

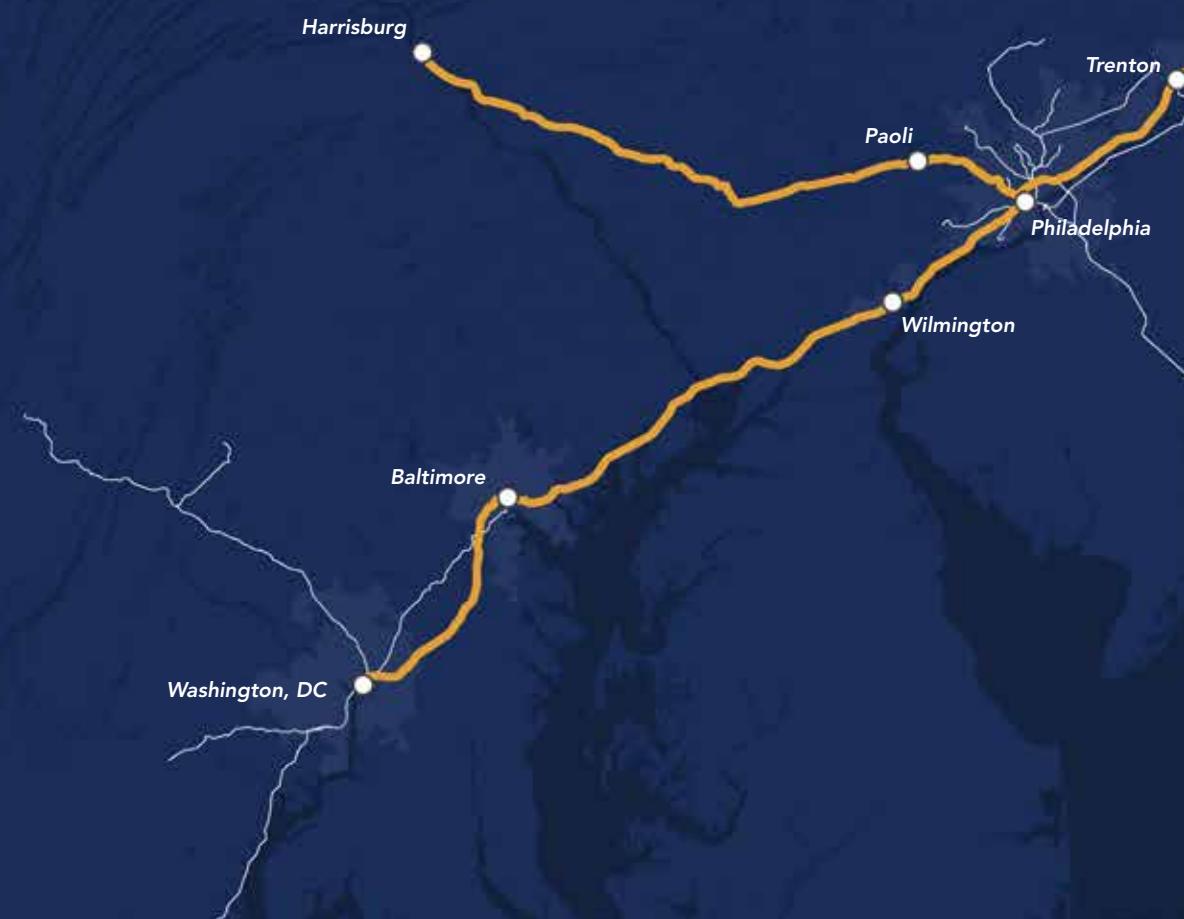


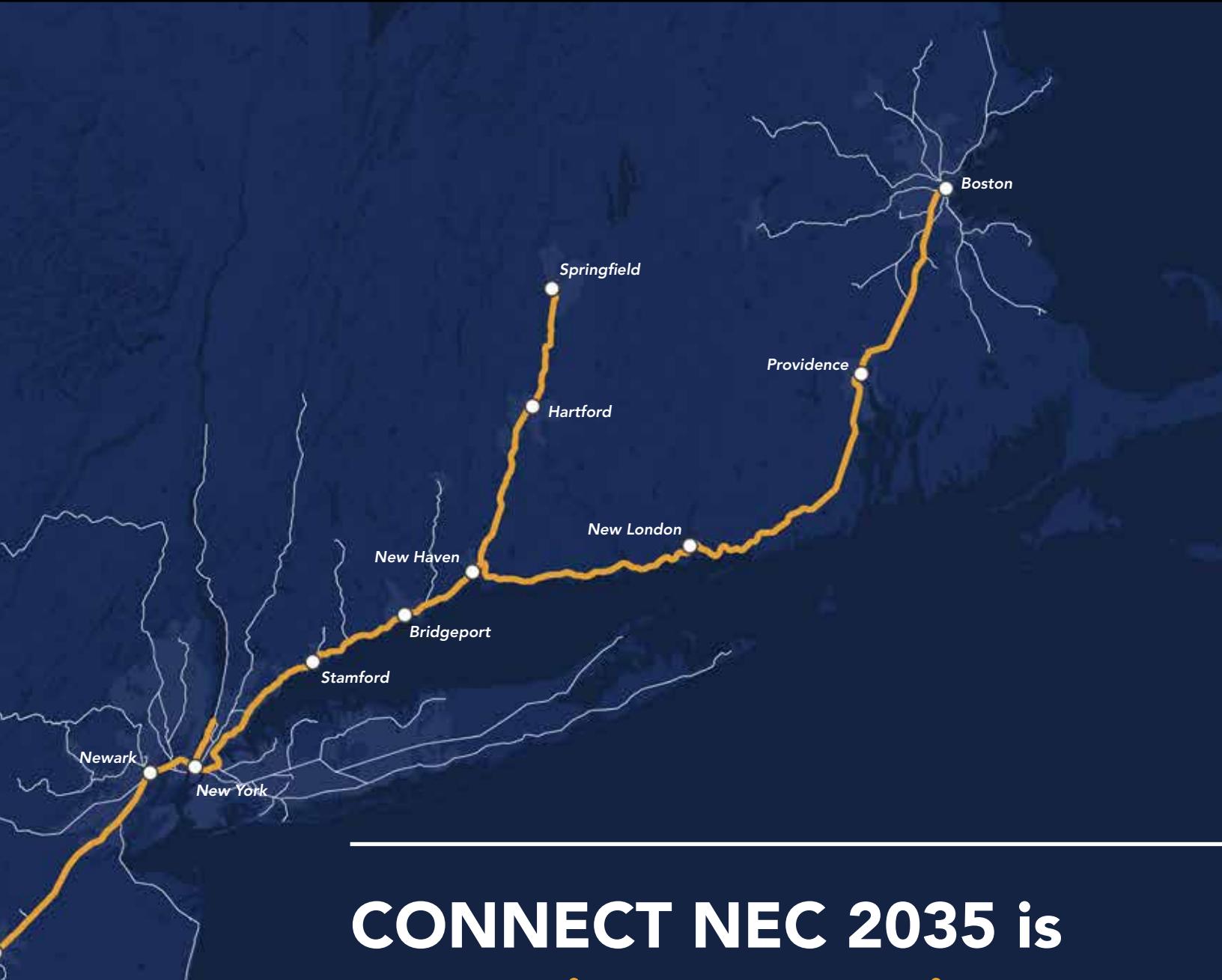
CONNECT 2035

A 15-Year Service Development Plan
and Infrastructure Planning Process
for the Northeast Corridor

