

PRIIA Section 210 FY10 Performance Improvement Plan Cardinal



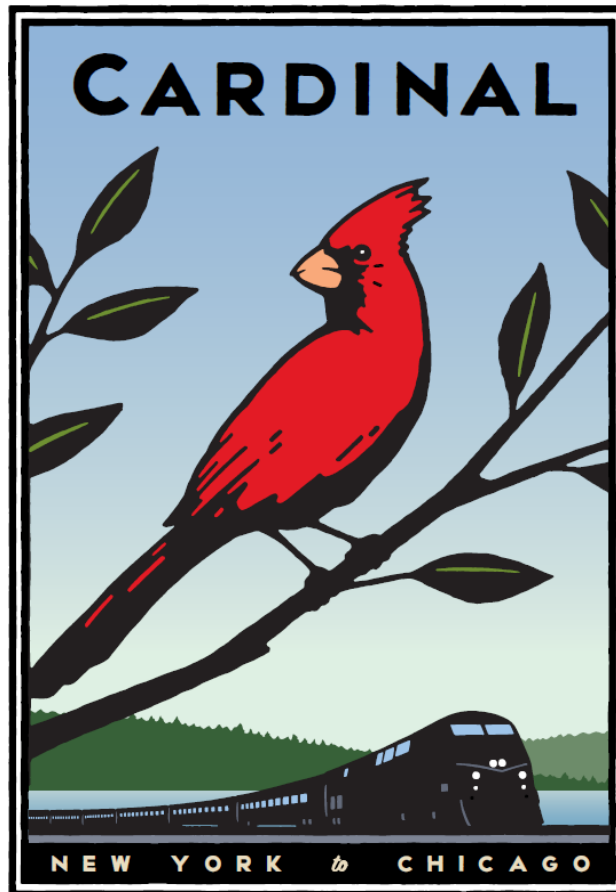
September 2010



PRIIA Section 210 Report

Cardinal

Performance Improvement Plan (PIP)



September 2010

Section 210 Core Team
Marketing & Product Development
Operations
Policy & Development
Finance
Government Affairs

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I. PRIIA Overview

The Passenger Rail Investment and Improvement Act (PRIIA) is transforming the way that Amtrak manages and reports on its intercity passenger rail services. Two key sections of PRIIA are driving this change:

- **Section 207** laid the groundwork for a series of comprehensive new financial, operating, customer service, and other service quality metrics with aggressive standards Amtrak must achieve by 2014. The law states that Amtrak must report on these quarterly to the Federal Railroad Administration (FRA). These metrics include the following:
 - Financial / Operating
 - Cost Recovery
 - Loss / Passenger-mile
 - Passenger-miles / Train-mile
 - On-Time Performance (OTP) and Train Delays
 - Effective Speed
 - Endpoint OTP
 - All Stations OTP
 - Host and Amtrak Train Delays
 - Customer Satisfaction
 - Overall
 - Personnel
 - Communications
 - On-Board
 - Station
 - Sleeping Car Experience

Please see Appendix A for a complete list of the metrics and the standards.

- **Section 210** requires Amtrak to embark on a comprehensive program to improve its long-distance services. Starting in FY10 with the five worst performing routes, Amtrak formed cross-departmental Performance Improvement Teams to explore every aspect of the routes' operations. By the end of the fiscal year, Amtrak will make recommendations based on in-depth analyses of the long-distance routes in nine key areas. These areas are:
 - On-time performance
 - Scheduling, frequency, routes, and stops
 - Feasibility of restructuring the route into connected corridor services
 - Performance-related equipment changes and capital improvements
 - Onboard amenities and service including food, first class, and sleeping car service
 - State or other non-Federal financial contributions
 - Improving financial performance
 - Anticipated Federal funding of operating and capital costs



- Other aspects of Amtrak’s long-distance passenger rail routes that affect the financial, competitive, and functional performance of service on Amtrak’s long-distance passenger rail routes.

Amtrak ranked the long-distance routes using a composite score, which includes customer satisfaction (CSI), on-time performance (OTP), and cost recovery (CR). Fiscal year 2008 is the performance baseline for the scores. The following chart shows Amtrak’s ranking of long-distance services for purposes of PRIIA Section 210. The dates at the left show the years in which Amtrak will perform the work.

		CSI	OTP	CR	Avg.	
FY12	Top Third	Auto Train	84%	82%	88%	84%
		Empire Builder	82%	69%	66%	72%
		Southwest Chief	79%	65%	53%	66%
		City of New Orleans	78%	62%	53%	65%
		Coast Starlight	79%	61%	49%	63%
FY11	Middle Third	Silver Meteor	74%	66%	49%	63%
		Crescent	76%	67%	46%	63%
		Palmetto	72%	52%	61%	62%
		Lake Shore Ltd.	70%	58%	44%	57%
		Silver Star	75%	45%	43%	54%
FY10	Bottom Third	Capitol Ltd.	77%	33%	48%	53%
		California Zephyr	77%	30%	45%	51%
		Texas Eagle	70%	18%	46%	44%
		Cardinal	66%	31%	35%	44%
		Sunset Ltd.	75%	27%	24%	42%

The program commenced in 2010 with analysis of the five worst performing routes (bottom third) and will continue for the next two years with the middle third and top third routes. Amtrak must publish the Performance Improvement Plans (PIPs) on its web site, and begin implementing the plans thereafter.

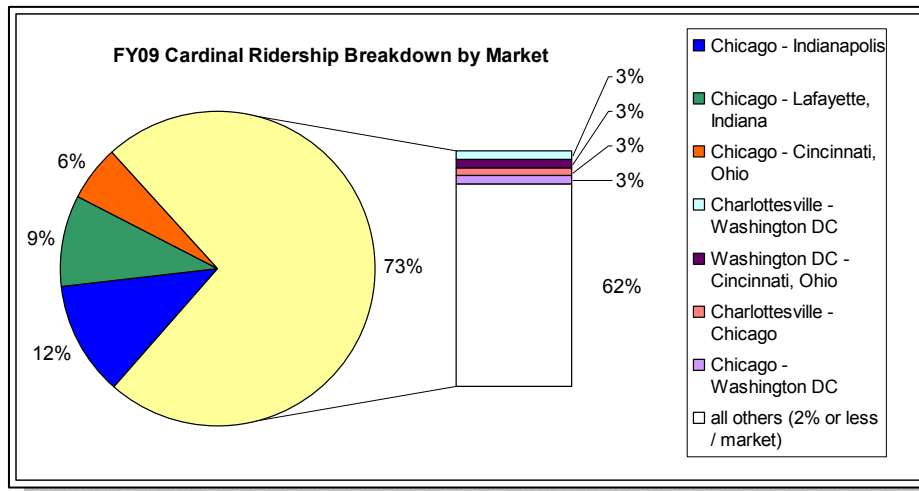
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II. EXECUTIVE SUMMARY

This report describes the recommendations of the *Cardinal* Performance Improvement Team. The *Cardinal* currently operates tri-weekly and provides coach and sleeper service between New York City and Chicago. The following shows a high-level map of the *Cardinal* route.



