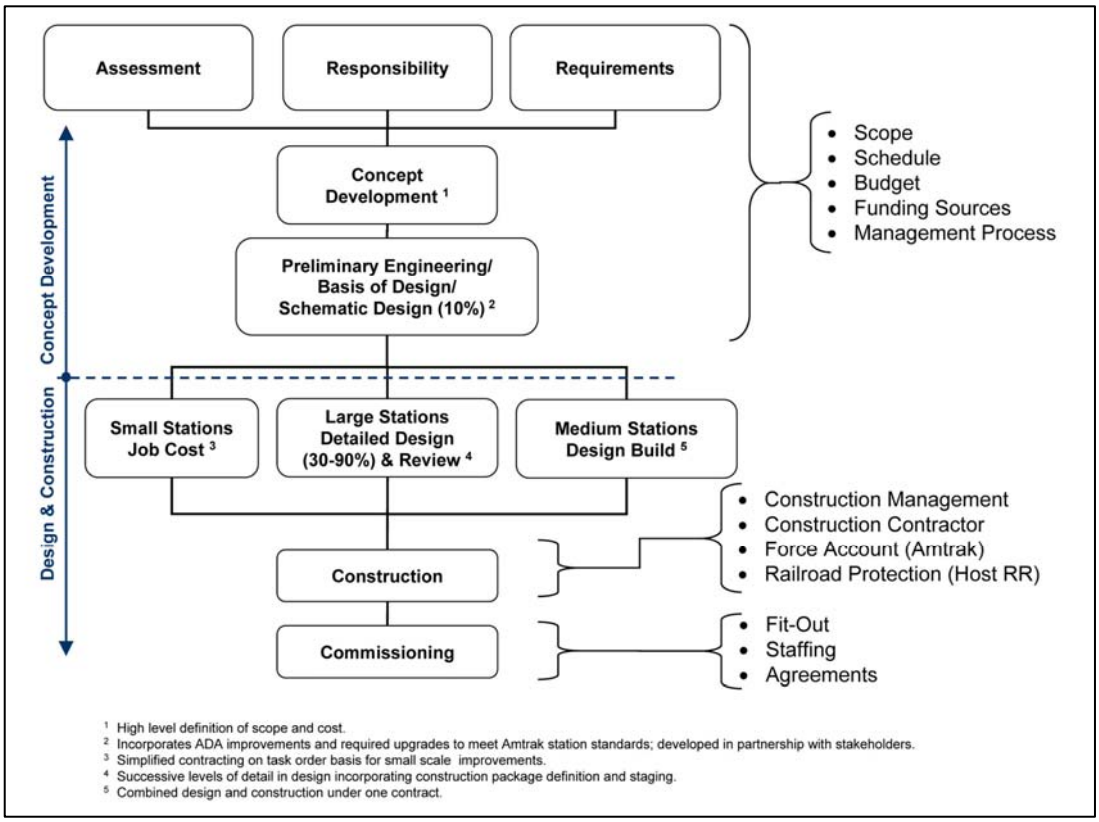
Preliminary research indicates that the buildings that once served as the *Pioneer* stations, and the land on which they sit, are owned in most instances by either a freight railroad or a private developer. Some city and county governments have expressed a strong interest in funding the reinstatement of Amtrak service in their communities. However, no local government along the *Pioneer* route has, as of the date of this report, committed to financing this endeavor if service is reinstated. Thus, absent an agreement with the locality stating otherwise, the ADA compliance responsibility for reinstating stations on these privately owned sites will fall exclusively to Amtrak, either as the owner of the site if Amtrak purchases it from the private owner, or as the sole public user operating passenger railroad service at this Potentially Reinstated *Pioneer* stop.

C. Station Development Process

1. Stations Improvement Program and Schedule

Amtrak's Stations Development Plan is founded on a set of station surveys, contained in the Stations ADA Report, that were completed for each of the 481 stations served by Amtrak that are required to be made ADA compliant. Recently, Amtrak performed additional surveys of the Potentially Reinstated Stations which specify the nature of the improvements required to bring these structures up to a state of good repair and make them ADA accessible. The improvements made to these stations if *Pioneer* service is reinstated would follow the design and development processes depicted in the diagram below.

ADA Station Development Process



Project designs at all stations are initiated through the development of a conceptual design. The conceptual design describes the scope of the project, time frames for implementation, responsibilities for improvements and management process steps for completing the detailed design and construction process. The scope, schedule, and budget along with funding assumptions and management responsibilities and actions would be developed as part of this stage along with agreements among and between the parties associated with implementation.

This conceptual design phase is followed by the design and construction phase of the project. The nature and duration of the design and construction phase depends upon the size of the station involved and the extent of the work necessary to refurbish it. While the 19 Potentially Reinstated Stations all fall into the small station category, the improvements required at these stations will be substantial, since they were built before current ADA requirements took effect and have not been used for passenger rail service in over a decade. These projects typically follow a design-build approach in which a single contractor would handle both the detailed design and the construction. The duration for these projects from start to finish will average approximately 36 to 48 months.

2. Station-Related Agreements

   As part of the conceptual design process associated with Potentially Reinstated Station restoration, lease or purchase agreements would need to be forged between Amtrak and the private owners of the station sites, and the local governmental entity when necessary. As many of the sites are now used as museums, community centers, etc., these negotiations may require a great deal of time and resources.

   While Amtrak would, in general, take responsibility for adding and maintaining electronic ticketing and passenger information displays systems (where appropriate), other elements of the delivery system for service require detailed inventory and responsibility assignment. For purposes of the Potentially Reinstated Stations, Amtrak would expect to enter into an operating agreement with the local city or county, which would specify that the local governmental entity will provide for all ongoing maintenance associated with the station facility. This agreement would also delineate the responsibility for the day-to-day station operating expenses.

3. Funding Considerations

   An important consideration in restoring the Potentially Reinstated Stations is the source of funding for these efforts. As described in Section B.1.(b) above, Amtrak will be responsible for all costs incurred to render the Potentially Reinstated Stations ADA compliant. Given the significant amount of ADA related work associated with these projects, it will be impractical to distinguish ADA related costs from general refurbishment and state of good repair expenditures. If a decision is made to reinstate the *Pioneer* service, the additional Federal funding required for the associated capital costs would have to include funding for all of the Potentially Reinstated Station improvements in communities where the train would stop.

D. Preliminary Capital and Operating Cost Estimates

Recent surveys of the Potentially Reinstated Stations indicate that bringing all 19 stations back into service and into compliance with ADA requirements will require approximately $16.1 million in capital investments (in 2009 dollars). (See Exhibit B, *Amtrak SOGR and ADA Station Survey Assessment*.)

Once the necessary capital improvements to the Potentially Reinstated Stations have been made, an annual operating expenditure of approximately $150,000 will be needed to maintain them in a state of good repair and ensure that they remain ADA compliant. (See Exhibit C, *Amtrak Pioneer Stations—Annual Operating Costs*, which delineates the projected annual operating expenditure for each of these stations.)

If *Pioneer* service is resumed between Salt Lake City and Portland over the Rio Grande Route, only 11-12 of the 19 Potentially Reinstated Stations would need to be brought

up to a state of good repair and made ADA compliant. (If the *Pioneer* serves the UTA multi-modal station in Ogden, the projected expenditures at Ogden Union Station would not be required.) The projected cost of the necessary capital improvements at these stations is approximately $9.5 million to $10.3 million, depending upon whether Ogden Union Station is included. Annual operating costs are estimated to range between $90,000 and $120,000.

V. SERVICE RESTORATION ALTERNATIVES

A. Service Options

PRIIA requires Amtrak to study restoration of the *Pioneer* route, or portions of the route, between Seattle and Chicago.

The former *Pioneer* service pattern—operating through Chicago-Seattle cars on the *California Zephyr* between Chicago and Denver or Salt Lake City, and operating a separate *Pioneer* train from Denver (via the Overland Route) or Salt Lake City (Rio Grande Route) to Seattle—remains the logical and most cost efficient way to restore Chicago-Seattle service via the *Pioneer* route. Utilizing the *California Zephyr* between Chicago and Denver/Salt Lake City avoids the capital and operating costs of operating a separate *Pioneer* between those cities, but preserves the significant revenue generated by offering through coach and sleeping car service over the entire route. Providing service over only a portion of the *Pioneer* route—the 491-mile segment from Portland to Boise, for example—would generate lower ridership and revenue, even on the segment over which the train operated, since only the relatively small number of potential passengers whose origin and destination were both within that segment would be served. (Average passenger trip length on the *Pioneer* prior to its discontinuance was over 1,000 miles.) PRIIA would also require that any route less than 750 miles in length be state-funded.

The Overland Route options through Wyoming would serve a greater passenger volume, and would restore intercity passenger rail service to a state that has lacked service since the *Pioneer*'s discontinuance. The Rio Grande Route options would directly serve Salt Lake City, and would provide service between the Pacific Northwest and major Colorado vacation destinations such as Glenwood Springs.

This report also examines the alternative of utilizing existing *Cascades* trains to provide connecting service between Portland and Seattle rather than operating a separate *Pioneer* over that segment. This approach would avoid potential capital costs to increase rail line capacity between Portland and Seattle.

Originating the separate *Pioneer* at either Denver or Salt Lake City, and terminating it at either Portland or Seattle, produces four potential endpoint combinations. Amtrak evaluated various schedule options for each of these combinations under a ranking process based primarily upon ridership; total direct operating costs; direct operating loss (revenues minus direct operating costs); and fare box recovery (the percentage of direct operating costs covered by ticket and food and beverage revenues).

The four options presented in this report represent the best schedule alternatives for each of the four potential endpoint combinations. Their relative performance based upon the criteria described above is as follows.

- **Option 1 (Salt Lake City-Seattle Option)** - This option has higher ridership, lower operating costs, the lowest subsidy requirement, and the highest fare box recovery.
- **Option 2 (Denver-Seattle Option)** - This option has the highest ridership, higher operating costs, a higher subsidy requirement, and a moderate fare box recovery.
- **Option 3 (Salt Lake City - Portland Option)** - This option has lower ridership, lower operating costs, a lower subsidy requirement, and lower fare box recovery.
- **Option 4 (Denver - Portland Option)** - This option has lower ridership, higher operating costs, a higher subsidy requirement, and a lower fare box recovery.

Table 4 - Comparison of Potential Operating Performance

	Option 1	Option 2	Option 3*	Option 4*
	CHI-SLC-SEA	CHI-OGD-SEA	CHI-SLC-PDX	CHI-OGD-PDX
Total Riders	102,000	111,000	82,000	95,000
Total Revenue (millions)	$11.6	$13.1	$7.6	$9.2
Total Direct Costs (millions)	$36.6	$46.2	$35.9	$44.7
Net Impact (Rev. - Direct Costs) (millions)	($25.0)	($33.1)	($28.3)	($35.5)
Fare box Recovery	31.7%	28.4%	21.2%	20.6%

* Riders connecting to/from *Cascades* trains between Portland and Seattle are counted twice, since they would travel over two routes.

Exhibit D, *Long Distance Route Fare Box Recovery Table*, compares the projected fare box recoveries for the four *Pioneer* options with the fare box recoveries of the 15 long distance trains Amtrak currently operates. As can be seen, the projected fare box recovery of the reinstated *Pioneer* service, which varies from 20.6% to 31.7% under the various options selected, would be significantly lower than the average fare box recovery for Amtrak long distance trains in FY2008 (51.8%). Fare box recovery for the two Seattle options for *Pioneer* restoration (Options 1 and 2) is lower than on all but one of Amtrak's 15 existing long distance routes, and the Portland options have a lower fare box recovery than any Amtrak long distance route.

These four options and the proposed schedules associated with them are described further below. The times shown between Chicago and Denver or Salt Lake City are based upon the current *California Zephyr* schedules between those points.

The ridership and revenue estimates for the options that terminate in Portland assume that convenient connections would be available on *Cascades* trains to/from Seattle. (Most of the proposed *Pioneer* schedules would connect with existing

Cascades trains, and Washington DOT, which provides funding for the *Cascades* service, has plans to increase frequencies.) For the Overland Route options (Options 2 and 4), connections to/from Salt Lake City via UTA FrontRunner trains would be available at Ogden.

1. Option 1: Salt Lake City-Ogden-Portland-Seattle (Rio Grande Route)

   This was the route of the *Pioneer* until 1991. The route is 1,082 miles long. Total trip time is 22 hours. Through Chicago-Seattle cars operate on Amtrak's *California Zephyr* via the Rio Grande Route between Chicago and Salt Lake City.

   The proposed schedule for Option 1 is set forth below:

***Pioneer* - Option 1**					
Proposed **Train 25** Daily					Proposed **Train 26** Daily
2:00 PM	**Dp**	Chicago, IL	**CT**	**Ar**	3:50 PM
10:29 PM	**Ar**	Omaha, NE		**Dp**	6:14 AM
10:39 PM	**Dp**			**Ar**	5:59 AM
7:15 AM	**Ar**	Denver, CO	**MT**	**Dp**	8:10 PM
8:05 AM	**Dp**			**Ar**	7:38 PM
11:00 PM	**Ar**	Salt Lake CIty, UT		**Dp**	4:30 AM
1:00 AM	**Dp**			**Ar**	6:35 PM
2:00 AM	**Ar**	Ogden, UT		**Dp**	5:35 PM
2:02 AM	**Dp**			**Ar**	5:33 PM
4:40 AM	**Dp**	Pocatello, ID		**Dp**	2:26 PM
6:16 AM	**Dp**	Shoshone, ID (Twin Falls)		**Dp**	12:49 PM
8:36 AM	**Dp**	Boise, ID		**Dp**	10:38 AM
9:19 AM	**Dp**	Nampa, ID		**Dp**	9:52 AM
10:02 AM	**Dp**	Ontario, OR	**MT**	**Dp**	9:06 AM
10:57 AM	**Dp**	Baker City, OR	**PT**	**Dp**	6:11 AM
11:57 AM	**Dp**	La Grande, OR		**Dp**	5:06 AM
2:14 PM	**Dp**	Pendleton, OR		**Dp**	3:04 AM
2:57 PM	**Dp**	Hinkle-Hermiston, OR		**Dp**	2:12 AM
4:21 PM	**Dp**	The Dalles, OR		**Dp**	12:42 AM
4:49 PM	**Dp**	Hood River, OR		**Dp**	12:15 AM
6:30 PM	**Ar**	Portland, OR		**Dp**	10:58 PM
6:45 PM	**Dp**			**Ar**	10:43 PM
7:12 PM	**Dp**	Vancouver, WA		**Dp**	10:09 PM
7:52 PM	**Dp**	Kelso-Longview, WA		**Dp**	9:25 PM
8:41 PM	**Dp**	Centralia, WA		**Dp**	8:36 PM
9:05 PM	**Dp**	Olympia-Lacey, WA		**Dp**	8:12 PM
9:57 PM	**Dp**	Tacoma, WA		**Dp**	7:27 PM
11:05 PM	**Ar**	Seattle, WA	**PT**	**Dp**	6:30 PM

2. Option 2: Denver-Wyoming-Ogden-Portland-Seattle (Overland Route)

This is the route of the *Pioneer* when it was discontinued in May 1997. It is 1,624 miles long and runs from Denver to Seattle via the Overland Route through Wyoming. Total trip time is about 32.5 hours. The *Pioneer* exchanges through Chicago-Seattle cars with the *California Zephyr* in Denver.

The proposed schedule for Option 2 is set forth below:

***Pioneer* - Option 2**					
Proposed **Train 25** Daily					Proposed **Train 26** Daily
2:00 PM	**Dp**	Chicago, IL	**CT**	**Ar**	3:50 PM
10:29 PM	**Ar**	Omaha, NE		**Dp**	6:14 AM
10:39 PM	**Dp**			**Ar**	5:59 AM
7:15 AM	**Ar**	Denver, CO	**MT**	**Dp**	8:10 PM
9:00 AM	**Dp**			**Ar**	5:36 PM
10:07 AM	**Dp**	Greeley, CO		**Dp**	4:05 PM
11:09 AM	**Dp**	West Cheyenne-Borie, WY		**Dp**	3:04 PM
12:13 PM	**Dp**	Laramie, WY		**Dp**	1:57 PM
2:02 PM	**Dp**	Rawlins, WY		**Dp**	12:18 PM
3:43 PM	**Dp**	Rock Springs, WY		**Dp**	10:28 AM
4:20 PM	**Dp**	Green River, WY		**Dp**	10:04 AM
6:00 PM	**Dp**	Evanston, WY		**Dp**	8:11 AM
8:28 PM	**Ar**	Ogden, UT		**Dp**	6:26 AM
8:48 PM	**Dp**			**Ar**	6:06 AM
11:18 PM	**Dp**	Pocatello, ID		**Dp**	2:56 AM
12:54 AM	**Dp**	Shoshone, ID (Twin Falls)		**Dp**	1:19 AM
3:14 AM	**Dp**	Boise, ID		**Dp**	11:08 PM
3:57 AM	**Dp**	Nampa, ID		**Dp**	10:22 PM
4:40 AM	**Dp**	Ontario, OR	**MT**	**Dp**	9:36 PM
5:35 AM	**Dp**	Baker City, OR	**PT**	**Dp**	6:41 PM
6:35 AM	**Dp**	La Grande, OR		**Dp**	5:36 PM
8:52 AM	**Dp**	Pendleton, OR		**Dp**	3:34 PM
9:35 AM	**Dp**	Hinkle-Hermiston, OR		**Dp**	2:42 PM
10:59 AM	**Dp**	The Dalles, OR		**Dp**	1:12 PM
11:27 AM	**Dp**	Hood River, OR		**Dp**	12:45 PM
1:08 PM	**Ar**	Portland, OR		**Dp**	11:28 AM
1:25 PM	**Dp**			**Ar**	11:13 AM
1:52 PM	**Dp**	Vancouver, WA		**Dp**	10:39 AM
2:32 PM	**Dp**	Kelso-Longview, WA		**Dp**	9:55 AM
3:21 PM	**Dp**	Centralia, WA		**Dp**	9:06 AM
3:45 PM	**Dp**	Olympia-Lacey, WA		**Dp**	8:42 AM
4:37 PM	**Dp**	Tacoma, WA		**Dp**	7:57 AM
5:44 PM	**Ar**	Seattle, WA	**PT**	**Dp**	7:00 AM

3. Option 3: Salt Lake City-Ogden-Portland (Rio Grande Route)

This option follows the same route as Option 1: through cars operate on the *California Zephyr* from Chicago to Salt Lake City via the Rio Grande Route. However, the *Pioneer* would terminate in Portland instead of Seattle. The route between Salt Lake City and Portland is 895 miles long. Total trip time is 17.5 hours.

The proposed schedule for Option 3 is set forth below:

***Pioneer* - Option 3**					
Proposed **Train 25** Daily					Proposed **Train 26** Daily
2:00 PM	**Dp**	Chicago, IL	**CT**	**Ar**	3:50 PM
10:29 PM	**Ar**	Omaha, NE		**Dp**	6:14 AM
10:39 PM	**Dp**			**Ar**	5:59 AM
7:15 AM	**Ar**	Denver, CO	**MT**	**Dp**	8:10 PM
8:05 AM	**Dp**			**Ar**	7:38 PM
11:00 PM	**Ar**	Salt Lake CIty, UT		**Dp**	4:30 AM
1:00 AM	**Dp**			**Ar**	6:35 PM
2:00 AM	**Ar**	Ogden, UT		**Dp**	5:35 PM
2:02 AM	**Dp**			**Ar**	5:33 PM
4:40 AM	**Dp**	Pocatello, ID		**Dp**	2:26 PM
6:16 AM	**Dp**	Shoshone, ID (Twin Falls)		**Dp**	12:49 PM
8:36 AM	**Dp**	Boise, ID		**Dp**	10:38 AM
9:19 AM	**Dp**	Nampa, ID		**Dp**	9:52 AM
10:02 AM	**Dp**	Ontario, OR	**MT**	**Dp**	9:06 AM
10:57 AM	**Dp**	Baker City, OR	**PT**	**Dp**	6:11 AM
11:57 AM	**Dp**	La Grande, OR		**Dp**	5:06 AM
2:14 PM	**Dp**	Pendleton, OR		**Dp**	3:04 AM
2:57 PM	**Dp**	Hinkle-Hermiston, OR		**Dp**	2:12 AM
4:21 PM	**Dp**	The Dalles, OR		**Dp**	12:42 AM
4:49 PM	**Dp**	Hood River, OR		**Dp**	12:15 AM
6:30 PM	**Ar**	Portland, OR		**Dp**	10:58 PM

4. Option 4: Denver-Wyoming-Ogden-Portland (Overland Route)

With this route (like Option 2), the *Pioneer* would originate in Denver, where it would exchange through cars to/from Chicago with the *California Zephyr*, and would operate via the Overland Route through Wyoming. However, the train would terminate in Portland rather than in Seattle. The route is 1,437 miles long. Total trip time is 28 hours.

The proposed schedule for Option 4 is set forth below:

***Pioneer* - Option 4**					
Proposed **Train 25** Daily					Proposed **Train 26** Daily
2:00 PM	**Dp**	Chicago, IL	**CT**	**Ar**	3:50 PM
10:29 PM	**Ar**	Omaha, NE		**Dp**	6:14 AM
10:39 PM	**Dp**			**Ar**	5:59 AM
7:15 AM	**Ar**	Denver, CO		**Dp**	8:10 PM
9:00 AM	**Dp**			**Ar**	5:36 PM
10:07 AM	**Dp**	Greeley, CO		**Dp**	4:05 PM
11:09 AM	**Dp**	West Cheyenne-Borie, WY		**Dp**	3:04 PM
12:13 PM	**Dp**	Laramie, WY		**Dp**	1:57 PM
2:02 PM	**Dp**	Rawlins, WY		**Dp**	12:18 PM
3:43 PM	**Dp**	Rock Springs, WY		**Dp**	10:28 AM
4:20 PM	**Dp**	Green River, WY		**Dp**	10:04 AM
6:00 PM	**Dp**	Evanston, WY		**Dp**	8:11 AM
8:28 PM	**Ar**	Ogden, UT		**Dp**	6:26 AM
8:48 PM	**Dp**			**Ar**	6:06 AM
11:18 PM	**Dp**	Pocatello, ID		**Dp**	2:56 AM
12:54 AM	**Dp**	Shoshone, ID (Twin Falls)		**Dp**	1:19 AM
3:14 AM	**Dp**	Boise, ID		**Dp**	11:08 PM
3:57 AM	**Dp**	Nampa, ID		**Dp**	10:22 PM
4:40 AM	**Dp**	Ontario, OR	**MT**	**Dp**	9:36 PM
5:35 AM	**Dp**	Baker City, OR	**PT**	**Dp**	6:41 PM
6:35 AM	**Dp**	La Grande, OR		**Dp**	5:36 PM
8:52 AM	**Dp**	Pendleton, OR		**Dp**	3:34 PM
9:35 AM	**Dp**	Hinkle-Hermiston, OR		**Dp**	2:42 PM
10:59 AM	**Dp**	The Dalles, OR		**Dp**	1:12 PM
11:27 AM	**Dp**	Hood River, OR		**Dp**	12:45 PM
1:08 PM	**Ar**	Portland, OR		**Dp**	11:28 AM

B. Scheduling and Routing Alternatives

1. Eastbound Schedules for Seattle Route Options

Under the proposed eastbound schedules for the Rio Grande Route Options (Options 1 and 3), the through Seattle/Portland-Chicago cars lay over in Salt Lake City for approximately ten hours between the time the eastbound *Pioneer* arrives and the departure of the eastbound *California Zephyr.* This far from optimal schedule is necessitated by the same consideration that led Amtrak to reroute the *Pioneer* east to Denver over the Overland Route in 1991—the need both to connect with the *California Zephyr* and to provide arrival/departure times at Portland and Seattle that are conducive to attracting passengers.

The lengthened schedule under which the *California Zephyr* has operated between Salt Lake City and Denver since the late 1980s, and the fact that the eastbound *Zephyr* departs Salt Lake City an hour earlier than it did in 1997, means that the eastbound *Pioneer* would have to depart Seattle around 4:00 AM to connect with the *Zephyr* in Salt Lake City. That is even earlier than the 5:20 AM departure that Amtrak found to be unmarketable before the train was shifted to the Overland Route in 1991. The proposed eastbound schedules for Options 1 and 3, under which all major cities are served at hours conducive to passenger travel (albeit with a long layover at Salt Lake City) generate significantly higher revenue and ridership than schedules with a shorter layover that would serve both Salt Lake City and Seattle in the middle of the night (or require Seattle passengers to spend a night in Portland if the train originated in that city).