July 2021

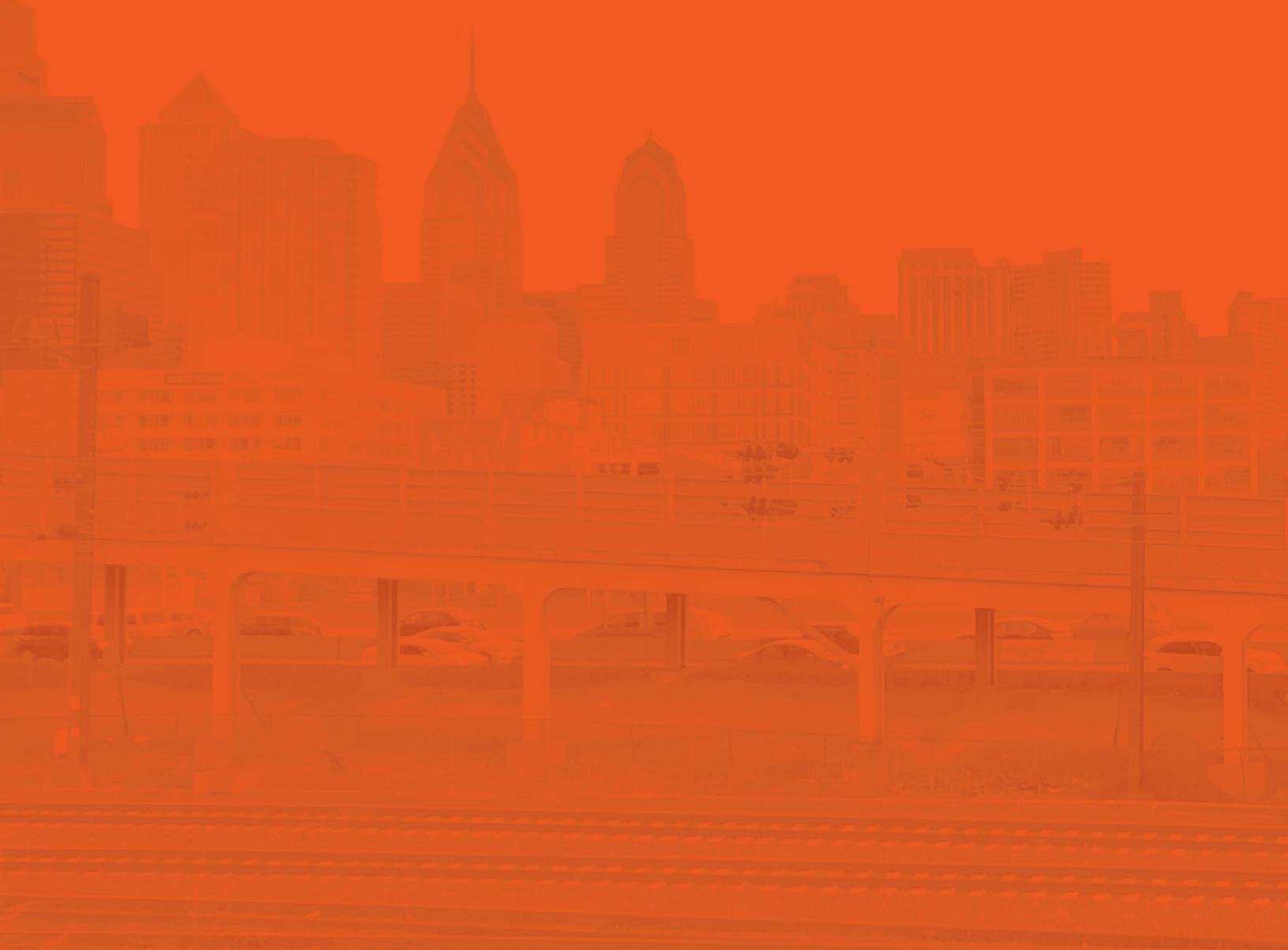
The Northeast Corridor is the economic backbone of the Northeast region, serving hundreds of thousands of people a day





CONNECT NEC 2035 is a **once-in-a-generation opportunity** to replace aging bridges and tunnels, add rail capacity, improve performance, and enhance customer experience in the corridor

CONNECT NEC 2035
includes over 150
projects to make our
nation's most important
rail corridor stronger
than ever



These projects pave the way for a 21st century corridor with frequent, fast, safe, reliable, and comfortable service

A blurred background image of a city skyline with a train in the foreground. The train is an Amtrak locomotive, and the city skyline includes several skyscrapers and industrial buildings. The entire image is overlaid with a solid orange color.



