

NORFOLK SOUTHERN RAILROAD BRIDGES

More than Meets the Eye

There's more to Norfolk Southern's 9,840 railroad bridges than meets the eye. From concrete structures spanning wide rivers to timber bridges crossing creeks, NS bridges cover 275 track miles and come in all styles, sizes, and

construction materials. The 670 NS employees who work in bridge inspection, maintenance, and replacement ensure that these bridges safely connect trains to our customers and the communities we serve.

BRIDGE BASICS

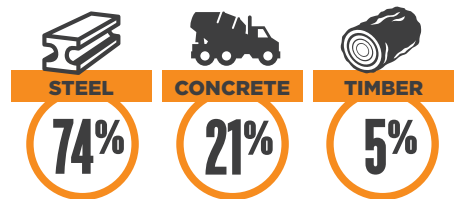
NS RAILROAD BRIDGES



REMARKABLY SAFE

Zero Casualties
and no significant property loss caused by structural deficiency on an NS bridge in modern times

3 MAJOR NS BRIDGE TYPES



MAINTENANCE AND INSPECTION

Norfolk Southern's bridge management program is extensive and effective. All bridges and structures are inspected regularly by certified NS bridge inspectors.

NS Bridge Inspection Practices

HANDS-ON INSPECTIONS:



USING
**LADDERS
MAN LIFTS
HIGH-RAIL TRUCKS**

WALKING INSPECTIONS:



FOOT-BY-FOOT
analysis of structure

UNDERWATER INSPECTIONS:



NS inspectors file detailed reports using
PHOTOGRAPHS, SKETCHES, AND VIDEOS
to describe bridge conditions.

NS' inspection supervisors & bridge engineers
REVIEW INSPECTION REPORTS
and develop a plan for maintenance or repair.

Bridges are inspected
MONTHLY or ANNUALLY
based on individual conditions.



The FRA routinely examines
NS BRIDGES & INSPECTION REPORTS
to ensure safety.

Norfolk Southern is in
full compliance
with
FEDERAL RAILROAD ADMINISTRATION

Bridge Safety Standards,
often exceeding requirements.

"We truly care about the safety of each and every bridge on the Norfolk Southern system."

-Kevin Hauschildt
NS Chief Engineer
Bridges and Structures

STRENGTHENING OUR TRANSPORTATION NETWORK

Norfolk Southern understands the importance of building and maintaining a safe, reliable, and efficient freight rail network. Tracing our roots to the 1830s, NS monitors and improves our infrastructure to support the nation's growing transportation needs.

THE KENOVA OHIO RIVER BRIDGE

Like most NS bridges, the Kenova Ohio River Bridge has undergone major upgrades over the past century and remains functionally and structurally sound today. The bridge is an integral link in the national railway system.



- » Spans nearly 4,000 feet across the Ohio River
- » Stands 82 feet above water
- » Built with 21.6 million pounds of solid steel
- » Handles 35 trains a day with double-stack clearance capacity

Its excellent condition is a testament to the precision and commitment of the NS workforce – past and present – to keep these structures safe and serviceable.

**A bridge's age and appearance bear little or no relevance to its safety and stability.*

TRAINING AND QUALIFICATIONS

NS employs *world-class* ENGINEERS, INSPECTORS, & SUPERVISORS responsible for maintaining the **highest standards of bridge safety.**



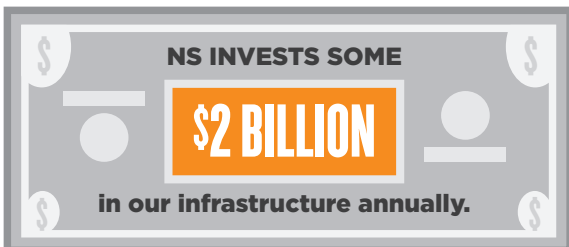
NS' *certified bridge engineers* developed an in-house **BRIDGE INSPECTION** training program.

ALL INVOLVED



in NS' bridge inspection program **TAKE THE COURSE** every three years in classroom and field settings.

