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HISTORIC STEEL TRUSS BRIDGES

CULTURAL RESOURCE SURVEY



Preservation
League of NYS



Council on
the Arts

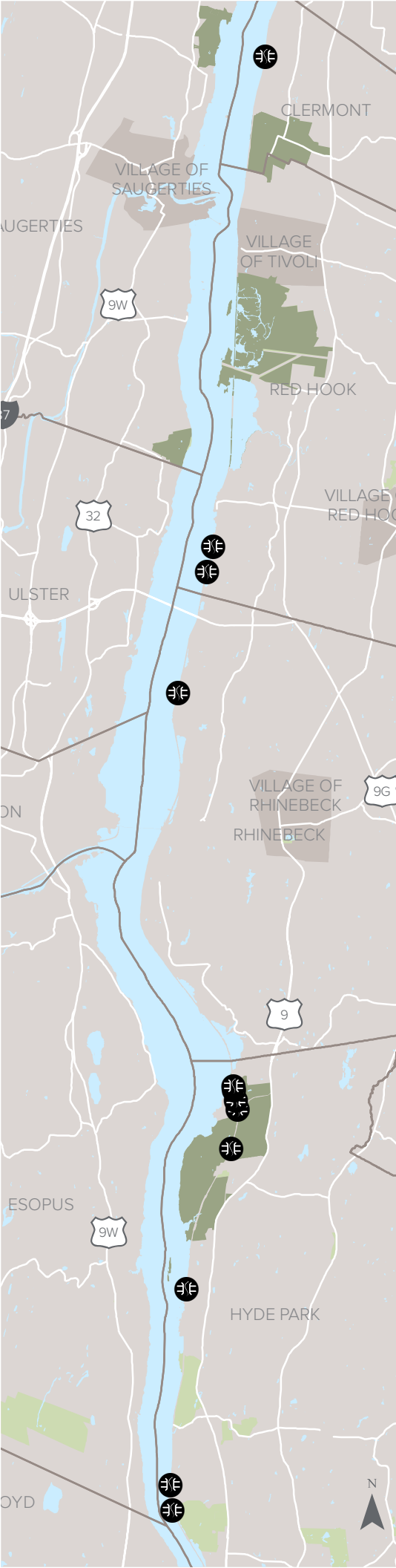


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This Cultural Resource Survey would not have been possible without the assistance many people who provided valuable information and reviewed drafts of this report.

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Thank you as well to representatives of organizations interested in ensuring these historic bridges endure into the future: Erin Tobin and Katy Peace, Preservation League of New York State; Chelsea Towers, and Kathy Howe, NYS Historic Preservation Office; Linda Cooper, NYSOPRHP/Taconic Region; David Hayes, The National Park Service; Jon Hoyt, Calvert Vaux Preservation Alliance; Reed Sparling, Matthew Fass, Seth McKee and Rita Shaheen, Scenic Hudson; Gerald Lennon, Rogers Point Boating Association; Shannon Butler, Historian of Hyde Park; and Nancy Kelly, Town Historian, Rhinebeck. Also, thanks to the participants in the November 17th Virtual Meeting. We appreciate your input that will help identify a strategy to preserve the bridges.

Finally, we must acknowledge Wint Aldrich, who contributed a wealth of information about the histories of these bridges and their surrounding properties. His vast knowledge of the history of the estates in the Hudson River National Historic Landmark District has greatly enhanced the content of this Cultural Resource Survey. He, along with his brother Richard, have lovingly maintained their truss bridge at Rokeby. In addition to his knowledge, Wint shared with us books, maps, historic photographs, and even personal stories. Thank you, Wint. We are deeply indebted for all. The historic references in this Cultural Resource Survey would not be as robust or complete without your generous assistance.

