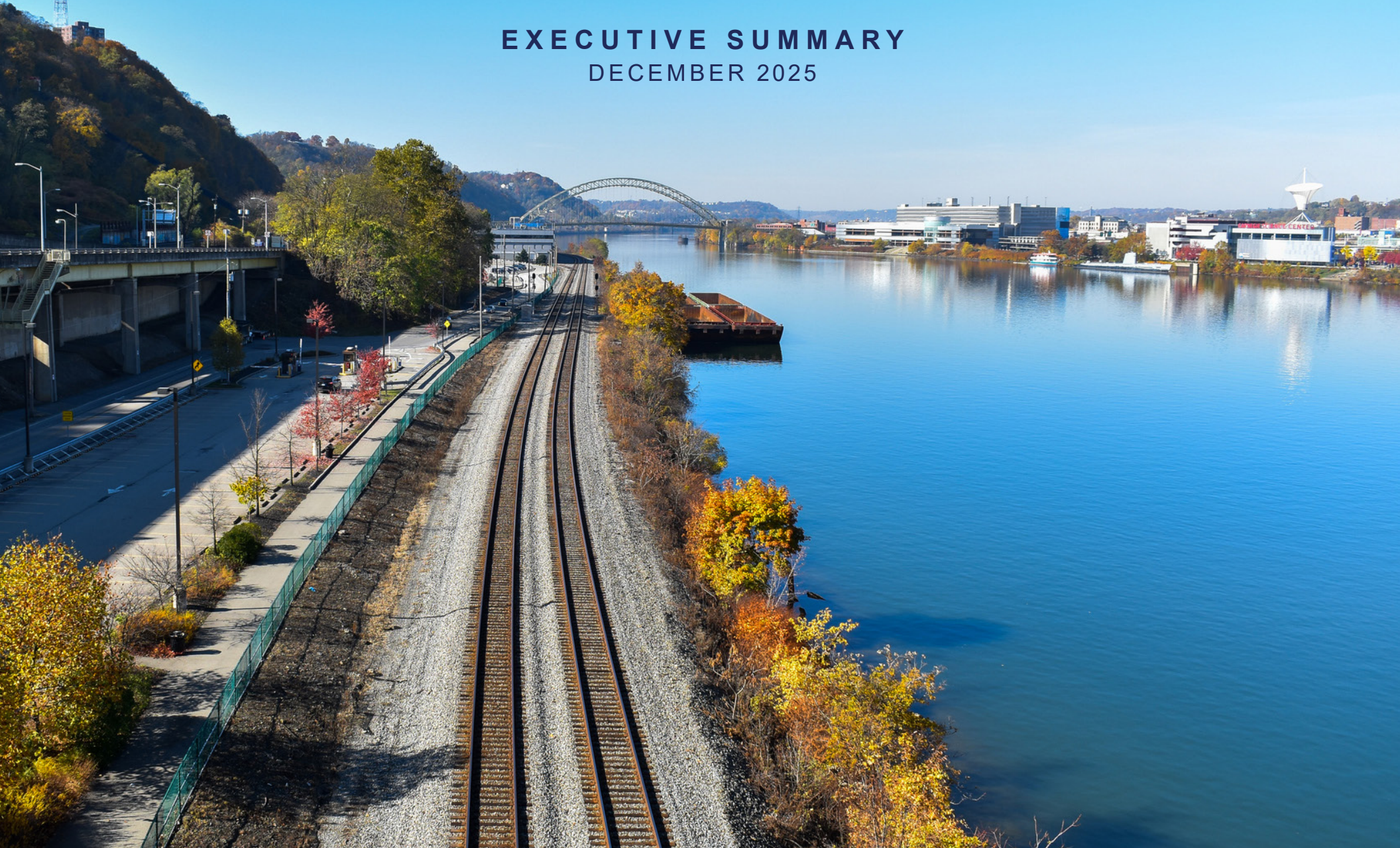




PENNSYLVANIA State Rail Plan

EXECUTIVE SUMMARY
DECEMBER 2025





Introduction

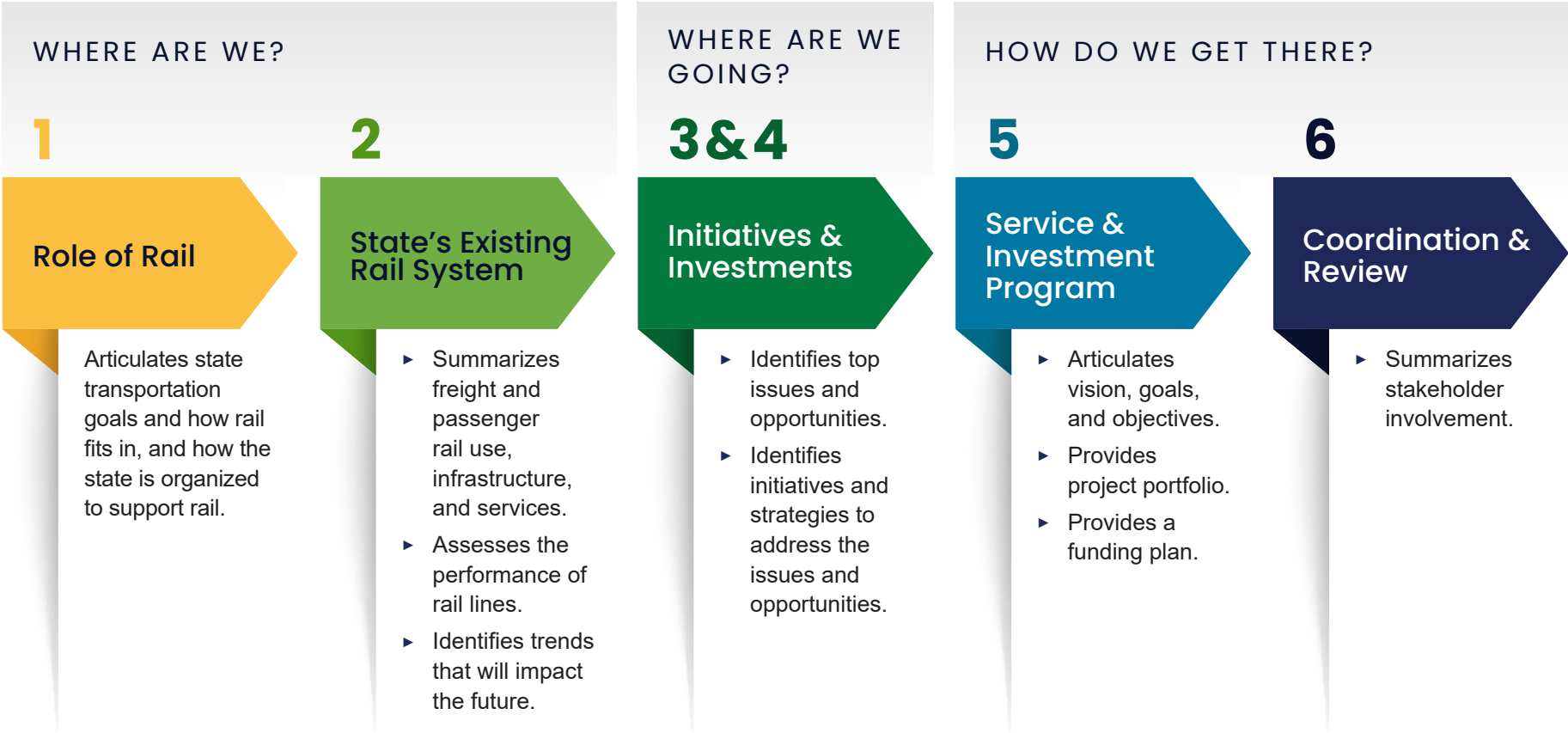
The 2025 Pennsylvania State Rail Plan is an update of a previous rail plan prepared in 2020. It provides a current assessment of the state's rail needs along with recommendations for policies, programs, processes, and projects to improve rail safety and service, and serve as a practical roadmap for future rail investment and policies. The State Rail Plan follows federal guidelines and will help position Pennsylvania stakeholders for federal funding.

The State Rail Plan consists of six chapters per Federal Railroad Administration (FRA) guidance that generally answer the questions:

- ▶ Where are we?
- ▶ Where are we going?
- ▶ How do we get there?

STATE RAIL PLAN ORGANIZATION