The *Cardinal* is a train that operates three days per week (tri-weekly) between the Northeast and Amtrak’s Chicago hub via a route serving Virginia, West Virginia, Ohio, Kentucky, and Indiana. Although it operates as a through train between New York and Chicago, nearly all passengers are traveling to and from intermediate stations in the middle of the route where the train is often the only form of intercity transportation available. Thus, one of the primary functions of the *Cardinal* is to connect these online communities in the interior with the major hubs and centers in the Northeast and Midwest. The chart below shows the FY09 ridership breakdown for the markets with 3% or more market share. The route serves a number of colleges and universities, such as Marshall, Purdue, and Indiana Universities, among others.



On the four days per week when the *Cardinal* does not run, Amtrak operates the *Hoosier State*. The *Hoosier State* provides coach service between Indianapolis and Chicago on the



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same time schedule as the *Cardinal*. The *Hoosier State* carried 31,384 passengers in 2009. During that same year, 25% of the *Cardinal's* riders or 26,726 traveled within the Indianapolis – Chicago segment. Because of the tight relationship between the two routes, any changes to the *Cardinal* would likely affect the *Hoosier State*. For this reason, the Performance Improvement Team included the *Hoosier State* in this analysis.

A. Background

In early 2010, Amtrak formed a cross-departmental Performance Improvement Team to develop a PIP for the *Cardinal* as mandated by PRIIA. Historically, Amtrak often focused on cost reduction when it tried to improve its long-distance routes' financial performance. This sometimes resulted in degraded service, which led to lower revenues and ridership, driving down financial performance. PRIIA Section 210 charges Amtrak with performing a comprehensive review of the route that covers service improvements as well as operational efficiencies. In developing its recommendations, the team evaluated their results in the context of the nine performance improvement areas outlined in the legislation. The *Cardinal* Performance Improvement Team explored nine service options and concluded that the one outlined in this PIP results in the best strategic direction for the *Cardinal* and *Hoosier State* at this time.

B. Plan Highlights

The Performance Improvement Team explored options that would increase revenues and reduce costs as well as improve equipment utilization and labor efficiency. Tri-weekly service is a major driver of inefficiency in the current *Cardinal* service. At the end of most trips, and on two of the five route segments on which train and engine crews work, the *Cardinal's* employees and/or equipment have a one to two day turnaround delay during which employees receive held-away pay and equipment sits idle without generating any ticket revenues.

The most significant change in the plan is to establish a daily sleeper and coach service between New York and Chicago. As part of this plan, Amtrak will eliminate the *Hoosier State* service

between Chicago and Indianapolis, since the schedule becomes redundant. Other changes include the addition of checked baggage service along the route at staffed stations, a new marketing relationship with the Greenbrier resort, a new regionalized menu, improvements in

Plan Highlights

- Establishes daily service between New York and Chicago
- Continues service via Charlottesville, Charleston, Cincinnati, and Indianapolis
- Establishes checked baggage service
- Improves equipment utilization by eliminating long layovers
- Continues daylight operation through the most scenic areas
- Provides daily connections to all transcontinental trains
- Introduces regional menu selections
- Seasonal introduction of a domed observation car
- Offers possibility for a future St. Louis gateway connection

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signage and cleaning of stations, and improved equipment maintenance processes with better supplies of Viewliner spare parts in Chicago. Amtrak estimates that this combination will result in the greatest improvements to the financial, operating, and customer service areas. (Amtrak is currently considering the addition of dome lounge cars to the service, but has not completed its analysis.¹)

As part of this yearlong analysis, the team considered and rejected a number of options. Some of the other strategies considered by the team that were not accepted include the following:

- *Substitute bi-level Superliner equipment in lieu of current single level cars.* This option precluded operation north of Washington due to overhead clearance restrictions. Much of the ridership and revenue contributed to this train by the Northeast Corridor would be lost due to an imposed change of trains in Washington. In addition, Amtrak does not have the bi-level equipment required.
- *Relocate the western terminus to St. Louis from Chicago.* This option broke connections with two major transcontinental trains as well as with most Chicago hub short distance services.
- *Establish a "split train" at Indianapolis offering service to both St. Louis and Chicago.* This option improved ridership and cost recovery, but not as much as daily service on the current route. It would also require substantial increases in Federal and/or State funding for operating and capital costs, and equipment that is not available at this time. Amtrak will reconsider this option in the future.

Appendix B provides further details on all of the options considered and their financial impact.

¹ Amtrak recently learned of the availability of dome lounge cars for purchase from a private vendor. These cars offer the potential to significantly improve the customer experience, as well as offer an enhanced level of meal service. These cars would also present an opportunity to increase Customer Satisfaction scores (CSI) in several areas, including all aspects of food service and the overall rating as well.

Amtrak has begun the process of determining whether the operation of these cars would be beneficial to the overall financial performance of this train, and to determine in detail the capital costs necessary to make them compatible with Amtrak mechanical standards and requirements. This work will continue during the early part of FY2011, and a decision will be made based on these criteria.



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C. Impact of the Plan

This section discusses the operational and other implications of the new service.

Equipment Impact

The proposed daily service will require three sets of equipment. Currently the *Cardinal* uses two sets and the *Hoosier State* uses one set. The chart to the right shows the current equipment used by both services, the equipment required by the Plan and the needed additional equipment.

	Service		
	Current*	Plan	Needed
Locomotives	3	3	-
Baggage Car	2	3	1
Sleepers	2	3	1
Diner/Lounge	2	3	1
Coach	8	9	1

*Includes Hoosier State

Amtrak is in the process of acquiring some of the new equipment that would satisfy some of the Plan’s equipment need. This equipment is scheduled for delivery in FY13. Amtrak is exploring the temporary reassignment of existing equipment and/or assignment of refurbished cars funded by ARRA stimulus as an interim measure to provide the relatively small number of additional cars required. Baggage cars are a particular problem in the near term.

Schedule Impact

Between Chicago and Indianapolis, Amtrak will continue to provide daily service on the current schedule. The *Cardinal* will serve this segment seven days per week replacing the *Hoosier State*.

Between Indianapolis and New York City, the *Cardinal* service will become daily from tri-weekly and will operate on the current time schedule.

Customer Satisfaction Impact

Running daily coach and sleeper service between Chicago and New York City reduces confusion for customers and simplifies their booking process. Research shows that tri-weekly trains require significantly more talk time with call center agents due to this complexity. With improved food service on the *Cardinal*, the introduction of daily food service on the former *Hoosier State* route segment, and baggage handling at staffed stations, Amtrak anticipates higher CSI scores in the future.



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Host Railroad Impact

The *Cardinal* travels primarily over CSX and on several other short segments of other railroads. Amtrak has begun discussions with the host railroads.