2. BNSF Denver-Boulder-Cheyenne Line

Between Denver and the Cheyenne area, BNSF's Front Range Subdivision, which runs through Boulder (home of the University of Colorado) and Fort Collins (home of Colorado State University) to Speer and Cheyenne, is a theoretical alternative to the former *Pioneer* route through Greeley. However, distances via the BNSF line are longer—14 miles longer between Denver and Speer (where there is no connection to the UP line) and 26 miles longer if the train operated over the BNSF line into Cheyenne (where there is a connection, but no access to UP's historic station in downtown Cheyenne). Moreover, maximum freight speed on the unsignalled BNSF line is only 49 mph; over 30 miles are restricted to 30 mph or less; and there is a 15-20 mph speed restriction on the six-mile segment of the line through downtown Fort Collins where trains run down the middle of Mason Street. While operation via the BNSF line is not feasible at the present time due to much longer trip times, it could be a viable alternative in the future if proposals to upgrade the line for high speed rail service come to fruition.

C. Schedule Development

The proposed schedules for the four options were created in what are called "Schedule Skeletons." This type of analysis breaks down each schedule option into sub-segments between stations. The running times and actual train schedules developed through this process take into account authorized speeds and route characteristics on each segment. They also reflect the time required for acceleration and deceleration at station stops, and include allowances for possible train delays and miscellaneous adjustments for other factors that will impact running time.

The schedules are based upon:

1. Pure Running Time (PRT): The optimum or minimum time the train will take to operate between passenger stations and/or other pre-determined points, exclusive of station dwell time or delays.

2. Station Dwell Time: The normal amount of time included in schedules to accommodate activities at station stops, including the loading/unloading of passengers and baggage and (where applicable) crew changes, locomotive fueling and other train servicing requirements.

3. Schedule Recovery Time: Time added to a schedule to enable a train to "recover" to its public schedule after incurring delays. Recovery Time can take two forms:

    - Standard Recovery Time (SRT): Additional schedule time that is based on a percentage of PRT in a given segment—usually about eight percent. This time is intended to permit recovery from all delays, regardless of cause.

    - Additional Recovery Time (ART): Usually the time allotted for opposing passenger trains to meet in single-track territory. The amount of added time varies with individual schedules and configuration of the rail line—usually at least five minutes per passenger train scheduled to be met.

The schedules developed for all four options included a minimum of eight to ten percent SRT. This percentage takes into consideration that the host railroads should give passenger trains dispatching preference over freight trains, as required by Federal law, and also assumes that the rail line will be satisfactorily maintained so that passenger trains will not be burdened with an excessive level of slow-order delays.

For Options 1 and 2, the scheduled running time between Denver/Salt Lake City and Seattle is approximately 34 hours and 23 hours, respectively. For Options 3 and 4, the scheduled running time between Denver/Salt Lake City and Portland is approximately 30 hours and 19 hours. These times are equivalent to the *Pioneer*'s running times between the same points in the 1980s and 1990s. Amtrak believes that these schedules can be reliably achieved due to:

- the recovery time built into them that is described above;
- anticipated capital investments to increase rail line capacity that would be undertaken in conjunction with reinstatement of the *Pioneer*; and
- host railroads' increased focus on the performance of Amtrak trains since enactment of PRIIA, which includes provisions aimed at improving on-time performance and ensuring passenger trains are granted preference over freight transportation as required by Federal law.

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VI. RIDERSHIP AND OPERATING COST ANALYSIS

Ridership and revenue for each option were estimated utilizing models and data Amtrak has developed to measure the impact of new or changed services. The inputs included surveys of Amtrak's long distance passengers, socio-economic data, and forecasts of population and income in the areas served by each station. The models take into account variations in ridership demand that are attributable to factors such as ticket prices; services offered by competing modes; the time of day at which stations are served and whether potential passengers are required to change trains in order to reach their destination, which negatively impacts ridership.

Surveys of Amtrak's long distance passengers indicate that approximately two-thirds are traveling on "purpose trips," including visits to family and friends and personal business (medical, legal, etc.). The remaining third are traveling for vacation or recreation purposes. A reinstated *Pioneer* would serve both of these markets due to the limited public transportation options in many of the communities the train would serve, and the scenery and vacation destinations along the route.

A. Ridership & Ticket Revenue Forecasts

Using the models and data described above and FY2009 as the baseline, Amtrak developed annual ridership and ticket revenue forecasts for each of the four proposed *Pioneer* service restoration options. The forecasted results are outlined in Table 5. The "total" forecast results are for the *Pioneer* route as it would be reported in Amtrak's financial system. The "incremental" figures reflect the net impact of addition of the *Pioneer* on Amtrak's systemwide ridership and revenues, including "cannibalization" of existing riders currently traveling on, for example, the *Empire Builder* Seattle-Chicago who would ride the restored *Pioneer* instead.

Table 5 - Forecast Results for the Reinstated *Pioneer* Service

Schedule	Ridership	Ticket Revenue
Option 1 - Salt Lake City-Seattle (Rio Grande Route)		
Total Rt.	114,100	$13,001,000
Incremental	102,100	$10,737,000
Option 2 - Denver-Seattle (Overland Route)		
Total Rt.	123,600	$14,467,000
Incremental	111,400	$12,116,000
Option 3 - Salt Lake City-Portland* (Rio Grande Route)		
Total Rt.	72,300	$8,211,000
Incremental	82,000**	$7,026,000
Option 4 - Denver-Portland* (Overland Route)		
Total Rt.	85,600	$9,741,000
Incremental	94,600**	$8,487,000

* Connections at Portland to *Cascades* trains for service to Seattle.

** Riders connecting to/from the *Cascades* are counted twice, on the *Cascades* and again on the *Pioneer*.

The figures above for the two Seattle options (Options 1 and 2) include local riders traveling only between Portland and Seattle (and intermediate points). However, given that the schedules of these options, which are driven by the schedules of the connecting *California Zephyr* and the need *to* serve Seattle/Portland at marketable times, operate relatively close to the schedules of existing *Cascades* frequencies, they generate very little incremental ridership between Seattle and Portland. (No changes in the schedules of state-supported *Cascades* trains were assumed, since this would require the concurrence of the Washington State Department of Transportation.)

Table 6 below outlines the overall ridership/revenue route metrics for the restored *Pioneer*. The passenger miles per train mile are relatively high compared to the average riders per train (the total number of passengers traveling over some segment of the route) since the *Pioneer* is credited with the train miles generated between Chicago and Denver or Salt Lake City by *Pioneer* passengers traveling on the through cars carried on the *California Zephyr* between these points.

Table 6 - Metrics of Restored *Pioneer* Service

Schedule	Ridership	Average Trip Length (Mi)	Average Riders per Train	Pass. Miles per Train Mile	Ticket Revenue per Train Mile
Option 1 - Salt Lake City- Seattle via Rio Grande Route Total Rt.	114,100	910	156	131	$16.46
Option 2 - Denver-Seattle via Overland Route Total Rt.	123,600	954	169	100	$12.20
Option 3 - Salt Lake City-Portland* via Rio Grande Route Total Rt.	72,300	931	99	103	$12.55
Option 4 - Denver-Portland* via Overland Route Total Rt.	85,600	942	117	77	$9.28

* Connections at Portland to *Cascades* Corridor trains for service to Seattle.

B. Factors Impacting *Pioneer* Ridership

The proposed route of the *Pioneer* serves a region that has grown faster than the United States as a whole over the past 17 years. Population growth in the states along the route (Colorado, Wyoming, Utah, Idaho, Oregon, and Washington) increased by 41% compared to a 19% increase nationally. While median household income nationally grew 66% nationwide, median household income in these states grew by 78% during the same period. Estimated population directly served by the route totals about 11 million. This represents about 58% of the total population of the states along the route.

The *California Zephyr* connection is critical to the operation of the *Pioneer,* since a large portion of the projected revenue is generated by passengers whose trip includes travel on the *California Zephyr* east of Denver/Salt Lake City. The projected *Pioneer* schedules reflect the necessity of a reliable connection with the *California Zephyr* to exchange through cars. However, this operational requirement results in potential *Pioneer* schedules that, in some cases, provide sub-optimal times in key cities such as Salt Lake City, Seattle and Boise. Using the Overland Route, which has a shorter running time than the Rio Grande Route, mitigates some of these challenges. However, the Overland Route has lower population and passenger miles per train mile, which translate into lower revenue per train mile, and significant additional mileage that increases operating and host railroad capital costs.

Projected *Pioneer* ridership is somewhat lower than actual ridership in the 1980s and 1990s that is depicted in Section II.C. In the major cities served by the *Pioneer* since the train's 1997 discontinuance, the already robust airline competition the *Pioneer* faced by the early 1990s, discussed in Section II.D, has increased markedly in the 12 years since the train's discontinuance due to the proliferation of low fare/high frequency airline service in all of the major city pairs on the *Pioneer* route.

Southwest Airlines, which began serving the region shortly before the *Pioneer*'s discontinuance, has rapidly expanded its operations, particularly since its 2006 initiation of service at Denver. Three major airline hubs bracket the *Pioneer* route, including Denver International Airport, opened two years before the *Pioneer*'s demise, where three major airlines have hub or hub-equivalent operations. The number of daily flights from Salt Lake City to Portland/ Seattle has increased from three in 1977 to 25 non-stops today, while Boise has nine non-stop flights each day to Seattle and eight non-stops to both Portland and Salt Lake City.

C. Operating Costs

Projected direct operating expenses for the *Pioneer* vary based on the route (Overland or Rio Grande) and western terminal (Portland or Seattle) selected. Not surprisingly, the options under which the *Pioneer* would operate longer distances as a separate train generally have higher operating costs. The principal cost categories, and the differences in costs among the various options, are discussed below.

The higher equipment requirements for the Portland Options (Options 3 and 4), which impact both operating and capital costs, are attributable to the fact that Amtrak has only limited equipment servicing facilities in the cities (Portland, Salt Lake City and Denver) between which the *Pioneer* would operate as a standalone train if terminated in Portland. This means that all of the *Pioneer*'s equipment, including the locomotive and diner-lounge car that would be dropped/added at Salt Lake City or Denver under the Seattle Options, would have to operate through from Portland to Chicago, where it would be maintained.

1. Train and Engine/On-Board Service Employees

Depending upon the option selected, reinstituting *Pioneer* service would require Amtrak to hire between 109 and 135 additional train and engine (T&E) employees (engineers, conductors, and assistant conductors) and on-board service (OBS) personnel (food service employees and coach/sleeper attendants), as detailed below:

Table 7 - Incremental T&E/OBS Headcount

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
T&E Crew	52	68	46	68
T&E Yard	1	2	1	2
OBS	56	58	75	65
Total	**109**	**128**	**122**	**135**

The number of T&E and OBS personnel required, and associated labor costs, were determined from proposed schedules, consist information, projected passenger loads, and service characteristics for each option. Table 8 below, depicts the estimated T&E and OBS labor and associated costs.

Table 8 - Incremental T&E/OBS Costs - $Million per Annum

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
T&E Labor	6,400,000	9,800,000	5,500,000	9,400,000
Yard Ops, Transp Mgmt & Training	2,500,000	3,300,000	2,200,000	3,000,000
OBS Labor	7,100,000	7,500,000	8,400,000	7,500,000
Total	**$16,000,000**	**$20,600,000**	**$16,100,000**	**$19,900,000**

2. Fuel

Fuel costs are estimated to range from $4.4 million to $6.7 million, depending on the option selected. Fuel cost estimates are based on an adjusted gross ton-mile model, which calculates fuel usage for each option based on train tonnage, mileage, gradient, and energy consumed in making station stops. The cost is then computed from a standard rate per million adjusted gross ton miles derived from actual results on existing trains. The price basis used for the estimate is the average price per gallon for the first six months of FY09.

Table 9 - Fuel costs

Option	Cost
1 - Salt Lake City-Seattle via Rio Grande Route	$4.4 million
2 - Denver-Seattle via Overland Route	$5.4 million
3 - Salt Lake City-Portland via Rio Grande Route	$5.7 million
4 - Denver-Portland via Overland Route	$6.7 million

3. Mechanical

Mechanical estimates cover all car and locomotive maintenance costs (except fuel), including turnaround servicing, inspection and maintenance costs, and represent both labor and material costs. Fleet maintenance and other mechanical work would be performed primarily at Chicago or Seattle. The estimated increase in mechanical staff required for the *Pioneer* is between 16 and 20 persons, depending upon the option. Forecasted mechanical costs are detailed in Table 10 below.

Table 10 - Mechanical Headcount & Costs

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
Incremental Headcount	20	20	16	16
Total Expenses (parts & labor)	$7.7M	$9.2M	$7.2M	$8.7M

4. Stations

All of the stations along the *Pioneer* route that Amtrak does not presently serve are assumed to be unstaffed under all options. Therefore, station employee headcount increases and non-labor station operating expenses would be minimal. Depending upon the option selected, additional station staff would be required at Salt Lake City, Portland, Tacoma, and Seattle, as depicted in Table 11 below, to accommodate additional *Pioneer* passengers or the additional hours that a station would remain open to serve the *Pioneer*.

At unstaffed stations, annual station operating costs are estimated at $6,750 per new station, which is the average annual operating cost for similar long distance stations. This figure includes utilities, communications, and other operating expenses.

Total station operating costs, including labor, range from $1.5 million for Option 3 to $2.0 million for Option 2, with the remaining options falling between the two values.

Table 11 - Incremental Headcount & Annual Cost for Station Operations

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
Stations Staff:				
Salt Lake City	3	0	3	0
Portland	3	4	3	4
Tacoma	2	3	0	0
Seattle	3	7	0	0
Total Headcount	**11**	**14**	**6**	**4**
Total Costs (Staff & Operations)	**$1.8 M**	**$2.0 M**	**$1.5 M**	**$1.7 M**

5. Other Direct Costs

Remaining direct costs are estimated to range from $5.4 million (Option 3) to $9.0 million (Option 2). They include insurance, reservations, marketing and advertising, and host railroad costs. Host railroad costs represent Amtrak's payments to the railroads (primarily UP) that own the tracks over which the *Pioneer* would operate. They reflect the incremental costs attributable to Amtrak's operations, plus incentive payments for good on-time performance.

D. Operating Financial Summary

Annual revenue and operating costs are summarized in Table 12 below. Also shown are performance metrics that reflect comparative fare box recovery (the percentage of direct costs covered by ticket and food and beverage revenues) and financial performance per train or passenger mile.

Table 12 - Summary of Revenue, Expenses, and Performance Metrics

Description	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
Ridership & Revenue				
Total Annual Passengers	**102,000**	**111,000**	**82,000**	**95,000**
Total Annual Revenue	**$11,600,000**	**$13,100,000**	**$7,600,000**	**$9,200,000**
Annual Operating Expenses				
Fuel	4,400,000	5,400,000	5,700,000	6,700,000
T&E Labor (Train Operations)	6,400,000	9,800,000	5,500,000	9,400,000
Yard Ops, Transp Mgmt & Training	2,500,000	3,300,000	2,200,000	3,000,000
OBS Labor (On Board Services)	7,100,000	7,500,000	8,400,000	7,500,000
Mechanical	7,700,000	9,200,000	7,200,000	8,700,000
Stations	1,800,000	2,000,000	1,500,000	1,700,000
Remaining Direct Costs	6,700,000	9,000,000	5,400,000	7,700,000
Total Direct Costs	**$36,600,000**	**$46,200,000**	**$35,900,000**	**$44,700,000**
Performance Metrics				
Budget Impact (Revenue less Operating)	**($25,000,000)**	**($33,100,000)**	**($28,300,000)**	**($35,500,000)**
Fare Box Recovery	31.7%	28.4%	21.2%	20.6%
Cost per Train Mile	47	39	56	43
Net per Train Mile	(32)	(28)	(44)	(34)
Revenue per Passenger Mile	0.13	0.13	0.13	0.13
Cost per Passenger Mile	0.42	0.46	0.61	0.62
Net Per Passenger Mile	(0.29)	(0.33)	(0.48)	(0.50)

VII. CAPITAL COSTS AND IMPLEMENTATION REQUIREMENTS

The reinstitution of *Pioneer* service would require significant capital investments and a major commitment of Amtrak personnel and resources. Capital expenditures will be required for new equipment, improvements to host railroad-owned tracks and infrastructure, and station restorations. There will also be one-time mobilization costs to hire, train, and qualify employees. This section presents a detailed discussion of these capital costs and implementation issues.

A. Host Railroad Capital Investments

Amtrak asked UP, the owner of the vast majority of the rail lines over which the *Pioneer* would operate, to provide Amtrak with its initial projections of capacity and other infrastructure improvements that UP believed would be needed to accommodate the *Pioneer* on UP's lines. UP prepared and submitted an initial feasibility study and preliminary capacity evaluation to Amtrak on July 15, 2009 (see Exhibit E, *Amtrak Pioneer Feasibility Study*).

Due to timing and resource constraints, UP was able to perform capacity modeling on only a portion of the route. UP's projected capacity requirements on the remainder of the route are based upon judgments of UP's planners. As indicated in UP's report, the UP's projected capacity requirements reflect only an initial assessment not adopted or agreed to by either UP or Amtrak. If a decision is made to reinstitute the *Pioneer*, Amtrak and UP would need to conduct further collaborative analyses, including capacity modeling and simulation of the entire route, to negotiate an agreed-upon level of investments.

1. UP Methodology

The methodologies UP employed for its initial analysis are summarized below.

a) Denver-Ogden-Pocatello

Between Denver and Pocatello, UP's proposed capacity investments are based upon the judgments of UP's planners. They evaluated the impact of adding the *Pioneer* to UP's freight operations and identified capacity investments that they believed would mitigate that impact.

b) Pocatello-Boise-Portland

On the Pocatello-Portland segment of the *Pioneer* route, UP used the Rail Traffic Controller (RTC) operations simulation program to assess the impacts of reinstating the *Pioneer*. RTC is widely used within the railroad industry for operations simulations to test the impacts of proposed changes in train operations or infrastructure improvements. Inputs for RTC include trains running over the line and the times at which they operate, track configurations and signalization, maximum allowable speeds, speed restrictions, locomotive power, train weight and length, and train prioritization.

Using these variables, RTC routes trains across the line. When two trains meet on single track segments, the train having higher priority remains on the main line, while the train with lesser priority moves onto a passing siding, allowing the train with higher priority to pass. Essentially, RTC resolves conflicts between opposing trains in the same way as a human dispatcher using CTC.

Outputs for RTC include average speed and delay per 100 train-miles for both passenger and freight trains. Typically, an RTC simulation effort develops a base case, which accurately portrays the current (or current with projected growth) operations of various kinds of trains on a line. In subsequent iterations, trains are added to the line and operations along the network are modified, or new capacity enhancements (such as new sidings) implemented. The results of these iterations are measured against the base case to assess the impact of operational or infrastructure changes on average speeds and minutes of delay.

For the RTC simulation between Pocatello and Portland, UP planners first created a base case and then added the *Pioneer* to the existing traffic mix. Once the projected impacts of the *Pioneer*'s introduction to the route were identified, UP's planners added various capital improvements to the route until train performance (measured in terms of speed and minutes of delay per 100 train miles) reached levels that UP deemed acceptable.

2. UP-Identified Potential Capital Improvements

The potential track, signal and other investments UP identified for reestablishment of the *Pioneer* are summarized below.

a) Greeley Subdivision (Denver-Speer)

UP planners stated that the line is at capacity. To provide additional capacity, they proposed that Amtrak fund capital improvements on UP's Julesburg Subdivision. This would allow four to six UP trains running between Denver and Omaha to be rerouted over the BNSF Brush Subdivision (on which the UP has trackage rights) from Denver to Union, Colorado, and thence over the Julesburg Subdivision from Union to Julesburg, Colorado to rejoin UP's line to Omaha.

b) Overland Route (Speer-Ogden)

This predominantly double track segment of the *Pioneer* Route consists of the Laramie, Rawlins and Evanston Subdivisions.

On the Laramie Subdivision, which runs from Speer, Colorado to Rawlins, Wyoming, UP proposed the installation of three universal crossovers to increase the number of locations where trains can shift from one track to the other. On the Rawlins Subdivision, which runs from Rawlins to Green River, UP

proposed that 71 miles of track be converted from ABS to CTC to increase capacity, and that two universal crossovers be installed.

The Evanston Subdivision runs from Green River to Ogden. UP's report proposed no specific improvements on this segment, but instead recommended a more in depth analysis, including an RTC simulation to identify potential capacity requirements, if restoration of the *Pioneer* is pursued.

c) Ogden and Pocatello Subdivisions (Ogden-Pocatello)

The Ogden Subdivision runs between Ogden and McCammon, Idaho and the Pocatello Subdivision links McCammon with Pocatello, Idaho.

UP stated that operations on the Ogden Subdivision are slow, and also noted that the Ogden Depot is no longer connected directly to the UP main line. UP proposed four improvements on this subdivision: a track connection to the Ogden Depot with a powered (dispatcher-controlled) switch; installation of manual interlockings at Cache Junction and Brigham City; the extension of power switching of Coulam siding; and an upgrade of rail and ties.

d) Nampa and Huntington Subdivisions

The Nampa Subdivision runs between Pocatello and Nampa, Idaho. Based upon the RTC operations simulation, UP planners proposed two improvements here: signaling upgrades for six sidings to allow trains to enter the sidings at 30 mph rather than 15 mph, and a run-through track at Nampa Yard that would create additional flexibility and allow sorting and crew changes clear of an Amtrak route through Nampa.

The Huntington Subdivision runs between Nampa and La Grande, just east of the Blue Mountains. UP proposed installation of an additional siding or second track in Baker City.

e) La Grande Subdivision

The La Grande Subdivision runs between La Grande and Hinkle, across the Blue Mountains. The line has steep grades that slow trains. UP proposed two improvements: a 2.5-mile extension of the double track westward from La Grande Yard to Hilgard, and a run-through track for freight trains at La Grande Yard.

f) Portland Subdivision

The Portland Subdivision runs between Hinkle and East Portland, mostly along the Columbia River. Based upon the RTC simulation, UP planners identified seven proposed projects, six of which are on the segment between Biggs and Portland. They include installing a run-through track at Hinkle Yard; CTC between Biggs and Crates; powering switches at Rowena Siding; extension of Hood River siding eastward to 10,000 feet; 10 miles of new double track along

the Columbia River Gorge west of Hood River; a new siding on the Graham Line just east of Portland; and a reconnection of the Graham Line to Steel Bridge to enable the *Pioneer* to access Portland Union Station without the backup move necessitated by the removal of the connection.

3. Salt Lake City-Ogden

Under the Rio Grande Route Options (Options 1 and 3), the *Pioneer* would originate at Salt Lake City rather than Denver, and would operate between Salt Lake City and Ogden, where it would join the Denver-Portland/Seattle route. On the 35-mile Salt Lake City-Ogden segment of the Rio Grande Route, there are two routing options: the UP Salt Lake Subdivision and the UTA FrontRunner line. Given the uncertainty as to which of these alternatives, or combination of them, a restored *Pioneer* operating over the Rio Grande Route would use, Amtrak did not undertake an assessment of rail line capacity on this relatively short segment.

As discussed in Section III.B.4, construction of a track connection would be required regardless of which route a *Pioneer* operating via the Rio Grande Route used between Salt Lake City and Ogden. In addition, Amtrak locomotives operating on the *Pioneer* would have to be equipped with The Automatic Train Protection (ATP) system, the GE Ultracab 2-cab signal system, used by UTA if the *Pioneer* operated over the UTA route, or operated via the UP route but served the UTA Ogden multi-modal station. The projected capital costs for the Rio Grande Route include the cost of constructing a track connection between the UTA and UP lines, and the cost of equipping a sufficient number of Amtrak locomotives with the cab signal system used by UTA.

4. Boise Cutoff

As discussed in Section II.B.2.d, current maximum speeds on the 44.3 mile Boise Cutoff are 25 mph or less, and approximately half of the line is out of service and used for freight car storage. Track upgrades will be necessary to restore the Boise Cutoff to passenger train standards. Based on a previous study and a general review conducted as part of this study, the initial projected cost of these improvements is $13.5 million. Further assessment of the line including structures, drainage and other right-of-way-conditions, would be required to verify this assumption.

5. BNSF Portland-Seattle

Under Options 1 and 2, the *Pioneer* would operate from Portland to Seattle on the BNSF line used by Amtrak's *Cascades* and *Coast Starlight.* BNSF and the Washington State Department of Transportation (WSDOT) have recently completed a capacity study that identified capacity improvements needed to support four new state-supported *Cascades* round trips operating between Portland and Seattle. Capacity investments required to accommodate the *Pioneer* between Portland and Seattle would depend upon which of these investments identified in the BNSF-WSDOT

study have been made, and the number of additional *Cascades* frequencies operating, at the time the *Pioneer* is restored. In addition, capital investments should not be necessary if a restored *Pioneer* supplants the Portland-Seattle *Cascades* frequency that is not currently state supported. Therefore, no determination has been made of potential capacity investment requirements on the BNSF line.