State Rail Plan chapters as prescribed by the FRA 2013 State Rail Plan Guidance:



IMPORTANCE OF PENNSYLVANIA RAIL SYSTEM

Pennsylvania has one of the most extensive freight rail networks in the U.S. According to the Association of American Railroads, Pennsylvania ranks among other states:

Pennsylvania's Rank in Freight Rail Activity in the United States

1st

Number of Freight Railroads

3rd

Total Rail Miles

8th

Carloads Originated

6th

Carloads Terminated

9th

Originated Rail Tons

12th

Terminated Rail Tons

9th

Freight Rail Employment

4th

Railroad Retirement Beneficiaries and Payments

Passenger rail serves an essential need for commuters, residents and business travel.

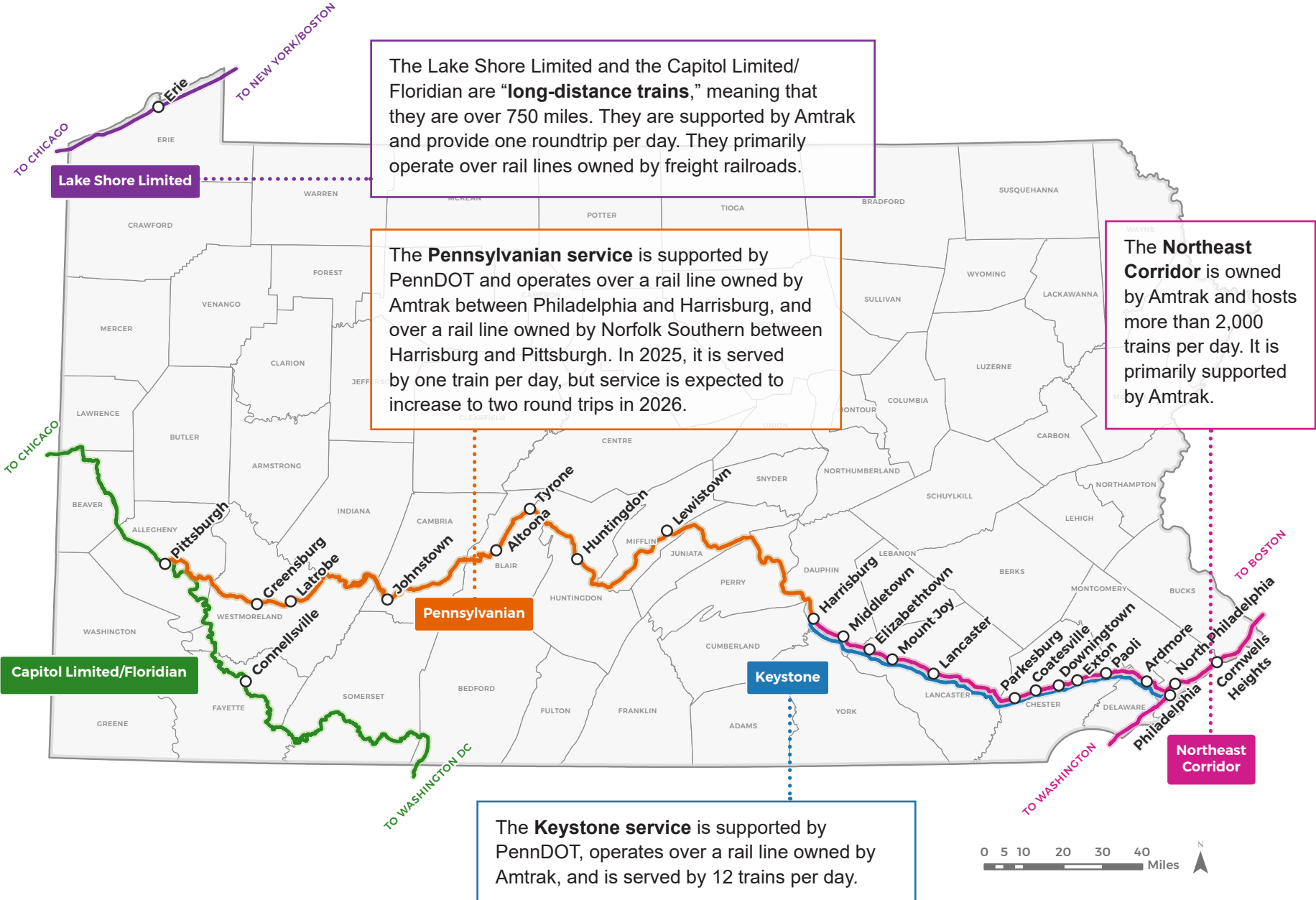
Philadelphia 30th Street Station is Amtrak's **3rd busiest station in the nation**, handling over 5 million passengers in Federal Fiscal Year 2024.