- Jeffrey Anzevino

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SCOPE AND METHOD

In 2020, Scenic Hudson applied for and received funding from the Preserve New York program of the Preservation League of New York State and the New York State Council on the Arts to inventory and further investigate 12 early twentieth century bridges over the CSX and Amtrak main line along the Hudson River in Columbia and Dutchess counties in order to advance plans for their preservation. Preserve New York is made possible with the support of Governor Andrew M. Cuomo and the New York State Legislature. The survey was conducted by a team of specialists qualified under 36CFR61 in the areas of historic engineering and historic preservation. Although several other historic bridges are also located in or near the corridor, this survey was restricted to those requiring the most immediate attention. The survey consisted of field investigation and limited recordation of each structure, a file search at the New York State Division for Historic Preservation, the review and inclusion of extant railroad drawings and maintenance records, and a well-attended virtual stakeholder charette as a means of collecting input from local officials and property owners. The assembled inventory combines these sources into report with recommendations that can be reliably consulted as efforts to preserve these bridges move forward.

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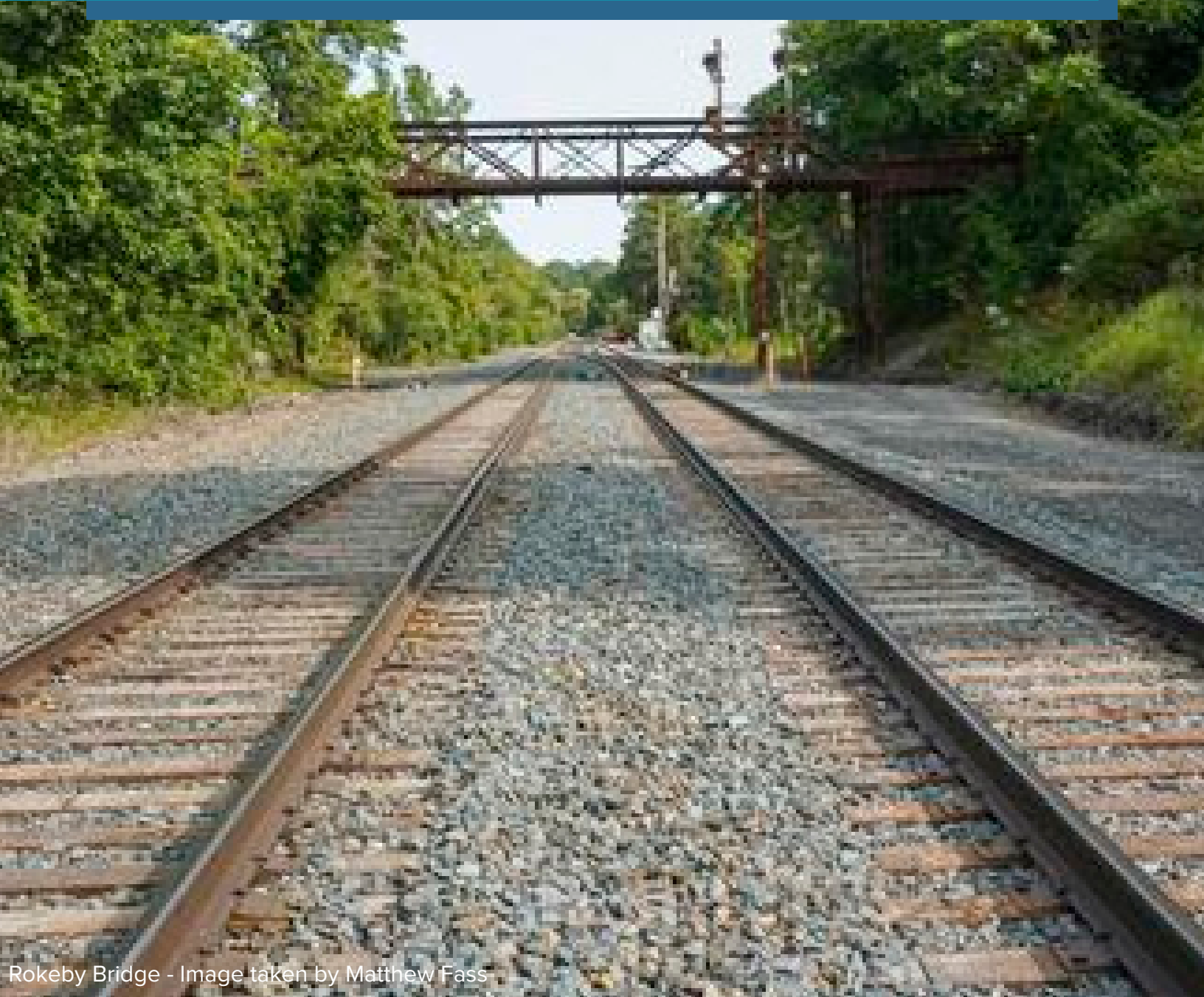
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View South of Poets’ Walk Park and Kingston Rhinecliff Bridges