B. Equipment Servicing Facilities

Depending upon the service restoration option selected, a reestablished *Pioneer* service would utilize the existing Amtrak layover and equipment servicing facilities in either Denver or Salt Lake City, and in either Portland or Seattle that are described in Section III.C.

As discussed in Section III.C, the current track and platform configurations at these locations, and the planned reconfiguration at Denver Union Station, should be sufficient to accommodate a restored *Pioneer*. Existing/planned mechanical facilities at Denver and Seattle should also be able to accommodate the *Pioneer's* equipment servicing requirements. If one of the Rio Grande Route Options (Options 1 or 3) under which the *Pioneer* originates at Salt Lake City is selected, a fuel pad along with a head-end power (HEP) unit would be required at Salt Lake City for fueling and servicing. Modest mechanical enhancements may also be required at Portland if either Option 3 or 4, under which the *Pioneer* would terminate at Portland, is selected. The relatively small costs for these items have not been quantified in the capital cost projections.

C. Positive Train Control

The Railway Safety Improvement Act of 2008 (RSIA) requires installation of positive train control (PTC)—an advanced collision prevention system—by 2015 on rail lines owned by Class 1 (major) freight railroads that handle over five million gross tons of traffic annually and are used by either (i) passenger trains or (ii) freight trains carrying toxic-by-inhalation ("TIH") chemicals. RSIA also directs the Federal Railroad Administration (FRA) to determine to what extent PTC should be required on other rail lines used by passenger trains.

FRA's proposed PTC regulations, issued in July of 2009, would require installation of PTC on virtually all rail lines on which passenger trains operate. However, there is an exception for lines on which "temporal separation can be achieved," i.e., passenger and freight trains do not operate at the same time.

On virtually all of the lines over which the *Pioneer* would operate, Amtrak expects that the freight railroads will be required to install PTC, regardless of whether the *Pioneer* is reinstated, because of the volume of freight traffic and the presence of TIH shipments. The one place where that is not the case is the Boise Cutoff. However, because of the short length of the Boise Cutoff and the very limited freight operations

on it, Amtrak presently anticipates that temporal separation should be possible, eliminating the need to install PTC if the *Pioneer* is reinstated.

Due to the implementation of PTC, Amtrak will be required to equip all of its locomotives with onboard PTC equipment. The projected capital costs shown below include the costs of installing such equipment on the additional Amtrak locomotives that would be required to operate the *Pioneer*.

D. Host Railroad Capital Improvement Summary

Table 13 below lists the track and signal-related capital investments on host railroads described above and their projected costs. The investments identified on the Overland Route (Options 1 and 3) total $324.1 million; on the Rio Grande Route (options 2 and 4), the total is $217.7 million.

These figures are subject to significant uncertainty. As discussed above, the majority of the identified investments are based upon an initial analysis by UP. If a decision is made to proceed with reinstatement of the *Pioneer,* further analyses and negotiations would be required to determine the investments needed. Future freight traffic levels, and the *Pioneer* routing/scheduling option selected, could significantly impact that determination. For example, the schedules Amtrak provided for the UP analysis assume that the eastbound and westbound *Pioneer*s would meet in the Columbia River Gorge area, where UP proposed major investments. Under the Rio Grande Options (Options 1 and 3), the trains would meet elsewhere. In addition, potential capacity investments for the options under which the *Pioneer* would operate between Salt Lake City and Ogden, and between Portland and Seattle, have not been quantified.

Table 13 - Track and Signals Capital Investments Identified ($M)

Location/Description	Options 1 & 3 (SLC-Portland/ Seattle via Rio Grande)	Options 2 & 4 (Denver-Portland/ Seattle via Overland)
Denver to Greeley		
CTC Sand Creek to Denver Union Terminal		5
Connect to BNSF at Commerce City		18
Upgrade Rail and Ties on Julesburg Sub		15
Laramie Subdivision		
Three universal crossovers		21
Rawlins Subdivision		
Two universal crossovers		14
70 miles CTC installation		36
Salt Lake City, Utah		
Construct connection to UTA	5	
Ogden Subdivision		
Construct connection to Ogden Depot		5
Install manual interlocking at Brigham City	5	5
Install manual interlocking at Cache Jct.	5	5
Extend and power Coulam siding	7	7
Upgrade Rail and Ties on Ogden Sub	25	25
Nampa and Huntington Subdivisions		
Bond six sidings to increase speed to 30 mph	4	4
Upgrade run-through track at Nampa	5	5
Construct 3 miles 2nd MT on Huntington sub	10	10
Boise Cutoff		
Track improvements	13.5	13.5
La Grande Subdivision		
Construct run-through track at La Grande	7	7
Connect Perry 2MT to Hilgard Siding (2.5 mi)	10	10
Portland Subdivision		
Construct run-through track at Hinkle	7	7
Power Univ Crossover at Oregon Trunk Jct.	8	8
Construct universal crossover at The Dalles	8	8
Install CTC Crates to Biggs (The Dalles)	11	11
Install power turnouts at Rowena	3	3
Extend Hood River siding eastward to 10,000'	10	10
Construct 10 miles 2nd MT in Columbia River Gorge	50	50
Construct siding on Graham Line	10	10
Connect Graham Line to the Steel Bridge (may require double-slip turnouts at East Portland Jct.)	10	10
Carborne signaling equipment		
Amtrak Onboard PTC	2.4	1.6
Amtrak Onboard ATP (UTA)	1.8	
Estimated Total*	**$217.7**	**$324.1**

E. Stations

Exhibit B identifies the capital investments, discussed in Section IV, required to bring the 19 Potentially Reinstated Stations to a state of good repair and into compliance with the ADA. For the Overland Route (Options 2 and 4), the projected cost is $15.6 million. The Rio Grande Route options (Options 1 and 3) have a projected stations capital investment cost of $9.5 million to $10.3 million, as only 11-12 of these stations would be served.

F. Equipment Requirements

Table 14 below, depicts the additional cars and locomotives (not including spare equipment to accommodate maintenance requirements) that would have to be added to Amtrak's active fleet for each option. As discussed in Section VI.C, these figures are based on the assumptions that:

- each *Pioneer* (west of Denver/Salt Lake City) would be comprised of one locomotive and four Superliner cars: a coach, baggage-coach, sleeper, and diner/lounge;
- the coach, baggage-coach, and sleeper would operate from Chicago-Seattle; and
- the locomotive and diner-lounge would operate from Denver or Salt Lake City to Seattle under Options 1 and 2, and from Chicago to Portland under Options 3 and 4.

The figures in Table 14 also reflect the fact that it would take six days (seven under Option 1) for a *Pioneer* equipment set to cycle from Chicago to Portland/Seattle and return. Therefore, six to seven sets of equipment would be required to provide daily train service over the entire route, and four or five food service cars/locomotives would be needed to provide daily service under options in which the locomotive and food service car would not operate east of Denver/Salt Lake City.

Table 14 - Equipment Requirements

Equipment Units Required	Option 1	Option 2	Options 3 & 4
Locomotives	5	4	6
Superliner Bag Coach	7	6	6
Superliner Coach	7	6	6
Superliner Sleeper	7	6	6
Superliner Diner/Lounge	5	5	6
Total	**31**	**27**	**30**

The projected cost to acquire the equipment required is:

- $141 million for Option 1 (Salt Lake City-Seattle);
- $123 million for Option 2 (Denver-Seattle); and
- $138 million for Options 3 and 4 (Denver or Salt Lake City to Portland).

These projections reflect the fact that all or virtually all of the equipment required for *Pioneer* restoration would have to be purchased new. Restoration of daily service on the three long distance routes Amtrak has been directed to study by PRIIA—the North Coast *Hiawatha*; the Chicago-Seattle *Pioneer*; and the *Sunset Limited* between New Orleans, Louisiana and Sanford/Orlando, Florida—would require approximately 100 additional Superliner cars. However, that equipment does not exist today. Amtrak has 20 repairable "wreck status" Superliner cars, which it plans to restore to service in order to alleviate equipment shortages on existing Western long distance trains.

Despite growing ridership, Amtrak's long distance equipment fleet is smaller now than it was when the *Pioneer* operated. Due to funding constraints, Amtrak has not ordered any new long distance equipment since the early 1990s, and most of the "Heritage" cars built for other railroads that Amtrak acquired at its formation have been retired due to age. Amtrak's existing fleet of bi-level Superliner cars is insufficient to meet equipment requirements on the nine long distance trains that currently use Superliner equipment, and Amtrak has only a small number of repairable "wreck status" Superliner cars. In addition, if Amtrak is to continue to provide existing services on long distance routes, it must in the very near future replace nearly 100 remaining "Heritage" cars that are now more than half a century old.

Amtrak has recently issued a request for proposals for the acquisition of 130 single-level long-distance cars, primarily to replace the remaining Heritage cars (although funding for this purchase has not yet been identified). Purchasing additional single-level cars to equip a restored *Pioneer* would not be an optimal solution. Single-level cars would accommodate fewer passengers, and operation of single-level *Pioneer* cars to/from Chicago on the bi-level *California Zephyr* would trigger a need for additional Superliner "transition" cars (which are in particularly short supply) equipped with a high-level door on one end and a single-level door on the other.

A purchase of new bi-level equipment for the *Pioneer*, which would take approximately four years for design, procurement and construction, would have to be part of a larger equipment order. The high upfront design and tooling costs associated with building passenger rail cars make it uneconomical to construct them in small quantities. Amtrak is preparing a comprehensive equipment fleet strategy that will, among other things, address the existing shortage of bi-level Superliner cars that limits capacity on Western long distance trains. An order for new bi-level equipment, which would be subject to funding availability, could provide the means to acquire additional equipment for new services such as a restored *Pioneer.*

G. Staffing Requirements

In addition to physical requirements and equipment, approximately 140-162 additional Amtrak personnel would be required for operation of the *Pioneer*, as detailed under "Operating Costs" in Section VI. The number of new employees is dependent on the route option selected, and is detailed below.

Table 15 - Incremental Headcount

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
Stations	11	14	6	4
T&E Crew(1)	52	68	46	68
T&E Yard	1	2	1	2
OBS(2)	56	58	75	65
Mechanical	20	20	16	16
TOTAL	**140**	**162**	**144**	**156**

(1) T&E-Train and Engine employees (engineers, conductors, and assistant conductors)

(2) OBS-On-Board Service employees (food service and coach/sleeper attendants)

The one-time costs to train new employees including training on work rules and the operation of Amtrak equipment, and the lengthy process mandated by federal safety regulations for certifying engineers and qualifying engineers and conductors to operate over specific territories, are shown below. Host Railroad T&E costs are projected reimbursements to host railroads (primarily UP) for providing their engineers and conductors for the qualification process.

Table 16 - Training & Qualifying Costs ($M)

	Option 1		Option 2		Option 3		Option 4	
	New Positions	Cost	New Positions	Cost	New Positions	Cost	New Positions	Cost
Amtrak								
OBS	56	0.3	58	0.3	75	0.3	65	0.3
T&E	52	3.7	68	5.0	46	3.3	68	5.0
Host Railroad T&E (1)	n/a	0.9	n/a	1.3	n/a	0.9	n/a	1.3
Total		**$4.9**		**$6.6**		**$4.5**		**$6.6**

1) Assume 18 trips, 2 engineers and 2 conductors required from host railroad for each Amtrak segment.

H. Summary of Capital/Implementation Costs

Below is a summary of the capital/implementation costs projected for reinstitution of the *Pioneer*:

Table 17 - Summary of Implementation Costs ($M)

	Option 1 SLC-Seattle via Rio Grande Route	Option 2 DEN-Seattle via Wyoming / Overland Route	Option 3 SLC-Portland via Rio Grande Route	Option 4 DEN-Portland via Wyoming / Overland Route
Training/Qualifying	4.9	6.6	4.5	6.6
Tracks & Signals	217.7	324.1	217.7	324.1
Stations	10.3	16.1	10.3	16.1
Equipment	141.0	123.0	138.0	138.0
TOTAL	**$373.9**	**$469.8**	**$370.5**	**$484.8**

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VIII. IMPLEMENTATION TIMELINE

Of the many actions that would have to be taken before reinstitution of *Pioneer* service, the one with the longest identified projected lead time that must be completed before service is restored is the design, procurement and construction of new Superliner bi-level passenger rail cars. This would require approximately four years from the date on which funding is made available.

The reinstitution of *Pioneer* service would also require significant infrastructure improvements, including work on stations, track and signals, that would be undertaken by or would significantly involve third parties. Amtrak would need to reach agreements with these parties before each project could commence, and some of the work will be subject to permitting, environmental, and/or other legal/regulatory requirements or processes. In addition, Amtrak would have to hire and train a significant number of new employees. While many of these activities would have long lead times, Amtrak believes that most or all of the activities required for commencement of reinstated *Pioneer* service could be completed within the approximately four year time frame required for the acquisition of new equipment.

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IX. PUBLIC OUTREACH

During the course of this study, Amtrak conducted extensive outreach to state agencies, communities, host railroads and other stakeholders that it expected to have an interest in a renewed *Pioneer* service. These stakeholders included the following:

State Departments of Transportation (DOT):

- Washington State Department of Transportation
- Oregon Department of Transportation
- Idaho Transportation Department
- Utah Department of Transportation
- Colorado Department of Transportation
- Wyoming Department of Transportation

Key Municipalities:

- Seattle
- Portland
- Boise
- Pocatello
- Ogden
- Salt Lake City
- Cheyenne
- Denver

Other Stakeholders:

- Union Pacific Railroad, a host railroad
- BNSF Railway, a host railroad
- Denver Regional Transit District (RTD), owner of Denver Union Station
- Utah Transportation Authority, a potential host railroad
- Idaho Northern and Pacific Railroad, a potential host railroad
- Sounder commuter rail service, commuter rail service operator between Tacoma and Seattle
- Various organizations and advocacy groups

Amtrak conducted several regional meetings with the DOTs and members of the congressional delegations at various points along the *Pioneer*'s route. Those who attended these meetings expressed a very high degree of regional interest in this study, and strong support for restoration of the *Pioneer.* The opportunities and challenges related to the train's restoration were addressed, along with the dynamics of the various routing options. The meeting attendees expressed a strong desire for an opportunity to comment on the draft report and route options.

Wyoming raised regional equity issues, noting that the states of Colorado and Utah already have Amtrak service from the *California Zephyr* (and Colorado has the *Southwest Chief*), while Wyoming lost its service when the *Pioneer* was discontinued. Additionally,

there are few other public transportation services in the state. According to the Wyoming Department of Transportation and others, the degree of support among the local mayors is high, and they have a basic understanding of the need to become engaged in station restoration.

On the other hand, Utah stated a preference for the Rio Grande Route because it would provide service from the Pacific Northwest to the Utah communities served by the *California Zephyr*, primarily Salt Lake City and Provo, that would not be served by the Overland Route. Washington, Oregon and Idaho also expressed a preference for the Rio Grande Route, since it would link their communities to the regionally significant destinations of Salt Lake City, Provo, Glenwood Springs, Colorado, and Winter Park, Colorado. Utah and Oregon expressed a perception that ridership on the *Pioneer* was adversely impacted when it was routed via Wyoming from 1991 to 1997. (This issue discussed in Section II.C.)

In addition to the above referenced DOTs, the meetings also included representatives from the following:

- Denver RTD
- Representative DeGette
- Representative Salazar
- Senator Enzi
- City of Cheyenne
- Cheyenne-Laramie County Corporation for Economic development
- Cheyenne Convention & Visitors Bureau
- Senator Barrasso
- Senator Hatch
- Senator Bennett
- Senator Udall
- City of Boise
- Senator Risch
- Senator Crapo
- Senator Wyden
- Representative DeFazio
- Representative Simpson
- Senator Merkley
- Representative Blumenauer
- Idaho Northern Pacific Railroad

Amtrak also developed a website to disseminate information about the study. The website included a secure portion, which could only be accessed by selected stakeholders such as members of Congress and their staffs and state DOTs, to provide a method for these stakeholders to comment on the draft report.

During the preparation of the study and following the public release of the draft report, Amtrak received a large number of letters and e-mails regarding restoration of the

Pioneer from elected officials, community and public interest organizations, and individuals along the proposed route. (See Exhibit F, *Draft Study Outreach Correspondence*.) Virtually all of those who commented on the report expressed strong support for restoration of service. Many offered suggestions regarding schedules, station stops, and other service characteristics.

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X. PUBLIC BENEFITS

Reinstating the *Pioneer* would increase travel options and mobility in the Intermountain West states the train would serve. It would also enhance Amtrak's route system by providing access to additional cities, and by directly connecting key city pairs such as Denver to Portland. The capital investments required to initiate the service would provide a short-term economic stimulus, while the operation of the train would provide long-term economic benefits to communities along the route.

A. Travel Options and Mobility Enhancements

Reinstating *Pioneer* service would restore a key central corridor link between the Midwest and Rocky Mountain States and Idaho and the Pacific Northwest. This would enhance connectivity within Amtrak's route network, and facilitate travel between city pairs for which no passenger rail service or only very circuitous service is currently available.

Reinstated rail passenger service would add another transportation option in communities with little or no public transportation service. Such an option is particularly vital during the winter months in a region of the country that receives heavy snowfall. For seniors and others unable to undertake the long drives associated with western highway travel, the *Pioneer* would be a welcome alternative. For those who cannot drive or do not own a car, and for persons who are unable to fly, a reinstated *Pioneer* would provide a truly essential service. A number of those who commented on the draft report indicated that they would use the train for medical appointments or business trips, or to make visits to family members that would not otherwise be possible.

Restoration of the *Pioneer* would play a particularly important role in the 12 communities along the route that lack convenient access to air service and have only limited intercity bus service. While airline deregulation has made air service between the major cities served by the *Pioneer* much more frequent and much less expensive, that is not the case in the smaller communities along the route. Airline service in these communities is much less convenient and much more expensive than it was when the *Pioneer* operated.

The decline in intercity bus service along the route of the *Pioneer*, discussed in Section II.D, has continued since the train's 1997 discontinuance. Current Greyhound Lines schedules (June 2009) show just two daily round trip frequencies along most of the *Pioneer*'s route, and one-seat bus service is no longer available from Seattle to Boise, Salt Lake City and Denver.

Some of those who commented on the draft report noted the potential to link a restored *Pioneer* service to existing and proposed local transit services, which could provide connections to additional communities and destinations and provide access to passengers who currently have no means of intercity public transportation.

B. Environment and Energy Efficiency

The reinstated *Pioneer* would represent a small but important step in reinforcing the development of a transportation network independent of the automobile. The *Pioneer* would increase passenger rail service to Portland, a city that is a leader in developing a pedestrian and transit friendly metropolitan area. Three other key *Pioneer* stops, Seattle, Denver, and Salt Lake City, also are developing transit networks focused around their rail stations. Boise deserves special mention for acquiring its rail station and eastern rail link to provide for future rail service.

The reinstated *Pioneer* also represents a step in efforts to improve energy efficiency and lower greenhouse gases. Rail passenger service is 19% more energy efficient than air travel and 28% more energy efficient than auto travel. Rail service also emits several times less carbon dioxide per passenger-mile than either air or highway travel.

C. Economic Development

Reinstating rail service along the route of the *Pioneer* would have a positive impact on job creation, local/state tax revenues and tourism activity in the region.

The capital expenditures required to restore service would produce significant economic activity and job creation. While short-term in nature, these expenditures would benefit local and state economies and create jobs in the region, primarily in construction and construction supply. They would also create manufacturing and material supply jobs that could be located in the region or elsewhere in the United States.

Operation of the service is projected to create between 140 and 162 permanent Amtrak jobs, depending upon which option is chosen. Overnight layovers for train crews would lead to expenditures for food, supplies and lodging that will benefit local economies. Restoration of the *Pioneer* would also generate new spending from vacation travelers who use the train to visit destinations along the *Pioneer*'s route.

These short-term and long-term direct expenditures can be expected to produce spillover economic benefits. These include job creation in other industries such as retail trade and tourism, and an increase in state and local tax revenues attributable to the increased economic activity.

Finally, in smaller communities along the route of the *Pioneer*, reinstatement of passenger rail service could be the impetus to restoring historic downtown rail stations and using them as a focal point for downtown revitalization, stimulating both public and private investment.

XI. CONCLUSION AND NEXT STEPS

The addition of the *Pioneer* and other long distance routes to the Amtrak national network could produce numerous public benefits, albeit at a significant cost. While PRIIA recognizes the importance of Amtrak's existing long distance routes, it does not provide capital or operating funding for expansion of service beyond current levels. Therefore, additional federal and/or state funding would be required for any service expansion.

The $8 billion in intercity passenger/high speed rail capital funding made available earlier this year by the American Recovery and Reinvestment Act (ARRA), and the additional $5 billion that the Administration has indicated it intends to request Congress to appropriate for this purpose over the next five years, represents a significant source of funding for capital costs associated with the expansion of intercity passenger rail service. Since the *Pioneer* route is not a federally designated high speed rail corridor, one or more states along the route would have to be an applicant or co-applicant for ARRA funding. Funding for the cost of operating the service would have to be obtained from other federal and/or state sources, since ARRA funding cannot be used for that purpose.

Amtrak recommends that Federal and state policymakers determine if passenger rail service should be reintroduced along the former *Pioneer* route, and if so, that they identify the preferred option for service restoration and provide the required levels of capital and operating funding to Amtrak. Upon such a decision, Amtrak will work aggressively with Federal and state partners to restore the *Pioneer* service.