SEPTA is the nation's **6th busiest commuter rail service**, handling as many as 132,000 riders per day before COVID.

Source: Association of American Railroads 2021 State Rankings



INTERCITY PASSENGER RAIL IN PENNSYLVANIA



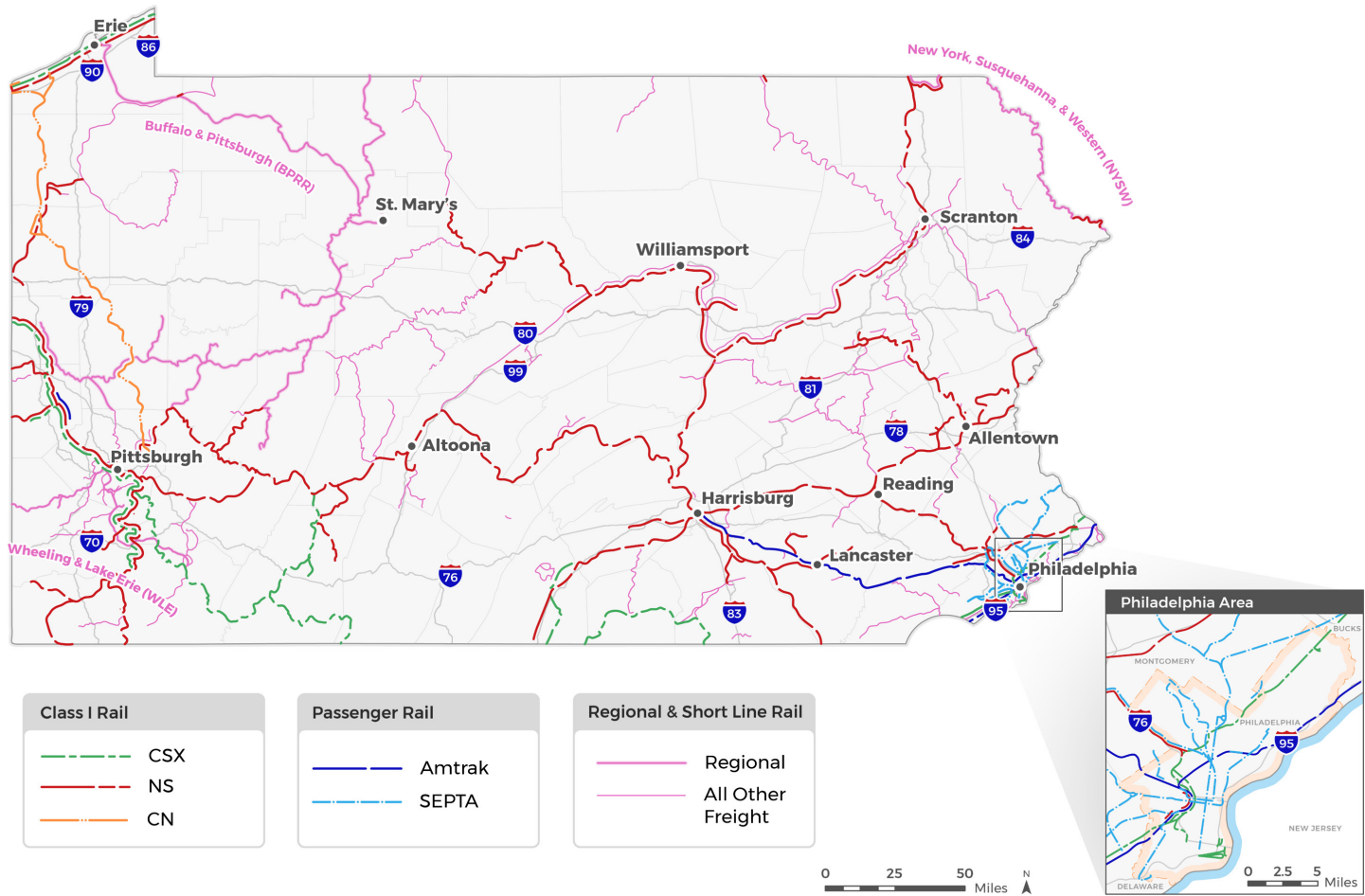
REGIONAL RAIL

The State Rail Plan includes the Southeast Pennsylvania Transportation Authority (SEPTA) Regional Rail. SEPTA operates **13 lines** and **155 stations** in the Philadelphia metropolitan area. Before COVID, it carried **132,000 riders per day**. Traditionally, Regional Rail was designed to facilitate daytime commutes from the suburbs to the Philadelphia urban core. SEPTA is now exploring a new operating model of providing frequent, all-day, and all-week service that connects people to a range of destinations across the region. SEPTA shares some of the same rail lines as Amtrak trains but owns and operates additional lines as well.



FREIGHT RAIL

The U.S. Surface Transportation Board classifies freight railroads in Pennsylvania as Class I, Class II, or Class III. Slightly over half of freight rail mileage in Pennsylvania is operated by Class I railroads.



