

White Paper: Reducing rail traffic congestion on the Downtown Cleveland Lakefront




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Executive Summary

Each night while most of Cleveland is sleeping, Amtrak is in the middle of its passenger train rush hour. Four Amtrak trains arrive and depart downtown Cleveland's Lakefront Station in four hours. Three trains are scheduled within two hours. When the trains run on time, the single-track station and its loading platform, as well as nearby approach tracks, can handle this traffic pattern with little or no delay.

But throw into the mix a delayed Amtrak train or three, plus the usually busy Norfolk Southern (NS) freight traffic and the occasional CSX freight train, the flow of traffic breaks down – sometimes very badly. Rescheduling trains only moves the traffic jam to other parts of the busy NS and CSX networks where there may be fewer tracks or more freight activity that don't offer dispatchers the freedom to park freight or passenger trains until traffic has cleared.

With minor modifications to the existing downtown Cleveland track layout and Cleveland station facility, rail traffic flow could be made more fluid for current and future passenger and freight customers, including the Port of Cleveland. The city's desire for a multi-modal transportation center at this location offers an opportunity to address these issues as part of its programming. This paper analyzes the rail traffic issues and suggests cost-effective program elements.

Documented problems

Amtrak train schedule conflicts: Each night between 1:45 a.m. and 3:45 a.m., three Amtrak passenger trains are scheduled to arrive and depart downtown Cleveland's Lakefront Station. A fourth Amtrak train is due to call at Cleveland between 5:35-5:50 a.m. One Amtrak train is the *Capitol Limited* operating daily eastbound and westbound on an overnight schedule between Chicago, Toledo, Cleveland, Pittsburgh and Washington DC, and other station stops en route. Another Amtrak train is the *Lake Shore Limited* operating daily eastbound and westbound on an overnight schedule between Chicago, Toledo, Cleveland, Buffalo, Albany, New York City, Boston and other station stops. At Albany, the *Lake Shore* splits or combines, depending on direction, into/from Boston trains #448/449 and New York trains #48/49.

Amtrak daily scheduled arrival and departures at Cleveland Lakefront Station:

Train Name (direction) & Train Number	Arrival	Departure
Capitol Limited (eastbound) #30	1:45 a.m.	1:54 a.m.
Capitol Limited (westbound) #29	2:53 a.m.	2:59 a.m.
Lake Shore Limited (westbound) #49/449	3:27 a.m.	3:45 a.m.
Lake Shore Limited (eastbound) #48/448	5:35 a.m.	5:50 a.m.

SOURCE: Amtrak System Timetable, Jan. 11, 2016

Delays worsen traffic jams: Unfortunately, delays to these four Amtrak trains that travel 780 to 1,020 miles each direction per day are common. According to Amtrak's Web-based “Route Performance Glossary of Terms,” a long-distance train traveling over 550 miles would be considered “on-time” if it arrived at its final destination within 30 minutes of its scheduled arrival time. Thus, the following tables show how often the trains that serve Cleveland arrive the end of their routes at least 30 minutes late.

**CAPITOL LIMITED (Trains #29 & #30)
Washington, DC - Pittsburgh - Cleveland - Chicago**

Endpoint On-Time Performance	
October 2016	Last 12 Months
66.1%	64.2%
Primary cause of delay in October 2016: train interference (caused 56.9% of all delays)	

SOURCE: Amtrak On-Time Performance data, November, 2016

**LAKE SHORE LIMITED (Trains #48/448 & #49/449)
New York/Boston - Albany – Cleveland - Chicago**

Endpoint On-Time Performance	
October 2016	Last 12 Months
64.5%	56.9%
Primary cause of delay in October 2016: train interference (caused 50.1% of all delays)	

SOURCE: Amtrak On-Time Performance data, November, 2016

Other principal causes of delays to these trains were track/signal issues (ie: repairs or outages), operational problems (ie: train equipment malfunctions) or passenger issues (ie: baggage or boarding delays), Amtrak reported. Freight on-time performance data is published by shipping lines such as Mitsui O.S.K. Lines, Schneider, etc. but is too old (2014) to be of much use here. Nearly all shipping lines have a goal for 90 percent of their shipments to arrive on time.

Note that the above data is recorded at the end of each train's route. Amtrak builds “recovery time” (aka: schedule padding) into each train's schedule prior to arrival at the destination station. Recovery time is typically 8 percent of the pure running time over a given segment. Extra time is often built into the end of the route. For long-distance trains like the *Capitol Limited* or *Lake Shore Limited*, they may run 30 minutes late or more at intermediate stations but arrive their destination stations “on time.”

In the summer and fall of 2016, All Aboard Ohio representatives made five observations of rail traffic patterns at the Cleveland Amtrak station between 1 a.m. and 6 a.m. We also received feedback from Amtrak employees who regularly work at the Cleveland station to determine if what we were seeing was unusual or the norm.