PRIIA Section 210 Performance Improvement Plan Criteria and the PIP Impact

Performance Improvement Plan Criteria	<i>The Cardinal</i> – Plan / Impact
On-time performance	<ul style="list-style-type: none"> - Introduces the regularity of daily service - Includes improvement from reducing slow orders on Buckingham Branch Railroad - Improved coordination with host railroads to avoid delays
Scheduling, frequency, routes and stops	<ul style="list-style-type: none"> - Increases frequency of service to daily - Retains same daylight schedule in most scenic areas - Improved Amtrak standard station signage - Consistent hours of station operation due to daily service
Feasibility of restructuring service into connected corridor services	<ul style="list-style-type: none"> - Not feasible. See the Route History section for additional details
Performance-related equipment changes and capital improvements	<ul style="list-style-type: none"> - Improves equipment utilization; service increases by 133% while additional equipment sets required increase by 50%
On-board amenities and service, including food, first class and sleeping car services	<ul style="list-style-type: none"> - Improved regional menu in diner/lite car - Improved customer experience as a result of daily service - Baggage handling at all staffed stations
State or other non-Federal financial contributions	<ul style="list-style-type: none"> - Not applicable
Improving financial performance	<ul style="list-style-type: none"> - Cost recovery improves by over eight points (from 27% to 35%) - Loss per passenger mile improves by 31% (from \$0.42 loss to \$0.29 loss)
Anticipated Federal funding of operating and capital costs	<ul style="list-style-type: none"> - No capital funding needs projected pending host railroad concurrence - Nominal increase in Federal operating subsidy (~\$2.1m) - One-time \$2.1m cost for crew qualification
Other areas affecting financial, competitive, and functional route performance	<ul style="list-style-type: none"> - Systemwide ridership increase of 134,900 - Daily connections to all transcontinental trains in Chicago



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One-Time Costs

Amtrak anticipates an expenditure of \$2.1m for training and crew qualification.

Labor Impact

Since the new service will not travel over any new route segments, Amtrak will not have to qualify crews on new Amtrak routes or establish new crew bases or commissaries, although additional personnel will be required.

Financial and Operating Impact

The chart below summarizes the key financial and operating metrics for the new service. Revenues for the planned *Cardinal* service increase by significantly more than the direct and shared costs. This helps improve the cost recovery ratio by 8 points over the current combined *Cardinal* and *Hoosier State* operations. With ridership nearly doubling, the loss per passenger-mile improves a strong 31%. These benefits are driven by a slight \$2.1m increase in Federal operating subsidy.

	Cardinal (includes Hoosier State)		
	Current	Future	Change
Ridership (000s)	140.2	275.1	+ 96%
Cost Recovery Ratio (based on Direct + Shared Costs)	27%	35%	+ 8 pts
Loss / Passenger-Mile	(\$0.42)	(\$0.29)	+ 31%
Pass Miles / Train Mile	109.1	125.5	+ 15%
Direct Loss (\$m)	(\$19.5)	(\$21.6)	(\$2.1)
	Improvement	Decline	

D. Implementation

Amtrak believes it could be feasible to begin the new service in late 2011, pending host railroad approval, staffing augmentation and equipment availability. Amtrak will develop an implementation plan in early FY11.



III. Performance Improvement Plan

A. Introduction

The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) requires Amtrak to conduct a comprehensive financial and operational analysis to improve the performance of its long-distance network. In compliance with this requirement, Amtrak has developed this Performance Improvement Plan (PIP) for the *Cardinal* service.

B. History

The *Cardinal* traces its lineage to two passenger trains operated by private freight railroads before Amtrak, the *James Whitcomb Riley* of the New York Central Railroad (that operated between Chicago and Cincinnati) and The *George Washington* of the Chesapeake and Ohio Railway (that operated primarily between Cincinnati and Washington). The *Riley* carried connecting cars from the *George Washington* to Chicago.

Amtrak assumed operational and financial responsibility for these services on May 1, 1971. However, except for a brief 90-day discontinuance in the fall of 1981, Amtrak has operated this service continuously for 39 years. Due primarily to poor track conditions west of Cincinnati, the specific route over which this service has operated changed several times. The current route between Chicago and Cincinnati, mostly on CSX, was adopted in 1986. That change incorporated the former stand-alone, daily *Hoosier State* and allowed the *Cardinal* to serve Indianapolis from the east. The *Cardinal* name was given to the train in 1977 and is based on the state bird of the six westernmost states through which it operates.

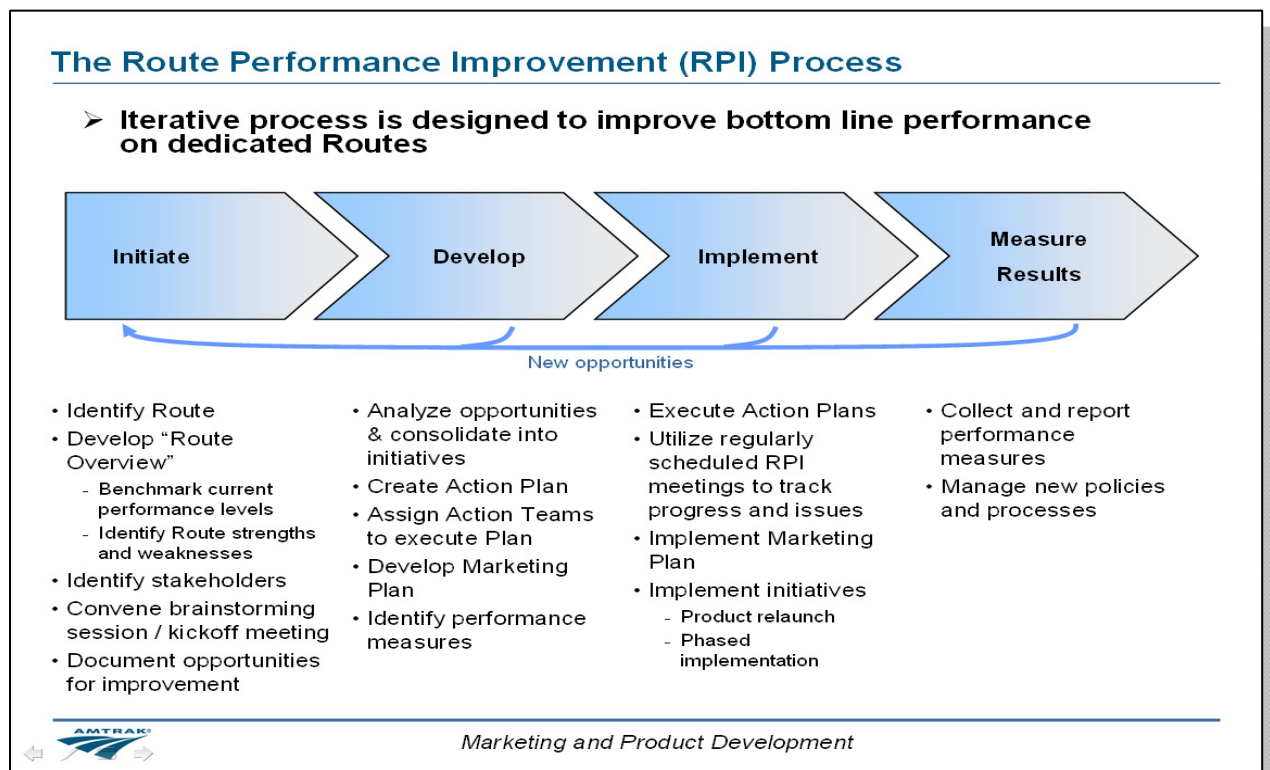
Amtrak's *Cardinal* is a single through train that serves two travel markets of shorter distances. One travel market connects points on the Northeast Corridor with stations in Virginia, West Virginia, Kentucky, Ohio, and Indiana. Another travel market links Chicago and Amtrak's connecting transcontinental trains with these same intermediate points. These two markets overlap in the middle of the route, with no clear dividing line.