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FOREWORD



FOREWORD

The 12 historic steel truss bridges that span the railroad tracks between Hyde Park and Clermont provide an irreplaceable link to the Hudson Valley’s industrial and transportation history. The preservation and restoration of those in public parklands could link visitors to exciting – and long inaccessible – destinations along the Hudson River. Sustaining the first link and creating the second are the focus of this Cultural Resource Survey.

The survey grew out of a recommendation contained in the 2020 Hudson River Access Plan, commissioned by Scenic Hudson as part of a collaborative campaign to increase places to enjoy the riverfront, particularly to find safe ways of crossing Amtrak’s rail line. This aligns with a key goal of New York State’s Coastal Management Program to increase Hudson River shoreline access. Noting the poor condition of most of these spans – 9 of which are listed on the National Register of Historic Places and whose clustering in such close proximity is extremely rare – the access plan went on to describe how their restoration could play a vital role in reconnecting people to the river.

Six of the dozen bridges, constructed primarily in 1911 and 1912 by the New York Central Railroad, are located on lands owned by the National Park Service, New York State and Scenic Hudson and, if restored, would attract thousands of visitors annually. Making these spans viable for use by pedestrians and bicyclists would create or enhance public access to historic sites (a place where Henry Hudson met with the region’s Indigenous people), cultural attractions (a landscape designed by Calvert Vaux, co-creator of Manhattan’s Central Park) and amenities in long-lost great estates (a private cove and beach). Saving and interpreting these

bridges also would provide tangible examples of early 20th-century infrastructure for students participating in STEM (Science, Technology, Engineering and Math) programs.

Made possible by a \$15,000 Preserve New York grant from the Preservation League of New York State and a match of \$5,000 from Scenic Hudson, this Cultural Resource Survey documents each bridge’s history and design, examines the murky issue surrounding their ownership and maintenance responsibility, and determines the scope of work and time frame needed for their rehabilitation. It also presents the opportunity for increasing efficiency and reducing the costs of restoring the bridges by “bundling” repairs into a single contract, a strategy promoted by the Federal Highway Administration.

The grant also funded a highly productive virtual charette in November 2020. The high attendance – including participation by property owners and local, state and federal officials – demonstrated the strong interest in safeguarding their future.

This Cultural Resource Survey and recommendations from the charette will facilitate creation of a Multi-Step Plan to assess, repair and reopen the bridges. One thing is clear: time is of the essence. Some of the bridges have already been threatened with removal, among them the span leading to Hyde Park’s Crum Elbow Point, site of Henry Hudson’s encounter with members of the Wappinger tribe. Restoring it would provide access to an exciting new scenic and historic attraction on the riverfront. Demolishing it and the other bridges would represent the loss of an important aspect of Hudson Valley history and an extraordinary opportunity.

HISTORIC OVERVIEW AND A NEW LIFE FOR THE BRIDGES

HISTORIC OVERVIEW & NATIONAL REGISTER STATUS

The historic truss bridges in this Cultural Resource Survey (CRS) are significant in reflecting the golden age of American railroads. This period was distinguished by remarkable expansion, heavier equipment, higher speeds, and increased reliability, safety, capacity, and efficiency. Huge investments during this era resulted in electrical signaling, quadruple tracking, massive employment and the great terminals. Route miles increased from 35,000 in 1865 to 164,000 in 1900. 1916 was the peak year for intercity freight by rail by percentage (77%).

Steel truss bridges carried longer spans, greater loads and required relatively little maintenance. The 12 bridges in our survey reflect the

technology of this era and their rehabilitation will preserve this history while continuing to offer safe and critically needed connections across the tracks to the Hudson River shore.

