Dear Secretary LaHood,

It is with much anticipation and great pleasure that I present before you the New York State Department of Transportation’s TIGER III Discretionary Grant application for the Portageville Bridge Replacement Project, a proposed public-private partnership between the State of New York, Norfolk Southern Railroad, Canadian Pacific Railroad, and the U.S. Department of Transportation. New York State, as with the nation, is seeking ways to confront the dilemma of how to address its aging infrastructure. The State of New York believes that this is the type of public-private partnership that can help lead the way.

A pinnacle of 19th century railroad engineering, the 819-foot-long wrought iron steel viaduct referred to as the Portageville “High Iron” Bridge soars 245 feet above the Genesee River Gorge between New York’s Wyoming and Livingston counties. In the late 1800s and early 1900s, the bridge helped to usher in an era of economic growth and prosperity for the burgeoning manufacturing communities it was designed to serve, including Binghamton, Buffalo and New York. Acting as the linchpin for the Erie Railroad’s east-west route, the bridge connected then-fledgling areas with direct and efficient freight rail access to national and international markets, providing what was at the time the equivalent of an interstate highway super-corridor. Coupled with the competing New York Central Railroad Water Level Route and the Pennsylvania Railroad Pennsylvania Route, the Erie Railroad’s Southern Tier Route, anchored by the Portageville Bridge, gave communities the freight access and volume necessary to accommodate and sustain precipitous economic and population growth unrivaled anywhere else in the world at the turn of the 20th century.

Fast forward more than 100 years later: In October 2011, transportation planners, freight railroads, and even casual observers can conclude that the bridge is a shell of its former great self, deteriorating from corrosion and fatigue. It now has been deemed structurally deficient and operationally obsolete. Symptoms of a larger problem led by worsening structural conditions, the Portageville Bridge is approaching the end of its useful design life as a rail freight carrying structure. While engineers cannot say precisely when the bridge will need to be taken permanently out of service, they do openly concede that the clock is ticking. The situation is increasingly precarious.

Location:
- Located near the town of Portage, New York
- Found within Letchworth State Park
- Milepost 361.66 on Norfolk Southern’s Southern Tier Corridor between Buffalo & Binghamton
- Spans the Genesee River

Southern Tier Corridor:
- Bridge connects one of only two east-west rail corridors in New York State
- The most direct freight rail route between Buffalo, Binghamton and New York City
- 10 short lines railroads utilize bridge
- Two Class I railroads utilize bridge
- A Canada-U.S. trade corridor

Bridge Facts:
- Single-track rail structure
- Six towers built in 1875
- Three spans of pin-locked trusses built in 1903
- 10 spans of deck plate girders built in 1903
- 819 foot long
- 245 feet above the Genesee River gorge

Current Condition:
- Structurally deficient & operationally obsolete
- Weight restriction of 273,000 lbs per rail car, below industry standard 286,000 lbs
- Speed restriction of 10 mph instead of 35 mph timetable
- Emergency Closure & Repairs on 9/9/2009
- Park patrons frequently trespass on bridge

Proposed Project Cost-Share:
- $17,750,000 TIGER Discretionary Grant
- $17,750,000 NS & CP
- $3,500,000 NYSDOT

Project Improvements:
- Improves rail service to and from Canada
- Removes weight restriction for the entire Southern Tier corridor
- Preserves a lifeline for 10 short line railroads
- Enhances service reliability for trains routed to Pan Am Southern in upstate New York and New England
- Sustains new intermodal service soon to be launched between Buffalo and the Ports of NY & NJ along the Southern Tier
- Keeps the Southern Tier Corridor intact

Benefit-Cost Ratios:
- 23.1 assuming a 3% discounting
- 11 assuming a 7% discounting
As recently as September 9, 2009, after structural cracks and broken rivets were discovered, an emergency inspection and subsequent repairs involving steel splicing at each crack location took the bridge out of commission for three days. During this time, all intermodal traffic was detoured onto the CSX Water Level Route, while general merchandise traffic was detoured onto the Western New York and Pennsylvania Railroad Southern Tier West Extension Route.

Ripple effects of the three-day shutdown demonstrated that this was more than a modest inconvenience. It caused five-hour delays in Norfolk Southern train schedules and resulted in substantial operational deficiencies that negatively impacted those served by the route.

It also raised serious concerns from the many rail customers, carriers, and transportation planners that depend upon this structure for rail to remain competitive along not only this corridor but to support investments and activities throughout the North American freight rail network. Naturally, the Portageville Bridge and the Southern Tier Route’s uncertain futures stymie economic development and freight rail growth opportunities predicated on its continued preservation.

Ultimately, as the benefit-cost analysis performed by Cambridge Systematics demonstrates, and which will be discussed at length later on page 16 of this application, even a temporary disruption of freight rail routing over the Southern Tier will result in considerable public and private costs such that: 1) some businesses that ship by rail will close entirely because they no longer remain competitive; 2) others will transition a percentage of their shipping to long-distance truck movements to meet their logistics needs; 3) still other businesses will continue to move by rail, albeit with higher transportation costs and along other railroad routes, which in many instances are more circuitous or have capacity constraints; and finally, 4) businesses that may desire to expand or initiate new freight rail industrial development activities will scale back, delay or even eliminate those plans entirely.

Disruption to this vital economic route is of particular concern because of the growing importance the railroads have recently placed in the corridor, which only 13 years ago was a nearly defunct route owned by Conrail and relegated to nearly a branch line status. Today, the Southern Tier Route has new and potentially growing significance as Norfolk Southern, Canadian Pacific and 10 short line railroads view it a central part of their business strategies to meet the nation’s freight transportation needs. Led by the recent advent of commercially viable natural resource extraction methods, the railroads along the Southern Tier have all witnessed, virtually overnight, a spike in carload demand for pipe, sand, water, chemicals, and drilling equipment. In many instances, regional carload traffic from 2009 to 2010 has jumped more than 1,000 percent, bringing back online many former rail yards and rail-served industrial facilities that had been sitting idle for decades. This demand is expected to grow in the region in the coming years as more companies locate within the region to help meet the nation’s energy needs.
Coupled with the exponential growth in regional industrial carload consumption is a growth in intermodal traffic over the Southern Tier. Today, approximately half of the Southern Tier’s train start composition is intermodal, accommodating market lanes between Chicago and New England, between Canada and the East Coast, and — if the uncertainty over the Bridge’s future is soon resolved — a new service between Buffalo and the Port Authority of New York and New Jersey (PANYNJ). The time-sensitive nature of these shipments means that this traffic segment, above all others, is most susceptible to conversion back to long-distance trucks if the Southern Tier Route is ever severed. Based upon investments the railroads are currently making in their networks, including Pan Am Southern’s proposed new intermodal facility in Mechanicville, New York, as well as the on-dock rail investments made by the PANYNJ, the Southern Tier is expected to grow for regional, national and international intermodal train movements — provided the Portageville Bridge is soon replaced.

Despite the Portageville Bridge’s glaring operational challenges, which include speed and weight restrictions as well as significant maintenance and inspection requirements, it nevertheless still functions as the integral link for New York State’s Southern Tier Route.

In recent years, the Portageville Bridge’s importance to New York State’s transportation network has reached new heights with significant growth in both local and pass-through rail traffic. At a time when significant freight rail investments and industrial development projects in New York and other parts of the nation are predicated on the preservation of the Southern Tier corridor, the Portageville Bridge Replacement Project takes on new meaning. The sections that follow detail why this project as proposed in NYSDOT’s TIGER Discretionary Grant application affects a wide area of the nation, with federal implications.

A TIGER Discretionary Grant award will remove operational constraints that have plagued the Southern Tier corridor for years and enhance the opportunity to move more freight within the region, country, and continent by rail by constructing a new, modern freight rail bridge.

The New York State Department of Transportation would like to thank you in advance for your full and fair consideration of this grant application.

Sincerely,

Joan McDonald
Commissioner
New York State Department of Transportation
New York State Department of Transportation’s TIGER III Grant Application

The Portageville Bridge Replacement Project

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1.0 Project Description

The Portageville Bridge Replacement Project sponsored by the New York State Department of Transportation (NYSDOT) proposes to replace the existing high-level single-track freight rail bridge originally constructed in 1875 (Figure A – existing bridge image) with a new, modern freight rail bridge on a new alignment approximately 75 feet south of the existing structure (Figure B – new bridge conceptual design). The bridge is located at milepost 361.66 and within New York's historic and magnificent 14,350-acre Letchworth State Park in Livingston and Wyoming counties on Norfolk Southern Railway Company’s Southern Tier Route between Buffalo and Binghamton, N.Y. On completion of the new bridge, freight rail operations will shift permanently to the new bridge. The existing structure will be dismantled, its steel recycled. Working with the New York State Office of Parks, Recreation and Historic Preservation, NYSDOT and Norfolk Southern (NS) are developing plans for historic signage to memorialize the more than 100-year-old bridge.