A unique feature of the *Cardinal* is the natural beauty along its route including: Virginia horse country, the Shenandoah Valley, the Blue Ridge and Allegheny Mountains, and the white water of West Virginia's New River Gorge. The *Cardinal* also provides "corridor" service between Indianapolis and Chicago with significant ridership from universities in Indiana.

C. Performance Improvement Plan Process

Amtrak’s Product Development Group had previously developed a Performance Improvement Plan (PIP) Process. This process has been adapted to PRIIA primarily by insuring that it addresses all specified areas of analysis and metrics. The process under PRIIA brings together representatives from Amtrak’s Marketing, Transportation, Mechanical, Finance, Government Affairs, and Policy and Development Departments, along with the employees who actually operate the trains and their labor organizations to ensure that the PIP is based on input from all parties with relevant experience.

The following diagram provides a graphic overview of the process.





D. Operating Plan

The *Cardinal* operating plan proposed in this PIP is for establishing daily service between New York and Chicago over the entire route. It preserves the possibility of a future St. Louis gateway connection that could be achieved by splitting the train at Indianapolis or Cincinnati and operating a section west to St. Louis. That is not being recommended now because it:

- Does not improve the cost recovery ratio as much as daily service alone, and would require a substantial increase in Federal funding,
- Is not operationally feasible due to lack of equipment, and
- Would require operation over segments of host railroad right of way not currently used by Amtrak.

E. Equipment Assignment, Utilization and Maintenance

The introduction of daily service between New York and Chicago will require a third set of equipment compared to the two required for current tri-weekly service. This equipment must be single level due to operation over the Northeast Corridor into New York. The NEC overhead electric traction system and tunnels preclude the use of bi-level Superliner equipment.

Each of three train sets must include:

- One P-42 diesel-electric locomotive
- One Heritage baggage car (to be replaced with new cars on order)
- One Viewliner sleeping car (potentially supplemented by new cars on order)
- One Amfleet II diner/lite
- Three Amfleet II 59 seat coaches

One electric locomotive from the Northeast Corridor fleet will handle the train between New York and Washington. Two Horizon 68 seat corridor coaches now used on the *Hoosier State* will be released for other service.

Shown to the right is a summary of current and future diesel locomotive requirements.

Current Service - Locomotive Requirements			
	Sets	Loco	Total
Cardinal	2	1	2
Hoosier State	1	1	1
Total			3

Planned Service - Locomotive Requirements			
	Sets	Loco	Total
Cardinal	3	1	3
Hoosier State	-	-	-
Total			3



Shown to the right is a summary of current and future equipment requirements.

Current Service - Car Requirements					
	Requirements per Set				
	Sets	Baggage	Sleeper	Diner / Lounge	Coach
Cardinal	2	1	1	1	3
Hoosier State	1	-	-	-	2
Total		2	2	2	8

Planned Service - Car Requirements					
	Requirements per Set				
	Sets	Baggage	Sleeper	Diner / Lounge	Coach
Cardinal	3	1	1	1	3
Hoosier State	-	-	-	-	-
Total		3	3	3	9
Needed		1	1	1	1

The fact that a 133 percent increase in frequency (plus elimination of the Chicago / Indianapolis *Hoosier State*) can be achieved with a 50 percent increase in equipment sets demonstrates the inherent inefficiency of the current tri-weekly service.

Daily service results in better utilization because it eliminates the time that equipment sits idle at end points between alternate day departures. Much of the maintenance cost associated with locomotives and cars is calendar based. It therefore constitutes a fixed cost that can be allocated over more car and locomotive miles.

In addition to reassignment of equipment, the *Cardinal* PIP requires improvements to equipment maintenance processes. For example, the Performance Improvement Team determined that there has been a lack of communication between the employees operating the trains and those maintaining the equipment. This has already been rectified by the establishment of joint inbound and outbound inspections that include both operating and maintenance personnel. It insures that maintenance personnel are made aware of and held accountable for making all needed repairs. It also holds operating personnel accountable for bringing all equipment into final destination yards free of excess trash and other impediments to effective maintenance.

To facilitate repairs, the team has taken steps to make repair parts for Viewliner sleeping cars available in Chicago despite the fact that few cars of this type operate into and out of Chicago. The lack of basic sleeping car parts precluded some relatively simple repairs during the turnaround maintenance process.

Since the *Cardinal* equipment lays overnight in New York’s Sunnyside Yard (versus a daylight turn in Chicago), more emphasis is being placed on maintenance being done there. In addition,



New York has more experience with single level equipment than Chicago does because all long-distance trains serviced there are comprised of single level equipment. For example, New York has assumed responsibility for time-consuming carpet shampooing.

F. Schedule, On Time Performance, and Potential Route Improvements

Amtrak does not plan to make any material change to the current schedule of Trains 50 or 51 with the institution of daily service. Efforts were made to develop a schedule that would provide times that are more convenient in Cincinnati but the only way to do so was to break important connections in Chicago with western trains that contribute a substantial amount of ridership and revenue to the *Cardinal*. Trains 50 and 51 will therefore operate on a daily basis on essentially their current schedules. That being the case, the team worked closely with operating and station employees to review, and in some cases recommend, adjustments in dwell times at stations. These changes should help match current operating realities with the schedule and will be incorporated in future timetable changes.

The Performance Improvement Team developing this schedule considered the following priorities and constraints:

Priorities and Constraints for Schedule Development
• Departure / Arrival in New York with minimal impact to other trains
• Departure / Arrival in Chicago with minimal impact to other trains
• Maintaining connections in Chicago with western trains
• Adequate time for equipment turnaround maintenance
• Indianapolis and Washington station dwell times
• Minimum additional train and engine crew expenses
• Minimum additional on-board service crew expenses
• Minimum additional station staffing costs
• Hours of operation at staffed stations

The efficient scheduling of train and engine operating crews is particularly important on long distance trains because there are limited opportunities each day to return them from away from home terminals to their home crew bases. These personnel include conductors, locomotive engineers and assistant conductors. The crews are subject to the Federal Hours of Service Act that specifies limits on working time and required rest periods. When crews are not put back to work within specified time limits, they earn "held away pay" because they cannot get home or (otherwise) be paid for time required by the nature of their jobs.

The Hours of Service Act does not apply to on board service personnel like sleeping car, food service car or coach attendants because they do not control train movement.



The current and planned *Cardinal* schedules are shown below. The current *Cardinal* and *Hoosier State* schedules are shown in Appendix D.

