

THE EMPIRE CORRIDOR

Express Track to the Future

*Moving Forward with a Pragmatic Plan for Building
a Modern Intercity Passenger Rail Service*





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Introduction

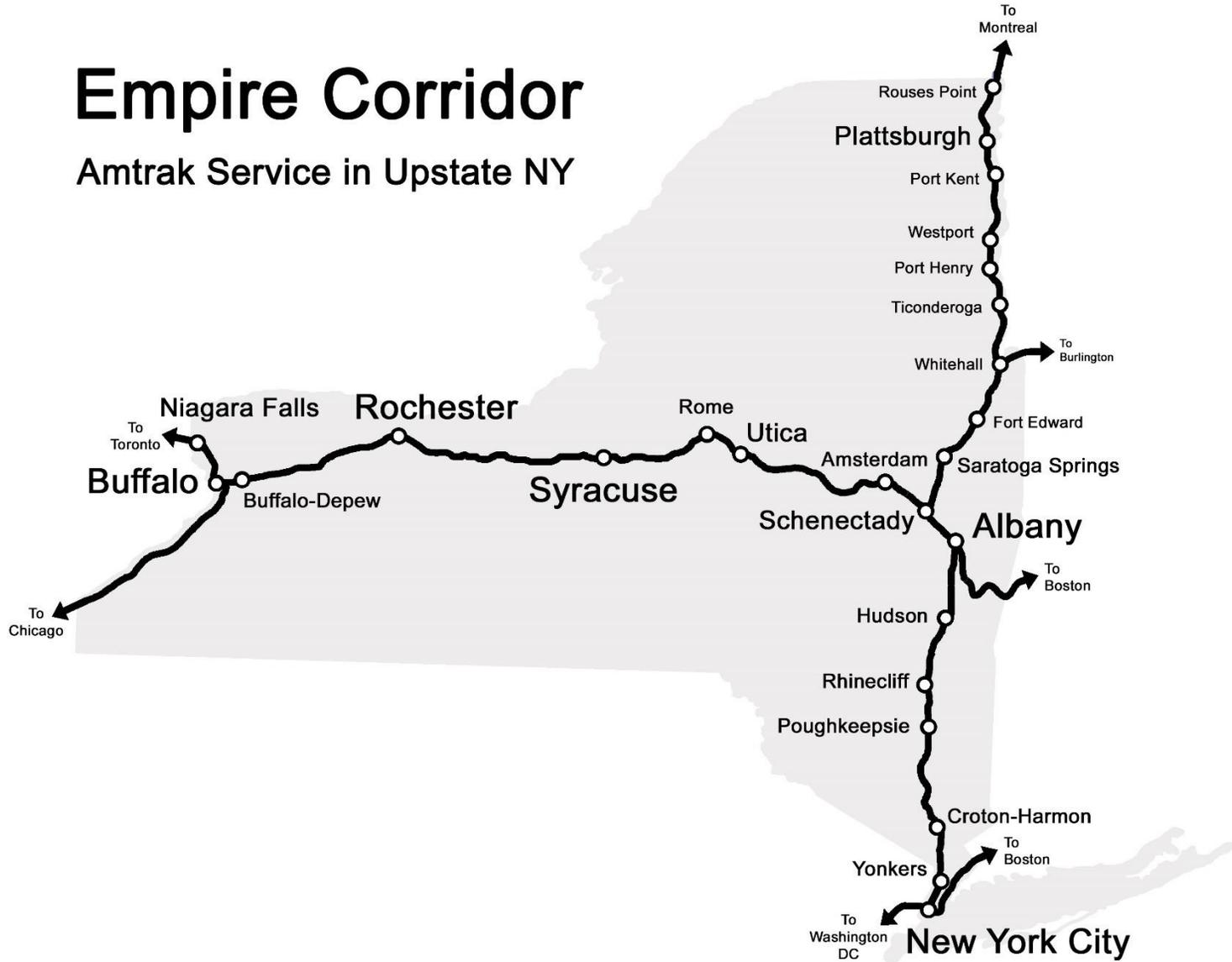
With the receipt of a Record of Decision from the Federal Railroad Administration (FRA) for the Empire Corridor Tier I Final Environmental Impact Statement, we now have the opportunity to begin the undertaking of the biggest transportation project in Upstate New York since the NYS Thruway in the 1950s.

A modern intercity rail service connecting Upstate New York with New York City would boost the socio-economic prospects of cities big and small by offering a convenient and efficient transportation alternative, supplemental to existing air service and highways. A passenger rail service offering train frequencies and travel times equivalent to Amtrak's Northeast Corridor and Brightline in Florida would be a catalyst for attracting further investment in the high tech, higher education, and tourist industries of Upstate New York.

The Preferred Alternative 90B with its accompanying Service Development Plan offers a pragmatic path forward—by building a new “Dedicated Express Track” for intercity passenger trains within the existing historic railway right-of-way from the Capital District to the Niagara Frontier, building upon the past to create the future.

Empire Corridor

Amtrak Service in Upstate NY



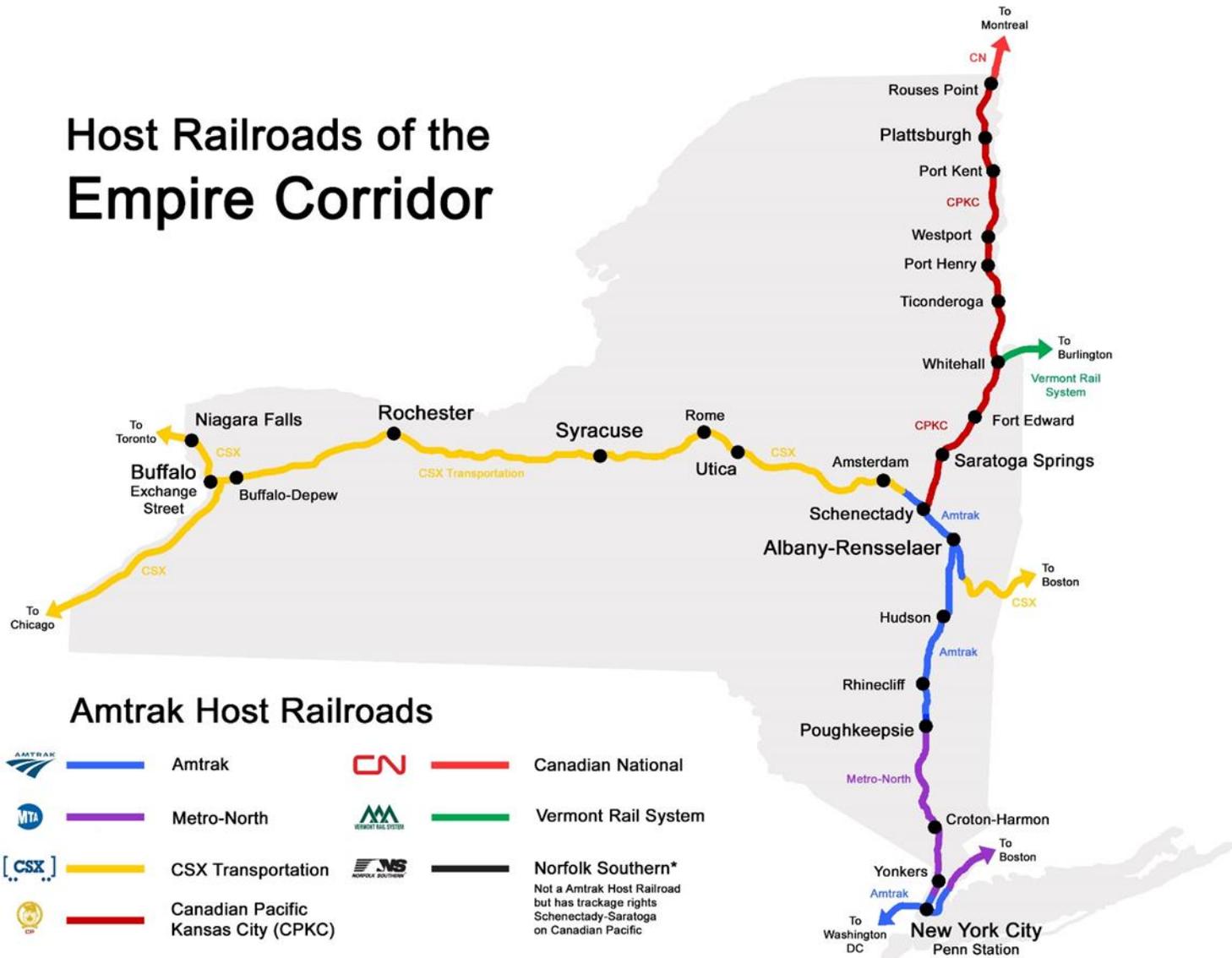
The Empire Corridor

The Empire Corridor is a 461-mile intercity rail corridor stretching between New York City and Niagara Falls, serving the major population centers of the Hudson Valley, Capital District, Central New York, and Western New York. The corridor is operated by Amtrak, the national passenger railroad, with annual operating and capital support made by the State of New York through NYSDOT, the state's department of transportation, which oversees the state-supported passenger rail service.

Under Section 209 of the federal Passenger Rail Investment and Improvement Act of 2008 (PRIIA) state financial support is mandated for all Amtrak services (non-NEC) under 750 miles. NYSDOT therefore contracts with Amtrak to operate the Empire Corridor—the exception being the long-distance New York-Boston-Chicago 'Lake Shore Limited' which is part of Amtrak's 'National System'. Before the pandemic in FY 2018-19 NYSDOT paid Amtrak \$44.33 million for operating costs not covered by ticket sales, as well as capital investment in track and equipment.

The corridor today hosts thirteen roundtrips New York-Albany, with four that extend service to Buffalo, including the long-distance 'Lake Shore Limited' to Chicago and the 'Maple Leaf' to Toronto. Travel times between New York City and Albany are about 2h 30m, and eight hours to Buffalo. In FY 2023 the ridership of Empire Corridor services was 1.2 million New York-Albany, and over 452,000 Albany-Niagara Falls-Toronto.

Host Railroads of the Empire Corridor

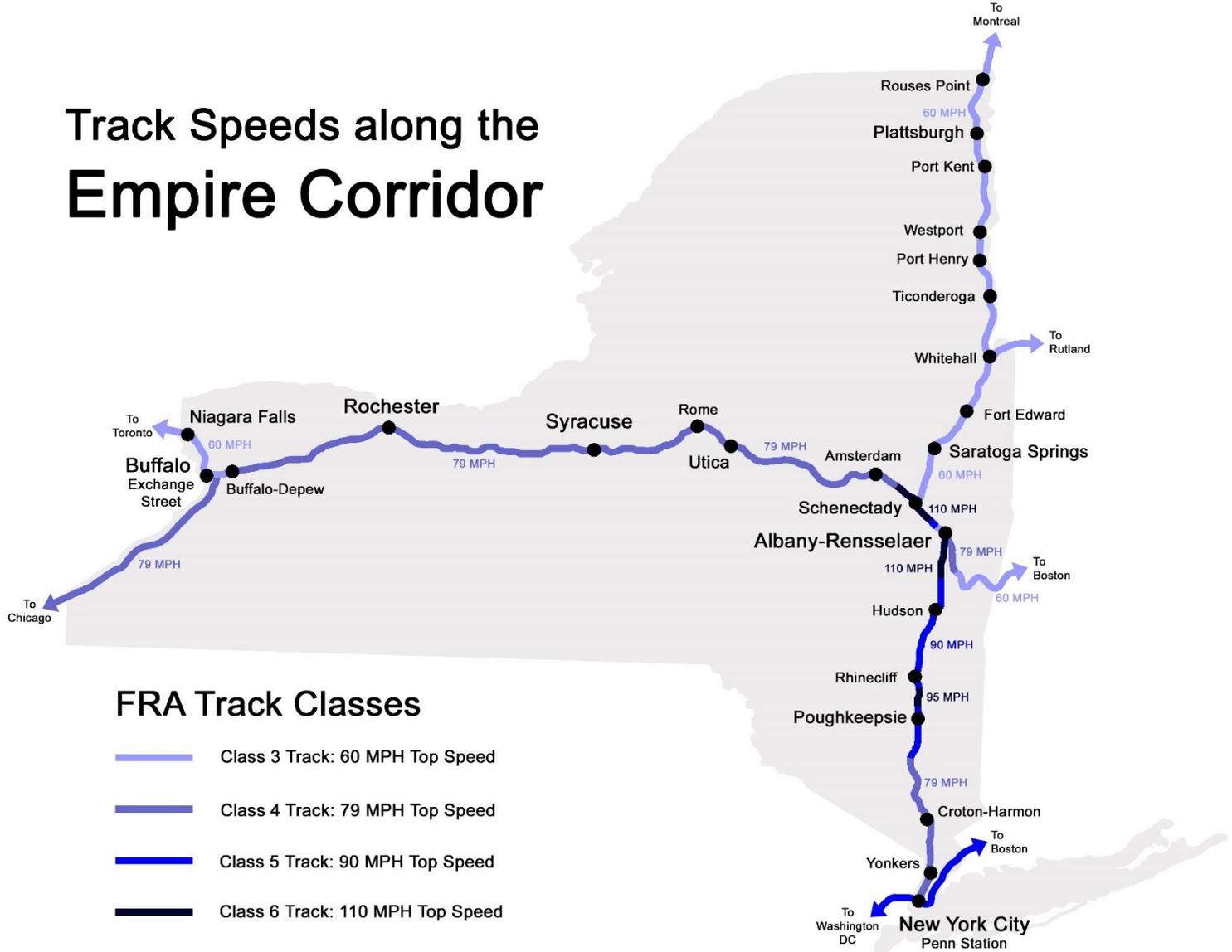




There are three “host railroads” for the Empire Corridor, with the Hudson Line divided between the commuter railroad Metro-North and Amtrak, and west of Schenectady (Hoffmans) the Class One freight railroad CSX Transportation. There is friction between Amtrak and the host railroads concerning the timekeeping. Legally since its creation, in return for relieving the private railroads of their intercity passenger rail public service obligations, the federal government mandated that passenger trains have priority over freight trains. However, in practice this has not always been true.

The top speed for Amtrak trains along the Empire Corridor is 110-mph on three sections of mainline through the Capital District on Amtrak tracks, with 90-mph south from Stuyvesant to Poughkeepsie. On Metro-North’s section of the Hudson Line south of Poughkeepsie speeds are 80 to 70-mph, with 60-mph on Amtrak’s Empire Connection from the Spuyten Duyvil Bridge south along the westside of Manhattan to Penn Station. West of Amsterdam the top speed on the CSX mainline to Buffalo is 79-mph, with 60-mph for the 28 miles of CSX’s Niagara Branch.

