

Ohio Passenger Rail Expansion



Options for service improvements under S.1626

January 2016

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Executive Summary

Ohio has many demographic factors that make it a strong candidate for expanded passenger rail service. Factors include numerous colleges with each having more than 10,000 students (750,000 students total statewide). Ohio has seven metro areas with 500,000 or more people and three with 2 million or more people. Ohio ranks in the top-10 in state population and in population density. Despite strong support for passenger rail at many chambers of commerce, local governments, metropolitan planning organizations and from most of its Congressional delegation, Ohio has virtually no intercity passenger rail.

Ohio has so little passenger rail because the state government is not currently supportive of it. Federal funding for expansion disappeared in the 1990s and, since, federal policy has put the responsibility on states to expand and maintain passenger rail. Because of that policy, because of Ohio's unwillingness to support rail and due to Amtrak's withdrawal from shipping mail/express, Ohio lost more passenger rail route-miles and more train-miles of passenger service in the 2000s than any other state except Florida.

Opportunities now exist to expand Ohio passenger rail service. The Federal Railroad Administration (FRA) in 2016 will develop multistate passenger rail system plans for the Southeast and Midwest, including Ohio. Also, S. 1626, the bipartisan Railroad Reform, Enhancement, and Efficiency Act of 2015 (RREEA) would for the first time since 1997 allow federal funds to be used for passenger rail expansion. This would come from RREEA's Sec. 301 provision that, if adequately funded by Congress, will provide three-year operating assistance grants to launch or restore intercity rail passenger transportation.

All Aboard Ohio, a nonprofit educational association of citizens and rail/transit users, wants its voice to be heard as the FRA's multistate plans for expansion are formed and Amtrak or other applicants seek Sec. 301 grants for expansion. These could include routes that were omitted from the national system or discontinued due to factors other than passenger usage, such political factors or the rationalization and downgrading of private railroad infrastructure. Sec. 301 offers an opportunity to right past wrongs and finally provide Ohioans with passenger rail service on routes they are likely to use. These basic system expansions could also provide the foundation for further expansions and service improvements, as was the case in Ohio's neighboring states.

All Aboard Ohio recommends these six Ohio expansions, listed in order of their apparent ease of implementation based on the extent of passenger rail-supportive infrastructure (quality of track, stations, PTC signals, layover/servicing facilities, etc.), freight rail traffic conditions, and potential ridership (based on the most recent studies):

1. **Daily Cardinal:** The annual operating subsidy for this Chicago-Cincinnati-New York City train could increase by \$2 million per year but cut the loss per passenger by 31 percent and boost ridership 96 percent (per Amtrak 2010 Performance Improvement Plan). Amtrak may soon have the equipment necessary for this expansion. No additional infrastructure capacity may be needed beyond what is being added now in Virginia and Indiana.
2. **Pennsylvanian restoration to Chicago via Detroit:** Based on running cars through Pittsburgh to Chicago on the Capitol Limited, the annual operating subsidy could be \$700,000 per year, but cut the loss per passenger 15 percent and boost ridership 9 percent (per Amtrak 2010 Performance Improvement Plan). Amtrak in 2014 considered extending the Pennsylvanian west of Pittsburgh to Chicago via Detroit as an independent train with little or no added subsidy. Amtrak may soon have the equipment necessary for this expansion. However, traffic capacity enhancements between Dearborn and Pittsburgh may be required for this expansion as would a new track connection at Ravenna to route this service via Youngstown which has 12 times more population than the existing Cleveland-Pittsburgh Amtrak route through Alliance.

3. **Tidewater section of the Cardinal to Detroit and to Norfolk:** The Cardinal adding a Tidewater section would serve the Midwest's three largest cities – Chicago, Detroit and Columbus. While the original Chesapeake & Ohio Detroit-Newport News “Sportsman” was discontinued shortly before Amtrak, there was an Amtrak train that served part of its market. From 1974-1979 Amtrak ran the Mountaineer from a connection with the Cardinal near Russell, KY to Norfolk, VA. All Aboard Ohio's proposed Tidewater service would run it combined with the Cardinal as a single train from Russell, KY for 362 miles to Gordonsville, VA. It would run separate from Pontiac/Detroit to Russell and from Gordonsville to Norfolk, connecting with existing Amtrak trains to Chicago at Toledo and Detroit, and at Richmond to Florida. Other than new equipment, little capital cost may be necessary for this service. Annual operating subsidy could be low at about \$16.4 million.
4. **Cincinnati section of Lake Shore Limited:** A 1990 Amtrak study of Service To Areas Not Presently Served proposed operating Cincinnati-Cleveland-New York City cars on the Chicago-Cleveland-New York City/Boston Lake Shore Limited. It would restore Amtrak service to Columbus (the nation's largest metro area without any passenger rail service) and Dayton for the first time since 1979. Amtrak projected this would be the nation's highest-ridership new service, attracting 133,000 first-year riders and incurring an operating subsidy of \$3.9 million in 1990. Up to a half-dozen en route stations in Ohio could be added. Amtrak may soon have the equipment necessary for this expansion. Grade crossing circuits will need to be lengthened to speed up trains and passenger-funded PTC may be needed Columbus-Galion. Modest capacity enhancements could be added to address traffic choke points with future improvements made to speed up an initially slow schedule.
5. **Three Rivers restoration via Detroit:** Operating on a 12-hour counter-schedule and on the same route as the Pennsylvanian extension (Chicago-Detroit-Pittsburgh-New York City), the Three Rivers would provide daylight service across Ohio and an overnight train to the East Coast. The prior Three Rivers carried 135,000 passengers at an operating loss of \$28 million per year due to an unpopulated route west of Akron and high costs from food service and sleeping cars. Service should be restored only if a new operating plan is more cost effective. About 3-4 trainsets of 5-7 cars each may be needed. While stations and PTC are in place, significant additional mainline capacity is likely required to accommodate this train.
6. **Broadway/National Limited restoration:** The National Limited (Kansas City-Columbus-New York City until 1979) and Broadway Limited (Chicago-Fort Wayne-New York City until 1990) were taken from their Ohio cities as a result of the private-sector downgrading their routes. This restoration proposal seeks to combine the best of the remaining segments by operating Chicago-Fort Wayne-Lima-Columbus-Pittsburgh-East Coast. An annual operating subsidy in the \$10 million to \$15 million range for the portion west of Pittsburgh is possible with through cars on an existing train(s) to the East Coast. Needed are numerous en route station facilities, PTC, new passing sidings and lengthened crossing circuits on almost all sections west of Pittsburgh, major trackwork between Gary, IN and the Illinois state line, new rails west of Dunkirk, OH and about 3-4 trainsets of 5-7 cars each.
7. **Midwest-Florida passenger rail:** In the year leading up to the May 1, 1971 start of Amtrak, most basic system plans for Amtrak included a Detroit-Cincinnati route. Despite their high ridership and operating performance potential, this was ultimately omitted from the final basic system. All Aboard Ohio believes that Midwest-Florida rail services that are routed mostly on Norfolk Southern (NS)-owned or NS-leased tracks (the Cincinnati-Chattanooga portion is owned by the City of Cincinnati) between Detroit-Toledo-Columbus-Cincinnati-Lexington-Chattanooga-Atlanta-Jacksonville-Orlando (link with All Aboard Florida to Miami and buses to Tampa) would attract significant ridership. The operating subsidy could range from \$43 million to \$60 million per year and significant capital costs on this route, possibly up to \$343 million for passing sidings, rolling stock, track connections in Toledo and Chattanooga, and about 18 new stations are envisioned.



ILLUSTRATION 1: Existing passenger rail in Ohio (light blue lines) is daily across northern Ohio but thrice-weekly along the Ohio River. All trains travel Chicago-East Coast on overnight schedules, stopping at Ohio's seven stations at inconvenient times.

Even if just the first three suggested expansions are implemented, passenger rail in Ohio would have better service coverage and the beginnings of a connected passenger rail network. Momentum would be created in Ohio, passenger rail would have visibility, and ridership as a political constituency for further expansion would now exist. Expansions #4-#7 would provide an even stronger foundation for more expansion, faster service and a truly competitive passenger rail network.

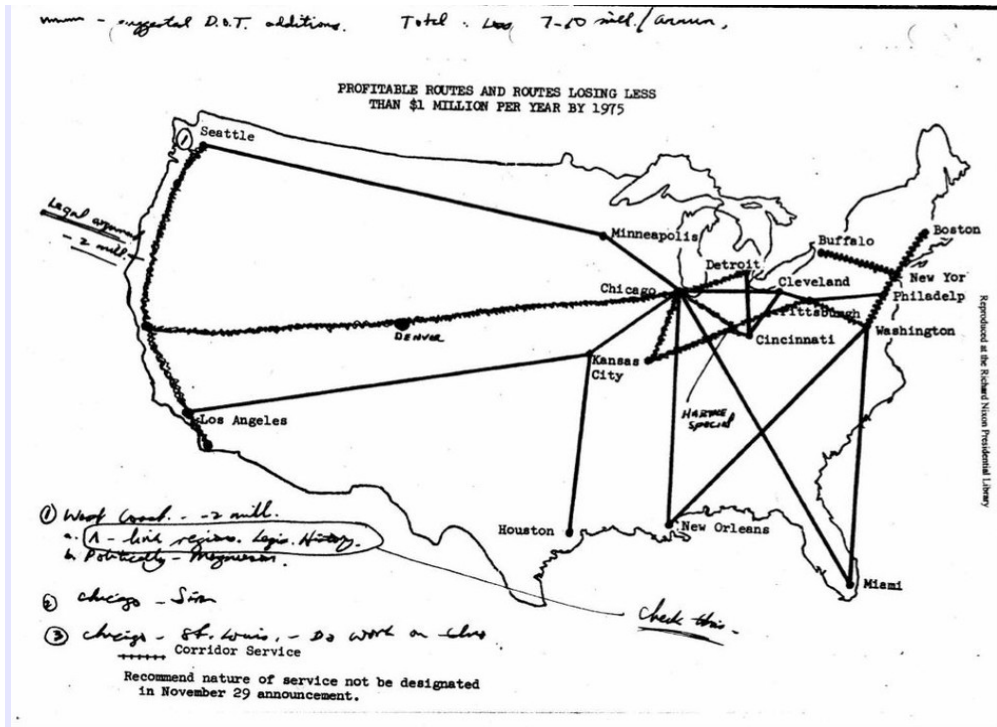
Background

All transportation infrastructure and services are sustained by the public sector but in varying ways based on the different political eras in which the public policies affecting them were created. While aviation and highway infrastructure is the domain of the public sector and heavily subsidized, the operation and financing of vehicles over that infrastructure is predominantly the domain of the private sector. The inverse is true of passenger rail. Its operations are primarily owned and subsidized by the public sector but the trains rely on privately owned, managed and financed infrastructure.