INFRASTRUCTURE INVESTMENTS

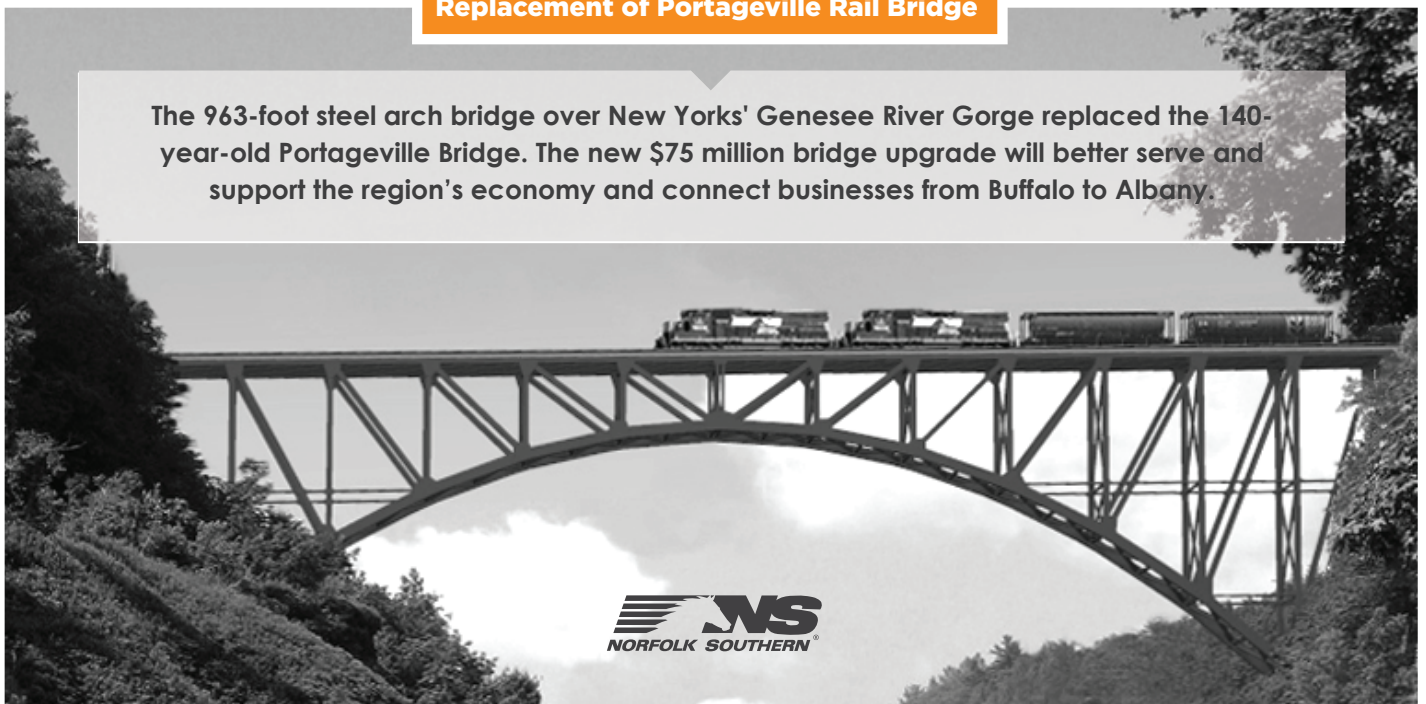


NS FUNDS MOST INFRASTRUCTURE & IMPROVEMENT PROJECTS *without taxpayer dollars.*

Replacement of Portageville Rail Bridge

Image depicts completed design

The 963-foot steel arch bridge over New York's Genesee River Gorge replaced the 140-year-old Portageville Bridge. The new \$75 million bridge upgrade will better serve and support the region's economy and connect businesses from Buffalo to Albany.



Norfolk Southern Corporation is one of the nation's premier transportation companies. Its Norfolk Southern Railway Company subsidiary operates approximately 20,000 route miles in 22 states and the District of Columbia, serves every major container port in the eastern United States, and provides efficient connections to other rail carriers. Norfolk Southern operates the most extensive intermodal network in the East and is a major transporter of coal, automotive, and industrial products.