

APPENDIX

The Gateway Program and Hudson Tunnel Project

Presented to:

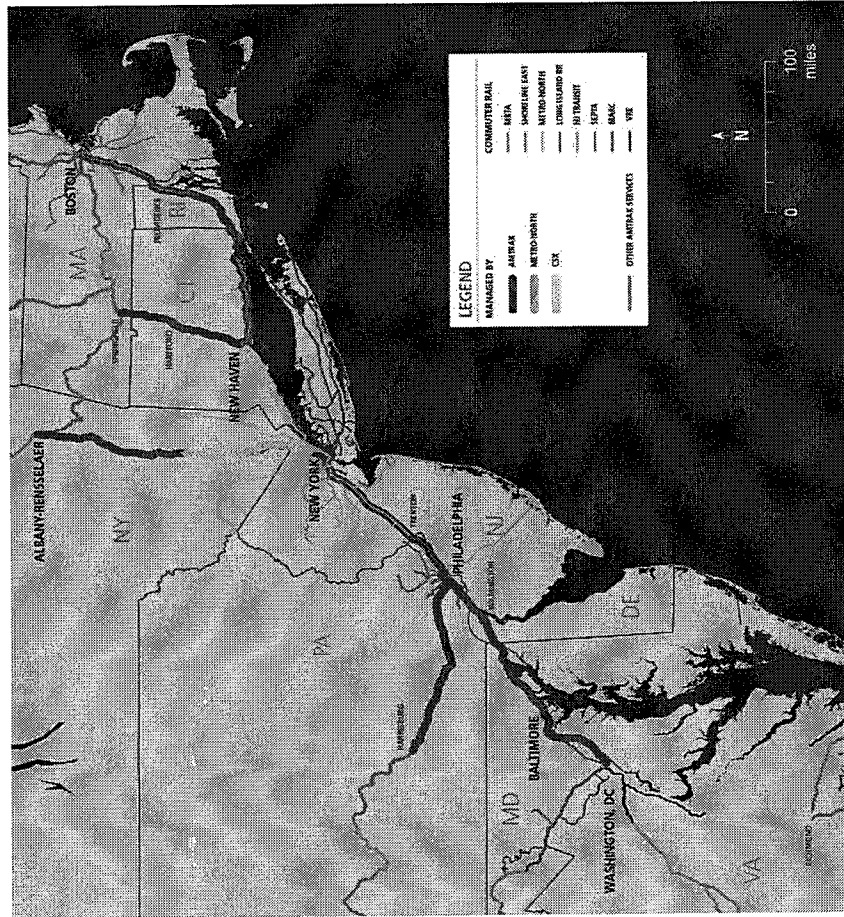
*NJ State Senate Oversight
Committee*

*Stephen Gardner
Executive Vice President
NEC Business Development*

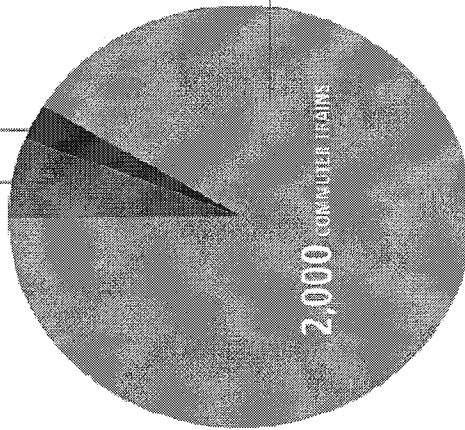
August 10, 2015



The Need for Gateway



140 INTERCITY TRAINS AMTRAK™
60 FREIGHT TRAINS

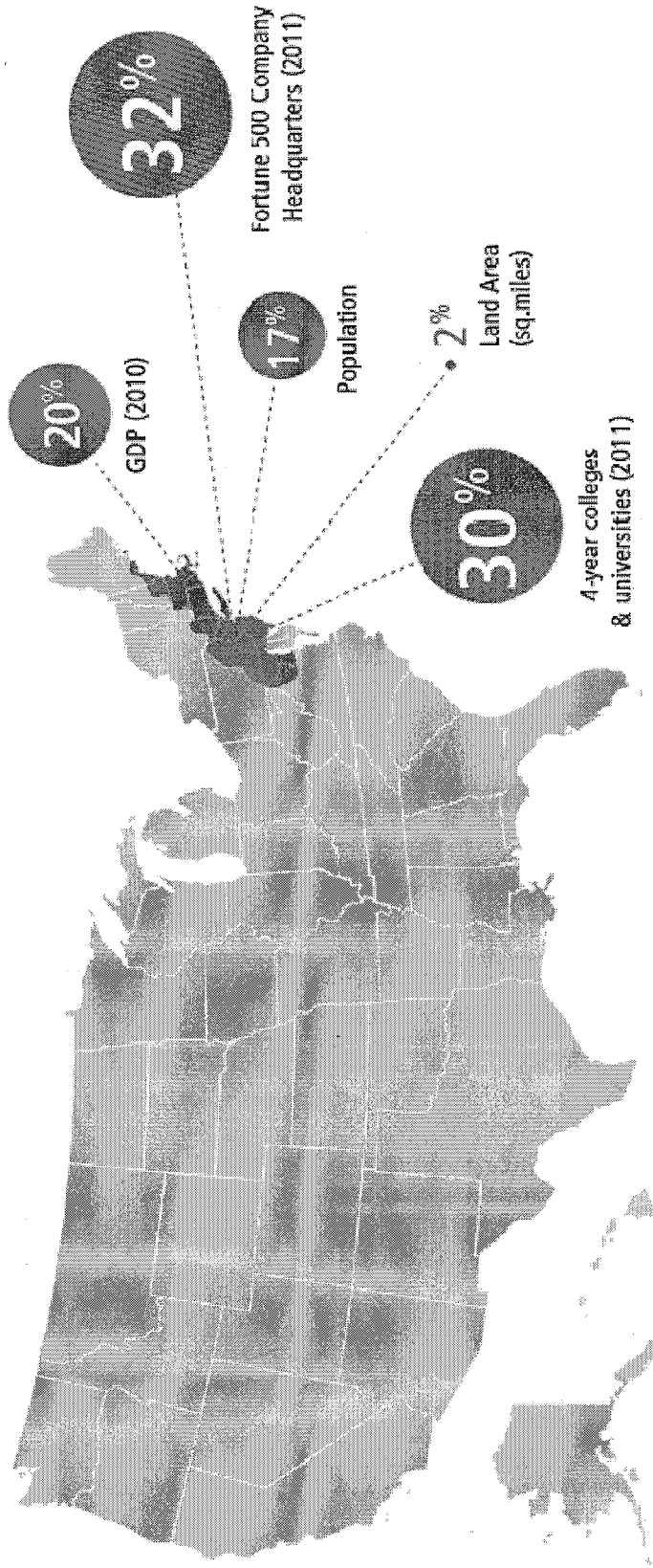


COMMUTER RAILROADS

- Mass Bay Transportation Authority (MBTA)
- Shore Line East
- Metro-North Railroad
- Long Island Rail Road
- New Jersey Transit
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- MARC
- Virginia Railway Express

2,200 DAILY TRAINS

SOURCE: AMTRAK



The Northeast Megaregion – with 17% of the population on 2% of U.S. land area – is North America’s best rail market similar in density and population to successful rail corridors in Europe.



NEC Vital to Local Economies

- NEC and connected commuter networks provide access to:
 - good jobs
 - large labor market
- For some counties, commuter rail is the major means of transport to Manhattan jobs
- Income earned by rail commuters provides significant economic value to suburban areas:
 - For some counties, such as Essex, income earned by rail commuters is in the billions of dollars

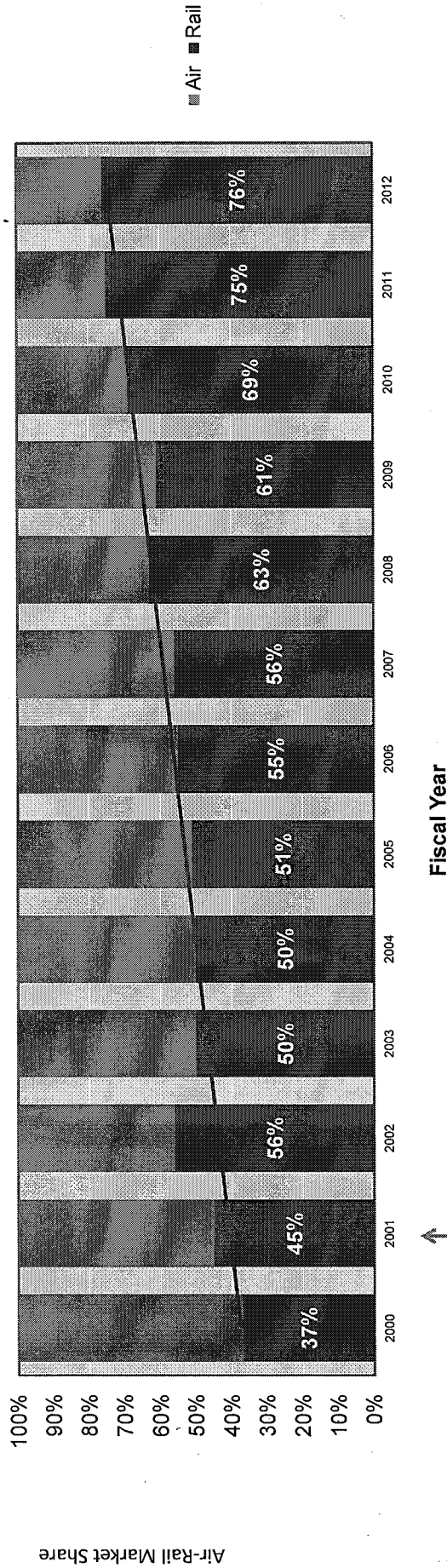
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NEC Vital to Region

Washington to New York Air-Rail Market



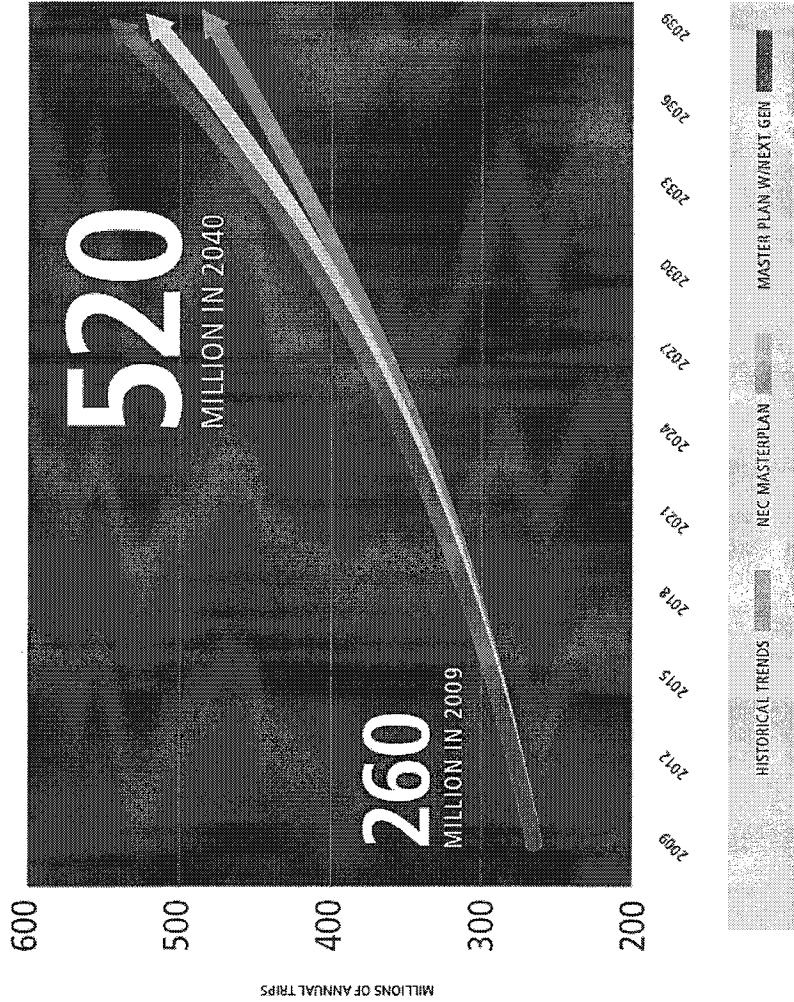
Acela Service introduced



Amtrak carries three times as many passengers DC-NY than all of the airlines put together