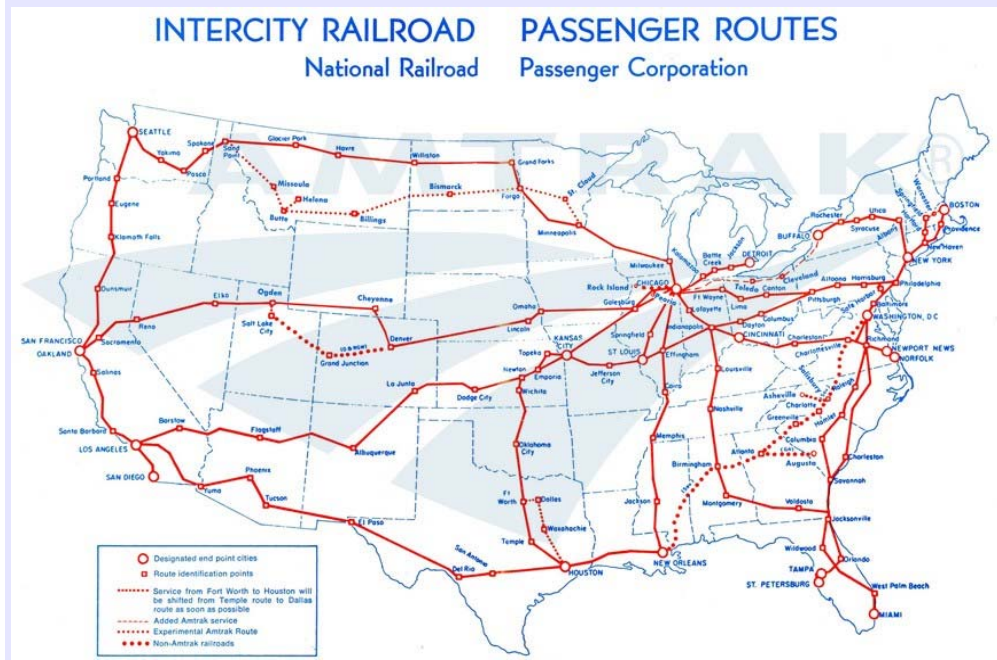
Thus, for passenger rail in Ohio and all other states to improve and expand, such efforts must be initiated by the public sector and partner with the private sector-owned rail network to accommodate on its terms. With that in mind, we have an opportunity to improve passenger rail service to Ohio, a state that in 2013 ranked 7th in the nation in population and 9th in population density (Source: Census).

All of the states ranking higher than Ohio in overall population and in population density fund programs for regional and/or intercity passenger rail capital improvements and/or ongoing train operations. There are also 21 states with less overall population and 18 states with less population density than Ohio that fund regional and/or intercity passenger rail service capital improvements and/or ongoing operations (Sources: APTA and Amtrak). Ohio is by far the most populous state with no passenger rail program.

Thus, Ohio has no regional commuter railroad service (not including highly localized urban rail transit in Cleveland and the new streetcar in Cincinnati). And it has very little intercity passenger rail service. Ohio's only passenger train services are provided by Amtrak as part of its basic system network first established by Congress in 1971. The few Ohio routes are those that link Chicago to the East Coast on overnight schedules, so they pass through Ohio during inconvenient hours.



ILLUSTRATIONS 2-3: USDOT's November 1970 proposed Basic System map (above) for Railpax that started operations as Amtrak on May 1, 1971. Despite this promising map, a lack of response to USDOT by Ohio's Congressional delegation kept the north-south routes in Ohio off the Amtrak map in July 1971 (below). Ohio briefly funded a Chicago-Toledo-Cleveland-Buffalo-New York "Lake Shore" in 1971, Amtrak's first state-supported route. Maps are courtesy of the Richard Nixon Presidential Library.



Ohio has had many opportunities to participate in new policies and programs to achieve the kinds of passenger service enjoyed by our neighbors in Illinois, Indiana, Michigan, New York and Pennsylvania. This goes back to very formation of Amtrak when members of Ohio's Congressional Delegation did not respond to U.S. Department of Transportation requests for input on proposed routes (see maps on prior page).

Here is a brief history of passenger rail service in Ohio since Amtrak began in 1971:

Gov. John Gilligan in 1971 secured state funding for an Amtrak-operated Chicago-Toledo-Cleveland-Buffalo-New York City "Lake Shore" passenger route in partnership with New York state. However, New York held back on funding until a review of passenger rail funding priorities was completed. The Lake Shore was discontinued in January 1972.

At the urging of the Ohio Association of Railroad Passengers (now dba All Aboard Ohio), Senator Bob Taft Sr. convinced the USDOT to make the Chicago-Cleveland-New York City "Lake Shore Limited" Amtrak's experimental route of 1975. The service continues to this day and has consistently been one of Amtrak's most popular trains.

In the mid-1970s, Gov. James Rhodes pushed a transportation bond issue that would have included a Cleveland-Columbus-Cincinnati (3C) passenger rail service that rail passenger advocates and environmental organizations supported. But they opposed the huge proposed expansion of roads. So the 3C passenger rail was dropped and the roads were built anyway.

US Rep. Harley Staggers of West Virginia encouraged Amtrak to provide numerous trains to his state. One of those originated in Ohio, the Shenandoah, which operated every night each way between Cincinnati and Washington DC via Ohio stations in Loveland, Chillicothe, Athens plus a cross-river station in Parkersburg. It operated from 1976-81.

Youngstown and Warren in 1977 lost the weekday Conrail (a Erie-Lackawanna operation before 1976) commuter train to Cleveland, ending passenger rail service to Greater Warren-Youngstown for the first time since the 1840s.

Two Ohio routes lost Amtrak service a decade apart due to main rail corridors being downgraded and/or abandoned. The first was the National Limited (New York City-Pittsburgh-Columbus-Dayton-Indianapolis-St Louis-Kansas City) that was a victim of systemwide route cuts by President Jimmy Carter. Greater Columbus remains the largest metro area in the Western Hemisphere without any regularly scheduled rail passenger service; Greater Dayton is one of the nation's largest metros with no passenger trains.

President Ronald Reagan's 1981 budget cuts caused the loss of the Shenandoah and the daily Cardinal (Chicago-Cincinnati-Charleston-Washington DC), ending all service to Cincinnati. Thus, four of Ohio's largest metro areas lost passenger rail service 1977-81. Senator Robert Byrd of WV restored the Cardinal in 1982 as a thrice-weekly train, a schedule it has operated with ever since.

Planning advanced for a high-speed system of passenger trains urged by Ohio Rep. Arthur Wilkowski and later by Sen. Robert Boggs. Ohio voters defeated a 1982 sales tax increase to construct the high-speed train system.

OARP responded in 1983 by urging construction of a low-cost, conventional-speed passenger rail system between the 3Cs and Cleveland-Youngstown-Pittsburgh to build the ridership base and political constituency for a higher-speed system. Cutbacks in federal funds to support state programs in 1986 discouraged Gov. Richard Celeste from budgeting \$10 million for the conventional rail system.

Conrail announced in 1989 it would downgrade its Fort Wayne Line west of Bucyrus and said it would pay to reroute Amtrak's Broadway Limited (Chicago-New York City) and Capitol Limited (Chicago-Washington DC) out of Canton, Crestline-Mansfield and Lima to more northerly routes. In 1990, the Capitol was rerouted through Alliance, Cleveland, Elyria, Sandusky and Toledo while the Broadway was rerouted via Youngstown, Akron and Fostoria. The Broadway ended service in 1995, was restored in 1996 as the Three Rivers and terminated again in 2005.

ODOT's Access Ohio plan in 1992 got overwhelming public input encouraging 3C and Toledo-Pittsburgh passenger trains. Planning for those routes, plus Cleveland-Akron commuter trains, advanced to where the new Ohio Rail Development Commission requested \$60 million in state capital budget funds for the new routes. Gov. George Voinovich's Chief of Staff Paul Mifsud, later convicted for contract steering, angrily confronted ORDC commissioners at a public meeting stating "they were in outer space" for seeking passenger rail expansion. The commissioners withdrew their funding request.

In 1997, ODOT began planning for a multi-year, \$500 million rebuild of I-71 from Cleveland to Columbus and a parallel passenger rail service to begin during construction. CSX requirements for added trackwork pushed the cost beyond what ODOT was willing to fund, and the 2C rail plan was dropped in 2002.

After a decade of All Aboard Ohio advocacy, Amtrak in 1998 restructured its New York City-Philadelphia-Pittsburgh Pennsylvanian into a Philadelphia-Pittsburgh-Cleveland-Toledo-Chicago route. The service was hampered by rail traffic issues following the sale of Conrail and by a lack of Amtrak marketing. Amtrak ended the service in 2003 when it withdrew from the mail and express business.

Gov. Bob Taft Jr. led ORDC's efforts to develop the Ohio Hub System freight and passenger rail plan to improve rail infrastructure to improve freight traffic fluidity and add passenger rail service on an 860-mile network. However planning never advanced past the conceptual stage during Taft's administration.

When 100% federal stimulus funds became available in 2009, planning for 3C rapidly accelerated. Gov. Ted Strickland applied for \$560 million and got \$400 million for 3C 79 mph passenger rail. ODOT/ORDC also secured \$7 million for planning of capital improvements necessary to speed up the trains to 110 mph. Despite value capture from private sector real estate development that would have sustained the operating costs of the trains, after losing to anti-rail John Kasich, Gov. Strickland told USDOT it was unlikely Ohio would use the \$400 million. USDOT reallocated the funds to other states before the new Republican majority in the U.S. House could rescind unobligated funds.

Senate bill 1626

The U.S. Senate incorporated into its surface transportation reauthorization a rail title that includes S.1626, the bipartisan Railroad Reform, Enhancement, and Efficiency Act of 2015. The Senate passed the surface transportation reauthorization in July with the rail title.

If passed by the U.S. House of Representatives, signed into law by President Barack Obama, and funded by annual Congressional appropriations, S.1626 would for the first time this century authorize new federal operating funding for expanded passenger rail service. Amtrak has been prohibited since 1997 from expanding services that would increase its federal operating support.

Under the most recent law, the Passenger Rail Investment & Improvement Act of 2008, only states or federally recognized multi-jurisdictional initiatives could provide public funding to expand passenger rail. Further, all routes shorter than 750 miles had to be supported by non-federal entities and their rate of operating and capital support be no different than that of other sponsors around the nation. Given Ohio's unwillingness to sponsor passenger rail services, the chances of Ohio seeing expanded service was nonexistent.

That would change under S.1626. First, the bill (under Sec. 204) would give local and regional governments a stronger voice in rail planning and development decisions. This is important in a state like Ohio that has an anti-rail state government but pro-rail local and regional governments.

Under Sec. 204, Amtrak must contract with an independent entity to objectively determine what intercity rail passenger transportation routes and services it should provide—including the establishment of new routes, the elimination of existing routes, and the contraction or expansion of services or frequencies. While potentially problematic, the Senate's proposal establishes a comprehensive framework for analyzing a route that recognize the unique benefits rail service provides.

These metrics include:

- Connectivity a route provides as part of the national network;
- Transportation needs of communities and populations that are not well served by other forms of intercity transportation;
- Financial and operational effects on the overall network, including considerations related to shared and indirect costs;
- Views of states and communities served by the route.

Information required by Sec. 204 could encourage communities in states like Ohio to unite in seeking expanded service. Or expansions could follow the Midwest passenger rail plan to be developed by the FRA starting in 2016 and initiated by the U.S. Department of Transportation under Section 301: Competitive Operating Grants. This section of S.1626 requires the Secretary of Transportation to develop a program for issuing three-year operating assistance grants to launch or restore intercity rail passenger transportation.

This provision emphasizes restoring service:

- For which planning, design, environmental reviews, equipment acquisition, and construction have been completed or almost completed;
- That would restore service over routes formerly operated by Amtrak;
- That would provide daily or daytime service, where such service does not previously exist;
- That include private funding (including funding from railroads);
- That would provide service to regions and communities underserved or not served by other intercity public transportation;
- That would foster economic development, particularly in rural communities and for disadvantaged populations, and provide other non-transportation benefits;
- That would enhance connectivity and geographic coverage of the existing national network of intercity passenger rail service.

That is why it the timing of the FRA's multistate Midwest passenger rail planning is so important. And this is why All Aboard Ohio is issuing this report now – to add the citizens' and passengers' voice to that planning effort.

Ohio Amtrak routes discontinued

As noted earlier, Ohio has lost a great deal of Amtrak service over the decades. But those losses have not eased more recently. In fact, in the most recent round of service cuts 2003-05, Ohio has seen more Amtrak service cut than any other state (Florida's total is larger if suspended service is included).

Compare the rail service cuts since 2000 in the two states that lost the most:

AMTRAK SERVICE DISCONTINUED IN OHIO*

Pennsylvanian – PHL-CHI route cut to NYP-PGH in 2003: 260 route miles in Ohio lost.

Three Rivers – NYP-CHI route eliminated in 2005: 244 route miles in Ohio lost.