CLASS I

Pennsylvania's **three Class I** railroads have revenues over **\$1B** and carry freight to other parts of North America.

CLASS II

Pennsylvania's **three Class II**, or "regional," railroads have revenues between **\$1B and \$47M** and carry freight within Pennsylvania or to and from nearby states.

CLASS III

Pennsylvania's **59 Class III** railroads have revenues less than **\$47M** and provide "last mile" service to customers.



RFAP AND RTAP PROJECTS

PennDOT administers two programs to fund freight rail improvements: the Rail Freight Assistance Program (RFAP) and the Rail Transportation Assistance Program (RTAP). In a typical year the programs fund 25 and 30 projects, spending up to approximately \$40 million. Projects selected between 2019 and 2023 will accomplish the following:

Projects Selected for RFAP and RTAP (2019 – 2023)



Rehabilitate over **300 miles of track** on short line and regional railroads



Construct or improve at least **12 loading/unloading facilities**



Construct over **5.5 miles** of new track, mostly to provide access to freight shippers



Rehabilitate or replace at least **32 bridges**



Rehabilitate at least **31 highway-rail grade crossings**



Install at least **37 turnouts**



Replace **76,765 ties**, including only those projects that focus specifically on tie replacement rather than rail line rehabilitation



Improve clearance to allow more efficient intermodal container operations for Philadelphia and Pittsburgh.

Station Improvements

Since the 2020 State Rail Plan, PennDOT has improved stations on the Keystone East route between Harrisburg and Philadelphia.

Projects vary, but some of the benefits include:

- ▶ Improved accessibility for all passengers
- ▶ More efficient high level train boarding
- ▶ More parking and better connections between station and surrounding community
- ▶ Improved state of repair
- ▶ Better vehicle and pedestrian circulation
- ▶ Passenger amenities
- ▶ Better aesthetics

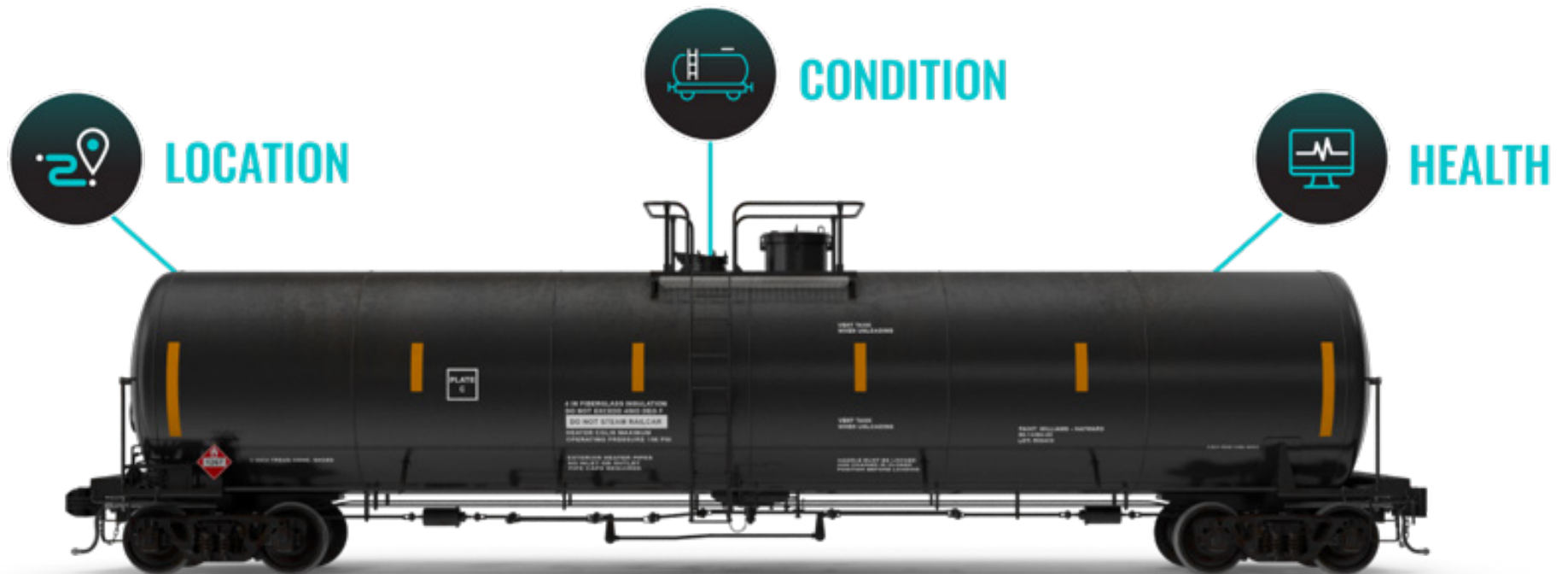
PennDOT administers about 20 grade crossing safety improvement projects per year under the federal grade crossing improvement program.





RAIL PULSE

FRA and PennDOT provided funding for RailPulse, a technology platform that provides real-time railcar data via GPS and other telemetry sensors installed on railcars across the North American fleet to improve railcar visibility. The 11 railcar owners that comprise the RailPulse partnership own 35 percent of the North American railcar fleet.



Source: <https://www.railpulse.com/>

Pennsylvania Rail Plan Goals

PennDOT has identified goals to guide future rail investment:

1 Enhance safety and security of Pennsylvania's rail system while minimizing risks to communities in which railroads operate.

- ▶ Improve highway-rail grade crossing safety
- ▶ Improve security of rail passengers
- ▶ Enhance safety and security of rail network and rolling stock
- ▶ Promote safe public behavior around rail network
- ▶ Reduce hazmat accident risk
- ▶ Support rail safety technologies

2 Bring the rail system to a state of good repair (SOGR) and ensure continued maintenance.

- ▶ Promote rail right-of-way preservation
- ▶ Invest in rail network to bring to state of good repair
- ▶ Upgrade rail network and equipment to meet modern standards

3 Enhance the connectivity and coordination within Pennsylvania's rail network and between rail and other modes of transportation.