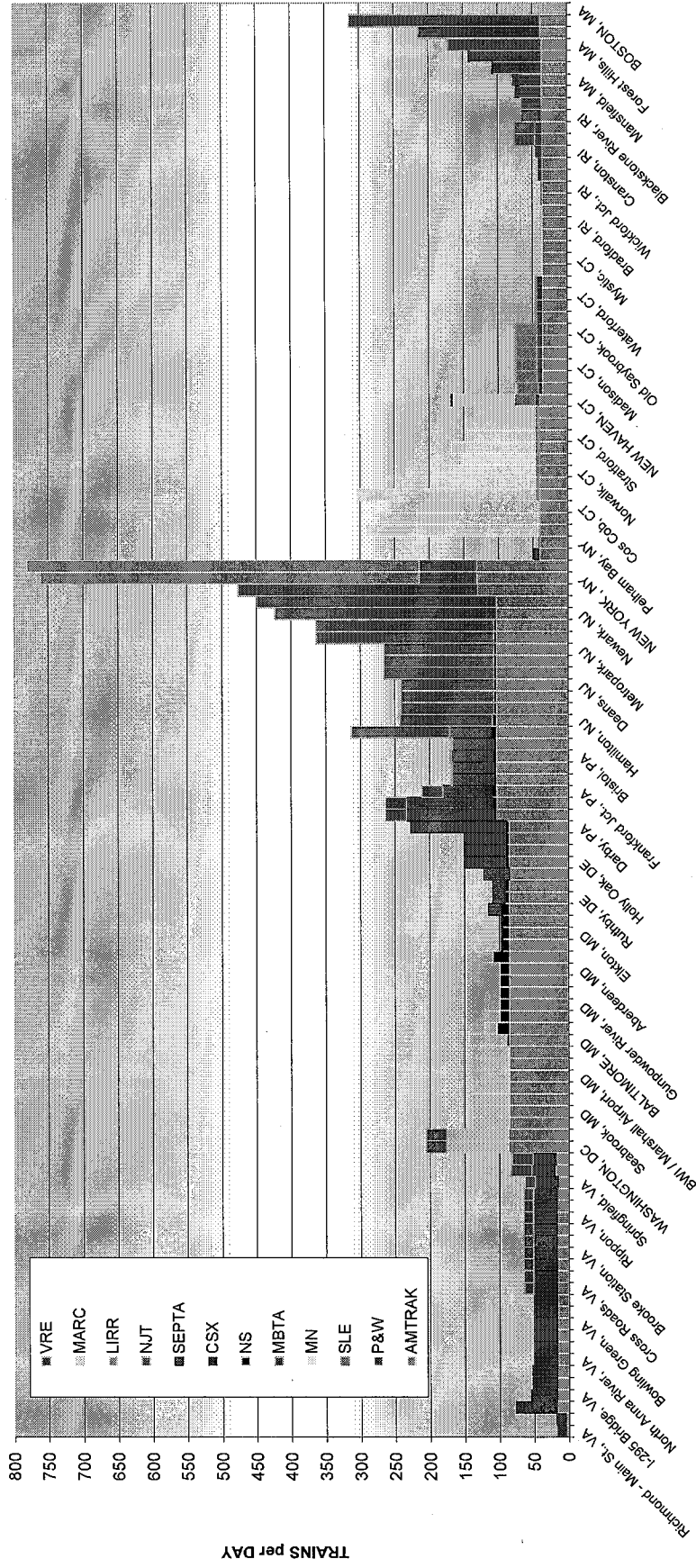
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- NEC passenger demand continues to grow
- How much of that demand the NEC can accommodate depends primarily on the level of investment.





Growth is Threatened By: Bottlenecks





Century-Old Assets



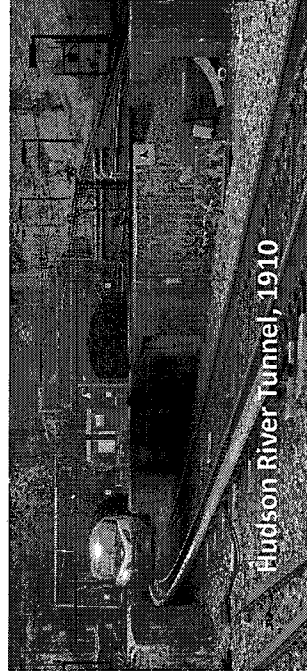
Connecticut River Bridge, 1907



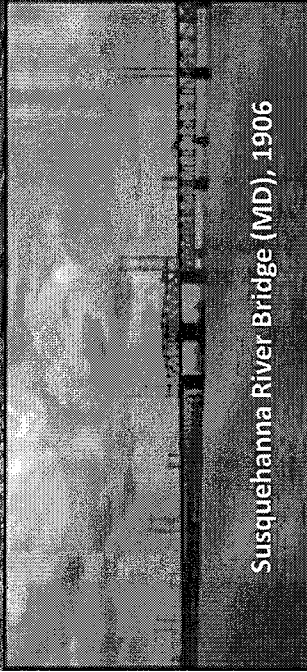
Portal Bridge (NJ), 1906



Pelham Bay Bridge (NY), 1907



Hudson River Tunnel, 1910



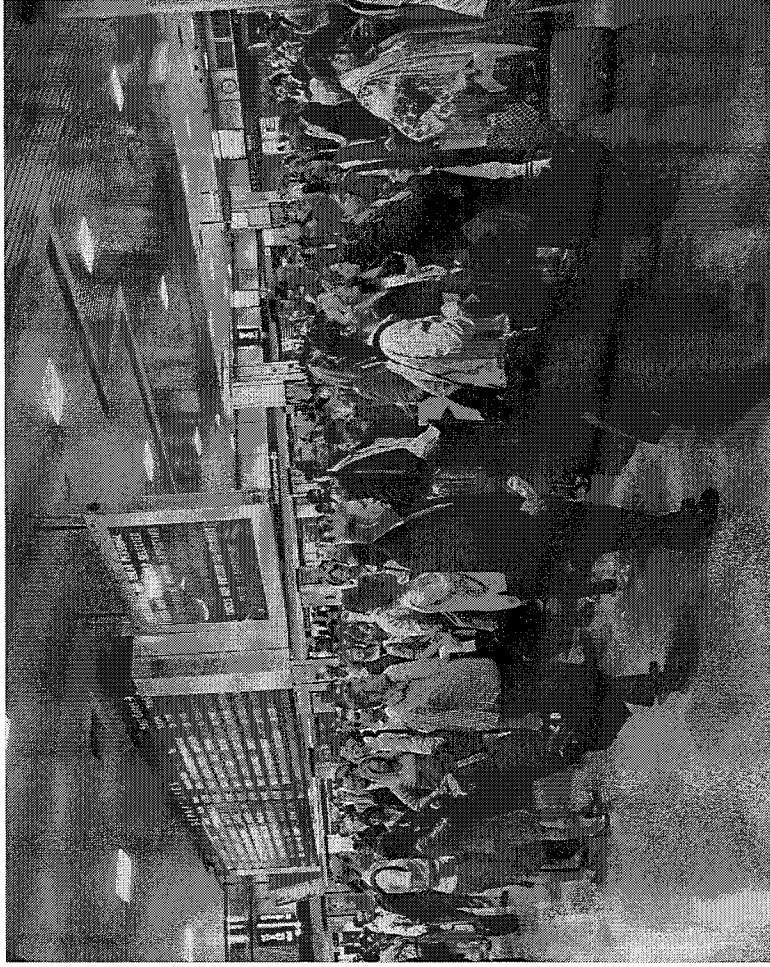
Susquehanna River Bridge (MD), 1906



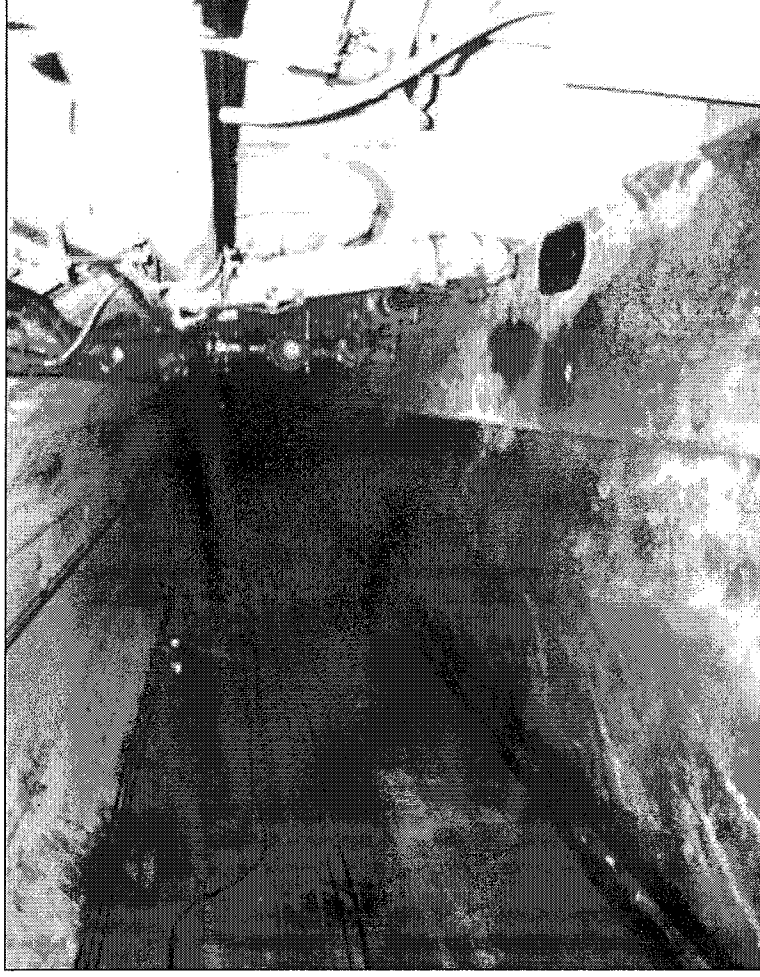
B&P Tunnel (MD), 1873

9/x

- PENN STATION – 410,000 daily passenger trips
- Long Island Railroad – 222,000 trips
- NJ Transit – 160,000 trips
- Amtrak – 28,000 trips
- PLUS NYC Transit - 344,800 daily trips at Penn Station
- 1/2/3 - 178,200 trips
- A/C/E - 166,600 trips

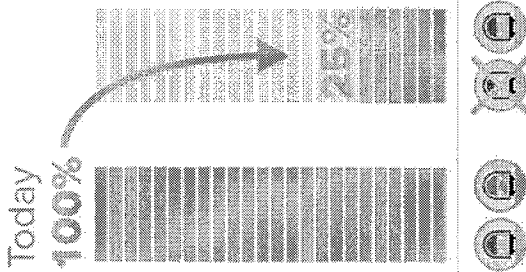


- Super Storm Sandy forced ~4-day closure of the NEC:
 - Flooded substations
 - Inundated East River and Hudson River Tunnel systems
- Ongoing damage to internal components requires complete renewal.
- Tunnel reconstruction requires closure of each tube for outages of >1 year.
- Rebuilding of the Hudson River Tunnel cannot begin until the new Hudson Tunnel Project is completed.

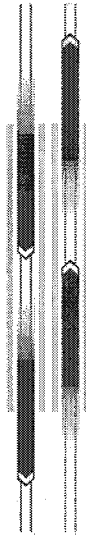


A Vital Link at Risk

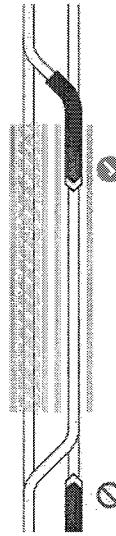
The Impact of a Hudson Rail Tunnel Closure



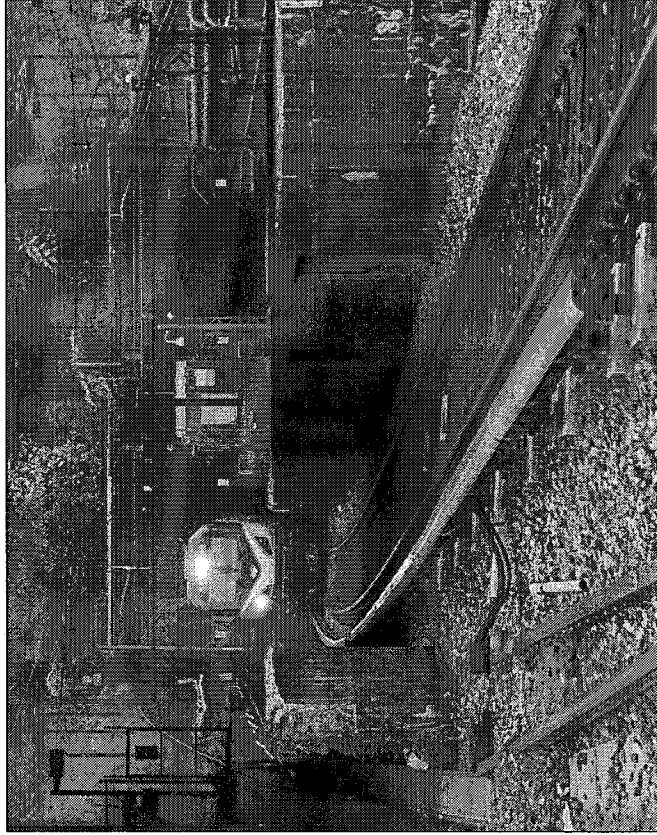
With **two tunnels**, capacity is **24 trains** per hour*