Track Speeds along the Empire Corridor



History

Today's Amtrak trains follow the natural pathway of the Hudson and Mohawk valleys, a "Water Level Route" carved by glaciers during the last ice age through the formable barrier of the Appalachian chain of mountains stretching from Alabama to Maine. Utilized by the Native Americans and then Europeans, trade on foot and in canoes moved between the eastern seaboard and the continental interior.

The Empire Corridor has its direct origins from some of the first railroads built in the United States during the 1830s, soon after the opening of the Erie Canal. After the Civil War these railroads were merged into the New York Central & Hudson River Railroad by "Commodore" Cornelius Vanderbilt, whose family would control the railroad into the 20th Century as it expanded into New England and the Midwest.

Under the Vanderbilts the New York Central became one of the busiest and most modern rail systems in the world. To accommodate the burgeoning traffic of the industrializing nation, the mainline from the new Grand Central Depot to Buffalo was largely four-tracked with new steel rails—with two separate tracks for freight and two for passenger trains—all overseen by what was then state-of-the-art "lock and block" interlocking signaling, which regulated the heavy traffic flows and prevented collisions.

OPPOSITE: The New York Central mainline at Little Falls in the 1880s, note the four-tracks with passenger and freight trains segregated between the two passenger tracks on the southside and the two freight tracks on the northside. **Photo from the Library of Congress**



Famous Trains

The well-built, maintained, and operated New York-Albany-Buffalo mainline—branded the “Water Level Route” for its easy grades along the shorelines of the Hudson and Mohawk rivers, and the Great Lakes—allowed the New York Central to push the speed of its premier passenger trains, starting with the ‘Empire State Express’ in the 1890s.

It ran non-stop for 142 miles between New York and Albany, while averaging a then amazing 50mph to Buffalo, with a top speed of 80mph. Behind specially built Engine 999 in a special run in 1893, the railroad with much publicity, claimed the train reached 112.5-mph, before being exhibited at the Chicago World’s Fair as the “fastest” train in the world. The ‘Empire State Express’ in 1902 was joined by the deluxe “mile-a-minute” New York-Chicago ‘20th Century Limited’—which became the flagship train of the New York Central, famous and beloved up to its discontinuance in the 1960s.

The heyday of the New York Central’s passenger service came during World War II and in the years immediately following the war. Multiple overnight trains departed New York’s Grand Central Terminal each day for major cities in the west, including Chicago, Detroit, Cleveland, Cincinnati, and St. Louis. And numerous day trains served cities and towns in Upstate NY, including Poughkeepsie, Schenectady, Utica, Syracuse, and Rochester along the four-track mainline to Buffalo. During WWII, the New York Central committed to a large \$56 million investment in new passenger equipment, creating what it branded as the “Great Steel Fleet” of 33 streamline trains.

"THE NIAGARA FALLS ROUTE"

NEW YORK CENTRAL

HUDSON RIVER RAILROAD

The Great Track

J. M. TUGGEY, General Superintendent
HENRY MOUNT, General Passenger Agent

NEW YORK
ALBANY
UTICA
SYRACUSE
ROCHESTER
BUFFALO
NIAGARA FALLS

N.Y. Central R.R.

OF HUDSON RIVER

AMERICA'S GREATEST RAILROAD

NEW YORK
ALBANY
UTICA
SYRACUSE
ROCHESTER
BUFFALO
NIAGARA FALLS

436 1/2 MILES

IN 425 1/2 MINUTES

ALL THE FAST RUNS OF THE WORLD ECLIPSED.

NEW YORK CENTRAL

OF HUDSON RIVER

CALL BY THE NAME OF THE GREAT TRACK

NEW YORK
ALBANY
UTICA
SYRACUSE
ROCHESTER
BUFFALO
NIAGARA FALLS

JOHN M. TUGGEY, GENERAL MANAGER
GEORGE H. DANIELS, GENERAL PASSENGER AGENT

GRAND CENTRAL STATION

ROUTE of scenic splendor between New York and the West and the main artery of commerce through the heart of industrial America....

NEW YORK CENTRAL LINES

Twentieth Century Limited - Chicago - New York - New England
Southwestern Limited - St. Louis - New York - New England

New York Central

SYSTEM TIME TABLES

The Empire State Express
In the Heart of the Hudson River

NEW YORK CENTRAL SYSTEM

EFFECTIVE FEBRUARY 14, 1942 - Form 1001



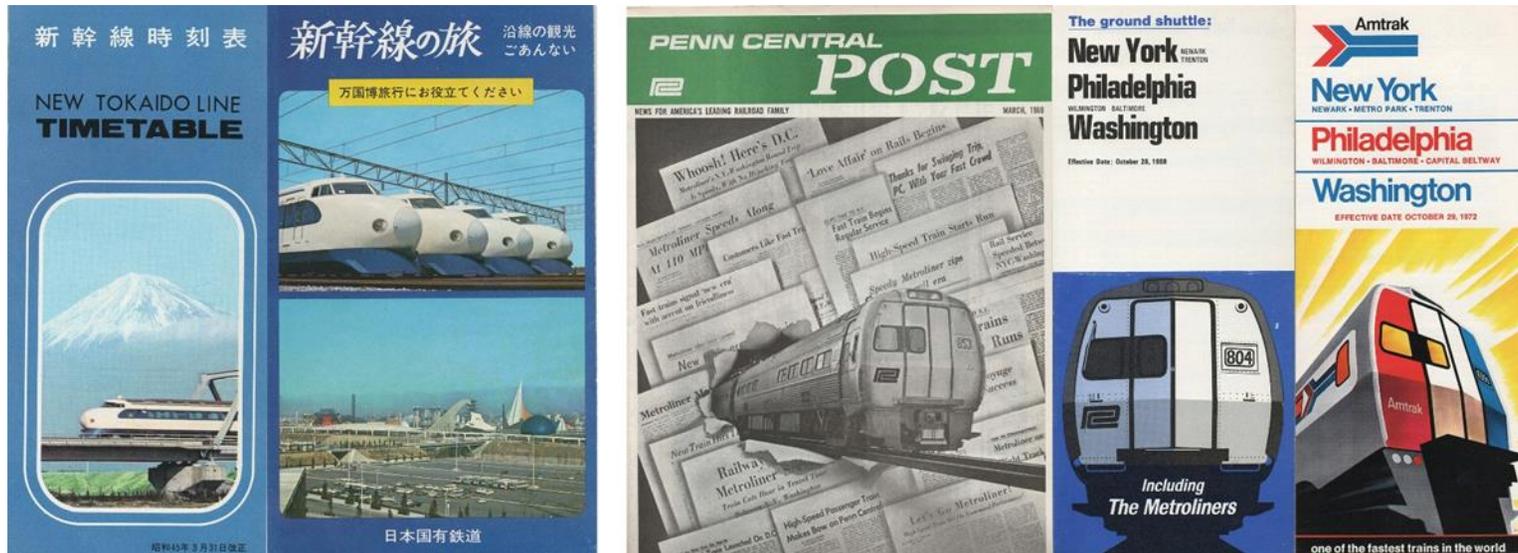
"The New York Centrals "Empire State Express"
One of the fastest Long Distance Trains in the world.

Postwar Trouble

After World War II the private rail industry entered a crisis as the combination of airlines and highways—generously supported by public subsidies—ate away at railroad traffic and profits. While the combination of downsizing and modernization could allow the rail industry to remain competitive moving bulk and long-distance freight, the passenger side of the corporate ledger bled red ink as travelers, followed by the mail, took to Boeings and the Interstates.

In 1957 the passenger deficit for the New York Central reached \$52 million, leading the railroad into the 1960s to slowly consolidate its local and long-distance passenger services. The 66 passenger and mail trains across Upstate New York in 1951 were cut to only 14 by 1965. By 1967 the passenger deficit had been cut down to \$28 million, but things got worse when midyear the U.S. Postal Service ended its Railway Post Office (RPO) operations that brought in \$7.8 million annually.

Overseas in Postwar Europe and Japan, large investment by national governments into their nationalized railways, combined with innovation in equipment and operations, allowed “intercity” passenger rail to remain popular with the traveling public over distances of several hundred miles, even as new airports and superhighways—the autobahns, autoroutes, and motorways of Europe—were open. In 1964 the world’s first dedicated high-speed rail line, the Tokaido Shinkansen, opened between Tokyo and Osaka ahead of the Summer Olympics. A grand success, the “Bullet Train” inspired high



speed rail projects in Europe, eventually leading to the French TGV and the German ICE in the 1980s. But these new high-speed rail services were built on the foundation of a program of steadily intensified intercity services, that by running fast and frequent with regular interval departures over upgraded mainlines, kept intercity rail in the running with airlines and highways.

In the United States, the main effort to follow the example of Europe and Asia with revitalized passenger rail in the 1960-70s was the federally sponsored 'Metroliner' project of the "Northeast Corridor"—which under the newly created Amtrak (1971) successfully evolved into the current Boston-New York-Washington 'Acela' and 'Northeast Regional' services. Today the electrified Northeast Corridor remains by far the busiest intercity rail route in the nation, carrying a third of all Amtrak passengers.

Empire Service

However, before the Metroliner there was the ‘Empire Service’ of the New York Central, which introduced a regular-interval “clock-face” service of faster intercity trains between New York City, Albany, and Buffalo. This new service was born from a combination of innovation and desperation.

Following example of railroads across the nation through the 1950 and 60s that petitioned state and federal regulators to allow the discontinuance of loss-making passenger trains, the New York Central did the same, asking the New York State Public Service Commission to allow for the discontinuance of the long-distance passenger trains it still ran through Upstate New York in 1967. The Public Service Commission refused, so the railroad came back with a new service plan as a counter-proposal.

The railroad’s Passenger Department in 1956 had based on research proposed the adoption of “Travel Tailored Schedules”—new regional timetables of fast and frequent day coach trains scheduled at regular intervals throughout the day—in place of the existing long-haul trains made up of coaches, sleepers, dining cars, and the “head-end” traffic of baggage, mail, and express freight. The Passenger Department wasn’t alone in its conclusions, the nationalized British Rail would begin to recast its “Inter-City” long-distant passenger operations along an identical pattern in the early 1960s.

The new service plan—branded as the “Empire Service”—built around a regular interval timetable of faster coach trains was ultimately approved by the regulators. The

railroad consolidated 11 daily local and long-distance trains out of New York City into eight round-trips New York-Albany, five round-trips New York-Buffalo, and one additional round-trip Albany-Buffalo. While two trains still carried sleeping cars for points beyond Buffalo, the focus was on day coach passengers within New York State.

On Saturday, December 2, 1967, the New York Central's last-named trains—including the '20th Century Limited' and 'Empire State Express'—made their final runs. The next day, Sunday December 3rd, 1967, saw the start of the new 'Empire Service' with the 8:30am departure of 'Empire Service' train #71 from Grand Central's Track 36. That evening, nameless train #61—forerunner of today's 'Lake Shore Limited'—departed Grand Central Terminal at 6:30pm for Chicago.



Turboliner Era

The “Empire Service” experiment was a short-lived success, with modest increases in ridership and revenues, which when combined with the significantly reduced operating costs, got the new service to a near break-even point in relatively short order. Robert D. Timpane, the railroad's assistant vice president of operating administration, oversaw a dedicated team of management trainees that monitored the onboard service quality and timekeeping—with monthly meetings held with union representatives and the Public Service Commission to evaluate and adjust the service.

Unfortunately, with the February 1, 1968 merger of the New York Central and Pennsylvania Railroad into the ill-fated Penn Central, the pro-passenger effort by management, labor, and the state regulator soon waned. Service quality rapidly deteriorated amid fierce corporate infighting and gross mismanagement. Penn Central entered into the largest bankruptcy in national history on June 21, 1970—the federal government stepping up to rescue the bankrupt Northeastern rail industry by creating Amtrak in 1971 and then the new freight railroad Conrail in 1976.

The Energy Crisis of the 1970s fueled a rebound in rail ridership under Amtrak’s stewardship. For the ‘Empire Service’, ridership increased from 466,200 in 1973 to 652,600 in 1975 after the OPEC oil embargo following the Yom Kippur War. With renewed interest in “energy efficient and environmentally friendly” rail transportation, New York State embarked on a big investment in the “Empire Corridor”.

NEW YORK STATE'S
**EMPIRE
CORRIDOR**



**HIGH SPEED
PASSENGER
SERVICE**

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MARIO M. CUOMO, Governor JAMES L. LAROCCA, Commissioner

MAYBE YOUR NEXT FLIGHT SHOULD BE ON A TRAIN.

No, we haven't lost our minds. Nor have we succeeded in building a train that can actually fly. At least not in the air.

But what we at Amtrak have done, we believe, is no less remarkable. In the last 12 years, we've built a new, nationwide passenger rail system. Literally, from the ground up. A system that today represents a viable alternative for people who fly. For business or pleasure.

How can we say that?

Did you know that Amtrak can take you to over 475 different places? That's far more than United, TWA, American and Delta put together.

We've improved our on-time record nearly 40%. And in the last 6½ years we've rebuilt our entire fleet, adding some of the newest and most technologically advanced equipment in the world.

When it comes to sheer comfort, we believe nothing comes close to the train. For instance, our coach seats are wider than the seats most airlines use. They give you so much legroom you'll think you're in first class. On the train, there are no seatbelts. You can get up and stretch your legs. Or take a walk into the dining car and enjoy a delicious meal, whenever you like.

On long trips, when time is essential, the plane is often more practical.

Still, on most trips, there are plenty of good reasons to consider the train.

So the next time you're going somewhere, get your head out of the clouds. Do what 19 million riders a year do. Take off with Amtrak. And fly, without ever leaving the ground.

For information or reservations call Amtrak or your travel agent.

Amtrak is your ticket to over 475 different cities.

Enough room to comfortably read the paper.