Train 50 – Current and Planned Schedule

Current	Days of Operation		Planned
Tu-Th-Sa			DAILY
5:45 PM Dp	Chicago, IL	CT	5:45 PM
6:58 PM Dp	Dyer, IN		6:58 PM
7:49 PM Dp	Rensselaer, IN	CT	7:49 PM
9:58 PM Dp	Lafayette, IN	ET	9:58 PM
10:30 PM Dp	Crawfordsville, IN		10:30 PM
11:50 PM Ar	Indianapolis, IN		11:50 PM
11:59 PM Dp			11:59 PM
1:26 AM Dp	Connersville, IN		1:26 AM
3:17 AM Ar	Cincinnati, OH		3:17 AM
3:29 AM Dp			3:29 AM
4:51 AM Dp	Maysville, KY		4:51 AM
5:44 AM Dp	So. Portsmouth-So. Shore, KY		5:44 AM
6:29 AM Dp	Ashland, KY		6:29 AM
7:09 AM Dp	Huntington, WV		7:09 AM
8:16 AM Dp	Charleston, WV		8:16 AM
8:45 AM Dp	Montgomery, WV		8:45 AM
9:36 AM Dp	Thurmond, WV		9:36 AM
9:53 AM Dp	Prince, WV (Beckley)		9:53 AM
10:23 AM Dp	Hinton, WV		10:23 AM
10:53 AM Dp	Alderson, WV		10:53 AM
11:25 AM Dp	White Sulphur Springs, WV		11:25 AM
12:14 PM Ar	Clifton Forge, VA		12:14 PM
12:19 PM Dp			12:19 PM
1:31 PM Dp	Staunton, VA		1:31 PM
2:47 PM Dp	Charlottesville, VA		2:47 PM
4:00 PM Dp	Culpeper, VA		4:00 PM
4:35 PM Dp	Manassas, VA		4:35 PM
5:19 PM Dp	Alexandria, VA		5:19 PM
5:55 PM Dp	Washington, DC		5:55 PM
6:54 PM Dp	Baltimore, MD		6:54 PM
7:45 PM Dp	Wilmington, DE		7:45 PM
8:09 PM Ar	Philadelphia, PA		8:09 PM
	Dp		
8:34 PM Dp	Trenton, NJ		8:34 PM
9:13 PM Dp	Newark, NJ		9:13 PM
9:36 PM Ar	New York, NY	ET	9:36 PM



Train 51 - Current and Planned Schedule

Current		Days of Operation		Planned
Su	We Fr			DAILY
6:55 AM	6:45 AM	Dp	New York, NY	ET 6:45 AM
7:13 AM	7:05 AM	Dp	Newark, NJ	7:05 AM
7:47 AM	7:40 AM	Dp	Trenton, NJ	7:40 AM
8:15 AM	8:05 AM	Ar	Philadelphia, PA	8:05 AM
8:20 AM	8:16 AM	Dp		8:16 AM
8:45 AM	8:41 AM	Dp	Wilmington, DE	8:41 AM
9:35 AM	9:29 AM	Dp	Baltimore, MD	9:29 AM
10:15 AM	10:10 AM	Ar	Washington, DC	10:10 AM
	11:10 AM	Dp		11:10 AM
	11:29 AM	Dp	Alexandria, VA	11:29 AM
	12:02 PM	Dp	Manassas, VA	12:02 PM
	12:35 PM	Dp	Culpeper, VA	12:35 PM
	1:55 PM	Dp	Charlottesville, VA	1:55 PM
	2:57 PM	Dp	Staunton, VA	2:57 PM
	4:05 PM	Ar	Clifton Forge, VA	4:05 PM
	4:08 PM	Dp		4:08 PM
	5:00 PM	Dp	White Sulphur Springs, WV	5:00 PM
	5:31 PM	Dp	Alderson, WV	5:31 PM
	6:01 PM	Dp	Hinton, WV	6:01 PM
	6:31 PM	Dp	Prince, WV	6:31 PM
	6:47 PM	Dp	Thurmond, WV	6:47 PM
	7:38 PM	Dp	Montgomery, WV	7:38 PM
	8:10 PM	Dp	Charleston, WV	8:10 PM
	9:35 PM	Dp	Huntington, WV	9:35 PM
	9:58 PM	Dp	Ashland, KY	9:58 PM
	10:41 PM	Dp	So. Portsmouth-So. Shore, KY	10:41 PM
	11:36 PM	Dp	Maysville, KY	11:36 PM
	1:03 AM	Ar	Cincinnati, OH	1:03 AM
	1:10 AM	Dp		1:10 AM
	3:05 AM	Dp	Connersville, IN	3:05 AM
	4:44 AM	Ar	Indianapolis, IN	4:44 AM
	6:00 AM	Dp		6:00 AM
	6:58 AM	Dp	Crawfordsville, IN	6:58 AM
	7:32 AM	Dp	Lafayette, IN	ET 7:32 AM
	7:37 AM	Dp	Rensselear, IN	CT 7:37 AM
	8:27 AM	Dp	Dyer, IN	8:27 AM
	10:05 AM	Ar	Chicago, IL	CT 10:05 AM



On-Time Performance (OTP)

OTP is often the result of factors outside Amtrak's direct control. Amtrak is responsible for the reliability of its locomotives and cars, the timely loading and unloading of passengers, and the operation of these trains over its own rights of way. On the route of the *Cardinal*, Amtrak controls the Northeast Corridor and Chicago Union Station terminal and yard tracks. However, many other factors are under the control of host railroads. These factors include operating preference and right of way condition including tracks and signals.

To deal more directly with improving on-time performance, the team has evaluated locations where trains meet and has discussed track conditions with host railroads. In particular, the Buckingham Branch Railroad is doing a major crosstie replacement and track-surfacing program that will eliminate many slow orders. The Buckingham Branch provides right of way for the *Cardinal* between Orange and Clifton Forge, VA.

To improve reliability, Amtrak will explore a temporary reroute of the *Cardinal* into and out of Chicago. In the long run, and as a result of the CREATE Program for rail infrastructure improvements in Chicago, it is anticipated that the train will take a better and faster route via Englewood, the Norfolk Southern Chicago Line and a future track connection with the former Illinois Central Railroad at Grand Crossing. On an interim basis, however, Amtrak plans to ask Canadian National Railways (CN) for a temporary reroute over the former Grand Trunk Western Railway, the former Illinois Central mainline, and the St. Charles Air Line into Chicago Union Station. The team believes that the interim simplified route involving only CN would improve reliability compared to multiple handoffs of the train to different dispatchers from different railroads. It might also save a few minutes, albeit not as much as the future route via CREATE.

G. On Board Service Plan

The Cardinal will initially maintain a combined diner/lite food service for both coach and sleeping car passengers. The current service standards are maintained, but with some notable improvements and innovations including a redesigned menu.

Amtrak will continue to assign on board crews to work from New York to Chicago and back with a New York crew base. Each train will continue to require:

- One sleeping car attendant
- One lead service attendant (with financial responsibility) and one service attendant in the Amfleet II diner/lite
- One attendant for the coaches



Another initiative of the *Cardinal* working team was to evaluate the food service menu. It was determined that some of the (then) current offerings were unappealing to passengers or, in some cases, too expensive for certain customers to purchase. Working in cooperation with Amtrak's commissary management group and food supply vendor, Amtrak has developed and introduced a more appropriate menu. It features selections with more regional appeal as well as some selections for those traveling on limited budgets.