With **one tunnel**, capacity falls to **6 trains**, or **25%**



*Inbound, at peak morning times



Major Project Backlog Elimination and Modernization

\$4 billion per year

Approximately \$4 billion in annual investment is required to fund ongoing normalized replacement of basic infrastructure, eliminate the backlog of both basic infrastructure and major projects, and modernize the NEC for tomorrow's needs

Basic Infrastructure: Backlog Elimination in 15 Years

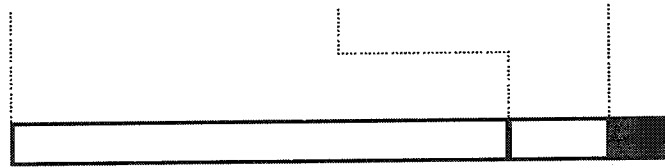
\$1 billion per year

Approximately \$1 billion in annual capital investment is needed to fund ongoing normalized replacement of basic infrastructure assets and eliminate the backlog of basic infrastructure assets in 15 years

Basic Infrastructure: Historic Funding Levels

\$400 million per year

Traditional capital funding sources (see table at left) have invested approximately \$400 million annually toward the normalized replacement of basic infrastructure assets



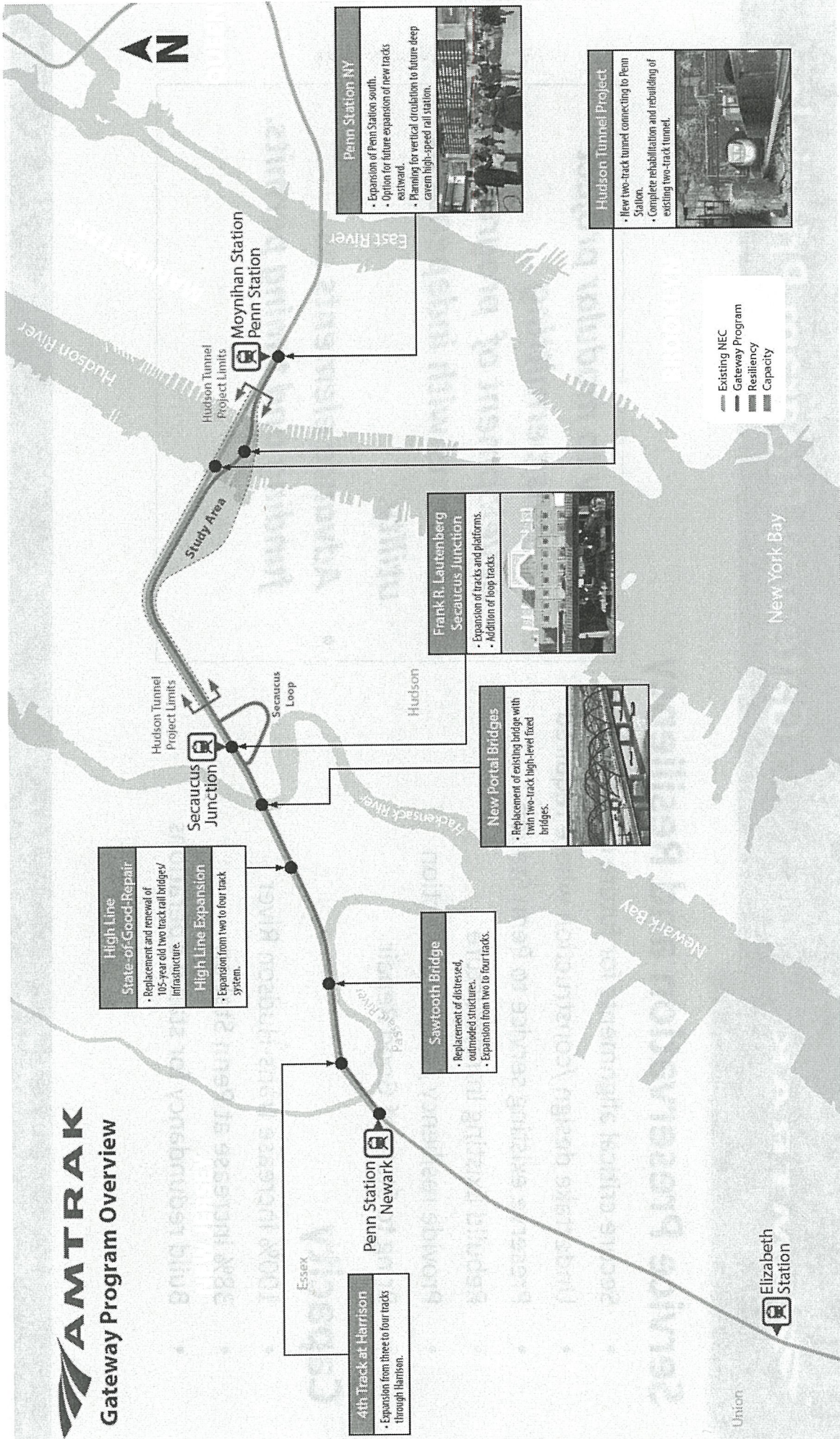
Source: NEC Commission 5-Yr Plan, FY16-20

13x

Gateway Program Overview

MK

AMTRAK Gateway Program Overview



Service Preservation and Resiliency

- Secure critical alignments for future operations
- Undertake design /construction where required
- Preserve existing service to Penn Station
- Rebuild Existing Infrastructure
- Provide resiliency / storm protection
- Bring to State of Good Repair

Capacity

- 100% increase trans-Hudson River
- 38% increase at Penn Station
- Build redundancy for stable operations

- *Priority to modular project designs permitting development of program elements with independent utility.*
- *Advance elements as funding and timing permits.*



Gateway Program Studies

Feasibility Study (completed)

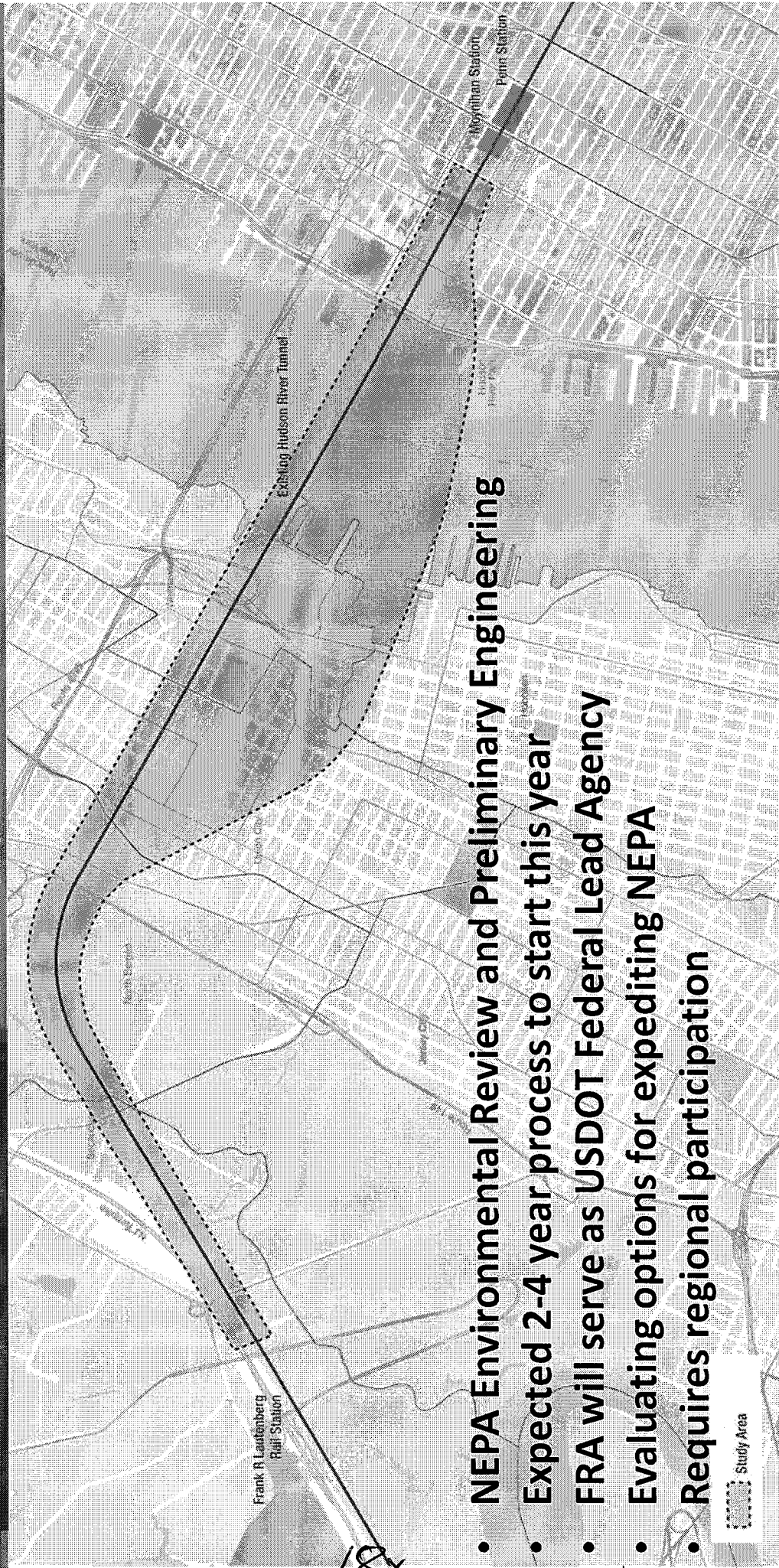
Systems Level Design (completed)

Program Development (underway)

NEPA/ Preliminary Engineering (underway)



Hudson Tunnel Project Study Area



- NEPA Environmental Review and Preliminary Engineering
- Expected 2-4 year process to start this year
- FRA will serve as USDOT Federal Lead Agency
- Evaluating options for expediting NEPA
- Requires regional participation

 Study Area

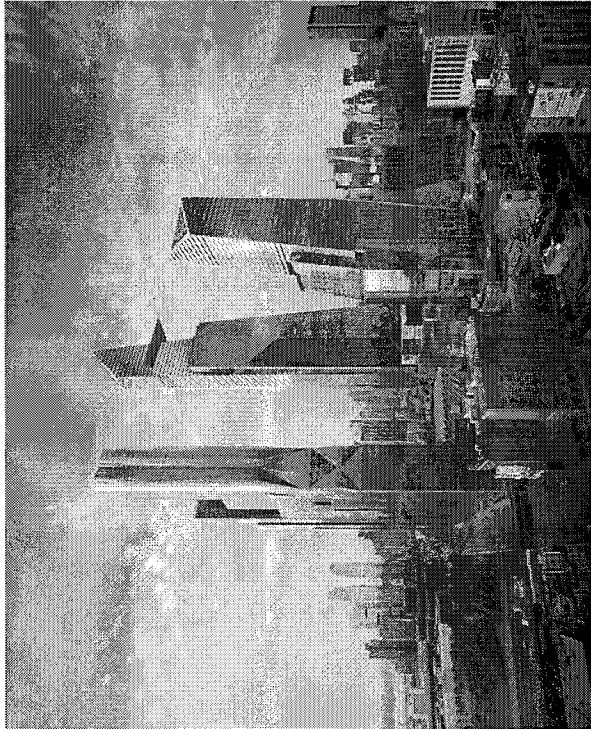
18X

	Years					
	2014	2015	2016	2017	2018	2019
NEPA Process / Environmental Permits						
NEPA Process Preparation (RFP)						
NEPA Process Award		◆				
Conduct NEPA Process						
ROD Issued						◆ Oct. 2018
Permit Process						
Preliminary Engineering / ROW Process						
Develop RFP						
NTP to PE Contractors		◆				
Preliminary Engineering						
Geotechnical Investigation / Survey						
Prepare ROW Documents						
ROW Acquisition Process						