The bridges were built circa 1911 - 1912 (except for the former Dominican Camp which was 1928) by the New York Central Railroad as the Hudson River Line was expanded from 2 to 4 tracks. Of the 12 bridges all except those at Crum Elbow - FDR, Coal Dock Lane, and the former Dominican Camp are listed on the National Register of Historic Places. A determination of eligibility for the National Register will afford these three bridges most of the same protections enjoyed by the listed ones. Our survey has found that these three bridges also qualify for the National Register and this CRS will be submitted to the New York State Office of Parks, Recreation and Historic Preservation via the Cultural Resource Information Survey (CRIS) for further action.

NEW LIFE FOR A RARE COLLECTION OF HISTORIC BRIDGES

In the early 20th century, access to the Hudson River in upper Dutchess and southern Columbia counties was confined largely to those wealthy families whose sprawling estates lined its banks. To reach the shore, and in some cases their mansions, many had to cross over the railroad tracks on steel truss bridges.

Purely utilitarian but still attractive, steel truss bridges were the span of choice for getting from



Example of a wagon (6 Tons) that would travel over the bridges in the early 1900s. There are 7 ft. between the axles with each axle having a load bearing of 3 tons.



Example of a 1912 Road Roller used as the Live Load Design Vehicle (13 Tons) for most of the bridges. There are 11 ft. between the axles. The rear axle bears 8 tons and the front axle bears 5 tons.

one side of something to another in America at that time. That's because the bridges' simple design made them easy and economical to construct, while their distinctive triangular framing allowed them to handle heavy loads. Sadly, many of these one-time workhorses of America's transportation infrastructure have been demolished.

The purpose of this CRS is to avoid the same fate for these 12 historic bridges over the tracks between Hyde Park and Clermont, New York. They're an integral part of our Hudson Valley history. It is extremely rare to have a dozen historic bridges, six of which are in public parks, so close together. As Preservation League of New York State President Jay DiLorenzo has noted, the connection to the water has its own historic and cultural significance. If this connection is removed, it would adversely affect the historic landscapes. It is a real opportunity for interpretation and appreciation, in addition to restoring connections to the river – for everyone this time.

In addition to furnishing new connections to the river, the bridges offer glimpses into the region's

past and the charmed lives of previous users. Every bridge has an interesting story. In Hyde Park, a steel truss bridge leads to Crum Elbow Point, where the Half Moon anchored during Henry Hudson's 1609 voyage of discovery and the crew made friendly contact with Indigenous people of the Wappinger tribe. Later, Franklin and Eleanor Roosevelt also enjoyed spending time there. Three bridges exist at the Staatsburgh State Historic Site in Staatsburg. The southernmost provides a crossing for a winding carriage road leading to a mansion called "The Point". Calvert Vaux, co-designer of Manhattan's Central Park, designed the house in 1855 and may have laid out the road as well. Further north, in the site's Hopeland Trails section, 2 bridges allowed the Gilded Age proprietors of a 300-acre estate to reach a private cove and beach affording panoramic river views. These spans have outlasted the owners' 35-room mansion, which was demolished in the 1950s.

At Poets' Walk Park, a steel truss footbridge once led to a dock belonging to merchant and diplomat Franklin Hughes Delano (for whom FDR, his great-nephew, was named). Reputedly, the dock was so large a carriage drawn by four horses could circle around on it.

Entrances to most of these bridges are currently blocked off. In a cursory inspection conducted as part of the CRS, it was found that there are varying repair needs for each bridge. For a few, their steel superstructures appear ready to accommodate pedestrians and bicyclists. All that seems to prevent them from providing entry to some exciting old and new riverfront destinations is replacing rotten wood components and making certain safety upgrades. Other bridges need significantly more work.

BACKGROUND

SAVING THE BRIDGES TO MEET A COMMUNITY IN NEED

Potential public programs could serve a wide spectrum of community needs ranging from connecting people to the river to increasing the public's understanding of early 20th century bridge technology. As previously noted, many of these bridges are in parks and, as such, will be readily accessible to thousands of people. Further, saving and interpreting these bridges will provide tangible examples of vanishing pony truss bridges for students participating in STEM (Science, Technology, Engineering and Math) programs in the Hudson Valley. For example, at the annual Engineer's Week Celebration in Albany every February, hundreds of high school and college students compete in a truss bridge design contest – with the trusses looking similar to our historic trusses. It would be wonderful for these students to have an opportunity to be able to examine these historic treasures in person.