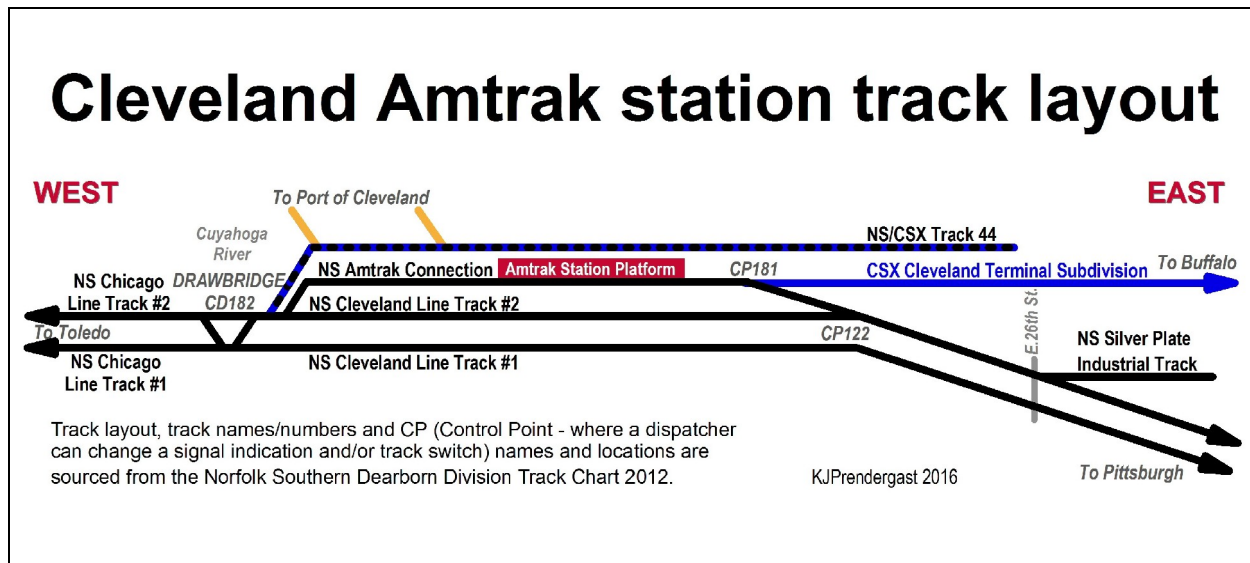
Our observations and Amtrak employee feedback determined that, when a delay causes two Amtrak trains to converge at downtown Cleveland at the same time, the track layout in the vicinity can typically accommodate the two Amtrak trains without causing significant delays of more than 15 minutes to other passenger trains or freight traffic. However, when there are several freight trains in the vicinity, the converging Amtrak trains (and nearby freight trains) are more prone to further delays.

The worst traffic jams occur when three Amtrak trains converge at downtown Cleveland within 30 minutes of each other. There simply aren't enough passing sidings, crossover tracks or other trackage available to accommodate them. And because NS dispatches about 70-80 freight trains per day past the Cleveland Amtrak station, there is an average of three freight trains passing here every hour. There is always at least one freight train within a few miles of the Amtrak station and is vulnerable to delay by nightly Amtrak trains and by daytime Port of Cleveland trains.