TOTAL OHIO ROUTE MILES LOST: **504**

TOTAL OHIO DAILY TRAIN-MILES OF SERVICE LOST: **1,008**

* Does not include daily PHL-CHI Skyline Connection train on same route as *Pennsylvanian* that Amtrak was slated to begin in 2003 but canceled when it was apparent that Amtrak was going to eliminate its mail/express services. The Skyline Connection represents a lost opportunity of additional 260 route miles and another 520 train-miles of daily service on a daytime schedule in both directions across Ohio (see service schedule below that was officially published in Amtrak's National Timetable).

CHICAGO-CLEVELAND-PITTSBURGH SERVICE															
Chicago • Toledo • Cleveland • Pittsburgh															
Pennsylvanian	Skyline Connection	Lake Shore Limited	Capitol Limited	Three Rivers	◀ Train Name ▶			Three Rivers	Capitol Limited	Lake Shore Limited	Skyline Connection	Pennsylvanian			
44	46	48	30	40	◀ Train Number ▶			41	29	49	45	43			
Daily	Daily	Daily	Daily	Daily	◀ Days of Operation ▶			Daily	Daily	Daily	Daily	Daily			
					◀ On Board Service ▶										
Read Down								Mile	Symbol	Read Up					
6 00A	1 30P	7 00P	7 45P	9 20P	Dp	Chicago, IL—Union Sta. ● Madison—see pg. 44	(CT)	0		Ar	8 25A	9 35A	11 15A	6 47P	12 26A
R 6 28A		7 50P	8 45P	10 14P	↓	Hammond-Whiting, IN	(CT)	16		↑	D 7 00A	8 12A	10 06A		D11 07P
						South Bend, IN	(EST)	84				7 08A	9 01A		10 02P
						Elkhart, IN		101				6 41A	8 34A		9 35P
						Waterloo, IN (Ft. Wayne)	(EST)	155				5 51A	7 44A		8 44P
		11 38P				Bryan, OH	(ET)	180				8 16A			
11 05A	6 57P	12 33A	1 24A	Ar	↓	Toledo, OH		234		Dp	5 37A	7 24A	2 41P	8 30P	
11 10A	7 02P	12 50A	1 49A	Dp		Ann Arbor, Detroit—see below				Ar	5 02A	7 04A	2 36P	8 25P	
11 57A	7 49P	1 40A				Sandusky, OH		281		↑		6 09A	1 42P	7 11P	
12 29P		2 16A	3 08A			Elyria, OH (Lorain)		316		↑	3 19A	5 35A		6 38P	
1 11P	9 11P	3 00A	3 44A	Ar	↓	Cleveland, OH—Lakeland Sta.		341		Dp	2 49A	5 05A	12 38P	6 07P	
1 15P	9 15P		3 47A	Dp		Alliance, OH		397		Ar	2 45A		12 33P	6 02P	
2 27P			4 58A			Pittsburgh, PA	(ET)	481		Dp	1 38A		9 05A	4 23P	
4 43P	12 43A		6 51A	8 23A	Ar						11 25P	11 59P		2 44P	

ILLUSTRATION 4: From Amtrak National Timetable; May 21, 2000. Each column of times represents a train, or 10 daily trains total. Of those, only four operate today (Capitol Limited and Lake Shore Limited).

AMTRAK SERVICE DISCONTINUED IN FLORIDA**

Palmetto – NYP-MIA route eliminated, service to Tampa retained by expansion of Silver Star route for a net loss of 468 route-miles

Sunset Limited – LAX-ORL route shortened to LAX-NOL with service suspended following Hurricane Katrina in 2005. Resulted in a service loss to Florida of 564 route-miles.

TOTAL FLORIDA ROUTE MILES LOST: **1,032**

TOTAL FLORIDA DAILY TRAIN-MILES OF SERVICE LOST: **1,419**

**Includes Sunset Limited route east of New Orleans that was suspended, not terminated.

Ohio Amtrak Expansion Options

Ohio's meager rail travel offerings were caused by the state's lack of support for passenger rail and by Amtrak's discontinuances over the decades. S.1626 is a tremendous opportunity to address and reverse many of these losses, where practical. Since the federal policy regarding equalization of funding for routes 750 miles or less remains in effect under S.1626 and that states are providing this funding, **All Aboard Ohio only considered expansions along routes longer than 750 miles.**

The services and planned services considered for restoration are those that Amtrak actually operated or had been planned by Amtrak or the USDOT for Amtrak to operate but were removed from consideration despite strong potential ridership include:

- Daily Cardinal (Chicago-Cincinnati-Charleston-Washington DC-New York City)
- Pennsylvanian (daily, Chicago-Toledo-Cleveland-Pittsburgh-Philadelphia)
- 3C Corridor (daily, Cleveland-Columbus-Dayton-Cincinnati)
- Detroit-Cincinnati Corridor (daily, Detroit-Toledo-Lima-Dayton-Cincinnati)
- Three Rivers (daily, Chicago-Akron-Youngstown-Pittsburgh-Philadelphia-New York City)
- Broadway Limited (daily, Chicago-Fort Wayne-Lima-Crestline-Canton-Pittsburgh-New York City)
- National Limited (daily, Kansas City-St. Louis-Dayton-Columbus-Pittsburgh-New York City)
- Shenandoah (daily, Cincinnati-Loveland-Chillicothe-Athens-Parkersburg-Washington DC)

Each of the above routes/services (if less than 750 miles it was considered whether it could be logically extended as a section of a long-distance train) were subjected to S.1626's criteria and scored 1-5 from weakest to strongest. Detroit-Cincinnati was expanded to Midwest-Florida, a 750+ mile route that was discontinued in 1979 but originated in Chicago.

Ohio Amtrak Expansion Evaluation Matrix*

	Daily Cardinal	Pennsylvanian	Tidewater	3C Corridor	Three Rivers	National Ltd	Broadway Ltd	Midwest-Florida	Shenandoah
Ready to go, or low capital cost	5	5	4	2	1	1	1	1	0
Restores former Amtrak service	5	5	2	2	5	5	5	0	5
Fill void of daily/daytime rail service	5	4	5	5	4	5	4	5	4
Includes private/RR funding	4	3	2	2	3	1	1	3	0
Fills void of other intercity transportation	5	4	5	3	2	3	4	4	4
Spurs non-transportation benefits	5	3	3	4	4	4	5	4	3
Connectivity, geographic coverage	4	4	5	5	4	4	4	5	4
TOTALS	33	28	26	23	23	23	23	22	20

*Based on the routing/operating assumptions shown in the proposed train schedules herein.

Descriptions of Ohio Amtrak expansion options



Illustration 5: Amtrak's Cardinal route.

Daily Cardinal: based on the findings from a 2010 Performance Improvement Plan, Amtrak estimated that expanding service on the Chicago-Cincinnati-New York City Cardinal route from thrice-weekly to daily would increase ridership 96 percent and cut its operating loss per passenger by 31 percent. The annual operating subsidy would increase by \$2 million per year. Amtrak may soon have the equipment necessary for this expansion. No additional infrastructure capacity may be needed above what is being added now by the Buckingham Branch Railroad/Virginia Department of Transportation and by CSX in Indiana.

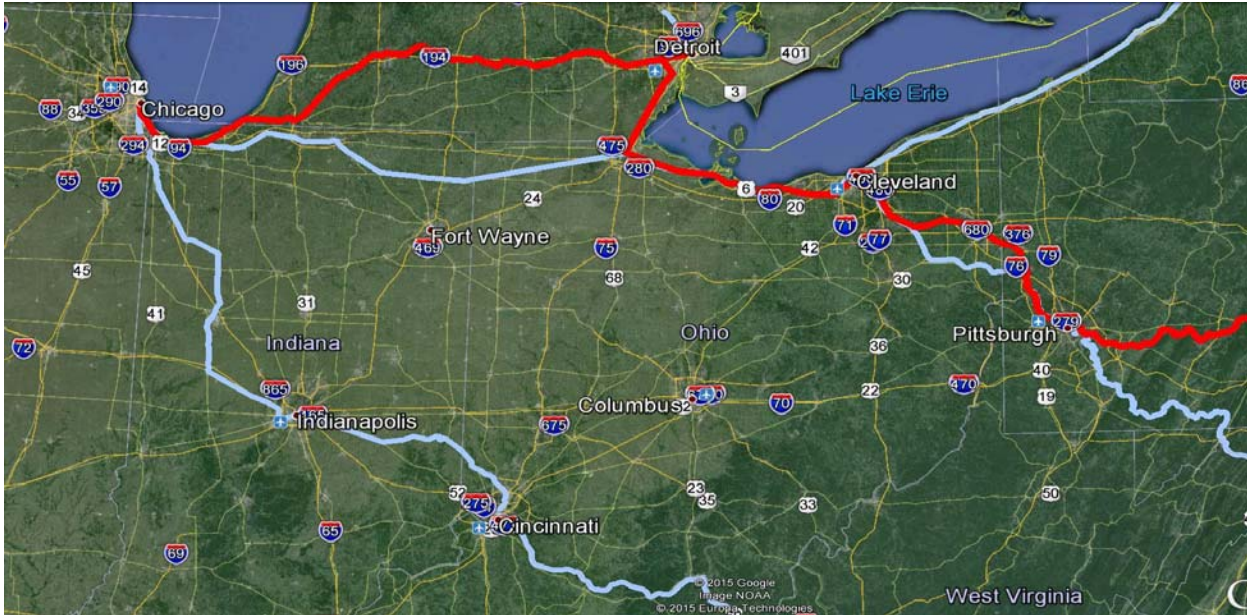


Illustration 6: Proposed route for Pennsylvania extension to Chicago and Three Rivers restoration.

Pennsylvanian extension to Chicago via Detroit: From 1997-2003, Amtrak operated its New York City-Pittsburgh Pennsylvanian service as a Philadelphia-Pittsburgh-Cleveland-Chicago route until it withdrew from the mail/express business. Amtrak in 2010 first studied restoring through service west of Pittsburgh

to Chicago within the Capitol Limited (Washington DC-Pittsburgh-Cleveland-Chicago) Performance Improvement Plan. Cars from the Pennsylvanian would have travelled through Pittsburgh to Chicago and return on the back of the Capitol. Ridership was estimated to increase 9 percent and the route's operating loss would drop 15 percent. The annual operating subsidy would increase by \$700,000 per year. Amtrak in 2014 considered extending the Pennsylvanian to Chicago as an independent train by routing it west of Toledo via Dearborn and the Wolverine Corridor over which Amtrak pays no track use fee. Amtrak estimated little or no subsidy increase. Amtrak may soon have the equipment necessary for this expansion. However, traffic capacity enhancements between Dearborn and Pittsburgh may be required for this expansion, as would a new track connection at Ravenna to permit service via Youngstown.

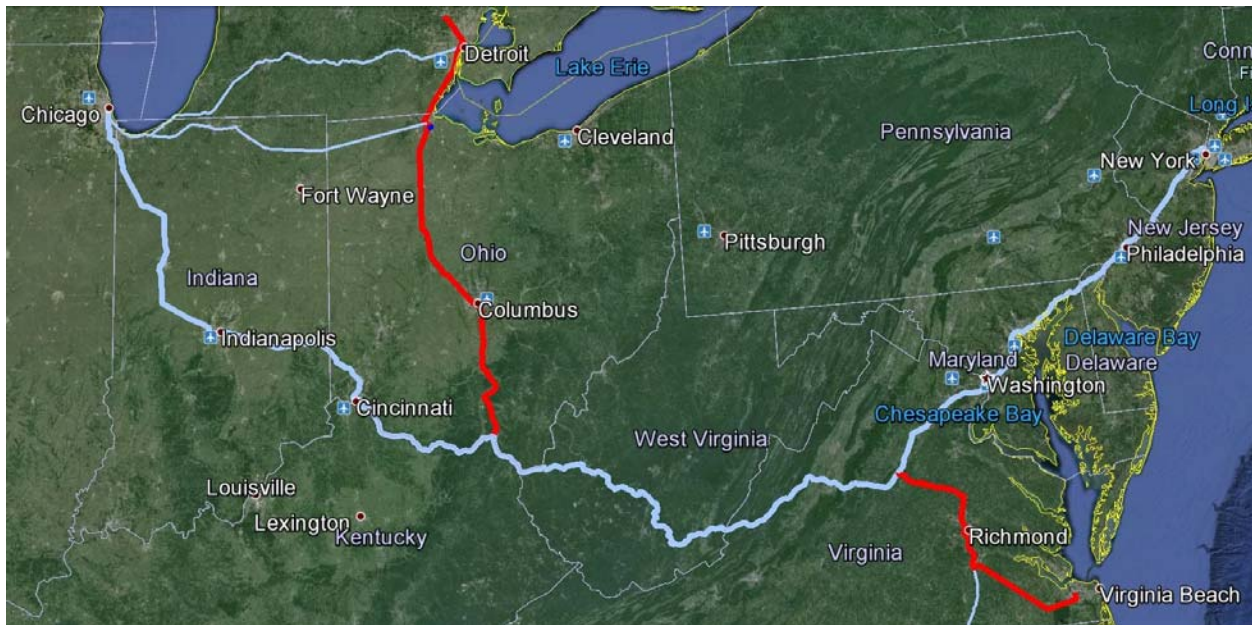


Illustration 7: Detroit-Norfolk Tidewater segments (in red) added to daily Cardinal (thick blue line).

