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North Coast Hiawatha Passenger Rail Study

P.R.I.I.A. Section 224
October 16, 2009

P.R.I.I.A. Section 224
Amtrak North Coast Hiawatha Passenger Rail Study
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I. EXECUTIVE SUMMARY

A. Background

Enacted into law on October 16, 2008, the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law 110-432) reauthorizes the nation's intercity passenger rail provider, Amtrak. PRIIA also establishes new programs and policies to strengthen the U.S. intercity passenger rail system.

Section 224 of PRIIA requires Amtrak to undertake studies of reinstating the *North Coast Hiawatha* route, and of reinstating or expanding service, or adding stops, on several other routes. These studies are to be submitted to Congress within one year after PRIIA's October 16, 2008 enactment.

This report fulfills the requirement of Section 224 (a) (2), which directs Amtrak to conduct a study of:

> *"The* North Coast Hiawatha Route *between Chicago and Seattle, through southern Montana, which was operated by Amtrak until 1979, to determine whether to reinstate passenger rail service along the route or along segments of the route, provided that such service will not negatively impact existing Amtrak routes. . ."*

B. Prior Amtrak Service

In June 1971, Amtrak began operating a tri-weekly section of the Chicago to Seattle *Empire Builder* over the former Northern Pacific Railroad line, then owned by the Burlington Northern Railroad (BN), between Minneapolis/St. Paul, Minnesota and Spokane, Washington via southern Montana. Later, this service was given the name *North Coast Hiawatha* and became a separate Chicago-to-Seattle train operating on a variety of schedules on either a daily or tri-weekly basis.

The *North Coast Hiawatha* was discontinued on October 6, 1979. At that time, Amtrak terminated service through southern Montana and North Dakota and shifted the *Empire Builder* to BN's Cascade Tunnel route between Spokane and Seattle, eliminating service at three communities on the Stampede Pass route between Pasco, Washington and Seattle. While northern Montana is still served by Amtrak's *Empire Builder*, the southern part of the state and the central Washington communities on the Stampede Pass route have not seen Amtrak service since 1979.

C. Changes in Rail Operations

Since the last *North Coast Hiawatha* operated between Chicago and Seattle 30 years ago, railroad operations on the route over it traveled have changed significantly. Among the changes are:

1. Commuter train traffic on the portion of the route between Chicago and its northern suburbs has grown, as has the number of Amtrak trains operating between Chicago and Milwaukee, Wisconsin.

2. Unit coal train shipments from the Powder River Basin in Wyoming, which join the route in Southern Montana and travel both east and west, have increased enormously. Unit grain train movements have grown as well.

3. The Montana Rail Link (MRL) has taken a long-term lease from BNSF Railway (BNSF) of the Jones Junction, Montana to Sandpoint, Idaho segment of the route, and handles a large volume of run-through trains from BNSF.

4. Prior to its discontinuance in 1979, the North Coast Hiawatha operated via Butte and Deer Lodge, Montana. A portion of this route is no longer in service, resulting in the proposed new routing through Helena, Montana.

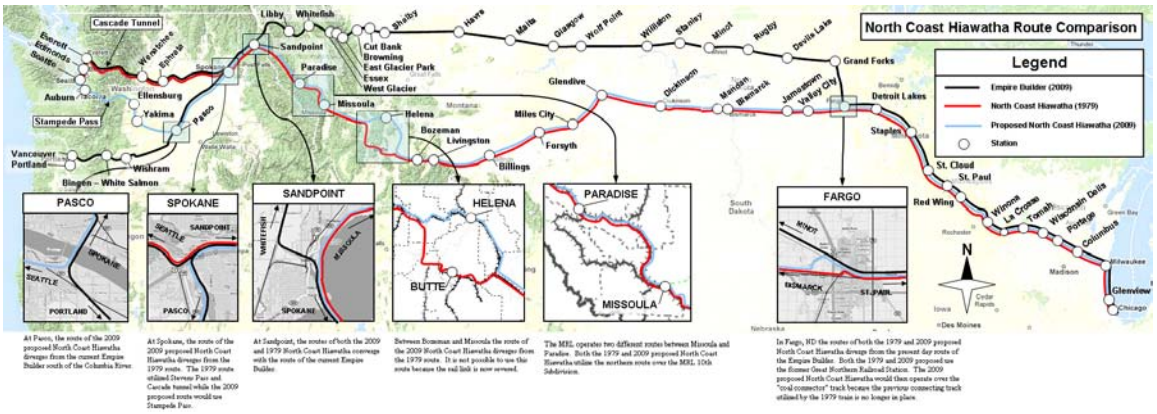
5. Freight train operations on the *North Coast Hiawatha*'s former Cascade Tunnel route west of Spokane have grown significantly, and the number of trains that can be operated via that route is limited by the time required to clear (flush) the Cascade Tunnel of diesel exhaust emissions from the locomotives of existing trains. Restored service would therefore have to operate via the slower Stampede Pass route between Pasco and Auburn, Washington.

6. Commuter train service has been initiated between Auburn and Seattle, and the number of commuter and Amtrak trains on this segment continues to grow.

The combination of these changes results in a somewhat different route, with a longer overall proposed train schedule, than when the *North Coast Hiawatha* last operated in 1979, and triggers a need for investments for increased rail line capacity to accommodate restored Amtrak service.

D. Proposed Route

The following map, a larger version of which appears in Exhibit 1, depicts both the proposed route of the *North Coast Hiawatha* and the route over which the train last operated in October of 1979.



The proposed route generally follows the route over which the North Coast Hiawatha previously operated, as outlined below:

1. Chicago, Illinois - Fargo, North Dakota (658 miles)

   The North Coast Hiawatha would follow the 1979 route – which is also the route of Amtrak's Empire Builder – over rail lines owned by Metra, CP Rail (CP) and BNSF.

2. Fargo, North Dakota - Sandpoint, Idaho (1178 miles)

With one exception, the train would follow the 1979 route through southern North Dakota and southern Montana, restoring service to a line Amtrak has not served since the North Coast Hiawatha's discontinuance. It would operate over rail lines operated by BNSF and MRL and would pass through Livingston, Montana, which is 54 miles from the north entrance to Yellowstone National Park. On the 124-mile segment between Logan and Garrison, Montana, the *North Coast Hiawatha* would operate via the state capital of Helena because a portion of the former route via Butte and Deer Lodge, Montana is no longer in service.

3. Sandpoint, Idaho - Spokane, Washington (68 miles)

   The train would follow the 1979 route, which is owned by BNSF and currently served by Amtrak's *Empire Builder*.

4. Spokane, Washington - Seattle, Washington (396 miles)

   The former *North Coast Hiawatha* operated between Spokane and Seattle via the shorter Cascade Tunnel route which Amtrak's *Empire Builder* has used since the *North Coast Hiawatha*'s 1979 discontinuance. Because freight volume through the Cascade Tunnel is very near capacity, the proposed route would operate via BNSF

over the current route of the Portland section of Amtrak's *Empire Builder* between Spokane and Pasco, Washington. From Pasco to Auburn, Washington, the North Coast Hiawatha would operate via BNSF's Stampede Pass route (which Amtrak has not served since 1979), before joining BNSF's Portland-Seattle line (the route of Amtrak's *Cascades* trains) at Auburn for the final 21 miles into Seattle.

E. Operating Plan

This report assumes that the *North Coast Hiawatha* would operate as a separate, daily train between Chicago and Seattle, providing a second frequency on the Chicago-St. Paul-Fargo, North Dakota portion of the route already served by the *Empire Builder*. The projected consist of each train would be two or three diesel locomotives; a baggage car; and eight bi-level Superliner cars: a transition sleeping car, two sleeping cars, three coaches, a dining car and a lounge car.

F. Ridership and Financial Performance

Annual projected ridership on the proposed North Coast Hiawatha service is 359,800 passengers, and projected annual revenue is approximately $43 million. These figures include 65,800 riders who are projected to ride the restored North Coast Hiawatha service instead of the current *Empire Builder* route, resulting in an estimated $8 million reduction in *Empire Builder* annual revenue.

Projected direct operating costs are $73.1 million, which would produce a direct operating loss of $31.1 million for the North Coast Hiawatha route and would increase Amtrak's direct operating loss by $39.1 million annually (when lost revenues on the *Empire Builder* route are taken into account). Due to high projected ridership, the *North Coast Hiawatha*'s projected farebox recovery – the percentage of operating costs covered by ticket and food and beverage revenues – is 58%, which is higher than the average farebox recovery (51.8% in FY2008) of Amtrak's current long distance services.

G. Implementation/Capital Costs

The single largest cost to commence operating the restored North Coast Hiawatha is the cost of upgrading existing track structure, signaling, and grade crossing warning devices. Host railroad carriers have provided preliminary cost estimates covering the capital investments they consider necessary for restored *North Coast Hiawatha* service that total $619.8 million. Further studies and negotiations between Amtrak and host railroads would be required to determine an appropriate level of infrastructure investments. In addition, installation of Positive Train Control (PTC) on portions of the route where it would be required for reinstitution of passenger service is preliminarily projected to cost approximately $60 million.

The second largest cost to restore the *North Coast Hiawatha* will be for acquisition of the necessary locomotives and passenger cars. A projected total of up to 18 locomotives and 54 passenger cars would be required (not including spare equipment to accommodate maintenance and safety requirements), with an estimated purchase cost of $330 million. Most or all of this equipment would have to be purchased new, as Amtrak's current long-distance equipment fleet is insufficient to meet even existing passenger demand.

Costs to restore or replace the stations formerly used by the *North Coast Hiawatha*, and to bring them into compliance with the Americans with Disabilities Act (ADA), are estimated at approximately $17.6 million.

In order to commence service on the restored *North Coast Hiawatha*, approximately 269 new Amtrak employees would be needed to fill various positions required for the new operation. Recruiting, hiring, and training these new employees, and qualifying engineers and conductors on the route as required by federal safety regulations, would add approximately $15.8 million in one-time costs.

Projected capital and implementation costs total $1.043 billion, a figure that is subject to significant uncertainty.

H. Financial Summary and Key Metrics

Below is a summary of the key financial and performance metrics for the restored *North Coast Hiawatha*. A more detailed summary can be found in Exhibit 2.