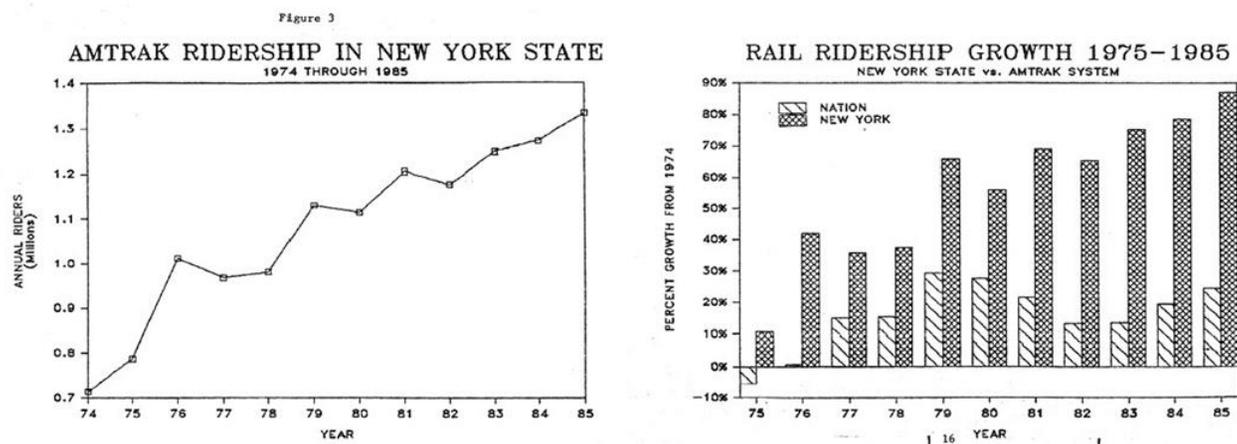
The train: One of five Turboliners now operating between New York City and Albany.



**ALL
ABOARD
AMTRAK**

Amtrak at this time also introduced on the corridor the Rohr Turboliners in 1975, the trainsets derived from a French gas turbine design, giving the service a high-speed image. The introduction alone of new sleek modern trains is credited to boosting ridership overseas, what the British called the “nose-cone” effect after the mid-1970s introduction by British Rail of their streamlined high-speed ‘Intercity 125’ HST diesel trainsets, which were observed to have boosted ridership even for services where travel times remained the same! Amtrak took advantage of the cutting-edge “Space Age” look of the Turboliners, featuring them heavily in both state and national publicity.

New York State invested over \$100 million—funded by several bond issues—in intercity passenger rail infrastructure from 1975 to 1991 as part of the “Empire Corridor High Speed Rail Program”. The civil engineering work included upgrades and replacement of tracks, signaling, and stations. Line speeds were increased to 110-mph on tracks through the Capital District, and 90-mph to Poughkeepsie. The infrastructure renewal program enabled a doubling of train frequencies and a slashing of travel times south of Albany from 3 hours to 2h 15m by the early 1980s. The end result of this investment was a near doubling of ridership from 1975 to 1985 from about 700,000 to over 1.2 million annually, a faster rate of growth than by Amtrak nationally.



After this however investment slowed, futuristic technology like maglev becoming a distraction. In 1991 trains were switched from Grand Central Terminal to Penn Station with the refurbishment of a former freight line on the westside of Manhattan, renamed the “Empire Connection”. Several stations were rebuilt, including the Albany Rensselaer Rail Station, which open in 2002 and is now Amtrak’s ninth-busiest station.

A “High Speed Rail” program by the Pataki Administration in the late-1990s to rebuild the old Turboliner trainsets ended in grief. According to the State Controller this was primarily due to mismanagement by NYSDOT—which lacked the necessary in-house expertise after its well-staffed “Rail Division” had been downsized into a small “Rail Bureau” within the Office of Intermodal Services. Amtrak, while under fiscal stress and political attack by the Bush Administration, walked away from the project in 2002. After the settling of a lawsuit with Amtrak, the partially rebuilt Turboliners (and a warehouse of parts) were sold at auction in 2012 by the Office of General Services and scrapped.

The American Recovery and Reinvestment Act of 2009 led to a combined \$942 million in federal and state money being invested into the Empire Corridor. This included the construction of a second mainline track between Albany and Schenectady, eliminating a major bottleneck in the system. Money was also invested in a fourth platform track at the Rensselaer station, signaling work south of Albany, and new stations at Niagara Falls, Rochester, Schenectady, and Exchange Street in downtown Buffalo.



New York State
NYSStore SURPLUS GOVERNMENT PROPERTY FOR SALE
NYSStore.com Home About NYSStore.com Homeless, Campus, Donations Homeless, Campus, Map

All Auctions on **eBay**

- VEHICLES
- BUSINESS & INDUSTRIAL
- COMPUTERS & NETWORKING
- ELECTRONICS
- FURNITURE
- MISCELLANEOUS/OTHER

VEHICLES & Homeowner Equipment
LIVE STATEWIDE AUCTIONS

SURPLUS REAL ESTATE

SURPLUS TRAIN CARS & PARTS
PUBLIC AUCTION
DECEMBER 11 & 13
Bid Online With **proxibid**

LIVE PUBLIC AUCTION

SURPLUS TRAIN CARS AND PARTS

ONSITE AND ONLINE AUCTION: DECEMBER 11 & 13

The Tier One EIS

The Federal Railroad Administration (FRA) signed off on the Tier I Final Environmental Impact Statement (FEIS) for the Empire Corridor on February 2, 2023 – the Notice of Availability appearing in the Federal Register on February 17, 2023. It had been a long process, taking over 15 years and 4 months*, starting in 2009 with the issuance of a notice of intent to prepare an environmental impact study, with the Draft EIS released for public comments and several open house hearings in Spring 2014.

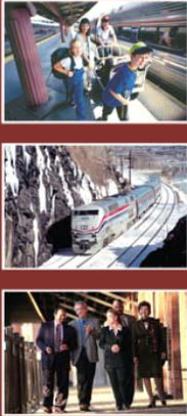
Why so long? In part the delay came from a dispute between New York State and CSX, the Class One freight railroad that had acquired half of the Conrail system in 1999 in a joint deal with rival freight railroad Norfolk Southern. CSX acquired the ex-New York Central lines in Upstate NY, including the Empire Corridor. CSX has a 90-mph maximum speed limit for its rail lines, and at the start of the EIS process CSX and NYSDOT signed an agreement to that fact in 2010, following the example of other states like Virginia that wish to upgrade their state supported Amtrak services.

However, the powers that be in Albany pushed for 110-mph as the top speed on the CSX right-of-way, and despite the agreement from 2010, pushed CSX to relent, which it refused to do, rallying its shippers in opposition. In its caustic official comments to the Draft EIS, the freight railroad listed every conceivable reason why high-speed trains on its tracks were a horrible idea, suggesting that the public fly or take the bus instead.

*During this time, China built the largest high-speed rail system in the world.

High Speed Rail Empire Corridor

Tier 1 Final Environmental Impact Statement Volume 1

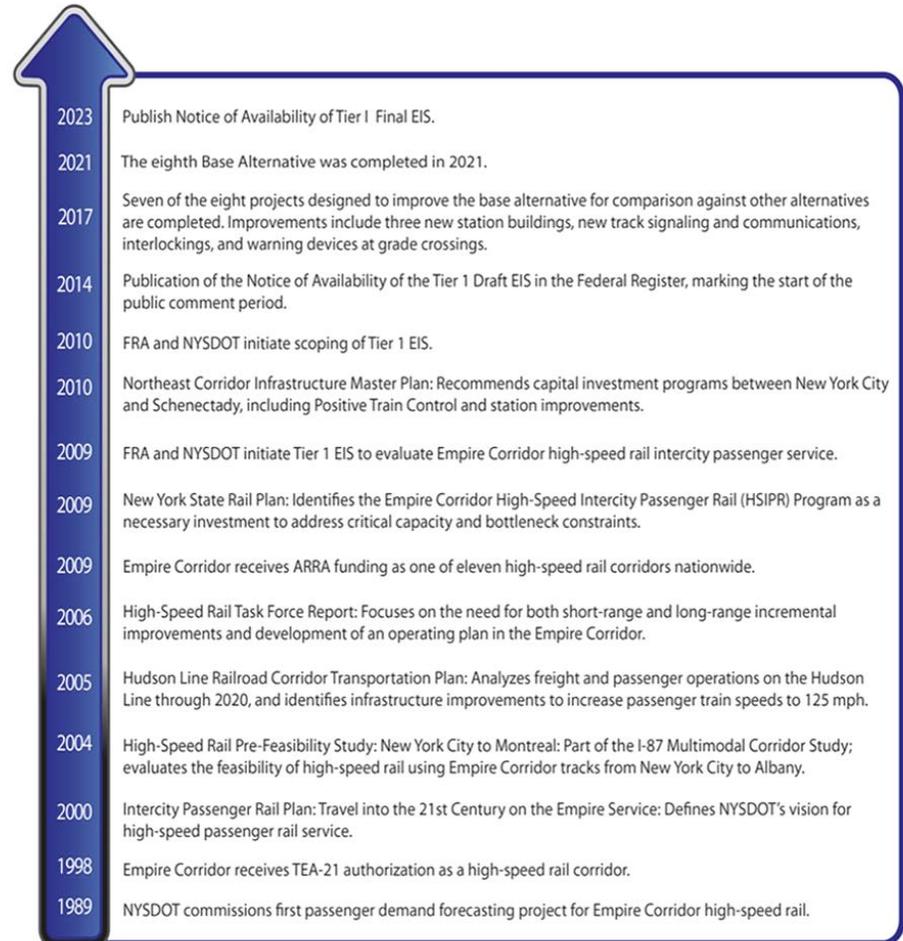



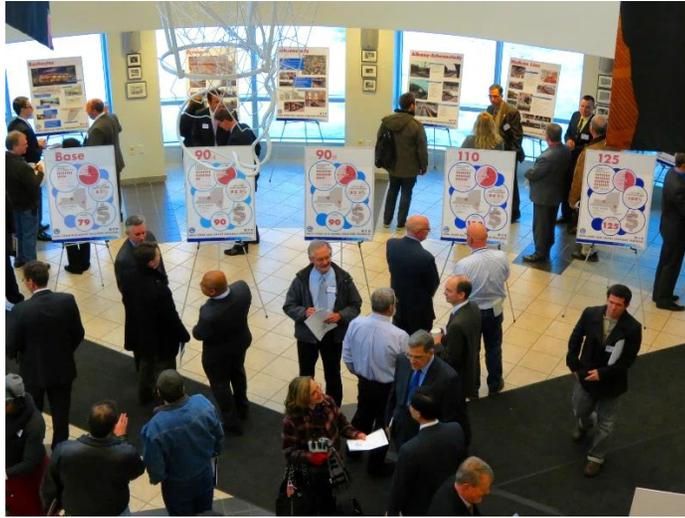


 U.S. Department of Transportation
 Federal Railroad Administration

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Exhibit 1-2—High Speed Rail Empire Corridor Planning Timeline





Eventually it seems that New York State relented, and Alternative 90B was chosen over Alternative 110 as the preferred alternative to develop into a Service Development Plan. Two “Very High-Speed Rail” alternatives with top speeds of 160 and 220-mph were rejected early during the Draft EIS process as too expensive. A 125-mph alternative (ALT 125) with new tracks on new right-of-way west of Albany was included in the Draft EIS, along with a 90-mph alternative (ALT 90A) on the existing double-track CSX mainline, as opposed to the proposed dedicated third track of ALT 90B and ALT 110.

Despite the ineptitude on the part of NYSDOT in completing the Final EIS in a timely manner, the preferred Alternative 90B is a sound plan, a credit to the state employees and consultants who prepared the EIS study. The installation of additional third and fourth “express tracks” dedicated to passenger trains would add capacity and provide the ability to route passenger trains around freight trains, while operating at higher speeds.

Preferred ALT 90B | Key Facts & Figures

PROGRAM COST

\$8.8 billion

ANNUAL RIDERSHIP

2.6 million (x2 BASE ALT)

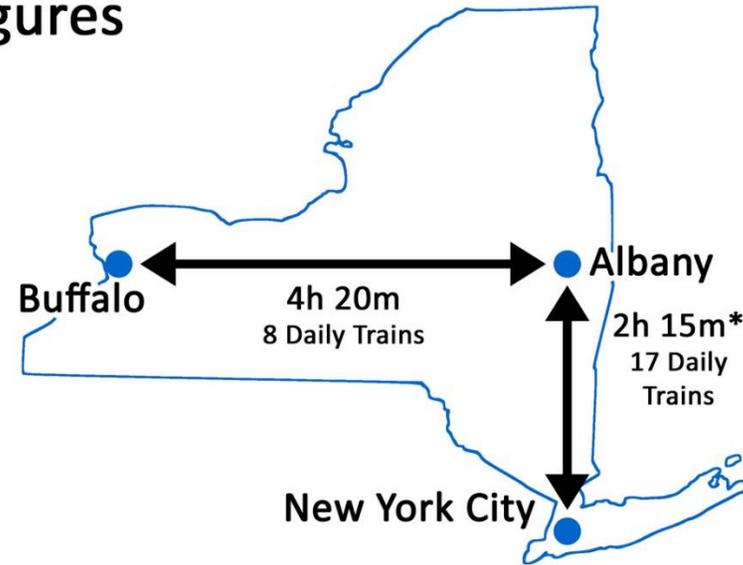
OPERATING RATIO

81% (6% increase over BASE ALT)

ON-TIME PERFORMANCE

95% (12% increase over BASE ALT)

SELECT TRAVEL TIMES & FREQUENCY



* 2 Hours Flat with select Non-Stop Express Trains

	SERVICE TODAY		FEIS ALT 90B	
	Travel Times	Round-Trips	Travel Times	Round-Trips
New York–Albany	2h 25m	12	2h 15m (2h Express)	17
New York–Utica	4h 30m	4	3h 55m	9
New York–Syracuse	5h 31m	4	4h 50m	9
New York–Rochester	6h 47m	4	6h 00m	8
New York–Buffalo	7h 53m	4	6h 50m	8
New York–Niagara Falls	9h 00m	3	7h 36m	7

Alternative 90B, would result in a 1½ hour savings in travel time and a 10 mph faster top speed over the Base Alternative, with four additional roundtrips west of Albany to Buffalo, for a total of eight roundtrips, with a 95% on-time performance. Minutes-delayed and trip times for CSX freight between the Selkirk Yard south of Albany to Buffalo would be reduced as well. The current project cost is estimated at \$8.8 billion over 25 years, with approximately \$240 - \$250 million annually. Future costs will vary due to inflation and changes to the Service Development Plan. Annual ridership is estimated at 2.6 million, a million more than the Base Alternative, with an 81% operating ratio, 6% higher than the Base Alternative.

Compared to Alternative 90B, Alternative 110 was seen as having significantly higher costs and greater potential for environmental impacts than Alternative 90B because of the required property acquisition, while only achieving a modest improvement in overall performance. Left unwritten was host railroad CSX's opposition to 110-mph speeds on or adjacent to its right-of-way. Alternative 125 with a cost of nearly \$16 billion was rejected as being too expensive, while taking too long to confer benefits due to the time required to assemble, acquire, and construct a new right-of-way. In contrast, service would be incrementally improved as Alternative 90B was built out project by project, the first additional frequencies west of Albany coming at the ten-year mark.