The Tidewater: Shown above in a thick, light-blue line is the existing Amtrak “Cardinal” (Chicago-New York City) route along with the proposed “The Tidewater”-only added segments (in red) to provide a Pontiac/Detroit to Norfolk/Virginia Beach passenger rail service. The two trains would run combined as a single train through the Appalachian Mountains, from Russell, KY to Gordonsville, VA to save on operating costs, promote multiple city-pair travel connectivity (including four route endpoints) and mitigate interference with existing CSX freight train operations. Also shown are thin, light-blue lines as existing Amtrak routes that could provide connecting transportation for travelers using The Tidewater.

Proposed routing Pontiac, MI-Russell, KY (connect to Cardinal):

Pontiac-Detroit (Milwaukee Jct): 22 miles, Canadian National Holly Subdivision;
 Detroit-West Detroit (CP West Detroit): 4 miles, Conrail Shared Assets North Yard Branch;
 West Detroit to Trenton, MI (FN Tower): 13 miles, Conrail Shared Assets Detroit Line;
 Trenton, MI to Toledo, OH (Air Line Junction): 43 miles, Norfolk Southern Detroit Line;
 Toledo to East Toledo Yard (CP 286): 3 miles, Norfolk Southern Chicago Line;
 East Toledo Yard to Walbridge Jct.: 3 miles, CSX Stanley Secondary;
 Walbridge Jct. to CP Stanley: 1 miles, CSX Toledo Terminal Subdivision;
 CP Stanley to Ridgeway, OH: 77 miles, CSX Toledo Branch Subdivision;
 Ridgeway to Columbus (CP 139): 50 miles, CSX Scottslawn Subdivision;
 Columbus, OH to Russell, KY (Riverton): 115 miles, CSX Northern Subdivision;

If the CSX routing between Toledo, OH and Russell, KY is unavailable for any reason, there is a parallel NS route via Bellevue, Columbus, Portsmouth, OH and Kenova, WV. It requires adding an interlocked crossover track at the north end of NS's Watkins Yard in Columbus.

Proposed routing (disconnect from Cardinal) Gordonsville, VA-Norfolk, VA:

Gordonsville, VA-Doswell: 49 miles, Buckingham Branch RR;
Doswell-Richmond: 17 miles, CSX RF&P Subdivision;
Richmond-Petersburg (CP BX): 31 miles, CSX North End Subdivision;
Petersburg (CP BX)-Petersburg (CP Crater): 1 mile, Amtrak connection;
Petersburg (CP Crater)-Petersburg (CP Poe): 3 miles, NS Petersburg Belt Line;
Petersburg-Norfolk, VA: 77 miles, NS Norfolk District.

Illustration 8: On Toledo's southeast side, from Walbridge north to East Toledo, CSX's 2.75-mile Stanley Secondary (dark-blue line) links CSX's Toledo Branch Sub-division (red line) from Bowling Green to NS's Chicago Line (red/light-blue line) to Toledo's MLK Plaza station at the upper-left of the satellite image. The Stanley Secondary is need of track and signal improvements prior to the introduction of passenger service.



Illustration 9: Looking north from Wales Road along CSX's Stanley Secondary toward NS's CP286 (East Toledo Yard). No freight cars are on the connecting tracks in this 2014 view, but it's common for both tracks to be occupied by parked freight cars awaiting pick-up for transfer to either NS or CSX. East Toledo Yard could be expanded to keep one of these tracks (improved with new ties, ballast, continuous welded rails and Positive Train Control signals) open at all times for a passenger train to get through.



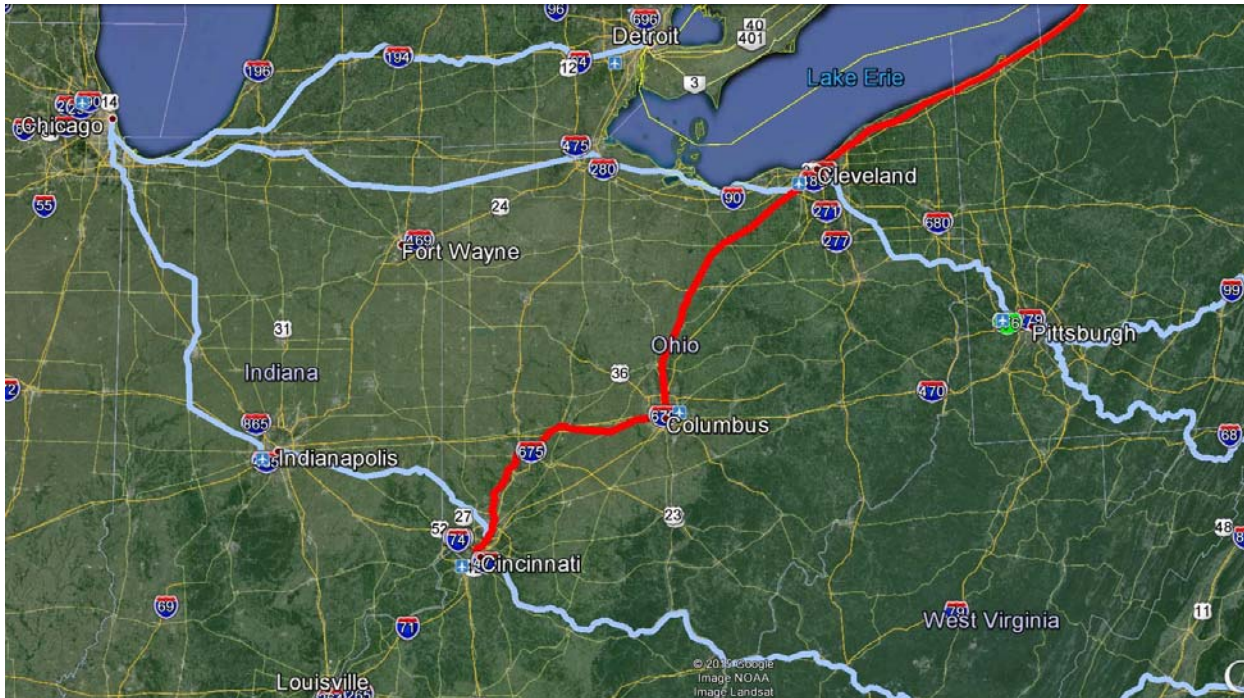


Illustration 10: Proposed route of the Cincinnati section of Amtrak's Lake Shore Limited.

Cincinnati section of Lake Shore Limited: A 1990 Amtrak study of Service To Areas Not Presently Served proposed operating Cincinnati-Cleveland-New York City cars on the Chicago-Cleveland-New York City/Boston Lake Shore Limited. It would restore Amtrak service to Columbus (the nation's largest metro area without any passenger rail service) and Dayton for the first time since 1979. Amtrak projected it would be the nation's highest-ridership new service – #2 was New Orleans-Orlando to which the State of Florida funded track improvements to enable a route extension of the Sunset Limited. Ohio took no similar action even though the Cincinnati section was projected to attract about 133,000 first-year riders and incur a small operating subsidy of \$3.9 million in 1990. Today, that annual operating cost could be in the \$6 million to \$8 million range adjusted for inflation and based on similar routes and services elsewhere. Up to a half-dozen en route stations in Ohio could be added, starting with those in the largest cities. Amtrak may soon have the equipment necessary for this expansion thanks to delivery of Midwest trains to free up equipment. Grade crossing circuits will need to be lengthened to speed up trains and PTC, if not provided by CSX on its Columbus-Galions segment to meet federal requirements, will need to be added at the expense of the passenger service sponsor. Capacity enhancements would be added to address traffic choke points with future improvements made to speed up an initially slow schedule.

Three Rivers restoration via Detroit: Operating on a schedule roughly 12 hours opposite of and on the same route as the Pennsylvanian extension (Chicago-Detroit-Pittsburgh-New York City), the Three Rivers would provide more daylight service to Ohio cities and an overnight train to the East Coast. The previous Three Rivers carried 135,000 passengers per year in its final years at an annual operating loss of \$28 million (\$39 million adjusted for inflation) over an unpopulated route west of Akron and incurring high costs from food service and sleeping cars. Service should be restored if a new operating plan is shown by an analysis to be cost-effective. A significant amount of equipment totalling 3-4 trainsets of about 5-7 cars each may be needed. While all stations are in place and PTC will soon be in place, significant additional mainline capacity may be required to accommodate this train. Crossing circuits should be lengthened so this and other passenger trains can operate at up to 90 mph where track conditions permit.

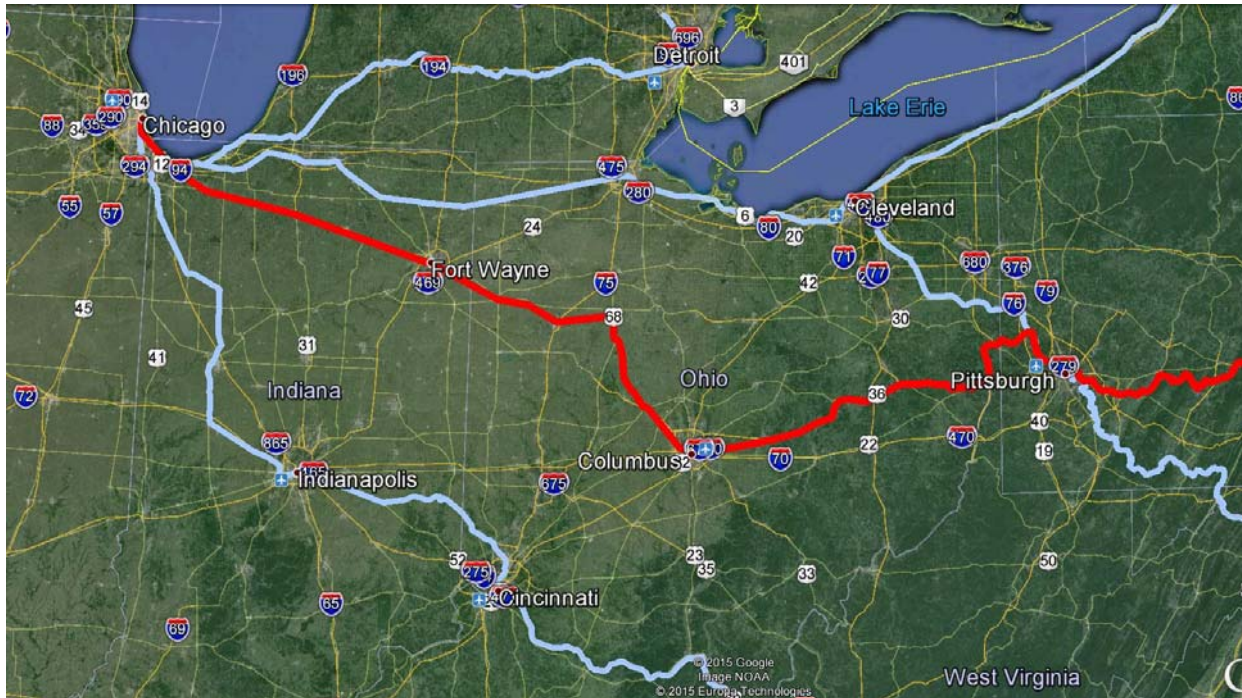


Illustration 11: Proposed route of a combined restoration of Amtrak's Broadway Limited/National Limited.