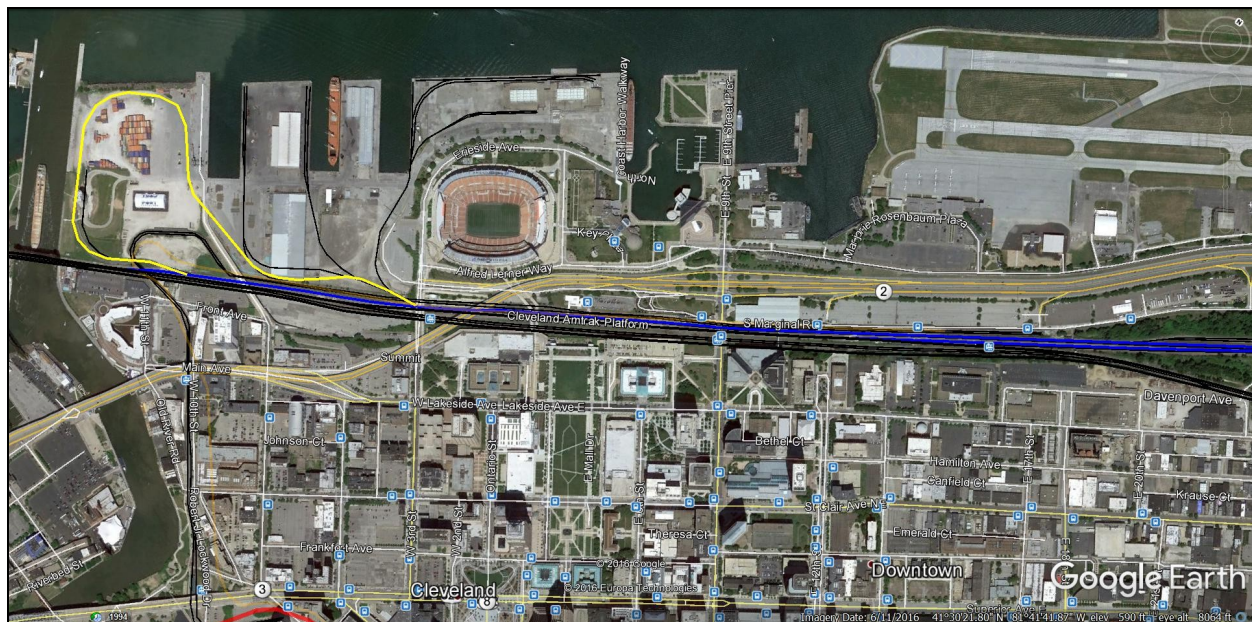
Limited track structure: The Cleveland Amtrak station is located at the convergence of three rail corridors owned by two Class 1 railroads. NS's Chicago Line (Chicago-Cleveland) and Cleveland Line (Cleveland-Yellow Creek, OH) are operated as a through rail corridor, with 100 million gross tons of rail traffic per year typically moving between the Chicago Line and Cleveland Line without any change apparent to the casual, trackside observer. Historically, these were separate properties owned by competing railroads. The Chicago Line was part of the Chicago-New York City "Water Level Route" mainline of the New York Central System. The Cleveland Line was the Cleveland & Pittsburgh Railroad, leased by the Pennsylvania Railroad until it merged with the New York Central in 1968 to become Penn Central. Both later became part of Conrail in 1976 and were then acquired by NS in 1999.

The third rail corridor, Cleveland Terminal Subdivision, is owned by CSX. It is a short segment, continuing only six miles to CSX's Collinwood Yard in Northeast Cleveland. That's where CSX's Lake Shore Subdivision takes over, continuing on another 175 miles to Buffalo. These CSX lines were once part of the Chicago-New York City "Water Level Route" mainline of the New York Central System until 1968. The mainline was owned by Penn Central until the coming of Conrail in 1976. CSX acquired the rail corridor northeast from Cleveland in 1999.

There is also a fourth rail operation in the immediate vicinity that will be discussed later. This is the trackage belonging to the Port of Cleveland and owned by the Cleveland-Cuyahoga County Port Authority. Railroad switching operations are provided under contract by Cleveland Harbor Belt Railroad LLC, a subsidiary of Cleveland Commercial Railroad which operates two routes totaling 35 route-miles in southeastern Greater Cleveland. Cleveland Harbor Belt does not operate beyond the Port of Cleveland. See the downtown Cleveland Amtrak station track layout schematic on the next page.



The track schematic above shows a simplified layout of tracks, switches, crossovers between tracks and other key features in the vicinity of the downtown Cleveland Amtrak station facility. Note that the existing Amtrak station platform (1,200 feet long, 10 feet wide) reaches south only to the Amtrak Connection track. The northern platform edge is five feet from where the door of a standard Amtrak passenger car would be if passengers boarded/alighted from a train on Track 44. The horizontal gap requirement from platform edge to train doorway is two inches. Furthermore, the Amtrak trains that serve Cleveland typically range in length from 900 feet to 1,500 feet, including locomotives. Thus only one Amtrak passenger train can process passengers at Cleveland at one time. Below is how the Cleveland Amtrak station-area track layout appears from a satellite. Many track details cannot be seen.



Anatomy of a railroad traffic jam

Cleveland, OH; July 29, 2016: The events in the early morning hours were noteworthy due to their complexity. Unfortunately, similar rail traffic jams occur regularly here, according to Amtrak station personnel. For orientation of the following descriptions, please refer to the map “Cleveland Amtrak station track layout” on the prior page.

TIME & OBSERVED EVENT

3:05 am Amtrak #29 (Westbound Capitol Ltd) from Washington DC & Pittsburgh passes East 26th Street on Norfolk Southern's (NS) Cleveland Line Track #2, then is stopped by the NS dispatcher by a red signal at CP122. Train #29 was due to arrive CLE at 2:53 am. If allowed to continue another 4,000 feet into the station, it would have arrived less than 15 minutes late. Instead, Train #29 either reversed into the Silver Plate Industrial Track to clear the Cleveland Line or, more likely, it reversed 8 miles on Track #2 to the nearest crossover track east of Cleveland at CP114 in Garfield Heights. It delayed NS trains to CP107, 15 miles east.

3:07 am Eastbound Norfolk Southern (NS) intermodal freight train passes CLE Amtrak station on Cleveland Line Track #1.

3:22 am Amtrak Train #30 (EB Capitol Ltd) from Chicago & Toledo arrives CLE 1 hour, 37 minutes late (-1:37).