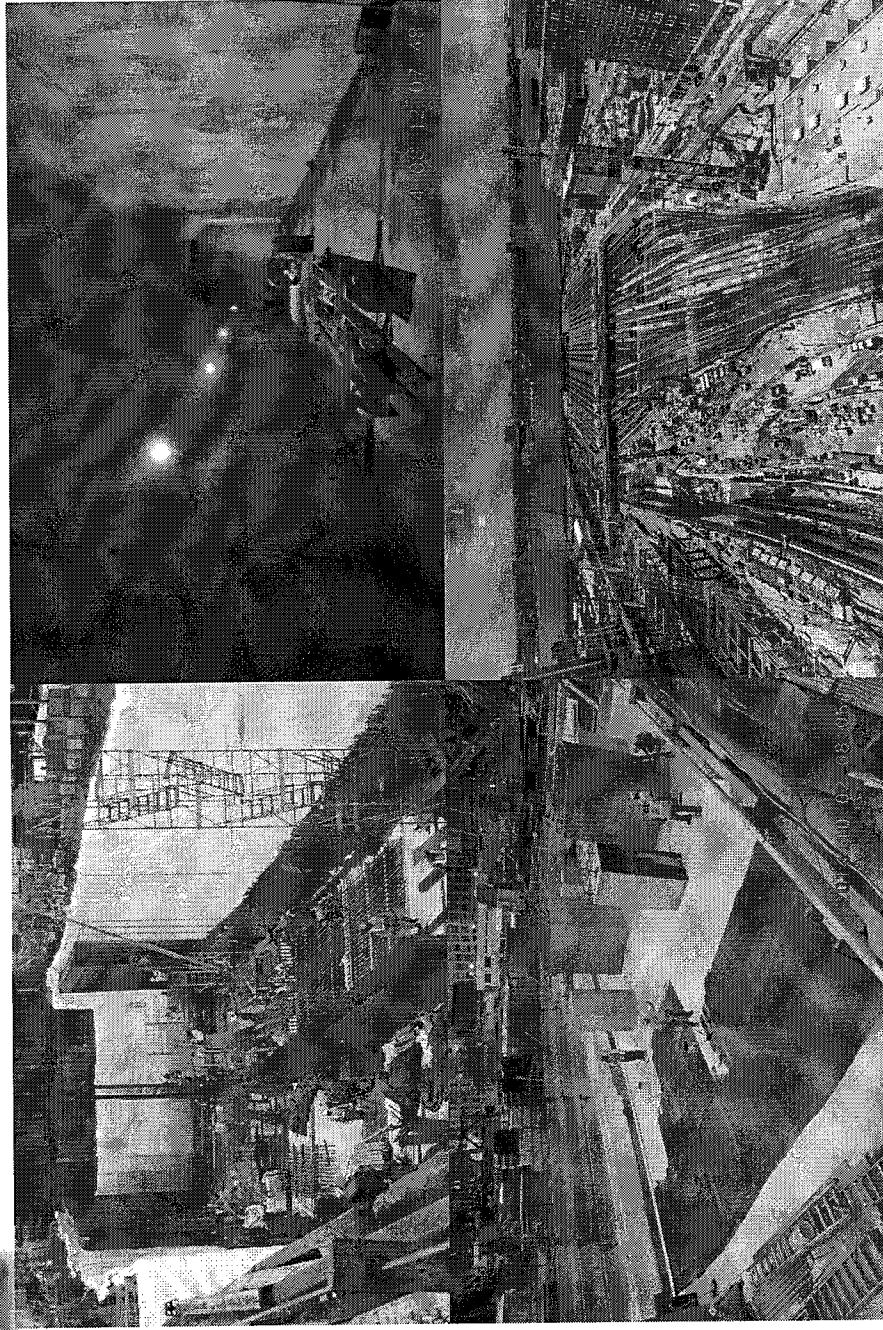
19x



ROW Preservation – Hudson Yards



Amtrak began construction in August 2013 to preserve a potential future pathway for a new Hudson River tunnel through Hudson Yards – or risk losing Penn Station access forever.



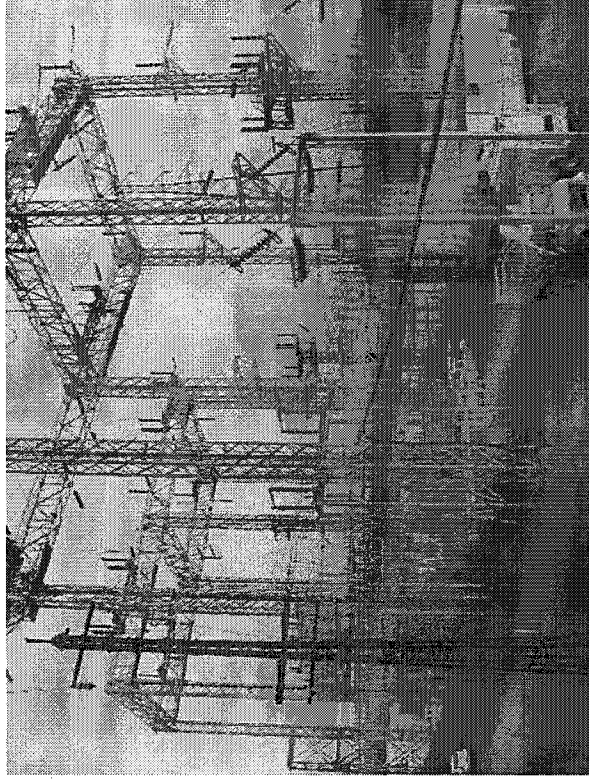
- Casing construction underway or complete from 10th Ave to the western edge of 11th Ave in Manhattan
- Funded primarily by Sandy Act grants to Amtrak of approximately ~\$235m
- Additional ~\$300m required to complete casing across Hudson Yards site.
- Design underway and construction needs to begin in advance of development



Early Actions: Portal Bridge / Sub 41

- Portal North Bridge design and environmental work complete.
- ~\$1 billion construction costs over 5 years
- Needs NJT/Amtrak/Federal funding

22x



- Substation 41 was flooded by Super Storm Sandy
- Will be rebuilt in conjunction with NJ TransitGrid Project

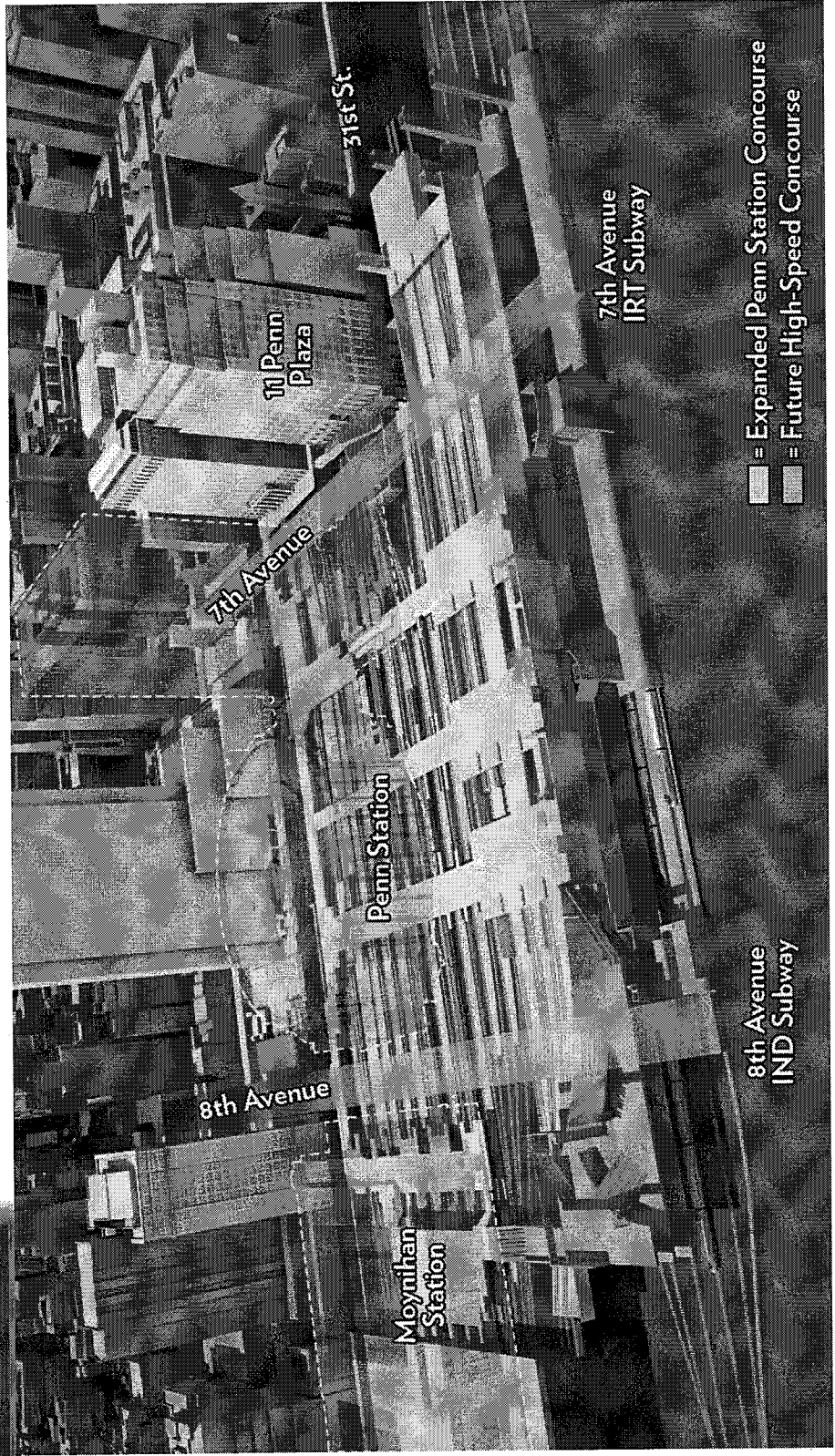


Portal North Bridge rendering



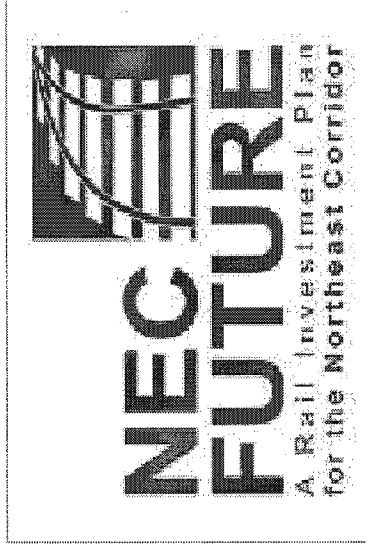
Expanded Penn Station Concourses

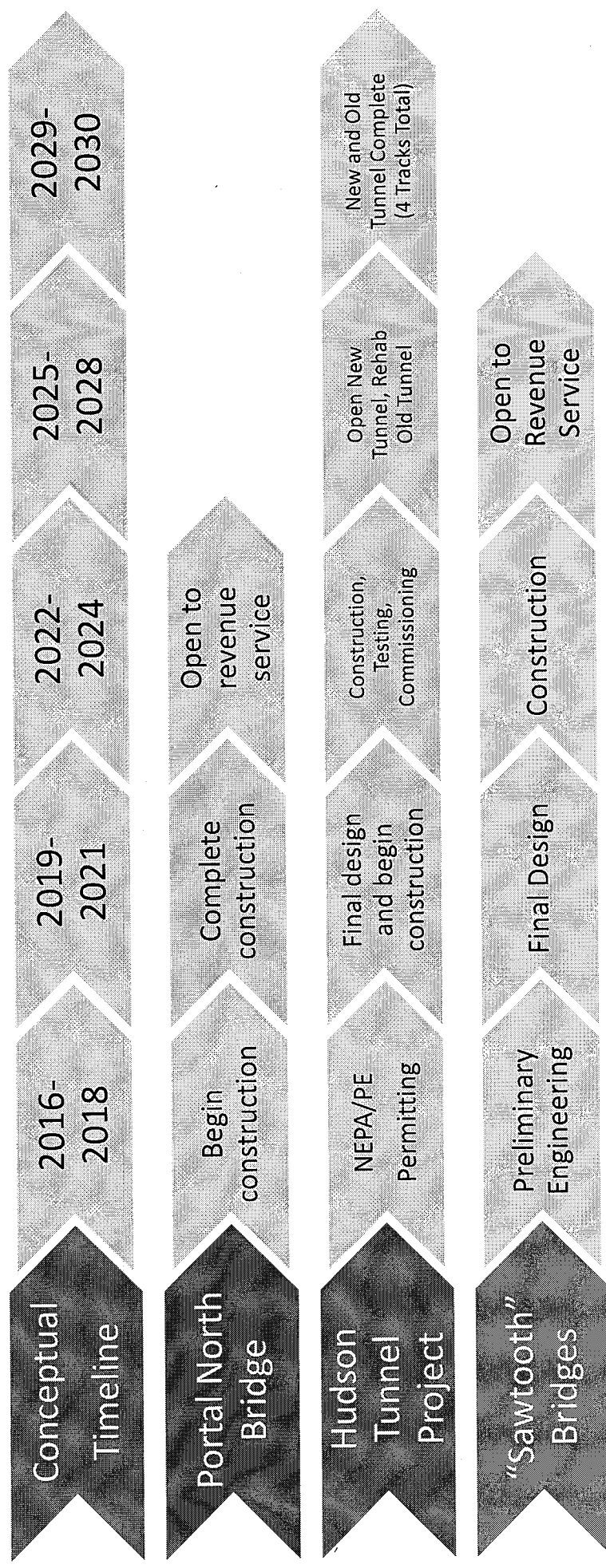
- Station plans evaluated for
- Train operations
- Station connectivity
- Future line extensions
- Development potential