Broadway/National Limited restoration: The National Limited (Kansas City-Columbus-New York City until 1979) and Broadway Limited (Chicago-Fort Wayne-New York City until 1990) were eliminated as a result of plans by the private-sector to downgrade or abandon their routes. Conrail rebuffed efforts by the public or other carriers to acquire these rights of way to preserve rail service. Such abandonments and downgraded lines were the result of short-sighted, selfish efforts by Conrail to restrain competition and increase shareholder values. But this caused economic pain for many communities, passengers and shippers who have yet to recover decades later. Our restoration proposal seeks to combine the best of the remaining segments by operating Chicago-Fort Wayne-Lima-Columbus-Pittsburgh-East Coast. To improve the cost-effectiveness of this expansion, it is proposed to operate with through cars on an existing train to either New York City or Washington DC. Studies should identify the best eastern terminus for this train. This service would also be scheduled to connect at Columbus with the Cincinnati section of the Lake Shore to enable Cincinnati-Dayton travel to/from Pittsburgh and beyond. Even with these cost-saving, revenue-enhancing possibilities, an annual operating subsidy in the \$10 million to \$15 million range for the portion west of Pittsburgh is not out of the question. Needed are numerous en route station facilities, PTC, new passing sidings and lengthened crossing circuits on almost all sections west of Pittsburgh, major trackwork between Gary, IN and the Illinois state line, new rails west of Dunkirk, OH and about 3-4 trainsets of 5-7 cars each.

Shenandoah restoration: Shortly after Amtrak's daily, overnight Cincinnati-Loveland-Chillicothe-Athens-Parkersburg-Washington DC was discontinued following President Ronald Reagan's 1981 budget cuts, CSX abandoned a significant portion of the former Baltimore & Ohio St. Louis-Washington DC mainline. Most of the mainline east of Greenfield, OH to Clarksburg, WV was removed by 1984. CSX rebuffed efforts by the public or other carriers to acquire these rights of way to preserve rail service. Such abandonments and downgraded lines were the result of short-sighted, selfish efforts by the CSX to restrain competition and increase shareholder values. Yet this caused economic pain for many communities, passengers and shippers who have yet to recover decades later. The cost of restoring this long-gone mainline for passenger service would be cost-prohibitive. The remaining segments of this mainline do not offer opportunities for passenger rail restoration except for those which already have it.

The Cumberland-Washington DC portion of Amtrak's Chicago-Washington DC Capitol Limited was started in 1982 to partially make up for the loss of the Shenandoah.

Midwest-Florida restoration: When Amtrak's route network was being established by the U.S. Department of Transportation and Office of Management and Budget in 1970, passenger rail service between Detroit-Toledo-Lima-Dayton-Cincinnati appeared in the drafts. It was removed after being circulated publicly and after Congressional input was sought. A string of population centers and universities would be served by this route that parallels heavily traveled I-75. The most direct route is CSX's Toledo Subdivision, route of B&O's Cincinnati. This rail corridor is still in excellent condition, but given the freight traffic on this line and CSX's views toward passenger trains, other route options (such as a mix of CSX, NS and G&W via Toledo-Bowling Green-Findlay-Lima-Springfield) may be considered. However, these routes lack PTC and, for the most part, do not have high-quality track. Addressing these will drive up capital costs. Also, the Detroit-Cincinnati corridor is only about 250 miles long; federal law puts the operating cost responsibility for routes less than 750 miles long on states. Ohio isn't likely to fund it. Another option would be to operate this route as a section of a long-distance train. One possibility could involve a Detroit section of the Cardinal. But ridership potential for such a circuitous routing between Detroit/Toledo and the East Coast is problematic. The Detroit-Cincinnati route would fit better into a Midwest funnel of routes linking to Atlanta and Florida, but the capital costs for restoring a variation of "The Floridian" route would be far larger yet the ridership potential might also be large and it would serve a large geographic void in the National System.



Illustration 12: Map of all the existing Amtrak/proposed expansions to/through Ohio

Conceptual train timetables for discussion purposes appear on the following pages.

New York ● Washington ● Pittsburgh ● Cleveland ● Dearborn ● Chicago											
41	49	29	43			◀ Train Number ▶		40	48	30	42
Daily	Daily	Daily	Daily			◀ Days of Operation ▶		Daily	Daily	Daily	Daily
Read	Down			Miles						Read	Up
9 50P	6 30P		10 52A	0	Dp	New York, NY Penn Station	Ar	8 58A	12 27P		5 43P
10 07P			11 09A	10	Dp	Newark, NJ	Dp	8 33A			5 23P
10 42P			11 44A	58	Dp	Trenton, NJ	Dp	8 09A			4 49P
11 12P			12 15P	91	Ar	Philadelphia, PA	Dp	7 38A			4 18P
11 42P			12 42P		Dp	30th Street Station	Ar	7 08A			3 48P
12 12A			1 12P	110	Dp	Paoli, PA	Dp	6 37A			3 07P
12 52A			1 52P	159	Dp	Lancaster, PA	Dp	5 53A			2 23P
1 06A			2 06P	177	Dp	Elizabethtown, PA	Dp	5 36A			2 06P
1 26A			2 26P	195	Ar	Harrisburg, PA	Dp	5 18A			1 48P
1 46A			2 36P		Dp	30th Street Station	Ar	5 08A			1 38P
2 56A			3 46P	256	Dp	Lewistown, PA	Dp	3 34A			12 04P
3 32A			4 22P	293	Dp	Huntingdon, PA	Dp	2 57A			11 27A
3 58A			4 48P	313	Dp	Tyrone, PA	Dp	2 30A			11 00A
4 16A			5 06P	327	Dp	Altoona, PA	Dp	2 14A			10 44A
5 10A			6 00P	366	Dp	Johnstown, PA	Dp	1 17A			9 47A
5 51A			6 41P	403	Dp	Latrobe, PA	Dp	12 36A			9 06A
6 02A			6 52P	413	Dp	Greensburg, PA	Dp	12 26A			8 56A
		4 00P		*0	Dp	Washington, DC Union Sta	Ar			1 55P	
7 05A		11 43P	7 55P	*299	Ar	Pittsburgh, PA Penn Station	Dp	11 45P		6 10A	8 15A
7 30A		11 59P	8 05P	444	Dp		Ar	11 30P		5 50A	8 00A
9 00A			9 35P	510	Dp	Youngstown, OH	Dp	10 00P			6 30A
		1 30A		*383	Dp	Alliance, OH	Dp			4 20A	
9 40A			10 15P	543	Dp	Ravenna-Kent, OH	Dp	9 20P			5 50A
10 30A	6 17A	3 00A	11 05P	*439	Ar	Cleveland, OH Lakefront Sta	Dp	8 30P	11 59P	2 50A	5 00A
10 35A	6 45A	3 05A	11 10P	580	Dp		Ar	8 20P	11 30P	2 41A	4 40A
11 05A	7 18A	3 35A	11 40P	605	Dp	Elyria, OH	Dp	7 50P	10 55P	2 11A	4 10A
11 38A	7 55A	4 08A	12 13A	640	Dp	Sandusky, OH	Dp	7 15P	10 20P	1 36A	3 35A
12 40P	8 55A	5 10A	1 15A	687	Ar	Toledo, OH	Dp	6 25P	9 30P	12 45A	2 45A
12 50P	9 15A	5 50A	1 45A		Dp	MLK Plaza Station	Ar	6 35P	9 20P	12 35A	2 25A
3 00P		7 30A	4 15A	747	Dp	Dearborn, MI (Detroit)	Dp	4 50P		10 50P	11 59P
3 25P		8 00A	4 40A	777	Dp	Ann Arbor, MI	Dp	4 20P		10 20P	11 30P
4 25P		9 10A	5 40A	860	Dp	Battle Creek, MI	Dp	3 20P		9 10P	10 30P
4 50P		9 40A	6 10A	882	Dp	Kalamazoo, MI	Dp	2 50P		8 40P	10 00P
	10 05A			740	Dp	Bryan, OH	Dp		8 10P		
	10 33A			765	Dp	Waterloo, IN-Ft Wayne	Dp		7 45P		
	11 25A			820	Dp	Elkhart, IN	Dp		6 52P		
	11 50A			837	Dp	South Bend, IN ET	Dp		6 29P		
6 00P	12 45P	10 58A	7 25A	921	Ar	Chicago, IL Union Sta CT	Dp	11 50A	4 00P	5 30P	7 00P

- Blue columns represent new/restored trains or new/expanded routes for existing trains.

Cincinnati section of Lake Shore Limited

**New York City ● Albany ● Buffalo ●
Cleveland ● Columbus ● Cincinnati**

849			◀ Train Number ▶		848
Daily			◀ Days of Operation ▶		Daily
Read Down	Miles				Read Up
6 30P	0	Dp	New York, NY Penn Station	Ar	12 27P
7 16P	32	Dp	Croton-Harmon, NY	Dp	11 44A
8 00P	73	Dp	Poughkeepsie, NY	Dp	10 58A
8 17P	88	Dp	Rhinecliff, NY	Dp	10 40A
9 10P	141	Ar	Albany, NY	Dp	9 55A
9 55P		Dp	Rensselaer Station	Ar	9 05A
10 22P	159	Dp	Schenectady, NY	Dp	8 10A
11 38P	237	Dp	Utica, NY	Dp	6 55A
12 39A	291	Dp	Syracuse, NY	Dp	6 00A
1 59A	370	Dp	Rochester, NY	Dp	4 40A
2 45A	431	Ar	Buffalo, NY	Dp	3 40A
2 50A		Dp	Depew Station	Ar	3 35A
3 45A	475	Dp	Dunkirk, NY	Dp	2 35A
4 40A	523	Dp	Erie, PA	Dp	1 40A
5 50A	597	Dp	Mentor, OH	Dp	12 30A
6 17A	618	Ar	Cleveland, OH	Dp	11 59P
7 15A		Dp	Lakefront Station	Ar	10 50P
7 35A	631	Dp	Berea, OH	Dp	10 20P
8 40A	695	Dp	Galion-Mansfield, OH	Dp	9 15P
9 30A	742	Dp	Crosswoods I-270, OH	Dp	8 25P
9 45A	753	Ar	Columbus, OH	Dp	8 10P
9 50A		Dp	High Street Station	Ar	8 05P
10 45A	798	Dp	Springfield, OH	Dp	7 10P
11 20A	823	Dp	Dayton, OH	Dp	6 35P
11 50A	844	Dp	Middletown, OH	Dp	6 05P
12 15P	867	Dp	Sharonville, OH	Dp	5 40P
1 00P	878	Ar	Cincinnati, OH Union Terminal	Dp	5 05P

- Blue portion of columns represents new section of Amtrak's existing New York City-Cleveland-Chicago *Lake Shore Limited* service. There is an existing Boston section of this train but the through cars would run to New York. Also, the *Lake Shore's* schedule would be adjusted to accommodate this train.