3:32 am Amtrak #30 departs CLE in reverse direction, back onto the Cleveland Line, and across the Cuyahoga River drawbridge.

3:45 am Amtrak #30 passes CLE Amtrak station EB on Cleveland Line Track #1.

3:50 am Amtrak Train #49 (WB Lake Shore Ltd) from New York City & Buffalo is due to arrive CLE at 3:27 am but is stopped by the NS dispatcher by a red signal at CP 181, 3,000 feet east of the station.

3:55 am WB NS intermodal freight train passes CLE Amtrak station on Cleveland Line Track #2. It takes several minutes for it to pass.

4:02 am EB NS intermodal freight train passes CLE Amtrak station on Cleveland Line Track #1. It also takes several minutes for it to pass.

4:04 am Amtrak #29 arrives CLE Amtrak station. It pulled forward along the Cleveland Line Track #2, came down the Amtrak Connection via CP122 and CP181, and arrived CLE -1:11.

4:12 am Amtrak #29 departs CLE -1:13.

4:17 am Amtrak #49 is given a green signal at CP181 and arrives CLE -0:50.

4:27 am Amtrak #49 departs CLE -0:42 and is no more than 10 miles behind Amtrak #29 for the next 341 miles to Chicago.

Observed and documented by Ken Prendergast, Executive Director, All Aboard Ohio



Looking west from East 9th Street toward Cleveland Browns Stadium, Amtrak station and, at far right, the Greater Cleveland Regional Transit Authority's (GCRTA) North Coast station. Tracks from left are Norfolk Southern's NS Cleveland Line Track 1 and 2, NS's Amtrak Connection track (on which the Amtrak train is setting next to the station platform), Track 44 (owned by NS west of East 9th and CSX east of East 9th), and the GCRTA Waterfront Line tracks (not visible).



Looking east from the North Point Building's pedestrian walkway, the tracks from left are GCRTA's two-track Waterfront Line, CSX's Track 44 (owned by NS west of here), NS's Amtrak Connection that climbs the gradient past CP181's double-red signal (CSX's Cleveland Terminal Subdivision continues straight ahead) to CP122's signal bridge, and NS's Cleveland Line Track 2 and Track 1 (the latter being used by the double-stack intermodal freight train).

NS addresses some Northern Ohio rail traffic congestion

NS in 2014 expanded its Moorman Yard in Bellevue, Ohio — NS’ biggest classification yard, which is named after former NS Chairman, President and Chief Executive Officer Wick Moorman (who on Sept. 1 became president and CEO of Amtrak). It prompted an examination to determine if better connections were needed to/from NS’s Chicago-East Coast Premier Corridor because of how lines feed into and out of the facility.

“As a result of the analysis, the Class I now is building a reverse connection in Vermilion, Ohio, that’s designed to smooth traffic flow along a portion of the Premier. The \$12.5 million connection will enable eastbound trains to move off the formerly named Chicago Line between the Windy City and Cleveland — the railroad’s busiest line that accommodates 100 trains per day, including 14 Amtrak trains — and onto the B-Line, a parallel NS mainline that provides access to New England and upstate New York markets. The B-Line doesn’t have as much capacity as the Chicago Line, but doesn’t host as many trains.

“Involving the construction of less than a mile of track, the reverse connection will enable trains bound for Buffalo, N.Y., and points in New England to avoid busy Chicago Line traffic around downtown Cleveland, says NS Vice President of Strategic Planning John Friedmann. Roadbed and grading work is slated for completion this year and the track will be constructed in 2017.”

— SOURCE: “Norfolk Southern pours capital, sweat equity into its new Premier Corridor” By Jeff Stagl, Managing Editor, *Progressive Railroading*, August 2016

The reference to “downtown Cleveland” in the previous article is not quite accurate, however, as the rerouted trains will no longer travel the busy Chicago Line between Vermilion and Rockport Yard, near Cleveland Hopkins International Airport. That's as far east as the Vermilion Track Connection's benefit to the Chicago Line goes. That portion is also used by all Amtrak trains through Cleveland.

East of Rockport Yard to a location near Monroe Cemetery at the southern edge of Cleveland's Ohio City neighborhood is NS's Cloggsville Connection that links the Chicago Line with NS's B-Line. The Cloggsville Connection will also see freight traffic detoured off of it. No passenger trains use this connection. From Ohio City eastward, including passing just south of downtown Cleveland via the industrial valley, the rerouted trains will return to their regular route.

Thus, **the new Vermilion track connection will have no impact on the freight and passenger traffic congestion at or near the Cleveland Amtrak station.** All Aboard Ohio is not aware of any other capital improvements in NS's budget that would address the traffic congestion in downtown Cleveland, either.