Projected Performance (dollar figures in Millions)	
Capital/Implementation Costs	$1,043.2
Annual Passenger Revenue	$43.0
Direct Costs	$74.1
Direct Operating Contribution/Loss	$31.1
Farebox Recovery	58.0%
Total Annual Ridership	359,800
Passenger Miles/Train Mile	153.1

I. Public Benefits

Amtrak anticipates that restoring passenger service on the *North Coast Hiawatha* route would produce net economic benefits. Direct benefits would flow from the jobs created, primarily in construction, manufacturing and material supply, during the duration of the infrastructure and station capital investment projects, and from the creation of approxi-

mately 269 permanent Amtrak jobs. Capital expenditures of approximately $330 million for equipment would create additional jobs. Operation of the service would directly benefit local economies, and would also generate ongoing spillover economic benefits.

Restoration of passenger rail service on the route would produce mobility benefits. Airline service is limited or non-existent in most of the communities along the route, particularly for passengers traveling within North Dakota and Montana. Restoration of the *North Coast Hiawatha* would provide a passenger rail option that does not exist today, as well a creating a safe and environmentally-friendly travel option for the three million annual visitors to Yellowstone National Park.

J. Timeline

Implementation of service on the *North Coast Hiawatha* route would require a minimum of 48-60 months lead time from the date on which funding is made available. This is due to the time required to:

(1) Negotiate and execute all necessary agreements;
(2) Complete necessary infrastructure improvements;
(3) Purchase needed locomotives and passenger cars;
(4) Restore/replace stations and make them ADA compliant; and
(5) Hire, train, and qualify locomotive engineers and conductors, on-board service personnel, and other necessary employees

K. Conclusion and Next Steps

Restoration of the *North Coast Hiawatha* would generate significant ridership, enhance Amtrak's route network, and produce public benefits. However, it would require large expenditures for initial capital costs and ongoing operating costs not covered by farebox 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 long-distance train service beyond current levels. Amtrak supports strengthening and improving the national network of long-distance trains, but would need significant additional funding to expand operations, including the restoration of the *North Coast Hiawatha*.

Therefore, Amtrak recommends that federal and state policymakers determine if intercity passenger rail service along the former *North Coast Hiawatha* route should be reintroduced and, if so, that they 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 service.

II. INTRODUCTION

A. Purpose of the Report

Enacted into law on October 16, 2008, the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law 110-432) reauthorizes the nation's intercity passenger rail provider, Amtrak. PRIIA seeks to strengthen the U.S. intercity passenger rail system through the development of new policies, the authorization of operating and capital support for Amtrak, and sustained capital investment through new federal grant programs, administered by the United States Department of Transportation (U.S. DOT) through the Federal Railroad Administration (FRA), that provide funding for inter-city passenger rail improvements.

Additionally, PRIIA requires Amtrak to undertake a number of studies and reports relating to various intercity passenger rail services. Section 224 of PRIIA requires Amtrak to complete a study to determine whether to reinstate passenger rail service along the restored *North Coast Hiawatha* route or along segments of the route, provided that such service will not negatively impact existing Amtrak routes.

In developing the report, Amtrak consulted with host railroads Metra, CP, BNSF and MRL who own the trackage on the various route segments. In addition, Amtrak held several outreach meetings with state and elected officials.

B. Background and Historical Data

A brief history of the operation of the former *North Coast Hiawatha* is contained in the following table.

A brief history of intercity passenger operations on the former *North Coast Hiawatha* route.

Date Range	Event
Prior to 1970	Northern Pacific Railway (NP) operates the Chicago-Seattle *North Coast Limited,* and the St. Paul-Seattle *Mainstreeter,* via the southern portions of North Dakota and Montana and Stampede Pass in Washington.
March 1970	NP merges with several other railroads to form Burlington Northern (BN), which continues to operate *North Coast Limited* and *Mainstreeter.*
May 1, 1971	NP route not included in initial U.S DOT-designated Amtrak route network; *North Coast Limited* and *Mainstreeter* discontinued.
June 5, 1971	Amtrak initiates tri-weekly service over the *North Coast Limited* route from Minneapolis, MN to Spokane, WA. The train ran combined with Amtrak's *Empire Builder* on the eastern and western ends of the route. The train is later named the *North Coast Hiawatha.*
November, 1971	The *North Coast Hiawatha* initiates separate operations from the *Empire Builder* between Chicago and Spokane. When not operating the tri-weekly Chicago - Spokane schedule, the train travels between Chicago and Minneapolis.
December 1972	During the holiday period, the *North Coast Hiawatha* operates on a daily schedule between Chicago and Spokane.
June 1973	The *North Coast Hiawatha* separates operations completely from the *Empire Builder*. Instead of taking the traditional NP route over Stampede Pass, the train is shifted to the shorter route over Stevens Pass and through Cascade Tunnel.
Summer of 1974, 1975, 1976	The *North Coast Hiawatha* operates on a daily schedule between Chicago and Seattle.
Fall 1976	The *North Coast Hiawatha* adopts a 45 hour 30 minute schedule between Chicago and Seattle.
Spring 1977	Schedule is lengthened to 52 hours 30 minutes due to speed restrictions on SDP-40 locomotives following a series of derailments.
September 1977	*Empire Builder* cut to quad-weekly service. Quad-weekly *North Coast Hiawatha* between Chicago and St. Paul discontinued.
November 1977	*North Coast Hiawatha* schedule is shortened to 46 hours 40 minutes.
October 1978	Amtrak Improvement Act of 1978 (Pub. Law No. 95-421) directs the U.S. DOT to reexamine Amtrak's route system and submit a report with a recommended route system that Amtrak would be required to implement unless disapproved by Congress.
January 1979	U.S. DOT's report recommends that a number of Amtrak routes, including the *North Coast Hiawatha*, be discontinued to reduce Amtrak's operating losses.
October 6, 1979	*North Coast Hiawatha* makes its last trip.

III. ROUTE DESCRIPTION

A. Route Characteristics

A general description of the proposed route of the restored *North Coast Hiawatha* follows:

1. Illinois - Wisconsin

   The 2,300 mile *North Coast Hiawatha* route originates in Chicago, America's third largest city at Amtrak-owned Chicago Union Station. It heads north on the Metra-owned rail line between Chicago and Rondout, Illinois, stopping in the suburban community of Glenview before joining CP-owned trackage at Rondout. After passing Chicago's north suburbs, the route continues through farmland to Milwaukee. Turning west from Lake Michigan, the route heads toward the Mississippi River, passing through the Wisconsin cities of Columbus, Portage, Wisconsin Dells, Tomah, and La Crosse. After reaching Portage on the Wisconsin River, it crosses the Mississippi River at Wisconsin Dells, passing through the sandstone formations of the Wisconsin River Gorge. From there, the route passes Tomah, and continues along the banks of the Mississippi and the majestic Mississippi River bluffs. Between 2000 and 2007, the total population of the counties served by the route on the Illinois – Wisconsin segment has remained relatively constant, at approximately 6,640,000.

2. Minnesota

   After passing through La Crosse, the route runs across, and then parallels, the Mississippi River, traveling through Winona and Red Wing, Minnesota on the way to Minneapolis–St. Paul, the 13th most populous metropolitan area in the U.S. After stopping at Amtrak's Midway Station in St. Paul, located on trackage owned by the Minnesota Commercial Railway, the route joins BNSF's main line to the Pacific Northwest. It continues through Staples and Detroit Lakes, passing numerous nearby lakes including Lake Detroit. The County population on the Minnesota segment has increased by 1.3% (to 1,947,557) from 2000 to 2007.

3. North Dakota

   In North Dakota, the *North Coast Hiawatha* route splits from the route of the Amtrak *Empire Builder* at Fargo, the most populous city in the state. Continuing west over rolling plains, the route travels through the southern part of North Dakota and on to Bismarck, North Dakota's state capital and second largest city. After Bismarck, it passes over the Missouri River and into Mandan and then Dickinson, the last stop in North Dakota. County population on the North Dakota segment has increased 4.2% from 2000 to 2007, to a current 185,686.

4. Montana

   The route crosses southern Montana, making a first stop in Glendive near Makoshika State Park, and continues westward through the towns of Miles City and Forsyth and into Montana's largest city, Billings. It then heads west to Livingston, which serves as the State's gateway to Yellowstone National Park. The park, whose north entrance is situated 54 miles south of Livingston, features dramatic lakes, canyons, rivers, mountain ranges, and geysers, and attracts approximately three million visitors each year. Scenery along this segment is stunning and features numerous mountain ranges, high plains, and rivers. The route continues to Bozeman, the fastest growing city in the state, then on to Helena, the state capital. It crosses the Continental Divide at Blossburg, Montana at a 5,400 foot elevation near the 3,900-foot-long Mullan Tunnel. County populations on the Montana segment have increased 11% from 2000 to 2007 to a current 460,348.

5. Idaho - Washington

   After passing through Paradise, Montana, the route crosses the Idaho state line and continues to Sandpoint on the shores of Lake Pend Oreille, where it rejoins the route of Amtrak's *Empire Builder*. Crossing into Washington, the route continues to Spokane. After passing through Pasco, the route splits from the *Empire Builder* route to Portland and heads northwest via BNSF's Stampede Pass line to Yakima, which is located near the Yakima Indian Reservation. It then passes through Ellensburg, crossing the Cascades at scenic Stampede Pass. The Pass features spectacular scenery characterized by rich evergreen forests and dramatic vistas of snow-capped mountains. After negotiating the Pass, the route approaches Seattle from the south, joining BNSF's Portland-Seattle line at Auburn, an outlying community in the Seattle-Tacoma area with commuter rail links to Seattle. The County population on the Idaho – Washington segment has increased 8.5% from 2000 to 2007, to a current level of 3,470,856.

B. Other Transportation Modes Along Route

Most communities on the *North Coast Hiawatha* route are served by interstate highways and have intercity bus and/or airline service. However, public transportation alternatives are limited: airline service to on-route communities is expensive and in many cases circuitous; bus travel between many points requires one or more transfers; and travel by all non-rail modes is impaired by the often severe winter weather conditions along the route.

1. Automobiles

   With few exceptions, the *North Coast Hiawatha* route is paralleled by interstate highways, primarily Interstates 90 and 94. Highway distances are generally

comparable to distances via the rail route. Significant portions of the parallel inter state highway segments in North Dakota and Montana have 75 mph speed limits, which gives highway travel a time advantage over travel by train that, particularly for longer trips, can be offset by the need to make rest stops. Long driving distances and the often severe winter weather in the Northern Plains Region the route traverses present challenges to driving, particularly for older or mobility-limited travelers.

2. Bus/Motor Coach

   While most of the proposed *North Coast Hiawatha* route between Fargo and Seattle has parallel intercity bus service, there are gaps where bus routes diverge from the rail line. Through-bus service along the route is not available, which means that longer trips generally require one or more bus changes. During winter months, the reliability and availability of bus service is impacted by weather conditions.