The Final Tier I EIS includes a Service Development Plan* with the schedule for implementation of the Preferred Alternative, to guide the 25 years of continued investment till project completion. The SDP outlines in detail a program of major infrastructure construction, and includes how the resulting new passenger service will be operated, equipment requirements, funding needs, and management systems.

Preferred ALT 90B | Service Development Plan

	Short Term Capital Plan					Mid Term Capital Plan								Extended Term Capital Plan											
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25
New York City — Albany	13	13	15	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
New York City — Schenectady	6	6	8	8	8	8	8	8	8	9	9	9	10	10	11	11	11	12	12	13	13	13	13	13	13
New York City — Saratoga Springs	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
New York City — Syracuse	4	4	4	4	4	4	4	4	4	5	5	5	6	6	7	7	7	8	8	9	9	9	9	9	9
New York City — Buffalo-Depew	4	4	4	4	4	4	4	4	4	5	5	5	5	5	6	6	6	7	7	7	7	7	7	7	8
New York City — Niagara Falls	3	3	3	3	3	3	3	3	3	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	7

Short Term Capital Plan	Mid Term Capital Plan	Extended Term Capital Plan	Extended Term Capital Plan	Extended Term Capital Plan
<p>PROJECTS SUMMARY | YEARS 1-5 COST: \$1.2 BILLION</p> <p>Start and complete numerous projects in the Hudson Valley to increase frequency, increase speeds, and reduce delays, including: two sections of third track and yard improvements Croton-Poughkeepsie, signaling and interlocking upgrades, rock slope stabilization, bridge replacements, track work increasing speeds to 90- and 110mph, and new high-level platforms at Rhinecliff and Hudson stations. Construct new movable Livingston Ave Bridge across the Hudson River at Albany. Start construction of second mainline track Schenectady-to-Hoffmans and rehabilitating the Mohawk River Bridge.</p>	<p>PROJECTS SUMMARY | YEARS 6-10 COST: \$1.3 BILLION</p> <p>Construct passenger dedicated passenger track through in the Mohawk Valley, Hoffmans-to-Fonda and Herkimer-to-Vernon. Rebuild interlocking at CP 373 in Rochester. Double track the Niagara Branch north of North Tonawanda. Complete second mainline track Schenectady-to-Hoffmans and rehabilitating the Mohawk River Bridge.</p>	<p>PROJECTS SUMMARY | YEARS 11-15 COST: \$1.6 BILLION</p> <p>Construct passenger dedicated passenger tracks in the Mohawk Valley, Little Falls-to-Herkimer; west of Syracuse, Warners-to-Seneca River Bridge; Rochester Sub-division east of downtown Rochester and Chili Jct-to-South Byron. Start constructing the Rochester 'West Shore Bypass' project of a additional mainline freight tracks south of Rochester. Start constructing passenger tracks for the Syracuse Subdivision, Vernon-to-Dewitt Yard</p>	<p>PROJECTS SUMMARY | YEARS 16-20 COST: \$1.7 BILLION</p> <p>Start construction of passenger dedicated mainline tracks through the Mohawk Valley, Fonda-to-Little Falls. Finish constructing passenger tracks for the Syracuse Sub-division, Vernon-to-Dewitt Yard; start new passenger tracks for the Buffalo Sub-division, South Byron to East Buffalo. Start and finish new passenger mainline tracks Seneca River Bridge to Palmyra, rebuild Seneca River Bridge to eliminate 40-mph speed restriction. Complete Rochester 'West Shore Bypass' project of a additional mainline freight tracks south of Rochester.</p>	<p>PROJECTS SUMMARY | YEARS 21-25 COST: \$1.6 BILLION</p> <p>Finish construction of passenger dedicated mainline tracks through the Mohawk Valley, Fonda-to-Little Falls. Construct passenger mainline tracks for the Syracuse Subdivision through the station; Rochester Sub-division, Rochester to Chili Jct; and finish new tracks for the Buffalo Sub-division, South Byron to East Buffalo.</p>

*The Service Development Plan is being updated by NYSDOT with a \$500,000 federal grant as of 2024, due to the length of time of competing the SDP, with key cost estimates in the report dating to 2017.

ALT 90B Service Development Plan | Timetable Westbound

Conceptual - Westbound

Western Corridor		1	***	2	***	3	***	4	***	5	***	6	***	7	***	8	***	9	***	***	***
Hudson Valley		***	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Destination		Niagara Falls	Albany	Toronto	Montreal	Syracuse	Albany	Niagara Falls	Albany	Niagara Falls	Saratoga Springs	Niagara Falls	Chicago	Rutland	Niagara Falls	Saratoga Springs	Syracuse	Albany	Albany	Albany	
Train Number		#271	#231	#63	#69	#273	#233	#281	#235	#283	#237	#285	#49	#291	#287	#239	#275	#241	#243	#245	
Frequency		Mon - Fri	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Mon-Fri	Daily	Daily	Daily	Daily	
New York City	...	6:15 AM	7:15 AM	8:15 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	3:45 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	11:00 PM	
Yonkers	...	...	...	...	...	10:15 AM	11:15 AM	12:15 PM	...	2:15 PM	...	...	...	...	...	...	...	9:15 PM	...	...
Croton-Harmon	...	7:00 AM	8:00 AM	9:00 AM	...	10:45 AM	11:45 AM	12:45 PM	...	2:45 PM	3:45 PM	4:30 PM	5:15 PM	...	...	6:45 PM	7:45 PM	9:45 PM	11:45 PM	...
Poughkeepsie	...	7:30 AM	8:30 AM	9:30 AM	...	11:15 AM	12:15 PM	1:15 PM	...	3:15 PM	4:15 PM	...	5:45 PM	...	...	...	8:15 PM	10:15 PM	12:15 AM	...
Rhinecliff	...	7:45 AM	8:45 AM	9:45 AM	...	11:30 AM	12:30 PM	1:30 PM	...	3:30 PM	4:30 PM	...	6:00 PM	7:00 PM	7:30 PM	8:30 PM	10:30 PM	12:30 AM	...	...
Hudson	...	8:05 AM	9:05 AM	10:05 AM	...	11:50 AM	12:50 PM	1:50 PM	...	3:50 PM	4:50 PM	...	6:20 PM	7:20 PM	7:50 PM	8:50 PM	10:50 PM	12:50 AM	...	...
ALBANY - RENSSELAER	...	8:30 AM	9:30 AM	10:30 AM	11:00 AM	12:15 PM	1:15 PM	2:15 PM	3:00 PM	4:15 PM	5:15 PM	6:00 PM	6:45 PM	7:15 PM	7:45 PM	8:15 PM	9:15 PM	11:15 PM	1:15 AM	...	
	6:30 AM	...	9:45 AM	10:45 AM	11:15 AM	...	1:30 PM	...	3:15 PM	4:30 PM	5:30 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM	8:30 PM	...	...	...	...
Schenectady	6:50 AM	...	10:05 AM	11:05 AM	11:35 AM	...	1:50 PM	...	3:35 PM	4:50 PM	5:50 PM	6:50 PM	7:20 PM	7:50 PM	8:20 PM	8:50 PM	...	...	...	...
Amsterdam	7:10 AM	...	10:25 AM	...	11:55 AM	...	2:10 PM	...	3:55 PM	...	6:10 PM	...	...	8:10 PM	...	9:10 PM	...	...	...	...
Utica	7:55 AM	...	11:10 AM	...	12:40 PM	...	2:55 PM	...	4:40 PM	...	6:55 PM	7:50 PM	...	8:55 PM	...	9:55 PM	...	...	...	...
Rome	8:10 AM	...	11:25 AM	...	12:55 PM	...	3:10 PM	...	4:55 PM	...	7:10 PM	...	...	9:10 PM	...	10:10 PM	...	...	...	...
SYRACUSE	8:50 AM	...	12:05 PM	...	1:35 PM	...	3:50 PM	...	5:35 PM	...	7:50 PM	8:45 PM	...	9:50 PM	...	10:50 PM	...	...	...	...
Rochester	10:00 AM	...	1:15 PM	...	...	...	5:00 PM	...	6:45 PM	...	9:00 PM	9:55 PM	...	11:00 PM	...	...	...	...	...	...
BUFFALO - DEPEW	10:50 AM	...	2:05 PM	...	...	...	5:50 PM	...	7:35 PM	...	9:50 PM	10:45 PM	...	11:50 PM	...	...	...	...	...	...
Buffalo-Exchange Street	11:05 AM	...	2:20 PM	...	...	...	6:05 PM	...	7:50 PM	...	10:05 PM	...	...	12:05 AM	...	...	...	...	...	...
NIAGARA FALLS	11:41 AM	...	2:51 PM	...	...	...	6:36 PM	...	8:21 PM	...	10:36 PM	...	...	12:36 AM	...	...	...	...	...	...
Canadian Border	...	...	3:05 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Toronto	...	...	6:05 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saratoga Springs	...	...	...	11:35 AM	...	...	...	...	...	5:20 PM	...	...	7:50 PM	...	8:50 PM	...	...	...	...	...
Fort Edward	...	...	...	12:00 PM	...	...	...	...	...	...	...	...	...	8:15 PM	...	...	...	...	...	...
RUTLAND	...	...	...	...	...	...	...	...	...	...	...	...	9:15 PM	...	...	...	...	...	...	...
Whitehall	...	...	...	12:25 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fort Ticonderoga	...	...	...	12:58 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Henry	...	...	...	1:15 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Westport	...	...	...	1:35 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Kent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plattsburgh	...	...	...	2:55 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rouses Point	...	...	...	3:20 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MONTREAL-Central Station	...	...	...	5:00 PM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

New: Albany-Rensselaer - New York City (Penn Station)

New: Western Empire Corridor

ALT 90B Service Development Plan | Timetable Eastbound

Conceptual - Eastbound

Western Corridor		***	***	***	***	1	***	2	***	3	***	4	***	5	6	***	7	***	8	9
Hudson Valley		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	***
Originates		Albany	Albany	Saratoga Springs	Albany	Syracuse	Saratoga Springs	Niagara Falls	Rutland	Niagara Falls	Albany	Niagara Falls	Albany	Chicago	Niagara Falls	Montreal	Toronto	Albany	Syracuse	Niagara Falls
Train Number		#230	#232	#234	#236	#270	#238	#280	#290	#282	#242	#284	#244	#48	#286	#68	#64	#246	#272	#274
Frequency		Mon-Fri	Daily	Mon-Fri	Daily	Daily	Mon-Fri	Daily	Daily	Daily	Daily	Daily	Mon-Fri	Daily	Daily	Daily	Daily	Daily	Daily	Mon-Fri
MONTREAL-Central Station		...	...	...	...	...	...	...	...	...	...	...	...	...	...	10:50 AM	...	...	...	...
Rouses Point		...	...	...	...	...	...	...	...	...	...	...	...	...	...	12:15 PM	...	...	...	...
Plattsburgh		...	...	...	...	...	...	...	...	...	...	...	...	...	...	12:45 PM	...	...	...	...
Port Kent		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Westport		...	...	...	...	...	...	...	...	...	...	...	...	...	...	1:45 PM	...	...	...	...
Port Henry		...	...	...	...	...	...	...	...	...	...	...	...	...	...	2:10 PM	...	...	...	...
Fort Ticonderoga		...	...	...	...	...	...	...	...	...	...	...	...	...	...	2:35 PM	...	...	...	...
Whitehall		...	...	...	...	...	...	...	...	...	...	...	...	...	...	3:05 PM	...	...	...	...
RUTLAND		...	...	...	...	...	...	8:30 AM	...	...	...	...	...	...	...	...	...	...	...	...
Fort Edward		...	...	...	...	...	...	9:30 AM	...	...	...	...	...	...	...	3:30 PM	...	...	...	...
Saratoga Springs		...	...	6:00 AM	...	...	8:00 AM	9:55 AM	...	...	...	...	...	...	...	3:55 PM	...	...	...	...
Toronto		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9:30 AM	...	...	...
Canadian Border		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11:30 AM	...	...	...
NIAGARA FALLS		...	...	...	...	...	...	4:40 AM	...	6:40 AM	...	8:40 AM	...	...	10:40 AM	...	12:40 PM	...	...	3:40 PM
Buffalo-Exchange Street		...	...	...	...	...	...	5:10 AM	...	7:10 AM	...	9:10 AM	...	...	11:10 AM	...	1:10 PM	...	...	4:10 PM
BUFFALO-DEPEW		...	...	...	...	...	...	5:25 AM	...	7:25 AM	...	9:25 AM	...	10:25 AM	11:25 PM	...	1:25 PM	...	...	4:25 PM
Rochester		...	...	...	...	...	...	6:15 AM	...	8:15 AM	...	10:15 AM	...	11:15 AM	12:15 PM	...	2:15 PM	...	...	5:15 PM
SYRACUSE		...	...	...	...	5:25 AM	...	7:25 AM	...	9:25 AM	...	11:25 AM	...	12:25 PM	1:25 PM	...	3:25 PM	...	5:25 PM	6:25 PM
Rome		...	...	...	...	6:05 AM	...	8:05 AM	...	10:05 AM	...	12:05 PM	...	...	2:05 PM	...	4:05 PM	...	6:05 PM	7:05 PM
Utica		...	...	...	...	6:20 AM	...	8:20 AM	...	10:20 AM	...	12:20 PM	...	1:20 PM	2:20 PM	...	4:20 PM	...	6:20 PM	7:20 PM
Amsterdam		...	...	...	...	7:05 AM	...	9:05 AM	...	11:05 AM	...	1:05 PM	...	...	3:05 PM	...	5:05 PM	...	7:05 PM	8:05 PM
Schenectady		...	...	6:30 AM	...	7:25 AM	8:30 AM	9:25 AM	10:25 AM	11:25 AM	...	1:25 PM	...	2:25 PM	3:25 PM	4:25 PM	5:25 PM	...	7:25 PM	8:25 PM
ALBANY - RENSSELAER		...	...	6:50 AM	...	7:45 AM	8:50 AM	9:45 AM	10:45 AM	11:45 AM	...	1:45 PM	...	2:45 PM	3:45 PM	4:45 PM	5:45 PM	...	7:45 PM	8:45 PM
Hudson		5:00 AM	6:00 AM	7:00 AM	7:30 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	3:30 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	...
Rhinecliff		5:25 AM	6:25 AM	...	7:50 AM	8:25 AM	9:25 AM	10:25 AM	11:25 AM	12:25 PM	1:25 PM	...	3:25 PM	...	4:25 PM	5:25 PM	6:25 PM	7:25 PM	8:25 PM	...
Poughkeepsie		5:50 AM	6:50 AM	...	8:10 AM	8:50 AM	9:50 AM	10:50 AM	11:50 AM	12:50 PM	1:50 PM	...	3:50 PM	...	4:50 PM	5:50 PM	6:50 PM	7:50 PM	8:50 PM	...
Croton-Harmon		...	...	...	...	9:05 AM	10:05 AM	11:05 AM	12:05 PM	1:05 PM	2:05 PM	...	4:05 PM	...	5:05 PM	6:05 PM	7:05 PM	8:05 PM	9:05 PM	...
Yonkers		6:35 AM	7:35 PM	...	...	9:35 AM	10:35 AM	11:35 AM	12:35 PM	1:35 PM	2:35 PM	...	4:35 PM	5:10 PM	5:35 PM	6:35 PM	7:35 PM	8:35 PM	9:35 PM	...
New York City		7:10 AM	8:10 AM	9:00 AM	9:40 AM	10:15 AM	11:15 AM	12:15 PM	1:15 PM	2:15 PM	3:15 PM	4:00 PM	5:15 PM	5:45 PM	6:15 PM	7:15 PM	8:15 PM	9:15 PM	10:15 PM	...