■ = Expanded Penn Station Concourse
 ■ = Future High-Speed Concourse

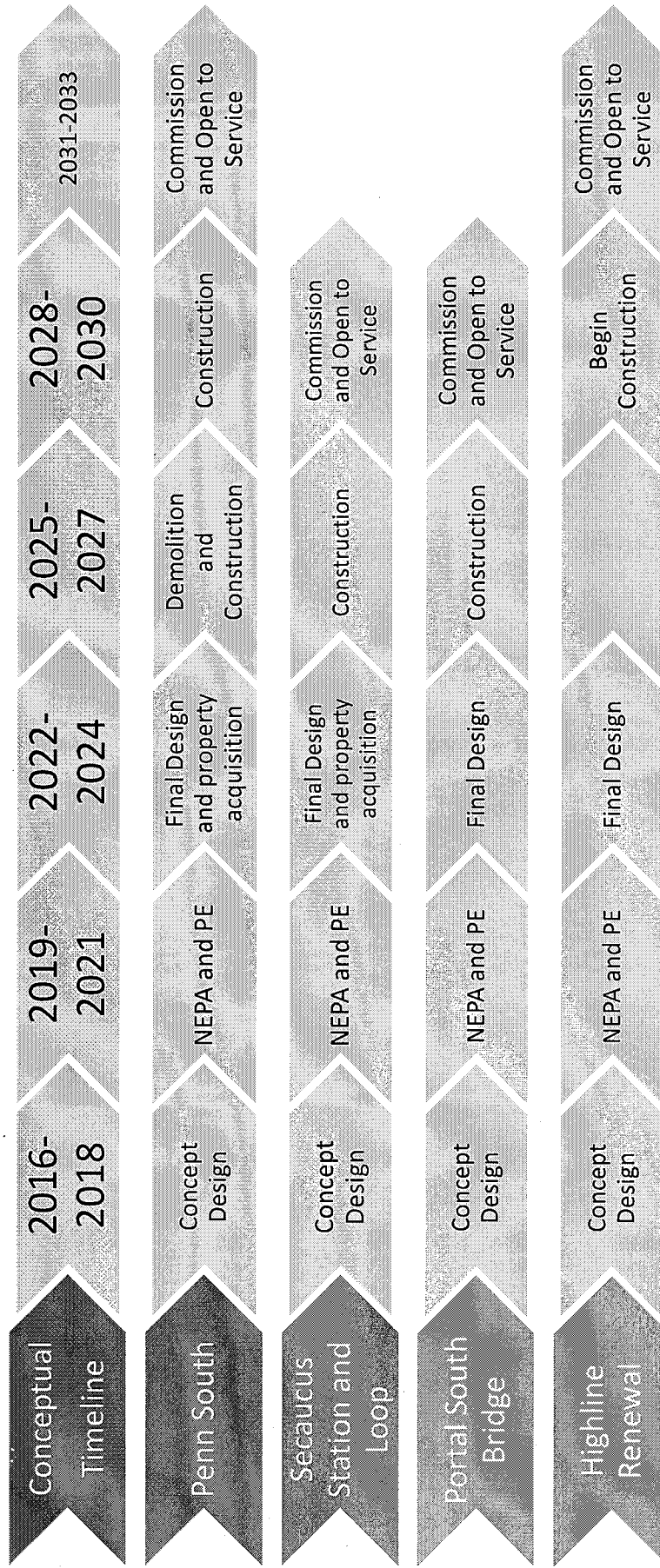
- The Federal Railroad Administration (FRA) is currently leading NEC FUTURE Environmental Impacts Statement (EIS) and Service Development Plan process to study options for expanding capacity on the NEC.
- These studies are a pre-requisite for advancing any projects that significantly expand rail service levels on the NEC, including the new capacity elements of the Gateway Program.
- The Draft EIS is expected to be released this fall and a final EIS is expected in 2016.





Assumes adequate funding available for all activities

25x



Assumes adequate funding available for all activities

26x

Thank you.

www.nec.amtrak.com

TESTIMONY OF
STEPHEN J. GARDNER
AMTRAK
30TH STREET STATION
PHILADELPHIA, PA 19104
BEFORE THE
LEGISLATIVE OVERSIGHT COMMITTEE
HEARING ON
“NEW JERSEY TRANSIT AND AMTRAK BUDGETARY AND OPERATING
ISSUES, THE GATEWAY TUNNEL PROJECT, AND NEW JERSEY’S
LONG-TERM TRANSPORTATION CAPITAL FUNDING NEEDS”
MONDAY, AUGUST 10, 2015
10:00 A.M.
STATE HOUSE ANNEX, TRENTON, NJ

Good morning and thank you, Chairman Gordon, Ranking Member Kean, and the other members of Committee for the opportunity to testify today on the challenges facing the Northeast Corridor and the Hudson River tunnel linking New Jersey and New York. With the Chairman's permission, I will start with a brief written statement and then proceed to a presentation on the Northeast Corridor and the Gateway Program.

I'd like to begin by offering our apologies for the recent series of Northeast Corridor delays in the vicinity of New York Penn Station which severely affected New Jersey Transit and Amtrak service for several days. Amtrak's first priority is to ensure the safe and reliable operation of our trains and infrastructure and our employees pride themselves on being able to keep our complex and often aged assets and systems functioning in a variety of situations. Thus, we treat any significant disruption to our or our operating partners' services with the utmost seriousness. We are very much aware of how many people depend on us in this region, so when disruptions do take place as they did the week of July 20, every effort is made to quickly and safely restore service and to coordinate with our transportation partners, like New Jersey Transit, so that they can best serve their impacted customers. Amtrak regrets these recent delays on the and again I offer our sincere apologies to all who were affected.

Before I describe the events that gave rise to these disruptions and our actions since then, I'd like to provide some context regarding our tunnel under the Hudson River. Every day, approximately 350 NJ TRANSIT and 100 Amtrak trains, carrying a combined 200,000 riders, operate through the two tubes that make up the Hudson River Tunnel. This Tunnel - opened in 1910, now 105 years old and the only existing rail crossing of the Hudson River south of Albany - was built and operated by the Pennsylvania Railroad and until bankruptcy of its successor, Penn Central, led to the Federal Government's creation of Conrail and transfer of much of the

Northeast Corridor to Amtrak in 1976. While the Tunnel has seen some improvements and renewal since Amtrak took over, much of the tunnel elements are in their original state and, notably, parts of the electric traction and power supply equipment in them date from the early 1930's. At the peak period of rush hour, trains enter the Tunnel every two minutes and forty seconds in the peak direction, carrying up to 30,000 passenger an hour and seventeen percent of the total rush hour traffic that enters Manhattan from New Jersey. This level of traffic on just two mainline tracks make this section likely the highest density passenger rail operation in North America.

Yet, elements of the Tunnel and other NEC infrastructure that enable this tremendous level of service are outdated, less-reliable than required, and already operate at maximum capacity. Simply stated, everyday we push the limits of this infrastructure by making such extensive use of such fragile assets. In doing so, when the inevitable problems arise, the impacts on the network can be dramatic. A related byproduct of this heavy use is the series of challenges it places on our ability to maintain the Tunnel. Since the line is so busy, we can only do most maintenance work in limited windows of 3-4 hours in the middle of the night on weekdays and must reserve our major work for when we take one tube of the Tunnel out of service for 55 hours on weekends.

It is against this backdrop that I'd like to now discuss the impacts of Super Storm Sandy. As most know, both tubes of the Hudson River Tunnel and two of our four East River Tunnel tubes connecting Manhattan and Queens were inundated during the Storm resulting in their closure and the first prolonged cessation of rail service between New Jersey and New York since 1910. Millions of gallons of brackish water filled these tubes and flooded other key assets in the area. After herculean efforts by our employees that I believe clearly demonstrates the depth of

our commitment to this railroad, the Hudson River Tunnel was back in limited service approximately 4 days later.

However, that was hardly the end of Sandy's impact on the Tunnel, as a detailed review of the Tunnel structure and key systems after the Storm revealed that chlorides deposited by the flooding had infiltrated various elements of the tunnel and were now causing progressive deterioration. While the fundamental structure of the Tunnel was deemed safe, this ongoing deterioration is likely to lead to various failures of Tunnel elements that could significantly impact reliability, increase unplanned outages, and disrupt regular operations. The only feasible approach to stopping this deterioration is the complete removal and replacement of the track structure and bench walls that line the interior sides of the tunnel and house various power, signal, and other lines, including the high-voltage cables responsible for some of the recent failures that I will discuss shortly. Such extensive demolition and reconstruction of the Tunnel can only occur during a complete shutdown of each tube for more than a year.

All this is to point out the depth of the challenges we are facing with the existing Tunnels. Surely, there are many examples of old infrastructure still in service today across America but I'm not aware of a comparable instance where we so heavily rely on something so fragile working nearly perfectly every day.

With this context, I will now turn to the events of the week of July 20th. As I'll explain, the disruptions of that week stemmed from several different problems cropping up simultaneously, the timing of which may be coincidental and or might be indicative of the challenges we are likely to face with more frequency in the years to come.

On Monday, a vintage circuit breaker tripped in a substation just west of the Tunnel, causing a twenty minute power outage during the evening rush hour. Shortly thereafter, a NJ TRANSIT train suffering mechanical issues in the south tube became disabled for a little under an hour, limiting service to only the north tube and delaying dozens of Amtrak and NJ Transit trains.

Next came an electric traction system fire on Wednesday morning before five a.m., which led to an extensive loss of power affecting the south tube and Penn Station. At 5:28am, all traffic was stopped between Penn Station and Secaucus, until limited service was restored to the north tube at 6:09 a.m. It wasn't until 7:45 a.m. that both tubes were returned to service with no restrictions. This was caused by a burnt 1930's-era insulated electrical terminal.

Finally, on Friday at four a.m., an electric feeder line to one of the tubes that is housed in the Tunnel bench walls failed. There are four such feeders, and one of the other three was already out of service and awaiting repairs, so the resulting electric supply limits forced operations to observe a three-train limit in the tunnel. Amtrak surged maintenance crews and contractors to repair this eighty year old segment of feeder and restored an offline connection to the Sunnyside static frequency converter.

Our crews and contractors worked intensively to perform the necessary, immediate repair and we remain focused on preventing or responding to any such failures as quickly as we can. But, I need to be clear that given the age, ongoing damage from Super Storm Sandy and intense utilization of the Tunnels, issues like the recent disruptions are not unlikely to be entirely preventable and, in fact, may increase over time until the Tunnel can be renewed and modernized.

The challenges we face ultimately stem from long-term underinvestment in the Northeast Corridor by the Federal government, the states, and the commuter authorities that rely on these assets. Today's predicament – with perhaps the exception of Super Storm Sandy - has been foreseeable for decades and, in fact, Amtrak has been sounding the alarm for nearly that long about the needs to modernize the Northeast Corridor. In the meantime, we've been stretching our people and our scarce resources to keep the NEC alive, focused on holding together this complex system and national asset amidst increasing growth and greater demands.

Along the way, some progress has been made and in many respects the Corridor is significantly better than it was when we took it over thanks to occasional major investments made by both the Federal government and various states and commuter authorities. But, these investments have been far too limited and far too sporadic compared to the true need, reflecting the lack of a dedicated Federal funding program for intercity passenger rail and the tendency for commuter authorities up and down the NEC to focus capital dollars on expanding their service over the NEC rather than investing their fair share in the NEC's core assets that make the service possible in the first place.

Thankfully, I believe we are making progress towards recognizing and addressing this core issue. In 2008, Congress required the creation of a new body, the NEC Commission, to serve as a cooperative forum for planning and development of the NEC, with membership from the U.S. Department of Transportation, the states and Amtrak. Working together, the Commission, on which I serve as a Vice Chair, has created the first ever comprehensive NEC 5-year capital plan to lay out the full capital needs of the NEC and has fulfilled its mandate to establish a new cost-sharing model between Amtrak and the commuter authorities that will require all users of NEC assets to pay their fair share of maintenance and operating costs based

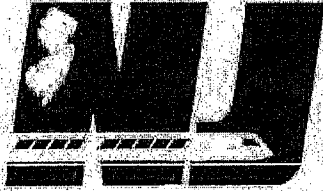
on usage. Finally, the Commission put forth a comprehensive proposal to Congress for the creation of a new Federal capital matching program to invest in the NEC in partnership with state, commuter and Amtrak investments much along the lines of what exists today for highway, transit and aviation investments.

It is from this new cooperative paradigm that solutions to the Tunnel crisis can be found. What is needed to both rehabilitate our existing infrastructure and to create the future capacity for growth is a long-term, coordinated partnership between Amtrak, NJ TRANSIT, New York's Metropolitan Transportation Authority, the States of New Jersey and New York, and the Federal government to advance the Gateway Program. The Gateway Program is a comprehensive set of infrastructure improvements between roughly Newark, New Jersey and New York's Penn Station that will preserve existing service levels and ultimately permit significant growth in trans-Hudson rail service. By modernizing existing assets, strengthening system resiliency, and increasing track, tunnel, bridge, and station capacity, the Program can protect today's 450 daily trains under the Hudson, while creating the capacity to eventually allow a doubling of passenger trains into Manhattan. Most urgently, the Gateway Program's Hudson Tunnel Project would create a new Hudson River tunnel which would permit the closure of the existing, century-old tunnel for the required improvement work while supporting current volumes of daily traffic.

In my upcoming presentation, I will go over the main aspects of the Gateway Program and hope to convince you that it is fundamental to the long-range economic future of New Jersey, New York and the entire region. We've taken great care to develop the Program to address what we know about the long-term needs of NJ TRANSIT and the MTA. But we have essentially reached the limit of where we can take the Program on our own and now require the partnership of others to advance it. With crucial actions now upon us, such as starting the

environmental and engineering work for the new Tunnel or construction of a new Portal Bridge, we urgently need New Jersey, New York and the federal government to truly join in the planning, development and funding of this Program.