Amtrak will continue to operate a single sleeping car on the *Cardinal*. In addition to accommodating revenue passengers, the sleeper must also provide rooms for the on board service crew. While this results in significant passenger capacity limitations, daily service will make more space available each week due to a greater frequency of departures. In addition, Amtrak's recent order for 130 new single level long distance cars includes some combination baggage dormitory cars. If some of those new cars can be assigned to the *Cardinal* after delivery, they can replace the old Heritage baggage car and also eliminate the need for sleeping car revenue rooms to be used for crew space.

H. Station Service Plan

The route of the *Cardinal* between New York and Chicago serves 32 stations. Of these stations, 15 are staffed and 17 are not staffed. There are no plans to add staff at any unstaffed locations although two part time positions are planned in Indianapolis to support new checked baggage service. The financial estimates show an increase of \$400K for station staff associated with the operation of the train on a daily basis.

The existing tri-weekly service of the *Cardinal* results in station hours of operation that confuse potential customers. Currently, passengers trying to plan trips or purchase tickets from these cities are faced with inconsistent station hours dependent upon the direction of train operation on any given day, as well as days when stations are entirely closed. This confusion will be eliminated by daily service.

The team also discovered that obsolete signage was present at several locations including Charleston, WV. This signage with the old Amtrak logo is currently being replaced with contemporary graphics.

Having observed recurring black carpet stains throughout the trains at the end of even one trip over the route, the team determined that the cause was an accumulation of coal dust on platforms in areas frequented by coal trains. Passengers were tracking this fine dirt into the cars on their shoes after boarding. The team obtained power washers for the Huntington, Prince, and Charleston, WV stations that station personnel will use to clean platforms and remove coal dust at those locations.



I. Marketing Plan

The *Cardinal* connects five of the top 20 population centers in the United States (New York / Philadelphia / Baltimore / Washington DC / Chicago) with Indianapolis, Cincinnati, Charleston and Charlottesville plus many more rural locations in between. As part of the PIP plan, Amtrak will identify opportunities and review existing programs.

Advertising

Amtrak will advertise the *Cardinal* in various media vehicles. The key target markets will be: Baltimore, MD, Washington, D.C., Charlottesville, VA, Charleston, WV, Cincinnati, OH, Indianapolis, IN and Chicago, IL. Assuming national television, an Amtrak branded spot will be created for use promoting the everyday low fares on the *Cardinal*. Outdoor billboards will be utilized targeting drivers along the route. There are also numerous regional and local publications that will be utilized to advertise the benefits of train travel on the *Cardinal*. In addition, the Amtrak.com database and social media tools such as Facebook and Twitter will promote the benefits of riding on Amtrak.

Price

Along with revenue management and pricing, the fare structure will be assessed to ensure that Amtrak is at the optimal fare structure. The evaluation will include both the coaches and the accommodations. In addition, special pricing will be promoted online to encourage travel for the weak segments of the train. These fares will be promoted on Amtrak.com and through targeted regionalized messages on the home page of Amtrak.com.

Promotions

Amtrak will continue to work with the partners along the route to encourage train travel. Amtrak will work with local events (i.e. West Virginia Boy Scout Jamboree/ PGA Tour at the Greenbrier), local Convention Visitor Bureaus (i.e. Indianapolis) and state tourism agencies (i.e. Virginia Tourism Corporation). In addition to local efforts, Amtrak will sponsor a spring online radio promotion to encourage travel on the *Cardinal*. Amtrak Guest Rewards will promote the train by offering special bonus offers to those who travel on that train and will promote the train in various electronic communications. Amtrak Vacations will continue to promote its Greenbrier Resort package and seek additional opportunities (i.e. National Parks). In an effort to reach the younger segment, Amtrak will showcase the *Cardinal* through both Student Advantage and the International Students Identity Card (ISIC) and through local college and university programs and/or sports sponsorships along the route.

Travel Partners

Amtrak will continue to work and review our programs with the National Accounts and tour operators to promote the *Cardinal*. A special offer will be created for all the National travel agency partners (i.e. American Automobile Association). Amtrak will target with our tour operators and offer special fares promoting the *Cardinal*.

Travel/Trade Shows

Amtrak will continue to exhibit at travel and trade shows and promote the *Cardinal*. Amtrak participates in both consumer (i.e. American Association of Retired Persons) and trade (i.e. National Business Travel Association) shows and in all instances, the *Cardinal* will be promoted.



Cardinal at Thurmond, WV



IV. Financial Analysis

The following table highlights the incremental ridership and financial changes Amtrak will realize from the new service. The net financial impact is a \$2.1 million increase in operating loss, or about 0.4% of the Federal operating subsidy. In return for this outlay, the *Cardinal* will serve nearly 135,000 more riders resulting in strong improvements to the PRIIA metrics of loss per passenger-mile and passenger miles per train mile. In addition, the *Cardinal's* cost recovery will rise from 27 percent to 35 percent.

Appendix C provides further details in the financial changes.

	FY10 estimate			Nominal Change	Combined Cardinal / Hoosier	Change
	Cardinal	Hoosier State	Total Base			
Total Revenue (\$m)	\$6.5	\$0.8	\$7.3	\$9.0	\$16.3	+ 124%
Total Base + Incremental Direct Costs (\$m)	(\$21.9)	(\$4.9)	(\$26.8)	(\$11.1)	(\$37.9)	+ 41%
Loss (\$m)	(\$15.5)	(\$4.1)	(\$19.5)	(\$2.1)	(\$21.6)	+ 11%
Annual Ridership (000s)	104.7	35.5	140.2	134.9	275.1	+ 96%
Passenger Miles (m)	41.4	5.4	46.8	57.1	103.9	+ 122%
Train Miles (000s)	347.4	81.5	428.9	399.0	827.9	+ 93%
Cost Recovery Ratio	29%	17%	27%		35%	+ 8 pts
Loss / Passenger Mile	(\$0.37)	(\$0.76)	(\$0.42)		(\$0.29)	+ 31%
Pass Miles / Train Mile	119.2	66.3	109.1		125.5	+ 15%
Improvement						



V. Implementation

Amtrak will begin implementation of service improvements in FY 2011. Early in the fiscal year, the Performance Improvement Team will develop a detailed systematic implementation plan to establish individual accountabilities for each requirement specified in this PIP. The following summarize the three critical elements of the plan.

Host Railroads

Host railroad concurrence for daily operation and schedule must be obtained before the most important PIP changes can be implemented. Amtrak's Scheduling Group will submit the daily schedule plan to all railroads involved and negotiate required approvals. CSX is the primary host railroad although several shorter segments of other carriers are also involved. Refusal or delay by any would delay proposed improvements. The proposed reroute over Canadian National (CN) and the St. Charles Air Line into Chicago is not essential to the plan for daily operation but it would contribute additional reliability and possible trip time improvements.

Staffing

Amtrak's Northeast, Mid Atlantic, and Central Divisions have plans in place to hire, train, and certify engineers, assistant conductors, and on board service employees. The divisions estimated that this activity would require up to 180 days.

Equipment

Amtrak has a sufficient number of diesel locomotives for daily service. Amtrak is in the process of acquiring new single level equipment and restoring existing equipment that would provide the relatively small number of additional passenger cars required. The new equipment is scheduled for delivery in FY13. Until Amtrak receives the new equipment, Amtrak's implementation plan will consider temporary reassignment of existing equipment as an interim measure.