New York ● Washington ● Pittsburgh ● Columbus ● Cincinnati ● Chicago											
849	429	43	51			◀ Train Number ▶		848	430	44	50
Daily	Daily	Daily	Daily			◀ Days of Operation ▶		Daily	Daily	Daily	Daily
Read Down				Miles						Read	Up
6 30P		10 52A	10 15A	0	Dp	New York, NY Penn Station	Ar	12 27P		5 43P	8 38P
		11 09A	10 35A	10	Dp	Newark, NJ	Dp			5 23P	8 18P
		11 44A	11 12A	58	Dp	Trenton, NJ	Dp			4 49P	7 42P
		12 15P	11 43A	91	Ar	Philadelphia, PA	Dp			4 18P	7 06P
		12 42P	11 45A		Dp	30th Street Station	Ar			3 48P	7 04P
		1 12P		110	Dp	Paoli, PA	Dp			3 07P	
		1 52P		159	Dp	Lancaster, PA	Dp			2 23P	
		2 06P		177	Dp	Elizabethtown, PA	Dp			2 06P	
		2 26P		195	Ar	Harrisburg, PA	Dp			1 48P	
		2 36P			Dp	30th Street Station	Ar			1 38P	
		3 46P		256	Dp	Lewistown, PA	Dp			12 04P	
		4 22P		293	Dp	Huntingdon, PA	Dp			11 27A	
		4 48P		313	Dp	Tyrone, PA	Dp			11 00A	
		5 06P		327	Dp	Altoona, PA	Dp			10 44A	
		6 00P		366	Dp	Johnstown, PA	Dp			9 47A	
		6 41P		403	Dp	Latrobe, PA	Dp			9 06A	
		6 52P		413	Dp	Greensburg, PA	Dp			8 56A	
	4 00P		2 35P	*0	Dp	Washington, DC Union Sta	Ar		1 55P		4 49P
	11 43P	7 55P		*299	Ar	Pittsburgh, PA Penn Station	Dp		6 10A	8 15A	
	12 20A	8 05P		444	Dp		Ar		5 30A	8 00A	
	1 15A			*344	Dp	East Liverpool, OH	Dp		4 25A		
	1 50A			368	Dp	Steubenville, OH	Dp		3 50A		
	3 45A			430	Dp	Newcomerstown/I-77, OH	Dp		1 55A		
	5 10A			484	Dp	Newark, OH	Dp		12 30A		
9 45A	6 05A			517	Ar	Columbus, OH	Dp	8 10P	11 40P		
9 50A	6 15A				Dp	High Street Station	Ar	8 05P	11 30P		
11 20A				587	Dp	Dayton, OH	Dp	6 35P			
1 00P			5 00A	642	Ar	Cincinnati, OH Union Term.	Dp	5 05P			1 45A
			5 10A		Dp		Ar				1 35A
	6 55A			545	Dp	Marysville, OH	Dp		10 45P		
	7 30A			577	Dp	Kenton, OH	Dp		10 10P		
	8 10A			612	Dp	Lima, OH, OH	Dp		9 30P		
	9 10A			671	Dp	Fort Wayne, IN	Dp		8 30P		
	9 50A			710	Dp	Warsaw, IN	Dp		7 50P		
	10 15A			735	Dp	Plymouth, IN ET	Dp		7 25P		
	9 55A			775	Dp	Valparaiso, IN CT	Dp		5 45P		
	10 15A			794	Dp	Gary Airport, IN	Dp		5 25P		
	10 55A	7 25A	11 05A	818	Ar	Chicago, IL Union Station	Dp		4 55P	7 00P	6 45P

● Blue columns = new/restored trains or new sections of existing trains. Not all trains shown.

Daily Cardinal + extended Hoosier State**Cincinnati ● Indianapolis ● Chicago**

851	51			◀ Train Number ▶		850	50
Daily	Daily			◀ Days of Operation ▶		Daily	Daily
Read	Down	Miles				Read	Up
7 30A	5 10A	0	Dp	Cincinnati, OH Union Terminal	Ar	9 45P	1 35A
8 00A	5 40A	11	Dp	Tri-County I-275, OH	Dp	9 00P	12 50A
8 15A	5 55A	24	Dp	Hamilton, OH	Dp	8 45P	12 35A
8 30A	6 10A	38	Dp	Oxford, OH	Dp	8 30P	12 20A
9 00A	6 40A	66	Dp	Connersville, IN	Dp	8 00P	11 50P
10 10A	7 55A	123	Ar	Indianapolis, IN	Dp	6 55P	10 45P
10 15A	8 05A		Dp	Union Station	Ar	6 50P	10 35P
10 25A	8 15A	130	Dp	Speedway, IN	Dp	6 35P	10 20P
11 10A	9 00A	170	Dp	Crawfordsville, IN	Dp	5 50P	9 35P
11 40A	9 30A	197	Dp	Lafayette, IN ET	Dp	5 20P	9 05P
11 35A	9 25A	245	Dp	Rensselaer, IN CT	Dp	4 25P	8 10P
12 20P	10 10A	290	Dp	Dyer, IN	Dp	3 40P	7 25P
1 05P	11 05A	319	Ar	Chicago, IL Union Station	Dp	3 00P	6 45P

- Blue columns represent a newly expanded passenger rail service.

NOTE: While the proposed federal funding criteria of S. 1626 would support expansion of routes of 750 miles or more, the services in the above discussion timetable are for a shorter route. One of the services on this route is provided by trains #50/51, Amtrak's Cardinal which serves a New York City-Chicago route of 1,147 miles. All Aboard Ohio recommends expanding this thrice-weekly service to daily using funds that would be authorized by S. 1626. The other service, trains #850/851, is the Hoosier State which currently operates four days per week between Indianapolis and Chicago on the days the Cardinal doesn't run. Its schedule (in 2015) is currently identical to the Cardinal's on this section. This report, while focusing on long-distance expansions due to the proposed funding criteria of the Senate legislation, shows a daily Hoosier State on a schedule independent of the Cardinal's and on a route extended to Cincinnati. All Aboard Ohio advocated for the Cincinnati extension of the Hoosier State long before the issuance of this report. We include it here to show how well it could fit into our long-distance service expansion recommendations.

The Tidewater – based on existing Cardinal schedule

Detroit ● Toledo ● Columbus ● Norfolk Washington DC ● Philadelphia ● New York					
450			◀ Train Number ▶		451
Daily			◀ Days of Operation ▶		Daily
Read Down	Miles				Read Up
10 05P	0	Dp	Pontiac, MI	Ar	7 10A
10 18P	9	Dp	Troy, MI	Dp	6 40A
10 25P	13	Dp	Royal Oak, MI	Dp	6 33A
10 45P	23	Ar	Detroit, MI	Dp	6 13A
10 50P		Dp	Woodward Station	Ar	6 10A
11 15P	36	Dp	Wyandotte, MI	Dp	5 40A
11 40P	59	Dp	Monroe, MI	Dp	5 15A
12 20A	83	Ar	Toledo, OH	Dp	4 40A
12 35A		Dp	MLK Plaza Station	Ar	4 25A
1 20A	105	Dp	Bowling Green, OH	Dp	3 25A
1 50A	129	Dp	Findlay, OH	Dp	2 55A
2 20A	157	Dp	Kenton, OH	Dp	2 25A
2 55A	190	Dp	Marysville, OH	Dp	1 50A
3 40A	217	Ar	Columbus, OH	Dp	1 20A
3 45A		Dp	High Street Station	Ar	1 15A
4 45A	260	Dp	Chillicothe, OH	Dp	12 20A
5 45A	312	Dp	Sciotoville-Portsmouth, OH	Dp	11 20P
6 45A	338	Dp	Ashland, KY	Dp	10 20P
7 09A	353	Ar	Huntington, WV	Dp	9 56P
7 16A		Dp	Eighth Avenue Station	Ar	9 49P
8 21A	502	Dp	Charleston, WV	Dp	8 34P
8 50A	429	Dp	Montgomery, WV	Dp	7 55P
9 41A	470	Dp	Thurmond, WV	Dp	7 04P
10 02A	481	Dp	Prince, WV (Beckley)	Dp	6 48P
10 34A	504	Dp	Hinton, WV	Dp	6 11P
11 39A	549	Dp	White Sulphur Sprgs, WV	Dp	5 10P
12 44P	584	Dp	Clifton Forge, VA	Dp	4 18P
2 03P	662	Dp	Staunton, VA	Dp	2 59P
3 19P	681	Dp	Charlottesville, VA	Dp	1 57P
6 10P	768	Dp	Richmond, VA	Dp	11 05A
6 44P	796	Dp	Petersburg, VA	Dp	10 20A
8 22P	881	Ar	Norfolk, VA	Dp	8 50A
6 49P	796	Ar	Washington, DC	Dp	10 05A
7 46P	836	Ar	Baltimore, MD	Dp	9 00A
8 35P	905	Ar	Wilmington, DE	Dp	8 14A
8 56P	930	Ar	Philadelphia, PA	Dp	7 45A
10 08P	1011	Ar	Newark, NJ	Dp	6 35A
10 28P	1021	Ar	New York, NY	Dp	6 15A

The Tidewater – adjusted to offer better times at Columbus & Detroit, plus better connections.

Detroit ● Toledo ● Columbus ● Norfolk Washington DC ● Philadelphia ● New York					
450			◀ Train Number ▶		451
Daily			◀ Days of Operation ▶		Daily
Read Down	Miles				Read Up
7 05P	0	Dp	Pontiac, MI	Ar	11 10A
7 18P	9	Dp	Troy, MI	Dp	10 40A
7 25P	13	Dp	Royal Oak, MI	Dp	10 33A
7 45P	23	Ar	Detroit, MI	Dp	10 13A
7 50P		Dp	Woodward Station	Ar	10 10A
8 15P	36	Dp	Wyandotte, MI	Dp	9 40A
8 40P	59	Dp	Monroe, MI	Dp	9 15A
9 20P	83	Ar	Toledo, OH	Dp	8 40A
9 35P		Dp	MLK Plaza Station	Ar	8 25A
10 20P	105	Dp	Bowling Green, OH	Dp	7 25A
10 50P	129	Dp	Findlay, OH	Dp	6 55A
11 20P	157	Dp	Kenton, OH	Dp	6 25A
11 55P	190	Dp	Marysville, OH	Dp	5 50A
12 40A	217	Ar	Columbus, OH	Dp	5 20A
12 45A		Dp	High Street Station	Ar	5 15A
1 45A	260	Dp	Chillicothe, OH	Dp	4 20A
2 45A	312	Dp	Sciotoville-Portsmouth, OH	Dp	3 20A
3 45A	338	Dp	Ashland, KY	Dp	2 20A
4 09A	353	Ar	Huntington, WV	Dp	1 56A
4 16A		Dp	Eighth Avenue Station	Ar	1 49A
5 21A	502	Dp	Charleston, WV	Dp	12 34A
5 50A	429	Dp	Montgomery, WV	Dp	11 55P
6 41A	470	Dp	Thurmond, WV	Dp	11 04P
7 02A	481	Dp	Prince, WV (Beckley)	Dp	10 48P
7 34A	504	Dp	Hinton, WV	Dp	10 11P
8 39A	549	Dp	White Sulphur Sprgs, WV	Dp	9 10P
9 44A	584	Dp	Clifton Forge, VA	Dp	8 18P
11 03A	662	Dp	Staunton, VA	Dp	6 59P
12 19P	681	Dp	Charlottesville, VA	Dp	5 57P
3 10P	768	Dp	Richmond, VA	Dp	3 05P
3 44P	796	Dp	Petersburg, VA	Dp	2 20P
5 22P	881	Ar	Norfolk, VA	Dp	12 50P
3 49P	796	Ar	Washington, DC	Dp	2 05P
4 46P	836	Ar	Baltimore, MD	Dp	1 00P
5 35P	905	Ar	Wilmington, DE	Dp	12 14P
5 56P	930	Ar	Philadelphia, PA	Dp	11 45A
7 08P	1011	Ar	Newark, NJ	Dp	10 35A
7 28P	1021	Ar	New York, NY	Dp	10 15A

The Tidewater – this is the same schedule as the one on the prior page but with the smaller stations removed to provide enough space on one page to also show potential connecting train services/schedules at Toledo, Detroit and Richmond.