MARC train approaching Odenton Station (MD)





Exterior of Washington Union Station (DC)

July 2021

CONNECT 2035

A 15-Year Service Development Plan and Infrastructure Planning
Process for the Northeast Corridor



A Report by the
Northeast Corridor Commission

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In Partnership with:

Massachusetts Department of Transportation (MassDOT)
Massachusetts Bay Transportation Authority (MBTA)
Rhode Island Department of Transportation (RIDOT)
Connecticut Department of Transportation (CTDOT)/CTrail
Metropolitan Transportation Authority (MTA)
MTA Metro-North Railroad (Metro-North)
MTA Long Island Rail Road (LIRR)
New Jersey Transit (NJ TRANSIT)
Southeastern Pennsylvania Transportation Authority (SEPTA)
Pennsylvania Department of Transportation (PennDOT)
Delaware Department of Transportation (DelDOT)
Maryland Department of Transportation (MDOT), Maryland Transit
Association (MTA)/Maryland Area Regional Commuter (MARC)
The District of Columbia Department of Transportation (DDOT)
Virginia Railway Express (VRE)
Amtrak
U.S. Department of Transportation (USDOT)



Passengers waiting to board a Metro-North train at Bridgeport Station (CT)



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Glossary

Key Concept/Terminology	Definition
Americans With Disabilities Act (ADA)	A civil rights law protecting the rights of people with disabilities in public life, including their access to transportation services.
Automatic Block Signaling (ABS)	The system of wayside and/or in-cab signaling that governs train movement between interlockings.
Capital renewal	Routine state of good repair and replacement of existing basic infrastructure, such as track/roadbed, signals, catenary, and undergrade bridges. Capital renewal is sometimes included in a special project.
Capital renewal program	A combination of capital renewal sections to optimize project delivery and minimize rider impact.
Capital renewal section	The geographic boundaries, generally from universal interlocking to universal interlocking, that form the limits of the C35 capital renewal programs.
Chokepoint	A capacity constrained location along the railroad due to the overall volume of trains, the mix of services, or the trackwork configuration. Chokepoints create bottlenecks that lead to delays or require service reductions.
Commission member agencies	Includes the NEC Commission voting members from each of the NEC states (MA, RI, CT, NY, NJ, PA, DE, and MD), the District of Columbia, Amtrak, and the USDOT as well as representatives from commuter and freight railroads.
CONNECT NEC 2035 (C35)	A corridor-wide 15-year service development plan for the NEC that describes an initial phase towards advancing the NEC FUTURE vision.
C35 Delivery Analysis	Packaging of special projects and capital renewal to gain efficiencies in project delivery and optimize the use of available track outages and other railroad resources. Analysis assumes unconstrained funding and railroad resources.
Direct jobs	Occupations required to deliver the C35 plan, such as project planners, designers, engineers, and construction workers.
Enabling project	An improvement to the rail network that supports the construction of, or that is necessary to complement, special projects or capital renewal. Enabling projects provide additional network flexibility or capacity during construction and generally provide similar long-term operational benefits.
Environmental Impact Statement (EIS)	Documentation associated with one of three classes of action to comply with federal requirements established in the National Environmental Policy Act (42 USC §4332 et seq.) and implementing regulations (40 CFR Parts 1500–1508). An agency decision supported by an EIS is conveyed in a Record of Decision.
Greenhouse gas (GHG)	Gases that trap heat in the atmosphere are called greenhouse gases. CO ₂ makes up the largest component of GHG emissions. Other prominent transportation GHGs include methane (CH ₄) and NOx.