GRANT FUNDS FIRST STEP IN RESTORATION

In order to increase Hudson River shoreline access, a key goal of New York State's Coastal Management Program, the ***Hudson River Access Plan*** (March 2020) recommended preserving historic truss bridges spanning Amtrak's Empire Corridor South, which would also preserve an important component of the valley's heritage.

Thanks to a \$15,000 Preserve New York grant from the Preservation League of New York State, and a match of \$5,000 from Scenic Hudson,

this Cultural Resource Survey has been created to document the bridges' history and design, examine the murky issue surrounding bridge ownership and maintenance responsibility, and determine the scope of work and time frame needed for their rehabilitation. The grant funded a productive virtual charrette on November 17, 2020. The high attendance – including participation by property owners and local, state and federal officials – demonstrated the strong interest in safeguarding their future.

ADOPTING THE FHWA'S PLAYBOOK TO BUNDLE THE BRIDGES

To limit funding needed for the bridges' restoration, this CRS recommends "bundling," a proven strategy promoted by the Federal Highway Administration. Bundling repairs on bridges of a similar type in the same region into a single contract increases efficiency and reduces costs. This approach was overwhelmingly endorsed by charrette participants. Bundling is explained in further detail later in Appendix C.

ADDRESSING THE REASON WHY WE ARE WHERE WE ARE

Since the bridges were built a century ago, owners and operators of the railroad within this corridor were in constant flux – New York Central Railroad, Conrail, CSX and Amtrak. Currently, CSX owns the corridor while leasing operation and maintenance responsibilities to Amtrak. In 1988, Conrail raised the vertical clearance of many bridges within the corridor while retaining responsibility for bridge ownership and maintenance. Since that time, ownership and

maintenance responsibilities have become less clear.

Referencing the 2011 maintenance and operation agreement between CSX and Amtrak, CSX has stated in 2020 documents that they transferred ownership and maintenance for these historic bridges to Amtrak, although the New York State Department of Transportation bridge inspection system identifies CSX as the owners. Amtrak has rebutted, stating that they have no responsibility as a result of the Regional Rail Reorganization Act of 1973.

All parties involved, including NYSDOT (which administers federal aid funds to Amtrak) and adjacent landowners will agree that it has become a legal morass. Local property owners who wish to maintain the roadway portion of the bridges find themselves being restricted by expensive railroad requirements for applications and flag persons, etc. Contractors looking to do work over the railroad face many of the same issues. Many adjacent landowners and contractors feel that the fees charged by CSX and/or Amtrak are exorbitant, and some question the difficulty of doing work over the tracks when thousands of trucks and cars travel under bridges being repaired on New York State's interstate system every day at equal or greater speeds.

COAL DOCK LANE - A MICROCOSM TO A SUCCESSFUL PATH FORWARD

The Coal Dock Lane bridge was closed by the New York State Department of Transportation in the Spring of 2020 due to structural red flags

issued by their consultant inspection firm (HNTB) (*please see the Bridge Summaries for more information*). One steel floor beam directly over the northbound Amtrak tracks was deflecting due to severe corrosion. The closure severed vehicular access to the Rogers Point Boating Association (RPBA), three homes, a Coast Guard fixed navigational aid, and Dutchess County's water intake.

How did we get here? Neither CSX nor Amtrak conducted much needed hands-on inspections and maintenance on structural elements over this active passenger rail line. The RPBA, to their credit, did what they could, replacing the wood deck planking on the bridge in 2019 (which is the limit of their responsibility based on the 1988 Conrail deeds for other bridges in this corridor). Over the past few decades, decision-making has been deferred to the attorneys, with occasional exchanges between parties stating why the bridge(s)—and subsequent safety of rail passengers—is not their responsibility.

The legal issues are well beyond the scope and intent of a CRS document. So, this report will not go further other than state that a successful compromise was reached in November, 2020 to set aside the legal issues in order to repair and reopen the Coal Dock Lane bridge in the best interest of public safety and the local economy. Efforts to repair and reopen the Coal Dock Lane bridge are described in the Bridge Summaries and Charette highlights elsewhere in this document.