Again, I appreciate the opportunity to discuss the Northeast Corridor, the Gateway Program and future of trans-Hudson capacity with you today. This issue is crucially important to so many New Jersey residents and Amtrak takes very seriously our responsibility to provide a safe, dependable link between New Jersey and New York. We look forward to working together with all the relevant stakeholders to address the challenges posed by our aging infrastructure and collective need to serve a growing ridership. My thanks again for your time today and I will now proceed to my presentation.



New Jersey Association of Railroad Passengers

P.O. Box 271, Raritan, New Jersey 08869-0271

<http://www.nj-arp.org/>

A Plea to Americans who ask "Why Should I Care about Hudson River Rail Tunnels Between NJ and NY?"

July 28, 2015

We are the New Jersey Association of Railroad Passengers (**NJ-ARP**), an independent not-for-profit rail advocacy organization established in 1980. As New Jersey's leading rail passenger advocacy organization, we support a balanced public transportation system for our state and its neighbors along the Northeast Corridor. We are an all volunteer organization and have been in the forefront in advocating efficient intermodal transportation solutions for the entire area.

"Fine!", you say. "What does that have to do with us folks living across America?" Here's what! Amtrak's Northeast Corridor (NEC) rail line passes through New Jersey. It is connected to New York City by two 104 year old rail tunnels. Because of their frail state one or both of the tunnels could be closed without warning and if that happens there will be chaos on the Amtrak system that will result in a significant loss in the number of both intercity and long-distance passengers.

The construction of an additional trans-Hudson crossing will allow the existing tunnels to be taken out of service, and in the long run, allow for a large increase in Amtrak service when both sets are up and running. The existing tunnels currently are capable of carrying about 24 trains per hour in each direction. Unfortunately, both tunnels were swamped by Hurricane Sandy and extensively damaged by salt water. Shutting down just one tunnel would reduce capacity to 6 trains per hour (as trains moving both into and out of New York's Pennsylvania Station will have to operate on only a single track). That alone would ensure an economic Armageddon along the Northeast Corridor. If both tunnels had to shut, the economic consequences would snowball across this country. We should also mention that those tunnels lead to a two-track, 104 year old wooden structure known as Portal Bridge, spanning the Hackensack River in the Meadowlands. It has locking machinery dating back to pre WWII that is prone to sticking in the open position. That bridge is one lightning or barge strike away from destruction as well.

Here are the states that have DIRECT AMTRAK service using those tunnels:

- Massachusetts (NEC, Springfield)
- Vermont (Vermont)
- Rhode Island (NEC)
- Connecticut (NEC, Springfield, Vermont)
- New York (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Keystone, Pennsylvanian, Virginia Service, Vermont)
- New Jersey (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Keystone, Pennsylvanian, Virginia Service, Vermont)
- Pennsylvania (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Keystone, Pennsylvanian, Virginia Service, Vermont)
- Delaware (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Virginia Service, Vermont)
- Maryland (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Virginia Service, Vermont)
- DC (NEC, Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Virginia Service, Vermont)
- Virginia (Silver Service, Palmetto, Cardinal, Crescent, Carolinian, Virginia Service)
- West Virginia (Cardinal)
- North Carolina (Silver Service, Palmetto, Carolinian, Crescent)
- South Carolina (Silver Service, Palmetto, Crescent)
- Georgia (Silver Service, Palmetto, Crescent)
- Florida (Silver Service)
- Alabama (Crescent)
- Mississippi (Crescent)
- Louisiana (Crescent)
- Ohio (Cardinal)
- Indiana (Cardinal)
- Illinois (Cardinal)

The states that have AMTRAK service with just ONE change of trains using those tunnels are:
EVERY state served by AMTRAK! (Only Alaska, Hawaii, South Dakota and Wyoming are NOT served by Amtrak)

The Northeast Corridor contributes \$50 billion annually to the U.S. economy. The loss of the NEC for only a single day would cost nearly \$100 million in transportation-related impacts and productivity losses. The NEC carries more passengers within the NEC region than all airlines combined! It also connects to the national freight rail network allowing Midwestern businesses and manufacturers to reach east coast ports and the global economy. Federal Transportation Secretary, Anthony Foxx recently said "It's perhaps one of the – if not the – most important project in the country right now that's not happening."

How can you help? We urge you to contact your state's senators and congressional representatives to ask them to support and pass funding legislation for the implementation of construction of both the Hudson River Tunnels as shown in Amtrak's Gateway Project, and also immediate construction of Portal Bridge (which as been "shovel-ready" for over two years – awaiting funds.) There is no time left to waste, and there is no quick fix to replace two 104 year old underwater tunnels. The American economy is finally starting to come out of our terrible recession We, the American people cannot afford this type of an economic blow.

THANK YOU!

36x

THE GATEWAY PROGRAM

Critical Capacity Expansion to the Northeast Corridor

PROJECT OVERVIEW

The Gateway Program is a comprehensive program of strategic rail infrastructure improvements designed to improve current services and create new capacity that will allow the doubling of passenger trains into Manhattan. The program will increase track, tunnel, bridge, and station capacity, eventually creating four mainline tracks between Newark, New Jersey, and Penn Station, New York, including a new Hudson River tunnel. The program will also strengthen system resiliency with the modernization of existing infrastructure, and updates to the electrical system that supplies power to the roughly 450 daily trains using this segment of Amtrak's Northeast Corridor.

WHY IS THE GATEWAY PROGRAM NEEDED?

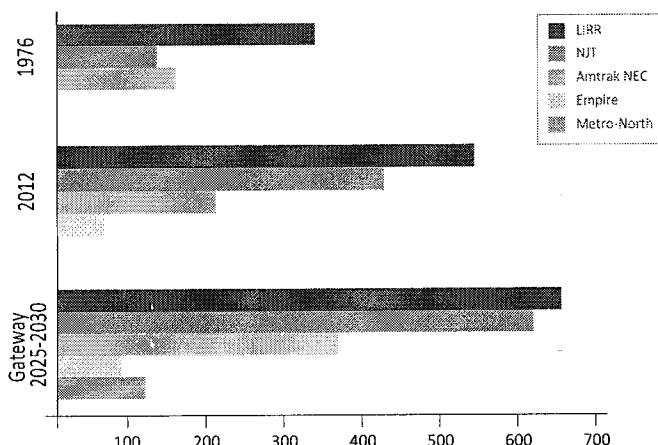
The Northeast Corridor (NEC), connecting Washington, DC and Boston, MA, is at or near capacity at many locations, but nowhere is the demand on the existing rail system greater than in Penn Station, New York and its associated infrastructure. The existing, 100-year-old rail tunnel into midtown Manhattan – the only intercity passenger rail crossing into New York City from New Jersey – operates today at 95 percent capacity during rush hour, creating a severe bottleneck that limits NEC train volume across the entire rail corridor. Trains and stations are currently severely overcrowded at peak periods, and this will worsen as demand for service is projected to increase significantly by 2030. Additionally, much of the existing rail infrastructure in this portion of the NEC was damaged following Super Storm Sandy and now faces reliability challenges.

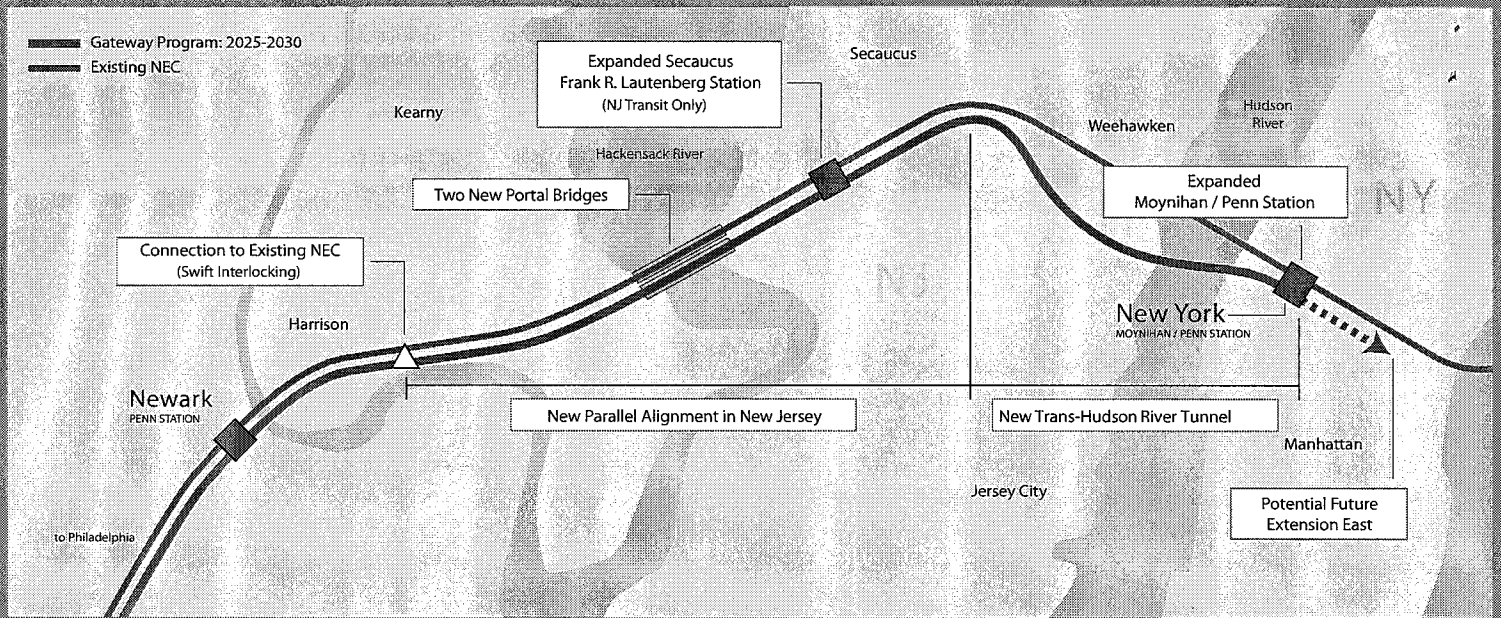
The vulnerability of access to Penn Station, New York was brought into national focus after Super Storm Sandy inundated the Hudson and East River tunnels, severing all rail service to New York. With the Gateway Program, the construction of a new Hudson River tunnel will permit the closing of the existing century-old tunnel for extended periods so that essential repair and replacement work can be done. The current volume of traffic through the tunnels is so dense that long-term closures are impossible to plan unless the new Gateway tunnel is in place. The disruption of the daily traffic into and out of Manhattan would be too great. Today, work is done during elaborately scheduled 55-hour weekend periods to avoid severe service reductions – but longer-term closures cannot be avoided due to the degree of damage that has been discovered following Super Storm Sandy.

In sum, the Gateway Program will create the new infrastructure essential to greater resiliency against future potential storms and disasters, while enabling repairs to damage and achieving capacity and reliability-related investments to meet the needs of the NEC's operators for the next 30-50 years.

PROJECT SUMMARY	
Timeline	Target Completion: 2030
Funding	Amtrak has received \$15 million annually from FY 2012 - FY 2014 through a special fund set aside in Amtrak's federal capital appropriation to initiate Gateway Program planning and pre-construction work. Amtrak also received \$185 million in the Disaster Relief Appropriations Act of 2013 for the Hudson Yards Right-of-Way Preservation Project in FY 2013.
Partners	Amtrak is seeking to collaborate with all potential users of the future capacity provided by Gateway, and will engage with local, regional, and national partners as the program develops.
Status	Construction is underway to preserve the future potential pathway of the Gateway tunnel through Hudson Yards, west of Penn Station. A System Level Design study is underway, to be followed by Program Development.