Detroit ● Toledo ● Columbus ● Norfolk Washington DC ● Philadelphia ● New York					
450			◀ Train Number ▶		451
Daily			◀ Days of Operation ▶		Daily
Read Down	Miles				Read Up
12 50P	0	<i>Dp</i>	CHICAGO, IL	<i>Ar</i>	3 58P
4 08P	138	<i>Dp</i>	<i>Kalamazoo, MI</i>	<i>Dp</i>	2 25P
6 16P	243	<i>Dp</i>	<i>Ann Arbor, MI</i>	<i>Dp</i>	12 17P
7 13P	281	<i>Ar</i>	Detroit, MI	<i>Dp</i>	11 20A
7 50P	23	<i>Dp</i>	<i>Woodward Station</i>	<i>Ar</i>	10 10A
3 15P	0	<i>Dp</i>	CHICAGO, IL	<i>Dp</i>	1 00P
5 45P	84	<i>Dp</i>	<i>South Bend, IN</i>	<i>Dp</i>	12 04P
8 35P	234	<i>Ar</i>	Toledo, OH	<i>Dp</i>	9 30A
9 35P	83	<i>Dp</i>	<i>MLK Plaza Station</i>	<i>Ar</i>	8 30A
10 20P	105	<i>Dp</i>	<i>Bowling Green, OH</i>	<i>Dp</i>	7 25A
10 50P	129	<i>Dp</i>	<i>Findlay, OH</i>	<i>Dp</i>	6 55A
11 20P	157	<i>Dp</i>	<i>Kenton, OH</i>	<i>Dp</i>	6 25A
11 55P	190	<i>Dp</i>	<i>Marysville, OH</i>	<i>Dp</i>	5 50A
12 40A	217	<i>Ar</i>	Columbus, OH	<i>Dp</i>	5 20A
12 45A		<i>Dp</i>	<i>High Street Station</i>	<i>Ar</i>	5 15A
1 45A	260	<i>Dp</i>	<i>Chillicothe, OH</i>	<i>Dp</i>	4 20A
2 45A	312	<i>Dp</i>	<i>Sciotoville-Portsmouth, OH</i>	<i>Dp</i>	3 20A
3 45A	338	<i>Dp</i>	<i>Ashland, KY</i>	<i>Dp</i>	2 20A
4 09A	353	<i>Ar</i>	Huntington, WV	<i>Dp</i>	1 56A
4 16A		<i>Dp</i>	<i>Eighth Avenue Station</i>	<i>Ar</i>	1 49A
5 21A	502	<i>Dp</i>	Charleston, WV	<i>Dp</i>	12 34A
8 39A	539	<i>Dp</i>	<i>White Sulphur Sprgs, WV</i>	<i>Dp</i>	9 10P
12 19P	681	<i>Dp</i>	<i>Charlottesville, VA</i>	<i>Dp</i>	5 57P
3 10P	768	<i>Ar</i>	Richmond, VA	<i>Dp</i>	3 05P
5 17P	0	<i>Dp</i>		<i>Ar</i>	12 07P
9 00P	197	<i>Ar</i>	<i>Raleigh, NC</i>	<i>Dp</i>	8 45A
10 06A	790	<i>Ar</i>	<i>Orlando, FL</i>	<i>Dp</i>	7 32P
12 23P	889	<i>Ar</i>	<i>Tampa, FL</i>	<i>Dp</i>	5 27P
5 58P	1055	<i>Ar</i>	<i>Miami, FL</i>	<i>Dp</i>	11 50A
5 22P	881	<i>Ar</i>	Norfolk, VA	<i>Dp</i>	12 50P
3 49P	796	<i>Ar</i>	Washington, DC	<i>Dp</i>	2 05P
4 46P	836	<i>Ar</i>	Baltimore, MD	<i>Dp</i>	1 00P
5 35P	905	<i>Ar</i>	<i>Wilmington, DE</i>	<i>Dp</i>	12 14P
5 56P	930	<i>Ar</i>	Philadelphia, PA	<i>Dp</i>	11 45A
7 08P	1011	<i>Ar</i>	<i>Newark, NJ</i>	<i>Dp</i>	10 35A
7 28P	1021	<i>Ar</i>	New York, NY	<i>Dp</i>	10 15A

Detroit ● Columbus ● Cincinnati ● Atlanta Jacksonville ● Orlando ● Tampa ● Miami					
31			◀ Train Number ▶		32
Daily			◀ Days of Operation ▶		Daily
Read Down	Miles				Read Up
11 15A	0	Dp	Pontiac, MI	Ar	5 55P
11 35A	8	Dp	Troy, MI	Dp	5 30P
11 55A	23	Ar	Detroit, MI	Dp	5 10P
12 00P		Dp	Woodward Station	Ar	5 05P
1 00P	59	Dp	Monroe, MI	Dp	3 55P
1 35P	83	Ar	Toledo, OH	Dp	3 20P
1 45P		Dp	MLK Plaza Station	Ar	3 10P
2 25P	104	Dp	Bowling Green, OH	Dp	2 25P
2 55P	128	Dp	Findlay, OH	Dp	1 55P
4 00P	188	Dp	Marysville, OH	Dp	12 50P
4 45P	216	Ar	Columbus, OH	Dp	12 05P
4 55P		Dp	High Street Station	Ar	11 55A
5 50P	261	Dp	Springfield, OH	Dp	10 55A
6 25P	286	Dp	Dayton, OH	Dp	10 20A
6 55P	307	Dp	Middletown, OH	Dp	9 50A
8 10P	341	Ar	Cincinnati, OH	Dp	8 40A
8 20P		Dp	Union Terminal	Ar	8 30A
8 45P	356	Dp	Richwood, KY	Dp	7 55A
10 15P	438	Dp	Lexington, KY	Dp	6 25A
10 55P	472	Dp	Danville, KY	Dp	5 45A
11 55P	516	Dp	Somerset, KY	Dp	4 45A
2 50A	634	Dp	Rockwood-Harriman, TN	Dp	1 50A
4 20A	710	Dp	Chattanooga, TN	Dp	12 21A
4 56A	737	Dp	Dalton, GA	Dp	11 45P
5 40A	777	Dp	Rome, GA	Dp	11 00P
6 45A	832	Dp	Austell, GA	Dp	9 55P
7 15A	849	Ar	Atlanta, GA	Dp	9 30P
7 25A		Dp	GWCC Station	Ar	9 20P
7 55A	877	Dp	McDonough, GA	Dp	8 40P
9 15A	937	Dp	Macon, GA	Dp	7 20P
11 55A	1084	Dp	Jesup, GA	Dp	4 40P
1 30P	1180	Ar	Jacksonville, FL	Dp	3 20P
1 50P		Dp		Ar	3 00P
5 30P	1327	Ar	Orlando Airport, FL	Dp	11 30A
7 30P	1426	Ar	Tampa, FL (via connecting bus)	Dp	9 30A
7 50P	1527	Ar	W. Palm Beach, FL (AAF)	Dp	9 10A
8 40P	1570	Ar	Fort Lauderdale, FL (AAF)	Dp	8 20A
9 00P	1592	Ar	Miami, FL (All Aboard Florida)	Dp	8 00A

An opinion of capital costs for proposed expansions

DAILY CARDINAL

No additional infrastructure or equipment investments are anticipated beyond those that are already underway for this Chicago-Cincinnati-Washington DC-New York City route, including:

- Amtrak acquiring 130 new Viewliner II cars starting in 2015 from CAF USA, including 25 sleepers, 25 dining cars, 10 baggage-dorms and 70 baggage cars.
- CSX is adding 3 passing sidings and replacing jointed rails with seamless welded rails between the suburbs of Chicago and Hamilton, OH. The timeline and cost of this work is not known.
- Buckingham Branch Railroad is using its company funds to leverage a Virginia Department of Transportation grant totaling \$12.1 million to lengthen two passing sidings, construct a third, plus replace jointed rails with seamless welded rails and resurfacing its tracks between Clifton Forge-Orange, VA by 2018.
- Positive Train Control signals and on-board transponder equipment is being installed by the host railroads per federal regulations.

Projected economic impact: \$240 million (per U.S. Department of Commerce), based on the capital improvements by the private sector to enhance the capacity of the rail corridor and the manufacture of the new passenger rail cars to be used by this expansion that are estimated at \$60 million.

Projected annual ridership: 215,000 (per Amtrak) [For context, it would take four full 737 jets or 10 full long-distance buses per day to carry the passengers that east/west Cardinal trains would carry].

PENNSYLVANIAN EXTENSION

This represents Phase 1 of expanding New York City-Philadelphia-Pittsburgh passenger rail service west to Cleveland, Toledo, Dearborn (Detroit), Kalamazoo and Chicago.

Restore Ravenna track connection	\$ 5 million
Add track capacity -- Sidings, Xovers or connections (Oak Harbor, E34th-Erie Xing).	\$25 million
Lengthen circuits at 200 crossings for 90mph.	\$10 million
Expand CLE, SKY & TOL into 2-track stations	\$35 million
New stations -- New Castle, Ravenna, Youngstown.	\$ 7 million
Rolling stock (Amtrak ID'd equipment for PA ext)	<u>\$ 0 million</u>
 Subtotal	 \$82 million
Contingencies at 30%.	\$25 million
Engineering	<u>\$ 8 million</u>
TOTAL.	\$115 million

Possible exceptions: up to \$79M may not be needed upfront. Of the total, \$58M for stations, \$14M for crossings and \$7M Ravenna Connection may not be needed to extend service to Chicago via Dearborn but results in fewer stations, slower service and no trains to Greater Youngstown's 500,000 population.

Projected economic impact: \$460 million (per U.S. Department of Commerce)

Projected annual ridership: 360,000 (at average of 222 passengers per route-mile for extended segment + existing Pennsylvanian) [For context, it would take 5½ full 737 jets or 13 full long-distance buses per day to carry the passengers that a Pennsylvanian extended to Chicago would carry].

CINCINNATI SECTION OF LAKE SHORE LIMITED

These capital improvements would allow for a Cincinnati-Dayton-Columbus-Cleveland-New York City train to operate at passenger train speeds over a significant portion of the Cincinnati-Cleveland rail corridor which is owned by CSX north of Columbus and NS south of Columbus.

Lengthen grade crossing circuits at 200 crossings for 80-90 mph	\$10 million
Construct 3,000-foot Berea track connection between NS Chicago Line and CSX Columbus Line.	\$ 6 million
Add 17 miles of 2 nd main track on CSX Greenwich Sub from CP 54 (Boyd) to CP 71 (south of Shelby)	\$30 million
Add universal crossovers between CSX Columbus Line and NS Dayton District at Weber Road in Columbus . . .	\$ 4 million
Construct Columbus Station Track and crossovers on joint CSX Columbus Line/NS Dayton District	\$ 6 million
Add 7.7 miles total of 2 nd main track on NS Dayton District from Wrights to Miami River Bridge and in the vicinity of the Moraine Yard in Dayton.	\$17 million
Add 2.3 miles of 2 nd main track on NS Dayton District around Sharonville Yard	\$ 6 million
Add crossover at RH on CSX Cincinnati Terminal Sub. .	\$ 2 million
Add 900 feet of 3 rd main track past Hopple Street overpass plus two new turnouts	\$ 3 million
Lengthen CSX Western Avenue intermodal yard lead by 1,400 feet	\$ 1 million
Construct Cincinnati Station Track and two crossovers immediately north of Union Terminal.	\$ 5 million
Stations -- 4 @ \$10M each and 18 at \$1M each.	\$26 million
Rolling stock (12 rehabbed coaches + 3 locos)	<u>\$20 million</u>
 Subtotal	 \$136 million
Contingencies at 30%.	\$ 41 million
Engineering	<u>\$ 12 million</u>
 TOTAL.	 \$189 million

Possible exceptions: Including a portion of contingencies/engineering, if a slightly slower schedule, fewer stations and basic station facilities at the outset are acceptable, it's possible that \$80 million may not be needed upfront. Of the total, about \$28 million for stations, \$28 million for rolling stock (which could be leased instead) and \$24 million for infrastructure. Additionally, access to and expanded facilities at Cincinnati Union Terminal could be shared by other passenger rail services – as might the estimated \$15 million cost of implementation.

Projected economic impact: \$756 million (per U.S. Department of Commerce)

Projected annual ridership: 195,000 (at average of 222 passengers per route-mile) [For context, it would take four full 737 jets or nine full long-distance buses each day to carry the passengers that a Cincinnati section of the Lake Shore Limited would carry].