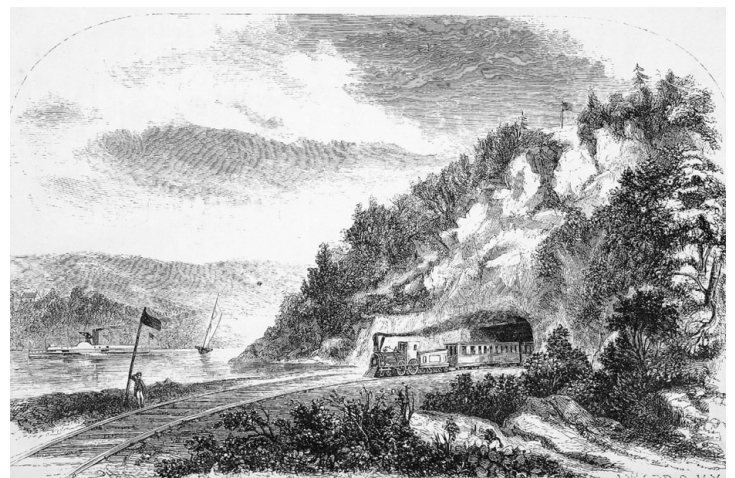
HISTORIC CONTEXT

The twelve bridges inventoried in this survey reflect the golden age of American railroading. Built between 1911 and 1928, these bridges were part of a massive investment in railroad infrastructure which expanded track miles, increased carrying capacity, and improved safety and reliability. During this period, the railroads invested in heavier road beds, doubling and in some cases quadrupling tracks to increase corridor capacities, building extensive yard facilities and building monumental Neo-classical passenger terminals in major cities. In fact, the two railroad stations in our subject area, Hyde Park and Rhinecliff, were both constructed in 1914.

During this era, new heavy capacity steel bridges were built to replace earlier wood and iron structures incapable of handling heavier locomotives and rolling stock. Bridges accommodating vehicles and pedestrians were built or rebuilt to higher standards during this period as motor vehicles, including trucks and construction equipment, exceeded previous loading requirements. Riveted steel trusses and poured-in-place concrete became the standard construction approach for much of this unparalleled period of construction. The structures built during this era were remarkably durable, but as the railroads became less profitable in later decades, maintenance declined. Now, a century later, the twelve subject bridges require new investment in order to remain safe and functional.

The rail corridor running beneath each of these bridges was originally built for the Hudson River

Railroad. The railroad was chartered in 1846 to extend the Troy and Greenbush Railroad to New York City. John B. Jervis (1795-1885) was chosen as Chief Engineer. His experience in surveying and building the Erie Canal, the Delaware and Hudson Canal, the Mohawk and Hudson Railroad and the Croton Aqueduct gave him the practical experience to tackle a long-distance railroad requiring difficult rock cuts and tunnels. Construction began in 1847 and service north from New York began as soon as each link was completed. Eight major tunnels were required ranging in length from 70 feet to 1400 feet. Seven rock cuts were required between Poughkeepsie and Tivoli. On June 1, 1851, the Hudson River Railroad leased the Troy and Greenbush Railroad and on October 3, 1851, rail service was inaugurated between New York and Rensselaer. The completed Hudson River Railroad paralleled the Hudson River and was acclaimed for the scenic beauty of its route as well as its convenience, qualities still admired by today's Amtrak passengers.

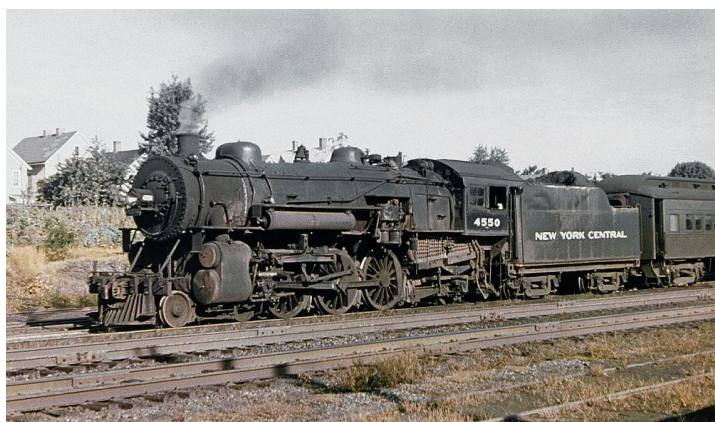


Hudson River Railroad by J.W. Orr, Holden's Magazine, January 1, 1851. Tunnel at Anthony's Nose.