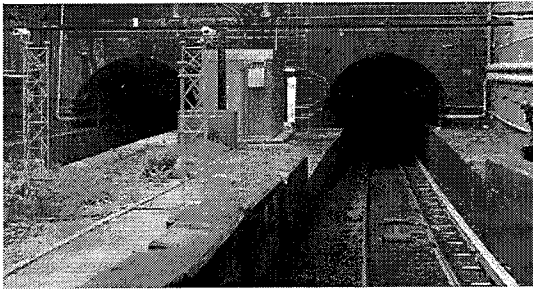
Historic and Projected Growth in Daily Penn Station, New York Train Movements 1976, 2012, and with Gateway (Illustrative)



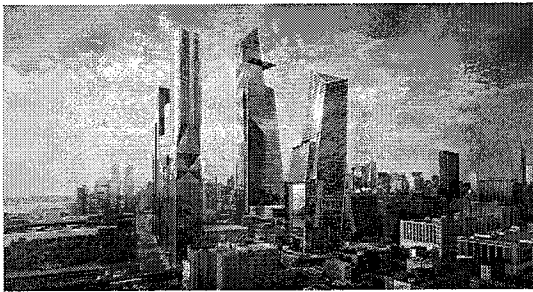


PROGRAM KEY COMPONENTS

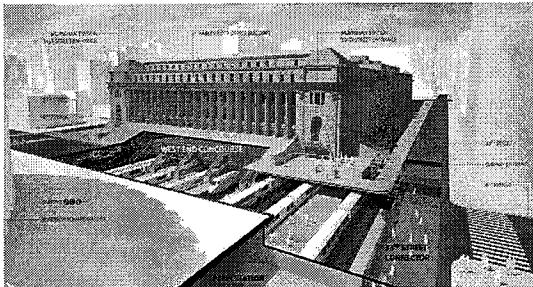
1. **New Hudson River Tunnel:** A new, two-tube trans-Hudson River rail tunnel from the Bergen Palisades in New Jersey to Manhattan will directly serve an expanded Penn Station. This new tunnel will provide operational benefits for the existing Penn Station and increased capacity for commuter and intercity rail operations including NJ Transit and Amtrak. Construction has already begun on an 800-foot concrete casing through the Hudson Yards site, west of Penn Station, to preserve the only viable right-of-way for the future tunnel into Penn Station.
2. **Expanded Moynihan/Penn Station, New York:** An expansion of existing New York Penn Station tracks and platforms and the creation of new “Penn South” concourses will provide direct connections to the future Moynihan Station. These improvements will support the long-term growth of commuter and intercity passenger rail service at both Penn Station and the historic Farley Post Office Building, which is being transformed into the new “Moynihan Station” by the Moynihan Station Development Corporation. The expanded Moynihan/Penn Station complex creates a consolidated Amtrak operation on Manhattan’s West Side and the high level of service and connectivity required for the growth of Amtrak’s Acela and future NextGen high-speed rail services.
3. **New Portal Bridges:** Two new high-level, fixed bridges, known as North and South Portal Bridges, will replace the 100-year-old, moveable Portal Bridge over the Hackensack River between Kearny and Secaucus, New Jersey, doubling corridor capacity. Final design and federal environmental review for the North Bridge, the first to be constructed, has been completed. The new bridge is estimated to cost \$900 million over a 5-year construction period and will proceed with the cooperation of NJ Transit and Amtrak, as soon as funding can be secured.
4. **Newark-to-Secaucus Improvements:** The existing NEC will be greatly improved between Newark and Secaucus, New Jersey. The mainline will be expanded from two to four tracks between Newark and the Bergen Palisades tunnel portals, better connections will be built to link the NEC with the NJ Transit Morris and Essex Lines, and various bridges will be upgraded or replaced.
5. **Reconstruction of Existing Hudson River Tunnel:** It has long been Amtrak’s goal that the existing Hudson River tunnel, completed in 1910 by the Pennsylvania Railroad, be rebuilt and modernized. However, the damage to the tunnel following Super Storm Sandy has changed the situation entirely. Instead of work being a long term goal, it is now an urgent necessity. The Gateway Program must be expedited for that work to proceed without causing acute disruptions to the NEC.



Hudson River Tunnel: The existing two-tube Hudson River tunnel is over 100 years old, was damaged by Super Storm Sandy, and now requires extensive repairs and replacement work.



Hudson Yards: The rapid advancement of the Hudson Yards mixed-use development project by Related Companies and Oxford Properties Group requires early action to protect the Gateway tunnel alignment into Penn Station.



Moynihan Station: The first phase of construction is underway to turn the Farley Post Office into an expanded Moynihan/Penn Station complex, which will benefit from the connections provided by the Gateway Program.



Portal Bridge: Elements of the Gateway Program, such as the replacement of Portal Bridge, have completed final design and are ready to move forward as soon as funding is secured.

PROGRAM BENEFITS

By eliminating the bottleneck in New York and creating additional tunnel, track, and station capacity in the most congested segment on the NEC, the Gateway Program will provide greater levels of service, increased redundancy, added reliability for shared operations, and additional capacity for the future increases in commuter and intercity rail service.

- **Increases Capacity:** The Gateway Program will benefit both intercity and commuter rail passengers, as well as communities and states along the entire NEC. The program will more than double Amtrak intercity rail services and provide for up to a 75 percent increase in NJ Transit commuter trains to New York City.
- **Improves Operational Reliability and Resiliency:** The Gateway Program will provide essential Hudson River system redundancy and operational flexibility critical to both managing and maintaining the system reliably day-in and day-out and in responding to emergencies. The new Hudson River tunnel will be built to provide enhanced resiliency against natural and man-made threats.
- **Expands Commuter Rail Service:** The Gateway Program will enable the expansion of one-seat ride opportunities to New York City for NJ Transit commuters. It will also support the introduction of Metro-North Railroad New Haven and Hudson Line commuter services to Penn Station, New York and provide additional capacity to expand Amtrak high-speed, regional, and state-supported intercity services throughout the entire Northeast Region.
- **Supports Next Generation High-Speed Rail:** The Gateway Program improvements will enable expansion of existing Amtrak high-speed Acela Express and other intercity services, including Amtrak's proposed 220 mph, next generation high-speed rail trains. Without the infrastructure and capacity improvements contained in the Gateway Program, it will not be possible to achieve the proposed high-speed goals.
- **Boosts Economic Growth:** The Gateway Program will grow the economy by making business travel in the Northeast Region more convenient and reliable. The Gateway Program will also increase access to labor and job markets on both sides of the Hudson River for employers and employees, creating more comfortable and reliable commuting options. The expansion of high-speed Acela Express service and future introduction of 220 mph high-speed service will shrink travel times between major cities in the Northeast Region, forging new economic linkages critical in today's globally competitive market.

PROGRESS TO DATE AND NEXT STEPS

Hudson Yards Right-of-Way Preservation

Early actions to preserve the future pathway for the Gateway Program have already begun. With \$185 million in federal funding, Amtrak began construction in 2013 on a concrete casing to preserve an underground right-of-way that could serve as the future alignment for the Gateway tunnel into Penn Station, New York. Amtrak has determined that this alignment through the Hudson Yards provides the only viable route for new Hudson River tunnel to access Penn Station and serve existing tracks and platforms.

Gateway Program Development

Two design studies, System Level Design and Program Development, will define the functionality and utility of the infrastructure built under the Gateway Program, and overall program delivery and implementation, respectively. As part of these studies, Amtrak plans to collaborate with future users (rail service providers) of the new capacity to assess and determine future service plans and program functionality.

Concept Design of Program Elements

Amtrak is advancing concept design for discrete elements of the Gateway Program, each offering independent utility. These include projects such as Penn Station South Expansion, Replacement of "Sawtooth" Bridges in New Jersey, Harrison Station Fourth Track, and Elizabeth Station Fifth Track. The Gateway Program's modular design allows these individual elements to advance as funding becomes available. For example, final design and environmental review of Portal Bridge North, which will replace the existing Portal Bridge over the Hackensack River, is already complete, making the project "shovel ready."

Preliminary Engineering and NEPA work on new Hudson River Tunnel

It is critical to begin early engineering work and environmental reviews of the new tunnel serving Penn Station under the Hudson River. With the existing 100-year old tunnels at 95% capacity and damaged following Super Storm Sandy, it is essential to set a timetable for its repair and replacement. This can only be achieved once current rail traffic can be shifted to the new tunnel.

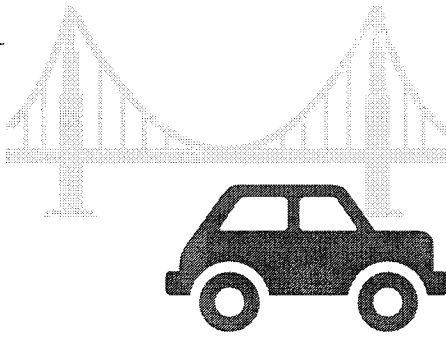
Hudson Yards Right-of-Way Preservation Phase II

The next phase of this project, between 11th and 12th Avenues, will need to be constructed in the coming years to protect the Gateway tunnel right-of-way, as commercial and residential development at Hudson Yards continues west. Amtrak plans to seek additional funding to supplement this existing construction project over the next two years.

FOR MORE INFORMATION CONTACT

NEC Infrastructure & Investment Development
gateway@amtrak.com





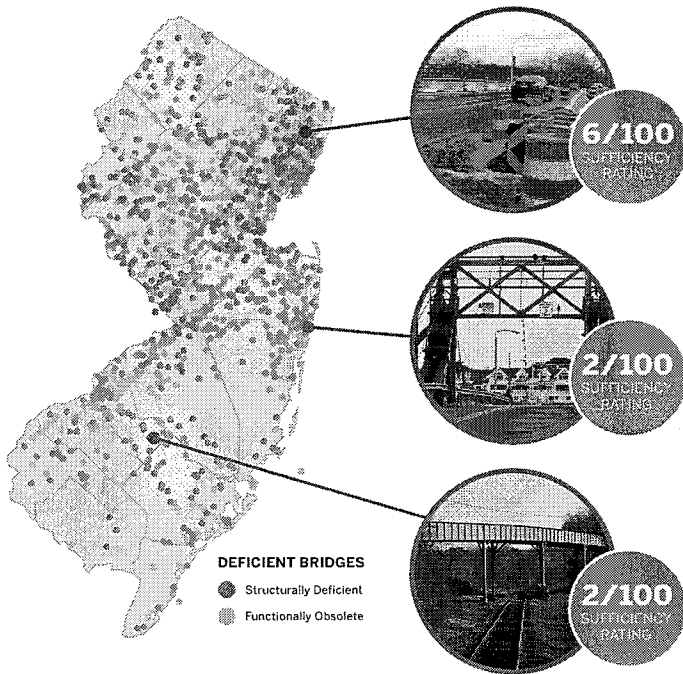
REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

Impacts to Public Safety and Welfare

Without upgrades and repairs to our transportation infrastructure, the safety of our families and loved ones are put at risk. Thousands of miles of state roadways and hundreds of bridges are in desperate need of repair or replacement, ranking New Jersey among the worst in the nation.

In fact, 46 percent of NJ roads eligible for federal aid are rated "not acceptable" and need major repairs or replacement. This is the highest percentage in all 50 states. Much needed improvements to our crumbling transportation infrastructure will prevent a disaster and saves lives.

STRUCTURALLY DEFICIENT BRIDGES



Cedar Lane-Anderson St. Bridge,

Hackensack River, Hackensack/Teaneck

Built: 1971 **Daily Traffic:** 30,000

Notes: Before the 15-ton weight restriction banning buses, 400 NJ Transit buses crossed the bridge every weekday.

Glimmer Glass Draw Bridge

Glimmer Glass tidal inlet, Manasquan/Brielle

Built: 1920 **Daily Traffic:** 6,712

Notes: Bridge closed on August 7th to vehicular traffic after large truck fractured the bridge's timber deck at three locations

Old White Horse Pike, County Road 716 Bridge

Bridge over NJ Transit Rail Line, Winslow Township

Built: 1902 **Daily Traffic:** 900

Notes: Bridge closed on September 25, 2013 after engineers determined the bridge had structural concerns.

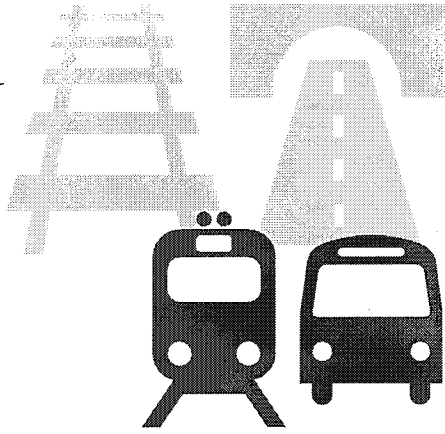
2,334
PROBLEMATIC BRIDGES

624
STRUCTURALLY DEFICIENT BRIDGES

1,710
FUNCTIONALLY OBSOLETE BRIDGES

THE PROBLEM

New Jersey's Transportation Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next 10 years to **maintain and improve** the state's roads, bridges, and mass transit systems, as well as to **begin critical projects**. The lack of a long-term solution to this dire problem **threatens the safety and quality of life** of residents and commuters, as well as the state's **business climate and economy**.



REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

Impacts to Mass Transit

New Jersey's Transportation Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next 10 years to **maintain and improve** the state's roads, bridges, and mass transit systems, as well as to **begin critical projects**. The lack of a long-term solution to this dire problem threatens the **safety and quality of life of residents and commuters**, as well as the state's **business climate and economy**.

New Jersey mass transit users are facing **increasing** amounts of **delays** and **service cancellations**. Investment in NJ's mass transportation systems is critical to the vibrancy of NJ's **cities, social mobility, and economic competitiveness**. NJ Transit's announcement to upgrade the fleet with 1,388 buses and 113 multi-level rail cars could be **in jeopardy** because of an **unfunded Transportation Trust Fund**. Our mass transit riders **need a modern, reliable, and safe** transportation system.

THE FACTS

- ✓ NJ Transit is the third largest transit system in the country with **165 rail stations, 62 light rail stations and more than 19,000 bus stops** linking major points in New Jersey, New York and Philadelphia.
- ✓ NJ Transit provides more than **895,000 weekday trips** on 262 bus routes, three light rail lines, and 12 commuter rail lines.
- ✓ To get to work, **10.8% of all New Jersey workers** or 436,074 people take public transportation.
- ✓ New Jersey residents make up 12% of Manhattan's workforce. Everyday approximately **250,000 commuters use buses, PATH and NJ Transit**.
- ✓ The Newark Light Rail and The Hudson-Bergen Light Rail are critical to **social mobility and economic opportunity** in New Jersey's two largest cities, Newark and Jersey City.