- ▶ Improve coordination between freight and passenger rail
- ▶ Increase opportunities for multimodal freight opportunities
- ▶ Advance existing passenger rail expansion opportunities
- ▶ Improve multimodal access to the passenger rail network
- ▶ Improve connectivity within the freight rail network

4 Enhance quality of life in Pennsylvania

- ▶ Mitigate highway congestion by diversion to rail
- ▶ Encourage rail-compatible land uses along rail lines
- ▶ Increase rail-related economic development opportunities
- ▶ Enhance rail as a mobility option
- ▶ Mitigate negative impacts of rail
- ▶ Educate the public about benefits of rail

5 Support energy efficiency, environmental sustainability, and resiliency.

- ▶ Promote reduced energy usage, greenhouse gas through investments in rail
- ▶ Explore and promote technological improvements for energy efficiency and sustainability
- ▶ Investigate resiliency improvements to reduce risk of extreme weather

6 Identify stable and predictable funding alternatives.

- ▶ Continue to pursue and promote funding for rail
- ▶ Identify non-traditional sources of funding for rail projects
- ▶ Advocate for balanced funding between rail and highway modes
- ▶ Determine legislative actions to support rail

Outreach

In preparing the State Rail Plan, PennDOT engaged with numerous rail stakeholders and members of the public, responding to more than 100 comments and questions on the Draft Plan.

2 Public meetings:
203
ATTENDING

Online public survey:
884
RESPONSES

3 Stakeholder workshops
Collectively attended by **73**

12 MEETINGS
with economic development organizations, trade associations, and shippers

Additional Outreach:

- ▶ Advancing PA Rail Website
- ▶ Information requests sent to all railroads and SEPTA
- ▶ Meetings with railroads
- ▶ Port and rail authority roundtables
- ▶ MPO/RPO roundtable and survey
- ▶ Meetings with neighboring states

A number of themes became apparent through outreach and data analysis for the State Rail Plan.



SAFETY AND SECURITY

- ▶ Decline in highway-rail grade crossing crashes over 20 years, but progress has slowed, and more safety improvements are needed.
- ▶ Stakeholder concern over shipment of hazardous materials through communities, particularly after East Palestine derailment.
- ▶ New technologies that track and monitor railroad assets can help to make railroad infrastructure and rolling stock more safe and secure.
- ▶ Pedestrians struck by trains on railroad property are the majority of rail-related fatalities.



STATE OF GOOD REPAIR

- ▶ 303 route miles of freight railroads in Pennsylvania are unable to accommodate industry standard railcar weights.
- ▶ Amtrak and SEPTA corridors and stations require significant ongoing maintenance to remain in a state of good repair.
- ▶ Costly for small railroads to maintain infrastructure, particularly given inflation.
- ▶ Need for railroads to maintain infrastructure, including bridges, culverts and highway-rail crossing surfaces.



ENERGY EFFICIENCY, SUSTAINABILITY, RESILIENCY

- ▶ Freight rail is four times more fuel efficient than truck transportation.
- ▶ Passenger rail is 86% more fuel efficient than driving nationwide, but higher in Pennsylvania because a significant portion of Pennsylvania's passenger rail network is electrified.





CONNECTIVITY

- ▶ Opportunities for truck/rail transload facilities.
- ▶ Opportunities for freight rail improvements at port facilities.
- ▶ Need for rail access or rail improvements at industrial/manufacturing hubs.
- ▶ Interest in passenger rail connections to universities.
- ▶ Opportunities exist to decrease interference between freight/passenger trains, such as freight/passenger separation on SEPTA Airport Line.
- ▶ Interested in high speed rail, such as dedicated right-of-way or on Interstate median.
- ▶ Most respondents to public survey were interested in passenger rail, with nearly two thirds interested in new passenger rail routes.



QUALITY OF LIFE

- ▶ Reliance of key Pennsylvania industries on rail, with opportunities for freight rail improvements to bolster these industries.
- ▶ Need for developable industrial sites adjacent to rail lines.
- ▶ Interest in rail access to recreational opportunities, as well as rails-to-trails and rails-with-trails.
- ▶ Need to address locations where highway-rail grade crossings are occupied by trains for extended periods of time.
- ▶ Need to address locations where low rail overpasses reduce the mobility because trucks cannot fit under the bridges.
- ▶ Concern over train noise in residential areas.
- ▶ Opportunity for development around train stations, supporting transit-oriented lifestyle.
- ▶ Respondents to public survey identified increased train frequency would most likely be the reason for them to take the train more often.





Passenger Rail Needs

In preparing the State Rail Plan, \$20 billion in passenger rail needs were identified on the corridors between Philadelphia and Harrisburg (Keystone East), Harrisburg and Pittsburgh (Keystone West), the Northeast Corridor Mainline (Delaware and New Jersey state lines), and SEPTA rail lines beyond the Keystone East and Northeast Corridor Mainline. Projects were classified as infrastructure, station, bridge, or rolling stock.

Infrastructure projects are improvements or capital maintenance to railroad track and structures, supporting State Rail Plan goals:

- ▶ **Safety, State of Good Repair:** Keep rail assets safe and in a state of good repair
- ▶ **Quality of Life:** Improve passenger rail as a transportation option; improve passenger experience
- ▶ **Energy Efficiency, Sustainability:** Encourage use of rail, which is less energy-intensive than highway transportation; maintain efficient, fluid rail network

Station projects improve railroad stations, access to railroad stations, supporting State Rail Plan goals:

- ▶ **Safety:** Provide safer, more secure access to the rail network
- ▶ **State of Good Repair:** Maintain stations in a state of good repair
- ▶ **Connectivity:** Improve access to the passenger rail network
- ▶ **Quality of Life:** Improve passenger experience

Bridge projects replace or improve bridges, including railroad and highway bridges over rail, supporting State Rail Plan goals:

- ▶ **Safety, State of Good Repair:** Keep bridges safe and in a state of good repair
- ▶ **Quality of life:** Increase capacity to make rail a more viable option

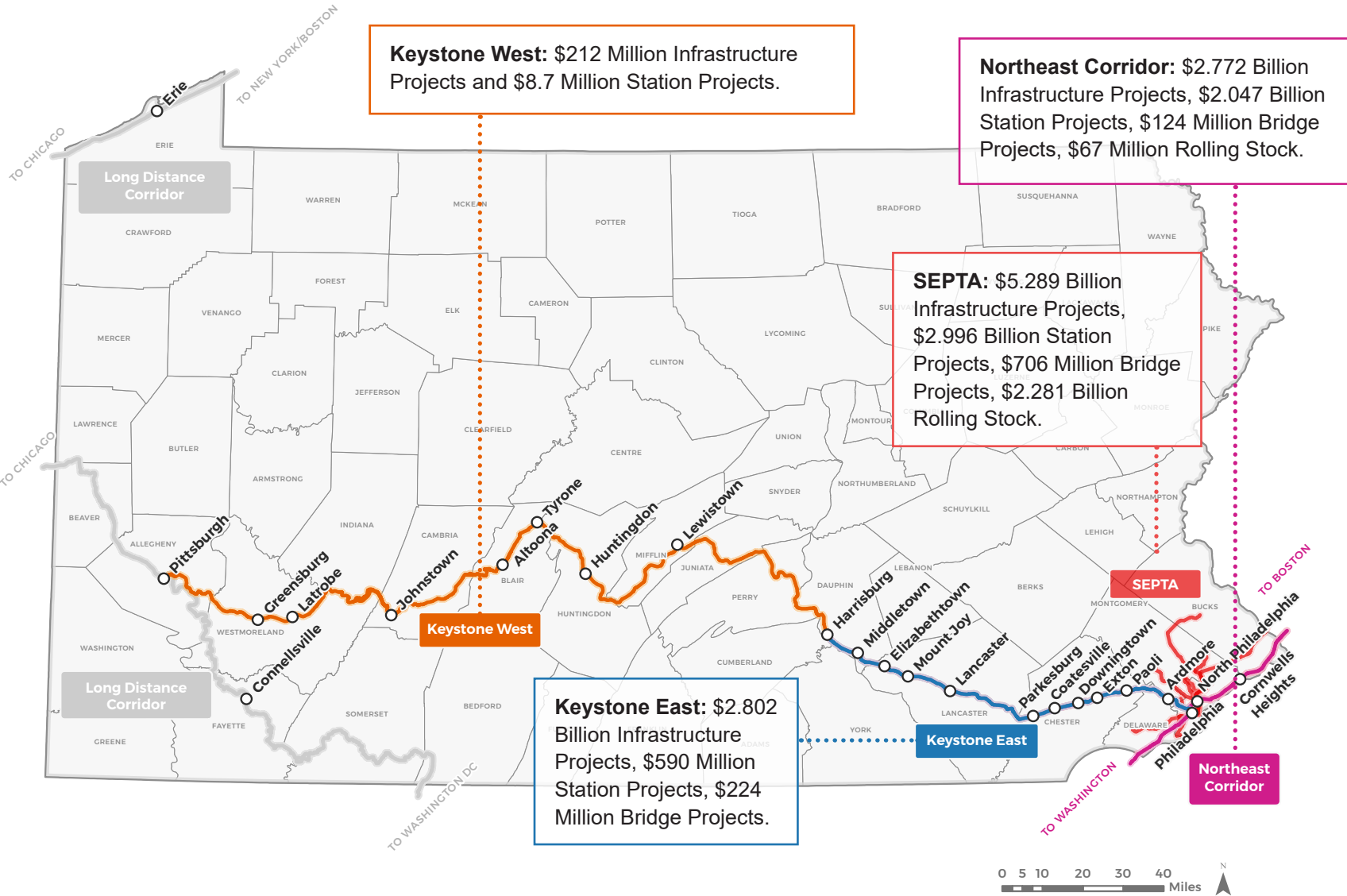
Rolling stock projects rebuild or acquire new railcars, locomotives, trainsets, supporting State Rail Plan goals:

- ▶ **Safety, State of Good Repair:** Ensures that rail equipment is safe and in good repair
- ▶ **Quality of Life:** Enhanced passenger experience
- ▶ **Energy Efficiency, Sustainability:** New equipment is more efficient than old equipment



PASSENGER RAIL NEEDS

Specific projects are also grouped into programs of projects intended to accomplish a set of service objectives. In the case of the Keystone West, projects are intended to enable a second daily Pennsylvanian service, while SEPTA projects aim to support an all-day service plan. Passenger rail programs in Pennsylvania generally seek to decrease transit times, improve on-time performance, increase service frequency, bring infrastructure to a state of good repair, and improve the passenger experience.



NEW PASSENGER RAIL CORRIDORS

In addition to improvements to existing corridors, PennDOT and other stakeholders are investigating new passenger rail corridors.

The federal government has established the Corridor Identification and Development Program (CID Program) to evaluate potential new intercity passenger rail corridors or improvements to existing corridors. Several corridors in Pennsylvania were selected for federal funding for planning.