The implementation of the new service is dependent on these three critical elements. Once Amtrak explores these elements further, it will produce a detailed timeline for the implementation of the new service.



VI. Appendix A: PRIIA Section 207 Performance Metrics

The following shows the PRIIA Section 207 Metrics on which Amtrak must report to the FRA quarterly.

	Reported by	Standard	Comment		
Financial/Operating					
Short-term avoidable operating cost recovery	Route	Continuous Year Over Year Improvement on an 8 quarter moving average	Excludes capital charges Reported with and without State subsidy included in revenue		
Fully allocated operating cost recovery	Route				
Long-term avoidable operating loss per passenger-mile	Route				
Adjusted loss per passenger-mile	System				
Passenger-miles per train-mile	Route				
On-Time Performance and Train Delays					
<i>OTP (All tests must be met to pass OTP standard)</i>					
Change in "Effective Speed"	Route	Equal to or better than the average effective speed during FY08	Applies for each rolling four-quarter period.		
Endpoint OTP*		FY10	FY14		
Acela	Route	90%	95%		
Other NEC routes		85%	90%		
Other corridor routes		80%	90%		
Long distance		80%	85%		
All Stations OTP*			FY10	FY14	
Acela	Route	90%	95%		
Other NEC routes		85%	90%		
Other corridor routes		80%	90%		
Long distance		80%	85%		
Begins FY12, but must be published immediately					
Train Delays - Off NEC					
Amtrak-responsible delays per 10,000 train-miles	Route	325 minutes / 10,000 train-miles			
Host-responsible delays per 10,000 train-miles	Route, Host	900 minutes / 10,000 train-miles			
Train Delays - On NEC Only					
Acela	Route, Host	265 minutes / 10,000 train-miles			
Other NEC routes		475 minutes / 10,000 train-miles			
Other Service Quality					
CSI - Percent of Passengers "Very Satisfied" with:					
Overall service	Route	82%	90%		
Amtrak personnel		80%	90%		
Information given					
On-board comfort					
On-board cleanliness					
On-board food service					
Overall station experience				tdb	future metric
Overall sleeping car experience					
For Information Only					
Equipment-caused service interruptions / 10,000 train-miles	Route	-	-		
Passenger comment data by category / business line	Type of Route	-	-		
No standard proposed: Intended to reflect objectively the quality of mechanical maintenance as perceived by the passenger					
No standard proposed: Presented as supplementary information					
Public Benefits					
Connectivity: % of passengers connecting to/from other routes	Long Distance Route	-	-		
Availability of other modes: % of passengers-trips to/from underserved communities	Route, System	-	-		
Energy-saving and environmental measures	tdb	-	-		
No standard possible, improvement could require network changes					
No standard possible, improvement could require network changes					
Future					

	*OTP (Maximum Minutes of Delay for "On Time Arrival")					All Stations All Trip Lengths
	Endpoint					
	<251 miles	251-350 miles	351-450 miles	451-550 miles	>551 miles	
All Routes, exc. Acela	10	15	20	25	30	15
Acela	10	na	na	10	na	10



VII. Appendix B: Service Options Considered

The *Cardinal* Performance Improvement Team considered seven total options before arriving at the proposed operating plan presented in this report. The following summarizes each option and its financial impact. Note:

- All options included a change to daily frequency
- One option considered Superliner equipment
- Three options considered new terminus in St. Louis

Service Changes Included	Options						
	1	2	3	4	5	6	7
Increase to Daily Frequency	●	●	●	●	●	●	●
Replace Hoosier State	●	●				●	●
(V)iewliner / (S)uperliner Equipment	S	V	V	V	V	V	V
Schedule Change		●	●	●	●		●
Daily Service To Saint Louis			●	●			●
Daily to Cincinnati, Bus: Cincinnati-Indianapolis					●		

	Base	Incremental						
	<i>(no changes)</i>	1	2	3	4	5	6	7
Riders	140,192	81,500	109,200	87,200	72,200	21,800	134,900	123,400
Revenue (\$ millions)	\$7.3	\$5.1	\$5.3	\$2.9	\$3.0	(\$2.6)	\$9.0	\$11.6
Direct Costs (\$ millions)	\$26.8	\$8.6	\$7.7	\$10.9	\$10.9	\$2.2	\$11.1	\$16.2
Change in Direct Loss	(\$19.5)	(\$3.5)	(\$2.4)	(\$8.0)	(\$7.9)	(\$4.8)	(\$2.1)	(\$4.6)

	Base	Core (Fully Allocated)						
Cost Recovery	27%	31%	32%	23%	23%	15%	35%	31%
Core Loss / Passenger-Mile	(\$0.42)	(\$0.36)	(\$0.33)	(\$0.56)	(\$0.58)	(\$1.00)	(\$0.29)	(\$0.34)
Passenger Miles per Train Mile	109	118	125	74	71	47	126	142
Total Riders	140,192	221,692	249,392	227,392	212,392	161,992	275,092	298,792
Passenger Miles (millions)	46.8	78.3	82.9	62.1	59.5	27.1	103.9	122.3
Train Miles	428,903	663,692	663,692	838,016	838,016	572,077	827,942	859,186

After a thorough evaluation of all options, the team determined that Option 6 provided the best overall improvement under the requirements of PRIIA. The preliminary work performed on Option 7 will be retained and the question of establishing a St. Louis gateway will be revisited when equipment becomes available for such a route.



VIII. Appendix C: Financials and Expense Description

The incremental costs for daily service are primarily driven by the following factors:

	FY10 Base			Incremental Change	New Daily Cardinal Service	
	Cardinal	Hoosier State	TOTAL			
REVENUES (mil)						
Ticket Revenue	\$6.0	\$0.8	\$6.8	\$8.3	\$15.2	
Food and Beverage	0.5	0.0	0.5	0.7	\$1.1	
Total Revenue	\$6.5	\$0.8	\$7.3	\$9.0	\$16.3	
EXPENSES (mil)						
Host Railroad	\$1.1	\$0.3	\$1.4	\$1.2	\$2.6	
Fuel	0.9	0.2	1.1	1.0	\$2.1	
Power - Electric Traction	0.2	0.0	0.2	0.3	\$0.5	
T&E (Labor & Support)	4.4	1.2	5.5	3.0	\$8.5	
OBS (Labor & Support)	1.6	0.0	1.6	1.9	\$3.5	
Commissary (F&B)	0.8	0.0	0.8	1.1	\$1.9	
Yard Ops	0.5	0.2	0.7	0.5	\$0.9	
Operations Management	0.8	0.4	1.2		\$1.2	
Motor Coach	0.1	0.0	0.1		\$0.1	
Maintenance of Equipment	4.0	1.1	5.1	1.3	\$7.0	
Stations	1.5	0.3	1.8	0.4	\$2.0	
Amtrak Maintenance of Way	1.1	0.0	1.2		\$1.2	
Sales and Marketing	1.5	0.3	1.8	0.07	\$1.9	
Commissions	0.2	0.0	0.2	0.2	\$0.4	
Insurance	0.3	0.0	0.3	0.07	\$0.4	
Passenger Inconvenience	0.1	0.0	0.1	0.09	\$0.2	
Police, Environmental, and Safety	0.6	0.2	0.8	0.0	\$0.8	
General & Administrative	2.3	0.6	3.0	0.0	\$3.0	
Total - Direct and Shared Costs	\$21.9	\$4.9	\$26.8	\$11.1	\$37.9	
Core Contribution/(Loss)	(\$15.5)	(\$4.1)	(\$19.5)	(\$2.1)	(\$21.6)	
STATISTICS						
						Change
Total Riders	104,692	35,500	140,192	134,900	275,092	+ 96%
Total Passenger Miles(mil)	41.4	5.4	46.8	57.1	103.9	+ 122%
Total Train Miles	347,367	81,536	428,903	399,039	827,942	+ 93%
PRIIA Section 207 Metrics						
	FY10 Base				New Daily Cardinal Service	Change
	Cardinal	Hoosier State	TOTAL			
Cost Recovery	29%	17%	27%		35%	+ 8 pts.
Loss per Passenger Mile	(\$0.37)	(\$0.75)	(\$0.42)		(\$0.29)	+ 31%
Passenger Miles per Train Mile	119.2	66.7	109.2		125.5	+ 15%
Improvement						