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XII. EXHIBITS

A. Historic Schedule Table

B. Amtrak SOGR and ADA Station Survey Assessment

C. Amtrak *Pioneer* Stations—Annual Operating Costs

D. Long Distance Route Fare Box Recovery Table

E. Amtrak Pioneer Feasibility Study

F. Draft Study Outreach Correspondence

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Exhibit A

Historic Schedule Table

Historic Pioneer Schedules																			
City	FY 1977 Spring #25	FY 1978 Spring #25	FY 1979 Spring #25	FY 1980 Spring #25	FY 1981 Spring #25	FY 1983 Spring #25 Thru cars From CZ	Fiscal Year 1984 Fall #25 Thru cars from California Zephyr	Fiscal Year 1984 Spring #25 Thru cars from California Zephyr	FY 1985 Fall #25 Thru cars From CZ	FY 1987 Fall #25 Thru cars From CZ	Fiscal Year 1988 Fall #25 Thru cars from California Zephyr	Fiscal Year 1988 Spring #25 Thru cars from California Zephyr	FY 1989 Spring #25 Thru cars From CZ	FY 1990 Spring #25 Thru cars From CZ	FY 1991 Fall #25 Thru cars From CZ	FY 1992 Spring #25 Thru cars From CZ	Fiscal Year 1993 Fall #25 Thru cars from California Zephyr	Fiscal Year 1993 Spring #25 Thru cars from California Zephyr
Denver																		
Arr																840am	840am	740am
Dep																1015am	1015am	915am
Salt Lake City																		
Arr						1015pm	945pm	1025pm	1025pm	1042pm	1052pm	1052pm	1052pm	1052pm	1120pm	Bus	Bus	Bus
Dep	1015pm	1100pm	1125pm	1045pm	1050pm	1030pm	1005pm	1045pm	1145pm	1137pm	1150pm	1150pm	1052pm	1150pm	1240am	*800pm*	*800pm*	*715pm*
Ogden																		
*Arr**	*1025pm**	*1155pm**	*1145pm**	*1110pm**	*1100pm**											900pm	900pm	812pm
Dep	1110pm	1210am	1235am	1205am	1210am	1155pm	1110pm	1150pm	1250am	1240pm	1243am	1243am	1243am	1243am	133am	915pm	915pm	827pm
Boise																		
Dep	640am	720am	730am	700am	700am	625am	535am	615am	715am	710am	710am	710am	707am	656am	746am	325am	325am	249am
Portland																		
Arr	510pm	525pm	550pm	520pm	530pm	435pm	350pm	430pm	530pm	520pm	505pm	505pm	505pm	515pm	605pm	140pm	140pm	110pm
Dep	530pm	535pm	600pm	530pm	540pm	440pm	400pm	440pm	540pm	530pm	515pm	515pm	530pm	540pm	630pm	210pm	210pm	210pm
Seattle																		
Arr	920pm	925pm	950pm	920pm	930pm	830pm	750pm	830pm	930pm	920pm	915pm	915pm	930pm	940pm	1030pm	610pm	610pm	610pm
Elapsed Time	24' 05"	23' 25"	23' 25"	23' 35"	23' 40"	23' 15"	23' 05"	23' 05"	24' 05"	23' 38"	23' 23"	23' 23"	23' 38"	23' 48"	24' 10"	34' 30"	34' 30"	35' 30"

(Including connection layover)

* Arrival of connection - San Francisco Zephyr

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Exhibit A

Historic Schedule Table

Historic Pioneer Schedules																			
	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1983	Fiscal Year 1984		FY 1986	FY 1987	Fiscal Year 1988		FY 1989	FY 1990	FY 1991	FY 1992	Fiscal Year 1993	
City	Spring #26	Spring #26	Spring #26	Spring #26	Spring #26	Spring #26	Fall #26	Spring #26	Spring #26	Spring #26	Fall #26	Spring #26	Spring #26	Spring #26	Fall #26	Spring #26	Fall #26	Spring #26
Seattle																		
Dep	730am	750am	710am	730am	800am	700am	645am	700am	630am	700am	645am	630am	600am	600am	500am	800am	800am	730am
Portland																		
Arr	1120am	1140am	1100am	1120am	1150am	1050am	1035am	1050am	1020am	1050am	1045am	1030am	1000am	1000am	900am	12noon	12noon	1130am
Dep	1130am	1150am	1110am	1130am	12noon	1055am	1045am	1100am	1030am	1100am	1100am	1045am	1015am	1015am	915am	1210pm	1210pm	1140am
Boise																		
Dep	1135pm	1135pm	1050pm	1110pm	1150pm	1040pm	1030pm	1045pm	1025pm	1055pm	1055pm	1040pm	1003pm	1011pm	911pm	1145pm	1145pm	1120pm
Ogden																		
Arr	705am	635am	555am	615am	645am											620am	620am	607am
*Dep***	*730am***	*705am***	*615am***	*650am***	*720am***	540am	500am	515am	445am	513am	513am	458am	418am	423am	323am	635am	635am	622am
Salt Lake City																		
Arr	800am	800am	710am	740am	815am	635am	615am	630am	600am	628am	625am	610am	540am	550am	450am	*715am*	*715am*	*700am*
Dep						650am	640am	655am	625am	648am	658am	653am	638am	638am	535am	Bus	Bus	Bus
Denver																		
Arr																520pm	520pm	540pm
Dep																900pm	900pm	830pm
Elapsed Time	23' 30"	23' 10"	23' 00"	23' 10"	23' 15"	22' 50"	22' 55"	22' 55"	22' 55"	22' 48"	23' 13"	23' 23"	23' 38"	23' 38"	23' 35"	36' 00"	36' 00"	36' 00"
						(Including connection layover)												
						Thru cars To CZ	Thru cars to California Zephyr		Thru cars To CZ	Thru cars To CZ	Thru cars to California Zephyr		Thru cars To CZ	Thru cars To CZ	Thru cars To CZ	Thru cars To CZ	Thru cars to California Zephyr	

** Departure of connection - San Francisco Zephyr

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Exhibit B

Amtrak SOGR and ADA Station Survey Assessment

AMTRAK SOGR AND ADA STATION SURVEY ASSESSMENT
STATUS MATRIX - PIONEER LINE

Station	SGR Improvement Costs											TOTAL	TOTAL	TOTAL	TOTAL		
	Station Construction Costs	Pathways Construction Cost	Platform Construction Costs	SGR TOTAL	PIDS TOTAL	Host RR Protection	E-Ticketing	Station Construction Costs	Pathways Construction Costs	Platform Construction Costs	ADA TOTAL	Station Construction	Pathways Construction	Platform Construction	TOTAL COST	Option 1	Option 2
Greeley, CO	$ -	$ -	$ 31,251	$ 31,251	$ 165,000	$ 147,982	$ 110,000	$ 31,231	$ 35,479	$ 215,385	$ 705,077	$ 141,231	$ 35,479	$ 559,618	$ 736,328	$ 736,328	
Cheyenne, WY	*$ -*	*$ 174*	*$ 12,017*	*$ 12,191*	*$ 165,000*	*$ 68,238*	*$ 110,000*	*$ 33,922*	*$ 25,034*	*$ 101,713*	*$ 503,907*	*$ 143,922*	*$ 25,208*	*$ 346,968*	*$ 516,098*	*$ 516,098*	
West Cheyenne-Borie, WY	$ 51,546	$ 90,256	$ 53,606	$ 195,408	$ 165,000	$ 76,880	$ 110,000	$ 10,571	$ 56,791	$ 74,528	$ 493,770	$ 172,117	$ 147,047	$ 370,014	$ 689,178	$ 689,178	
Laramie, WY	$ -	$ -	$ 23,026	$ 23,026	$ 165,000	$ 142,210	$ 110,000	$ 66,518	$ 43,640	$ 213,991	$ 741,359	$ 176,518	$ 43,640	$ 544,227	$ 764,385	$ 764,385	
Rawlins, WY	$ 3,748	$ 54,967	$ 23,686	$ 82,401	$ 165,000	$ 85,269	$ 110,000	$ 31,231	$ 35,479	$ 118,429	$ 545,408	$ 144,979	$ 90,446	$ 392,384	$ 627,809	$ 627,809	
Rock Springs, WY	$ -	$ -	$ -	$ -	$ 165,000	$ 65,061	$ 110,000	$ 31,231	$ 35,479	$ 108,435	$ 515,206	$ 141,231	$ 35,479	$ 338,496	$ 515,206	$ 515,206	
Green River, WY	$ 182,630	$ 187,395	$ 105,389	$ 475,414	$ 165,000	$ 197,572	$ 110,000	$ 91,141	$ 185,785	$ 223,897	$ 973,395	$ 383,771	$ 373,180	$ 691,858	$ 1,448,809	$ 1,448,809	
Evanston, WY	$ -	$ -	$ 23,026	$ 23,026	$ 165,000	$ 85,772	$ 110,000	$ 31,231	$ 35,479	$ 119,928	$ 547,410	$ 141,231	$ 35,479	$ 393,726	$ 570,436	$ 570,436	
Ogden, UT	$ 10,694	$ 2,466	$ 23,521	$ 36,681	$ 165,000	$ 155,907	$ 110,000	$ 40,927	$ 42,884	$ 236,324	$ 751,042	$ 161,621	$ 45,350	$ 580,752	$ 787,723	$ 787,723	$ 787,723
Pocatello, ID	$ 11,331	$ -	$ 23,686	$ 35,017	$ 165,000	$ 76,274	$ 110,000	$ 48,646	$ 35,479	$ 103,438	$ 538,837	$ 169,977	$ 35,479	$ 368,398	$ 573,854	$ 573,854	$ 573,854
Shoshone, ID	$ 182,630	$ 187,395	$ 105,389	$ 475,414	$ 165,000	$ 216,461	$ 110,000	$ 91,141	$ 185,785	$ 255,379	$ 1,023,766	$ 383,771	$ 373,180	$ 742,229	$ 1,499,180	$ 1,499,180	$ 1,499,180
Boise, ID	$ -	$ 56,722	$ 23,768	$ 80,490	$ 165,000	$ 79,438	$ 110,000	$ 33,985	$ 36,354	$ 108,628	$ 533,405	$ 143,985	$ 93,076	$ 376,834	$ 613,895	$ 613,895	$ 613,895
Nampa, ID	$ 164,334	$ 1,333	$ 1,333	$ 167,000	$ 165,000	$ 49,962	$ 110,000	$ 71,674	$ 39,922	$ 81,937	$ 518,495	$ 346,008	$ 41,255	$ 298,232	$ 685,495	$ 685,495	$ 685,495
Ontario, OR	$ 7,199	$ 985	$ -	$ 8,184	$ 165,000	$ 83,368	$ 110,000	$ 76,057	$ 51,628	$ 138,946	$ 624,999	$ 193,256	$ 52,613	$ 387,314	$ 633,183	$ 633,183	$ 633,183
Baker City, OR	$ 12,839	$ 16,505	$ 24,758	$ 54,102	$ 165,000	$ 88,429	$ 110,000	$ 45,613	$ 60,716	$ 122,624	$ 592,382	$ 168,452	$ 77,221	$ 400,811	$ 646,484	$ 646,484	$ 646,484
La Grande, OR	$ 104,257	$ 29,636	$ 45,731	$ 179,624	$ 165,000	$ 114,467	$ 110,000	$ 74,800	$ 43,222	$ 145,048	$ 652,537	$ 289,057	$ 72,858	$ 470,246	$ 832,161	$ 832,161	$ 832,161
Pendleton, OR	$ 182,630	$ 187,395	$ 81,703	$ 451,728	$ 165,000	$ 176,539	$ 110,000	$ 59,910	$ 150,307	$ 212,529	$ 874,285	$ 352,540	$ 337,702	$ 635,771	$ 1,326,013	$ 1,326,013	$ 1,326,013
Hinkle-Hermiston, OR	$ 182,630	$ 187,395	$ 81,703	$ 451,728	$ 165,000	$ 176,539	$ 110,000	$ 59,910	$ 150,307	$ 212,529	$ 874,285	$ 352,540	$ 337,702	$ 635,771	$ 1,326,013	$ 1,326,013	$ 1,326,013
The Dalles, OR	$ -	$ -	$ 24,758	$ 24,758	$ 165,000	$ 107,164	$ 110,000	$ 76,057	$ 46,453	$ 153,849	$ 658,523	$ 186,057	$ 46,453	$ 450,771	$ 683,281	$ 683,281	$ 683,281
Hood River, OR	$ 37,647	$ 562	$ 25,320	$ 63,529	$ 165,000	$ 83,203	$ 110,000	$ 70,658	$ 48,641	$ 113,352	$ 590,854	$ 218,305	$ 49,203	$ 386,875	$ 654,383	$ 654,383	$ 654,383
Total																$ 16,129,915	$ 10,261,666

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Exhibit C

Amtrak *Pioneer* Stations—Annual Operating Costs

Station	State	Fuel, Power & Utilities	Facility, Communication & Office	Other	TOTAL OPERATING COST		Option 1	Option 2
Greeley	CO	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Cheyenne	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
West Cheyenne-Borie	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Laramie	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Rawlins	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Rock Springs	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Green River	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Evanston	WY	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	
Ogden	UT	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Pocatello	ID	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Shoshone	ID	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Boise	ID	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Nampa	ID	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Ontario	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Baker City	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
La Grande	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Pendleton	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Hinkle-Hermiston	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
The Dalles	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
Hood River	OR	$ 734	$ 5,875	$ 139	$ 6,7		$ 6,748	$ 6,748
TOTAL					$ 134,9	rte	$ 134,961	$ 80,977

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Exhibit D

Long Distance Route Fare Box Recovery Table

Train	Description	Passenger and Food & Beverage Revenue	Direct Costs	Fare Box Recovery
RT_LD	Long Distance Routes	$ 446,483,407	$ 861,533,189	51.8%
RT63	Auto Train	58,423,207	66,679,244	87.6%
RT25	Empire Builder	64,816,255	98,625,440	65.7%
RT48	Palmetto	13,582,980	21,017,134	64.6%
RT30	City of New Orleans	16,022,134	30,145,416	53.1%
RT28	Southwest Chief	44,442,062	84,435,823	52.6%
RT19	Silver Meteor	32,479,834	64,327,025	50.5%
RT34	Coast Starlight	32,848,010	67,400,591	48.7%
RT26	Capitol Limited	18,873,122	39,399,359	47.9%
RT52	Crescent	28,664,109	60,600,688	47.3%
RT32	Texas Eagle	21,336,586	46,661,304	45.7%
RT27	California Zephyr	43,092,490	96,754,144	44.5%
RT45	Lake Shore Limited	25,569,942	58,344,533	43.8%
RT16	Silver Star	29,771,169	68,495,983	43.5%
RT18	Cardinal	7,164,539	20,033,005	35.8%
	Pioneer *Option 1*	$ 11,600,000	$ 36,600,000	31.7%
	Pioneer *Option 2*	$ 13,100,000	$ 46,200,000	28.4%
RT33	Sunset Limited	9,396,969	38,613,501	24.3%
	Pioneer *Option 3*	$ 7,600,000	$ 35,900,000	21.2%
	Pioneer *Option 4*	$ 9,200,000	$ 44,700,000	20.6%

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Exhibit E

Amtrak Pioneer Feasibility Study

Preliminary Capacity Evaluation
Covering Routes Denver / Salt Lake City
to Portland

July 15, 2009

Prepared by
Network Planning and Operations
Union Pacific Railroad
Omaha, Nebraska

UNION PACIFIC
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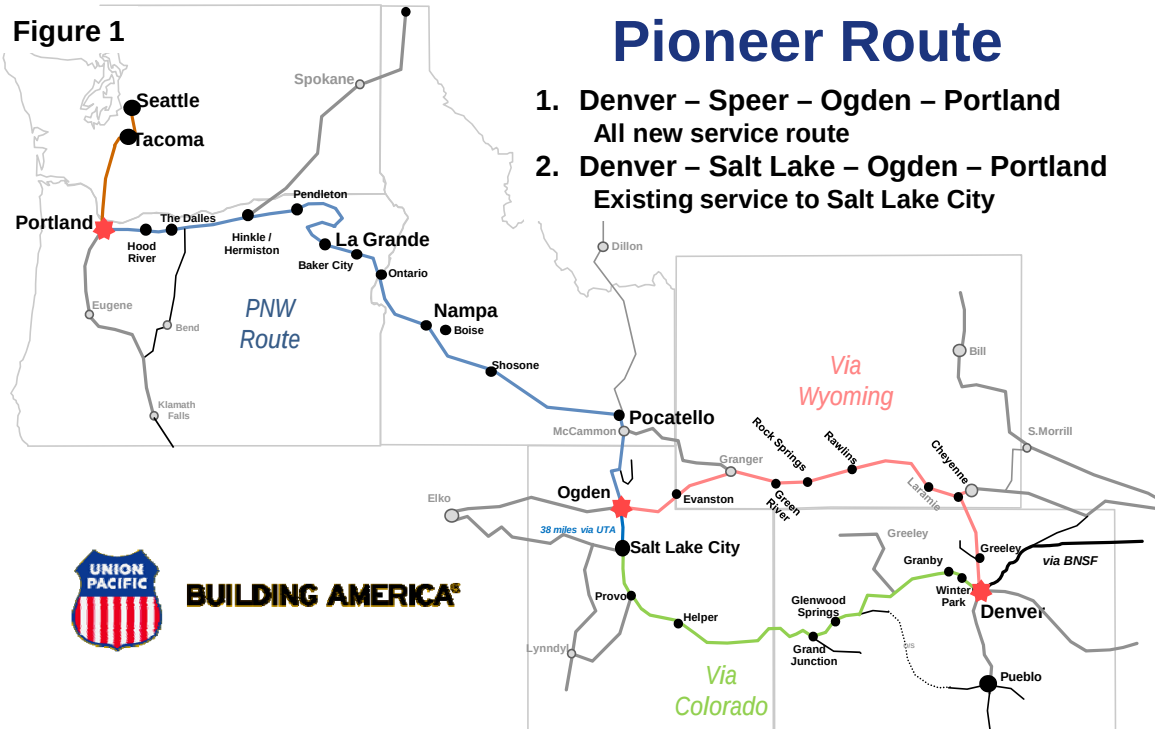
CONTENTS

I. Summary of Issues

A. Background and Scope

Under the terms of §224(a)(1) of the Passenger Rail & Improvement Act of 2008 (Amtrak Reauthorization) Amtrak is mandated to evaluate the feasibility of re-establishing service on the Pioneer between Chicago, Denver and Portland / Seattle. In light of that mandate, Amtrak has contracted with Union Pacific, the corridor owner and operator, to evaluate the Pioneer routing given the significant changes in operating and service conditions since the Pioneer was discontinued in May 1997.

Figure 1



Amtrak proposes to operate the Pioneer over one of two possible routes; the first being from Denver to Portland via Speer Jct., Ogden, and Pocatello with the other route being from Salt Lake City to Portland via Ogden and Pocatello. In both cases, cars between Chicago and Denver would move via the existing California Zephyr on the BNSF Railway with cars for the Pioneer splitting at either Denver or Salt Lake City depending on routing. In the case of splitting the train at Salt Lake City, the Pioneer route will be via the Utah Transit Authority (UTA) line from the Amtrak station in Salt Lake City to the Ogden passenger station.

B. Preliminary Capacity Evaluation - Description

The purpose of this capacity evaluation is to establish a high-level feasibility assessment and identify an initial set of infrastructure improvements necessary to support the operation of Amtrak Pioneer Service, consistent with UP's Passenger Principles, our agreement with Amtrak and federal law. A key element of these principles is that the proposed infrastructure must support high levels of passenger performance as well as on-time and on-demand operation of projected UPRR freight customer volumes. It is not acceptable to cause or create time-of-day restrictions ('windows' or 'curfews') that would hinder the free flow of shipments for UP's 25,000 freight customers. Full access to current and potential freight customers must also be preserved.

Due to the tight timeframe for completing this analysis, Amtrak and Union Pacific have explicitly agreed that this study shall be deemed a preliminary evaluation only. Normal capacity analysis utilizing Rail Traffic Controller (RTC) simulation modeling has not been undertaken for the entire route due to time limitations. Therefore, RTC modeling has only been applied on a limited number of bottleneck locations between Pocatello and Portland and incorporate limited evaluation of freight growth scenarios. Amtrak and Union Pacific agree that if this project is to be further pursued, an in-depth capacity analysis including use of RTC modeling for the entire route and refined freight growth estimates will be required. Such in-depth analysis over the full route could potentially yield additional infrastructure requirements needed to support the proposed service.

The improvement cost estimates provided with this analysis are of necessity limited to preliminary "ballpark" estimates only. Issues surrounding constructability, permitting and environmental requirements will be addressed in later phases of the project if it is further pursued. Costs shown should be considered as "placeholders" until more detailed engineering design work can be accomplished and project constructability in certain difficult locations can be confirmed.

A combination of capacity analytics, bottleneck tools and simulation software has been used in determining appropriate infrastructure improvements for the corridor under evaluation. Throughout this study reference will be made to "Normative Base" or "Normative Volumes". Normative volumes described in this study reflect peak period operations during the 2006-2007 timeframe, prior to the dramatic economic downturn experienced in late 2008. Section IV of this report provides a description of the RTC simulation software model utilized. In order to validate Amtrak schedules and run times between Denver and Portland a complete end to end RTC analysis is recommended.

This study does not address critical operating requirements such as station hold-out requirements (General Code of Operating Rules - GCOR 6.30). Any passenger station mitigation must be consistent with Union Pacific's interpretation of GCOR 6.30 as stated in System Special Instructions Item 10-J. Under this instruction, freight trains are not allowed to pass a passenger stations while the passenger train is stopped at the station. Additionally, this study does not address other features of a passenger service arrangement such as the need for ongoing maintenance windows, agreement term, or train size and schedule parameters.

NOTE: This analysis focuses on capacity-related infrastructure improvements associated with the proposed additional passenger service. Rail and tie upgrades are only shown for the Julesburg and Ogden subdivisions. It is recognized that rail and tie renewals for other existing lines may be recommended as well in order to provide the robust track structure needed for increased service levels. THE COST OF SUCH ADDITIONAL TRACK STRUCTURE UPGRADE IS NOT INCLUDED IN THIS REPORT.

C. Pioneer Route Train Operations

1. Wyoming Corridor

Under normative conditions Union Pacific operates approximately 16 trains per day (TPD) on the Greeley subdivision between Denver Union Terminal and Speer Jct. (Cheyenne). Once reaching Speer Jct. the Greeley subdivision joins the heavily used Overland Route between North Platte, Nebraska and Oakland, California. Using the Overland Route, the *Pioneer* would traverse the Laramie and Rawlins subdivisions which handle approximately 70 TPD. The Laramie and Rawlins subdivisions are primarily operated under Centralized Traffic Control (CTC) with some sections of track warrant Automatic Block Signals.

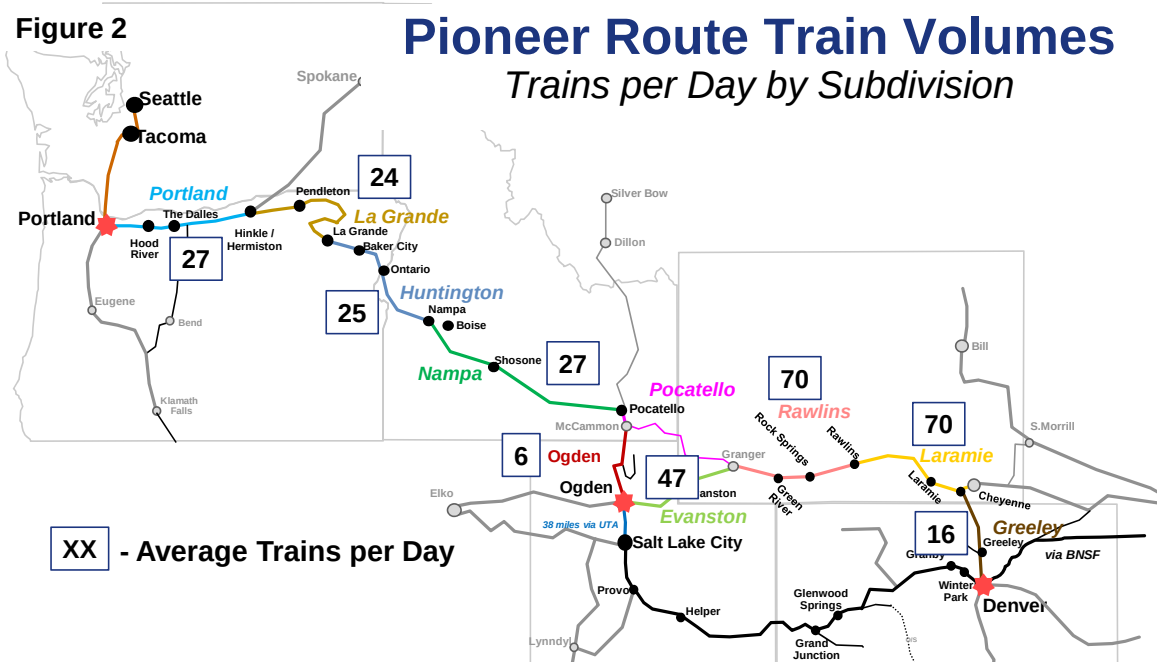
West of Granger, Wyoming the *Pioneer* would follow the Evanston subdivision to Ogden, Utah. The Evanston subdivision is largely governed by track warrant Automatic Block Signals and carries 47

trains per day. At Ogden the *Pioneer* would follow the Ogden subdivision to Pocatello, Idaho. The Ogden subdivision is also governed by track warrant, Automatic Block Signals and carries 6 trains per day.

2. PNW Corridor

The Pacific Northwest Corridor (PNW) traverses 714 miles between Pocatello, Idaho and Portland, Oregon. The route is primarily CTC with occasional segments of Automatic Block Signals in terminal areas. Union Pacific carries between 24 and 27 trains per day on the PNW Corridor. Average trains per day by subdivision are shown in Figure 2. Of all the routes between Denver and Portland, the PNW corridor is the most topologically varied. From the sea level terminals in Portland the route covers high plains and the steep grades of the Blue Mountains before returning to the plains of eastern Idaho. The varied terrain, including the tight confines of the Columbia River Gorge, makes train operations subject to slow speeds and creates difficult challenges for capacity expansion.

Figure 2



D. Changes on the Route Since 1997

Originally not part of the initial Amtrak route system, the *Pioneer* was established in June 1977 as a tri-weekly train to serve the communities on the PNW Route between Salt Lake City, Utah and Portland, Oregon. The train initiated daily service in 1983 when Amtrak began coordinating the *Pioneer* with the *California Zephyr* at Salt Lake City. This daily service prevailed until June 1991 when Amtrak shifted the *Pioneer* routing to serve Wyoming and joined the *California Zephyr* at Denver. As part of cost saving measures, Amtrak retrenched to tri-weekly service in 1993. Ultimately citing low ridership and poor revenue, Amtrak discontinued the *Pioneer* on May 10, 1997.

Significant changes in both operations and infrastructure have occurred since the *Pioneer* was discontinued in 1997. In general, trains over the route have become longer and heavier and operate at a lower horsepower per trailing ton (fewer locomotives for a given number of cars). Additionally, Union Pacific now uses distributed power on most trains in the PNW Corridor. Distributed power is a technology whereby the engineer in the first locomotive controls locomotives at the head of the

train as well as any locomotives that may be at the rear or in the middle of the train. As a result, trains on the PNW Corridor (and on the Union Pacific System in general) are longer, heavier, more fuel efficient and provide more consistent train flow.

The combination of lower horsepower per trailing ton and distributed power has provided significant operating efficiencies that lower costs, conserve fuel, reduce emissions and translate to lower shipping rates for customers. Although lower horsepower per trailing ton may also translate to slower speeds, improved operating practices have ensured that service commitments and on-time-performance have not degraded. Union Pacific, in fact, has consistently improved customer satisfaction over the Pioneer Route and Customer Satisfaction Index is at a record high level.

Traffic volumes on the PNW Route are subject to seasonal spikes that occur with the movement of export grain to PNW ports. At those times when export market conditions are favorable, a daily increase of three or more grain trains may develop. These periodic increases in grain traffic occur above Normative Base conditions.