Convoluting rail access to/from Port of Cleveland: Contributing to rail traffic congestion at/near the Amtrak station is the Port of Cleveland. Or, more accurately, the convoluted routing that freight trains must take to enter and leave the port grounds contributes to congestion. In late 2012, according to the Cleveland-Cuyahoga County Port Authority, it completed a new \$4.5 million rail loop involving more than one mile of new track through the 80-acre port complex.

Now trains can enter or exit the Port of Cleveland by one of two tracks, both of which switch off from Track 44 just west of the Amtrak station platform. One port access track crosses the GCRTA light-rail Waterfront Line at grade. The other access track has the Waterfront Line bridging over it; this appears to be the preferred port access track based on casual observations. The new port loop track offers a great deal of rail car switching flexibility in the port.

The switching maneuvers are performed under contract by the Cleveland Harbor Belt Railroad LLC. It assembles trains for pick up by CSX to take directly to customers or to its Collinwood Yard six miles away in Northeast Cleveland, or by NS to take directly to customers or to several of its rail yards 6-17 miles away in Greater Cleveland. These NS yards are Rockport, Motor and Von Willer – the latter is leased from NS by Cleveland Commercial Railroad, the parent company of Cleveland Harbor Belt Railroad. The Cleveland Harbor Belt Railroad also receives trains from CSX and NS, then disassembles them and places the rail cars at their appropriate unloading or loading locations through the port grounds.

It sounds simple – except it isn't. When every CSX or NS freight train leaves the port, it pulls eastward out of the port grounds onto Track 44. The train must then reverse direction at 10 mph or less to go west on Track 44 and, when rail traffic clears, enters Track 2 of the busy Cleveland Line/Chicago Line demarcation at CD182/Drawbridge at the mouth of the Cuyahoga River.

The river at this location is very busy with commercial shipping and recreational boating, but the railroad has the right of way because 100 million gross tons of annual rail traffic (about 70-80 daily trains) cross the river here at maximum authorized speeds of 30 mph (SOURCE: NS Dearborn Division Track Charts, 2012). NS trains heading to Rockport Yard or west-side customers continue heading west.

But NS port trains heading to Motor Yard, Von Willer Yard or east-side customers, as well as all CSX port trains are only halfway through their zig-zag maneuvers on one of the busiest railroad mainlines linking the Midwest-Northeast. These trains must reverse direction at Drawbridge to head back east again. For eastbound NS trains, many of them cross over at Drawbridge to Track 1 to join the normal flow of traffic.

Unfortunately, eastbound CSX trains can't cross over. They must run against the normal flow of traffic on someone else's railroad – on Track 2 of NS's Chicago Line through Drawbridge, then use NS's Amtrak Connection track until reaching CP181 where it switches onto CSX's Cleveland Terminal Subdivision to head east to Collinwood Yard. All Aboard Ohio has observed these zig-zag movements in/out of the port. They normally take 15-20 minutes, but can sometimes take longer if there is bad-ordered rolling-stock or the dispatcher is busy with other duties.



The yellow lines show the many lakefront tracks that Port of Cleveland rail traffic must currently use to travel to/from east-side rail yards and customers located on CSX and NS routes. All of these are zig-zag movements east out of the port grounds, west across the Cuyahoga River drawbridge, then east again on NS's busy Cleveland Line tracks. CSX trains leave NS toward the east, or right side of this view, to travel to their Collinwood Yard in Northeast Cleveland.



As a result of All Aboard Ohio's proposed capital improvements for addressing Amtrak and freight train delays in the vicinity of the Cleveland Amtrak station, this graphic shows the benefit to simplifying Port of Cleveland rail traffic patterns as well. Gone is the zig-zag movement of freight trains in/out of the Port of Cleveland, onto the Drawbridge, and blocking Cuyahoga River shipping and frequent NS freight trains. It is replaced by a much-simplified, continuous movement to/from all east-side customers and yards of NS and to CSX's Collinwood Yard. In fact, CSX trains wouldn't have to touch NS's busy Cleveland Line anymore, as a result of All Aboard Ohio's proposed track enhancements.

Alternative solutions for consideration

Rescheduling Amtrak or freight trains: For all of the problems experienced by freight and passenger customers in the vicinity of the Cleveland Amtrak station, they appear to be the best of worse alternatives. And, as noted earlier, when all freight and passenger trains run on time, the existing track layout near the station can handle the rail traffic in a relatively fluid manner.

Rescheduling trains means moving the convergence of trains to another location, and few other locations across Northern Ohio have as much track capacity as Cleveland. The next best option would probably be Toledo where two Amtrak trains can get off the NS Chicago Line and into the MLK Plaza Station that has two tracks with platforms to process passengers from those tracks. The two tracks were rehabilitated with new welded rails, ties and ballast by Amtrak in 2011 and the two platforms will be replaced with new surfaces, tactile edges, drainage, lighting and signage in the next year or two.