Primary Cost Drivers²

- Host Railroad - \$1.2 million: Payments to host railroads, primarily for maintenance-of-way, and incentives for on-time performance.
- Fuel - \$1.0 million: Calculated using a Gross Ton Mileage (GTM) model that estimates costs for each proposal based on train tonnage, mileage and per-gallon fuel cost. The increase is based on current budgeted per gallon costs.
- Train and Engine Labor (T&E) - \$3.0 million: Labor costs for train & engine crews increase because of daily service levels and the increased number of crews necessary. Productivity still improves, though, as the cost increase from tri-weekly to daily is 55%, even though the frequency between Washington and Indianapolis increases by 133%. The productivity improvement comes primarily from the elimination of non-productive “held-away” payments associated with tri-weekly service.
- OBS Labor - \$1.9 million: Labor costs for on-board service crews that provide food and customer service on trains based on anticipated crew assignments and existing wage/benefit rates. Efficiency improves, however, because under current schedules, the OBS crew that arrives in Chicago on Monday does not leave for their return to New York until Tuesday. These held-away expenses are eliminated with daily service.
- F&B and Commissary - \$1.1 million: These provisioning costs are calculated based on projected ridership increases on the *Cardinal* route.
- Yard Operations - \$0.5 million: Amtrak estimates additional switching costs in Indianapolis.
- Maintenance of Equipment - \$1.3 million: The increase is from the combination of increased staffing plus running maintenance costs associated with 0.5 million more car miles and 0.3 million more locomotive miles.
- Station Costs - \$0.4 million

² Note: Operating cost estimates, especially those for T&E and host railroad access, are based on preliminary schedules that have not been reviewed with the host railroads. Should the proposed changes be implemented, the schedule will be subject to negotiations with the host railroads. Because of T&E operating rules, small changes in schedules may cause large swings in T&E costs. Any changes to the schedules may create operating inefficiencies, which would significantly increase T&E operating costs.



IX. Appendix D - Current Schedule

Hoosier State	Cardinal	Cardinal	◀ Train Name ▶				Cardinal	Hoosier State	
851	51	51	◀ Train Number ▶				50	850	
SuTuWeFr	Dp NYC WeFr	Dp NYC Su	◀ Normal Days of Operation ▶				Ar NYC WeFrSu	SuMoWeFr	
			◀ On Board Service ▶						
ReadDown		Mile	▼		Symbol	▲	Read Up		
	6 45A	6 55A	0	Dp	New York, NY (ET) -Penn Station	● & QT	Ar	9 45P	
	R 7 05A	R 7 13A	10	↓	Newark, NJ-Penn Station	● & QT	↑	D 9 23P	
	R 7 40A	R 7 47A	58		Trenton, NJ	● & QT		D 8 43P	
	R 8 16A	R 8 20A	91		Philadelphia, PA-30th St. Station	● & QT		D 8 09P	
	R 8 41A	R 8 45A	116		Wilmington, DE	● & QT		D 7 45P	
	R 9 29A	R 9 35A	185		Baltimore, MD-Penn Station	● & QT		D 6 54P	
	R11 10A	R11 10A	225		Washington, DC	● & QT		D 5 55P	
	R11 29A	R11 29A	233		Alexandria, VA	● & QT		D 5 19P	
	12 02P	12 02P	258		Manassas, VA	○		4 35P	
	12 35P	12 35P	293		Culpeper, VA	○		4 00P	
	1 55P	1 55P	340		Charlottesville, VA ↔ Richmond—see back	● & QT		2 47P	
	2 57P	2 57P	379	Staunton, VA	○	1 31P			
	4 05P	4 05P	437	Ar	Clifton Forge, VA (Homestead)	○	Dp	12 19P	
	4 08P	4 08P	472	Dp	White Sulphur Springs, WV (Greenbrier)	○	Ar	12 14P	
	5 00P	5 00P		11 25A					
	** 5 31P	** 5 31P	496		Alderson, WV	○		**10 53A	
	6 01P	6 01P	517		Hinton, WV	○		10 23A	
	6 31P	6 31P	540		Prince, WV (Beckley)	● & B		9 53A	
	** 6 47P	** 6 47P	551		Thurmond, WV	○		** 9 36A	
	7 38P	7 38P	592		Montgomery, WV	○		8 45A	
	8 10P	8 10P	619		Charleston, WV	● & B		8 16A	
	9 35P	9 35P	668		Huntington, WV	● & B		7 09A	
	9 58P	9 58P	683		Ashland, KY (Kenova, WV)	& ○		6 29A	
	10 41P	10 41P	712		So. Portsmouth-So. Shore, KY	& ○		5 44A	
	11 36P	11 36P	766		Maysville, KY	○ & B		4 51A	
	1 03A	1 03A	828	Ar	Cincinnati, OH-Union Terminal	● & B	Dp	3 29A	
	1 10A	1 10A		Ar			3 17A		
	3 05A	3 05A	893		Connersville, IN	○		1 26A	
	4 44A	4 44A	951	Ar	Indianapolis, IN ↔ Davenport, Galesburg, Champaign— see back	● & B	Dp	11 59P	
6 00A	6 00A	6 00A		Ar			11 50P		
	** 6 58A	** 6 58A	** 6 58A	998	Crawfordsville, IN	○ & B		**10 30P	
	7 32A	7 32A	7 32A	1025	Lafayette, IN (ET)	○ & B		9 58P	
	7 37A	7 37A	7 37A	1072	Rensselaer, IN (CT)	○		7 49P	
	8 27A	8 27A	8 27A	1118	Dyer, IN	○		6 58P	
	10 05A	10 05A	10 05A	1147	Ar	Chicago, IL-Union Station (CT) ↔ Madison—see back	● & QT	Dp	5 45P
	Ar CHI SuTuWeFr	Ar CHI ThSa	Ar CHI Mo					Dp CHI TuThSa	Dp CHI SuMoWeFr

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