The estimated cost to construct the replacement bridge is $39 million with NS and Canadian Pacific (CP) covering at least 50 percent of the project’s construction cost.

NYSDOT, in partnership with NS, is seeking $17.75 million in funds in order to permanently resolve ongoing structural and operational deficiencies that long have plagued the current structure. If left unresolved, these deficiencies in the very near future will threaten the viability of the Southern Tier as a major transportation corridor. A failure to act would only perpetuate the nation’s woefully aging and neglected infrastructure at a time when the investments in infrastructure are desperately needed to maintain the country’s competitiveness on a global stage. Even more devastating if the Southern Tier is severed would be the damage that closure may do to job creation which is dependent on rail for delivery of essential supplies and equipment. The application provides the context in which a new, modern freight rail bridge is needed, including the current transportation challenges and the future freight rail growth opportunities the new structure would help facilitate. This project can serve as a test case for how an effective public-private partnership can address the country’s deteriorating infrastructure and at the same time contribute to economic development, job creation, and other public benefits.

NYSDOT and NS have proceeded with the environmental review and the preliminary engineering. A Draft Environmental Impact Statement that complies with the New York State Environmental Quality Review Act (SEQRA) is near completion. Since the environmental procedures under SEQRA are closely aligned with the review procedures and requirements of NEPA, that SEQRA document can easily be converted into a NEPA document.
The engineering consultants engaged by NS have issued an opinion that further sheds light on and strengthens the position that there is no viable option to replacing the bridge with a new structure. See Appendix 15.3, Letter of Modjeski and Masters, signed by Kevin Johns, PE. Senior Associate, dated October 12, 2011. Rehabilitating or repairing the current Portageville Bridge “poses significant engineering concerns due to the integrity of the structure, and such concerns would largely remain even after a retrofit of the current bridge.”

In the 2009 State Rail Plan, NYSDOT identified the bridge as a major bottleneck that must be addressed, noting that “the weight restriction and low operating speeds significantly impact the line’s overall capacity …, and long-term closing of the Portageville Bridge would threaten the vitality of the entire route between Buffalo and Binghamton.” This concern for the future of this corridor and the detrimental impact of its closure, led NYSDOT to contribute $3.5 million for preliminary engineering.

The new bridge will be designed to handle the freight rail industry standard 286,000 pounds per rail car (up from the current weight-restricted load limit of 273,000 pounds per rail car, which results in rerouting of heavy unit trains). It would improve train operating speeds to 35 miles per hour over the bridge (instead of the current speed-restricted limit of 10 miles per hour), preserve one of only two east-west rail corridors within New York State, and enhance the prospect for freight rail growth for 10 short line railroads that access the Southern Tier Route through the Empire Link interchange agreement with NS. Finally, a new bridge will allow NS and CP to meet the demands for freight rail traffic in New York, New England, the Midwest, Canada and beyond (Figure C).

The application identifies and discusses the major reasons that lead NYSDOT to conclude that the time to replace the bridge is now. This discussion looks at the historical, operating, transportation planning, and industrial development issues. A detailed cost-benefit analysis of the project’s strong public merits is examined, including the methodology utilized, followed by a discussion of the project’s anticipated long-term public outcomes. Finally the project’s readiness is discussed, including the bridge’s construction timeline as well as a timeline of projected environmental and permitting approvals.
The 135-year old Portageville Bridge is the weakest link in the Southern Tier Route, the most direct rail route connecting Buffalo with Binghamton and New York City, and is currently approaching the end of its useful design life. The existing 819-foot-long steel viaduct spans the Genesee River 245 feet above the floor of the gorge in Letchworth State Park, between Livingston and Wyoming counties in New York. The viaduct spans the gorge on six wrought iron towers constructed in 1875. The superstructure, which consists of three spans of pin-connected deck trusses and 10 spans of deck plate girders, was built in 1903. Corrosion and fatigue for a bridge of this age are expected, but that level of deterioration has also had a corresponding impact on freight rail service for local and through train traffic.

The bridge’s condition has resulted in operational constraints – including weight and speed restrictions over the bridge coupled with extensive maintenance and inspection requirements, as well as safety concerns for both Letchworth State Park patrons and railroad maintenance and locomotive crews. These constraints, together with the growing importance of the corridor for local, regional, national, and international freight movements, make it clear that the bridge needs to be replaced. NS, its consultants and NYSDOT have come to the conclusion that the current structure cannot be economically rehabilitated for continued rail use. A modern, new structure is the only avenue to eliminating the operational constraints, enhancing corridor-wide train performance, improving safety, strengthening economic development opportunities, leveraging rail infrastructure investments made in other parts of the network, including those made by the state’s short lines, and preserving an important corridor for the 21st century.

The first operational constraint for the Portageville Bridge is caused by its limited load-carrying capability, which has the effect of restricting rail cars to 273,000 pounds per rail car. The ability for freight railroads, particularly Class I railroads, to carry 286,000 pounds per rail car is paramount, as this weight is the current industry standard, and the overwhelming majority of the national rail network handles the heavier cars. Therefore, the bridge now operates as a bottleneck in the heart of a major east-west transportation corridor. Heavier freight traffic has to be routed entirely around the Southern Tier, which results in longer transit times, more fuel consumed, reduced energy efficiency, and higher transportation cost to customers. Figure D shows the flow of freight that crosses the bridge.

The second operational constraint for the bridge is the current speed restriction of 10 miles per hour. Track geometry would permit optimal speeds of 35 miles per hour; however, the bridge’s structural fatigue necessitates far slower speeds. For trains in excess of a mile long, which is not uncommon, especially those traveling long distances – including international trains originating from Canada or the Midwest – the speed restriction significantly impacts transit times and causes congestion on the NS Southern Tier and other NS corridors.
The third operational constraint is the bridge's significant maintenance and inspection requirements. After an inspection of the bridge in September 2009 identified broken rivets and structural cracks, (Figure E and F – image of broken rivets and structural crack) engineers deemed it unsafe to continue operations and closed the bridge for three days while emergency repairs were made. All local and through traffic normally routed over the Southern Tier was temporarily detoured onto other railroads. This disruption had the immediate effect of leading to train service delays and triggered concern among all the stakeholders – many of the 10 short line railroads, two Class I railroads, all their customers and transportation planners – that the bridge's future is precarious and that without a new bridge in place before the existing structure is taken permanently out of service, the Southern Tier could be severed for an extended period of time or even permanently.

Fourth, the Portageville Bridge poses a safety hazard for park patrons and railroad employees. Park visitors frequently trespass on railroad property for the views of the Genesee River gorge possible from the bridge, despite efforts by NS to discourage trespassing through preventative measures such as fencing. Moreover, at such heights and in light of the extensive maintenance and inspection requirements, the bridge poses a safety hazard for railroad employees who must perform the dangerous work that allows the bridge to remain in operation (Figure G – image of maintenance of way employee working underneath the bridge). A modern, new bridge on an adjacent alignment will reduce the need to perform maintenance and inspections beyond standard procedures for new railroad structures. The new bridge will also include automatic gates that will block access to the new bridge by park patrons, greatly enhancing safety on the bridge.

Finally, as traffic volumes continue to grow along the Southern Tier, the bridge becomes increasingly important and integral to continued carload growth – and therefore its operational constraints will affect many other carloads and customers. Today, even a temporary bridge disruption will not only discourage development of new intermodal service lanes and shrink, delay, or eliminate some industrial development projects along the Southern Tier, but also negatively impact freight rail services in New England, Canada and the Midwest. As the need to utilize the corridor as an alternative to increasingly congested interstate highways grows, the replacement of this bridge becomes increasingly essential.
3.0 Project Parties

This application is proposed as a public-private partnership between the USDOT, NYSDOT, Norfolk Southern and Canadian Pacific. Norfolk Southern (NS) owns the Portageville Bridge, which is part of Southern Tier Route acquired in 1999 as part of the Conrail transaction. Canadian Pacific Corporation (CP) maintains haulage rights along the Southern Tier from Buffalo to Binghamton and comprises approximately 17 percent of the total carload traffic over the Portageville Bridge annually. CP will be responsible for a portion of the total private contribution toward the bridge replacement proportionate to the percentage of total carload traffic the railroad comprises over the bridge. NS and CP have agreed to maintain at least a 50 percent private contribution toward the project’s total cost. Meanwhile, NYSDOT is providing $3.5 million to the project, currently ongoing, for preliminary engineering.