THE TIDEWATER

While the original Chesapeake & Ohio “Sportsman” was discontinued shortly before Amtrak, there was an Amtrak train that served part of its market. From 1974-1979 Amtrak ran a train called The Mountaineer from Cattleburg, KY (where Ohio, West Virginia and Kentucky all meet) to Norfolk, VA. It connected with the Cardinal to/from points west. Later, the Mountaineer was renamed the Hilltopper. East of there, the Mountaineer/Hilltopper took a more southerly route, missing many of the larger towns and active sports/recreational destinations of the New River Gorge.

All Aboard Ohio's proposed Tidewater service would serve those traffic generators along the Cardinal and run combined with it as a single train from Russell, KY for 362 miles to Gordonsville, VA. Russell is the site of a major CSX rail yard and servicing facility seven miles west of the Ashland, KY station. Russell Yard (Riverton) is the eastern limit of CSX's Northern Subdivision from Columbus. The yard is also 17 miles east of Limeville, KY (NJ Cabin) where CSX's Cincinnati Subdivision (route of Amtrak's Cardinal) diverges from CSX's Northern Subdivision.

From Gordonsville to Doswell, VA, a distance of 49 miles, the CSX-owned and Buckingham Branch RR-operated Piedmont Subdivision is jointed rail but in good condition. A major tie renewal program was undertaken in September 2015. Traffic is governed by Direct Train Control in which movement from one seven-mile (on average) block to the next block requires radio authority from the train dispatcher. Buckingham Branch's locomotives will be equipped with PTC transponders to operate over its Clifton Forge-Orange, VA route used by Amtrak's Cardinal. That should reduce the unit cost of adding PTC to the Piedmont Subdivision. PTC installation should allow freight train speeds to be increased to perhaps 40 mph with a passenger train speed of 55 or 60 mph. Grade-crossing circuits will have to be lengthened and constant-warning time predictors added to 31 crossings to account for higher train speeds at a cost of about \$50,000 per crossing or \$1.55 million total.

All other track connections are in place, are in good condition, are regularly used, and are interlocked/dispatcher-controlled. There are three Columbus-Toledo routes available, one NS and two CSX. The NS line via Bellevue, OH could be an alternative if the CSX route via Ridgeway can't be used, for whatever reason. The NS line is attractive because it doesn't require capital improvements to track connections on the southeast side of Toledo. The CSX Ridgeway routing limits Columbus station sites to the west side of the Scioto River rather than in downtown. The NS option offers numerous Columbus station sites including in downtown. Nine new stations are proposed, including a large, staffed station at Columbus. A unit cost of \$1 million was applied to all new, unstaffed stations and \$5 million for Columbus.

CAPITAL ASSUMPTIONS

Add PTC signals to BBRR Gordonsville-Doswell including upgrading two noncontrolled sidings.	\$ 4.0 million
Upgrade grade-crossing safety Gordonsville-Doswell for higher train speeds.	\$ 1.6 million
Add PTC signals to CSX's Toledo Branch Subdivision between Toledo-Ridgeway (may not be needed)	\$ 6.0 million
Upgrade CSX's 2.75-mile Stanley Secondary & expand the East Toledo Yard for CSX-NS interchange traffic.	\$ 4.0 million
Construct 9 new stations (8 unstaffed, 1 staffed).	\$13.0 million
Rolling stock (4 sets of 5-car trains + loco)	<u>\$52.0 million</u>
Subtotal	\$80 million
Contingencies at 30%.	\$24 million
Engineering	<u>\$ 3 million</u>
TOTAL.	\$107 million

OPERATING ASSUMPTIONS

The Tidewater's total new train-miles added Russell, KY to Pontiac, MI (383 route-miles) are 279,782 per year. The total new train-miles added from Gordonsville, VA to Norfolk, VA (179 route-miles) are 130,760 per year. The shared train-miles with the Cardinal from Russell, KY to Gordonsville, VA (370 route-miles) is 270,285 per year.

A unit operating subsidy for long-distance trains (accounting for provisions, maintenance and on-board service of sleepers, coaches, food-service, train & engine crew, etc.) is \$30-\$40 per train-mile. Considering that the Cardinal doesn't offer a full diner and nor will this new Tidewater service, the lower \$30 figure was used for the new segments. On the shared portion with the Cardinal, a figure of \$15 per train-mile was used to account for labor, equipment maintenance, depreciation and extra fuel use.

Annual operating subsidy assumptions:
 Pontiac-Russell segment \$ 8.4 million
 Russell-Gordonsville segment . \$ 4.1 million
 Gordonsville-Norfolk segment . \$ 3.9 million
 Total estimated annual operating subsidy \$16.4 million

BENEFITS

Projected 20-year economic impact: \$428 million (per U.S. Department of Commerce)

Projected annual ridership: 175,000 (at average of 199 passengers per route-mile) [For context, it would take more than three full 737 jets or eight full long-distance buses each day to carry the passengers that this proposed Tidewater section of the Cardinal would carry].

THREE RIVERS RESTORATION

This represents Phase 2 of expanding passenger rail service linking New York City, Philadelphia, Pittsburgh, Cleveland, Toledo, Dearborn (Detroit), Kalamazoo and Chicago.

Add track capacity -- Sidings, track connections \$30 million
 Lengthen circuits at 60 crossings for 90mph \$ 3 million
 Rolling stock (4 sets of 7-car trains + loco) \$60 million

 Subtotal \$92 million
 Contingencies at 30%. \$28 million
 Engineering \$ 8 million

 TOTAL. \$128 million

Possible exceptions: including a portion of contingencies/engineering, it's possible that \$86 million may not be needed upfront. Of the total, about \$82 million could be saved from rolling stock as Amtrak or another carrier could lease 3-4 sets of equipment and thus transfer the cost from capital to operating. Another \$4 million for crossings may not be needed but would result in slower service.

Projected economic impact: \$512 million (per U.S. Department of Commerce)

Projected annual ridership: 200,000 (at average of 222 passengers per route-mile) [For context, it would take four full 737 jets or nine full long-distance buses each day to carry the passengers that the Three Rivers would carry].

NATIONAL LTD/BROADWAY LTD RESTORATION

The National Limited cannot be restored to its old route as the tracks west of Dayton to Indianapolis are gone. Meanwhile, interest in restoring service to the Broadway Limited route is concentrated west of North Central Ohio. So All Aboard Ohio combined these two routes as a single option for restoring long-distance passenger rail service but as a “Connected Corridors” service (providing service to numerous short- to medium-distance travel markets with a single train).

Replace jointed rail with CWR, plus ties & resurfacing as needed along 106 miles of track Dunkirk-Hobart. . . .	\$53 million
Lengthen circuits at 300 crossings for 80-90mph	\$15 million
Build track connections at Mounds, Dunkirk	\$ 6 million
Construct 6 passing sidings @ \$7M each	\$42 million
Stations – 1 @ \$10M, 2 @ \$5M each, 12 at \$1M each. .	\$32 million
Rolling stock (4 sets of 7-car trains + loco)	<u>\$60 million</u>
Subtotal	\$208 million
Contingencies at 30%.	\$ 62 million
Engineering	<u>\$ 19 million</u>
TOTAL.	\$289 million

Possible exceptions: Including a portion of contingencies/engineering, if a slower schedule, fewer stations and basic station facilities at the outset are acceptable, it's possible that as much as \$196 million may not be needed upfront. Of the total, about \$21 million for stations, \$82 million for rolling stock (which could be leased instead) and \$93 million for infrastructure. Additionally, access to and expanded facilities at Columbus could be shared by other passenger rail services – as might its estimated \$21 million cost.

Projected economic impact: \$1.156 billion (per U.S. Department of Commerce)

Projected annual ridership: 220,000 (at average of 222 passengers per route-mile) [For context, it would take four full 737 jets or 10 full long-distance buses each day to carry the passengers that a restored National/Broadway Limited would carry].

MIDWEST-FLORIDA RESTORATION

One of the highest-rated routes considered for inclusion in Amtrak's national system prior to its formation was Detroit-Cincinnati. It was left out due to Congressional indifference. Routes under 750 miles would not be able to have their operating costs supported by S. 1626's Sec. 301 grant. Midwest-Florida is a major travel market yet Amtrak's only direct service was the Chicago-Miami Floridian that bypassed Ohio and Atlanta and was discontinued in 1979. All Aboard Ohio proposes a Detroit-Orlando train via Columbus, Cincinnati and Lexington on the City of Cincinnati-owned rail corridor leased by a subsidiary of Norfolk Southern. Given CSX's hostility to passenger trains, their mainlines are avoided where possible. Connections are made to Tampa by bus and Miami by All Aboard Florida train. Rail lines proposed for use are in excellent condition but track connections are either missing or in bad condition. Serious traffic congestion exists through Toledo to Walbridge, on the north side of Cincinnati, and north of Atlanta.

Lengthen circuits at 200 crossings for 80-90mph	\$10 million
Build track connections at Toledo Rockwell Jct.-Walbridge, Columbus Mounds, East Chattanooga, Jesup.	\$25 million
Construct Columbus Station Track and crossovers on joint CSX Columbus Line/NS Dayton District	\$ 6 million

CONTINUED

Add 7.7 miles total of 2 nd main track on NS Dayton District from Wrights to Miami River Bridge and in the vicinity of the Moraine Yard in Dayton.	\$17 million
Add 2.3 miles of 2 nd main track on NS Dayton District around Sharonville Yard	\$ 6 million
Add crossover at RH on CSX Cincinnati Terminal Sub.	\$ 2 million
Add 900 feet of 3 rd main track past Hopple Street overpass plus two new turnouts	\$ 3 million
Lengthen CSX Western Avenue intermodal yard lead by 1,400 feet	\$ 1 million
Construct Cincinnati Station Track and two crossovers immediately north of Union Terminal.	\$ 5 million
Construct/lengthen 6 passing sidings @ \$7M each	\$42 million
Stations – 3 @ \$10M, 2 @ \$5M each, 15 at \$1M each.	\$55 million
Rolling stock (5 sets of 7-car trains + loco)	<u>\$75 million</u>
Subtotal	\$247 million
Contingencies at 30%.	\$ 74 million
Engineering	<u>\$ 22 million</u>
TOTAL.	\$343 million

Possible exceptions: Including a portion of contingencies/engineering, if a slower schedule, fewer stations and basic station facilities at the outset are acceptable, it's possible that as much as \$176 million may not be needed upfront. Of the total, about \$14 million crossings, \$22 million for stations, \$104 million for rolling stock (which could be leased instead) and \$15 million for infrastructure. Additionally, access to and expanded facilities at Columbus could be shared by other passenger rail services – as might its estimated \$21 million cost.

Projected economic impact: \$1.372 billion (per U.S. Department of Commerce)

Projected annual ridership: 350,000 (at average of 222 passengers per route-mile) [For context, it would take seven full 737 jets or 16 full long-distance buses each day to carry the passengers that an Midwest-Florida rail service would carry].

Summary of Suggested Amtrak Expansions

Suggested Expansion	Estimated Capital Cost	Est. New Annual Operating Subsidy	Projected Annual Ridership	Projected Economic Impact
<i>Daily Cardinal</i>	\$0	\$2M	215,000	\$240 million
<i>Pennsylvanian extension</i>	\$40M to \$119M	\$700,000	360,000	\$460 million
<i>Tidewater</i>	\$107M	\$16.4M	175,000	\$428 million
<i>Cincinnati section of Lake Shore</i>	\$109M to \$189M	\$6M to \$8M	195,000	\$756 million
<i>Three Rivers restoration</i>	\$42M to \$128M	\$28M to \$39M	200,000	\$512 million
<i>National/Broadway Ltd restoration</i>	\$93M to \$289M	\$10M to \$15M	220,000	\$1.156 billion
<i>Midwest-Florida restoration</i>	\$167M to \$343M	\$43M to \$60M	350,000	\$1.372 billion

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