3. Airline

   A restored North Coast Hiawatha would serve 16 communities that do not have Amtrak service today (not including East Auburn, Washington, a suburb of Seat tle). Six of these communities – Valley City and Mandan in North Dakota; Forsyth, Livingston and Paradise, Montana; and Ellensburg, Washington – do not have scheduled airline service. Four others have only federally-subsidized Essential Air Service provided by small aircraft.

   The largest Montana and North Dakota cities along the route have regional jet or mid-sized plane service to a major airline hub such as Minneapolis or Seattle. How ever, limited airline competition in these two states results in high airfares, as illustrated by the fact that it is much more expensive to fly from Chicago to Bismarck, North Dakota than from Chicago to Seattle. Moreover, no direct airline service is available between North Dakota/Montana cities on the North Coast Hiawatha route. A traveler wishing to fly from Bismarck to Billings, a 436-mile trip by rail, must take a nearly 1,000 mile, two-plane, journey via Denver.

IV. EXISTING RAILROAD OPERATIONS

A Route Segment Descriptions

Following is a brief outline of host railroad operations by segment on the proposed route of the North Coast Hiawatha.

1. Chicago, Illinois – St. Paul, Minnesota (417 miles)
   Host railroads: Metra/CP

   This segment includes a portion of Chicago's heavily traveled (60 commuter trains per weekday) Metra line to Fox Lake, Illinois, as well as Amtrak's Chicago to Milwaukee *Hiawatha* service (14 trains per day) and is the route of the daily Chicago to Seattle *Empire Builder*.

   From Chicago to Milwaukee, the line is double track. The line from Milwaukee to St. Paul is a mix of double and single track with sidings. The route is almost exclusively controlled by Centralized Traffic Control (CTC) signaling. CTC is a control system whereby a dispatcher in a remote location directs trains over track segments, primarily via wayside signals and switches for passing sidings that the dispatcher controls.

2. St. Paul, Minnesota – Fargo, North Dakota (241 miles)
   Host railroad: BNSF

   The current *Empire Builder* service operates over this segment, and Northstar commuter rail service is scheduled to begin later this year over the 38 miles between Minneapolis Junction and Big Lake, Minnesota. The route is a mix of Automated Block Signals (ABS) and CTC signaling. With ABS, which provides less capacity per track mile than CTC, trains operate pursuant to train orders given by the dispatcher, and switches are operated by train crews.

   The maximum passenger train speed is 79 mph, except on double track ABS segments where the maximum passenger speed is 59 mph for any train moving against the current of traffic.

   The present day Empire Builder stops at St. Paul's Midway Station, although there are proposals to restore passenger rail service to the St. Paul Union Depot. Freight traffic volumes vary over the segment. Heavy coal train volumes build as it heads west, reaching as many as 62 trains per day by Fargo. This segment is mostly dou ble track, but there are two single track segments between St. Anthony, Minne sota and Fargo.

3. Fargo, North Dakota – Jones Junction, Montana (615 miles)
   Host railroad: BNSF

   At Fargo, the *North Coast Hiawatha* route diverges from the current *Empire Builder* route and continues west across southern North Dakota. Most of this segment is single track equipped with ABS signaling. Freight traffic volumes average between 19 and 21 trains per day; because of tonnage and grades, additional locomotives (Helper Engines) are added to coal trains along the route to enable these heavy trains to travel uphill.

   The east and westbound *North Coast Hiawatha* trains will need to meet on this segment. Given that it is single track, this means that one train will have to operate via one of the passing sidings located along the line that enable trains operating in opposite directions to pass each other. The *North Coast Hiawatha* will also have to overtake a number of slower freight trains. Given the volume of freight traffic and the fact that heavy coal trains travel more slowly than passenger trains, particularly on steep grades, each *North Coast Hiawatha* train would need to overtake an average of six or more freight trains per day in each direction between Fargo and Jones Junction.

   Another issue that would have to be addressed on this segment is the Fargo station location. Currently, the station stop for the *Empire Builder* trains is on the Prosper Subdivision, which is west of the point where the *Empire Builder* and *North Coast Hiawatha* routes diverge. Getting from the current station location back onto the line towards Jones Junction would require use of the BNSF "coal connector" track, on which maximum speed is currently only 10 mph.

4. Jones Junction, Montana – Helena, Montana (254 miles)
   Host railroad: MRL

   Although grain and other products move over this segment, traffic is predominately unit coal trains originating in the Powder River Basin and destined to west coast ports for export that are received daily from the BNSF. Total train volume averages 10 to 12 trains per day; operations on this single-track segment are controlled primarily by CTC.

   Operations must be tightly controlled through the major yard at Laurel, where MRL's east-west mainline intersects with a BNSF north-south line; all freight trains stop to change crews; and many MRL trains pick up or set off cars. Frequently, several trains wait for handling outside the yard, occupying main line tracks and preventing other trains from passing. The Laurel yard currently does not have a

signaled main line: all trains traveling through the yard must use a non-signaled yard track.

5. Helena, Montana – Sandpoint, Idaho (309 miles)
   Host railroad: MRL

   Traffic volume on this segment is heaviest between Missoula and De Smet, Montana at about 15-16 trains per day, and drops to only nine to ten trains per day between Thompson Falls, Montana and Sandpoint. Elevation reaches 5,400 feet at the Continental Divide, with steep grades for trains traveling in both directions. The route is controlled primarily by CTC, with the exception of the segment between De Smet and Paradise, Montana where control is by Track Warrant Control (TWC). TWC is a method of controlling train movement under which a dispatcher authorizes a train to exclusively occupy track within specified limits in a territory designated by the timetable.

   When the *North Coast Hiawatha* last operated, it traveled between Logan and Garrison, Montana via a line that passed through Butte and Deer Lodge. A portion of that line has subsequently been taken out of service, meaning that the *North Coast Hiawatha* would have to have to operate via Helena, the Montana state capitol.

6. Sandpoint, Idaho – Spokane, Washington (68 miles)
   Host railroad: BNSF

   At Sandpoint, the proposed route of the *North Coast Hiawatha* rejoins the route of the current *Empire Builder*. The line is almost all CTC signaled double track, with a few miles of ABS and a 13-mile single track segment between Athol and Rathdrum, Idaho. Maximum passenger speed is 79 mph.

   Train volumes range from approximately 40 to 45 trains per day. Coal trains and a variety of mixed freight trains, as well as Amtrak's daily *Empire Builder*, operate over this segment.

7. Spokane, Washington – Pasco, Washington (146 miles)
   Host railroad: BNSF

   The Spokane-Portland section of the *Empire Builder* operates over this CTC-equipped, mostly single track segment. Maximum passenger speed is 79 mph, and traffic volume is approximately 29 trains per day.

   Under the proposed schedules, the *North Coast Hiawathas* would meet each other on the single track segment between Babb and Fishtrap, Washington.

8. Pasco, Washington – Seattle, Washington (241 miles)
   Host railroad: BNSF

   The Stampede Pass route from Pasco to Auburn, Washington is mostly TWC, with islands of CTC and a few miles of ABS. The single track segments between sidings are dark territory (areas without signals). Maximum speed is 49 mph.

   The eastbound and westbound *North Coast Hiawatha* trains would meet on this segment under the proposed schedules. The Stampede Pass route currently has very few freight trains – BNSF has recently removed through freight traffic from the line – which means fewer meets but also longer spacing between sidings, limiting the number of locations where trains can pass each other.

   The last 21 miles of the *North Coast Hiawatha* route from Auburn to Seattle is on BNSF's Portland-Seattle main line. BNSF is currently in the midst of determining improvements needed for various increments of additional Sound Transit commuter trains (operating Tacoma - Seattle), and has recently completed a capacity investment study for additional Amtrak *Cascades* frequencies between Portland and Seattle. When, or how many of, these additional passenger train frequencies will be implemented is not known.

B. Route Segment Details

The following table summarizes selected physical characteristics of the proposed *North Coast Hiawatha* route.

Route Segment Details

General			Segment		Method of Control (miles)				Track		Trains (trains per day)	
Description	Subdivision Name	Railroad	Length (miles)	Max Speed (MPH)	CTC	ABS	TWC	OCS	Sidings N^{o}	Double (miles)	Freight	Amtrak and Commuter
Chicago - Rondout	Milwaukee North Line	Metra	32.0	79.0	34					32		76
Rondout - Milwaukee	C&M Sub	Canadian Pacific	54.0	79.0	52.1	1.9	1.9			54	20	16
Milwaukee - St. Paul	River Sub, Watertown Sub, Tomah Sub	Canadian Pacific	331.0	79.0	331				20	76.4	18	2
St. Paul - Fargo	Midway Sub, Staples Sub, KO Sub	BNSF	241.0	79.0	140	113	113	8.6	4	210	12-17[1], 23-35[2], 49-60[3]	2
Fargo - Mandan	KO Sub, Jamestown Sub	BNSF	199.0	60.0	18	172	166	4.4	10	38	19	
Mandan - Glendive	Dickinson Sub	BNSF	205.0	60.0		203	205		19		19-21	
Glendive - Jones Jct	Forsyth Sub	BNSF	210.0	60.0	29	181	123		14		19-21	
Jones Jct - Spurling	1st Sub	Montana Rail Link	33.6	60.0	17.1	13.9	13.9		3	20	10-16	
Spurling - Helena	2nd Sub	Montana Rail Link	220.0	60.0	220				23		10-12	
Helena - DeSmet	3rd Sub	Montana Rail Link	126.0	60.0	123.8	1.6			11	8.9	10-16	
DeSmet - Paradise	10th Sub	Montana Rail Link	64.2	49.0			64.2		4		13-14	
Paradise - Sandpoint	4th Sub	Montana Rail Link	119.0	60.0	119				13		9-11	
Sandpoint - Spokane	Kootenai River Sub	BNSF	68.5	79.0	63.3	5.2		5.2	1	50.3	38-43	2
Spokane - Pasco	Spokane Sub, Lakeside Sub	BNSF	145.6	79.0	139	6.5		1.1	11	23.9	27	2
Pasco - Auburn	Yakima Valley Sub, Stampede Sub	BNSF	229.0	49.0	17.9	1.9	210		8	4.2	2-3	
Auburn - Seattle	Seattle Sub	BNSF	21.6	79.0	21.6					21.6	10-28	28
		Total Mileage:	2300		1326	700	897	19		539		

[1] Midway Sub [2] Staples Sub [3] KO Sub

V. STATIONS

A. The *North Coast Hiawatha* Stations

When the *North Coast Hiawatha* was discontinued in October 1979, and the *Empire Builder* was rerouted via the Cascade Tunnel route between Spokane and Seattle, Amtrak service was eliminated at 18 stations. Fifteen of these stations in southern North Dakota and Montana had been served exclusively by the *North Coast Hiawatha*, and the remaining three stations were on the Stampede Pass route in central Washington that the *Empire Builder* no longer served. The proposed route of the reinstated *North Coast Hiawatha* would pass through the communities in which 16 of these stations were located. It would also operate via Helena, Montana (instead of Butte and Deer Lodge, Montana, which are on the now partially out-of-service portion of the former *North Coast Hiawatha* route). These 17 communities, termed the "potentially reinstated stations", are listed below.