The New York State Department of Transportation is the project’s applicant, the official grant recipient, and is providing a portion of the project’s cost-share.

Norfolk Southern is the owner of the bridge and will provide a portion of the project’s cost-share.

Canadian Pacific maintains haulage rights over the bridge and will provide a portion of the project’s cost-share.

3.1 Directions to FTP Website and Password

While this application is being submitted through grants.gov, selection committee members are encouraged to visit www.tigercrescentapp.com/portageville, a password-protected ftp site that will include updates to the appendix, particularly useful as more letters of support are submitted beyond the application submission deadline. The site’s username is tiger3 and its password is iron.
4.0 Grant Funds and Sources/Uses of Project Funds

Financial Plan: The figure below includes a detailed cost-allocation for the proposed project, by spending item, year and by contributor.

### Portageville Bridge Replacement Project Budget

<table>
<thead>
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<th>Project Components</th>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>$17,750,000</strong></td>
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### Portageville Bridge Replacement Project Budget

<table>
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<th>Non-TIGER III Participation</th>
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<tr>
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<td><strong>$2,100,000</strong>  <strong>$16,650,000</strong>  <strong>$17,650,000</strong></td>
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5.0 The Historical & Contemporary Context of the Portageville Bridge & Southern Tier Corridor

This section offers a brief summary of the history of the Southern Tier Route and its substantial contributions to manufacturing and agriculture in New York State, beginning with the creation of the New York & Erie Railroad in 1832 through the eventual demise of the Erie Lackawanna Railroad as manufacturing in the Eastern U.S. declined and construction of the interstate highways captured a disproportionate share of freight and passengers.

The New York & Erie Railroad grew quickly. In 1845, even before the original line from Piermont to Dunkirk was complete, the eastern and western ends of the line were extended. The Buffalo & New York City Railroad developed as a branch of the New York & Erie as an addition on the western end. This branch required a bridge at the town of Portage over the Genesee River in the Genesee Valley. Designed by engineer Silas Seymour, the bridge was an engineering feat – first constructed in wood, and towering 245 feet above the Genesee River’s Upper Falls and spanning 819 feet across the river gorge. At the time, it was the tallest and longest wooden railroad bridge of its kind in the world.

Built in only 13 months, the wooden Portageville Bridge carried its first train on August 14, 1852. As with the other east-west rail lines developed during this period, the corridor helped to foster the industrial revolution and drive economic development in many of the communities it served. For 23 years, the bridge handled a steady flow of passengers and freight until a fire destroyed it on May 6, 1875 (Figure H and I – image of the Portageville wooden bridge and another after the fire).

Responding quickly, the Erie Railroad rebuilt the bridge in 53 days, only this time with iron. Completed on July 31, 1875, the same iron bridge still stands today. The Erie Railroad later merged with the Lackawanna Railroad to become the Erie Lackawanna in 1960, in an era when the railroad industry saw intense merger activity in an effort to stave off bankruptcies in the 1950s and early 1960s. The merged railroad, known as the EL, ran from New Jersey to Chicago, and struggled to survive during this period. (Ironically, the EL was controlled through stock by the Norfolk & Western Railway, the immediate predecessor of Norfolk Southern).

The Erie Lackawanna Railroad later became part of the Conrail system after the bankruptcy of the Penn Central Railroad. For many years, and particularly during the period of Conrail ownership, the Southern Tier Corridor received little investment and was underutilized. The route’s role as a major transportation corridor consequently declined, as Conrail invested more in the two other competing east-west routes, the old Pennsylvania Railroad from Philadelphia/North Jersey to St. Louis, and the New York Central route from Boston/Albany to Kansas City, via Chicago. Industrial development activity along those corridors grew, while many of the communities along the Southern Tier in New York saw the loss of industries as well as population.

Because Norfolk Southern had also had acquired the Pennsylvania Railroad Corridor, one of the densest freight rail corridors in the nation, some were concerned that NS, like Conrail, would also not invest in the Southern Tier. To the contrary, however, since acquiring the route in 1999, NS has demonstrated its interest in retaining the Southern Tier Corridor as a critical piece of its marketing and operational strategy and plans.
5.1 Recent Southern Tier Route Rail Investments

Since NS acquired this line segment from Conrail in 1999, it has undertaken a number of significant investments on the Southern Tier Route, including bridge replacements, rail yard improvements, and track upgrades along the Corridor. These investments are designed to improve service, attract new business and enhance safety. As evidence of NS’s strong commitment to safety, NS has won the E.H. Harriman Memorial gold medal award for the lowest employee injury ratio among Class I railroads for a record 22 years in a row.

The following table summarizes the recent bridge improvements Norfolk Southern has made along the Southern Tier.

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<tr>
<th>Bridge</th>
<th>Year Replaced</th>
<th>Approximate Cost</th>
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<td>Bridge SR-214.42 over Front St. in Binghamton</td>
<td>2004</td>
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<tr>
<td>Bridge SR-393.68 over Buffalo Rd. in Attica</td>
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</table>

However, while they have independent utility, these improvements cannot be used to their full potential until the Portageville Bridge is replaced with a new bridge that can function at a comparable operating level. Indeed, these assets and all the other bridges along the Tier remain stranded investments.

NS also has invested more than $10 million in recent years to reassemble, expand, and improve its operations at Bison Yard in Buffalo. This yard had been considered redundant and was largely dismantled by Conrail. Today, Bison Yard is a major multi-use facility that:

1.) Serves as a crew change point for through trains;
2.) Functions as a flat switchyard for local operations;
3.) Includes an automotive distribution terminal for Ford and Chrysler vehicles with 50 railcar spots and the capacity for 2,424 vehicles;
4.) Includes a Just-in-Time (JIT) Rail Center, one of only three on Norfolk Southern’s network, offering truck-competitive transportation options for automotive parts originating within a 150-mile radius of the Buffalo JIT Center and destined for Mexico; and
5.) Includes an intermodal facility that performed 37,400 lifts (a lift is counted each time a trailer or container is lifted onto or taken off a railcar) in 2009.

However, the Portageville Bridge’s current condition jeopardizes the full use of the Bison Yard’s investments, because of limitations to growing freight rail opportunities and improving freight rail service to existing customers to their full potential along the Southern Tier. Furthermore, the bridge’s condition diminishes rather than enhances the opportunity to increase Buffalo’s position as an international gateway for Canadian freight rail trade to New York City and the East Coast, and vice versa.

NS has completed key rail infrastructure improvements intended to enhance the Southern Tier’s 35-mile segment between Binghamton and Waverly, New York. That $10 million investment, of which NYSDOT contributed $3.5 million, involved installing a new signal system and crossties, as well as replacing jointed rail with continuously welded rail. The project markedly improves train operating speeds, reduces track maintenance, and enhances the entire Southern Tier Route.

If the Portageville Bridge was taken out of service, these recent private and public investments in the Southern Tier would be stranded, and the intermodal double-stack trains operating on the line today would be lost. The freight traffic that does remain would likely be handled by trucks.
5.2 The Southern Tier’s Empire Link

New York State is home to a one-of-a-kind partnership that is serving as a model for the rest of the country. Norfolk Southern and 10 New York-based short line railroads formed the “Empire Link,” a program intended to convert short-haul truck movements to rail. The “Empire Link” allows these short line railroads to market the excess capacity on the Southern Tier main line between Binghamton and Silver Springs, N.Y. (a segment that includes the Portageville Bridge), as well as on branch lines between Corning and Geneva, and between Waverly and Ludlowville, allowing the short lines to connect and interchange traffic with each other by accessing the Southern Tier. Figure J- highlights the participating Empire Link railroads.