Cornelius Vanderbilt acquired control of the railroad in 1864 soon after buying the parallel New York and Harlem Railroad. He also assembled a series of railroads between Albany and Buffalo which became the New York Central Railroad. He built a bridge over the Hudson in Albany in 1866 (replaced in 1902 by the current Livingston Avenue Bridge) and after initially allowing transfers over his bridge, suspended the practice, using the bridge and the access it provided as leverage to acquire the Hudson River Railroad. The two railroads were merged on November 1, 1869. The resulting New York Central and Hudson River Railroad became one of the most important railroads in the eastern United States extending its reach well beyond New York State into Michigan and Illinois. Its profits and strategic position allowed it to acquire control over many competing lines including the West Shore Railroad on the other side of the Hudson in 1885.

Railroads became increasingly influential in the American economy after the Civil War. The Transcontinental Railroad was completed in 1869 and route miles increased rapidly. Air brakes, introduced by George Westinghouse in 1869 were required by the federal safety act of 1893 and the weight of locomotives and rolling stock increased accordingly. By 1900, route miles nationally increased to 164,000. In 1905, American railroads ordered 6,300 new locomotives in one year. In 1916, the railroads carried 77% of intercity freight in America, the peak year for this measure. The power and influence of the railroads was proclaimed by a series of monumental passenger terminals

including Pennsylvania Station (1910) and Grand Central Terminal (1913).



Heavier locomotives and rolling stock required better track-age and bridges earlier in the twentieth century. A NYCRR Pacific steam locomotive photograph ed in 1951 from Richard Leonard's Steam Locomotive Archive.

The New York Central and Hudson River Railroad grew accordingly. It introduced the Twentieth Century Limited service to Chicago in 1902 and converted the Hudson River corridor from two tracks to four between 1911 and 1913 in order to facilitate this and other express trains. This process required widening rock cuts and tunnels and replacing the existing bridges over the tracks. The majority of the subject bridges date from this episode. Drawings prepared by the railroad indicate that some of the replaced structures were short and relatively primitive. The drawings for many of the bridges includes a vignette illustrating the footprint of a steam roller used to assure sufficient bridge capacity. In each of these locations, grade crossings were impractical given the high banks and rock cuts through which the tracks

passed. Upland landowners, including a series of wealthy and influential families, such as the Rogers, the Vanderbilts, the Mills, and others required vehicular connections to the river for boating and for coal shipments necessary to heat and power their big estates. The railroad designed and built bridges to span the wider corridor. Riveted steel truss bridges were the most expedient and practical approach. Older stone abutments were used where possible, but new abutments and piers were built using poured-in-place concrete which was now widely available and economical. A series of different truss designs were employed, including variations of Warren and Howe trusses. The bridges were fitted with wood plank road decks and board “fences” said to prevent locomotives from spooking crossing horses. These so-called fences were also intended to improve the appearances of the bridges from roadside and to prevent small stones and debris from falling onto passing trains. Some of the bridges in the corridor were built with concrete over steel which may have been an aesthetic choice of the adjacent property owners. The concrete spandrels were panelized and offered what some may have felt was a less utilitarian appearance along the gracious estate carriageways.

Similar bridges were built elsewhere along the corridor but were not investigated in detail due to the limited scope of this survey. However, a cursory examination indicates similar approaches to design. Among them are the 1915 Denning’s Point Bridge with a Warren truss, the Greenway Bridge with its

double-intersection Warren truss under the east approach to the George Washington Bridge, the bridge at Rhinecliff and the Ferry Street Bridge in Hudson. In the immediate vicinity of the current survey are the bridges at Mills Mansion (1912) and Vanderbilt Mansion (1912) featuring concrete walls similar in appearance to the Penny Lane Bridge built circa 1911. Other historic railroad bridges in the region have already been removed and or replaced including the 1916 White Mills Rd Bridge in Chatham (2013) and the 1892 Herrick Street Bridge in Rensselaer (2002). The twelve bridges in this survey are becoming increasingly rare survivors of this important era in American railroads.