New: Albany-Rensselaer - New York City (Penn Station)

New: Western Empire Corridor

Empire South

On the Empire Corridor South between New York City and Albany-Rensselaer, Alternative 90B includes the majority of the projects that were compiled in the Hudson Line Railroad Corridor Transportation Plan of 2005. These improvement projects were identified and agreed upon by the joint-users of the railway, including Amtrak, Metro-North, CSX, and Canadian Pacific (now CPKC), with NYSDOT included as a major stakeholder.

These civil engineering projects will together improve reliability, increase frequency, and reduced travel times for Amtrak service. They include: a second track on the Empire Connection, two sections of third track south of Poughkeepsie and yard improvements at Poughkeepsie, signaling and interlocking upgrades, rock slope stabilization, bridge replacements, track work to increase speeds to 90 and 110-mph, and new high-level platforms at the Rhinecliff and Hudson stations.

Constructing a new movable Livingston Ave Bridge across the Hudson River between Albany and Rensselaer is the biggest project, at an estimated \$400 million. The existing railroad bridge has stone piers dating from the 1860s and a steel superstructure from the early 1900s. Its deteriorated state limits trains to crossing to one at a time at 15-mph, while troubles operating the swing bridge can delay both rail and maritime traffic. A new lift-type bridge would bring the crossing up to modern rail standards, include a new recreational walkway, while reliably accommodating waterborne on the river.



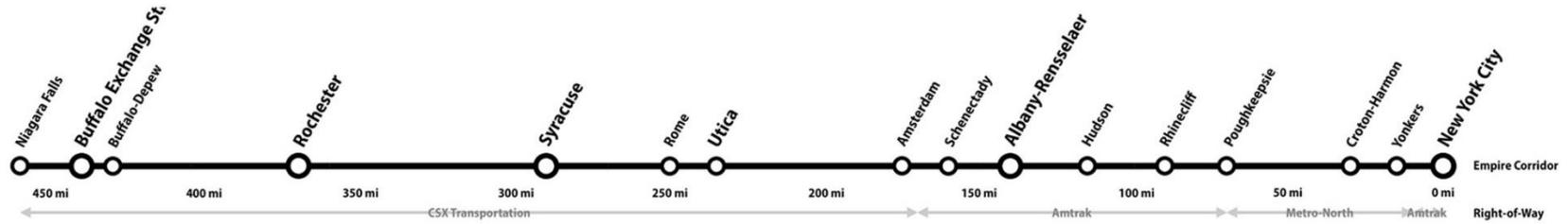
ABOVE: A rendering from NYSDOT of the new Livingston Ave Bridge (LAB) from the Albany side. The new lift bridge would be built south of the existing swing bridge and incorporate a new recreational pathway for pedestrians and cyclists. Passenger train speeds will rise from 15 to 30-mph over the new span (the curving track at each end having an existing 40-mph speed limit) with two trains allowed to cross simultaneously.



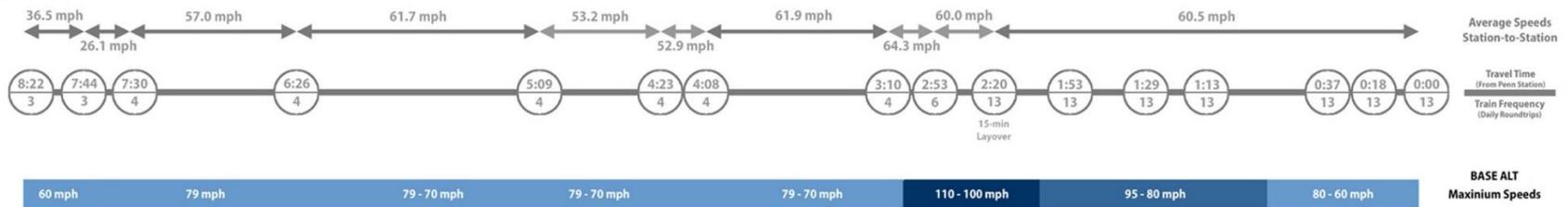
Travel times for intercity trains making all current intermediate station-stops between Penn Station and Rensselaer—Yonkers, Croton-Harmon, Poughkeepsie, Rhinecliff, and Hudson—would be reduced to 2hrs 15mins, a savings of 15 minutes over current schedules. A two-hour express service is proposed for certain train frequencies, the Service Development Plan stating that the “two-hour threshold is an important perceptual consideration in attracting travelers to this line.” Indeed, this was the goal of the failed High-Speed Rail program of the Pataki Administration, utilizing rebuilt Rohr Turboliners on upgraded tracks.

Average speed for the non-stop express would be over 70-mph for the 141 miles, and given that the travel time on busy section south of Croton-Harmon would remain 40-45 minutes, as Amtrak trains are slotted into the busy commuter traffic of Metro-North, the average speed from Croton-Harmon to Rensselaer would be over 80-mph. While not “true” high-speed rail, it would be one of fastest intercity rail services in the nation.

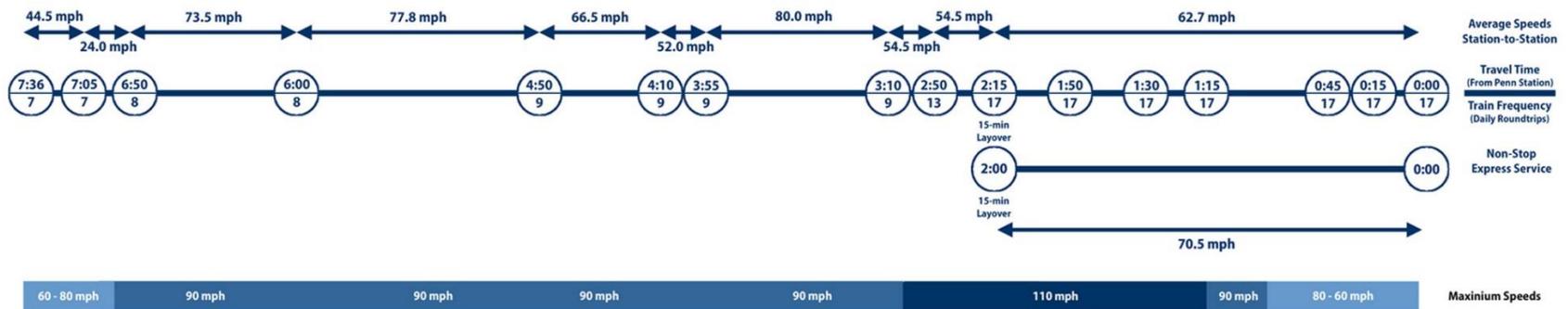
Preferred ALT 90B | Travel Times, Frequency & Line Speeds



BASE ALT



ALT 90B



Empire West

The primary focus of the Tier I EIS is on improving intercity passenger rail service west of Albany to Niagara Falls, as this section of the Empire Corridor has Amtrak service of a far lower intensity compared to the already relatively high-intensity service (for North America) down the Hudson Valley, from Rensselaer to Penn Station.

The Preferred Alternative 90B addresses the inequalities in service levels by solving the primary issue preventing faster and more frequent passenger service, the shared-use of a busy double track mainline—controlled by freight railroad CSX Transportation—that hosts frequent but slower freight trains with the currently infrequent yet faster passenger trains. This mix of traffic is analogous to a two-lane highway full of heavy trucks and passenger cars, and the solution is equivalent to an express lane on an urban superhighway, a new ninety-mile-per-hour “express track” dedicated to passenger trains. This separation of freight and passenger rail traffic, would greatly improve the flow of traffic for both Amtrak and CSX, while increasing the capacity for more trains.

Alternative 90B would add a total of approximately 370 miles of additional trackage to segregate passenger rail and freight trains, essentially constituting a parallel railway to the existing double-track mainline. There would be a third dedicated passenger track for approximately 273 miles between Schenectady (MP 159) and Buffalo-Depew (MP 432), and an additional fourth passenger track for approximately 39 miles in five separate sections, allowing for the passing at speed of opposing passenger trains.

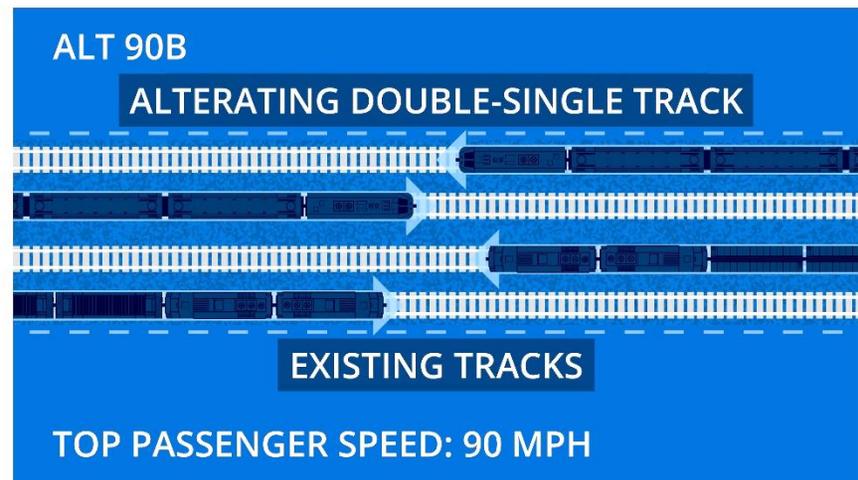
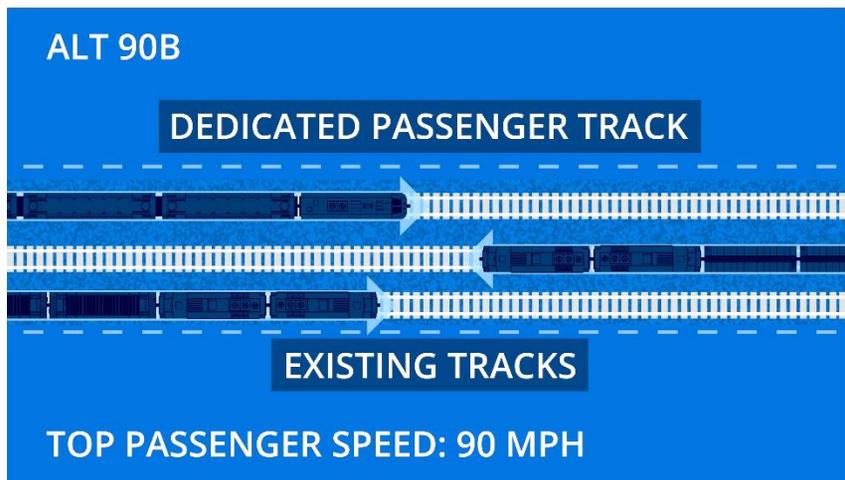
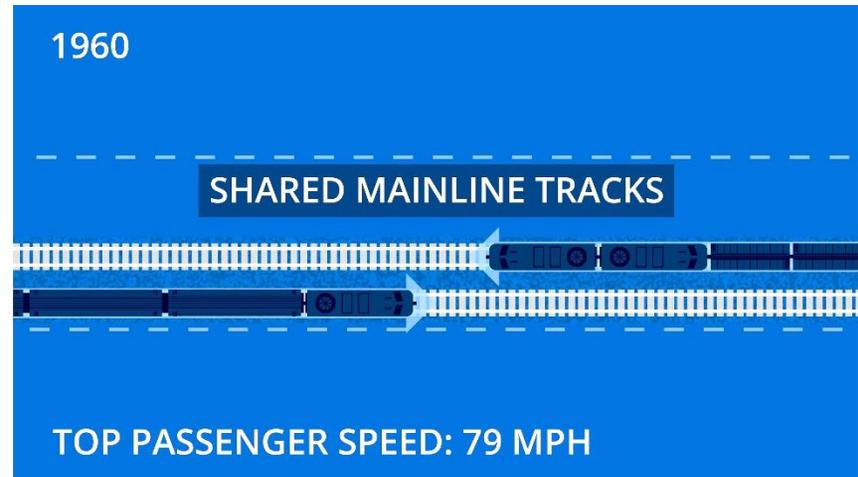
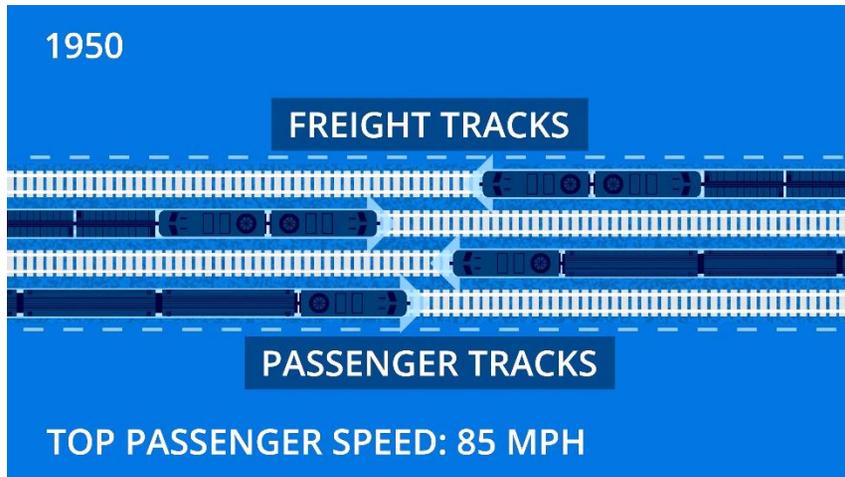


ABOVE: The CSX mainline with its broad right-of-way at “Big Nose” along the Mohawk River.