Potentially Reinstated North Coast Hiawatha Stations
Valley City, ND
Jamestown, ND
Bismarck, ND
Mandan, ND
Dickinson, ND
Glendive, MT
Miles City, MT
Forsyth, MT
Billings, MT
Livingston, MT
Bozeman, MT
Helena,MT
Missoula, MT
Paradise, MT
Yakima, WA
Ellensburg, WA
East Auburn, WA

The potentially reinstated stations are presented in this report for illustrative purposes only. Whether a reinstated North Coast Hiawatha would stop in all of these communities, or would serve other communities, has not been determined. As many of the potentially reinstated station buildings no longer exist, are used for freight railroad purposes, or

have been sold or leased to private entities for non-railroad purposes (e.g., restaurants, museums, retail shops, etc.), this report also does not intend to imply that the particular station facilities formerly utilized by the *North Coast Hiawatha* would be used as station stops if the train is reinstated and serves the communities in which they are located.

B. Station Restoration Requirements

Whether Amtrak uses the existing potentially reinstated station structures or new ones, it must ensure that they are in a state of good repair and are compliant with the Americans with Disabilities Act of 1990 (ADA) 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 ensure that the stations it serves are equipped 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 (ADA)*

   Amtrak strives to ensure that the rail stations it serves are in a state of good repair and 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)) (the "ADA"). In February of 2009, Amtrak submitted to Congress "A Report on Accessibility and Compliance with the Americans with Disabilities Act of 1990," (the "Stations ADA Report") that details Amtrak's plan for making the 481 stations Amtrak currently serves compliant with the ADA. However, the Stations ADA Report does not include restoration assessments and development plans for any of the potentially reinstated stations or any alternative stations that might be added in their place. This discussion, therefore, will focus on the improvements necessary to reinstate service 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 new stations built by others, all stations will likely be deemed "new stations" for purposes of the ADA. As such, Amtrak cannot serve them unless and until they are made fully ADA compliant. Accessibility can be achieved through the use of wheelchair lifts where applicable. Preliminary research indicates that the buildings that once served as the *North Coast Hiawatha* stations and the land on which they sit are owned in most instances by either a freight railroad or a private developer. Nevertheless, some

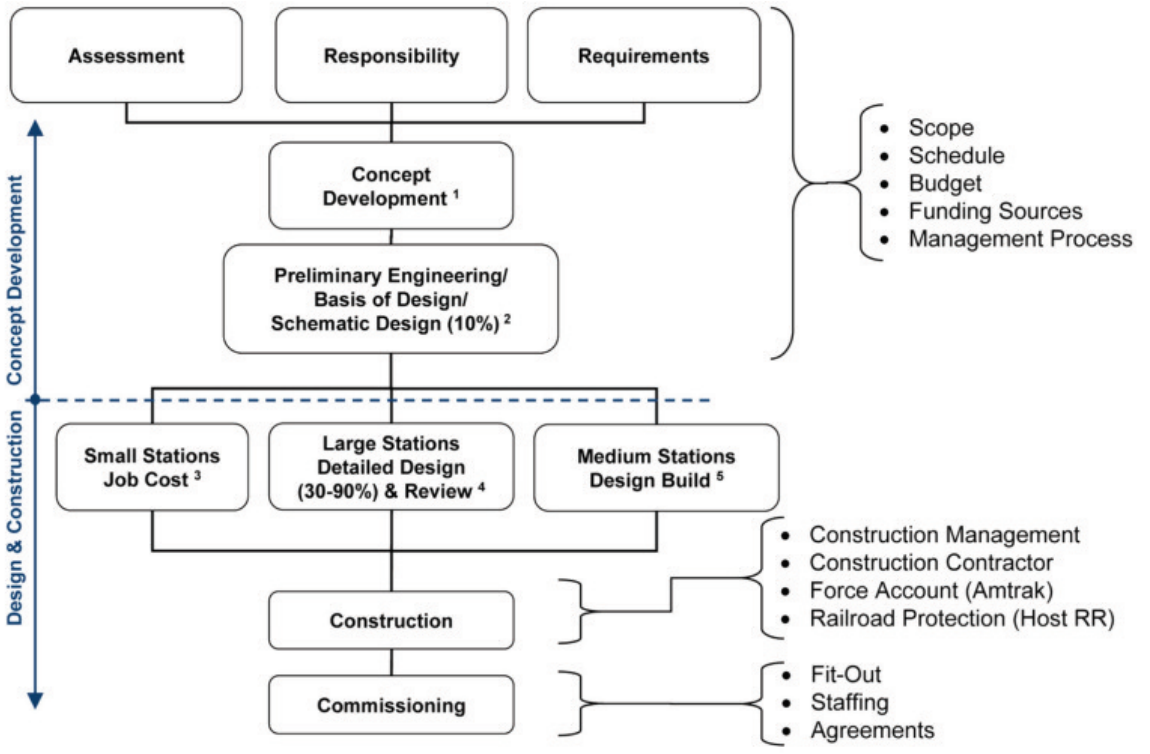
city and county governments have expressed a strong interest in funding the reinstatement of Amtrak service in their communities. However, no local government along the route has, as of the date of this report, committed to financing this endeavor.

C. Station Development Process

1. Stations Improvement Program and Schedule

Amtrak's Stations Development Plan is founded on a set of station surveys completed for each of the 481 stations served by Amtrak that are required to be made ADA compliant and are contained in the Stations ADA Report. 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 will follow the design and development processes depicted in the diagram below.

ADA Station Development Process



[1] High level definition of scope and cost.
[2] Incorporates ADA improvements and required upgrades to meet Amtrak station standards; developed in partnership with stakeholders.
[3] Simplified contracting on task order basis for small scale improvements.
[4] Successive levels of detail in design incorporating construction package definition and staging.
[5] Combined design and construction under one contract.

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 agree ments 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 de pends upon the size of the station involved and the extent of the work necessary to refurbish it. While the 17 potentially reinstated stations are small stations, the improvements required at these stations will be substantial. 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 Required

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 restaurants, retail outlets, or for freight railroad purposes, these negotiations may require a great deal of time and resources.

While Amtrak will, 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. Given the significant amount of ADA-related work associated with these projects, it is impractical to distinguish ADA-related costs from general refurbishment and state of good repair expenditures. For example, missing platforms must be replaced both to comply with ADA and for customer service considerations. If a decision is made to reinstate the *North Coast Hi*

awatha 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 Cost Estimate Ranges

1. Capital Cost Estimates

Recent surveys of the potentially reinstated stations indicate that many have been demolished or are in such an advanced state of deterioration that they are no longer suitable for use in any future restored passenger train service. A few potentially useable station structures have been converted by private developers for commercial use.

Even if the current sites can be used, all 17 potentially reinstated stations would require the construction of a new platform, as all of the old platforms have been removed. The parking lots at the potentially reinstated stations must be either expanded, re-striped, or replaced altogether. Although Amtrak's Station Guide lines do not designate parking as a mandatory feature for small stations (the category in which the 17 potentially reinstated stations fall), parking facilities should be added. As public transportation options in these communities are limited, passengers using these facilities will most likely use personal automobiles as their primary mode of transportation to and from these stations.

Based upon the recent surveys and these assumptions, reinstatement of service to the 17 potentially reinstated stations is projected to require approximately $17.6 million in capital investments for the restoration of existing station facilities where feasible, construction of new facilities elsewhere, and to achieve ADA compliance. The table in Exhibit 4 shows the projected capital expenditures for each potentially reinstated station.

2. Operating Cost Estimates

Once the necessary capital improvements to the potentially reinstated stations have been made, an annual operating expenditure estimated at $130,000 will be needed to maintain them in a state of good repair and to ensure that they remain ADA compliant. The table in Exhibit 5 delineates the projected annual operating expenditure for each of the 17 potentially reinstated stations. These operating expense projections are based on fiscal year 2008 operating expenses per passen ger for other similarly sized Amtrak stations. Small stations are typically un-staffed and as such, have no employee-related expenses. The only expenses (if any) associ ated with these stations derive from (1) utilities; or (2) facility, communication, and office functions.

VI. PROJECTED TRAIN SCHEDULE

The projected train schedules for a restored *North Coast Hiawatha* and the manner in which they were developed are discussed below.

A. Scheduling Considerations

During the eight years that the *North Coast Hiawatha* operated, it evolved from an unnamed train consolidated with the Empire Builder on both the eastern and western ends of the route to a separate train, with many variations in frequency and schedules in between. Over thirty years have elapsed since the last *North Coast Hiawatha* operated, during which time there have been significant changes in freight and commuter rail operations over the route and changed conditions have made it infeasible to operate restored service over two portions of the former route. Therefore, while the proposed route and schedule are similar to the service operated in 1979, there are a number of differences.

The proposed *North Coast Hiawatha* schedule shown in this feasibility study is based upon information provided by host railroads, and an assessment of current train operations and infrastructure conditions on the route. If the decision is made to restore the *North Coast Hiawatha* service, a comprehensive review of operations and infrastructure at the time service is initiated, including the impact of infrastructure investments made to support restored passenger service, will be required to determine actual running times and schedules.

B. Scheduling Elements

Schedule running times and actual train schedules take into account maximum authorized speeds and route characteristics on each segment. The schedule also reflects the time required for acceleration and deceleration at station stops, and includes allowances for possible train delays and miscellaneous adjustments for other factors that will impact running time.

Amtrak and its host railroads use standard methodologies to develop passenger train schedules. Using host carrier timetables and other inputs including standard station dwell times and estimated recovery times, a proposed schedule was developed. Some considerations used in the development of these schedules are discussed below.

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 ac commodate 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 re cover 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 8 percent. This time is intended to permit recovery from all delays, regardless of cause.

    - Additional Recovery Time (ART): 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 recovery time takes into consideration that the host railroads must 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 caused by track conditions. In addition, extra schedule recovery time will be included for each train that was scheduled to meet a passenger train traveling in the opposite direction in dark (non-signaled) territory.

Working with the host carriers, Amtrak developed the following schedule which assumes current host railroad operating conditions. For purposes of comparison, the final 1979 schedule is shown in Exhibit 6.