STATUS OF MASS TRANSIT



TWO 100+ YEAR OLD
HUDSON RIVER RAIL TUNNELS



176
OUTDATED SINGLE LEVEL RAIL CARS



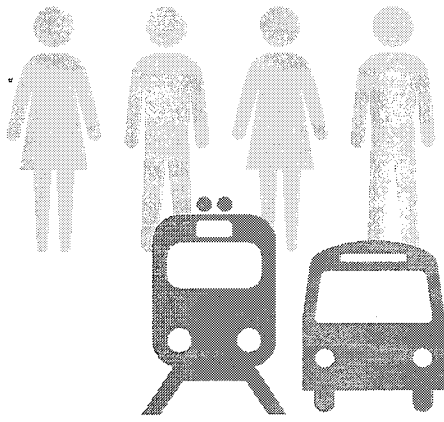
1,388
BUSES IN NEED OF REPLACEMENT

THE GOAL:

Achieve sufficient revenue that allows for \$2B in annual statewide TTF capital spending, maximize the federal match, and continue to pay annual debt service obligations.

BENEFITS:

- Replacement of single-level rail cars with multi-level cars to add capacity and reliability.
- New cruiser buses will increase capacity and comfort.
- Future expansion projects.
- Reduces Road Congestion
- Enhances Social and Economic Mobility
- Drives Economic Growth
- Reduces Carbon Footprint



REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

Impacts to Residents and Commuters

New Jersey's Transportation Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next 10 years to **maintain and improve** the state's roads, bridges, and

mass transit systems, as well as to **begin critical projects**. The lack of a long-term solution to this dire problem **threatens** the **safety and quality of life** of **residents and commuters**, as well as the state's **business climate and economy**.

THE FACTS

- ✓ New Jersey workers have the second longest average commute in the United States at 33 minutes, according to the U.S. Census Bureau.
- ✓ This is 37 percent above the national average of 24 minutes. The nine additional minutes have significant consequences on worker productivity and quality of life.
- ✓ Collectively, New Jersey's 3.9 million commuters are stuck in the car for the equivalent of an additional 35 million minutes every day.
- ✓ Getting there, 72.3 percent of commuters drive alone, 8.4 percent car-pool and 10.8 percent take public transportation. Other employees walked, took a taxi or bicycled.

ROAD CONDITIONS AND SAFETY TODAY



52.7%
OF ROADWAY FATALITIES

Poor roadway conditions are a contributing factor in more than half of roadway fatalities, according to research by the Pacific Institute for Research and Evaluation (PIRE)



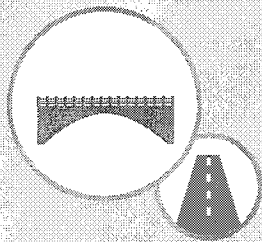
627
PEOPLE KILLED

627 people lost their lives on New Jersey roads in 2011, according to the national highway traffic safety administration.



\$4.6
BILLION ANNUALLY

The PIRE study estimates that road condition related crashes cost New Jersey \$4.6 Billion annually.



THE GOAL:

Achieve sufficient revenue that allows for \$2B in annual statewide TTF capital spending, maximize the federal match, and continue to pay annual debt service obligations.

BENEFITS:

- A fully funded transportation system will help the **571,585 commuters in New Jersey save almost 6.3 million hours** a year.
- Improvements in road conditions and traffic congestion mean that New Jersey drivers, on average, would have an **additional 11 hours** each year for their own interests, rather than sitting in traffic



REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

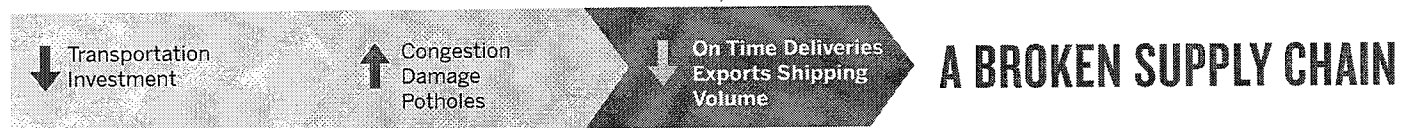
Impacts To Transportation Logistics & Distribution Industry

New Jersey's Transportation Trust Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next ten years. Without investment in a robust highway and bridge network necessary to sustain **New Jersey's transportation logistics and distribution**

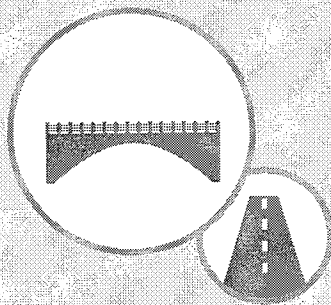
industry the state will fail to gain a competitive edge when the Panama Canal expansion brings in larger container ships to Port Newark-Elizabeth. The lack of a long-term solution to support future logistics growth **threatens** the state's **business** climate and **economy**.

THE FACTS

- ✓ Inter-state truck shipments along NJ's highway and bridge network are vital to the economic growth of the state.
- ✓ In 2011, NJ businesses shipped a total of \$959.8 billion in freight. Most of these goods—70 percent— were shipped via truck over the state's highway and bridge network.
- ✓ The value of freight shipments from NJ businesses for both domestic and export markets will more than double from \$755 billion in 2011 to over \$1.5 trillion in 2040.
- ✓ An estimated 12-15% increase of goods will come through the ports and onto our highways once the Port Authority completes the Bayonne Bridge raising.
- ✓ NJ imports, traveling by all modes, will increase from \$204 billion to \$510.7 billion over the same time period.
- ✓ Crashes due to poor and dangerous road conditions cost NJ families, businesses, and local governments at least \$4.6 billion annually.



A BROKEN SUPPLY CHAIN



THE GOAL:

Achieve sufficient revenue that allows for \$2B in annual statewide TTF capital spending, maximize the federal match, and continue to pay annual debt service obligations.

A modern transportation system allows the TLD sector to increase operating efficiencies and better serve firms that rely on shipping goods. This enables business in all sectors to continue to grow and expand.

INVESTMENT BENEFITS

A \$2 Billion TTF

\$2.64
BILLION

Annual business savings on truck operating and maintenance costs

\$1.60
BILLION

Annual truck savings from reduced travel times



REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

Impacts to Business & Economy

New Jersey's Transportation Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next 10 years to **maintain and improve** the state's roads, bridges, and mass transit systems, as well as to **begin critical projects**. The lack of a long-term solution to this dire problem **threatens the safety and quality of life** of residents and commuters, as well as the state's **business climate and economy**.

As New Jersey's neighboring states continue to gain jobs well past pre-recession economic levels, New Jersey has **lagged the nation and the region in jobs recovered after the recession**. The efficient and safe movement of goods and people is **critical to the economic competitiveness of New Jersey and the quality of life for its citizens**. Collectively, NJ's **3.9 million commuters** are stuck in the car for the equivalent of an additional **35 million minutes** every day, directly impacting business productivity. Every employee, customer and business pays a price when the system is **congested, unsafe or in poor condition**.

JOBS AND GROWTH AT RISK

New Jersey's highway, bridge and transit network is crucial to the success of the state economy—**facilitating the shipment of nearly \$500 billion in goods** produced by New Jersey businesses, over **\$59.6 billion** in output related to the state's retail trade, tourism and service industries and **\$70 billion** in international trade. **Nearly, 2.0 million New Jersey jobs fully depend on a modern updated infrastructure system.**



**Advanced
Manufacturing**



Aerospace & Defense



**Transportation,
Logistics & Distribution**



Healthcare



Finance



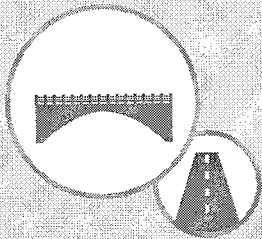
Tourism



Technology



Life Sciences



THE GOAL:

Achieve sufficient revenue that allows for \$2B in annual statewide TTF capital spending, maximize the federal match, and continue to pay annual debt service obligations.

BENEFITS:

- Overall estimates are that every \$1 increase in the highway and bridge capital stack generates a **total of 30 cents in business savings**.
- Fully investing in the New Jersey highway and bridge system would generate an **additional \$3.7 billion in sales and output across all industries**.
- Money invested in highways, bridges and transit generates nearly **\$9.5 billion in total annual economic activity** for the state and **contributes about \$5 billion to New Jersey's Gross State Product (GSP)**.



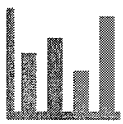
REFORMING

NEW JERSEY'S TRANSPORTATION SYSTEM:

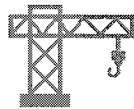
Impacts to Business & Economy

RIPPLE EFFECTS THROUGHOUT ECONOMY

As a result of an improved highway network, New Jersey businesses will enjoy reduced operating costs and increased market access. These spillovers, or network effects, will benefit all businesses, but will be particularly important for those industries that rely more heavily on transportation, such as manufacturing, warehousing and storage, tourism and retail and wholesale trade.



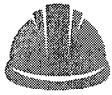
Staying Competitive as logistics and global transportation networks become increasingly important.



Maximizing Port Investment to ensure the region is ready for the 12-15% increase in shipping volume when the expanded Panama Canal and raised Bayonne Bridge open.



Improved Access to Markets for New Jersey exporters, at the ports of Newark and Elizabeth will help increase competitiveness and lower the cost of shipping goods.



Improved Access To Labor provides easier commutes for employees and enables recruiting from a larger pool of potential workers.



Reduced Production Costs with transportation links to larger markets and reduced transaction costs.



Increase Market Share & More Customers with transportation links to larger markets and reduced transaction costs.



Increased Operational Efficiency as businesses can make better decisions about their products, inputs, deliveries, and workforce without worry about poor roadways or congestion.



Increased Demand for Inputs as the economy expands businesses will purchase more goods from their suppliers and will increase their demand for private capital.



Agglomeration Economies are strengthened as it becomes easier for firms to locate closer to one another.



REFORMING NEW JERSEY'S TRANSPORTATION SYSTEM:

Impacts to the Labor & Construction Industry

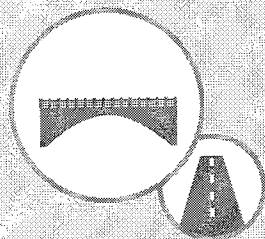
New Jersey's Transportation Fund will reach **insolvency** on June 30 2016, leaving the state **no ability to pay for any transportation projects**. According to experts, the TTF needs **\$20 billion** over the next 10 years to **maintain and improve** the state's roads, bridges, and mass

transit systems, as well as to **begin critical projects**. The lack of a long-term solution to this dire problem threatens the **safety** and **quality of life** of residents and commuters, as well as the state's **business** climate and **economy**.

JOB AND GROWTH AT RISK

Transportation construction spending in New Jersey supports:

- ✓ 104,913 full-time jobs.
- ✓ 52,264 direct jobs in transportation construction and related activities
- ✓ 52,649 jobs induced, or sustained, by transportation construction and services
- ✓ \$9.5 billion in total annual economic activity
- ✓ Contributes about \$5 billion or 1% to New Jersey's Gross State Product (GSP)
- ✓ Nearly 2.0 million NJ jobs are fully dependent on the work done by the state's transportation industry



THE GOAL:

Achieve sufficient revenue that allows for \$2B in annual statewide TTF capital spending, maximize the federal match, and continue to pay annual debt service obligations.

MAXIMIZING GROWTH OPPORTUNITIES

- An estimated **12-15% increase of goods will come through the ports** once the Port Authority completes the Bayonne Bridge raising. 70% of all goods will be shipped by the roadway network and need to be distributed in closely located industrial space.
- According to a leader in real estate research, demand for Class A Industrial space will continue to increase in the NJ Turnpike corridor and Port areas with over **23.6 million square feet** either approved or under construction that can be delivered over the next two years.

↑ Transportation Investment

↓ Congestion
Potholes
Damage

↑ On Time Delivers
Exports Shipping
Volume

CREATES DEMAND FOR TRANSPORTATION & DISTRIBUTION CONSTRUCTION

ADDITIONAL APPENDIX MATERIALS
SUBMITTED TO THE
SENATE LEGISLATIVE OVERSIGHT COMMITTEE
for the
August 10, 2015 Meeting

Submitted by Thomas A. Bracken, President and Chief Executive Officer,
New Jersey State Chamber of Commerce; and Chairman, Forward New Jersey:

Larry Higgs, “Why NJ Transit commuters suffered through a week of lousy commutes,”
NJ Advance Media, July 24, 2015, ©2015 NJ.com.

Meir Rinde, “Gateway Tunnel -- Like NJ Commuters -- is Going Nowhere Fast,” *NJ
Spotlight*, July 31, 2015.

Mike Davis, “See how NJ Transit slammed by cash woes,” *Asbury Park Press*, July 31,
2015.