The design strategy of Alternative 90B has been coined by Spanish academics from the University at Cantabrai as “Alternate Double-Single Track” or a “ADST” line, which reduces construction costs by utilizing primarily single track, including through expensive segments with cuttings, embankments, tunnels, viaducts, and bridges, while utilizing double track primarily in cheaper build segments of favorable topography and only where it is necessary, to accommodate passing trains.

Several high-speed lines in Spain and one in Sweden have been built as ADST lines. In the USA the newly open Miami-Orlando ‘Brightline Florida’ has a few single-track segments, and the now under construction ‘Brightline West’ between Las Vegas and the Inland Empire will be primarily single-track, with like Alternative 90B, several long segments of double-track to allow for opposing trains to pass at speed. ADST works for less intensively trafficked passenger railways where a timetable of regular interval trains can be scheduled to have trains meet on the double-track sections. Because of this the proposed Empire Corridor timetables in the Service Development Plan are built in part around the planned sections of new third and fourth dedicated passenger tracks.



ABOVE: The progression of the former New York Central (now CSX) mainline Schenectady (Hoffmans) to Buffalo from 4 tracks to the current 2 tracks, with at the bottom the proposed addition under the ALT 90B Service Development Plan of a third dedicated passenger track on the surplus right-of-way, with in five sections a fourth passenger track as well on expanded right-of-way, to facilitate passenger trains passing at speed.

The maximum authorized speed on these new dedicated passenger tracks would be 90-mph, with high-speed No. 32.7 turnouts (switches) allowing for diverging moves of 80-mph at the interlockings (the complex of turnouts at a control point) so that a passenger train entering a segment of fourth track to pass an oncoming passenger train would only have to reduced speed by 10-mph, from 90 to 80-mph.

The top speed is set by host railroad CSX, which has a non-negotiable 90-mph speed limit* on its right-of-way, which other states have accepted. This includes Virginia, which is undertaking building third and fourth dedicated passenger tracks with a 90-mph speed on the CSX mainline between Washington DC and Richmond VA.

The new passenger dedicated, third mainline track, would primarily occupy the northern portion of the existing railbed that historically contained the two freight tracks of the former four-track mainline. The third track would be spaced with a 15-foot track center from the existing Track 2, the segments of fourth track having a 15-foot track center from the third track.

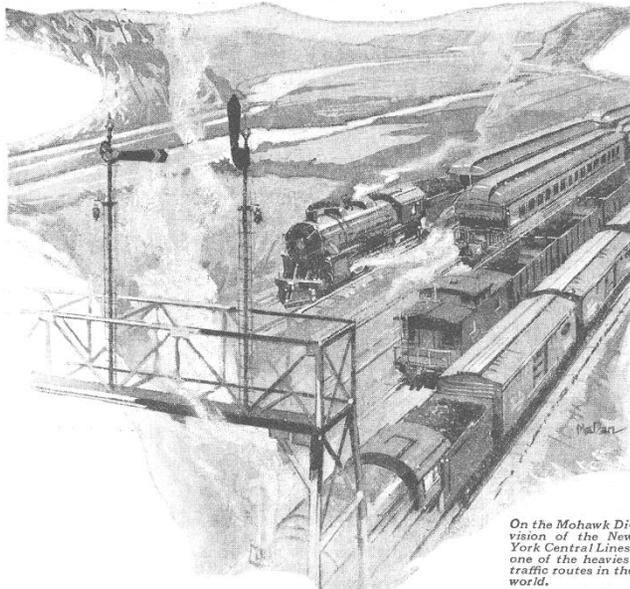
While a primary benefit of Alternative 90B is the minimum need for acquiring land outside the existing rail right-of-way, some land acquisition and roadway relocation would be required to expand the right-of-way to accommodate the fourth track segments and curve re-alignments for higher speeds. There would also be new segments of double track installed on the Niagara Branch (CSX) in Buffalo.

*The other speed limit is federal regulations, the Federal Railroad Administration (FRA) requiring for 125-mph track full width barriers capable of absorbing impact of highway vehicle—including a fully loaded dump truck traveling at 60-mph—and lack of such technology has limited speeds on lines with grade crossings to 110-mph, the FRA having an absolute ban on grade crossings for train speeds above 125-mph. Therefore, for all practical purposes for speeds above 110-mph, full grade separation is required to create a “sealed corridor” with no grade crossings.

Current 2 Tracks



ALT 90B 3 Tracks



On the Mohawk Division of the New York Central Lines, one of the heaviest traffic routes in the world.

ALT 90B 4 Tracks





Additional infrastructure would include three grade separated flyovers—one east of the Dewitt Yard east of Syracuse (MP 279); another to the east of the Rochester Yard (MP 366), and one east of the Buffalo-Depew Station (MP 427)—where the third track would pass over the two existing freight tracks on an elevated structure, avoiding freight yards located on the northside of the mainline and to reach existing stations located on the southside of the mainline. While capital intensive, the Service Development Plan sees the flyovers as worth the cost in minimizing interference between freight and passenger traffic that could lead to delays and longer travel times.

A new signal system to support the 90-mph line speeds would be installed and grade crossings rebuilt. All supporting physical infrastructure, including bridges and culverts, would be brought up to a good state of repair or replaced. The Service Development Plan states that the most efficient approach to rail infrastructure upgrades on such a heavily used railway as the CSX mainline is to visit each repair location only once, and to upgrade to a state of good repair all infrastructure elements at that location, even if some repairs or upgrades are not directly related to the program objectives.



ABOVE: The rail bridge over Danascara Creek in Tribes Hill at Milepost 183, west of Amsterdam on the CSX mainline. Bridges like this one, built in 1950, will have to be rebuilt or replaced to bring the entire infrastructure up to a state of good repair, while providing for the new third (and fourth) dedicated passenger track. The sharp curve just east of this location would be realigned to increase line speeds from the current 50-mph to 70-mph, one of the few locations (the curve at Little Falls another) where passenger train speeds would fall below 90-mph.



Major station improvements would also have to be undertaken, to be fully compliant with the infrastructure and service levels laid out in the Service Development Plan. Amsterdam would get a new station with a downtown location (planning is currently underway) featuring an ADA-compliant high-level island platform—enabling the seamless level boarding of trains, greatly improving accessibility for those with mobility impairments—served by the new third and fourth passenger tracks. A new station building would be connected to the platform with an overhead concourse containing stairs and elevators.

Utica Union Station would see a new high-level platform built on the footprint of the existing side platform that serves Amtrak on mainline Track 1 and the scenic heritage Adirondack Railroad on a sidetrack. The existing mainline track would be shifted south to allow the island platform to be served by the new third and fourth passenger tracks, likely requiring an additional new platform and overhead pedestrian bridge to be built to serve the tourist excursion trains of the Adirondack Railroad. Rome would see a new high-level platform, stairs, and elevators built to serve the new third track.

The Syracuse Station (William F. Walsh Regional Transportation Center) would see major work with new third and fourth passenger tracks serving a rebuilt high-level platform. This project would also replace the existing bridge over Park Street with a new bridge capable of carrying five tracks, while adding and upgrading interlockings and signaling to smooth the flow of freight and passenger trains. Amtrak trains will have to cross over the freight tracks of CSX from the southside of the right-of-way where the station is located to the northside where the dedicated third (and some segments of fourth) passenger tracks will run west to Rochester.

A new Buffalo-Depew Station would be constructed with a new high-level platform and new interlockings, serving new third and fourth passenger tracks. The Exchange Street and Niagara Falls stations having been recently rebuilt, will see little additional work. On the site of an existing freight yard, a new Niagara Falls Maintenance Facility is being planned; to provide shore power, potable water, inspection, cleaning, and light repair capabilities. The facility will include storage tracks and climate control buildings, as opposed to the current situation where train maintenance is conducted by Amtrak personnel outdoors in the elements.

Alternative 90B would double the frequency of Amtrak's service west of Albany to nine daily round trips to Syracuse, eight of which continue to Buffalo-Depew including the 'Lake Shore Limited', and seven on to Exchange Street and Niagara Falls. Travel times between Albany-Rensselaer and Buffalo-Depew would be reduced from the current best of about around 5h 15m to 4h 20m, for an average speed of 67-mph, with an on-time-performance of 95 percent.

New Trains

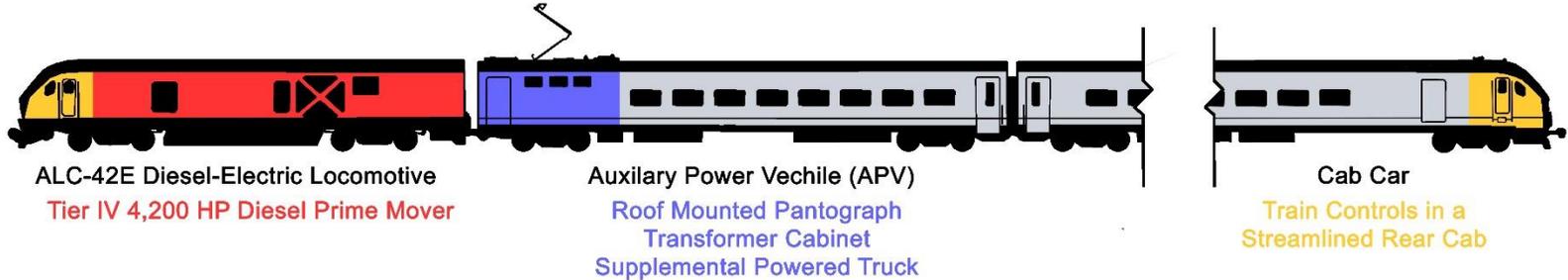
In December 2022 at a press conference in the Moynihan Train Hall at Penn Station, Amtrak President Roger Harris and other officials introduced the new brand name “Airo” for the Siemens Charger-Venture intercity trainsets of semi-permanently-coupled coaches, making up a fleet of 83 trainsets that would replace the decades old Amfleet coach consists for the corridor services in the Northeast, Southeast, and Northwest.

The Empire Corridor services—‘Empire Service’, ‘Maple Leaf’, ‘Ethan Allen’, and ‘Adirondack’—will utilize a fleet of fifteen (with an option for two more sets) hybrid battery trainsets. These trainsets will have a Siemens diesel-electric ALC-42E Charger (the diesel engine providing the power for the traction motors) locomotive mated to an Auxiliary Power Vehicle (APV) adjacent to the locomotive, the APV containing a large battery pack to supply electrical power when operating in Penn Station, and Grand Central Terminal if required in the future.

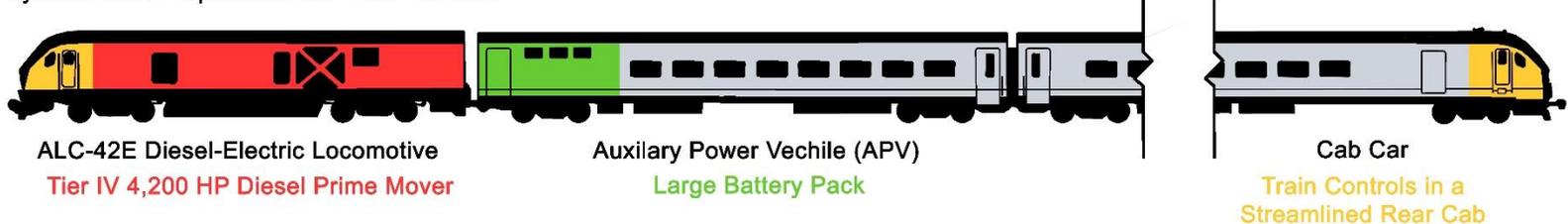
The APV will part of a semi-permanently coupled consist of six Siemens Venture coaches, the rear coach having a streamlined cab for push-pull bidirectional travel, simplifying and speeding up turnarounds at terminal stations. The battery will eliminate the current use of DC third rail by the existing fleet of aged eighteen GE Genesis P32AC dual-mode engines. A prototype Empire Corridor Airo trainset is planned to be available for testing by 2025, with the rest of the trainsets being delivered by 2030.

Amtrak 'Airo' Siemens Trainset Power & Control Features

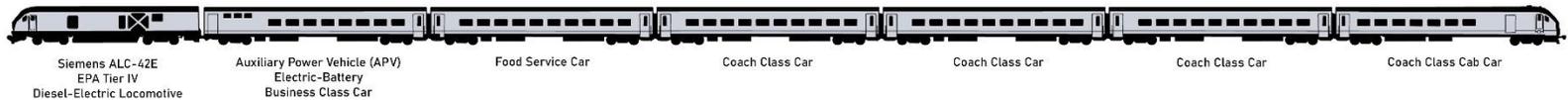
Dual-Power Northeast Corridor 'Airo' Trainset



Hybrid-Power Empire Corridor 'Airo' Trainset



Empire Corridor Six Car 'Airo' Trainset



The Airo trainsets will have modern train interiors. The coaches will feature a spacious interior with panoramic windows, enhanced lighting, improved technology with digital customer information systems, touchless restroom controls, dedicated individual outlets, USB ports, and onboard WiFi. Wayfinding signage will become cleaner and more evident way to identify and differentiate cabins—both on the exterior and interior of the coaches through a color-coded system.

Seat design will prioritize ergonomics, offering enhanced comfort with plenty of legroom, bigger and sturdier tray tables, moveable headrests and a dedicated cup and seatback tablet-holder. The seating will be in two classes, coach with 2x2 seating and business with 2x1 seating. The trainsets will also meet or exceed all requirements of the Americans with Disabilities Act (ADA) for new-build equipment, replacing legacy equipment built prior to the ADA's passage on which various accessibility elements have been added during overhauls with varying effectiveness.

When operating in diesel mode, the new trainsets will meet EPA Tier 4 emissions standards. The Charger locomotives are equipped with electronically-controlled regenerative braking systems that use energy from the traction motors during braking to feed the auxiliary and head-end power systems to minimize fuel consumption. With a fuel capacity of 2,200 gallons, the locomotive consumes more than three times less fuel than comparable gallons per passenger for two-person car travel. The QSK95 Cummins engine in the locomotives provides a 16 percent improvement in fuel efficiency over the non-Tier 4 certified locomotives that the Charger will replace. The battery power may also further boost the fuel efficiency, as with hybrid motor vehicles.