NORTH COAST HIAWATHA
Proposed

Read Down	Mile		City		Read Up
11:15 AM	0	Dp	Chicago, IL	Ar	8:33 PM
11:39 AM	18	↑	Glenview, IL	↑	7:50PM
12:55 PM	86	↑	Milwaukee, WI	↑	6:45 PM
2:05 PM	150	↑	Columbus,WI	↑	5:35 PM
2:34 PM	178	↑	Portage, WI	↑	5:05 PM
2:52 PM	195	↑	Wisconsin Dells, WI	↑	4:47 PM
3:30 PM	240	↑	Tomah, WI	↑	4:06 PM
4:14 PM	281	↑	La Crosse, WI	↑	3:25 PM
4:50 PM	308	↑	Winona, MN	↑	2:49 PM
5:52 PM	371	↓	Red Wing, MN	↑	1:32 PM
7:31 PM	417	Ar	St. Paul-Minneapolis, MN	Dp	12:28 PM
8:11 PM		Dp		Ar	11:48 AM
9:40 PM	482	↑	St. Cloud, MN	↑	9:57 AM
10:42 PM	548	↑	Staples, MN	↑	8:48 AM
11:38 PM	610	↑	Detroit Lakes, MN	↑	7:49 AM
12:40 AM	658	↑	Fargo, ND	↑	6:52 AM
1:43 AM	716	↑	Valley City, ND	↑	5:34 AM
2:20 AM	750	↑	Jamestown, ND	↑	4:55 AM
3:48 AM	852	↑	Bismarck, ND	↑	3:20 AM
4:08 AM	857	↑	Mandan, ND (CT)	↑	3:07 AM
5:00 AM	957	↑	Dickinson, ND (MT)	↑	11:55 PM
7:05 AM	1063	↑	Glendive, MT	↑	9:54 PM
8:25 AM	1141	↑	Miles City, MT	↑	8:34 PM
9:20 AM	1187	↑	Forsyth, MT	↑	7:32 PM
11:13AM	1288	↓	Billings, MT	↑	5:52 PM
1:26 PM	1404	Ar	Livingston, MT	Dp	3:34 PM
1:54 PM		Dp		Ar	3:06 PM
2:36 PM	1429	↑	Bozeman, MT	↑	2:00 PM
4:31 PM	1527	↑	Helena, MT	↑	12:06 PM
7:33 PM	1646	↑	Missoula, MT	↑	9:28AM
9:39 PM	1717	↑	Paradise, MT (MT)	↑	7:08 AM
11:15 PM	1836	↓	Sandpoint Jct. ID (PT)	↑	3:48AM
12:42 AM	1904	Ar	Spokane, WA	Dp	2:30 AM
1:02 AM		Dp		Ar	2:10 AM
4:07 AM	2049	↑	Pasco, WA	↑	11:25 PM
5:57 AM	2139	↑	Yakima, WA	↑	9:43 PM
6:57 AM	2175	↑	Ellensburg, WA	↑	8:35 PM
7:47 AM	2277	↓	East Auburn, WA	↑	5:58 PM
10:42AM	2300	Ar	Seattle, WA	Dp	5:20 PM

VII. RIDERSHIP AND FINANCIAL ANALYSIS

Financial performance of the *North Coast Hiawatha* service was estimated using Amtrak's standard methodology for long distance services. Beginning with a proposed train schedule, the service was evaluated for ridership and revenue performance, operational requirements, and anticipated direct operating costs attributable to the service. These direct costs do not include interest, depreciation and general overhead expenses.

A high level assessment of infrastructure capital investments was conducted with input from the host railroads, as well as an assessment of station and equipment investment requirements.

A. Ridership/Revenue Projections

Ridership and revenue impacts were estimated utilizing various models and data inputs developed to measure 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 revenue figures also include on-board food service revenues. An analysis of the impact of this service on the current ridership/revenue of other Amtrak trains (primarily the *Empire Builder*) was also conducted.

Ridership and revenue are functions of ticket price, schedule, frequency of service, population and economic activity. The scheduling factors that drive them include station stops, departure/arrival times, total schedule time, and the availability of connections with other Amtrak trains.

B. Operating Cost Analysis

Projected operating costs were developed based upon the proposed train schedules, projected route and service amenities, staffing requirements, and unit costs derived from the operation of similar services. The primary cost categories included are as follows:

- Fuel Costs: Calculated using a Gross Ton Mileage (GTM) model that estimates costs for each proposal based on train tonnage, mileage, and per-gallon fuel cost.

- T&E and OBS Labor: Labor costs for train and engine (T&E) crews – conductors and engineers – and for on-board service (OBS) crews that provide food and customer service on trains. These labor costs were modeled based on anticipated crew assignments and existing wage/benefit rates.

- Mechanical Costs: Based on average costs for specific functions such as turn around servicing, maintenance of equipment and related support. Turn

around costs were estimated based upon the average cost-per-train turn. Preventative maintenance costs and bad order (defect) repair costs were estimated based on the typical average Amtrak cost-per-unit for each additional car/locomotive required. Support costs were calculated as a percentage of the direct mechanical costs.

- Remaining Direct Costs: Include payments to host railroads, primarily for incremental maintenance-of-way and incentive payments for on-time performance, and other shared costs associated with advertising, marketing, stations, yard operations, police, environmental, insurance, and commissions. These costs were estimated based on statistical drivers unique to each cost area.

- Non-direct Costs: Costs such as General and Administrative (G & A) expenses, administrative support, and computer systems were not included in the cost projections.

C. Financial Results - Operations

The table below provides study financial results including estimated revenue, direct costs and net financial impact:

Estimated Performance (dollar figures are in Millions) [1]	
Total Riders	**359,800**
Passenger Related Revenue [2]	**$ 43.0**
Expenses	
Fuel	**$** 7.4
T&E Labor	13.0
OBS Labor	14.7
Mechanical	11.9
Remaining Direct Costs	27.1
Total Direct Costs	**$ 74.1**
Operating Contribution (Loss)	**($ 31.1)**
Fare Box Recovery [3]	**58.0%**

Footnotes:

1. Projected results for the *North Coast Hiawatha* Service only.
2. Projected total Passenger Related Revenue including both ticket and food and beverage revenues. Includes the projected transfer of approximately $8.0 million in projected passenger revenue from *Empire Builder* service.
3. Farebox Recovery represents the projected portion of direct operating costs that will be re covered from passenger revenues.

While the *North Coast Hiawatha* has a projected direct operating loss of $31.1 million annually, its relatively high projected ridership and revenues produce a 58% farebox recovery (the percentage of direct operating costs covered by ticket and food and beverage revenue). As indicated in Exhibit 7, this compares favorably to the average farebox recovery of Amtrak's long-distance services (51.8% in FY2008), and exceeds the 2008 farebox recovery on 12 of Amtrak's 15 long distance routes.

VIII. CAPITAL COSTS AND IMPLEMENTATION REQUIREMENTS

Restoration of the *North Coast Hiawatha* route would require significant up-front capital and mobilization expenditures. In order to develop capital cost projections, a high-level assessment of infrastructure needs was conducted with the assistance of the host railroads. Amtrak also assessed station and equipment investment requirements, and developed projections of mobilization (start-up) costs associated with hiring, training and qualifying new employees.

A. Host Railroad Infrastructure Improvements

The capital projects on host railroad infrastructure described below are based upon high level estimates provided by the host railroads of the order of magnitude capital investments they believe would be required to accommodate a restored *North Coast Hiawatha*. Most of these investments would increase rail line capacity to accommodate the additional Amtrak trains and enable them to overtake slower freight trains; others are required to enable passenger trains to operate at higher speeds than freight trains are permitted today.

The investments identified below have a total projected cost of $619.8 million. This figure is subject to significant uncertainty. The projects listed are based upon an initial analysis by the host railroads, and have not been adopted or agreed to by either party. If a decision is made to proceed with reinstatement of the *North Coast Hiawatha*, further analyses and negotiations, and computer modeling simulations where warranted, would be required to determine the investments needed. Future freight traffic levels could significantly impact that determination.
The following is a description by segment of the capital investments identified and their projected cost (in 2009 dollars).

1. Chicago, Illinois – St. Paul, Minnesota (417 miles) _____ $44 million
   Host railroads: Metra/CP

   Improvements would include replacing existing turnouts with equilateral turnouts to enable trains to operate at higher speed when entering selected sidings and at locations where sections of single track change to double track.

2. St. Paul, Minnesota – Fargo, North Dakota
   (241 miles) _____ $24 million
   Host railroad: BNSF

   This portion of the route has two single track segments between St. Anthony, Minnesota and Fargo. The projected improvements would connect

two of the sidings in this area into a double track segment, increasing capacity and operational fluidity.

3. Fargo, North Dakota – Jones Junction, Montana
(615 miles) _____ $307.3 million
Host railroad: BNSF

This segment has 98 public grade crossings through which passenger trains would operate at higher speeds than freight trains. Modifying the automatic warning devices at these grade crossings so that they will provide sufficient warning of the approach of faster passenger trains has an estimated cost of ap proximately $9.8 million. This segment also has 191 public crossings that have only cross bucks (i.e., do not have flashing lights or gates). Assuming that one third (ap proximately 64) of these crossings would need to be converted to automatic protection devices, the estimated cost would total $16.0 million. New speed signs would also be required, at a total estimated cost of $90,000.

Of the 43 sidings on this segment, 41 do not have automatic switches controlled by the dispatcher. While these sidings are "powered," activation of the siding switch still requires the train to come to a complete stop, and a crew member to get off the train and push a button on the siding switch mast, which results in de lays and reduces track capacity. The cost estimate to convert these switches to re mote operation is $17.4 million.

The construction of new and extended sidings on this 615-mile segment, at a projected cost of $264 million, accounts for nearly half of the host railroad infra structure investments identified on the *North Coast Hiawatha* route. The west bound and eastbound *North Coast Hiawatha* trains will need to meet each other on this segment, and to overtake an average of six or more slower freight trains on each trip. Increasing the number and length of sidings would provide capacity for additional meets and overtakes, and would eliminate some of the longer sin gle track segments between sidings where trains are unable to pass each other.

Siding lengths and the distances between them today are designed for current freight operations, which consist primarily of trains that do not need to overtake each other. BNSF freight trains meeting or overtaken by a restored *North Coast Hiawatha* would need to take the siding and be clear of the main track in order to avoid delaying the Amtrak train. Several of the siding extensions are included to establish locations where long freight trains can occupy the siding without block ing public grade crossings.