The 10 short lines participating in the Empire Link are the Bath and Hammondsport Railroad; Central New York Railroad Corp.; Finger Lakes Railway; Livonia, Avon and Lakeville Railroad; the New York, Susquehanna & Western Railway Corp.; Ontario Central Railroad; Owego & Harford Railway; Rochester and Southern Railroad; Wellsboro and Corning Railroad; and Western New York & Pennsylvania Railroad. As the economy continues to improve, NS and its partners remain optimistic about the program’s future success in diverting short-haul truck moves to rail. In comments supporting the project to rebuild the Portageville Bridge, Mike Smith, president of the Finger Lakes Railway stated, “This program is called the Empire Link and has seen progress on many interchanges that have successfully removed circuity, sped up rail service from origin to destination, and provided truck competitive pricing.” Mr. Smith adds further that the Portageville Bridge project “once completed will enhance our rail service offering while keeping our focus on cost-effective rail rates and efficient direct routing to and from our important and growing customer base.”
5.3 The Southern Tier’s Industrial Development Projects

Norfolk Southern has historically been known for its aggressive industrial development program to attract industries to its lines and to work successfully with existing customers on expansions. NS has brought that practice and expertise to the New York Southern Tier, and customers and communities are seeing those efforts bear fruit. Carload and industrial development activity along the Southern Tier has increased markedly in recent years and is expected to grow with time. NS also works with its short line partners in attracting industry. As a result, companies involved in food processing, propane distribution, bulk transfer facilities and others have located along the Southern Tier or connecting short lines. Notably, there has been a recent surge in economic development activity in the region, resulting in the demand for tens of thousands of annual carloads of sand, diesel fuel, brine, and pipe, much of it originating thousands of miles away in locations such as Texas, Oklahoma, Michigan and Illinois. The Southern Tier of New York is enjoying the kind of economic development and job creation it has not experienced in many years.

The Portageville Bridge is part of an efficient freight access route, precisely where the demand is currently. In a few short years, the region has exploded with private investments and increased demand for freight. This reinforces the need for reliable infrastructure along the route: if the Southern Tier were to be severed, even temporarily, some or all of this freight could be lost to long-distance, heavy-haul trucks; and even a small percentage of freight moved by truck is significant in light of the expected high volumes. There is no doubt that due to their weight, these trucks will accelerate the wear and tear to highways not only in New York but also in the states they must travel through before arriving in New York. Moreover, because of the energy-intensive nature of moving heavy freight long distances, trucking will consume far greater quantities of diesel fuel and result in substantially more air pollution than if the freight is moved by rail, and particularly if it is moved along the most efficient rail routes, including the Southern Tier.

The new industrial projects, both ongoing and potential, along the Southern Tier are promising signs for an area of New York that for decades has been plagued with some of the highest levels of unemployment and population decline due to the exodus of the manufacturing industry. The prospect for economic development is improving as new drilling companies and their support organizations locate within the area, hiring people within the area, purchasing goods within the area, and consequently expanding the tax base. In the process, major investments are bringing back on line many formerly served rail sites and yards, which in turn is enhancing the quality of life for those who call these communities home.

A prime example of the resurgent economic activity is the Center at Horseheads in Horseheads, N.Y. As recently as two years ago, this 500-acre industrial park constructed in the 1940s as a military depot by the U.S. Army Corps of Engineers sat largely vacant and had a correspondingly small amount of freight rail demand – requiring fewer than 100 carloads. Indeed, the facility itself was mired in bankruptcy. In 2010, with the infusion of new tenants tied to the natural gas industry setting up shop at the facility, carload demand on the Horseheads Industrial Track spiked by more than 1,000 percent to 1,786 cars, largely for hauling sand and pipe. And as demand picks up, the facility could handle anywhere between 8,000 and 12,000 carloads annually. The operator of the facility is making more than $1 million in track upgrades and other improvements for new companies at what was once a neglected and underutilized industrial park. Along with Horseheads, businesses are springing up in Wellsboro, Owego, Sayre, Elmira, Binghamton, Corning and Endicott.
The table above shows the dramatic increase in new shipments tied to the surge in economic activity in the Chemung-Elmira region.

While economic development tied to these new industries will not be eliminated if the Southern Tier is severed as a result of deterioration of the Portageville Bridge, the higher transportation costs associated with either moving freight by another more circuitous route or by truck will result in less capital available to purchase additional goods and hire additional employees. Therefore, the full benefits of this new industrial development and the associated freight rail investments cannot be fully optimized without the Portageville Bridge’s replacement.

Finally, there is a natural reluctance on the part of businesses to make significant capital investments in order to locate on a rail-served site or expand rail service unless there are assurances that the service can be consistent, reliable, and cost-competitive. The Portageville Bridge’s operational constraints and deteriorating condition make industrial development projects along the Southern Tier and in other locations predicated on the corridor’s preservation far less enticing, resulting in projects being delayed, scaled back in scope, or eliminated from the drawing board entirely. Maintaining the efficiency of an intact Southern Tier Corridor for freight transportation is critical if we are to maintain that momentum of job creation and reverse the long decline in population. The region is witnessing investments in the tens of millions by private companies, creating jobs in energy, related fields and other services.

6.0 Enhanced Cross-Border Trade via Rail: Canadian Pacific and New Intermodal Opportunities

North American Free Trade Act (NAFTA) commerce is another important and on-going component of the Southern Tier Route and Portageville Bridge. Canada is the nation’s largest trading partner, and the Buffalo-Niagara gateway is a major international artery for this trade, facilitating $82 billion annually, or roughly 15 percent of the total trade conducted between the world’s two largest trading partners.
The region serves as the second-largest international gateway for U.S.-Canada trade by virtue of its central location, providing access within 500 miles to 55 percent of the U.S. population and 63 percent of the Canadian population as well as 75 percent of Canada’s manufacturing activity and 55 percent of U.S. manufacturing activity.

The greater Buffalo-Niagara region has long sought to increase the use of rail intermodal to help alleviate the significant cross-border truck traffic between the U.S. and Canada while at the same time creating new economic development opportunities associated with international intermodal services. Currently, Buffalo-Niagara is one of several locations where a substantial volume of containers are transported to or from the Port of New York and New Jersey. Much of this current container traffic moves by truck between the two regions and is concentrated principally along interstates, but could just as easily move along the Southern Tier’s parallel rail route. By developing reliable intermodal rail service along this lane, without the current disruptions encountered by the Portageville Bridge, much of today’s container truck traffic could be absorbed by rail. And this new intermodal service would begin to accelerate Buffalo’s role as part of the Port Authority of New York and New Jersey’s (PANYNJ) port inland distribution network (PIDN), which will help accommodate the precipitous container traffic growth that is occurring at the Port.

According to the Greater Buffalo-Niagara Regional Transportation Council’s (GBNRTC) Niagara Frontier Urban Area Freight Transportation Study, approximately 75 percent of the region’s freight travels by truck today. And while the opportunity to expand freight rail international service along the Southern Tier exists, the Southern Tier’s inefficient and unreliable performance due to the Portageville Bridge stymies growth opportunities. In other words, the Portageville Bridge currently serves as a barrier to international trade, diminishing rather than enhancing U.S. competitiveness in the global economy. According to the USDOT’s “Global Connectivity Strategic Goal” which is part of its Strategic Plan 2006-2011, the Department is to “facilitate an international transportation system that promotes economic growth and development.”

Canadian Pacific uses the Southern Tier corridor between the Midwest U.S. and Canada to move traffic to Binghamton. CP does have alternate routing options to New York State should the Southern Tier Route be severed as a result of a Portageville Bridge failure, but as Shawn Smith, general manager of strategic network development for CP, states, “the Southern Tier routing provides the most direct and efficient rail route between certain points on our network and southwestern New York and Pennsylvania.” He further maintains that, “Upgrading the bridge will play an important part in strengthening cross-border trade between Canada and the United States ... and offers the best opportunity to expand further cross-border trade moved by rail, delivering even more freight efficiently between the US East Coast and points on CP’s continental network.” (Figure N)

Since the 1990s, out of desire to increase container throughput at the Port, the PANYNJ has invested heavily in on-dock rail infrastructure projects, which are seen as a way to alleviate the heavy truck traffic volumes choking roadways around the Port and slowing freight movements. Referred to as the ExpressRail System, this $600 million rail program undertaken at each of the Port’s three major container
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terminals has created rail facilities and support tracks that are working in concert with the PANYNJ’s other strategic investment to augment capacity, enhance throughput, and optimize the inherent strengths of each freight transportation mode (Figure K).

For several years now, NS and the PANYNJ have discussed the possibility of introducing an intermodal service lane between the Port and Buffalo along the Southern Tier Route – the most direct double-stack cleared intermodal route between the two metropolitan regions. One of the chief obstacles preventing introduction of this new intermodal service until now has been the deteriorating condition of the Portageville Bridge. As this new intermodal lane will require the hiring of additional train crews and dedicated rolling stock assets, including railcars and locomotives, among other resources, the uncertainty of the bridge, and therefore the route’s future, has been too significant a barrier to overcome. There was some hope that NS would be able to launch this new service by 2011. While not necessarily the chief reason for the delay, the uncertainty surrounding the timing of a replacement bridge certainly has been a major factor.