Key Concept/Terminology	Definition
Indirect jobs	Non-construction jobs at suppliers of materials generated to support infrastructure investment, such as steel, concrete, wood, and specialized railroad equipment.
Induced Jobs	Jobs created by the spending of monies such as project salaries for items such as groceries, gas, and entertainment.
Integrated 2035 Operating Plan (2035 Operating Plan)	A comprehensive 24-hour weekday schedule of proposed 2035 revenue and non-revenue passenger train movements on the NEC. This is based on service plans and operating assumptions provided by NEC agencies and reflects necessary adjustments to resolve routing schedule conflicts. The integrated operating plan will be regularly updated by NEC agencies and will be incorporated in future CONNECT NEC analyses and plans.
Major backlog projects	Projects which are necessary for achieving a state of good repair but are not undertaken on a routine basis. Examples include rehabilitation or replacement of major bridges and tunnels.
NEC FUTURE	The Federal Railroad Administration's long-term vision for the NEC to improve the existing NEC and grow the role of rail for both commuter and intercity services. The NEC FUTURE vision is expressed as the Selected Alternative in the NEC FUTURE Record of Decision (2017; https://www.fra.dot.gov/necfuture/).
Northeast Corridor (NEC)	Northeast Corridor or NEC refers to the rail line which runs 457 miles from Washington, DC to Boston, MA as well as connecting corridors to Harrisburg, PA; Spuyten Duyvil, NY; and Springfield, MA. Commuter, intercity and freight services all operate on the NEC.
Northeast Corridor Commission (the Commission)	The Northeast Corridor Commission was established by Congress (49 U.S.C. § 24905) in order to develop coordinated strategies that improve the Northeast's core rail network. The membership is comprised of the eight NEC states and the District of Columbia, Amtrak, and the USDOT.
Operating plan	A more detailed version of a service plan, showing train schedules, train equipment assignments, and (optionally) train cycling through a rail network.
On-Time-Performance (OTP)	A measure of train schedule adherence as defined by each rail operator, generally focused on end-terminal arrivals. Though exceptions exist by operator and by specific service, commuter trains are generally counted as late if arriving six or more minutes behind schedule and Amtrak trains are generally counted as late if arriving ten or more minutes behind schedule. OTP reflects the percentage of scheduled train trips that do not arrive late based on these definitions.
Passenger Miles Traveled (PMT)	The total number of passengers carried by a rail system for a unit of time multiplied by the number of miles they travel.
Peak period	The busiest travel periods on the NEC, which are generally 7-9 AM in the morning and 4-6 PM in the evening.

Glossary

Key Concept/Terminology	Definition
Project list	Compilation of special projects included in CONNECT NEC 2035.
Record of Decision (ROD)	A lead agency issues a ROD to complete their environmental review under the National Environmental Policy Act after they prepare and issue a Final EIS. The ROD is a document that states what the agency decision is; identifies the alternatives considered, including the environmentally preferred alternative; and identifies required mitigation commitments, including any enforcement and monitoring commitments (CEQ NEPA Regulations, 40 C.F.R. § 1505.2).
Right-of-way	The strip of land controlled by a railroad or government entity through ownership or perpetual easement that accommodates railroad tracks, associated utilities and maintenance access.
Route miles	The distance between mileposts or other landmarks along the rail right-of-way.
Service Plan	Definition of rail service in terms of level of service (trains per hour/trains per day), travel times and station stopping patterns. Service plans do not include train schedules with specific station stopping times.
Special projects	Includes “major backlog projects” which represent the complete overhaul or replacement of major bridges and tunnels, and “improvement projects” aimed at creating new infrastructure above and beyond existing assets or replacing existing structures with markedly superior ones. In some cases, special projects include capital renewal work.
Special project groups	A grouping of special projects geographically combined with capital renewal efforts in the same area.
State of good repair or state-of-good-repair (SOGR)	The condition in which the existing physical assets, both individually and as a system are: (a) functioning as designed within their “useful lives,” and (b) sustained through regular maintenance and replacement programs. SOGR represents one element of a comprehensive capital investment program that builds infrastructure to modern safety standards and addresses system capacity and performance.
Territory or analysis territory	Five sections of the NEC identified to support the project delivery analysis and to establish service objectives (New England, Connecticut-Westchester, New York City Metro, Mid-Atlantic North, and Mid-Atlantic South). Territories allowed for an integrated analysis where multiple operators share NEC track and facilities.
Track miles	Defined as the distance between mileposts or other landmarks along the rail right-of-way multiplied by the number of tracks.
Turn the crank	A round of analysis to confirm the feasibility of delivering C35 special projects, capital renewal and the 2035 operating plan. An approach that analyzes sequencing, resources, and track outages to support implementation.
Vehicle Miles Traveled (VMT)	Measurement of the total vehicle miles traveled for all vehicles within a specific time period.

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