In Fargo, the BNSF "coal connector" track will have to be upgraded to enable the *North Coast Hiawatha* to access the station currently used by the *Empire Builder*,

or a new station will have to be established at a different location. Further analysis will be required to determine the preferable alternative.

4. Jones Junction, Montana – Helena, Montana
(254 miles) _____ $23.1 million
Host railroad: MRL

   The projects identified on this segment to increase capacity include siding extensions, additional crossovers to permit trains to switch tracks, and some track rearrangement. BNSF, which delivers trains to MRL at Laurel Yard, has stated that a signaled main line track must be constructed through the yard in order to accom modate the *North Coast Hiawatha* trains without impacting the fluidity of existing freight operations through this terminal complex. Further analysis to make this de termination will be required, and the cost of constructing such a track is not in- cluded in this estimate.

5. Helena, Montana – Sandpoint, Idaho (309 miles) _____ $6.1 million
Host railroad: MRL

   In order to accommodate meets with passenger trains, MRL has identified a need for additional powered crossovers on this segment, as well as some extension of CTC and certain additional track changes.

6. Sandpoint, Idaho – Spokane, Washington (68 miles) _____ $24 million
Host railroad: BNSF

   This portion of the route includes a single track segment between Athol and Rathdrum, Idaho. The proposed improvements would extend the existing double track from Athol to connect it with the Ramsey siding.

7. Spokane, Washington – Pasco, Washington (145 miles) _____ $96 million
Host railroad: BNSF

   The North Coast Hiawatha trains would meet each other on the single-track segment between Babb and Fishtrap, Washington. The estimate includes the cost of connecting the Babb and Fishtrap sidings, and other sidings, to create double track segments.

8. Pasco, Washington – Seattle, Washington (241 miles) _____ $95.3 million
Host railroad: BNSF

   Except for CTC-controlled sidings, there are no signals on the 221 miles of "dark territory" between Pasco and Auburn. The cost estimate for broken rail protection

circuitry, which would provide warning of broken rails in the absence of a signal system, is $14.2 million.

The Pasco-Auburn segment has 43 public grade crossings through which passenger trains would operate at higher speeds than freight trains. Modifying the auto matic protection devices at these grade crossings so that they will provide suffi cient warning of the approach of faster passenger trains is projected to cost approximately $4.3 million. This segment also has 33 public crossings that are protected only by cross bucks. Assuming that one third (11) of these crossings would need to be converted to automatic protection devices, the estimated cost would total $2.8 million. New speed signs would also be required, at a total estimated cost of $60,000.

In order to accommodate meets between the *North Coast Hiawathas* and freight trains, BNSF identified a need for siding projects on the Pasco-Auburn segment that are projected to cost $64 million. Investment needs on this segment may be impacted by the recent removal of through freight traffic.

The impact of adding the *North Coast Hiawatha* service to BNSF's line between Auburn and Seattle will depend heavily upon how many of the proposed additional Amtrak *Cascades* and Sounder commuter train frequencies, and associated capacity investments, have actually been implemented at the time service is restored. The estimate includes a place holder of $10 million for potential investments between Auburn and Seattle.

Total Host Railroad-Identified Infrastructure Improvements _____ $619.8 million

B. Stations

As detailed in Section V and Exhibits 3 and 4, the proposed return of passenger service to the *North Coast Hiawatha* route would require capital investments to restore and replace station facilities and meet ADA requirements. The projected cost is $17.6 million.

C. Equipment

Restoration of the *North Coast Hiawatha* service would require a significant increase in Amtrak's equipment fleet. Based upon schedules, operating requirements, and projected passenger demand, six trainsets – each comprised of two to three diesel locomotives, a baggage car, and eight bi-level Superliner cars (a transition sleeping car, two sleeping cars three coaches, a dining car and a lounge car) would be needed to provide daily service over the route. This translates into a need for up to 18 engines, and for 54 passenger cars (not including spares to accommodate maintenance and safety inspection requirements).

The projected capital cost of this additional equipment is $330 million. This projection reflects the fact that all or virtually all of the equipment required for the *North Coast Hiawatha's* restoration would have to be purchased new. Due to funding constraints, Amtrak has not ordered any new long distance equipment since the early 1990s. The existing fleet of bi-level Superliner cars is insufficient to meet equipment requirements on the nine long distance trains that currently use Superliner equipment, including the Empire Builder on which passengers seeking to travel often cannot be accommodated due to limited capacity.

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. 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. 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.

A purchase of new bi-level equipment for the *North Coast Hiawatha*, 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 uneconomic 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 *North Coast Hiawatha*.

D. Positive Train Control Requirement

In addition to the above costs, legal requirements for installation of Positive Train Control (PTC) equipment must be considered.

Positive Train Control is a system designed to prevent train-to-train collisions, train operations above authorized speeds, train operations in maintenance of way work zone limits, and the movement of a train through a switch left in the wrong position. The Rail Safety Improvement Act of 2008 mandates that, by December 31, 2015, PTC be installed on those lines of Class-1 railroads that carry over five million gross tons of traffic annually, and have either toxic-by-inhalation hazardous materials (TIH) traffic or passenger trains. The Act also gives FRA authority to require PTC installation on other rail lines. FRA has recently issued proposed regulations that would require PTC on virtually all rail lines over which scheduled passenger trains operate.

At this time, the scope, costs and funding responsibility associated with the PTC requirement are still to be determined. Based upon current law, the FRA's proposed regulations, and the fact that a significant portion of the *North Coast Hiawatha* route is on a non-Class 1 railroad (MRL) that will not be required to install PTC for its freight operations, Amtrak's best current estimate is that PTC installation costs on the *North Coast Hiawatha* route that would be triggered by the resumption of passenger service would total approximately $60 million. However, this figure could change materially when current uncertainties about the PTC installation requirement are resolved.

E. Implementation Requirements

Before restoring *North Coast Hiawatha* service, Amtrak would need to hire, train and qualify necessary employees to perform a number of functions including train movement, on-board service, mechanical servicing, and station staffing. The number of additional staff required by position is projected as follows.

Required Additional Personnel	
Stations	23
Train and Engineer Crew	103
On-Board-Service Crew	104
Road Foremen and Trainmasters	4
Mechanical	35
Total	269

The projected cost of hiring, training and qualifying these 269 employees is $15.8 million. The majority of this cost is driven by the lengthy classroom and on-the-job training required of new engineers and conductors, and federal regulations that require that they be qualified on the operating rules and physical characteristics of the routes over which they will be operating trains. In addition to classroom training, engineer-trainees are required to complete a minimum of 240 hours of locomotive engine operation and 480 hours of on-the-job training to obtain certification; the qualification process requires engineers to make as many as 36 round trips, accompanied by a qualified engineer, on each line staffed by the crew base where they are employed.

IX. IMPLEMENTATION TIMELINE

The projected service implementation timeline from the date on which funding is made available for a restoration of the *North Coast Hiawatha* is estimated to be 48-60 months. The activities with the longest projected lead time that must be completed concurrently before service is initiated are:

- Infrastructure improvements: 48 – 60 months
- Design, procurement, and acquisition of new equipment: up to 48 months
- Station rehabilitation/construction: 36 – 48 months for completion of all stations
- Negotiate agreements: up to 24 months
- Hire, train and qualify new employees: up to 20 months

X. STAKEHOLDER OUTREACH

A. Outreach Methodology

As part of this study, Amtrak performed public outreach in the states along the route of the proposed service to gauge interest and support for its restoration. Over the course of the last 12 months, Amtrak has had a number of meetings and conference calls with the State DOTs and elected officials to discuss with them some of the details of the study. Meetings with state DOT and elected officials were held in Bozeman, Montana on May 26, 2009; in Bismarck, North Dakota on August 18, 2009, and with Washington and Idaho DOT officials on September 18, 2009 via conference call. The input received at these meetings is summarized below; the officials who attended are listed in Exhibit 8. In almost all cases, there was genuine enthusiasm for the proposed service. However, how the service would be funded was a major unresolved issue.

1. North Dakota

   North Dakota DOT (NDDOT) officials were very supportive of Amtrak service. They noted that their state has very limited air and bus transportation options, making current and future Amtrak service a critical component in meeting overall transportation needs.

   Due to its proximity to Minneapolis/St. Paul, most of North Dakota's air transportation is routed via the Northwest Airlines hub at Minneapolis/St. Paul Airport. State officials noted that, despite their long border with Montana, there are no direct flights between any city in North Dakota and any city in Montana. They felt that the proposed *North Coast Hiawatha* service could potentially open up significant business opportunities for the state.

   However, the State of North Dakota does not have the financial ability to pay for any operating subsidies, and believes the *North Coast Hiawatha* service should be funded with federal support. State officials indicated that the State could help communities fund some limited station improvements; that they would review the study when it was completed; and that they would be willing to participate in public forums to help gauge public interest in the proposed service.

2. Montana

   The meeting in Bozeman, Montana was conducted in the form of a Town Hall meeting organized by Montana Senator Jon Tester. It was attended by approximately 200 people who voiced support for the return of Amtrak service to southern Montana.

Senator Tester spoke of the importance of the existing Amtrak *Empire Builder* service to the State. He described the legislation that required Amtrak to perform the study of the *North Coast Hiawatha* route, stressing that the return of service was not a done deal but that the study would give everyone a good idea of the associated costs.

Montana DOT Director Lynch expressed similar sentiments, and also informed the audience that the State was performing a separate study of restoring passenger service between Missoula and Billings (which would overlap the route of the *North Coast Hiawatha*). Both Senator Tester and Mr. Lynch stressed the importance of securing federal funding to reestablish service, but both wanted to see ridership and cost projections first.

During the Q&A portion, members of the audience voiced support for the restoration of Amtrak service to southern Montana and spoke about the need for the restoration of service and the need for increased mobility in Montana. The City of Bozeman expressed support for developing a multimodal train station in the community.

Discussion at the Montana meeting focused on the route Amtrak is studying, which would serve Helena rather than Butte, Montana because the rail line through Butte over which the *North Coast Hiawatha* formerly operated is partially out of service. Some members of the audience expressed support for the state ac quiring the right-of-way and restoring rail service over the route so that Butte could be served. Mr. Lynch of Montana DOT expressed initial support for the con-cept, but indicated the DOT would wait to see the results of the study first.

3. Idaho

While the *North Coast Hiawatha* made only make one stop, Sandpoint, in Idaho, Idaho DOT expressed gratitude that the service restoration study addressed service to that community. However, concern was expressed about the times of day the train would pass through Sandpoint, which would not differ significantly from the current *Empire Builder* times. Idaho DOT also suggested that Amtrak look at restoring service over a shorter route – perhaps between Fargo and Spokane – rather than over the entire route from Chicago to Seattle.