By supporting the Portageville Bridge Replacement Project, the USDOT will improve the performance of the entire rail corridor, which links to regional, national and international markets. For example and as mentioned in the previous section, intermodal service is set to begin soon between Buffalo and the Port of New York and New Jersey along the Southern Tier. As the 20th largest container port in the world, the third largest in the U.S. and the largest on the East Coast, the Port of New York and New Jersey has an opportunity to leverage an enhanced Southern Tier corridor in moving even more container traffic through the Port to Canada and the interior of the U.S., and vice versa.

7.0 The New England Connection: Pan Am Southern

The Portageville Bridge also plays an integral role linking rail movements from the West Coast and Midwest with eastern New York and New England as part of Pan Am Southern, LLC (PAS), a joint venture between NS and Pan Am Railways. This joint venture involves approximately 436.8 miles of rail lines in New York, Massachusetts, Vermont, New Hampshire, and Connecticut. In the transaction, Norfolk Southern agreed to contribute $137.5 million, of which $87.5 million would go toward improving rail infrastructure on the 155 miles of main line track between Ayer, Mass., and Mechanicville, N.Y. (Figure L – Pan Am Southern Map).

These improvements are expected to bring a new level of rail competition and service in upstate New York and New England, but the joint venture’s long-term success is predicated on the Southern Tier remaining intact and in service at all times. Trains originating in the Midwest that are destined for New England by way of Norfolk Southern and PAS are routed on the Southern Tier at Buffalo and taken down to Binghamton, crossing the Portageville Bridge approximately in the middle of the track segment. At Binghamton, the trains move onto Canadian Pacific’s route until arriving in Mechanicville, at which point the route becomes PAS and continues eastward toward Ayer, Mass.
As part of Norfolk Southern’s $87.5 million in capital improvements along PAS, a new $40 million intermodal facility and automotive terminal at Mechanicville, located approximately 25 miles northeast of Albany, N.Y., is under construction. After its first full year in operation, the new facility will have the capacity to perform 35,000 lifts annually (a lift is counted each time a container or trailer is lifted onto or off a railcar) and handle 3,000 vehicles (Figure M – Conceptual engineering design of Mechanicville). This new facility is expected to spur more than $100 million in economic development as integrated logistics and warehousing distribution centers as well as manufacturers locate and expand area operations near the terminal. The amount of economic development, however, is tied directly to the number of lifts performed at the facility. Of course, if repairs to the Portageville Bridge take the Southern Tier even only temporarily out of service, that will have immediate and direct consequences for PAS intermodal traffic. The more prolonged the disruption, the more adverse the impact, resulting in significant economic development implications for the greater Albany region.

8.0 Consistency with State & Local Planning Efforts

In the 2009 State Rail Plan, the New York State Department of Transportation laid out its 2020 vision for a freight rail system that will serve New Yorkers well, be a preferred choice for shippers, and connect New York’s communities and industries to the national and international freight network. The project to replace the Norfolk Southern’s railroad bridge over the Genesee River between Wyoming and Livingston counties will substantially help the state fulfill that vision.

In the rail plan, NYSDOT enunciated a number of goals for the freight rail system, and replacing the Norfolk Southern Portageville Bridge will help achieve two of those goals:

- Increasing freight rail market share by 25 percent, reducing growth in truck traffic and energy consumption;
- Serving business upstate and downstate via an integrated rail network that is restored to good condition and maintained in a state of good repair.

The rail plan (available at https://www.dot.ny.gov/divisions/policy-and-strategy/planning-bureau/state-rail-plan) identifies the bridge as one of 10 bottlenecks in the state’s Class I rail network. In identifying the bridge as a major bottleneck that must be addressed, the report states that, “The weight restrictions and low operating speeds significantly impact the line’s overall capacity. Any long-term closing of the Portageville Bridge would threaten the vitality of the entire route between Buffalo and Binghamton” (emphasis added).” Moreover, the report identified the Southern Tier network as “critical to the State’s long-term economic vitality;”
Significantly, the metropolitan planning organizations as well as local and county economic development offices that are adjacent to or near the Southern Tier have all identified the replacement of the bridge as a critical component to advance their own economic and transportation needs. For example, in its Niagara Frontier Urban Area Freight Transportation Study, the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) indicated that replacing the Portageville Bridge is a necessary rail investment to allow the Southern Tier to provide better access between the Buffalo Gateway and the Port of New York and New Jersey. Other communities and planning organizations within the state have acknowledged the economic development and transportation and environmental benefits the bridge replacement project promises to deliver as expressed in their strong letters of support and their own previous transportation studies citing the need to replace the bridge. The GBNRTC study is available at http://www.gbnrtc.org/planning/freight/ and local and state letters of support for the Portageville Bridge TIGER Discretionary Grant application are available in Appendix 15.3.

The Southern Tier Corridor is vital to New York State, and also to the rest of the country. The corridor not only impacts New York State, but also connects the Buffalo Gateway and the rest of New York and New England to the Midwest, providing connectivity to the rest of the nation. The Southern Tier plays an important role for cross-border NAFTA trade with Canada and is used by many short line railroads and the Canadian Pacific while also helping sustain freight rail investments and business in other portions of the country. A detailed above, the local, state, and national implications of not replacing the Portageville Bridge are stark. For many of the communities, a severed Southern Tier would eliminate the direct connection now enjoyed between the Buffalo Gateway and Binghamton, New York City, and New England. Consequently, this would result in more circuitous freight rail routing that likely would lead to more freight movements by commercial trucking, discouraging industrial development projects predicated on freight rail’s efficiency, economy and reliability in the region.

Recognizing the importance of preserving this important transportation corridor, New York State declared the need to preserve the existing rail system as a long-term transportation asset. This includes maintenance of the rail network through strategic programs to keep rail operations viable. NYSDOT took the first step in this effort to preserve this corridor by providing $3.5 million in public funds for preliminary engineering. If the Southern Tier Corridor is allowed to deteriorate, such a vital transportation corridor would be extremely difficult to assemble again. As has happened elsewhere in the country, the corridor would become fragmented and parceled to many owners, making reassembly challenging. In the meantime, freight would shift to truck, which would be less efficient and more harmful to the environment. NS has contingency plans, but those plans only slightly mitigate the harm. As shown in the cost-benefit analysis section, the detour options would increase costs, increase inefficiencies, and could result in diverting some of this freight to the highway.

Maintaining the integrity of the Southern Tier is also important as it relates to the nation’s national defense and military preparedness. As NYSDOT pointed out in the state rail plan, the department continues to work with the United States Military Surface Deployment and Distribution Command’s Transportation Engineering Agency to provide updates affecting the national Strategic Rail Corridor Network (STRACNET). The Southern Tier Corridor is a civilian rail line important to national defense. Lines designated for STRACNET within each corridor, and most connectors to military installations and activities requiring rail service, meet defense readiness requirements for maintenance condition, clearance and gross weight capability. While the Southern Tier meets the clearance requirements, because of the weight limitations on the Portageville Bridge, the corridor is not in compliance with the gross weight capability requirements and therefore may hamper the needs of the military to move equipment in a timely and efficient manner.
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Conclusion

Despite the investments along the Southern Tier and the promising opportunities to move more freight by rail both through the corridor and within it, all options taking the bridge out of service either for emergency repairs or an extended period of time while a new bridge is constructed, or, in the most extreme case, permanently without constructing a new bridge have the same end result – severing the Southern Tier. And in all events, service disruptions are felt regionally, nationally and internationally. While most of the freight may continue to move by rail, albeit on other railroads and along other routes, this would not necessarily result in optimal routing, pricing, and transit times. As transportation planners know, inefficiency like this puts freight rail and those industries that rely on it at a competitive disadvantage. If the competitive disadvantage persists long enough, businesses and railroads may falter while shippers select long-distance trucking over freight rail for meeting their transportation needs.

9.0 Benefit-Cost Analysis

Cambridge Systematics (CS) performed a rigorous, detailed cost-benefit analysis for the project. The analysis considered five categories of long-term outcomes: state of good repair; economic competitiveness; livability; sustainability; and safety. Non-monetized and monetized benefits were calculated for 30 analysis years, beginning in 2012 and ending in 2041. Monetized benefits were summed and discounted to net present value at rates of 3% and 7% annually. Benefit-cost ratios were calculated as NPV less project cost divided by project cost.