Chicago, Fort Wayne, Columbus and Pittsburgh

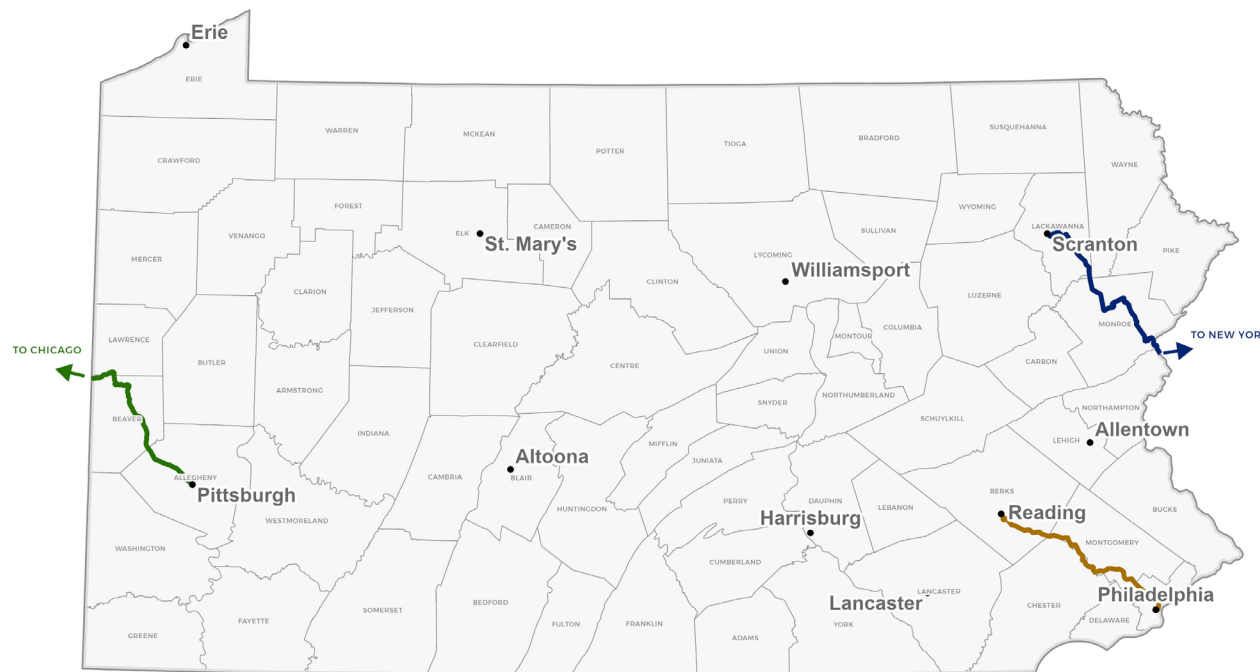
Sponsored by the City of Fort Wayne, IN, the project would reinstate service on an existing rail alignment, providing connection from Chicago, IL, to Pittsburgh, PA, through Fort Wayne, IN, and Columbus, OH.

Scranton – New York City

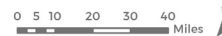
PennDOT and co-applicants Pennsylvania Northeast Regional Railroad Authority (PNRRA) and NJ TRANSIT propose restoring rail service between Scranton, PA, to New York, NY. The 140-mile corridor spans 60 miles across Pennsylvania, owned by the Pennsylvania PNRRA and 80 miles in New Jersey, owned and operated by NJ TRANSIT. The remaining 20 miles of missing track is property of New Jersey Department of Transportation.

Reading to Philadelphia

Sponsored by the Schuylkill River Passenger Rail Authority (SRPRA), the project would restore passenger train service along the corridor, utilizing the existing rail alignment to provide connection from Reading to Philadelphia with new intermediate stops at Pottstown, Phoenixville, and potentially Norristown, PA.



- CID Program New Corridors**
- Midwest Connect Corridor*
 - Reading - Philadelphia Corridor*
 - Scranton - New York City Corridor*
 - * New Passenger Corridor



Freight Project Needs

A total of 377 potential freight projects were identified in the State Rail Plan, of which 310 had cost estimates with a total cost of approximately \$1.4 billion. About half of the identified project costs are state of good repair projects.

Freight projects were categorized as follows:

State of good repair projects mostly consist of projects to replace railroad ties, rail, restore or replace bridges, supporting State Rail Plan goals:

- ▶ **State of Good Repair/Safety:** Keep rail assets at a state of good repair with continued safe operations.
- ▶ **Energy Efficiency/Sustainability:** More efficient locomotive speeds, larger railcars reduce fuel consumption and emissions per freight carried.

Capacity projects increase the volume of freight that can be handled, supporting State Rail Plan goals:

- ▶ **Connectivity:** Improving connecting track, yards, and sidings that are used to transfer railcars between rail lines.
- ▶ **Quality of Life:** Make freight rail a viable transportation option.
- ▶ **Energy Efficiency/Sustainability:** Improve fluidity of rail network, enable more freight to shift from highway to rail, reducing fuel consumption.

Customer access projects build/improve spurs and sidings to freight customer locations, supporting State Rail Plan goals:

- ▶ **State of Good Repair:** Bring shipper rail infrastructure to a state of good repair.
- ▶ **Connectivity:** Establish/improve connections between shippers and the rail network.

- ▶ **Quality of Life:** Support economic development by attracting new businesses or supporting competitiveness of existing businesses.
- ▶ **Energy Efficiency/Sustainability:** Encourage shippers to shift freight to rail from highway, reducing fuel consumption.

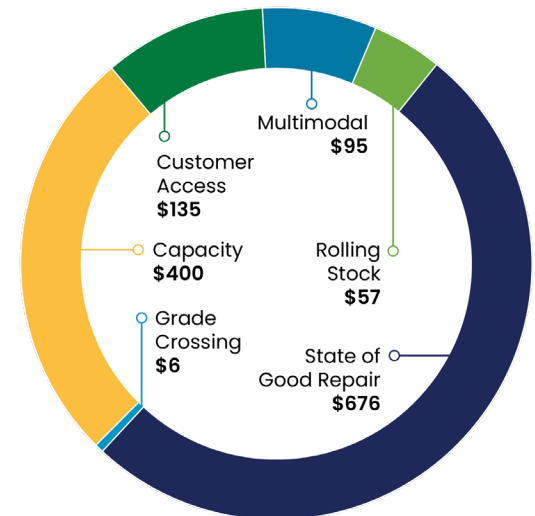
Multimodal Projects improve or establish facilities to transfer freight between rail and truck, pipeline or maritime, supporting State Rail Plan goals:

- ▶ **Connectivity:** Enable or improve connections between rail and other transport modes.
- ▶ **Quality of Life:** Support economic development, create transportation hubs, alleviate road congestion.
- ▶ **Energy Efficiency/Sustainability:** Encourage shippers to shift freight to rail from highway, reducing fuel consumption.