Idaho DOT noted that, due to a project to widen Interstate 90 through Sandpoint, the current Amtrak station may need to be relocated. One of the proposed sites under consideration, which is eight miles east of the current station, could not be served by the North Coast Hiawatha, since it is east of the point where the train's route would rejoin the BNSF line used by the *Empire Builder*. Idaho DOT

recommended that, if a new site is selected for Amtrak's Sandpoint station, it be situated in a location that could be served by both trains.

4. Washington

Washington State DOT (WSDOT) noted the benefits of restored service via Stampede Pass, a route that does not currently have Amtrak service, and the additional Amtrak service the *North Coast Hiawatha* would provide to the cities of Spokane, Pasco and Seattle. WSDOT has a state legislative mandate to study the possi bility of extending Amtrak Cascades service from Seattle to Spokane via the Stampede Pass route. Thus, WSDOT is very interested in the findings and outcome of the *North Coast Hiawatha* study, as the improvements for the proposed train would likely help WSDOT implement Cascades service over that route.

WSDOT also indicated that restored service that did not operate all the way east to Chicago would be an acceptable option.

B. Host Railroads

Amtrak contacted Metra, CP, BNSF and MRL, the four host railroads whose tracks and facilities would be used for the restored service, regarding the restoration study. Discussions with the host railroads covered route, speeds, infrastructure and general operations. Close communications with the host carriers has continued throughout the study.

Although there have been general operational discussions and field inspections with the host railroads, the specific infrastructure improvement proposals, draft schedule, and other railroad-related comments in this report have not been negotiated or agreed to with the host railroads, and reflect only initial best judgment recommendations identified during the study. Should a decision be made to proceed with service restoration, detailed discussions and formal negotiations will have to be initiated with these railroads. In some cases, detailed modeling and computer simulation of railroad operations may be required. Such modeling is expensive and may be time consuming.

XI. PUBLIC BENEFITS

Reinstating the *North Coast Hiawatha* would increase travel options and mobility throughout the southern portions of the States of Montana and North Dakota, and in the central portions of Washington State. It would also enhance Amtrak's route system and restore an intercity passenger rail service option for visitors to Yellowstone National Park. The capital expenditures 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

Reinstated rail passenger service would add another transportation option in communities heavily dependent on automobile transportation. 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 *North Coast Hiawatha* 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 *North Coast Hiawatha* would provide a truly essential service.

Restoration of the *North Coast Hiawatha* would play a particularly important role in transportation between communities in North Dakota and Montana, since there is no direct air service between any of the on-route cities in those two states. Given limited and often expensive public transportation options, reinstated passenger rail service would provide a vital transportation alternative for many travelers.

B. Economic Benefits

A restored *North Coast Hiawatha* would create jobs and economic activity, and could give a considerable boost to the tourism industry in southern Montana and North Dakota.

A decision to restore service would trigger capital investments in rail infrastructure and stations along the route, and the purchase of approximately $330 million in new passenger rail equipment. Such expenditures would generate jobs, primarily in construction, manufacturing and material supply, for the duration of these projects. Operation of the service is projected to create approximately 269 permanent Amtrak jobs. It would also lead to additional expenditures for food, supplies, lodging for train crews, etc., that will benefit local economics.

These short-term and long-term direct expenditures can be expected to produce significant spillover economic benefits. The spillover benefits include job creation in

other industries such as retail trade and tourism, and increased state and local tax revenues attributable to wage taxes on newly-created jobs and increased economic activity. Investments in stations frequently stimulate both public and private investments that create jobs and expand business opportunities in the surrounding region.

C. Environment and Energy Efficiency

Reinstatement of the *North Coast Hiawatha* would produce environmental benefits and improved energy efficiency. Rail passenger service is, on average, 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. The relatively high number of passenger miles per train mile projected for a restored *North Coast Hiawatha*, and the circuitry of air travel between on-route communities in Montana and North Dakota, could result in a higher than average level of environmental/energy benefits

Yellowstone National Park was designated as our nation's first national park in 1872 because of its proximity to the Northern Pacific rail line over which the *North Coast Hiawatha* would operate. Restoration of passenger rail service on that line would allow park visitors to once again reach that national treasure by train, reducing the carbon footprint attributable to their travel.

XII. CONCLUSION AND NEXT STEPS

The addition of the *North Coast Hiawatha* and other long distance routes to the Amtrak national network could produce numerous public benefits, particularly given the relatively high projected ridership on the *North Coast Hiawatha* route. However, the cost, especially for initial capital requirements, would be significant. While PRIIA recognizes the importance of Amtrak's existing long distance routes, it does not provide capital or operating funding for expansion of long distance service beyond current levels. Therefore, additional Federal and/or state funding would be required for any service expansion.

The $8 billion in intercity passenger and high speed intercity rail capital funding made available earlier this year by the American Recovery and Reinvestment Act of 2009 (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 most of the *North Coast Hiawatha* 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 *North Coast Hiawatha* route and, if so, that they 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 *North Coast Hiawatha* service.

XIII. EXHIBITS

Exhibit 1 - Map of Proposed and 1979 Routes

Exhibit 2 - Summary of Financial Performance and Key Metrics

Exhibit 3 - Route Population

Exhibit 4 - Potentially Reinstated Stations – Capital Costs

Exhibit 5 - Potentially Reinstated Stations – Operating Costs

Exhibit 6 - 1979 Schedule

Exhibit 7 - Farebox Recovery of Amtrak Long Distance Routes

Exhibit 8 - *North Coast Hiawatha* Study Outreach Meetings

Exhibit 1

Map of Proposed and 1979 Routes (Attached)

Exhibit 2

Summary of Financial Performance and Key Metrics

Projected Performance	
Ridership & Revenue	
Total Annual Ridership	359,800
Total Annual Passenger Revenue (Millions)	$43.0
Capital Expenses (Millions)	
Track & Signals	$619.8
Stations	$17.6
Equipment	$330.0
Positive Train Control	$ 60.0
Total Capital Costs	$1,027.4
Mobilization Expenses (Millions)	
Training and Other	$15.8
Total Activation Costs	$15.8
Total Capital & Activation Costs	$1,043.2
Annual Operating Expenses (Millions)	
Fuel	$7.4
T&E Labor (Train Operations)	$13.0
OBS Labor (On Board Services)	$14.7
Mechanical	$11.9
Other Direct Costs (including Stations)	$27.1
Total Direct Costs	$74.1
Performance Metrics	
Fare Box Recovery	58.0%
Cost Per Train Mile	$44.13
Net Per Train Mile	($18.52)
Revenue Per Passenger Mile	$0.17
Cost Per Passenger Mile	$0.29
Net Loss Per Passenger Mile	($0.12)
Passenger Miles per Train Mile	153.1

Exhibit 3

Route Population

State Population Summary (only counties served by proposed route included)

State	July 2007	2000 Census	Difference	% Difference
Illinois	5,285,107	5,376,741	-91,634	-1.7%
Wisconsin	1,354,541	1,324,732	29,809	2.3%
Minnesota	1,947,557	1,922,652	24,905	1.3%
North Dakota	185,686	178,188	7,498	4.2%
Montana	460,348	414,809	45,539	11.0%
Idaho	41,050	36,835	4,215	11.4%
Washington	3,429,806	3,161,083	268,723	8.5%
Total	12,704,095	12,415,040	289,055	2.3%

State Population Summary (only **cities** served by proposed route included)

State	July 2007	2000 Census	Difference	% Difference
Illinois	2,882,987	2,937,863	-54,876	-1.9%
Wisconsin	678,938	673,836	5,102	0.8%
Minnesota	732,217	739,328	-7,111	01.0%
North Dakota	206,795	201,212	5,583	2.8%
Montana	257,958	222,384	35,574	16/0%
Idaho	8,216	6,835	1,381	20.2%
Washington	997,918	918,642	79,276	8.6%
Total	5,765,029	5,700,100	64,929	1.1%

Data compiled by Amtrak from U.S. Census Bureau.

Station	SGR Improvement Costs				ADA Improvement Cost										TOTAL	TOTAL	TOTAL	TOTAL COST
	Station Construction Costs	Pathways Construction Cost	Platform Construction Costs	SGR TOTAL	Cat Improv. Station Construction Costs	Cat Improv. Pathways Construction Costs	Cat Improv. Platform Construction Costs	PIDS TOTAL	Host RR Protection	E-Ticketing	Station Construction Costs	Pathways Construction Costs	Platform Construction Costs	ADA TOTAL	Station Construction	Pathways Construction	Platform Construction	
Billings, MT	$ 111,659	$ 29,380	$ 10,620	$ 151,659	$ -	$ -	$ -	$ 165,000	$ 121,203	$ 110,000	$ 101,314	$ 84,479	$ 191,385	$ 773,381	$ 322,973	$ 113,859	$ 488,208	$ 925,040
Bismarck, ND	$ 135,706	$ 11,493	$ 6,808	$ 154,007	$ -	$ -	$ -	$ 165,000	$ 105,503	$ 110,000	$ 91,840	$ 77,659	$ 169,030	$ 719,032	$ 337,546	$ 89,152	$ 446,341	$ 873,039
Bozeman, MT	$ 182,630	$ 187,395	$ 81,703	$ 451,728	$ -	$ -	$ -	$ 165,000	$ 137,798	$ 110,000	$ 481,410	$ 105,686	$ 147,961	$ 1,147,855	$ 774,040	$ 293,081	$ 532,462	$ 1,599,583
Dickinson, ND	$ 118,610	$ 11,493	$ 6,808	$ 136,911	$ -	$ -	$ -	$ 165,000	$ 95,920	$ 110,000	$ 63,245	$ 69,399	$ 153,058	$ 656,622	$ 291,855	$ 80,892	$ 420,786	$ 793,533
East Auburn, WA	$ 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
Ellensburg WA	$ 302,568	$ 225,670	$ 31,793	$ 560,031	$ -	$ -	$ -	$ 165,000	$ 125,741	$ 110,000	$ 28,961	$ 83,643	$ 177,775	$ 691,120	$ 441,529	$ 309,313	$ 500,309	$ 1,251,151
Forsyth, MT	$ 24,586	$ 19,988	$ 7,593	$ 52,167	$ -	$ -	$ -	$ 165,000	$ 32,210	$ 110,000	$ 18,300	$ 9,604	$ 46,090	$ 381,204	$ 152,886	$ 29,592	$ 250,893	$ 433,371
Glendive, MT	$ 166,880	$ 105,461	$ 31,323	$ 303,664	$ -	$ -	$ -	$ 165,000	$ 95,995	$ 110,000	$ 57,661	$ 53,073	$ 128,668	$ 610,397	$ 334,541	$ 158,534	$ 420,986	$ 914,061
Helena, MT	$ 114,081	$ 182,252	$ 562	$ 296,895	$ -	$ -	$ -	$ 165,000	$ 106,819	$ 110,000	$ 55,024	$ 103,971	$ 177,469	$ 718,283	$ 279,105	$ 286,223	$ 449,850	$ 1,015,178
Jamestown, ND	$ 126,583	$ 562	$ 562	$ 127,707	$ -	$ -	$ -	$ 165,000	$ 102,812	$ 110,000	$ 51,063	$ 105,879	$ 170,791	$ 705,545	$ 287,646	$ 106,441	$ 439,165	$ 833,252
Livingston, MT	$ 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
Mandan, ND	$ 66,142	$ 80,590	$ 40,137	$ 186,869	$ -	$ -	$ -	$ 165,000	$ 101,342	$ 110,000	$ 57,331	$ 51,701	$ 128,767	$ 614,141	$ 233,473	$ 132,291	$ 435,246	$ 801,010
Miles City, MT	$ 24,985	$ -	$ -	$ 24,985	$ -	$ -	$ -	$ 165,000	$ 83,986	$ 110,000	$ 103,174	$ 51,701	$ 139,977	$ 653,838	$ 238,159	$ 51,701	$ 388,963	$ 678,823
Missoula, MT	$ 182,630	$ 187,395	$ 81,703	$ 451,728	$ -	$ -	$ -	$ 165,000	$ 176,541	$ 110,000	$ 59,910	$ 150,309	$ 212,532	$ 874,292	$ 352,540	$ 337,704	$ 635,776	$ 1,326,020
Paradise , MT	$ 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
Valley City, ND	$ 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
Yakima, WA	$ 110,684	$ 11,493	$ 6,808	$ 128,985	$ -	$ -	$ -	$ 165,000	$ 108,164	$ 110,000	$ 107,942	$ 85,874	$ 173,465	$ 750,445	$ 328,626	$ 97,367	$ 453,437	$ 879,430
TOTAL	$ 2,398,264	$ 1,802,752	$ 633,232	$ 4,834,248	$ -	$ -	$ -	$ 2,805,000	$ 2,100,190	$ 1,870,000	$ 1,516,815	$ 1,634,206	$ 2,867,084	$ 12,793,295	$ 5,785,079	$ 3,436,958	$ 8,405,506	$ 17,627,543

