

# THE HUDSON TUNNEL PROJECT

## OVERVIEW

The Hudson Tunnel Project (HTP) includes three major elements to create **resiliency**, **redundancy**, and **reliability** for Amtrak's Northeast Corridor (NEC) service and NJ TRANSIT's commuter rail service between New Jersey and Penn Station New York (PSNY):

- **New Two-Track Hudson River Tunnel:** The construction of a new two-track Hudson River rail tunnel from the Bergen Palisades in New Jersey to Manhattan.
- **Hudson Yards Concrete Casing – Section 3 (HYCC-3):** The construction of the third and final rail right-of-way preservation section beneath Hudson Yards in New York.
- **North River Tunnel Rehabilitation:** The rehabilitation of the existing North River Tunnel, which was severely damaged during Superstorm Sandy.



## BACKGROUND

The existing North River Tunnel (NRT) opened in 1910 by the Pennsylvania Railroad was designed to early 20th-century standards and consists of two tracks. This “one-track-in, one-track-out” rail system between New York and New Jersey results in significant delays up and down the NEC when service incidents occur. Service reliability through the NRT, already suboptimal because of the tunnel’s age and antiquated design, has been further compromised because of the damage to tunnel components caused by Superstorm Sandy in 2012.

Superstorm Sandy inundated both tubes of the NRT with millions of gallons of seawater, causing ongoing damage to the NRT’s structural, mechanical, and electrical infrastructure. This results in disabled trains, signal malfunctions, and chronic delays. When an incident takes one tube out of service, traffic in and out of PSNY must use the one remaining NRT tube, reducing capacity by up to 75% and leading to significant delays. The 24 trains per hour that use the NRT in the peak period could drop to as few as 6 when just one tube is closed.

The Hudson Tunnel Project will build two additional tracks and rehabilitate the existing two tracks, resulting in four modern tracks between New York and New Jersey that create operational flexibility, rail network redundancy, and resiliency against future impacts to the Hudson River rail crossing. The North River Tunnel/Hudson River rail connection is a vital part of the 457-mile NEC between Boston, MA, and Washington, DC, America’s busiest passenger railroad.

## BENEFITS

The Project will provide long-term resiliency, reliability, and redundancy to the regional and national rail network customers who rely on these rail services. In doing so, there are substantial social, economic, and environmental benefits. The HTP will:

- Eliminate a single point-of-failure for a regional economy that drives a sizable portion of America’s Gross Domestic Product (GDP). The New York regional economy and the Northeast corridor megaregion contribute 10% and 20%, respectively, of the nation’s GDP.

### North River Tunnel (Existing)

**Opened:** 1910

**Tracks:** 2 (1 track in separate tubes)

**Weekday Revenue Trains**

**450+ NJT & Amtrak Trains**

**Weekday Passenger Trips**

**200,000+ NJT & Amtrak Trips**

**Major Failure Days (2014-2018)**

**65 days**, each causing more than 5 hours of total train delays, resulting in **2,500 delayed trains & 65,000 train delay minutes**



- Create over 72,000 direct, indirect, and induced jobs over the Project's construction period.
- Generate \$19 billion in economic activity over the Project's construction period.
- Stimulate the economy by directly spending more than \$88 million/month on average on materials & labor over the Project's construction period.
- Utilize U.S. suppliers and manufacturers from around the country through the Buy America/Build America requirement that applies to federally funded purchases, as well as the provisions regarding participation by minority and women-owned, small, and disadvantaged businesses.

## CURRENT ACTIVITIES

**START OF CONSTRUCTION.** In November 2023, construction launched on both sides of the Hudson River. Ground broke in North Bergen on the Tonelle Avenue Bridge and Utility Relocation Project, which involves the construction of a new roadway bridge above the future railroad right-of-way to allow for a connection to the new tunnel portal and an access point for Tunnel Boring Machines. And in Manhattan, work is underway on the HYCC-3, a right-of-way preservation project.

**PROCUREMENT.** Five out of the nine packages that make up the Hudson Tunnel Project are either under construction or in procurement. In February 2024, GDC awarded its first heavy construction contract for work on the Hudson River Ground Stabilization (HRGS) Project, which involves work to fortify and stabilize the New York side of the Hudson River bottom. That same month, GDC awarded a Delivery Partner contract, adopting an innovative model that will accelerate project planning, programming, design management, and construction management. Contracts for the Palisades Tunnel and Manhattan Tunnel are currently in procurement and are expected to be awarded in 2024.

**FUNDING & FINANCING.** The federal funding commitment to the Hudson Tunnel Project represents the largest federal investment ever in a mass transit project.

Altogether, GDC has \$12 billion in federal commitments, with total project costs split 70-30 between federal and local partners. In July 2023, the agency received Federal Transit Administration (FTA) approval for Entry into Engineering, which qualifies the Project to receive up to \$6.88 billion from the Capital Investment Grants (CIG) Program upon execution of a Full Funding Grant Agreement. In addition, GDC was selected for a \$25 million US Department of Transportation's (USDOT) RAISE Grant for the Tonelle Avenue Project, \$3.8 billion through USDOT's Federal-State Partnership for Intercity Passenger Rail (FSP) Program, and the HTP received a \$292 million award from the MEGA Grant Program for HYCC-3.

GDC is working toward securing both a Full Funding Grant Agreement and Railroad Rehabilitation and Improvement Financing (RRIF) loans to finalize funding for the project in 2024.

## NEXT STEPS

As GDC moves toward a Full Funding Grant Agreement, it will continue to work closely with FTA to meet critical milestones. In October 2023, GDC began advancing in the Build America Bureau federal loan process by undertaking a complete creditworthiness review, credit diligence activities, and will enter into negotiations on loan documents and terms. Together with federal funding, securing these loans will guarantee the HTP is fully funded. Meanwhile, GDC continues to make progress on early work packages that will bolster reliability, reduce costs, and mitigate risks to successful delivery, and is preparing for heavy construction to begin in the Hudson River this year.

### Hudson River Tunnel & HYCC-3

**Tracks:** 2 (1 track in separate tubes)

**Environmental Review (New HRT)**

Complete from FRA & FTA

**Environmental Review (HYCC-3)**

Complete from FRA & FTA

**Est. Construction Duration (New HRT)**

12 years

**Project Lengths (approx.)**

New Track: 9 mi. (4.5 mi. each direction)

New Tunneling: 4.5mi. (2.4 mi. each direction)

**Tunnel Diameters (approx.)**

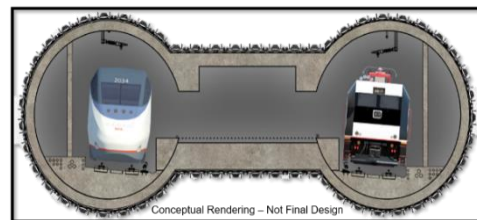
Internal: 25 feet, 2 inches

Outside: 28 feet

**Tunnel Depths Below Surface (approx.)**

Min: 20 feet (Manhattan, NY)

Max: 275 feet (Palisades, NJ)



### North River Tunnel Rehabilitation

**Environmental Review**

Complete from FRA & FTA

**Est. Construction Duration**

3 years (1.5 years per tube)

**Elements to be Improved**

- Signals & Emergency Cables
- Track and Trackbed
- Internal Concrete
- Leaks & Water Resiliency