But Toledo is two hours west by passenger train, meaning that two or more Amtrak trains would have to be rescheduled by at least two hours. That is a significant change for Amtrak – and for the host railroads. For example, All Aboard Ohio has communicated in the recent past with its colleagues at the Empire State Passengers Association (ESPA) about rescheduling the *Lake Shore Limited* to offer better times at Ohio stations. That idea was met with skepticism, as ESPA reported that Amtrak's four trains (the *Lake Shore*, *Maple Leaf* and two *Empire Service* trains) each way between Buffalo and Albany are purposely scheduled to fit into CSX freight traffic “windows” when fewer freight trains are operated. Any significant deviation from that operating pattern would cause serious degradation of passenger and freight travel times and reliability.

This was borne out in the New York State Department of Transportation's 2014 Tier 1 Draft Environmental Impact Statement of high-speed rail in the Empire Corridor (New York City-Niagara Falls). The base alternative was the least expensive, but accounted for the infrastructure improvements already programmed. The least expensive expansion alternative, 90A (including four more daily trains), is projected to cost \$1.66 billion yet cause freight delays per 100 miles operated to increase by 5 minutes, 27 seconds. More expensive alternatives would cause delays to decrease. So rescheduling trains likely means shifting Northeast Ohio's rail traffic congestion issues onto other regions of Ohio or to states that have their own rail traffic capacity constraints.

Better on-time performance: As noted before, the track layout in the vicinity of the Cleveland Amtrak station is able to accommodate the existing passenger and freight train traffic – when nearly all of the 70-80 trains per day are on time. So it would stand to reason that if on-time performance was improved, the available infrastructure could function as designed. Amtrak reports that there are many different causes of train delays (passenger/baggage loading, malfunctions or repairs to train equipment, track, signals, etc.). But, by far, the most frequent source of delays is “train interference” – other trains

Train delays can and do cascade through the entire Northeast-Midwest rail system because of insufficient track capacity at the Cleveland Amtrak station.

vying for space on a limited track layout. Outside of the Northeast or Chicago, the most common “other trains” are freight trains.

In other words, the greatest source of delays is too many trains vying for space on too little track. If an Amtrak train or freight train is delayed by congestion dozens or even hundreds of miles away, it tends to reach the Cleveland station delayed, too. Because the track layout at the Cleveland Amtrak station is sufficient to handle rail traffic only when everything is on time, one late train can and does cause another Amtrak or freight train to run late. That can and does cause more Amtrak freight trains to run late in Cleveland or in cities many miles away. In Chaos Theory, it's commonly called the “Butterfly Effect” – a phenomenon in which a small perturbation in the initial condition of a system results in large changes in later conditions. Train delays can and do cascade through the entire Northeast-Midwest rail system because of insufficient track capacity at the Cleveland Amtrak station.

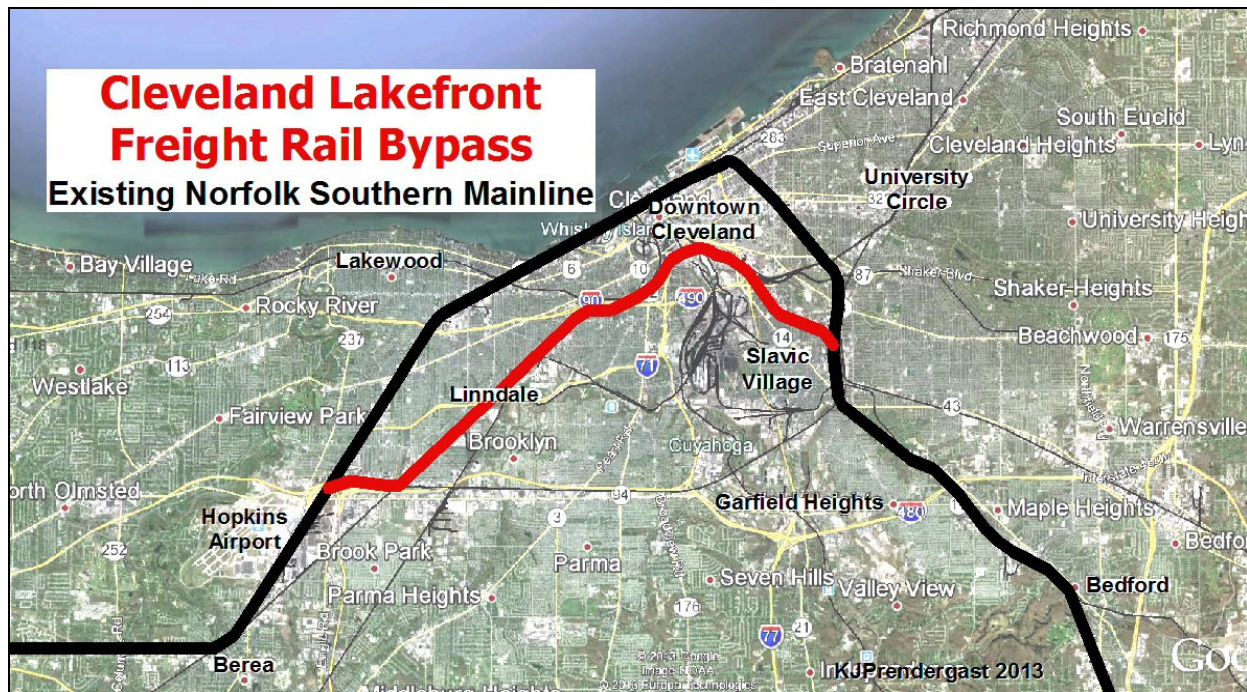
Capital improvement alternatives: All Aboard Ohio considered two capital improvement options to address the rail traffic capacity constraints near the Amtrak station. One option focused on track enhancements at/near the Amtrak station. The other looked at using NS's philosophy to build track connections between its rail corridors to reroute rail traffic away from the Amtrak station on the busy Chicago/Cleveland Line to a less-busy route like the B-Line.