Along with the change in operating practices there have been several changes to the rail infrastructure on the Pioneer Route. The most significant change is at Portland, Oregon where a connection between the Graham Line and the Steel Bridge was removed in 2005. Prior to 2005, the former Southern Pacific line from Brooklyn Yard to East Portland Jct. was governed by Automatic Block Signals with a 20 MPH speed limit at East Portland. In order to facilitate post-merger traffic, the speed over the restricted curves at East Portland Jct. was increased to 35 MPH. To accommodate the higher velocity, the restricted curves were eased, CTC was installed between Brooklyn and East Portland Jct. and the crossover between the Graham Line and the Steel Bridge was removed. Amtrak Cascade Service between Eugene and Portland was a direct beneficiary of the CTC and increased speed on the Brooklyn subdivision.

At Ogden, there is no longer a through Union Pacific route to the Ogden depot from Salt Lake City. An overhead UTA bridge crossing the Evanston subdivision (serving a multi-modal UTA depot at Ogden) has severed what connections existed. Re-establishing the *Pioneer* via Ogden from Salt Lake City would require that Amtrak use UTA trackage from Salt Lake City to Ogden. A short, direct connection from Union Pacific to the UTA at Salt Lake City is necessary to enable this move. Also, there is no longer a direct connection from the Evanston subdivision to the Ogden depot. A route from the Evanston subdivision would require a power operated turnout south of the depot and re-establishment of a route through the depot connecting to the Ogden subdivision at SP Jct.

The so-called “Boise Cut-off” that allowed Union Pacific passenger service to Boise from Nampa and Orchard no longer exists as a through route. A portion of the route through Boise has been sold to the city; other segments near Nampa are operated by a short line railroad. Amtrak will have to ensure that there is a viable through route if they choose to serve Boise directly.

E. Implications of Re-establishing Pioneer Service

Union Pacific was able to evaluate key bottlenecks along the PNW Route between Pocatello and Portland using RTC analysis. Unlike some other routes on the Union Pacific System, capacity expansion on the PNW Corridor is severely limited by geological and environmental constraints, most notably the Columbia River Gorge and Blue Mountains. Although Union Pacific has identified capacity projects in the Columbia River Gorge, we are not certain that those projects could satisfy environmental concerns and still be cost effective. To off-set some of the Columbia River Gorge constraints, outlying terminal areas would have to be enhanced and other capacity projects built in the corridor.

A central finding of the RTC analysis is that one pair of Amtrak trains consumes as much line capacity as five incremental freight trains. This is the case even with the inclusion of significant infrastructure improvements. The re-establishment of the *Pioneer* could limit the future ability of Union Pacific to expand its customers' freight service between Portland, Oregon and eastern gateways if appropriate infrastructure is not constructed. As stated above, additional in-depth capacity analysis will be needed if it is determined to further pursue the *Pioneer* project. This would require end-to-end RTC simulation modeling including prospective freight growth scenarios. On the route through Wyoming significant capacity improvements would be required to enable on-time performance given the high volume of traffic that will move on the Overland Route between Oakland, Roseville and eastern gateways. These improvements would typically be new universal crossovers on certain track segments that lack the ability to allow priority traffic to pass slower moving trains and maintain Amtrak service levels.

Between Denver and Speer Jct. (Cheyenne), Union Pacific proposes to shift four to six eastern gateway trains from the Greeley subdivision to the Julesburg subdivision (via existing trackage rights on the BNSF Brush subdivision to Union, CO). This shift would provide incremental capacity on the Greeley subdivision needed for the *Pioneer*.

II. CORRIDOR INFRASTRUCTURE REQUIREMENTS

A. Required Projects in Bottleneck Areas

In order to provide capacity for the Amtrak Pioneer and provide adequate corridor capability between Portland and Denver, the following infrastructure improvements would be required:

Denver to Portland Infrastructure Requirements

Denver to Greeley
- CTC Sand Creek to Denver Union Terminal [1]
- Connect to BNSF at Commerce City [1]
- Upgrade Rail and Ties on Julesburg Sub [1]

Laramie Subdivision
- Three universal crossovers [1]

Rawlins Subdivision
- Two universal crossovers [1]
- 70 miles CTC installation [1]

Salt Lake City, Utah [2]
- Construct connection to UTA

Ogden Subdivision
- Construct connection to Ogden Depot from Evanston Sub [1]
- Install manual interlocking at Brigham City
- Install manual interlocking at Cache Jct.
- Extend and power Coulam siding

Nampa and Huntington Subdivisions
- Bond six sidings to increase speed to 30 mph
- Upgrade run-through track at Nampa
- Construct 3 miles 2nd MT on Huntington sub

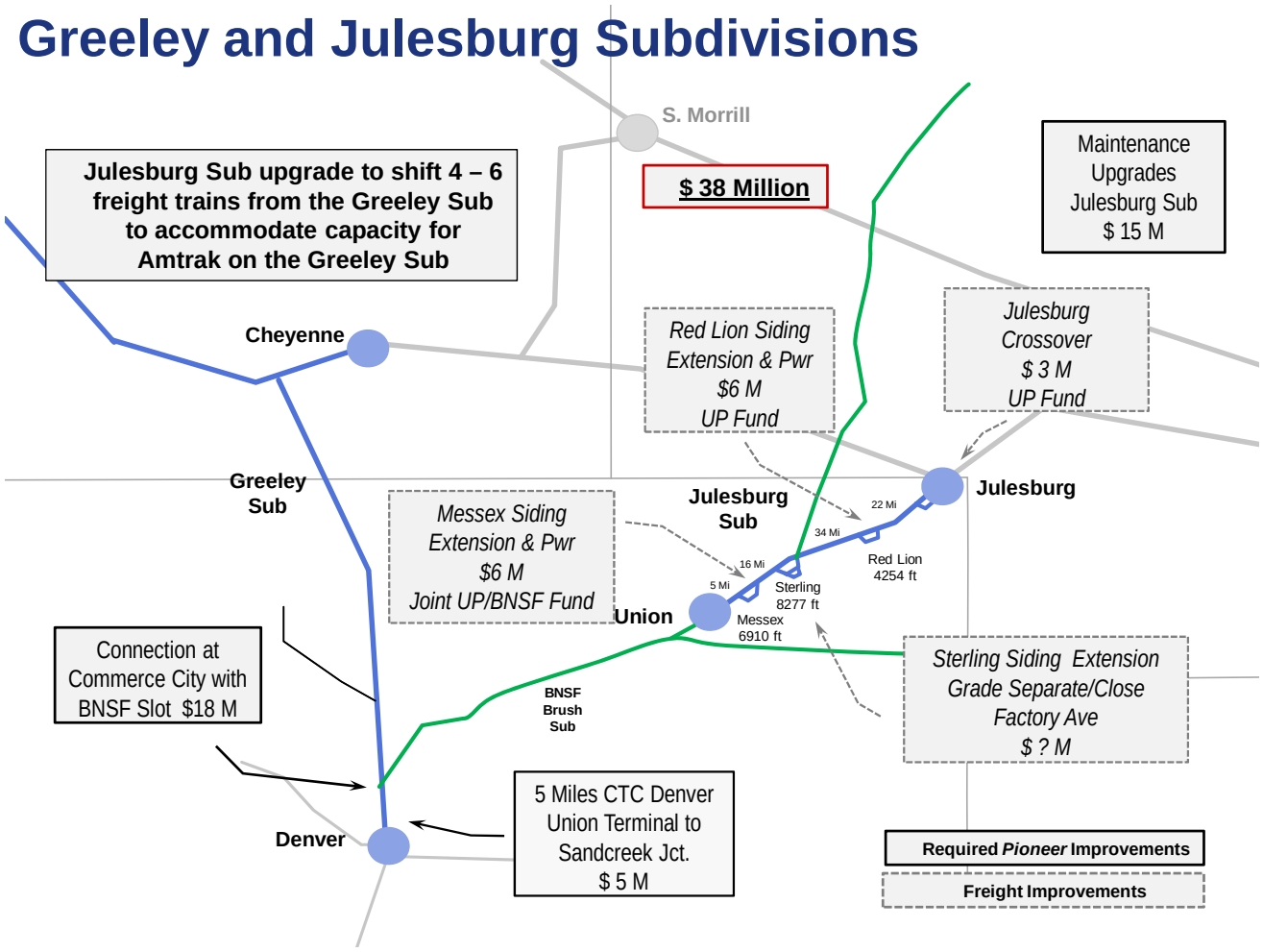
La Grande Subdivision
- Construct run-through track at La Grande
- Connect Perry 2MT to Hilgard Siding (2.5 mi)

Portland Subdivision
- Construct run-through track at Hinkle
- Power Univ Crossover at Oregon Trunk Jct.
- Construct universal crossover at The Dalles
- Install CTC Crates to Biggs (The Dalles)
- Install power turnouts at Rowena
- Extend Hood River siding eastward to 10,000'
- Construct 10 Miles of 2nd MT in Columbia River Gorge
- Construct siding on Graham Line
- Connect Graham Line to the Steel Bridge (may require double-slip turnourts at East Portland Jct.)

[1] Not required for routing via Salt lake City
[2] Not required for routing via Speer Jct.

Please note that there were other capacity projects evaluated but not included in the infrastructure requirements. A list of those projects appears in the appendix.

B. Project Descriptions

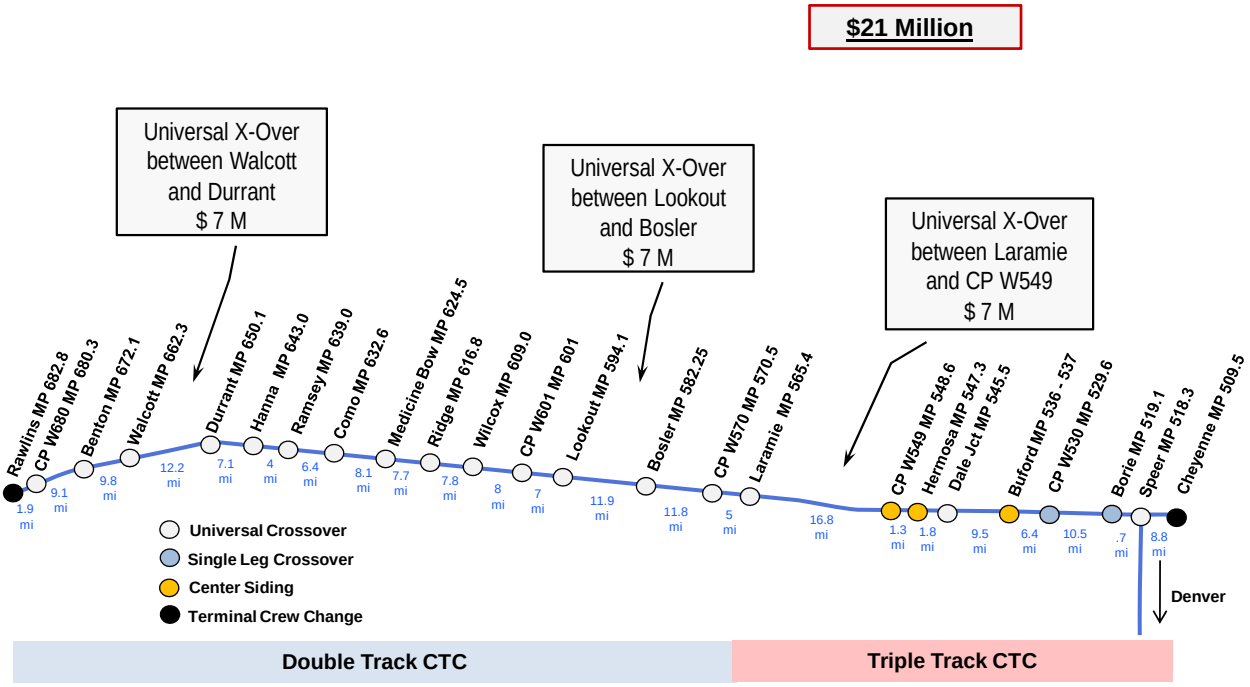


1. Greeley and Julesburg Subdivisions

Constructing upgrades on the Julesburg sub will allow approximately 4 to 6 freight trains to be rerouted from the capacity constrained Greeley subdivision to the Julesburg subdivision. This shift will then allow the proposed *Pioneer* service to run on the Greeley Subdivision. The capital requirements to accommodate the additional traffic on the Julesburg are significantly less than incremental capital requirements that would otherwise be required on the Greeley subdivision.

The alternative of providing sufficient capacity on the Greeley subdivision would require three additional sidings and closing or grade separating eight different roads in order to make the existing sidings fully useable. These Greeley subdivision improvements would require $35 million in direct infrastructure investment for sidings and CTC signalization and roughly $80 to $120 million of indirect investment to close and / or grade separate road crossings. In comparison, the Julesburg investment of $38 million would enable the proposed *Pioneer* service.

Laramie Subdivision



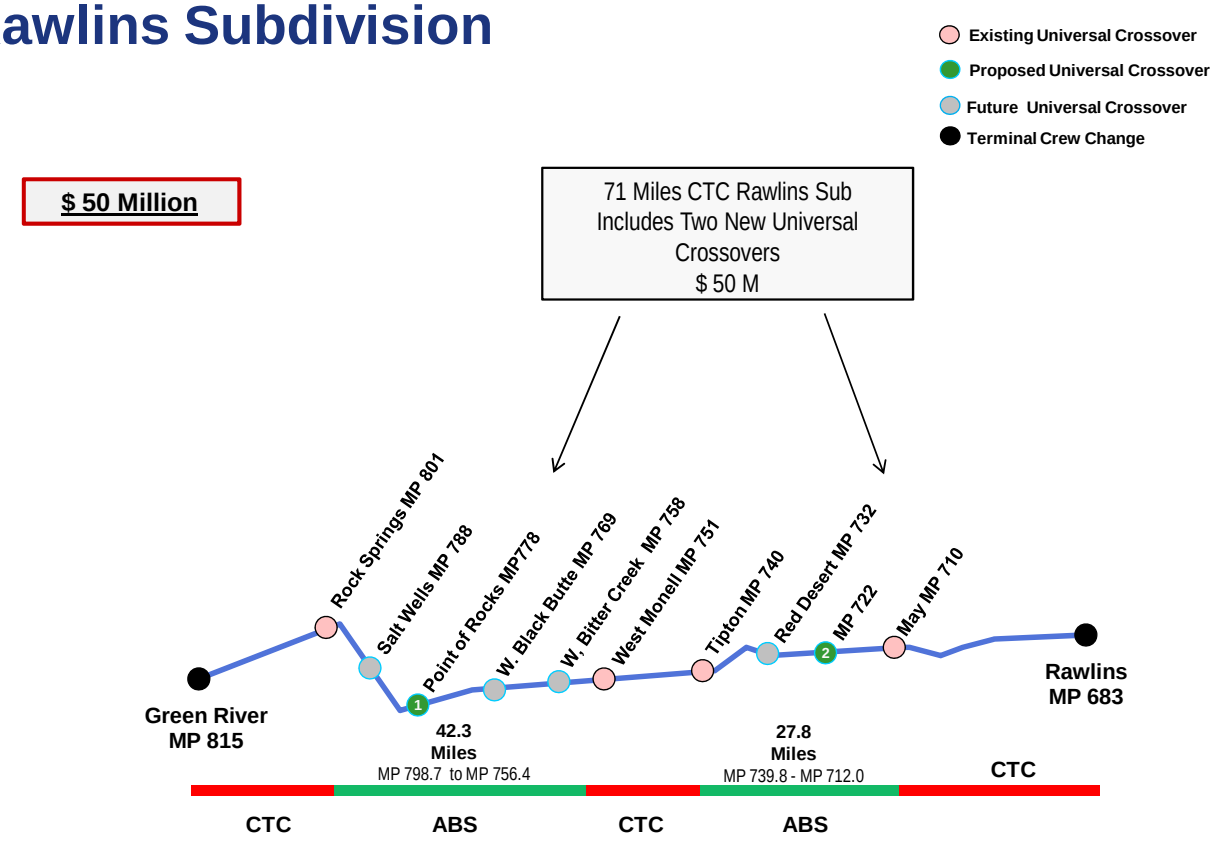
2. Laramie Subdivision

The Laramie subdivision has three segments (16.8 miles, 12.2 miles and 11.9 miles) of multiple-track CTC without universal crossovers. Other universal crossovers on the subdivision are spaced from 4 to 10 miles apart. Three new universal crossovers, midway in the long segments, are required to fully utilize the multiple tracks to sustain the *Pioneer* priority performance while not degrading freight service. Also, it is critical to be able to utilize either track during routine maintenance and incident recovery.

Total estimated cost for Laramie subdivision improvements is $21 million.

Preliminary Estimates Only - Not to be used for budgetary purposes

Rawlins Subdivision



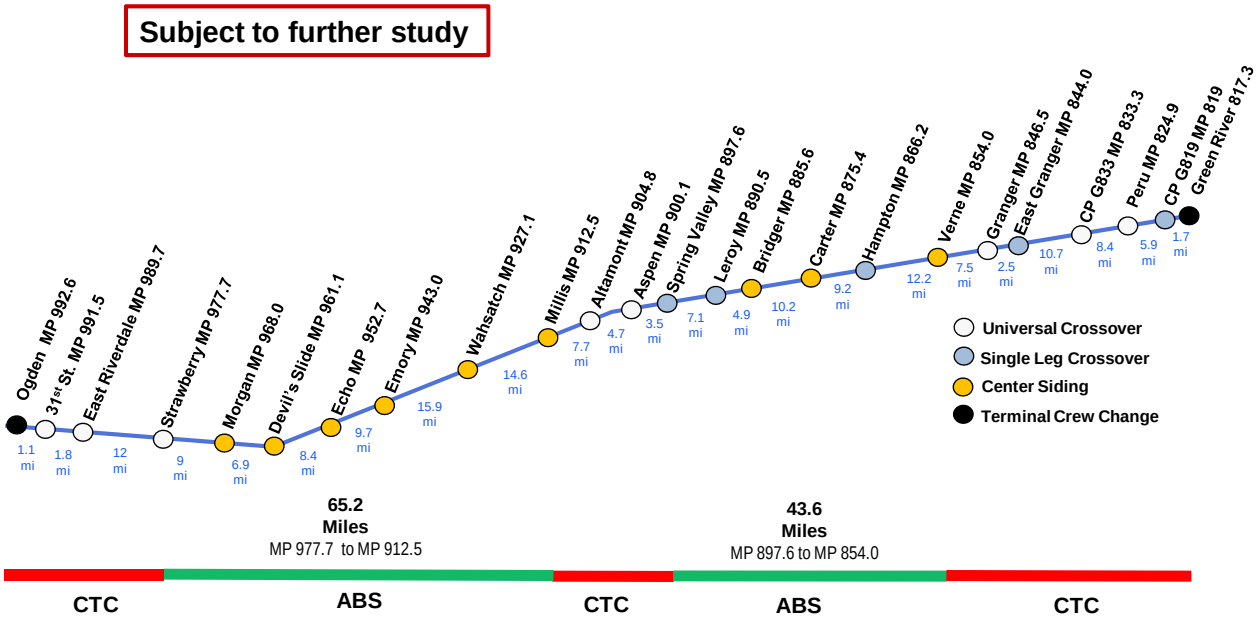
3. Rawlins subdivision

Given the normative volume of 70 trains per day, the Rawlins subdivision requires 71 miles of central traffic control (CTC) signalization and two new universal crossovers to fully utilize the multiple tracks and to sustain *Pioneer* priority performance while not degrading freight service. CTC will allow train traffic to run either direction on either track. It is also critical to be able to utilize either track during routine maintenance and incident recovery.

Total estimated cost for Rawlins subdivision improvements is $50 million.

Preliminary Estimates Only - Not to be used for budgetary purposes

Evanston Subdivision

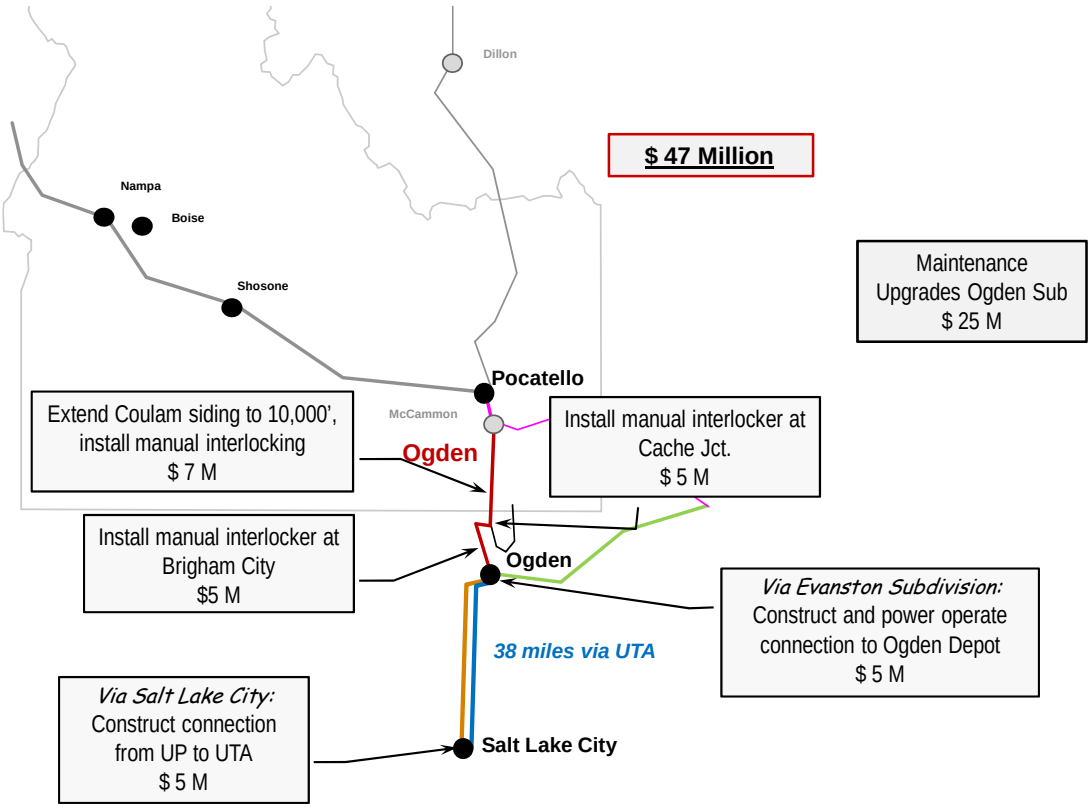


4. Evanston Subdivision

The Evanston Sub includes 109 miles of Automatic Block Signal, double track territory with hand throw center sidings and crossovers. Under double track Automatic Block Signals train movement is only signalized for one direction of traffic on each track. When trains overtake and pass another, during routine maintenance or during incident recovery, trains cannot operate against the current of signalized traffic without incurring significant delay. With normative volumes of 47 trains per day it is recommended that this territory be evaluated with RTC modeling if Amtrak decides to further pursue this segment of Pioneer service. Such an analysis would determine the extent of any CTC upgrade necessary.

Preliminary Estimates Only - Not to be used for budgetary purposes

Ogden Subdivision and Salt Lake City



5. Salt Lake City and the Ogden Subdivision

At Ogden, there is no longer a through route to the Ogden depot from Salt Lake City. An overhead UTA bridge crossing the Evanston subdivision (serving a multi-modal UTA depot at Ogden) has severed what connections existed. Re-establishing the *Pioneer* via Ogden from Salt Lake City would require that Amtrak use UTA trackage from Salt Lake City to Ogden. A short, direct connection from Union Pacific to the UTA at Salt Lake City is necessary to enable this move (estimates cost $5 million).

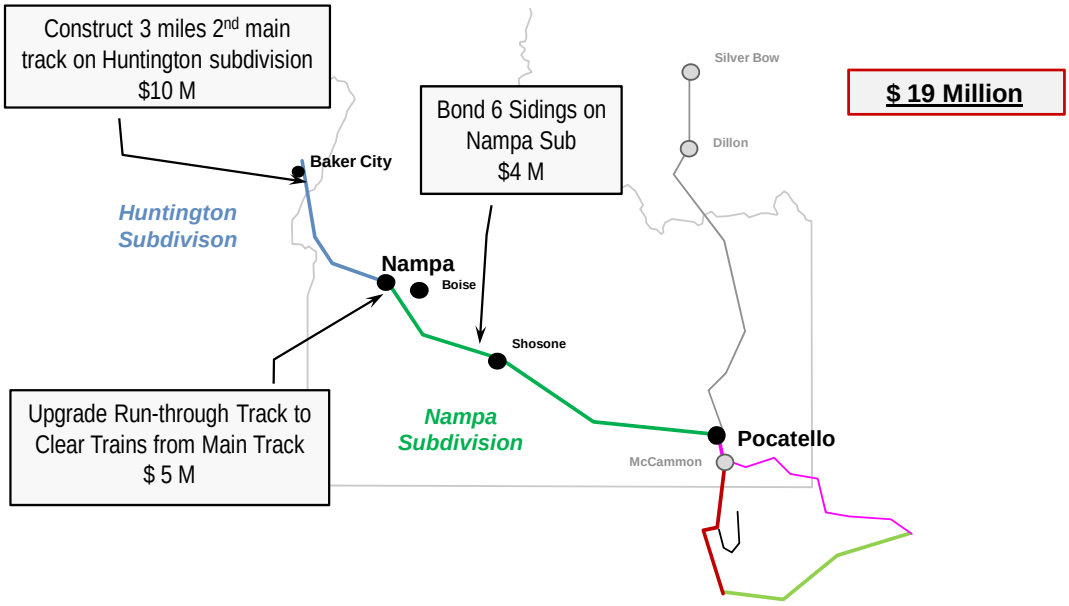
The Ogden subdivision, as referenced earlier, is governed by track warrant and Automatic Block Signals. To ensure fluid operation, manual interlocking (aka "CTC Islands") would be installed at Brigham City and Cache Jct. Coulam siding would be extended to 10,000 feet with manual interlocking to provide a third location with Brigham City and Cache Jct. where long freight trains could meet passenger trains. Estimated cost of the Ogden sub improvements is $17 million.