As previously noted, the project is expected to provide the following types of benefits: 1) some businesses that ship by rail will close entirely because they no longer remain competitive; 2) others will transition a percentage of their shipping to long-distance truck movements to meet their logistics needs; 3) others will continue to move by rail, via longer and more expensive rail routes; and 4) others will scale back, delay, or eliminate business activities due to higher transportation costs. CS believes each of these effects is real, and is likely to be realized in some proportion, if the project is not constructed as planned. The absolute “best case” scenario, if the project is not constructed as planned, is that current rail shippers will behave as follows: they will continue to use rail service over a longer and more expensive route; they will continue to operate and expand their businesses as expected; and they will not shift rail traffic to truck. CS calculated long-term outcomes from this “best case” no project scenario, and from the “with project” condition, and the difference represents the minimum long-term outcome benefits attributable to the project.

The key metrics in the analysis are: overall growth in rail traffic; reduced railcar mileage due to the continued availability of the Portageville routing; and reduced railcar handling costs due to the continued availability of the Portageville routing.

NS traffic over the Portageville routing has increased dramatically in recent years, and is projected to grow very strongly into the future due to the transportation needs of growing industries, including energy resources, transportation equipment, consumer goods, and other commodities. For the near-term, CS utilized traffic forecasts provided by NS; for the long-term, CS utilized traffic forecasts from the USDOT Freight Analysis Framework-3; and for interim years, CS transitioned between the two forecasts for interim years.
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To estimate reduced railcar mileage and railcar handling costs, CS used information provided by NS using its sophisticated network routing tool called Operation Plan Developer (OPD). NS employs this tool to make key decisions in its own operations and investment decisions. That system is a tool that describes the current traffic profile, as well as forecasts future traffic. OPD identified the traffic, the operating plan, and the network constraints for the alternatives. The two key metrics are car miles (circuitous miles a car will travel), and car days, or how much time the railcar takes from origin to destination. The analysis then calculates the public benefits of reduced emissions, reduced wait times at crossings, reduced highway congestion, and reduced fatalities on the highways should the bridge be replaced and current and future traffic stay on rail. The OPD looked at several routing options, and selected a total of five preferred re-routing options, which minimized travel distances for trains between different origin-destination pairs.

Long-term outcome benefits can be summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>Non-Monetized Benefits</th>
<th>Monetized Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over 30 Years</td>
<td>Over 30 Years</td>
</tr>
<tr>
<td>Rail Traffic (Loaded Cars)</td>
<td>6,958,480</td>
<td></td>
</tr>
<tr>
<td>Reduced Railcar Mileage</td>
<td>628,722,376</td>
<td></td>
</tr>
<tr>
<td>Reduced Fuel Consumption (gallons)</td>
<td>95,153,576</td>
<td></td>
</tr>
<tr>
<td>Reduced Carbon Emissions (tons)</td>
<td>1,056,205</td>
<td></td>
</tr>
<tr>
<td>Reduced NOx Emissions (tons)</td>
<td>32,882</td>
<td></td>
</tr>
<tr>
<td>Reduced PM Emissions (tons)</td>
<td>818</td>
<td></td>
</tr>
<tr>
<td>Reduced Fatalities</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1. State of Good Repair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Economic Competitiveness Savings</td>
<td></td>
<td>$1,248,718,632</td>
</tr>
<tr>
<td>3. Livability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sustainability Savings</td>
<td>$433,043,042</td>
<td></td>
</tr>
<tr>
<td>5. Safety Savings</td>
<td>$24,619,695</td>
<td></td>
</tr>
<tr>
<td>Total Benefit in Current Dollars</td>
<td></td>
<td>$1,706,381,368</td>
</tr>
<tr>
<td>Discounted Benefit at 3%</td>
<td>$965,867,034</td>
<td></td>
</tr>
<tr>
<td>Discounted Benefit at 7%</td>
<td>$479,016,597</td>
<td></td>
</tr>
<tr>
<td>Project Cost in Current Dollars</td>
<td></td>
<td>$40,000,000</td>
</tr>
<tr>
<td>BAR at 3%</td>
<td>23.1</td>
<td></td>
</tr>
<tr>
<td>BAR at 7%</td>
<td>11.0</td>
<td></td>
</tr>
</tbody>
</table>

The greatest benefit is realized in the form of Economic Competitiveness, which represents cost savings associated with handling rail traffic over shorter and less-expensive routings. The next greatest benefit is Sustainability, which represents reduced social costs for fuel consumption, carbon emissions, NOx emissions, and PM emissions due to shorter rail routings. Safety savings are realized in the form of reduced fatalities from reduced railcar miles traveled. The total benefit in current dollars is estimated at more than $1.7 billion dollars, resulting in a BCR of 23.1 (assuming 3% discounting) and a BCR of 11.0 (assuming 3% discounting). See Appendix 15.1 for a detailed summary of the Benefit-Cost Analysis.
10.0 SELECTION CRITERIA

The table on the previous page summarizes the monetized and nonmonetized benefits calculated over a 30-year period, as determined by CS.

10.1.1 State of Good Repair: Following a period of underinvestment during much of the Conrail ownership, Norfolk Southern lived up to its commitment to make investments that improve the service and performance of the Southern Tier Corridor and to bring the entire corridor between Buffalo and Binghamton up to a state of good repair. Indeed, when combined with NS previous investments in the Southern Tier, its investments as a result of PAS and the 50 percent match it is committed to invest in the Portageville Bridge, this project may represent one of the largest investments of private capital into a railroad network that stretches from Buffalo to the PAS New England region since the bankruptcy of the Northeastern railroad system. NS is reopening yards previously closed or defunct in the Elmira-Chemung area and, most strikingly of all, is constructing the new intermodal and auto terminal at Mechanicville at a cost of $40 million.

Structurally deficient and operationally obsolete, the current Portageville Bridge structure at 135 years old is quickly approaching the end of its useful design life as a rail freight carrying structure. The bridge was forced to shut down for three days two years ago, in September 2009, after an inspection revealed structural cracks and broken rivets on the bridge, resulting in a temporary severing of the Southern Tier. In the last two years, NS has spent over $240,000 each year in maintenance and monitoring costs on the existing structure. These costs will go away with the new structure. As fatigue and corrosion have taken their toll, the bridge has for years remained weight-restricted to a load-carrying capacity of 273,000 gross weight pounds instead of the Class I railroad standard 286,000 pounds. Since the Southern Tier corridor can only be as strong as its weakest link – which has been the Portageville Bridge for many years – the entire corridor is thus limited to 273,000 pounds per rail car. Heavier trains such as coal and stone are routed around the Southern Tier entirely, resulting in longer shipping distances. The bridge’s weight restrictions also impact other rail corridors that must route trains over the bridge, since these other corridors are equally constrained to the bridge’s maximum allowable weight. As discussed previously, this has immediate implications for PAS and Canadian traffic on Canadian Pacific.

Meanwhile, the bridge’s 10 mile-per-hour speed restriction versus normal 35 to 50 miles per hour affects train velocity along the rest of the corridor, adding to transit times and service reliability. When a train approaches the bridge, it must reduce speed to 10 miles per hour and not increase or accelerate again until the last car, sometimes a mile or longer away, has cleared the bridge (Figure N – aerial view of the Portageville Bridge showing the track curves leading into the bridge). This chokepoint thus diminishes the value of investments made along the corridor such as signalizing territory and installing continuously welded rail between Binghamton and Waverly, as well as on other corridors, such as PAS, intended to enhance train velocity.
Building the new bridge would remove significant operational constraints and would preserve and enhance the Southern Tier corridor for decades to come. It bears repeating that prior to the Conrail split and the merger into the NS and CSX systems, the Southern Tier Route remained substantially underutilized and experienced deferred maintenance, particularly as the communities along the route continued to undergo steady decline in industrial production, jobs, and population. NS will own and maintain the new bridge and will be responsible for upkeep and maintenance once this one-time public investment has been made. Unlike a highway or vehicular bridge project, this $17.5 million public investment does not require any ongoing use of tax dollars. The substantial cost-share by NS and CP into the bridge as part of this project increases the certainty the railroads will retain the entire Southern Tier corridor and remain a significant and viable transportation force in the state, while promoting economic development along their rights of way.

10.1.2 Economic Competitiveness
The Southern Tier serves three distinct markets: the Buffalo-Niagara region, with its strategic location for trans-border trade; the Elmira-Chemung area, a traditional agricultural and manufacturing region that is now seeing surge in rail traffic due to the extraction of mineral resources and other industrial activity; and Binghamton, which serves as a mini rail hub for east-west traffic as well as direct connections to New England, the New York Metropolitan region, and points south.