ABOVE: Renderings from Amtrak of the new ‘Airo’ trainsets that will replace most existing Amfleet equipment for corridor services in the Northeastern states, including for the Empire Corridor. Onboard accommodations will be in two classes: Coach (bottom left image) with 2x2 seating and Business (bottom right image) with 2x1 seating. Early versions of the Airo utilizing Siemens Charger locomotives and Venture coaches are already in service with Amtrak’s Midwest and California corridor services, and with Brightline in Florida.

Express Trains

There are two ways to reduce the travel times of passenger trains, run faster and stop less, including at intermediate stations. As laid out in the Service Development Plan of Alternative 90B, travel times are primarily lowered by traveling at a slightly faster (90 vs. 79-mph) top speed and not slowing or stopping for freight trains. Skipping stations with limited-stop express trains could significantly lower travel times even further between large destination cities, beyond what is proposed in the ALT 90B Service Development Plan.

The problem with express trains is that while they would enhance service to a few large cities, smaller cities would be left with an inferior service, not only of longer travel times, but of fewer daily trains, as the expresses ran non-stop through their stations. Politically this would seem to be a serious issue, with local boosters and elected officials likely crying foul.

The solution is however fairly simple, just run more trains, with any limited-stops express trains being in addition to the proposed eight daily Empire Corridor trains laid out in the Service Development Plan. So as long as all stations see increased frequency and significantly reduced travel times, with departures and arrivals spaced evenly throughout the day, then there should be no political issue with running a few limited-stop express trains. Instead, further reducing travel times between New York City, Utica, Syracuse, Rochester, Buffalo, and Niagara Falls should increase political support.



So, how much time could be saved by skipping station stops? Given that the proposed New York-Albany two hour express in the Service Development Plan would be 15 minutes faster than the all-stop trains, and that there are three intermediate station stops—Poughkeepsie, Rhinecliff, and Hudson—between Croton-Harmon* and Rensselaer, this would be 5 minutes saved for each station. This matches Brightline service in South Florida, where the trains stopping every other hour at Boca Raton, an “infill” station between West Palm Beach and Fort Lauderdale, have 5 minutes added to their schedule compared to the Miami-Orlando trains that do not stop.

*Croton-Harmon being discounted, as the need to slot Amtrak intercity trains between Metro-North commuter trains would keep travel times the same for all intercity trains south of Poughkeepsie.

Extrapolating from these two examples suggests that a total maximum of 45 minutes could be cut from the travel times between New York City and Syracuse, Rochester, Buffalo, and Niagara Falls by running non-stop north of Croton-Harmon—skipping Poughkeepsie, Rhinecliff, Hudson, Albany-Rensselaer, Schenectady, Amsterdam, and Rome, passing non-stop through Rensselaer saving 15 minutes from the standard scheduled layover to change crews while detraining and boarding passengers. This would require the express run to be operated by a single crew (engineer, conductors, and café attendant) between New York City and Niagara Falls.

This would reduce travel times from New York City to Syracuse from the projected 4h 50m in the Service Development Plan, to 4h 05m, for an average speed of 71-mph. The average speed between Croton and Utica for a non-stop run of 259 miles would be 82-mph, for a travel time of 2h 30m. Travel times from New York City to Rochester would be reduced from 6 hours to 5h 15m, and for Buffalo-Depew from 6h 50 to 6h 05m. Running express trains non-stop pass Albany would also help remediate the current issue of fully sold-out trains New York-Albany reducing seats available west of Albany.



The reduction of travel times from New York City to Utica, Syracuse, and Rochester to 3h 15m, 4h 05m, and 5h 15m is significant as rail journeys of 4-to-5 hours are seen as competitive with air travel in Europe. Historically in the Postwar Era travel times of 3 hours by intercity train became to be seen in the 1970s as the threshold of competitiveness with airlines by rail experts, an express train being able to travel from city center to city center while air travelers lost time traveling to and from airports and checking in for their flight. A three-hour travel time was seen as very conducive to out-and-home day trips, particularly by business travelers, for a total travel time of six hours allowed for an eight-hour workday in a distant city and ten hours of rest at home.

However, in the 21st Century the threshold seems to have moved out to 4 and 5 hours, as some high-speed rail services are capturing up to 50 percent of the combined air-rail market with such travel times. Guillaume Pepy, the president of the French National Railway (SNCF) credited this increase competitiveness to longer airport check-ins with more intrusive security after the 9-11 terrorist attacks, as well as the bonus of being able to work productively on a train due to laptops and WiFi.

There is also a growing environmental preference by travelers towards rail, the “Flight Shame” (“flygskam” in Swedish) movement championed by teenage climate activist Greta Thunberg encouraging the use of trains over planes due to rail’s smaller carbon footprint and the use of renewable energy by electric trains in Europe.

An example of the competitiveness of intercity rail for journeys of between 4 and 5 hours is the East Coast Mainline in Britain which connects London with Edinburgh, and is served by two passenger rail operators, the long-established publicly owned London and Northeast Railway (LNER) and Lumo, a new private entrant. The East

Coast Main Line is a 393-mile Victorian railway connecting London Kings Cross Station with Edinburgh Waverley, which since the 1980s has been modernized into an electrified high-speed line with sustained top speeds of 125-mph.

Currently as of summer 2024, intercity trains connect the two capital cities in around 4h 20m to 4h 50m, with one early morning southbound departure from Edinburgh—the 5.40am “Flying Scotsman”—making the journey in fours flat with only one intermediate stop at Newcastle. LNER has plans to reduce travel times to almost 4 hours for more trains by the end of 2024, with a frequency of two trains an hour at peak travel times. Lumo which started service in 2021 as low-cost budget operator, currently operates five daily roundtrips at off-peak times.

Before the COVID pandemic rail had only 35 percent of the combined air-rail market for London-Edinburgh, but after the introduction of Lumo’s full timetable of five daily trains with low-cost tickets, the share increased to over 50 percent. With the plan introduction of the new timetable in December, featuring many more four-hour express journeys, LNER hopes to boost its share of the air-rail market to 60 percent, wooing the premium market with its first-class onboard service and door-to-door travel times equivalent to flying.

Opposite is an altered timetable from the Service Development Plan, modified to include three additional roundtrips between New York City and Niagara Falls, including new morning and evening expresses—in addition to several existing semi-express frequencies—and an overnight red-eye service, which existing overnight bus service between New York and Buffalo by Greyhound and FlixBus indicates there is a sizable travel market for intercity rail to serve as well.

Preferred ALT 90B | Modified Timetable w/ Express Service

		New Express Frequency				Semi-Express Frequency				Semi-Express Frequency				New Express Frequency				Semi-Express Frequency				New Express Overnight Frequency		
WESTBOUND TRAINS		Train 271 Empire Service	Train 231 Empire Service	Train 203 Empire Service	Train 63 Maple Leaf	Train 69 Adirondack	Train 281 Empire Service	Train 233 Empire Service	Train 283 Empire Service	Train 235 Empire Service	Train 285 Empire Service	Train 291 Ethan Allen	Train 287 Empire Service	Train 49 Lake Shore Limited	Train 237 Empire Service	Train 209 Empire Service	Train 275 Empire Service	Train 289 Empire Service	Train 239 Empire Service	Train 241 Empire Service	Train 243 Empire Service	Train 245 Empire Service	Train 201 Empire Service	
New York Moynihan Penn Station	0 Dp.		6:15 AM	7:00 AM	7:15 AM	8:15 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	3:45 PM	4:30 PM	5:00 PM	5:15 PM	6:00 PM	6:15 PM	7:00 PM	8:00 PM	9:00 PM	11:00 PM	11:45 PM
Yonkers	14 Ar.		---	---	---	---	---	10:15 AM	11:15 AM	12:15 PM	---	2:15 PM	3:15 PM	---	---	---	5:30 PM	---	---	7:15 PM	8:15 PM	---	---	
Croton-Harmon	32 Ar.		7:00 AM	7:45 AM	8:00 AM	9:00 AM	---	10:45 AM	11:45 AM	12:45 PM	---	2:45 PM	3:45 PM	4:30 PM	5:15 PM	5:45 PM	6:00 PM	6:45 PM	7:00 PM	7:45 PM	8:45 PM	11:45 PM	12:30 AM	
Poughkeepsie	73 Ar.		7:30 AM	---	8:30 AM	9:30 AM	---	11:15 AM	12:15 PM	1:15 PM	---	3:15 PM	4:15 PM	---	5:45 PM	---	6:30 PM	---	7:30 PM	8:15 PM	10:15 PM	12:15 AM	---	
Rhinecliff	88 Ar.		7:45 AM	---	8:45 AM	9:45 AM	---	11:30 AM	12:30 PM	1:30 PM	---	3:30 PM	4:30 PM	---	6:00 PM	---	6:45 PM	---	7:45 PM	8:30 PM	10:30 PM	12:30 AM	---	
Hudson	114 Ar.		8:05 AM	---	9:05 AM	10:05 AM	---	11:50 AM	12:50 PM	1:50 PM	---	3:50 PM	4:50 PM	---	6:20 PM	---	7:05 PM	---	8:05 PM	8:50 PM	10:50 PM	12:50 AM	---	
Albany-Rensselaer	141 Dp.	6:30 AM	---	---	9:30 AM	10:30 AM	11:00 AM	12:15 PM	1:15 PM	2:15 PM	3:00 PM	4:15 PM	5:15 PM	6:00 PM	6:45 PM	---	7:30 PM	8:00 PM	8:30 PM	9:15 PM	11:15 PM	1:15 AM	1:45 AM	
Schenectady	159 Ar.	6:50 AM	---	---	9:45 AM	10:45 AM	11:15 AM	---	1:30 PM	3:15 PM	4:30 PM	5:30 PM	6:30 PM	7:00 PM	---	7:45 PM	8:15 PM	8:45 PM	---	---	---	---	---	
Saratoga Springs	178 Ar.	---	---	---	10:05 AM	11:05 AM	11:35 AM	---	1:50 PM	3:35 PM	4:50 PM	5:50 PM	6:50 PM	7:20 PM	---	8:05 PM	8:35 PM	9:05 PM	---	---	---	---	---	
Amsterdam	177 Ar.	7:10 AM	---	---	11:35 AM	---	---	---	---	---	5:20 PM	---	---	7:50 PM	---	---	---	9:35 PM	---	---	---	---	---	
Utica	237 Ar.	7:55 AM	---	10:25 AM	---	11:55 AM	---	2:10 PM	---	3:55 PM	---	6:10 PM	---	---	---	8:25 PM	8:55 PM	---	---	---	---	---	---	
Rome	250 Ar.	8:10 AM	---	10:10 AM	---	12:40 PM	---	2:55 PM	---	4:40 PM	---	6:55 PM	7:50 PM	---	8:10 PM	9:10 PM	9:40 PM	---	---	---	---	---	3:10 AM	
Syracuse	291 Ar.	8:50 AM	---	11:25 AM	---	12:55 PM	---	3:10 PM	---	4:55 PM	---	7:10 PM	---	---	---	9:25 PM	9:55 PM	---	---	---	---	---	---	
Rochester	370 Ar.	10:00 AM	---	11:05 AM	---	1:35 PM	---	3:50 PM	---	5:35 PM	---	7:50 PM	8:45 PM	---	9:05 PM	10:05 PM	10:35 PM	---	---	---	---	---	4:05 AM	
Buffalo-Depew	431 Ar.	10:50 AM	---	12:05 PM	---	2:45 PM	---	5:00 PM	---	6:45 PM	---	9:00 PM	9:55 PM	---	10:15 PM	11:15 PM	11:45 PM	---	---	---	---	---	5:15 AM	
Buffalo Exchange Street	437 Ar.	11:05 AM	---	1:05 PM	---	2:05 PM	---	3:35 PM	---	5:50 PM	---	7:35 PM	9:50 PM	10:45 PM	---	11:05 PM	12:35 AM	---	---	---	---	---	6:10 AM	
Niagara Falls	460 Ar.	11:41 AM	---	1:20 PM	---	2:20 PM	---	3:50 PM	---	6:05 PM	---	7:50 PM	10:05 PM	---	11:20 PM	12:50 AM	---	---	---	---	---	---	6:30 AM	
				1:51 PM	---	2:51 PM	---	4:21 PM	---	6:36 PM	---	8:21 PM	10:36 PM	---	11:51 PM	---	1:21 AM	---	---	---	---	---	7:05 AM	
						Train Continues to Toronto		Train Continues to Montreal				Train Continues to Burlington		Train Continues to Chicago										