Also included in the cost estimate is $25 million to upgrade rail and ties on the Ogden sub so that speeds of up to 79 MPH can be attained subject to track geometry.

Total estimated cost for Salt Lake City and Ogden subdivision improvements is $47 million.

Preliminary Estimates Only - Not to be used for budgetary purposes

Nampa and Huntington Subdivisions



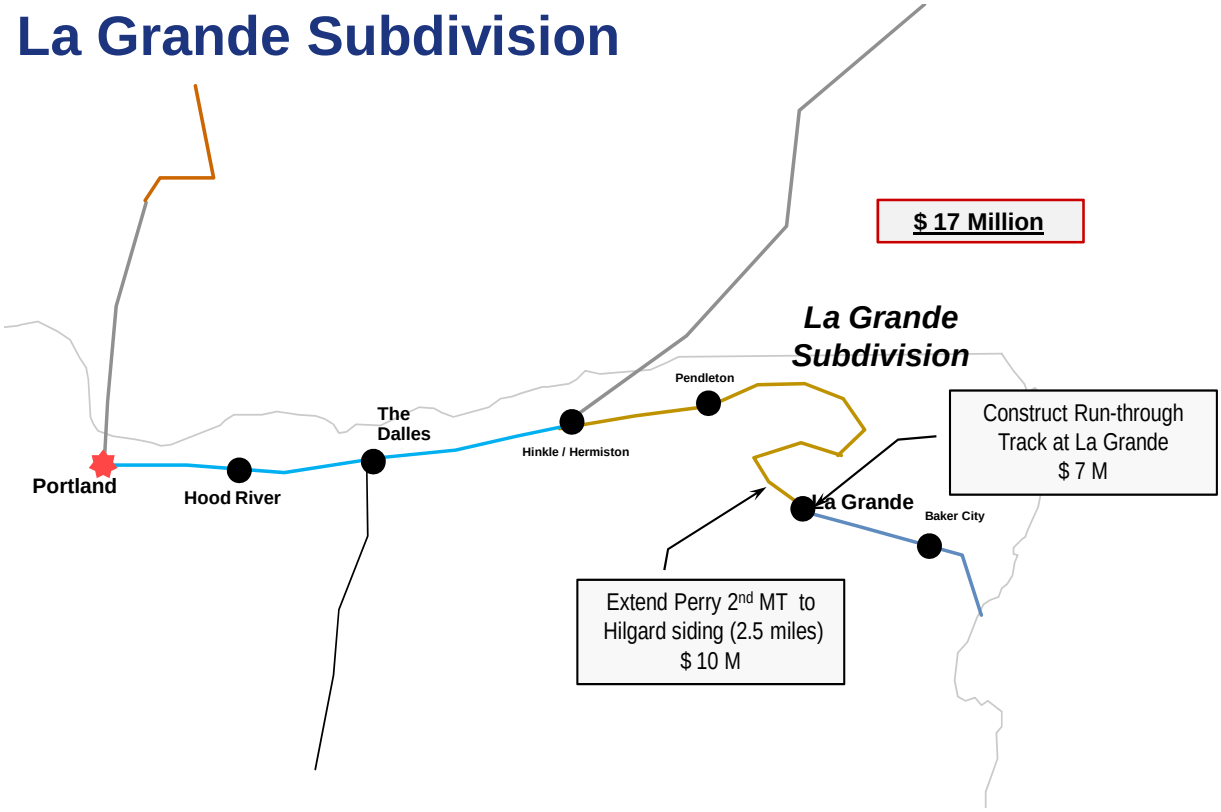
6. Nampa and Huntington Subdivisions

Nampa, Idaho is a key UP terminal on the PNW Route. It is a crew change location and a point where locomotives are added or removed from trains crossing the Blue Mountains to the west. To ensure fluidity and the ability to maintain the *Pioneer* schedule, an additional run-through slot would be constructed at Nampa. Estimated cost is approximately $5 million.

On the Nampa subdivision six sidings would have track bonding circuits installed to allow trains to enter the siding at 30 mph instead of the current restricted speed.

As mentioned in Section C.2 the topography of the Blue Mountains presents complex challenges that deter easy capacity improvements. The RTC analysis highlighted congestion near Baker, Oregon due to Amtrak stops and the lack of effective siding capacity in the vicinity. Additional double track near Baker or a Baker siding extension (eliminating the impact of road crossings within the siding) would alleviate the identified congestion. Estimated cost of such improvements is $10 million.

Total estimated cost for Nampa and Huntington subdivision improvements is $19 million.

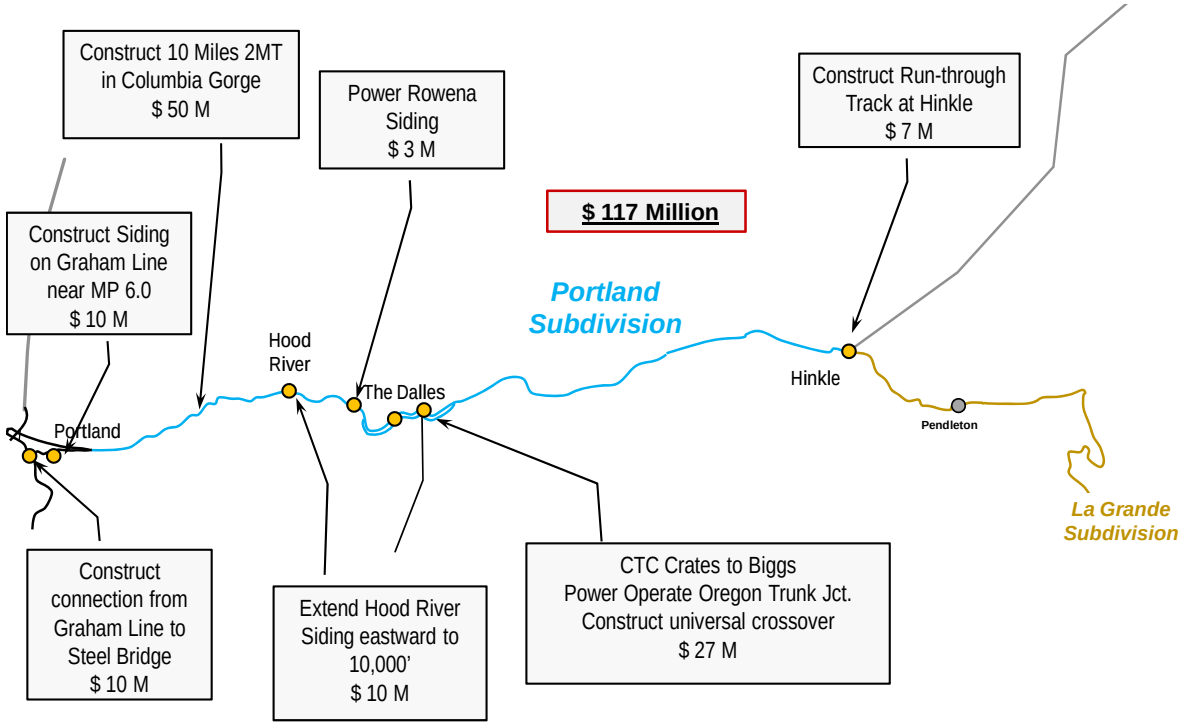


7. La Grande Subdivision

The slow running times associated with the eastward ascent to La Grande require additional infrastructure be constructed in the La Grande area to ensure throughput and on-time performance for Pioneer Service. Constructing an additional run-through track at La Grande (estimated cost $7 million) and connecting Perry to Hilgard ($10 million estimated cost) should provide the capacity required.

Total estimated cost for La Grande subdivision improvements is $17 million.

Portland Subdivision



8. Portland Subdivision

To ensure the best running time and minimal interference, the *Pioneer* would operate via the Graham Line from Troutdale to East Portland Jct. A new siding would be built on the Graham Line near MP 6.0, and a new connection to the Steel Bridge, possibly requiring double-slip turnouts, would be built at East Portland Jct. The estimated cost of these improvements is approximately $10 million each.

As discussed in Section E, there are very limited opportunities to provide capacity expansion in the Columbia River Gorge. The most straight forward improvements available are installing CTC between Crates and Biggs (through The Dalles), constructing a universal crossover at The Dalles, powering the existing universal crossover at Oregon Trunk Jct., and power operating the siding at Rowena. Estimated cost of these improvements is $30 million.

One opportunity for construction in the Columbia Gorge is to extend Hood River siding eastward to 10,000 feet. This siding extension would require a 500' bridge, but avoids making any hillside cuts or incursions in the Columbia River shoreline. In addition, Union Pacific has included a project to construct 10 miles of 2nd main track in the gorge. While this project is necessary to enable Amtrak performance and mitigate delay to freight trains, such a project has not been designed, and would require significant environmental mitigation. The Hood River project is estimated at $10 Million, while the 2MT project may exceed $50 million.

A new run-through slot at Hinkle will help off-set the balance of the capacity constraints in the area. Estimated cost is $7 million. Total estimated cost for capacity improvements on the Portland subdivision is $117 million.

C. Summary of Project Costs

The following cost estimates are, of necessity, limited to preliminary, high-level "ballpark" estimates. These cost values should be treated as order of magnitude estimates which are not based on field survey work or detailed engineering analysis. **The estimates should not be used for budgetary purposes.** Issues surrounding constructability, permitting and environmental requirements will be addressed in later phases of the project if it is further pursued.

Denver to Portland Infrastructure Requirements

	Split at Denver	Split at Salt Lake City
Denver to Greeley	($ millions)	($ millions)
CTC Sand Creek to Denver Union Terminal	5	
Connect to BNSF at Commerce City	18	
Upgrade Rail and Ties on Julesburg Sub	15	
Laramie Subdivision		
Three universal crossovers	21	
Rawlins Subdivision		
Two universal crossovers	14	
70 miles CTC installation	36	
Salt Lake City, Utah		
Construct connection to UTA		5
Ogden Subdivision		
Construct connection to Ogden Depot	5	
Install manual interlocking at Brigham City	5	5
Install manual interlocking at Cache Jct.	5	5
Extend and power Coulam siding	7	7
Upgrade Rail and Ties on Ogden Sub	25	25
Nampa and Huntington Subdivisions		
Bond six sidings to increase speed to 30 mph	4	4
Upgrade run-through track at Nampa	5	5
Construct 3 miles 2nd MT on Huntington sub	10	10
La Grande Subdivision		
Construct run-through track at La Grande	7	7
Connect Perry 2MT to Hilgard Siding (2.5 mi)	10	10
Portland Subdivision		
Construct run-through track at Hinkle	7	7
Power Univ Crossover at Oregon Trunk Jct.	8	8
Construct universal crossover at The Dalles	8	8
Install CTC Crates to Biggs (The Dalles)	11	11
Install power turnouts at Rowena	3	3
Extend Hood River siding eastward to 10,000'	10	10
Construct 10 miles 2nd MT in Columbia River Gorge	50	50
Construct siding on Graham Line	10	10
Connect Graham Line to the Steel Bridge (may require double-slip turnourts at East Portland Jct.)	10	10
Estimated Costs	$ 309	$ 200

III. CORRIDOR SIMULATION MODELING

A. RTC Study Methodology

A Normative Case of current operations assembled from track charts, timetables, general orders, and special instructions was coded into the RTC model to provide an accurate representation of track configurations, grades, speed limits, controlling signal aspects, yards, terminals, stations, and en route work locations. Existing freight traffic captured from actual data reflecting historical high levels of volume were then added to the model.

Once the Normative Case was completed, it was calibrated by comparison to actual operational statistics and key management review to ensure it accurately reflected current operations. This served as a benchmark to measure against subsequent case iterations' impact on changes in train velocity, transit times and congestion.

Subsequent test cases were built and modeled to represent future passenger and freight operations. These cases ensure the highest standards of safety and rail traffic fluidity. Track network enhancements were added and iterated until acceptable levels of transit times, velocity and congestion were achieved.

RTC produces key measures of network operations by train type. This allows intrinsic comparisons of competing proposals. These measures include:

Train count – the number of trains over a period (per day / per week) measured in the model. All trains included in the case(s) are dispatched; only those that complete their runs within the measurement time period are quantified in the statistics.

Transit Hours per Train – average transit times by train type over specified geography.

Velocity – average operating speed in miles per hour by train type.

Delay Minutes per 100 Train Miles – delay minutes normalized by train miles. This measure quantifies expected minutes of train delay anticipated per 100 train miles traversed. This ratio's value is that it can be used to measure delay between various volume and infrastructure sensitivities.

Results of case modeling and recommended track network enhancements were provided to the UP Engineering Design team to provide high level "ballpark" cost estimates.

This study is at a high order of magnitude and cost estimates for infrastructure are preliminary. Refined estimates requiring detailed engineering production are only undertaken if projects are considered feasible and funded for further study.

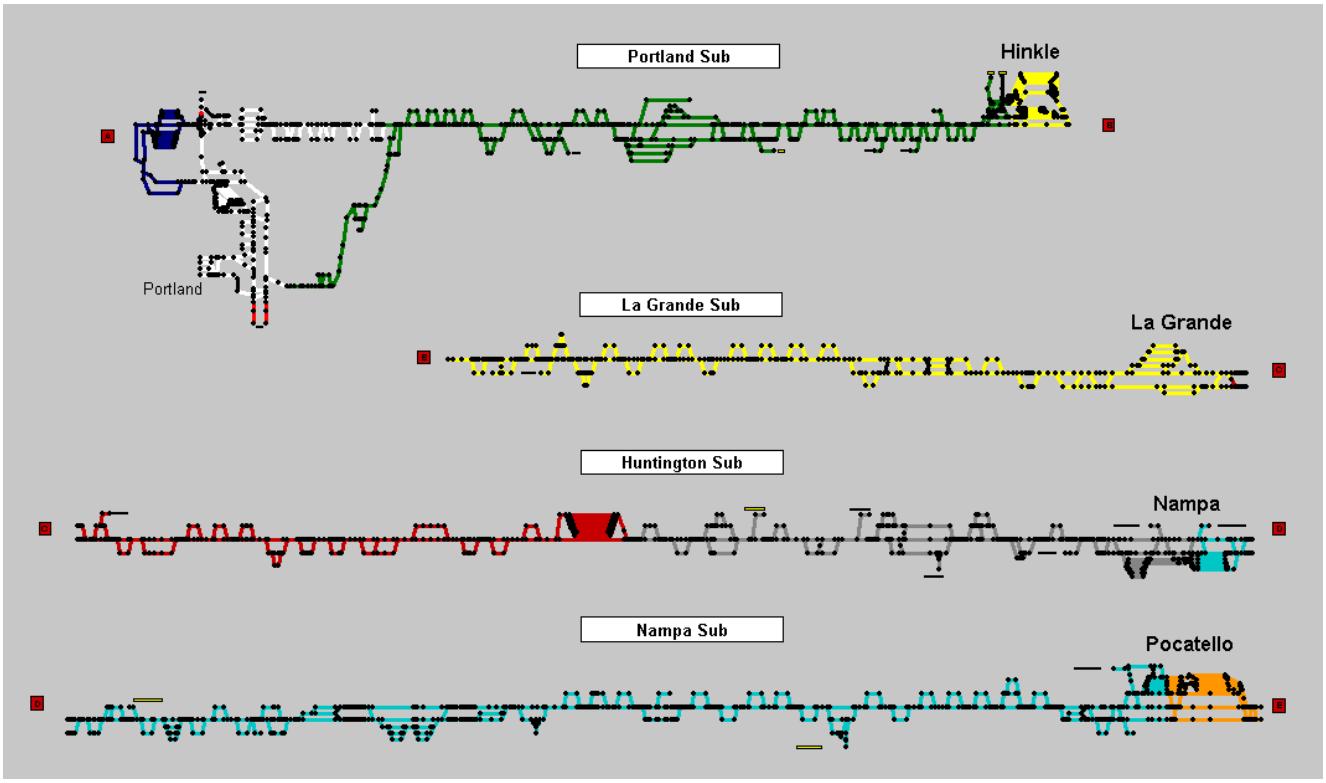
RTC Study Assumptions

Portland, La Grande, Huntington and Nampa subdivision normative through freight train daily volume was based upon weekly volumes achieved during February 2007. Actual freight train operating records from February 2007 served as a baseline for model generation. The provided Amtrak Pioneer Service schedules were used throughout the analysis to assess infrastructure and operational impacts.

Physical railroad infrastructure within the model was updated to reflect the track layout present at the time of the analysis. For planning purposes, it was assumed that adequate safety enhancements will be taken to mitigate General Code of Operating Rules (GCOR) 6.30 at Amtrak stations where multiple mainlines are present.

For study purposes, RTC was used to analyze the UP PNW route from: 1) Portland to La Grande; and 2) La Grande to Pocatello. RTC analytical results are discussed below based upon the aforementioned geographical segmentation.

UP PNW RTC Network



B. RTC Modeling Results: Portland to La Grande

Results of the Pioneer Service RTC analysis identified the following issues between Portland and La Grande:

- On the Portland and La Grande subdivisions, one pair of Amtrak trains has the equivalent network impact of approximately five additional through freight trains *(see volume & delay comparisons within columns A-C of the attached exhibit).*
- Significant congestion occurs around the La Grande and Hinkle terminal areas primarily due to Amtrak station stops delaying through freight crew change and terminal work events.
- An additional siding on the Graham Line allows *eastbound* through freight trains to clear the mainline which provides clear routing for Amtrak trains operating to/from Portland Union Station.
- An additional 10 miles of 2nd MT in the Columbia River Gorge and the Hood River siding extension and power operated turnouts provide much needed capability for Amtrak trains to meet / pass freight trains in the Columbia River Gorge.
- CTC and universal crossovers through The Dalles provide capability for Amtrak to meet / pass freight trains and leverage this existing double track – Automatic Block Siganl segment.
- Additional terminal run-through slots at both Hinkle and La Grande provide required capability for Amtrak station stops and concurrent through freight train terminal activities.
- The completion of double track from Perry to Hilgard on the La Grande subdivision provides capability for through freight trains to utilize crew change slots at La Grande and allows Amtrak to overtake and pass freight trains.
- The infrastructure improvements discussed above provide capacity to operate five additional freight trains above levels previously analyzed if Amtrak Pioneer Service was not introduced *(see volume & delay comparisons within columns H-I of the attached exhibit).*
- Infrastructure improvements included in column J (and discussed throughout the text of this document) mitigate Amtrak caused delays above moderate freight variability levels and enable adherence to Amtrak performance standards *(based on delay per 100 train miles, velocity and transit times vs column A).*

Please see the exhibit on the following page for detailed RTC results.

Amtrak Pioneer Route RTC Analysis

PNW: Portland to La Grande

7/15/2009

Recommended Improvements

AMTK via Graham Line →

Measurement	A Norm Base	B Norm Base w/Amtk		C 12% Frt Variability, No Impr, No Amtk		D 12% Frt Variability, No Impr w/Amtk		E Infra 1		F Infra 2		G Infra 3		H Infra 4		I Infra 4 + 5 incr Frt Trns, No Amtk		J Infra 6	
Improvements Included								12% Freight Variability and Amtrak in Cases E - H & J											
1. Add siding on Graham line (MP 5.3 - MP 6.9)								Y		Y		Y		Y		Y		Y	
2. Extend Hood River to 10,000'								Y		Y		Y		Y		Y		Y	
3. Power dual control switches both ends Rowena								Y		Y		Y		Y		Y		Y	
4. Change Dalles double track to multiple main CTC (22 mi)								Y		Y		Y		Y		Y		Y	
5. Add universal crossover at Dalles MP 87								Y		Y		Y		Y		Y		Y	
6. Power universal crossover at OR Trunk Jct MP 94.9								Y		Y		Y		Y		Y		Y	
7. Connect Kenton, Champ, Cully & Fir SDG's (5 mi)								Y		Y		N		N		N		N	
8. BNSF Fallbridge Sub Connection to Portland U. Station								Y		N		N		N		N		N	
9. Double Slip SW's Graham Line, Amtk use Graham								N		Y		Y		Y		Y		Y	
10. New RT Slots at Hinkle & La Grande								N		N		Y		Y		Y		Y	
11. Hilgard - Perry 2MT (2.5 mi)								N		N		N		Y		Y		Y	
12. Add'l 10 Miles 2MT - Columbia Riv Gorge								N		N		N		N		N		Y	
				Actl	vs Base	Actl	vs Base	Actl	vs Base	Actl	vs Base	Actl	vs Base	Actl	vs Base	Actl	vs Base	Actl	vs Base
Daily Trains																			
Amtrak	N/A	2		N/A		2		2		2		2		2		0		2	
UP Thru Freight (La Grande Sub)	24	24		27		27		27		27		27		27		32		27	
UP Thru Freignt (Network)	43	43		48		48		48		48		48		48		53		48	
Delay Min per 100 Train Miles																			
Amtrak	N/A	2.8		N/A		5.8		3.7		2.2		2.2		1.7		N/A		1.4	
UP Thru Freight	32.1	41.2	(28%)	39.8	(24%)	52.0	(62%)	46.3	(44%)	47.9	(49%)	43.7	(36%)	41.0	(28%)	40.5	(26%)	37.0	(15%)
Velocity (MPH)																			
Amtrak	N/A	41.5		N/A		40.6		43.8		43.1		43.1		43.3		N/A		43.3	
UP Thru Freight	19.4	18.8	(2.9%)	18.9	(2.4%)	18.2	(6.0%)	18.6	(3.7%)	18.6	(4.1%)	18.7	(3.3%)	18.9	(2.6%)	19.2	(0.9%)	19.2	(0.7%)
Transit Hrs per Train																			
Amtrak	N/A	7.2		N/A		7.3		6.9		6.8		6.8		6.7		N/A		6.7	

C. RTC Modeling Results: La Grande to Pocatello

Results of the Pioneer Service RTC analysis identified the following issues between La Grande and Pocatello:

- Bonding six sidings on the Nampa subdivision will provide the capability for freight trains to clear the mainline at a higher rate of speed thus reducing potential delays to Amtrak trains.
- Additional terminal run-through slots at both Nampa and La Grande provide required capability for Amtrak station stops and concurrent through freight train terminal activities.
- The RTC analysis highlighted congestion near Baker, Oregon due to Amtrak stops and the lack of effective siding capacity in the vicinity. Additional double track near Baker or a Baker siding extension, eliminating the impact of road crossings within the siding, would alleviate the identified congestion.
- Infrastructure improvements included in column H (and discussed throughout the text of this document) mitigate Amtrak caused delays above moderate freight variability levels and enable adherence to Amtrak performance standards *(based on delay per 100 train miles, velocity and transit times vs column A).*

Please see the exhibit on the following page for detailed RTC results.