The Buffalo-Niagara Gateway is strategically located to take advantage of the ever-growing increase in NAFTA-related trade. The bridge replacement project would strengthen the Buffalo Gateway and aid the region's goals of using its strategic location to expand international trade and the rail activity.

As an intact corridor, the tier would provide essential connectivity between the Port of New York and New Jersey-Buffalo, giving the New York port area and port industries direct rail access to and from Canadian markets, which the railroads and the state would like to see grow. A recent Niagara Frontier Transportation study estimates that freight movements through the Buffalo/Niagara area will more than double, increasing to 93 million tons by 2035 from 47 million in 2004, while cross-border traffic will triple from 6.4 million to 18.2 million tons during this same period. That study notes that most of the international traffic coming over the gateway is on the highway, creating a significant bottleneck at the border crossings. NS has expressed a strong interest in developing intermodal rail service between Canada and the Buffalo Gateway to the PANYNJ. If the Southern Tier Route is severed, however, that development would be highly unlikely as there are no viable options to the more direct efficient Southern Tier between Buffalo and New York City.

The Elmira-Chemung area retains its position as a strong manufacturing economy that is very much dependent upon efficient and cost-effective freight rail service. Indeed, a recent report by the Elmira-Chemung Transportation Council revealed that manufacturing companies had higher sales, revenues and annual compensation than the health care and social assistance sectors while employing just as many people. The recent surge in industrial activity due to gas and other natural resource explorations in the area will help support this trend.
Improving the corridor also offers NS and the short line railroads the opportunity to restore and utilize several brown-field sites, particularly in the Elmira-Chemung region. NYSDOT sees potential in the Binghamton area as well. NS recently reopened a defunct rail terminal in the Elmira area, for instance, for freight rail operations. The privately owned Center at Horseheads Industrial Park in Horseheads, N.Y., is currently expanding and improving facilities for new rail customers, bringing in increased employment at the same time. Using closed and underutilized rail facilities and terminals that are brown-field sites serve an important public purpose and need.

Binghamton will once again have the opportunity to operate as a railroad hub, a position it held in the past. With its geographic location, it served as a hub for east-west and north-south rail traffic. That role diminished as manufacturing declined and the interstates were built. But that location can give it a distinct advantage once again. With the creation of the PAS, NS expects to significantly increase intermodal and other operations into New England from the south and the west and will utilize Binghamton as the location where trains will switch from NS’s Southern Tier to CP’s route toward Albany.

10.1.3 Livability: Helping to reduce the amount of freight that moves in trucks over the state’s roads is critical to livability improvements for New York residents. The Eastern U.S. is one of the most populated and highest traffic-congested areas in the country. This situation threatens public health and safety and constrains regional economic growth and global competitiveness. It is often difficult and expensive to get around the region, which adversely impacts the region’s comparative quality of life, access to jobs and affordable housing, and business location decisions. The amount of delay endured by the average commuter was 34 hours, up from 14 hours in 1982.

The report also finds congestion is becoming a bigger problem outside of “rush hour,” with about 40 percent of the delay occurring in the midday and overnight hours, creating an increasingly serious problem for businesses that rely on efficient production and deliveries. A new Portageville Bridge will create an opportunity to more efficiently transport freight, move more freight by rail, and ensure that the freight that currently accesses the Southern Tier will continue to do so rather than be diverted to the highways – otherwise, the double-stack intermodal trains that NS and CP transport over the bridge have a high chance of being converted into increased highway traffic.

At a time when freight railroads, state departments of transportation, and the USDOT nationwide are clearing corridors to handle double-stack intermodal traffic, there is a risk that the nation and New York State will lose an established double-stack cleared route—one of the nation’s oldest and the first east of the Mississippi River. This would represent a modal shift in freight in the opposite direction from what is desired by federal policymakers. Once traffic is converted to the highway mode, it would place an additional burden on roadways, resulting in more gridlock, increasing fuel consumption and attendant air emissions. This shift to trucks also would accelerate the need to expand interstates, resulting in the consumption of more land to accommodate the growth in traffic.
In this regard, New York State is referring not only to freight that would shift to trucks for delivery to those communities adjacent to the Southern Tier, but also for through traffic now moving in containers for markets in New England and northern New Jersey. Since intermodal rail traffic is more susceptible to conversion back to truck, those four daily intermodal trains that traverse the Portageville Bridge today could easily shift to roads if the Southern Tier is severed for any extended time. This diversion threat cannot be underestimated. As the cost-benefit analysis study shows, even a modest shift of current rail traffic over the bridge to truck would have a negative impact. Obviously, though, since intermodal traffic comprises approximately half of train starts operating over the bridge, a closed bridge could conceivably result in a large shift from rail to truck, causing even more significant public costs.

Additional truck traffic to highways and roads will increase commuter times, decrease worker production, add higher fuel consumption and costs, and increase time spent away from the family, which together all directly impact the quality of life for New York residents. In contrast, the Portageville Bridge project helps negate longer transit times, increased fuel consumption and higher transportation costs to residents. The 2011 Urban Mobility Report, published by Texas Transportation Institute at Texas A&M University, estimates the cost of congestion is more than $100 billion, nearly $750 for every commuter in the U.S. According to the study, the “cost of congestion” is determined by the value of extra travel time (i.e., delay) and the extra fuel consumed by vehicles traveling at slower speeds. Travel time has a value of $16.01 per person hour and $105.67 per truck hour in 2009. Because travel time will increase across the entire road system with additional truck traffic, even those living closer to work will see an increase in commute time. The study reports that the economic recession has provided only a temporary respite from the growing congestion problem. When economic growth returns, the average commuter is estimated to see an additional three hours of delay annually by 2015 and seven hours by 2020. By 2015, the annual cost of gridlock will rise from $101 billion to $133 billion – more than $500 for every commuter – and the quantity of wasted fuel will jump from 1.9 billion gallons to 2.5 billion gallons – enough to fill more than 275,000 gasoline tanker trucks.

In addition to serving as a vital connection to the Southern Tier route, the Portageville Bridge is also well-known as part of the scenic park in which it is located. Renowned as the “Grand Canyon of the East,” Letchworth State Park is one of the most scenic recreational areas in the country. Park patrons enjoy its miles of trails and waterways for everything from hiking, horseback riding and biking to white-water rafting and kayaking; its breathtaking views of the Genesee River gorge as it passes through the park, including the river’s three waterfalls; its iconic and unique lodging amenities such as the historic Glen Iris Inn; and a host of other outdoor and cultural activities. More park information is available at: http://www.nysparks.state.ny.us/parks/79/details.aspx. Recognizing the bridge’s unique setting in the park, NYS DOT and NS have undertaken proactive steps to address the unique circumstances addressing replacement of the bridge by holding regular discussions with the New York Office of Parks, Recreation and Historic Preservation (OPRHP) regarding the appearance of the new bridge. As requested by OPRHP, NS will provide a plaque that commemorates the iconic iron bridge, similar to the plaques in the park today that memorialize the original wooden bridge that once spanned the Genesee River gorge.

**10.1.4 Environmental Sustainability:** According to the U.S. Environmental Protection Agency, moving freight by trains is 1.9 to 5.5 times more fuel efficient than trucks, depending on length of haul and commodity. NS has increased the fuel efficiency of its locomotives, essential to reducing emissions of greenhouse gases (GHGs). As shown in the Simplified Portageville Benefits Model, CS calculated substantial public environmental benefits from fuel consumption and air emissions reductions.
Moving goods and products by rail also provides additional benefits by helping manufacturers find ways to make their supply chains “greener.” NS has created the Green Machine, a carbon footprint analyzer that allows shipping companies to estimate emissions savings by choosing rail instead of highway. Upon completion of a new Portageville Bridge, companies that choose to ship via freight along this route will see even further carbon dioxide-equivalent (CO2) emission reductions due to greater freight capacity and direct routing. A new bridge ensures that the freight that currently accesses the Southern Tier will continue to do so rather than divert to the highway; otherwise, the double-stack intermodal trains NS currently transports over the bridge could be lost to trucks. Even if the majority of freight continues to move by rail, a severed Southern Tier would result in more route miles for freight moving by rail between the Buffalo-Canada gateway and Binghamton and New York City. It also would add route miles for through-freight trains originating on or destined for other rail corridors that currently travel over the bridge.

Additional sustainability benefits of this project include: recycling the steel from the existing structure, reclamation of Brownfield sites and job creation in the Elmira-Chemung region.