EASTBOUND TRAINS		Train 200 Empire Service	Train 230 Empire Service	Train 232 Empire Service	Train 234 Empire Service	Train 236 Empire Service	Train 270 Empire Service	Train 202 Empire Service	Train 238 Empire Service	Train 280 Empire Service	Train 242 Empire Service	Train 282 Empire Service	Train 244 Empire Service	Train 284 Empire Service	Train 290 Ethan Allen	Train 48 Lake Shore Limited	Train 286 Empire Service	Train 68 Adirondack	Train 64 Maple Leaf	Train 246 Empire Service	Train 288 Empire Service	Train 208 Empire Service	Train 274 Empire Service		
Niagara Falls	0 Dp.	11:40 PM						3:40 AM		4:40 AM		6:40 AM		8:40 AM		10:40 AM		12:40 PM		2:40 PM		4:40 PM		6:40 PM	
Buffalo Exchange Street	23 Ar.	12:10 AM						4:10 AM		5:10 AM		7:10 AM		9:10 AM		11:10 AM		1:10 PM		3:10 PM		5:10 PM		7:10 PM	
Buffalo-Depew	29 Ar.	12:25 AM						4:25 AM		5:25 AM		7:25 AM		9:25 AM		10:25 AM		11:25 AM		1:25 PM		3:25 PM		5:25 PM	
Rochester	90 Ar.	1:15 AM						5:15 AM		6:15 AM		8:15 AM		10:15 AM		11:15 AM		12:15 PM		2:15 PM		4:15 PM		6:15 PM	
Syracuse	170 Ar.	2:25 AM					5:25 AM	6:25 AM		7:25 AM		9:25 AM		11:25 AM		12:25 PM		1:25 PM		3:25 PM		5:25 PM		7:25 PM	
Rome	210 Ar.	---						6:05 AM		8:05 AM		10:05 AM		12:05 PM		---		2:05 PM		4:05 PM		6:05 PM		10:05 PM	
Utica	224 Ar.	3:15 AM						6:20 AM		7:15 AM		8:20 AM		10:20 AM		1:20 PM		2:20 PM		4:20 PM		6:20 PM		10:20 PM	
Amsterdam	283 Ar.	---						7:05 AM		9:05 AM		11:05 AM		1:05 PM		---		3:05 PM		5:05 PM		7:05 PM		11:05 PM	
Saratoga Springs	19 Ar.	---			6:00 AM		---	---		8:00 AM		---		1:55 PM		---		3:55 PM		---		---		---	
Schenectady	301 Ar.	---			6:30 AM		7:25 AM	---		8:30 AM		9:25 AM		11:25 AM		1:25 PM		2:25 PM		4:25 PM		6:25 PM		11:25 PM	
Albany-Rensselaer	319 Dp.	4:30 AM			6:50 AM		7:45 AM	8:30 AM		8:50 AM		9:45 AM		11:45 AM		1:45 PM		2:45 PM		4:45 PM		6:45 PM		11:45 PM	
Hudson	347 Ar.	---	5:00 AM	6:00 AM	7:00 AM	7:30 AM	8:00 AM	8:40 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	3:30 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	9:40 PM		
Rhinecliff	372 Ar.	---	5:25 AM	6:25 AM	---	7:50 AM	8:25 AM	---	9:25 AM	10:25 AM	11:25 AM	12:25 PM	1:25 PM	---	3:25 PM	---	4:25 PM	5:25 PM	6:25 PM	7:25 PM	8:25 PM	---	---		
Poughkeepsie	387 Ar.	---	5:50 AM	6:50 AM	---	8:10 AM	8:50 AM	---	9:50 AM	10:50 AM	11:50 AM	12:50 PM	1:50 PM	---	3:50 PM	---	4:50 PM	5:50 PM	6:50 PM	7:50 PM	8:50 PM	---	---		
Croton-Harmon	428 Ar.	6:05 AM	---	---	---	---	9:35 AM	---	10:35 AM	11:35 AM	12:35 PM	1:35 PM	2:35 PM	---	4:35 PM	5:10 PM	5:35 PM	6:35 PM	7:35 PM	8:35 PM	9:35 PM	11:00 PM	---		
Yonkers	446 Ar.	---	---	---	---	---	---	---	10:55 AM	---	12:55 PM	---	2:55 PM	---	4:55 PM	---	---	---	---	---	---	---	---	---	
New York Moynihan Penn Station	460 Ar.	6:45 AM	7:10 AM	8:10 AM	9:00 AM	9:40 AM	10:15 AM	10:40 AM	11:15 AM	12:15 PM	1:15 PM	2:15 PM	3:15 PM	4:00 PM	5:15 PM	5:45 PM	6:15 PM	7:15 PM	8:15 PM	9:15 PM	10:15 PM	11:40 PM	---		

Climate Act

In Spring 2019 the Climate Leadership and Community Protection Act was passed and signed into law, mandating that New York State move to a net-zero emission economy by 2050 by eliminating most emissions of greenhouse gases – primarily CO₂ – from the burning of fossil fuels.

The goal is to cut greenhouse gas emissions to 85% of 1990 levels by 2050, with the remaining 15% offset by reforestation, wetland creation, or carbon capturing through technological means. A 22-person “Climate Action Council” composed of top state officials, advised by smaller working groups with expertise in specific areas, was created to develop the framework for how the state will reduce greenhouse gas emissions.

Unfortunately, the Empire Corridor Tier One EIS does not address the Climate Act as most of the work in completing it was done before 2019, despite the long-delayed release of the Final EIS in February 2023. The Final Scoping Plan released by the Climate Action Council on January 1, 2023 doesn’t address rail either, its only mentioned in the Transportation Chapter being: “For the purposes of the scoping discussion, public transportation includes but is not limited to transit, micro-transit, shared mobility, and longer distance passenger rail services.” The Climate Council focused primarily on electrifying motor vehicles, including freight trucks and public transit buses. Electrification of the remaining diesel operated MTA commuter rail services of the Metro-North and the Long Island Rail Road was even overlooked!

It seems that for intercity rail New York State is outsourcing—if more in practice than plan—to the Amtrak, the service provider, which has committed to becoming a net-zero mobility provider by 2045, issuing in April 2024 a Request for Information (RFI) for solutions to transforming its rail fleet with zero-emission technologies.

On an interim basis Amtrak is moving towards replacing conventional diesel fuel with Renewable Diesel, a biofuel created from a blend of vegetable oils, animal fats, or recycled restaurant grease—reducing lifecycle carbon emissions by up to 63%, while also reducing other harmful emissions, including fine particulates and nitrogen oxides, leading to improved local air quality. California’s state-supported Amtrak services—the ‘Surfliner’, ‘Capitol Corridor’, and ‘San Joaquin’—are now fueled with biodiesel derived from commercial kitchens. Because Renewable Diesel is chemically identical to petroleum diesel, it is a “drop-in” fuel that can be used in existing diesel engines without modifications, either fully replacing diesel or being blended with any amount.



FRA | On Track for Decarbonization Workshop | Amtrak | Denver, May 2023

Long-term Amtrak is looking at hydrogen fuel cells, working in a hybrid powertrain with batteries. Green Hydrogen produced from renewable power generation—wind, solar, and hydro—is a zero-emission fuel, as opposed to hydrogen produced from fossil fuels, currently the primary industrial source. Hydrogen fuel cells are still a maturing technology in limited use, and the environmentally sustainable and cost-effective production of green hydrogen is also a work-in-progress. However, progress is being made with a lot of research and development, backed by both public and private funding being undertaken to develop a “hydrogen economy”.

Caltrans (California Department of Transportation) has the goal of achieving zero emissions by 2035 for its state supported passenger rail services, and is primarily pursuing hydrogen fuel cell propulsion to do so. Caltrans has rejected electrification with overhead catenary as too expensive (most freight railroads also are on record in strong opposition to electrification) to install, with batteries having too short a range. Caltrans has already ordered six zero-emission hydrogen trainsets from train manufacturer Stadler Rail for their new Valley Rail regional passenger service. Freight railroads CPKC and CSX are also currently testing prototype hydrogen locomotives converted from existing diesel-electric locomotives, the hydrogen fuel cells and battery pack replacing the diesel prime mover.

While Caltrans rejected electrification due to the high initial capital cost of installation and opposition by the freight rail industry, it has considered “tri-mode” hydrogen-battery locomotives making use of “discontinuous electrification”, utilizing a pantograph to take electricity directly from overhead catenary wire, where installed on publicly controlled track, for powering the traction motors and recharging the batteries.



Lastly, the Preferred Alternative 90B supports the Climate Act’s goals of encouraging “Smart Growth” and “Mobility Oriented Development” of walkable, compact, mixed-use projects of higher density, preferably within walking distance to a public transit facility. Modern intercity passenger rail encourages sustainable cities by serving as an urban renewal catalyst for the walkable higher density development of “Transit-Oriented Development” around rail stations, many of which along the Empire Corridor are located “downtown” in historic urban centers. Alternative 90B by utilizing existing railroad infrastructure and right-of-way, will preserve farmland and the wildlife habitat of forests and wetlands, while also reducing carbon emissions during construction by avoiding excessive tree cutting and excavation of earth, an environmental plus over greenfield high-speed rail.

Empire Beyond

The New York-to-Niagara Falls ‘Empire Corridor’ is part of a greater passenger rail corridor, the bottom trunk of a system of existing and potential branching services reaching out to Boston, Burlington, Montreal, Toronto, Cleveland, Detroit, and Chicago. All these cities were once served and connected by dozens of trains during the days of the New York Central, and all are served currently at some level today by Amtrak. Today the entirety of the New York-Boston-Chicago trunk is served solely by Amtrak’s long-distance ‘Lake Shore Limited’.

Roughly 30 million people live within 25 miles of the ‘Lake Shore Limited’ route’s 20 rail stations. The route connects 171 city pair markets, connecting smaller cities and towns to Chicago, New York and each other. More frequent trains along this greater metropolitan corridor, scheduled to allow for productive business and leisure trips to each major city, would create stronger economic and social ties, tying closer together the “Great Lakes Megaregion” and connecting it to the Northeastern Megalopolis.

The “Lakeshore Rail Alliance” is a multi-state rail coalition advocating for increased and improved train service along the current ‘Lake Shore Limited’ route between New York City and Chicago. The coalition has proposed that four trains a day should provide a base level of service at key travel times without requiring substantial investments in new track. Additional service would benefit a proposed new infill station for Chautauqua County, located in or near Dunkirk and Freedonia, in far western New York State.

Another rail proposed expansion project is “East-West Rail”—a plan being actively pursued by the Commonwealth of Massachusetts (MassDOT) to connect Boston, Springfield, Pittsfield, and Albany with a new Amtrak intercity corridor service. Amtrak in its 2021 ‘Corridor Vision Plan’ proposed two additional Boston-Albany trains to the existing ‘Lake Shore Limited’. As of 2024 several studies have been completed and several hundred million in funding granted by the state and federal governments.



Moving Forward

Many will be disappointed that Alternative 90B is not “true high-speed rail”, yet this “higher speed rail” program has the big benefit of avoiding the pitfalls that have befallen California High Speed Rail and the Texas Central Railway. The 2014 Draft EIS examined and rejected two alternatives for 160 and 220-mph high-speed rail, due to their high estimated cost of \$27 and \$39 billion, costs which are likely an underestimate given that the cost estimate for the Phase 1 San Francisco-Los Angeles segment of the California HSR project has gone from \$33 billion in 2008 to \$106 billion in 2024, with the completion date slipping decades into the future. Building a new greenfield high-speed railway between New York City and Buffalo would in all likelihood cost well over \$50 billion and take several decades to complete.

By leveraging the surplus right-of-way of the existing historic rail corridor, ALT 90B avoids the land acquisition problems of the greenfield high-speed rail construction of California HSR and Texas Central, where rural property owners have legally and politically fought eminent domain proceedings for years, delaying construction while increasing costs. Brightline West, now under construction between Las Vegas and the Inland Empire, avoids this issue by utilizing the median of Interstate 15 from for the new high-speed tracks. However, the terrain and built environment of Upstate New York is very different from the Mojave Desert, the alignment of the NYS Thruway through the Hudson and Mohawk valleys having sharper curves and steeper grades than the existing railroad mainline.

Higher Speed Rail Comparison

Brightline Florida

CITY PAIRS	DISTANCE	STATION STOPS	TRAVEL TIME	AVERAGE SPEED
Miami - West Palm Beach	70 mi	2-3 Stops	1:15-1:20	53-56 mph
West Palm Beach - Orlando	165 mi	Non-Stop	2:08	77 mph
Miami - Orlando	235 mi	3-4 Stops	3:25-3:30	67-69 mph

Amtrak Acela

CITY PAIRS	DISTANCE	STATION STOPS	TRAVEL TIME	AVERAGE SPEED
Boston - New York	231 mi	6 Stops	3:35-3:50	60-65 mph
New York - Washington	226 mi	7 Stops	2:50-2:59	76-79 mph
Boston - Washington	457 mi	14 Stops	6:40-6:51	67-69 mph

Amtrak Northeast Regional

CITY PAIRS	DISTANCE	STATION STOPS	TRAVEL TIME	AVERAGE SPEED
Boston - New York	231 mi	12 Stops	4:04-4:27	52-57 mph
New York - Washington	226 mi	15 Stops	3:20-3:42	61-68 mph
Boston - Washington	457 mi	28 Stops	7:52-8:12	56-58 mph

Empire Corridor: ALT 90B Service Development Plan

CITY PAIRS	DISTANCE	STATION STOPS	TRAVEL TIME	AVERAGE SPEED
New York - Croton-Harmon	32 mi	0-1 Stops	0:45	43 mph
New York - Albany	141 mi	0-5 Stops	2:00-2:15	63-71 mph
New York - Utica	237 mi	3-8 Stops	3:40-3:55	60-65 mph
New York - Syracuse	291 mi	5-10 Stops	4:35-4:50	60-64 mph
New York - Rochester	370 mi	6-11 Stops	5:45-5:00	62-64 mph
New York - Buffalo-Depew	431 mi	7-12 Stops	6:35-6:50	63-66 mph
New York - Niagara Falls	460 mi	9-14 Stops	7:21-7:36	61-63 mph

Albany - Buffalo-Depew	290 mi	6 Stops	4:20	67 mph
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Super Express: Non-Stop to Central & Western NY

New York - Utica	237 mi	1 Stop*	3:15	73 mph
New York - Syracuse	291 mi	2 Stops	4:05	71 mph
New York - Rochester	370 mi	3 Stops	5:15	70 mph
New York - Buffalo-Depew	431 mi	4 Stops	6:05	71 mph
New York - Niagara Falls	460 mi	6 Stops	6:51	67 mph

* Croton-Harmon



A good model for the Empire Corridor is Brightline Florida, a privately owned and operated intercity passenger railroad owned by the Fortress Investment Group. The civil engineering works compiled by the ALT 90B Service Development Plan are equivalent to that undertaken by Brightline, where some 200 miles of a formerly doubled but now single-track freight line, was doubled-tracked again utilizing the surplus right-of-way, with 35 miles of new track built along a state expressway from Cocoa to Orlando International Airport. From the project announcement to the inauguration of full-service Miami-to-Orlando, Brightline took only a decade to be built in two phases—with second phase of 170 miles from West Palm Beach to Orlando taking only 5 years to be built at the cost of \$5 billion.

Other states are moving forward with “higher speed rail” programs, including Virginia and North Carolina, which are building out the “Southeast Corridor” from Washington DC, south through Richmond, Raleigh, Durham, Greensboro, and Charlotte. From Washington to Richmond, a third (and some segments of fourth) 90-mph dedicated passenger track will be built alongside the existing CSX mainline, while from Richmond to Raleigh a mothball freight line would be rebuilt for 110-mph passenger service. Both states have received billions in federal grants, matched with billions in state funding, overseen by competent and well-staffed state rail agencies.

Alternative 90B represents a “good enough” plan that would deliver significant improvements in long-distance mobility and environmental sustainability, at a cost to construct that New York State can afford, and in a timeframe short enough to be relevant to the lives and plans of people today. Let’s not wait anymore, let’s build a new Empire State Express for the 21st Century.





The Empire State Passenger Association (ESPA) is a volunteer network of citizens, founded in 1980, working to improve and expand Amtrak and public transit services across New York State, from Montauk to Niagara Falls and Dunkirk to Plattsburgh. Our aspiration is a modern, comfortable, and convenient transportation system with seamless connections between trains and rental cars, buses, ferries, airports and local transit options. The Association is guided by its elected officers and membership in the Association is open to all interested persons.

Website

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