Exhibit 4
Potentially Reinstated North Coast Hiawatha Stations - Capital Costs
($ - 2009)

Exhibit 5
Potentially Reinstated North Coast Hiawatha Stations - Annual Operating Costs
($ - 2009)

Station	Fuel, Power & Utilities	Facility, Communication & Office	Total Operating Costs
Billings, MT	$ -	$ 7,500	$ 7,500
Bismarck, ND	$ 216	$ 7,500	$ 7,716
Bozeman, MT	$ -	$ 7,500	$ 7,500
Dickinson, ND	$ -	$ 7,500	$ 7,500
East Auburn, WA	$ 216	$ 7,500	$ 7,716
Ellensburg WA	$ -	$ 7,500	$ 7,500
Forsyth, MT	$ -	$ 7,500	$ 7,500
Glendive, MT	$ -	$ 7,500	$ 7,500
Helena, MT	$ -	$ 7,500	$ 7,500
Jamestown, ND	$ -	$ 7,500	$ 7,500
Livingston, MT	$ -	$ 7,500	$ 7,500
Mandan, ND	$ -	$ 7,500	$ 7,500
Miles City, MT	$ 2,716	$ 7,500	$ 10,216
Missoula, MT	$ 216	$ 7,500	$ 7,716
Paradise , MT	$ -	$ 7,500	$ 7,500
Valley City, ND	$ -	$ 7,500	$ 7,500
Yakima, WA	$ -	$ 7,500	$ 7,500
TOTAL	$ 3,364	$ 127,500	$ 130,864

Exhibit 6

1979 *North Coast Hiawatha* Schedule

NORTH COAST HIAWATHA 1979					
Read Down	Mile		City		Read Up
11:30 AM	0	Dp	Chicago, IL	Ar	6:59 PM
11:53 AM	17	↓	Glenview, IL	↑	6:33 PM
12:59 PM	85	Ar	Milwaukee, WI	Dp	5:29 PM
1:05 PM		Dp		Ar	5:23 PM
2:23 PM	150	|	Columbus, WI	↑	3:55 PM
2:56 PM	178	|	Portage, WI	|	3:25 PM
3:16 PM	195	|	Wisconsin Dells, WI	|	3:07 PM
4:07 PM	240	|	Tomah, WI	|	2:13 PM
5:02 PM	281	|	La Crosse, WI	|	1:22 PM
5:37 PM	308	|	Winona, MN	|	12:33 PM
6:44 PM	371	↓	Red Wing, MN	|	11:10 AM
8:15 PM	418	Ar	St. Paul-Minneapolis, MN	Dp	10:00 AM
8:45 PM		Dp		Ar	9:00 AM
10:16 PM	488	|	St. Cloud, MN	↑	7:25 AM
11:20 PM	553	|	Staples, MN	|	6:13 AM
12:21 AM	616	↓	Detroit Lakes, MN	|	5:10 AM
1:12 AM	664	Ar	Fargo, ND	Dp	4:15 AM
1:27 AM		Dp		Ar	4:00 AM
2:30 AM	726	|	Valley City, ND	↑	2:47 AM
3:07 AM	760	|	Jamestown, ND	|	2:06 AM
4:35 AM	861	|	Bismarck, ND	|	12:33 AM
4:55 AM	867	|	Mandan, ND (CT)	|	12:20 AM
5:44 AM	967	↓	Dickinson, ND (MT)	|	9:08 PM
7:44 AM	1073	Ar	Glendive, MT	Dp	7:10 PM
7:59 AM		Dp		Ar	7:00 PM
9:19 AM	1151	|	Miles City, MT	↑	5:45 PM
10:14 AM	1196	↓	Forsyth, MT	|	4:43 PM
11:52 AM	1298	Ar	Billings, MT	Dp	3:03 PM
12:01 PM		Dp		Ar	2:55 PM
1:40 PM	1414	Ar	Livingston, MT	Dp	1:00 PM
2:05 PM		Dp		Ar	12:35 PM
2:53 PM	1438	|	Bozeman, MT	↑	11:45 AM
5:20 PM	1533	|	Butte, MT	|	9:35 AM
6:07 PM	1574	↓	Deer Lodge, MT	|	8:40 AM
7:25 PM	1653	Ar	Missoula, MT	Dp	7:25 AM
7:40 PM		Dp		Ar	7:10 AM
9:23 PM	1724	|	Paradise, MT (MT)	↑	5:35 AM
10:36 PM	1842	↓	Sandpoint Jct. ID (PT)	|	2:33 AM
11:56 PM	1909	Ar	Spokane, WA	Dp	1:22 AM
12:26 AM		Dp		Ar	12:52 AM
2:45 AM	2028	|	Ephrata, WA	↑	10:32 PM
3:51 AM	2080	|	Wenatchee, WA	|	9:30 PM
7:05 AM	2202	|	Everett, WA	|	6:20 PM
7:35 AM	2217	↓	Edmonds, WA	|	5:52 PM
8:30 AM	2234	Ar	Seattle, WA	Dp	5:20 PM

Exhibit 7

Farebox Recovery of Amtrak Long Distance Routes

Route	Revenue	Direct Costs	Farebox Recovery
All Current Long Distance Routes	*$ 446,483,407*	*$ 861,533,189*	*51.8%*
Auto Train	*$ 58,423,207*	*$ 66,679,244*	*87.6%*
Empire Builder	*$ 64,816,255*	*$ 98,625,440*	*65.7%*
Palmetto	*$ 13,582,980*	*$ 21,017,134*	*64.6%*
North Coast Hiawatha (Projected)	**$ 42,987,861**	**$ 74,088,006**	**58.0%**
City of New Orleans	*$ 16,022,134*	*$ 30,145,416*	*53.1%*
Southwest Chief	*$ 44,442,062*	*$ 84,435,823*	*52.6%*
Silver Meteor	*$ 32,479,834*	*$ 64,327,025*	*50.5%*
Coast Starlight	*$ 32,848,010*	*$ 67,400,591*	*48.7%*
Capitol Limited	*$ 18,873,122*	*$ 39,399,359*	*47.9%*
Crescent	*$ 28,664,109*	*$ 60,600,688*	*47.3%*
Texas Eagle	*$ 21,336,586*	*$ 46,661,304*	*45.7%*
California Zephyr	*$ 43,092,490*	*$ 96,754,144*	*44.5%*
Lake Shore Limited	*$ 25,569,942*	*$ 58,344,533*	*43.8%*
Silver Star	*$ 29,771,169*	*$ 68,495,983*	*43.5%*
Cardinal	*$ 7,164,539*	*$ 20,033,005*	*35.8%*
Sunset Limited	*$ 9,396,969*	*$ 38,613,501*	*24.3%*

Exhibit 8

North Coast Hiawatha Study Outreach Meetings

1. **May 26, 2009**
   Bozeman, Montana

   Participants:

   Amtrak: Ray Lang

   Montana: U.S. Senator Jon Tester
   Montana DOT Director Jim Lynch
   Kaaren Jacobsen, Mayor of Bozeman

2. **August 18, 2009**
   Bismarck, North Dakota

   Participants:

   Amtrak: Ray Lang

   North Dakota: Lance Gaebe, Deputy Chief of Staff, Office of Governor Haven
   Jack Olson, Assistant Division Director, Planning and Programming, NDDOT
   Bob Johnston, Rail Planner, Planning and Programming, NDDOT
   Dave Leftwich, Interim Director, Office of Transportation Programs, NDDOT

3. **September 18, 2009**
   Conference Call

   Participants:

   Amtrak: Ray Lang

   Idaho: Ron Kerr, Idaho DOT

   Washington: Andrew Wood, Washington State DOT

XIV. REFERENCES

1. Canadian Pacific, BNSF and Montana Rail Link employee timetables.
2. Canadian Pacific, BNSF and Montana Rail Link track charts.
3. "Amtrak: The First Decade," compiled and edited by Bruce Goldberg, 1981.
4. "Amtrak in the Heartland," by Craig Sanders, 2006.
5. Rail Passenger Service, RL Banks, 2000.
6. "Additional information about Montana's Southern Passenger Rail Route, Montana Department of Transportation, April 9, 2007.
7. Current and 1979 Amtrak public timetables.