Amtrak Pioneer Route RTC Analysis

PNW: La Grande to Pocatello

7/15/2009

	A	B		C		D		E		F		G		H
Measurement	**Norm Base**	**Norm Base w/Amtk**		**12% Frt Variability, No Impr, No Amtk**		**12% Frt Variability, No Impr w/Amtk**		**Infra 1**		**Infra 2**		**Infra 3**		**Infra 4**
Improvements Included								**12 % Freight Variability and Amtrak in Cases E - H**						
1. Bond 6 sidings on Nampa Sub (30 mph)								Y		Y		Y		Y
2. Nampa DPU Track								Y		Y		Y		Y
3. Baker SDG Extension								N		Y		N		N
4. 3 mi 2nd MT on Huntington Sub								N		N		Y		Y
5. La Grande Add'l RT Slot								N		N		N		Y
**La Grande RT slot cost counted once in overall analysis*														
Daily Trains				**Actl**	**vs Base**	**Actl**	**vs Base**	**Actl**	**vs Base**	**Actl**	**vs Base**	**Actl**	**vs Base**	**Actl**	**vs Base**
Amtrak	N/A	2		N/A		2		2		2		2		2	
UP Thru Freight (Huntington Sub)	25	25		28		28		28		28		28		28	
Delay Min per 100 Train Miles														
Amtrak	N/A	0.8		N/A		1.9		1.0		2.7		2.2		1.0	
UP Thru Freight	27.6	36.4	(32%)	34.3	(24%)	39.0	(41%)	36.1	(31%)	35.2	(28%)	35.1	(27%)	30.9	(12%)
Velocity (MPH)														
Amtrak	N/A	48.4		N/A		48.0		48.3		47.7		47.9		48.3	
UP Thru Freight	24.3	23.5	(3.2%)	23.7	(2.3%)	23.3	(4.0%)	23.6	(2.7%)	23.7	(2.3%)	23.7	(2.4%)	24.1	(0.7%)
Transit Hrs per Train														
Amtrak	N/A	9.4		N/A		9.5		9.4		9.6		9.5		9.4	

IV. SIMULATION METHODOLOGY

RTC Model and Features

Rail Traffic Controller (RTC) is a comprehensive rail network computer simulation model developed by Berkeley Simulation Software (BSS). RTC is a sophisticated program designed to realistically simulate both freight and passenger rail operations. The characteristic that sets RTC apart from all other rail modeling instruments is that it resolves complex multi-train conflicts in realistic ways. It has proven to be fully capable of handling any level of train or track complexity. It does not simply resolve conflicts between pairs of trains, but rather looks globally at multi-train conflicts in much the same way as a dispatcher in a control center would.

The logic is cost based. As the model dispatches, each train's cost and performance are constantly recomputed to ensure the overall best solution for all trains in moving them to their destinations based on train priorities and track network configuration. It is the dynamic costing and multi-train view that enables RTC to replicate the performance of train dispatchers. In addition, RTC contains a complete interface for specifying signals with up to 32 aspects.

There is no other simulation model that provides this portfolio of functionality. The history of successful capacity planning projects using this system is well documented over the past several years. RTC is now the standard among freight railroads and is becoming the standard for passenger operations. The majority of the Class I Railroads, including the UPRR, BNSF, CSX, NS, Amtrak, KCS, TFM (Mexico) and others, have selected RTC for operations planning and capacity analysis. RTC is also now the accepted rail capacity analytical standard during judicial, governmental and regulatory review.

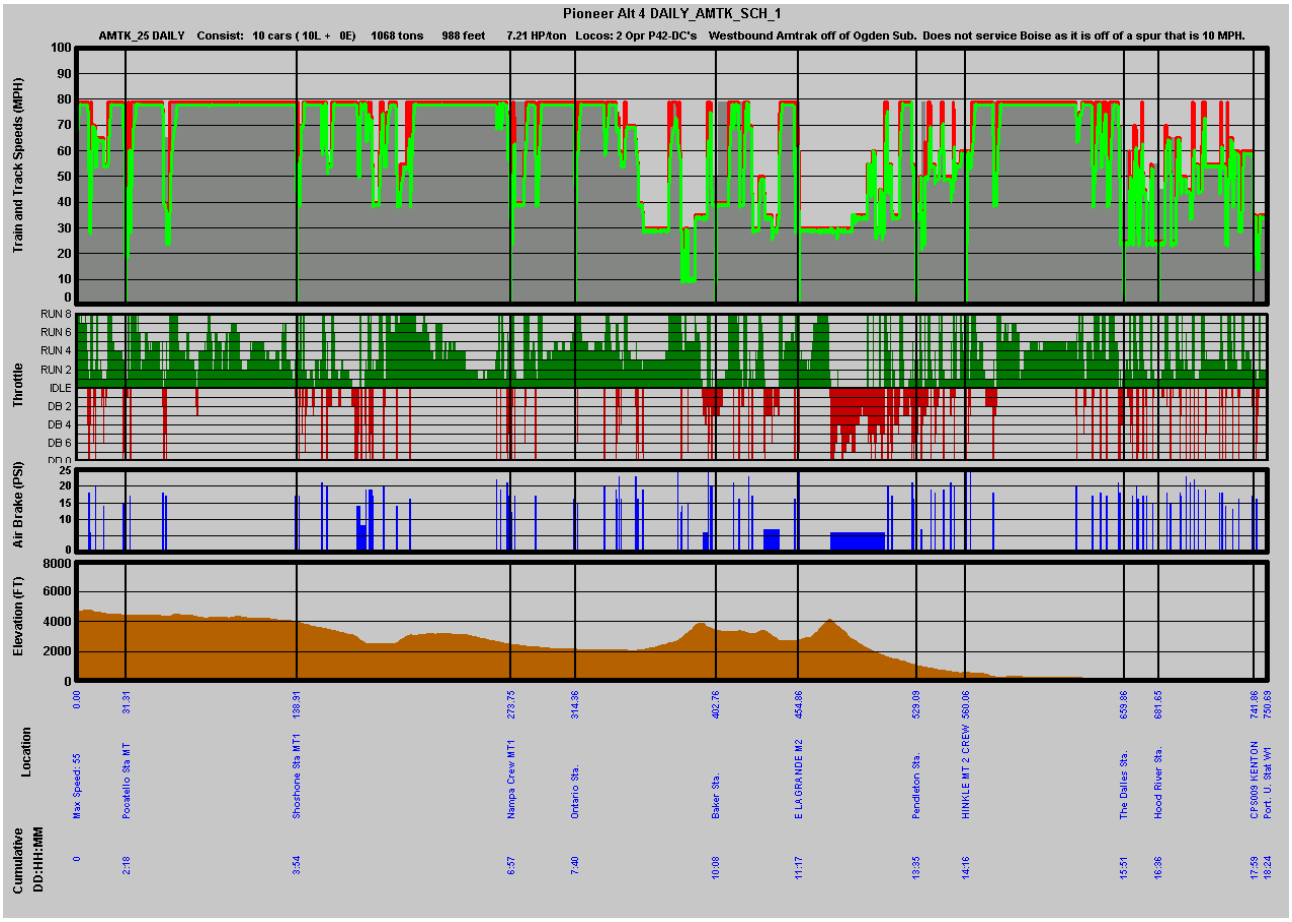
Other features of RTC that are particularly valuable include the ways in which it displays simulation results. While timetables and time-distance charts are useful for analysis on simple networks, they do not show conflict resolutions at a sufficient level of detail. RTC solutions are displayed in all the traditional ways, but it is the animation with its multitude of color modes that brings the solution to life. Railroad operators can view everything from train costs and schedule adherence to train lengths on one screen. The integrity of solutions is verifiable and presentable without spending hours examining abstract reports.

Traditional event-based simulations may be adequate at modeling simple mainline track configurations, but they have not proven to be very responsive to large, complex networks with high train volumes. This is especially important in potentially shared-use corridors, such as the Pioneer Route, where the density and dynamics of potential passenger and existing freight trains require a dispatching logic that effectively addresses meet, pass, overtake and intensive interlocking routing issues. In summary, RTC is the only model that has a proven track record in being able to accurately simulate large, robust networks.

Evaluating Train Performance

RTC contains a user-friendly train performance calculator (TPC). This tool is used for computing minimum run times for trains running from one specified point to another over a network without interference from other trains. Experimentation with various stopping patterns, routing configurations, dwell times and locomotive and train-set types provides the ability to identify the most effective scheduling/dispatching solution for a particular train type and associated specific physical characteristics.

Amtrak 25 RTC TPC Speed Profile



Developing Realistic Operating Plans

RTC eliminates the traditional practice of developing schedules and train movement alternatives based on average run times, an oversimplification that can lead to unachievable operating plans.

Arrival and departure times (as well as other parameters) are modified using RTC to improve schedules and craft the most fluid train dispatching scenarios. Furthermore, as traffic density increases, the potential for conflicting train movements increases as well, resulting in exposure to delays. This is precisely where RTC offers unprecedented, effective functionality.

RTC simulates train movements with the goal of achieving a cost-effective, overall system solution. When an excessive number of trains are specified to operate on the network, the model will delay trains as needed (at either terminals or en route) until clear routes become available. This characteristic provides the ability to vary departure times, dwell times, and the dynamics of train-set turns in order to test the vigor of schedules, the effectiveness of train dispatching and the capacity of the physical plant.

In summary, the RTC model replicates and predicts actual train movements, accurately identifying train dispatching and routing conflicts. Each simulation case analysis delivers precise comparisons of capacity and train delay at specific (and varied) levels of train service within a specified definition of infrastructure and physical characteristics.

Adding New Service

The effects of adding new trains to a congested corridor are comprehensively evaluated using the RTC model. The simulation measures the delay and performance resulting from new service by specific train as well as at the more aggregated levels of train class or the overall system network. These simulations are defined with sufficient duration to encompass all days of the week so that both "light" and "heavy" days, with peak and off-peak periods, can be duplicated and observed.

Interlockings

RTC is utilized to evaluate the benefits (and costs) of adding, modifying, eliminating, or networking interlockings, either in mainline road territory or within a complicated terminal area or district. The model (output) simulates delays associated with separate or segmented interlocking. This simulation is then repeated with a modification in the physical plant criteria assuring an efficient, unified network control system.

Construction Staging and Maintenance-Of-Way Windows

RTC provides the ability to develop realistic construction staging plans and to schedule the most effective maintenance-of-way (MOW) time slots on busy main tracks and terminals. RTC displays the effects of track impedances and speed restrictions on train movements with explicit graphics. The model offers the capability of experimenting with various staging scenarios and/or MOW windows to determine the best train schedules, physical plant configurations and timeframes to plan capital improvement construction or perform maintenance activities.

Evaluating Various Switch Types

RTC distinguishes the performance between controlled, electrically locked, self-restoring, spring and manual switches. The effects of each type of switch are easily evaluated by simply changing the switch type at a node.

Establishing or Moving Crossover Locations

Placement of crossovers can have dramatic effects on capacity utilization and train performance in multiple-track territories. RTC provides the ability to move crossovers around on the rail network model and test different assumptions on speeds for diverging train movements, a significant advantage in identifying locations that are best suited for a given set of train types and schedules. This modeling of a variety of crossover configurations also contributes to developing the most effective solutions to congestion issues as they are observed in the simulation.

Adding, Extending or Removing Passing Sidings

The utility of passing sidings or long segments of main track in multiple track territory is determined by their size and location. The “ideal” location for a passing siding or additional main track segment for 30 MPH track can be quite different than for 50 MPH, 80 MPH or 110 MPH track. The RTC simulation model enables the user to determine whether siding or additional main track segments are of appropriate length and location for the size and speed of the trains being operated, or to identify the best train sizes and operating speeds to match a specific track configuration.

Signals and Signal Blocks

Up to 32 aspects are available to create signal blocks for both Diverging and Non-diverging movements to accurately reflect signal restrictions. Interactive signal logic spaces trains at safe following distances based on specified signal blocks to represent signal system constraints on train operations.

Stringlines and Track Occupancy Charts

In addition to producing traditional stringline graphs (time/distance plots), RTC generates track occupancy charts that display which trains occupy specific tracks at any time through the simulation.

This is very useful for identifying "slots" at station platforms, and for evaluating track utilization in yards and intermodal facilities. The times displayed for a train are from head-end arrival to rear-end departure.

Operating Costs and Train Delay

RTC resolves conflicts by choosing the lowest cost solutions that are practicable. The coefficients applied by RTC's cost function are user defined. The simulation logic seeks multiple solutions to problems and chooses the least expensive one, leading to a high degree of flexibility. For example, depending on the cost coefficients, a passenger train that is ahead of schedule might be held for several minutes to allow a freight train to pass if the freight train's crew is close to their hours-of-service limit. This solution protects the on-time arrival of the passenger train at its final terminal while maintaining a cost-effective fluid operation for the freight train. It is when such events occur that users can see that the trains need to be rescheduled or that the overall system is at capacity and additional infrastructure is needed.

Output Statistics and Measures

RTC produces summaries of dispatch results by train types and segments that include velocity, travel time, delay, conflicts, miles traveled, and fuel consumed. These statistics are compared between case iterations to measure the impact of changes to operating procedures and network modifications between cases.

V. APPENDIX

The following projects, among others, were evaluated but not included in the final group of infrastructure requirements:

- Connect Kenton to Champ, Cully to Fir (Kenton Line)
  - Allows more fluid operation and reduces congestion on Portland subdivision
- Extend running track west from Hinkle to Munley
  - Creates location to queue at Hinkle and ease congestion on Portland sub
- Construct 2nd main track Motanic to Hilgard (near La Grande)
  - Improves fluidity
- Construct 2nd main track from Huron to High Bridge on La Grande subdivision
  - Improves fluidity
- Construct running track at Pocatello
  - Reduce delays at Pocatello associated with trains queuing while waiting for Amtrak
- Install segments of CTC on Evanston subdivision
  - Improves ability for Amtrak to overtake and pass freight trains
- Construct running track on Rawlins subdivision near MP 680
  - Remove local support traffic from Rawlins subdivision
- Construct three sidings on Greeley subdivision
  - Upgrade Greeley subdivision to support Amtrak

Exhibit F

Draft Study Outreach Correspondence

1. City of Boise Office of the Mayor – D. Bieter
2. Colorado Dept. of Transportation (CDOT) – T. Mauser
3. Idaho DOT – L.S. Stokes
4. NARP – R. Capon
5. Member of Congress – E. Blumenauer
6. Pocatello Mayor – R. Chase
7. Seattle City Council – J. Drago
8. US Senator – M. Crapo
9. US Senator – R. Wyden
10. Wyoming DOT – B.P. Collins

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BOISE CITY OF TREES

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Mayor

City Council

President
Maryanne Jordan

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Office of the Mayor

September 30, 2009

Jonathan Hutchison, Government Affairs Director – West
Amtrak
530 Water Street, 5th Floor
Oakland, CA 94607

Dear Mr. Hutchison:

On behalf of the City of Boise I would like to thank you for including these comments as additional content for the *Amtrak Pioneer Route Study Report.*

The City of Boise has a high level of interest in bringing back the Pioneer Route. As you know, Boise is the capital city and the largest city in the state of Idaho. Boise is also the third largest city in the northwestern United States behind Seattle and Portland, with a population of 205,314 according to the 2008 Census Bureau estimate. The Boise Metropolitan Statistical Area has approximately 587,000 people. Nampa (the state's second largest city) and Meridian (the state's third largest city) will all be served at the Historic Boise Depot, the iconic train stop centered along the Orchard-Nampa segment, referred to in the Amtrak study as the "Boise Cutoff."

While I recognize this report is a preliminary overview, I feel additional research is needed to obtain the most accurate assessment of the potential costs involved in restoring the Pioneer Route.

The section referred to as the "Boise Cutoff" is owned primarily by Union Pacific; the City of Boise is owner of 18.2 miles of the 44.3-mile segment. Based on studies conducted recently by our Economic Development office, it appears the City of Boise track can be "Amtrak ready" at a cost of $178,724 per mile, about 40 percent less than the $305,000 per mile being suggested in the *Amtrak Pioneer Route Study Report.*

With regard to the city-owned Boise Depot, I would definitely need clarification on the indicated need for spending upward of $600,000 for improvements as part of the return of the Pioneer Route. Again, I think the cost estimates may be significantly higher than necessary, at least in the case of the City of Boise assets.

As indicated in the communication surrounding this project, the study represents a rather hurried review, and that becomes apparent within the sections mentioning Boise. It is because this is such an important matter to the citizens of Boise and all of Southern Idaho that I suggest undertaking a more in-depth and precise study as soon as possible. You may find that the costs to bring back the Pioneer Route are more reasonable than indicated in this first draft.

Thank you for your consideration and for continuing the move forward for restoration of the Pioneer Route.

Sincerely,

David H. Bieter
Mayor

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CDOT Comments on the Amtrak Pioneer Route Passenger Rail Study

The Colorado Department of Transportation appreciates this opportunity to comment on the *Pioneer Route Passenger Rail Study.* CDOT is pleased to see that Congress and Amtrak are reviewing the feasibility of restoring the Pioneer route. Our comments on the study are listed below.

- **CDOT Support:** CDOT strongly supports the restoration of the Amtrak *Pioneer* service and views the choice of either route (Rio Grande route or Overland route) as beneficial to the state. However, based on its analysis of the pros and cons of the two routes, CDOT prefers routing the Pioneer via the Overland route, for the reasons identified later in the comments.

- **Competing Modes: Greyhound - US 40 Route between Denver and Salt Lake City:** Under the competing modes section (p. 12) – the study does not identify a Greyhound route from Denver to Salt Lake City – which starts in early October, 2009. This intercity bus route was just recently established by agreement between CDOT and the Utah DOT. It will serve eastern Utah and western Colorado cities, following U.S. Hwy 40 and will somewhat duplicate the Rio Grande routing of the Pioneer. This Denver-SLC intercity bus route would also provide a connection from SLC to points east for Pioneer passengers.

- **Capital and Operating Costs:**
  - **Capital Costs:** Given that the Pioneer operated over the Overland route just 12 years ago, the high capital costs in Option2 ($470 million) seem to go beyond what is required to restore the same service.
  - **Equipment:** While CDOT recognizes Amtrak's lack of equipment given the scale of their national network, the proposed equipment costs in this study still seem very high.
    - The stated cost of equipment is over $4.5 million/car. Is this cost similar to the average Amtrak fleet cost per car?
    - Wrecked equipment can be rehabbed at a lower cost than building new equipment. This would also reduce the start-up period from 4 years.
    - For determining equipment costs, Amtrak could also use annual depreciation of equipment and include this cost as part of the annual operating costs.
    - Viewliner equipment could also be used on this route for more immediate start-up of service.
  - **Operating Costs:** The projected operating loss also seem to be very high. How does the Pioneer projected ridership and revenue per mile compare with other long-distance routes?

- **Freight Issues that should be considered:**
  - CDOT appreciates that the Overland route has the potential to create freight capacity improvements in Colorado whereas the Rio Grande route would not entail any improvements to freight capacity.
  - The UP has stated that the Greeley Subdivision is at capacity (p.48). To provide additional capacity, UP proposes that Amtrak fund capital improvements on UP's Julesburg Sub. This would reduce traffic on the Greeley Sub by 4-6 train/day by

rerouting those train across UP's Julesburg Sub. PRIIA creates stronger requirements for the freight railroads to keep Amtrak on time.

- The identified capital improvements to accommodate the Pioneer would thus have positive benefits for freight operations in Colorado and these freight benefits would remain even if the Pioneer service were to end. While these identified freight capacity improvements will benefit Colorado, restoration of the Pioneer should not depend on freight improvements as these improvements can be done over time.

- **CDOT Route Preference:** As mentioned above, CDOT sees both routes as beneficial to the state. However, based on its analysis of the pros and cons of the two routes, CDOT prefers routing the Pioneer via the Overland route. Outlined below are what CDOT considered to be the pros and cons of each route:

- **Overland Route (1991-1997):** 1624 miles - Denver to Seattle, 1437 miles - Denver to Portland.

  - **Pros**
    - Creates new service in Colorado (Greeley) as well in Wyoming, which currently has no Amtrak service.
    - Adds a second train into Denver Union Station – creating a rider choice of route in Denver.
    - Faster travel time than Rio Grande route (4 hours shorter).
    - While not directly serving SLC, the UTA Front Runner can make a rail connection to SLC from Ogden (depending on schedule). Otherwise, regional bus can serve the same route as Front Runner.
    - Historically, Overland route produced higher ridership – although it was lower passenger miles per train mile.
    - Would not complete with CDOT/UDOT-funded Denver-SLC Greyhound service via US 40.
    - Through cars from Chicago to Seattle.
    - Station added in Greeley. The City of Greeley wants the train, has a great station, and would make local transit connections, depending on the Pioneer schedule.
    - The identified freight line capital improvements for the Overland route would also benefit freight operations in Colorado by adding system capacity.
    - The North Front Range (NFR) area in Colorado is lacking in intercity transit connections – routing the Pioneer via the Overland route would increase NFR intercity connections.
    - Routing the Pioneer via the Overland route will help to pave the way for commuter/regional rail services in the future.

  - **Cons**
    - The Overland route as proposed in the study would not provide a direct connection to the City of Cheyenne. Rather, the Cheyenne-area station would be at Borie – some 5 miles west of Cheyenne. A connecting van service to Cheyenne would be needed. Also, a new Borie station and platform would need to be constructed. Service into Cheyenne proper is important to Colorado as Cheyenne would be the largest regional connection to Denver where maximizing ridership largely depends on connections between city centers.

- **Rio Grande Route (1977-1991):** 1652 miles from Denver to Seattle, 1465 miles from Denver to Portland, 570 miles from Denver to SLC.

    - **Pros**
        - Perceived by many passengers to provide more dramatic scenery than the Overland route.

    - **Cons**
        - Would complete with CDOT/UDOT-funded Denver-SLC Greyhound service via US 40.
        - 10-hour layover in SLC for eastbound Pioneer passengers is far too long and would be between 6pm and 4:30am.
        - Slower travel time than Overland route (13 hrs. longer eastbound, and 5.5 hours longer westbound).
        - Does not provide any choice of route for passengers in the larger city of Denver.
        - Does not create any new service in Colorado (same Colorado stations served as with Zephyr). No new Colorado stations.
        - Rio Grande routing does not provide capital improvements (capacity) to the freight lines in Colorado.

- **Seattle as Destination:** CDOT believes it is important to terminate in Seattle. Going to Seattle, rather than terminating in Portland, actually reduces the annual subsidy required even though it is a longer distance. This is due to additional revenues that would be gained as well as having the required train maintenance/crew facilities in Seattle where none exist in Portland and would have to be newly built.

- **CDOT would appreciate some clarification on the following questions:**
    - Will states be asked to contribute operating funds? Study (p. 64) says funding for the operating costs would have to be obtained from other federal and/or state sources since ARRA cannot be used for operations.
    - If states were to cover the operating deficit equally, how much would each state have to contribute? If the option 2 operating deficit were equally divided between 6 states, each state would pay $5.5 million/yr. in operating cost. What formula would be used if states were asked to contribute operating funds?

- Finally, CDOT would be remiss if it did not mention that interest was also expressed in a number of communities with routing the *Pioneer* via the BNSF line from Cheyenne through the cities of Fort Collins, Loveland, Longmont and Boulder. CDOT recognizes that Amtrak did not have Congressional authority to study any routes beyond the two routes previously used by the Pioneer, and we appreciate that the study mentions this alternative and indicates that this specific Colorado routing could be studied later if needed. We believe this route could offer a large population base from which to draw riders and should be considered if future studies are conducted.

Thank you for this opportunity to comment.

Sincerely,

Tom Mauser
Modal Programs Manager
Colorado Dept. of Transportation
Division of Transportation Development
4201 E. Arkansas Ave., Shumate Bldg.
Denver, CO 80222
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September 30, 2009

Jonathan Hutchison
Government Affairs Director – West
Amtrak
530 Water Street; 5th Floor
Oakland, CA 94607

RE: PRIIA Section 224 Pioneer Route Passenger Rail Study (Amtrak Pioneer Restoration study)

Dear Mr. Hutchison:

The purpose of this letter is to submit the Idaho Transportation Department's (ITD) comments on the Amtrak Pioneer restoration study. First of all, we would like to thank Amtrak and its consultant, J.L. Patterson & Associates, Inc. (JLP), for the cooperation and open communications with the Pioneer states, Congressional delegations and others in conducting the Pioneer study. ITD supports reintroduction of the Pioneer route to the national Amtrak system and we plan to work further with Amtrak, the Idaho Congressional delegation, the other Pioneer state partners and other involved parties to explore the many options to return intercity passenger service to the citizens of southern Idaho and other locations along the route.

Our specific comments are as follows:

- Portland to Salt Lake City (SLC) service is essential to southern Idaho. Existing connecting Amtrak service is already at these locations, and this would be a good first step in reinstituting service. The operational schedule Options one and three appear to work best for the states of Idaho, Oregon and Washington for arrival/departure times, generating higher Passenger Miles/Train Mile ratios and much lower Capital/Implementation costs. However, we would not be opposed to some variation of Options two and four if the Pioneer could go to SLC from/to Ogden, or excellent connections could be made with the Utah Transit Authority. Whatever option is chosen, criteria should include maximizing connectivity to other Amtrak routes and local transit authorities.

- The ridership projections in the study should be reconsidered for the final report. As the study points out, the populations of the states served by the former Pioneer are among the fastest growing in the United States (41% versus 19% nationally over the past 17 years). The study also addresses the fact that air service to/from major cities along the route has improved. However, air and intercity bus service to smaller cities along the route has actually declined, as the study states (many years ago Greyhound essentially pulled out of Idaho but there are several other firms that are providing some services). In light of all this,

we recommend that the ridership projections be increased by 10-20%, which would result in projections still lower than or similar to the peak years of FY 92 and FY 93. This would make the fare box recovery ratios more favorable.