Lakefront Bypass: A report by All Aboard Ohio Executive Director Ken Prendergast in 2003, conducted for the Green City Blue Lake Institute and the Cleveland Waterfront Coalition looked at options for building a Lakefront Bypass for some or all NS through freight trains. The preferred routing would pass just south of downtown Cleveland (see map, next page). The report was peer-reviewed by transportation engineering consultants from LTK, Parsons Brinckerhoff and Wilbur Smith & Associates.

The portion relevant to rerouting freight traffic away from the tracks past the Cleveland Amtrak station involved reactivating and upgrading 2.4 miles of an NS-owned right of way (leased by Cleveland Commercial Railroad) between East 37th Street below Interstate 77 and Union Avenue near East 82nd Street in Cleveland's North Broadway neighborhood. An estimated investment of \$28 million could provide one Class 3 track, signals and track connections and allow perhaps 5-10 daily NS through freight trains to be rerouted away from the lakefront. Adjusted for inflation, that estimate would be about \$36 million in 2016. Full build-out of the 13.2-mile Lakefront Bypass, from Rockport Yard to Slavic Village, to reroute all NS through trains was \$150 million in 2003, or \$200 million today.

The *Progressive Railroading* article quoted on Page 8 later included additional information from NS Vice President of Strategic Planning John Friedmann that is relevant to this 2.4-mile piece of the Lakefront Bypass. The article paraphrased and quoted him, noting that track connections in general tend to be cheaper because they are short and can be built on land already owned by the railroad, as opposed to sidings that are longer and more expensive to construct. “We can get more bang for the buck,” Friedmann said.

See a map of the Lakefront Bypass on the next page.

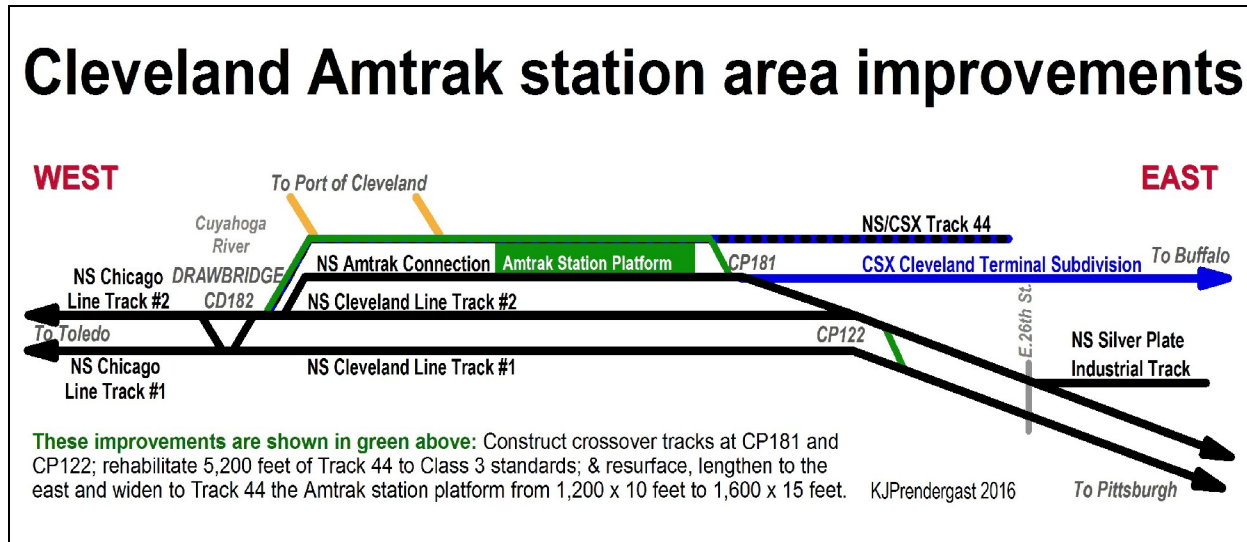


Cleveland station-area track enhancements: A more cost-effective, near-term solution appears to be track and station facility enhancements at and near the Cleveland Amtrak station. All investments are on active railroad-owned properties. This includes in order of importance:

- Construct a dispatcher-controlled crossover track at CP181 between Track 44 and the Amtrak Connection track. This will allow more than one passenger train to/from either Buffalo or Pittsburgh to get off NS's busy Cleveland Line. It also will keep CSX Port of Cleveland freight traffic off NS's Cleveland Line entirely. Estimated cost is \$3 million.
- Resurface, widen and lengthen the 10' x 1,200' Cleveland Amtrak station platform so it measures 15' x 1,600' with new lighting and Track 44 crossing surfaces. This, coupled with the above investment, will allow two trains to process passengers simultaneously at the Cleveland Amtrak station. A 9-car passenger train (typically the length of the *Capitol Limited*) with two locomotives (905' long) would be able to process passengers from 950' of platform along Track 44 without blocking either pedestrian crossing at the Cleveland station. Estimated cost is \$3 million.
- Rehabilitate about 5,200 feet of Track 44 to FRA Class 3 standards with continuous welded rail, new cross-ties, new ballast and a straighter alignment. This will provide passengers with smooth, safer track conditions. Estimated cost is \$1 million.
- Construct a dispatcher-controlled crossover track at CP122 between NS's Cleveland Line tracks 1 & 2. This will enable eastbound passenger trains from Cleveland to Pittsburgh to quickly rejoin the normal flow of rail traffic rather than run against it for 8.1 miles to the nearest crossover at CP114 in Garfield Heights. Estimated cost is \$4 million.

Total estimated construction cost for these conceptual enhancements to Cleveland station-area track/station facilities is about \$11 million.

The proposed track and station facility improvements are shown in green color in the track schematic below, and can be contrasted with the existing conditions “Cleveland Amtrak station track layout” schematic on Page 5:



Benefits of this proposed track layout and expanded station platform:

- It would not require the City of Cleveland to alter its plans for the Lakefront Multi-Modal Transportation Center. Instead the project's benefits would be more national in scope.
- With this new track layout in place, Amtrak service would be more reliable as more than one Amtrak passenger train at the same time could get off the NS mainline at the station and out of the way of NS's Chicago-East Coast Premier Corridor freight traffic.
- With access points at both ends of Track 44 (with the addition of the crossover track at CP181) as well as the addition of the crossover at CP122, passenger trains traveling in opposite directions no longer have to back up to get out of the way of the other Amtrak train(s), or other freight trains.
- More than one Amtrak train will be able to process passengers simultaneously at the Cleveland station, off the NS mainline, allowing NS traffic to pass through the station area without having to wait for the second Amtrak train to clear the mainline.
- The expanded station platform will allow more than one Amtrak train to process passengers without blocking both at-grade pedestrian walkways across Track 44, offering opportunities for future expansion of passenger rail service at Cleveland.
- Private passenger cars can be added/subtracted to Amtrak trains at Cleveland without having to use the NS mainline for switching maneuvers. The same holds true for adding/subtracting any rolling stock that needs repair or inspection.
- CSX freight trains accessing the Port of Cleveland no longer have to travel on any part of NS's busy Cleveland/Chicago Lines and no longer have to make a zig-zag movement that blocks NS traffic and Cuyahoga River shipping at Drawbridge.
- NS freight trains accessing the Port of Cleveland to/from east-side yards/customers no longer have to make a zig-zag movement at Drawbridge (also blocking Cuyahoga River shipping) and on Track 44 to enter/exit the port.

Next steps

All Aboard Ohio urges the City of Cleveland, Northeast Ohio Areawide Coordinating Agency, Cuyahoga County Department of Development, Ohio Rail Development Commission, Ohio Department of Transportation Office of Transit, Cleveland-Cuyahoga County Port Authority, Greater Cleveland Regional Transit Authority, Amtrak, Norfolk Southern, CSX and Cleveland Harbor Belt Railroad LLC to work together to support the development of environmental documentation of providing sufficient track capacity as part of the Lakefront Multi-Modal Transportation Center project.

The added track capacity here would not only support more reliable and expanded Amtrak service at the multi-modal station but also reduce delays for rail freight service on NS's busy Chicago-East Coast Premier Corridor and improve rail freight access to/from the Port of Cleveland. The city's desire for a multi-modal transportation center at this location offers an opportunity to create these benefits as a result of its programming. Plans for and placement of multi-modal station facilities (see below) would not have to be altered to include the added track capacity at the station. And best of all, the added cost of about \$11 million is a conservative, cost-effective expansion of the project's scope considering the broader benefits provided. We hope that the stakeholders involved with this project agree.