10.1.5 Safety: Replacing this aging and obsolete bridge with a modern, new structure will improve and enhance safety. As discussed previously, park visitors frequently trespass on railroad property to obtain unobstructed views of the Genesee River gorge from above, despite efforts by NS to discourage trespassing through preventative measures such as fencing and “No Trespassing” signs. Moreover, at such heights and in light of the extensive maintenance and inspection requirements, the bridge poses a safety hazard for railroad employees who must perform the dangerous work that allows the bridge to remain in operation. For Norfolk Southern, safety is first priority as evidenced by its earning the E.H. Harriman Memorial gold medal award for the lowest employee injury ratio among Class I railroads for a record 22 years in a row.

A modern, new bridge on an adjacent alignment will reduce the need to perform maintenance and inspections beyond standard procedures for new railroad structures. The new bridge will also include automatic gates that will block access to the new bridge by park patrons, greatly enhancing safety on the bridge.

10.2 Job Creation and Economic Stimulus: The project will produce meaningful job creation and economic stimulus. First, there will be jobs related to the construction of the bridge, both for railroad employees and for construction contractors. Second, New York State believes that it will see robust job growth in two key areas that are directly affected by the bridge project: the jobs created as a result in the increase in international trade at the Buffalo Gateway, and the significant job increases that have resulted and will continue to result from recent boom in local industrial development surrounding the Southern Tier. Efficient freight rail service is a critical piece of regional economic development efforts designed to maximize the job creation potential from these industrial expansions; higher transportation costs will result in fewer employment opportunities for Southern Tier residents.

NYSDOT also sees potential for job growth in the Albany area as well with the upcoming construction of the new intermodal and auto terminal at Mechanicville, where success is predicated on an intact Southern Tier to handle trains originating at or destined for the terminal.

10.3 Innovation: As noted previously, the bridge has several operational constraints that hamper service performance: it cannot handle railcars weighing 286,000 pounds, the industry standard, and speed is restricted to 10 mph. The replacement bridge will be able to accommodate the heavier cars and improve speed. The structure will also continue to accommodate double-stack trains. It will help drive diversions to rail intermodal and feed into other private investments throughout the Southern Tier and in other rail corridors such as PAS that lead to success for that traffic. Additionally, NS, subject to agreement with NYSDOT and OPRHP, will examine innovative bridge design opportunities that enhance the operation and security of the bridge.
The Portageville Bridge is also a vital part of the Empire Link, which itself is an innovative trackage rights agreement between 10 New York short line railroads and NS, targeting short-haul traffic less than 500 miles in upstate New York. These short lines play a key role in many of the small and medium-size communities and industries. Without a new bridge, there is every reason to believe that this unique project will end, resulting in loss of traffic volumes and revenues for these short line partners. And since short line railroads are small rail carrier operations, any loss of carloads and revenues could hurt their ability to remain viable and competitive.

**10.4 Partnership:** Public policymakers at the state and federal levels have come to recognize the substantial public benefits when more freight moves by rail and rail intermodal. Through recent public-private partnerships, New York and other states have embarked on efforts to encourage the transportation of goods on freight rail when those public benefits are clearly identifiable. The project to construct a new rail freight bridge at Portageville to replace the current deteriorating structure that links the Southern Tier together as a transportation corridor is one of the most important investment in freight rail capacity and infrastructure in this region of the state in many decades. It represents the final piece in a series of investments made along this main line to restore the Southern Tier as a major corridor for moving freight and enhancing economic development.

By filing this application, New York signals to the USDOT that this project is now a key priority for the state. Norfolk Southern and the Canadian Pacific are prepared to commit at least half the funds for the new bridge. The public investment will benefit two Class I railroads and 10 short line railroads that depend on the Southern Tier Corridor for their continued success and viability. This may be a rare occurrence where an investment in a single asset on one railroad route will benefit other private railroads – as evident by their strong letters of support. This partnership is also supported by the Port Authority of New York and New Jersey, U.S. senators, U.S. representatives, metropolitan planning organizations, state legislators, and many more. These letters of support can be found in the “Letters of Support” section of the appendix.
11.0 Project Readiness

11.2 & 11.2 Construction & NEPA Timeline: The figure below includes a detailed timeline, including key milestones for advancing construction of the replacement bridge. As illustrated in the schedule, the required environmental review for the project is under way and all approvals will be received well in advance of the March 31, 2013 deadline set forth in the Interim Notice of Funding Availability for the TIGER Discretionary Grants.

The project is currently undergoing environmental review in accordance with New York State’s State Environmental Quality Review Act (SEQRA) procedures. NS has retained an environmental consultant to prepare the required documentation. The environmental review process under SEQRA was commenced in August 2008 through a public scoping process, including public meetings. As part of that review, a Draft Environmental Impact Statement (DEIS) has been prepared and is under review by New York State agencies. A copy of that DEIS is provided in Appendix 15.4 Comments made by NYSDOT and OPRHP on that document are being incorporated; after the document has been revised, it is anticipated that NYSDOT as SEQRA lead agency will determine that the DEIS is complete and ready for public review. For the two federal agencies currently involved – the U.S. Army Corps of Engineers for a potential wetland permit and the National Park Service for conversion of parkland that has received funding under the Land and Water Conservation Fund Act – it is anticipated that these agencies will issue their approvals after making a NEPA determination primarily on the basis of the project’s Final Environmental Impact Statement (FEIS) prepared in accordance with SEQRA.
Should the Portageville Bridge Project be selected for federal funding, the SEQRA DEIS can readily be converted into a NEPA DEIS. The bridge replacement project would be considered a “major action” according to the Federal Railroad Administration (FRA) NEPA procedures published in the Federal Register on May 26, 1999. As demonstrated in the schedule, the already completed SEQRA document will be ready for federal review when the funding decision is made. While a formal NEPA Notice of Intent and scoping process will be required, it is anticipated that NEPA scoping can be brief, since it will be consistent with the prior, thorough scoping effort undertaken for SEQRA. As such, the DEIS can quickly proceed to publication and public review in accordance with NEPA. A preliminary discussion was held with the Federal Railroad Administration (FRA) concerning scoping and federal lead agency status in May 2010.

A detailed timeline of these NEPA efforts is shown in the attached schedule, which includes key milestones for advancing construction and completing the project’s NEPA review. It is anticipated that the NEPA DEIS can be completed and published by April 2012. Public review of the DEIS, including a public hearing, will be complete by July 2012, and the FEIS can be completed by September 2012. All environmental approvals, including applicable state and federal permits, conclusion of the Section 106 and Section 4f processes, and completion of Land and Water Conservation Fund Act (Section 6f) conversion approvals, will be secured by October 2012. Preliminary design will be coordinated such that final design can be complete by the end of 2012. Construction is planned to commence in May 2013.

12.0 Performance Evaluations

If a substantial amount of the TIGER Discretionary Grant request for this project is awarded, Norfolk Southern pledges to monitor the actual number of revenue carloads traversing the bridge annually following construction and startup. As part of its long-term financial plan, Norfolk Southern will annually report a final-year calculation of actual revenue carloads executed. Using this data, Norfolk Southern will report the short- and long-term performance evaluations by applying the Cambridge Systematics model detailed in the application. Long-term outcomes and other metrics, such as diverted loads, fuel savings, greenhouse gas reductions, avoided heavy-duty truck crashes and traffic fatalities, and total jobs created will be reported. Further, if USDOT awards TIGER funds consistent with this submittal, Norfolk Southern will maintain and operate the publicly funded assets for a period of at least 20 years, which will ensure that public benefits will continue to accrue.

13.0 Federal Wage Rate Certification

NYSDOT certifies that it is in compliance with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements), as required by the FY 2010 Appropriations Act.

14.0 Material Changes to the Pre-Application

There are no material changes to the preapplication.
FEDERAL WAGE RATE CERTIFICATION

Re: Certification of Compliance with Federal Wage Rate Requirements by the New York State Department of Transportation for Fiscal Year 2011 U.S. Department of Transportation (USDOT) Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants.

In accordance with the USDOT Office of the Secretary of Transportation issuance of a Notice of Funding Availability for the Department of Transportation’s National Infrastructure Investments Under the Full Year Continuing Appropriations, 2011; and Request for Comments (Docket No. DOT-OST-2011-0107; TIGER Discretionary Grants) and specifically Section VII, C of this Notice;

I, Joan McDonald, the Commissioner for the New York State Department of Transportation, certify that the New York State Department of Transportation, the applicant for TIGER grant funds pursuant to this application, will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements) should this application be approved for funding.

Signed: Joan McDonald, Commissioner
Date: October 27, 2011

Joan McDonald, Commissioner
New York State Department of Transportation
15.0 Appendix

“A Public-Private Partnership to Invest in Infrastructure”