- All future options should include a stop in Boise. Although using the Boise cutoff adds a few miles and some time to the schedule, it is important to realize that Boise is the largest metropolitan area between Portland and SLC, a distance of almost 800 miles.

- The timeline for reintroduction seems excessive. Amtrak could utilize Superliner cars rebuilt with American Recovery and Reinvestment Act (ARRA) stimulus funds or new Viewliner cars for the Pioneer fleet rather than waiting four years to build new Superliner cars.

- Reinstating Pioneer service would restore a key central corridor link between the Midwest, Intermountain West and Pacific Northwest, facilitating travel amongst the most rapidly growing regions of the U.S and connecting existing routes thereby creating system efficiencies. Pioneer service would provide transportation options to rural populations with few modal choices, which is critical; multiple markets (e.g., purpose and/or vacation trips) can be served this way; more alternatives would be available; and essential new service can be provided for those without existing nearby air service and limited bus services. New Pioneer service would also enhance economic benefits, consistent with Idaho's desire to grow and diversify investment across the state.

- A very important point is that a reintroduced Pioneer should be included in Amtrak's Long-Distance Intercity Passenger Network, like the Empire Builder and the Coast Starlight. The concept of the Pioneer as a state-supported train is not likely to work or would be awkward at best. This is because as many as six states would be involved in providing the necessary state capital and operating funding. If at least one state doesn't join the compact, or withdraws support at some point, the whole system could break down.

- We are willing to work with Amtrak, the Federal Railroad Administration, Idaho cities with potential Pioneer stations and other parties to try to obtain future funding through the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law 110-453), the High-Speed Intercity Passenger Rail Program or other sources to help fund capital improvements to stations and other infrastructure. Idaho cannot commit any state funding for operations and capital improvements at this time, especially given the current and projected status of the state's budget.

We agree with Amtrak's statement that the Pioneer study presents a preliminary, high level set of information, findings, opportunities, and challenges due to the costs involved, and there would need to be more thorough analyses to fully understand service, capital and economic requirements of any particular option.

Again, we look forward to working further with Amtrak, the Idaho Congressional delegation, the other Pioneer states, and other involved parties to explore the many options to return intercity passenger service to the citizens of southern Idaho and other locations along the route. Please contact Ron Kerr at 208.334.8210, ron.kerr@itd.idaho.gov with any questions.

Sincerely,

L. Scott Stokes, P.E.
Acting Director

cc: Idaho Congressional Delegation
City of Boise-John Brunelle
COMPASS

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Comments of the National Association of Railroad Passengers www.narprail.org, Ross B. Capon, President and CEO on Draft "Amtrak *Pioneer* Route Study Report"

We appreciate the opportunity to comment, albeit on one week's notice. We also appreciate the efforts of Senators Ron Wyden (D-OR) and Michael D. Crapo (R-ID) to restore the *Pioneer.* Senator Wyden aptly calls it "a passenger rail line that should never have been closed in the first place," harking back to Senate testimony by then Amtrak Chairman Tommy Thompson supporting that contention.

Our top-line concerns are these:

- Revenue estimates appear low and the methodology behind these estimates is not explained, in contrast with the great detail given to capital costs.
- Similarly, the estimated revenue-to-cost ratios appear low and may not have been calculated appropriately for a train that combines with another train.
- We recommend study of two additional options: Seattle to Los Angeles via Eastern Oregon, Boise, Salt Lake City and Las Vegas; Denver to Portland as suggested by Cascadia (although we have concerns about some of the statements in the report).

Ridership estimates too low and too opaque: We heartily endorse Senator Michael D. Crapo's (R-ID) request, in his September 30 letter to Amtrak President Joseph Boardman, for "a written response **explaining the ridership modeling and the assumptions used to obtain the estimates in the study."**

As Amtrak well knows, the environment for train travel has improved markedly in recent years. Even during the current, difficult economic times, the overnight trains as a group have seen ridership and revenues hold up better than either the Northeast Corridor or other state corridors. For the 11 months of Fiscal 2009 (Oct-August), Northeast Corridor revenues were down 9%, state corridors 4% and overnight trains 3%. The *California Zephyr* actually posted a 3% revenue increase.

To illustrate that Amtrak's *Pioneer* projections appear to ignore the strengthening of the overnight train market since the *Pioneer* last operated, consider that ridership on the *Southwest Chief* in Fiscal 2007 and 2008, respectively, was 34% and 40% higher than in Fiscal 1996, the last full year the *Pioneer* operated. The comparable percentage changes for passenger revenues were astounding: 58% and 71%, respectively, which doubtless reflects ridership constrained by limited capacity.

In addition to the general trends in overnight train revenues, three other factors argue for higher ridership estimates.

- One is openly acknowledged in the report: non-rail alternatives along the *Pioneer* route are considerably weaker than 10-15 years ago. [Page 62 of the report: "Restoration of the *Pioneer* would play a particularly important role in the 12 communities along the route that lack convenient access to air service and have only limited intercity bus service ... Airline service in [the smaller communities along the *Pioneer* route] is much less convenient and much more expensive than it was when the *Pioneer* operated. ... Current Greyhound Lines schedules (June 2009) show just two daily round trip frequencies along most of the *Pioneer*'s route, and one-seat bus service is no longer available from Seattle to Boise, Salt Lake City and Denver."]
- As noted on page 63, however, development and expansion of commuter and light rail services in the Denver and Salt Lake City areas means that trains have become familiar to more people in key *Pioneer* markets, which also could boost interest in a restored *Pioneer.* In addition, opportunities to coordinate with tour and transit bus companies should be considered.

- As Senator Crapo's letter notes, "The study projects the ridership at a level nearly 30% below the historic high in 1992 while the population growth in the states along the route has increased by 41%."

NARP provided relevant market data to Amtrak in April, but it does not appear that this was given credit in preparation of the report.

Through cars to/from Chicago: Unless the above-referenced Los Angeles routing is chosen, we agree that through cars to/from Chicago/Omaha would be important and produce significant revenue. Amtrak responded to this reality early in the *Pioneer's* existence when the free-standing Salt Lake City-Seattle train was replaced with what was in effect a section of the *San Francisco Zephyr* (later, *California Zephyr*, page 2). This made the combined *Zephyr/Pioneer* essentially a single train, best calculated with a single revenue-to-cost ratio for the entire operation. It is logical, of course, to understand the impact of adding *Pioneer* but the only accurate way to get that is by comparing the revenue-to-cost ratio—and other performance measures—of the existing operation (*California Zephyr* alone) with that of the proposed *Zephyr/Pioneer* operation.

Amtrak appears to have tried only to identify economic measures for the *Pioneer* as a stand-alone service. This analytical approach is guaranteed to give a distorted, negative picture of the prospective service.

"[T]he *California Zephyr* connection is critical to the operation of the *Pioneer*, since a large portion of the projected revenue is generated by passengers whose trip includes travel on the *California Zephyr* east of Denver/Salt Lake City" [draft report, p. 41]. The report, however, is silent on benefits *Pioneer* would confer on the *Zephyr*. For example, *Pioneer* cars will add capacity to the *Zephyr* over the segment where the trains are combined, and some of this capacity will be used by passengers local to *Zephyr* markets. That is, even if the through-cars sell out on the *Pioneer* segment (that is, west of Denver or Salt Lake City), only a small share of those passengers will travel to or from Chicago, leaving opportunities to sell the space to Chicago-Denver, Omaha-Galesburg, etc. passengers. In other words, the train the public recognizes as the *Zephyr* will have more capacity, handle more passengers and earn more revenues in markets the *Zephyr* serves today. Service-recovery opportunities will be greater as the bigger train means more useful redundancy if a car should develop a problem.

(In the long run, it would be ideal to run *Pioneer* as a separate train all the way to/from Chicago. This would permit a more attractive eastbound departure from Seattle and avoid a very long layover in Salt Lake City.)

Seattle crucial: We believe through service to Seattle is vital; it is not included in options 3 and 4.

Infrastructure costs: It should be obvious that UP's infrastructure numbers are the opening bid in a negotiating process. Indeed, the report refers at page 52 to "further analyses and negotiations." We urge Amtrak to point this out wherever possible so that these numbers do not needlessly discourage support for restoration.

Station costs generally should be borne by the communities served, although it would be good—if Amtrak gets a RIF loan for ADA work—to include ADA-specific work for stations on routes like the *Pioneer*. Careful reviews are needed for claims that station stops should vary from ones served in 1997.

Los Angeles option: When the *Pioneer* was discontinued, Amtrak also dropped service on a second branch of the *Zephyr*, the Chicago-Salt Lake City-Las Vegas-Los Angeles *Desert Wind*. An Amtrak

executive told our chairman at the time that this was the strongest of the routes dropped. Bureau of Transportation Statistics data suggest a strong travel market between Idaho/Utah and California/Nevada. A Seattle-Idaho-Los Angeles train would serve this market.

Denver-Wyoming-Salt Lake City-Seattle: We think the Cascadia Center has done enough homework to warrant a serious look at their proposed schedule, which involves two nights and one day. We agree that downtown Cheyenne should be served if any "Denver option" is chosen. However, we are concerned about some of the comments in their report, as well as issues they do not mention:

1. Their reference to "private operation of passenger trains" cites Sections 214, 216 and 217 of the Passenger Rail Investment and Improvement Act. In fact, the only private operator contemplated in Section 214 is the railroad that owns the tracks; we are not aware of Union Pacific interest in operating a *Pioneer* service. Section 216 refers only to "special trains." Section 217 refers to state-funded trains.
2. The claim that "trains compete meaningfully with airplanes only in short travel lanes" may be technically correct but in this context is misleading. While riding overnight trains, I have talked to many fellow passengers who had checked air fares before traveling.
3. Making an Ogden-Salt Lake City round-trip of course adds time to trips that transit this area, but would serve a large metro market, increase the public usefulness of the service and generate significant incremental revenue. .
4. Having no through cars to and from Chicago sacrifices a significant amount of revenue, though just how much is impossible to determine from the report's sketchy data.
5. Low cost per train-mile is not conclusive evidence that an option is best.
6. Introduction of single-level cars into territory exclusively used by Superliners (and Talgo) creates cost and perhaps logistical issues.
7. We do not agree that "Viewliners [single-level cars] would be available relatively soon" to run this service or that $100 million or more could be saved by use of existing rolling stock and refurbished cars. We would like to see a national equipment fleet large enough to run the entire national system plus additional routes, including *Pioneer*, but that fleet does not exist today. http://www.narprail.org/cms/index.php/resources/more/proposal_for_equipment/

National Association of Railroad Passengers www.narprail.org

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October 1, 2009

Mr. Joseph H. Boardman
Amtrak President and CEO
60 Massachusetts Avenue, NE
Washington, DC 20002

Dear Mr. Boardman,

I'm encouraged to see the draft report that Amtrak has released concerning reinstating the Amtrak Pioneer service between Chicago, Illinois, and Vancouver, British Columbia. I was part of a group of legislators who, believing that there was interest, and potential feasibility, called on Amtrak to expedite its review of reinstating this valuable service.

For two decades, the Pioneer carried passengers across America, showcasing a beautiful part of the country and providing an invaluable transportation option for travelers and residents along the route. Along some parts of the route, the Pioneer was the only major intercity transportation line to the rest of the country. My colleagues and I heard from residents along this route without bus service or airports. The Pioneer train would offer them a critical transportation connection. It would carry travelers through my state, and others, bringing economic activity to small communities.

Over the last several years—since the Pioneer service was discontinued—Amtrak has seen an increase in ridership, indicating that more and more people are choosing intercity passenger rail as a way to commute and to travel. The increased regional mobility that would be fostered by reinstating the Pioneer would drive economic activity, in a time we desperately need it, and by providing transportation options, this investment reflects the concern I share with my constituents about carbon pollution.

Clearly, Amtrak is right to identify that reinstating the Pioneer will require significant investment. I believe this is an investment worth making. Passenger rail is part of our history and our heritage, and America has a unique nostalgia for trains. Investments like these, however—that put people to work, increase mobility, and provide a critical transportation choice—are a core part of rebuilding and renewing America and will play a key role in moving America in the twenty-first century.

I am committed to working with Amtrak and with my colleagues in Congress to find a way to make this service financially viable.

Sincerely,

Earl Blumenauer
Member of Congress

Pocatello
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ROGER W. CHASE
Mayor

Pocatello City Council:
ROGER J. BRAY
RON FRASURE
GARY MOORE
EVA JOHNSON NYE
ROBERT RICHWAY
BRIAN T. UNDERWOOD

September 21, 2009

Joseph H. Boardman
President & Chief Executive Officer
Amtrak
60 Massachusetts Avenue, NE
Washington, DC 20002

Dear Mr. Boardman:

The City of Pocatello, Idaho strongly supports the return of Amtrak's Pioneer Line.

Residents in the greater Pocatello area are underserved by commercial air carriers. Restoration of rail service to our community will not only open up our community to additional transportation opportunities, but it will also make a tremendous difference to our economy and have a positive environmental impact for our region.

I recognize there are challenges that need to be overcome to restore this rail line, but we believe the line can be successful. On behalf of the citizens in our community, I encourage Amtrak to work with the Federal government to return the Pioneer Line to Pocatello.

Sincerely,

Roger W. Chase
Mayor

RWC/aln

cc:

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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Jan Drago
Seattle City Councilmember
Chair, Transportation Committee

September 30, 2009

Jonathan Hutchison
Government Affairs Director
Amtrak West
530 Water Street
Oakland, CA 94607

Dear Mr. Hutchison:

As chair of the Transportation Committee of the Seattle City Council, I want to lend my voice in support of restoring Amtrak's *Pioneer* train service to Seattle, thereby reopening service between the Seattle and the Rocky Mountain region via Denver.

The recently published draft of Amtrak's feasibility study proposes four scenarios for the train's restoration; two of those scenarios would make Seattle the train's western terminus.

The City of Seattle has long been committed to the support of environmentally-friendly travel. The City Council has enthusiastically supported the creation and expansion of Seattle's street car, light rail and commuter rail systems, and welcomes the recent substantial investment in Amtrak's Seattle maintenance facility.

The City has acquired King Street Station and has committed $26 million to restoring its magnificent architecture and making it the northwest hub of Amtrak's system. Exterior restoration has already begun with the installation of a new roof; the clocks are even working again! The initial phase of the interior restoration has already uncovered some of the beautiful architecture and design with a promise of more beauty to come. We anticipate joining in a public-private partnership of some sort in order to have the upper floors restored with restaurants, retail and office space.

Today King Street Station serves 26 weekday Sounder commuter trains and 14 daily Amtrak trains as well as weekend special Sounder trains to Mariners baseball and Seahawks football games. We look forward to seeing more Amtrak trains, including the Pioneer, in order to make the fullest use of all that the station offers.

You and I both know trains can substantially reduce transportation-generated carbon emissions. Trains facilitate travel for those who are unable to drive or fly. They connect Seattle with places that have no other public transportation link, or whose other

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transportation links are often broken by winter weather. Trains constitute an appealing alternative to the congested roads and airways in our region, and they certainly have played an integral part in Seattle's development as a world-class city.

A full range of long-distance train connections will play an important role in Seattle's future economic vitality and the reduction of Seattle's environmental footprint. Our city is ready to receive the Pioneer, and hopes that the current feasibility study will bring us one step closer to the day when it returns.

We fully support and would most happily welcome the return to Seattle of Amtrak's *Pioneer*.

Thank you for the opportunity to comment on the Pioneer route feasibility study.

Sincerely,

Jan Drago
Council Member
Chair, Transportation Committee

cc: U.S. Representative Jim McDermott
U.S. Senator Patty Murray
U.S. Senator Maria Cantwell

MIKE CRAPO
U.S. SENATOR
IDAHO

CO-CHAIRMAN, SENATE RENEWABLES AND ENERGY EFFICIENCY CAUCUS
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United States Senate
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September 30, 2009

Joseph H. Boardman
President and Chief Executive Officer
Amtrak
60 Massachusetts Avenue, NE
Washington, DC 20002

Dear Mr. Boardman:

The purpose of the Pioneer Train report required by Congress is to determine the costs and benefits of restoring a key corridor between the Midwest, the Intermountain States, and the Pacific Northwest. Unfortunately, the draft report appears to understate the ridership levels by using projections at a level nearly 30 percent below the historic high in 1992 and overstates the capital investment requirements and annual costs. Even under these questionable assumptions, it is important to note that in terms of total subsidy to routes, the Pioneer would be the 6th smallest out of sixteen.

The passenger rail experts I have been in contact with tell me that there are many more creative and less expensive ways to start and operate the Pioneer Train. I believe that the report needs to be reworked so that its assumptions can withstand scrutiny and comparison with the other fifteen long-distance trains that Amtrak operates. The goal for the study should be to develop a blueprint to reinstate the Pioneer Train at the lowest capital investment cost that supports safe and efficient operation and to quickly grow the ridership to a level that will bring a farebox recovery and the net cost per passenger mile to the median for Amtrak long-distance trains.

Benefits of Restoring the Pioneer Route to Idaho and Region :

In the past year, I have been contacted by hundreds of Idahoans who have written, called and emailed my office in support of reinstating the Pioneer Train across southern Idaho. In addition, several cities along the Pioneer route passed resolutions in support of reinstating the Pioneer Train. While nearly 80 percent of the responses were favorable, there are those concerned about the significant capital investment and ongoing operating subsidies needed to bring back and operate the Pioneer Train. I share those concerns.

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Twin Falls, ID 83301

We can all agree that reinstating the Pioneer Train has many positive benefits to include: connecting the Mountain West States to the national passenger rail system; adding travel options and increasing mobility for citizens; restoring a key corridor between the Midwest, the Intermountain States and the Pacific Northwest; enhancing economic and community development along the route; and providing a less fuel intensive and more environmentally sound transportation option.

These are important benefits, but they must be achieved at a reasonable and sustainable cost. I am fully aware of the need for public investment and ongoing support for key transportation infrastructure systems including highways, airports, seaports and railroads. While I applaud Amtrak and its contractor on this draft study, there are many unanswered questions, broad assumptions and rough cost estimates in the draft report that need additional work and analysis before Congress can be called on to make a decision on reinstating the Pioneer Train.

Questions with Ridership Projections:

The study projects the ridership at a level nearly 30 percent below the historic high in 1992 while the population growth in the states along the route has increased by 41 percent. Even taking into account increased direct flights between major cities along the route, this projection seems highly pessimistic. I would appreciate a written response explaining the ridership modeling and the assumptions used to obtain the estimates in the study.

The ridership numbers need to be recalculated with additional analysis on ways to increase ridership by considering alternate train schedules and different stopping points. For example, public/private partnerships for marketing the Pioneer Train should be considered to increase ridership through public awareness and coordinating with tour and transit bus companies. My office has received comments from bus companies interested in coordinating routes to serve the Pioneer Train. I urge you to review the comments provided by the Cascadia Center/ Pioneer Restoration Organization for more detail on this option.

Questions with Capital Investment Estimates:

Capital investment requirements must be reduced significantly to reasonable levels and a phased approach developed to facilitate funding. The capital investment estimates are excessive. Options to provide refurbished cars and engines for the Pioneer Train must be considered for the initial operation of the train. The Cascadia Center suggests that more than $100 million could be saved with this approach. I would like to have a written response outlining options and costs using existing rolling stock and refurbished cars for starting the Pioneer Train.

The costs for host railroad capital improvement are conjecture. The study states that "these figures are subject to significant uncertainty" and that they are based solely upon initial analysis by Union Pacific. It is understood that some costs are subject to negotiation with the host railroad, but a more thorough analysis should be completed with much more accurate cost estimates. In the completed study, Amtrak needs to reduce these costs to those upgrades that are truly needed for safe and efficient operation. I expect Amtrak to provide my office a written estimate of the minimum costs for host railroad capital improvements for safe and efficient operation.

Comparison with other Long-Distance Trains:

The Pioneer Train is an important element of a regional transportation system and a key component of a national system of passenger rail routes. The study should evaluate the Pioneer Train's costs and benefits relative to the other long-distance trains in the Amtrak system. Realistic and achievable target metrics should be developed for the operation of the Pioneer that allow for growth to serve one of the fastest growing areas of the nation.

Idahoans favor reinstating the Pioneer Train at a reasonable cost. I pledge to work with Amtrak to determine how to make this important intercity route feasible and sustainable and look forward to your responses to my questions and the completed study.

Sincerely,

Michael D. Crapo
United States Senator

cc: Jonathan Hutchison

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October 2, 2009

Joseph H. Boardman
President and Chief Executive Officer
Amtrak
60 Massachusetts Ave NE
Washington, DC 20002

Dear Mr. Boardman,

After reviewing the Pioneer Line report, it is apparent that the Pioneer has the potential to greatly benefit the state of Oregon by providing an alternative means of passenger transportation to a region that is currently only accessible by car, having already lost its commercial air service. However, the current report does not fully explore several important issues, thus preventing Congress from making an educated decision about the line. However, if some key questions are answered, I believe it will be evident that the Pioneer can be a great asset to Oregon and the nation.

After consulting with transportation experts and community leaders, I believe the report fails to look at several ways the service can be designed to better fit the needs of passengers. Improvements to the overall service will increase ridership and allow recovery of initial investment costs. In addition, I believe the capital costs associated with reinstating the Pioneer can be reduced. Furthermore, Amtrak should acquire unbiased cost projections for the necessary infrastructure improvements for passenger travel along the existing track.

If properly executed, the Pioneer Line will significantly enhance the transportation system of the Pacific Northwest. The proposed train would connect the Oregon cities of Ontario, Baker City, La Grande, Pendleton, Hood River, and The Dalles to the national rail system, giving residents travel options and increasing tourism to the region. Moreover, the Pioneer would allow Americans to travel in a more environmentally conscious manner. The goal of the Pioneer should be fostering economic growth and community development along the route, and improving travel options for citizens. We must keep these goals in mind while crafting this service.

The routes proposed by this report are designed to meet demands from outside the Northwest, rather than serve the needs of the region. The current schedule proposals are designed to coordinate with the California Zephyr at either Denver or Salt Lake City, and leave Oregon

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riders without the ability to choose between train times. For example, in Option 1 the only Pioneer stop in Pendleton would be at 3:04 AM. Clearly, a train stop in the middle of the night would do little to boost tourism or serve as an alternative to car travel. This problem could be rectified by offering a second train on an opposite schedule to provide riders with options. This would significantly increase ridership, and increase the productivity of existing Amtrak stations. I urge you to consult the attached letter from The Association of Oregon Rail and Transit Advocates (AORTA) for more on this issue.

Amtrak also needs to consider the potential positive effects of coordinating the Pioneer with local transit and tour buses. Feeder buses at key locations could enhance the ridership of the Pioneer and increase overall utilization of public transportation.

However, these service improvements will be useless unless Amtrak can decrease the proposed cost burden on the new Pioneer service. One reason for the high price estimate in the report is that system-wide expenses have been attributed solely to the Pioneer. Amtrak needs to separate equipment costs from operating costs. For example, costs for rolling stock should be a system-wide Amtrak expense—not a Pioneer operating cost.

Furthermore, the current projections for required infrastructure improvement have been provided solely by Union Pacific, which owns most of the track on the proposed route. It is important that price estimates are made by a trusted independent source. As Amtrak and Union Pacific work together to adapt the system to their mutual needs, updates should only be made if they are vital to preserving the safety and efficiency of the system.

I have attached comments from several citizens and groups that have an interest in the future of the Pioneer Line. I hope that you will review their comments as you prepare a final report.

Oregonians are excited about the Pioneer's potential. This report was an excellent starting point, and I hope that by working together we can design an affordable, utilitarian transportation service. I look forward to your response.

Sincerely,

Ron Wyden

Ron Wyden
United States Senator

Department of Transportation

State of Wyoming

Dave Freudenthal
Governor

John F. Cox
Director

October 1, 2009

Jonathan Hutchison
Government Affairs Director – West
Amtrak
530 Water Street; 5th Floor
Oakland, CA 94607

Dear Mr. Hutchison:

Thank you for your recent submittal of Amtrak's *Pioneer* Route Study Report. As you know, interest in intercity passenger rail service has grown considerably in the past several years in our state. A viable passenger rail system providing such an alternative remains a fundamental transportation need for Wyoming.

As illustrated in your report, the economic and social benefits associated with the reestablishment of the *Pioneer* via the Overland Route would be significant. The citizens of our state would benefit from a transportation alternative that would provide a more fuel efficient, safer, distraction-free and environmentally friendly mode of travel. We acknowledge that both the capital and direct operating costs for such a system are significant and will require on-going discussions with other state, railroad, and Congressional representatives.

We look forward to reviewing the final report after it is presented to Congress next month, and our staff is prepared to assist on any recommendations that Amtrak determines as a result of the report.

Sincerely,

B. Patrick Collins

B. Patrick Collins, P.E.
Assistant Chief Engineer
Engineering and Planning

cc: John F. Cox, Director, WYDOT

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