Grade crossing projects improve safety or bring grade crossings to a state of good repair, supporting State Rail Plan goals:

- ▶ **Safety/Quality of Life:** Reduce conflicts between trains and roadway users.
- ▶ **State of Good Repair:** Bring crossing infrastructure to a state of good repair.

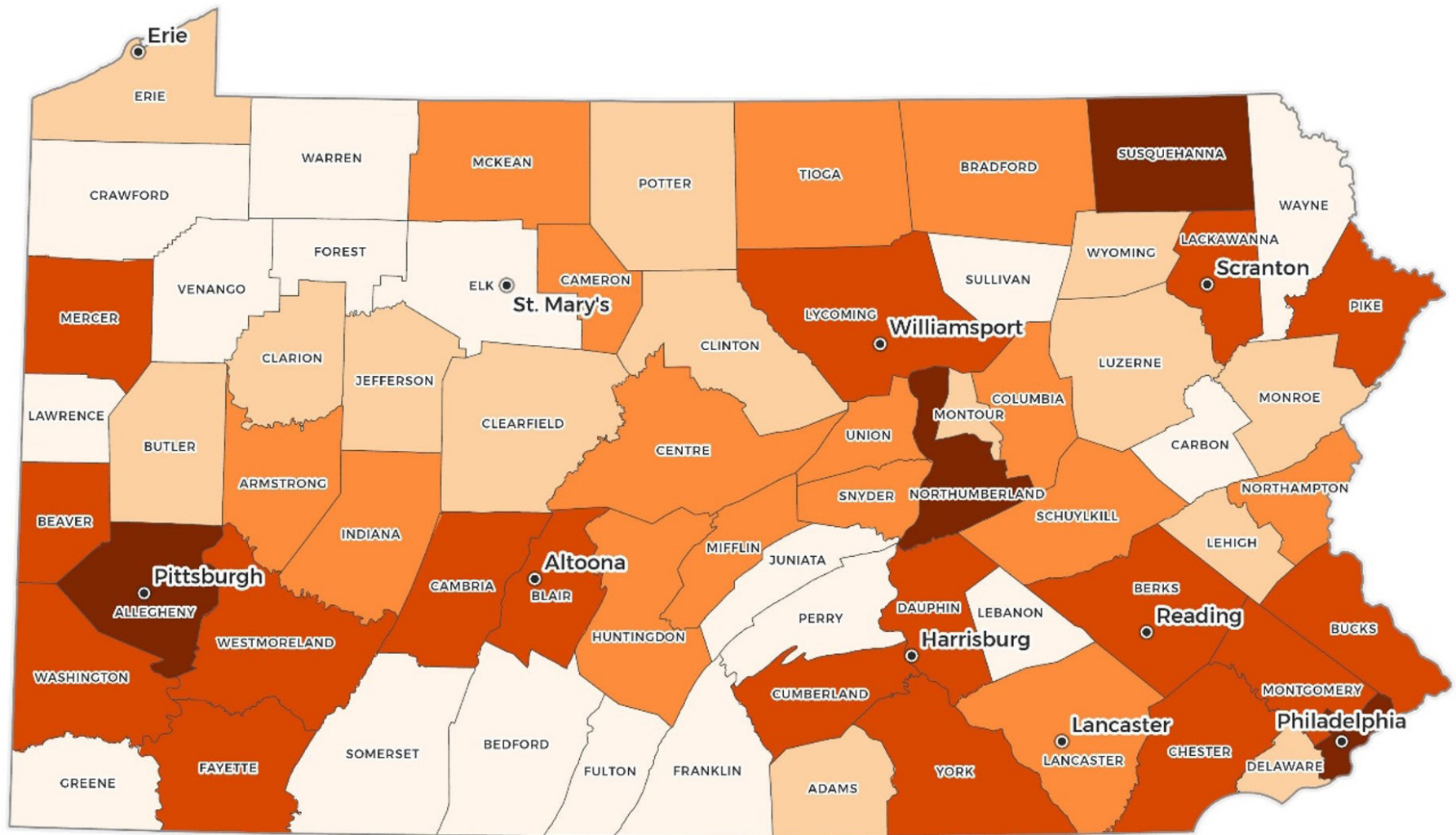
Potential Project Cost (Millions)



Rolling stock projects include the acquisition of railcars, locomotives, and also improvements/construction of infrastructure to store/maintain locomotives, supporting State Rail Plan goals:

- ▶ **State of Good Repair:** Bring rolling stock and buildings to a state of good repair.
- ▶ **Energy Efficiency/Sustainability:** Acquire more efficient equipment, reduce locomotive idling.

Freight Project needs were identified throughout much of the Commonwealth:



Freight Project Value in Million Dollars by County



In general, rail projects:

SUPPORT ECONOMIC DEVELOPMENT AND SAVE MONEY

- ▶ Freight and passenger rail can be more affordable than alternative modes for users, attracting people and businesses to the state.
- ▶ Freight rail hubs and passenger stations can provide concentrations of economic activity.

ENHANCE MOBILITY

- ▶ Rail projects provide modal choices to users. This is particularly important to passengers unable to drive or shippers with products that would be uneconomical to ship over the road.

IMPROVE SAFETY

- ▶ Freight rail experiences 1/8th the fatalities and 1/16th of the injuries as truck on a per ton-mile basis.
- ▶ Riding a train is 17 times safer than driving a car.

REDUCE FUEL CONSUMPTION AND EMISSIONS

- ▶ Freight rail is 4X more fuel efficient than trucking, and passenger rail in Pennsylvania is over 85% more fuel efficient than driving.

REDUCE ROADWAY CONGESTION, MAINTENANCE, AND CONSTRUCTION

- ▶ A single freight train can haul the equivalent of 300 trucks, and the average Amtrak train carries about 290 people.

Transporting Freight

TRUCKS

107 ton-miles per gallon of fuel

VS

RAILROADS

494 ton-miles per gallon of fuel

4X FUEL EFFICIENT