The Twentieth Century limited running express service between New York and Chicago with three diesel-electric units. Photograph by Drew Jacksich, Internet search 2021.

The New York Central and Hudson River Railroad became referred to simply as the New York Central Lines after 1914 and the New York Central System in 1935. The Central’s steam

locomotives were replaced by diesel electric units shortly after World War II. All of its trains east of Cleveland were converted to diesel by the end of 1953. Competition from automobiles and trucks cut significantly into railroad profitability in the following decades. Passenger service was reduced, lines were abandoned, and maintenance reduced. The famed Twentieth Century Limited was discontinued in 1967. A year later, the New York Central was merged with the competing Pennsylvania Railroad. The new Penn Central Railroad declared bankruptcy two years later in 1970. Amtrak took over passenger service on the Albany to New York corridor in 1971 and Conrail took over freight service in 1976. In 1998, CSX took over ownership of Conrail's tracks in the corridor. In 2011, CSX entered into a long-term lease of its Hudson line with Amtrak, which was also consented by the New York State Department of Transportation (NYSDOT). As part of the lease, Amtrak accepted the obligation to maintain all assets and structures on the Hudson Line.

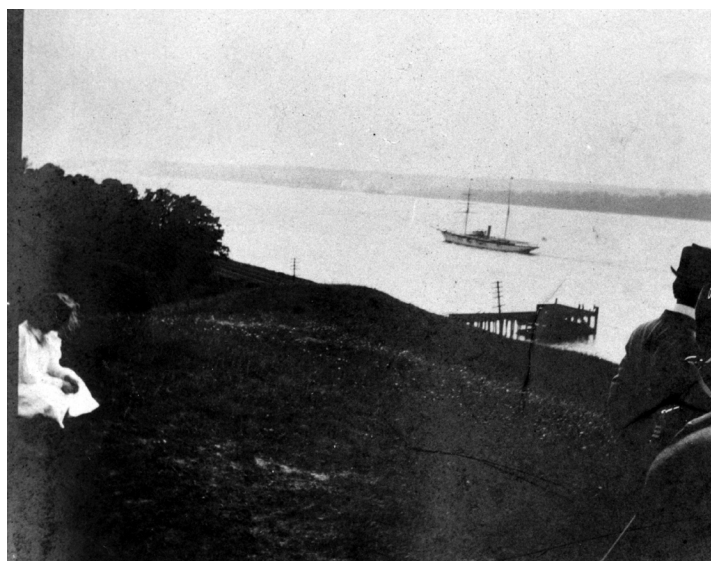
The twelve bridges detailed in this survey have not received regular maintenance or support from CSX or Amtrak although several adjacent property owners have undertaken deck repair and replacement projects at their own expense to maintain access to their properties. This practice is insufficient in the long run and less cost-effective than bundling major repairs over groups of similar bridges.

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"The Hudson River and Hudson River Railroad," *Holden's Magazine*, January 1, 1851 (www.hudsonrivermaritimemuseum.org History Blog) and (www.catskillarchive.com "The Hudson River and the Hudson River Railroad-New York Central Railroad Hudson Division")



The Narada at Delano's Dock (1908), four years before the current Poet's Walk bridge was erected.
[Image Source: Wint Aldrich]

CHARETTE AND KEY FINDINGS

Recommendation 3 in Scenic Hudson's comprehensive Hudson River Access Plan (March, 2020) identified as a high priority the saving of twelve historic century-old steel truss bridges before they are lost forever. This popular recommendation was followed by a PLNY grant in the summer of 2020 to conduct a Cultural Resource Survey and a Multi-Step Plan to assess, repair and reopen the bridges. As part of the PLNY grant, a Charette was held on November 17, 2020 for interested parties and stakeholders. Due to COVID-19 protocols, the Charette was held via **Zoom** and was attended by 40 people representing federal, state, regional and local governmental agencies as well as historic preservation organizations, and private property owners.

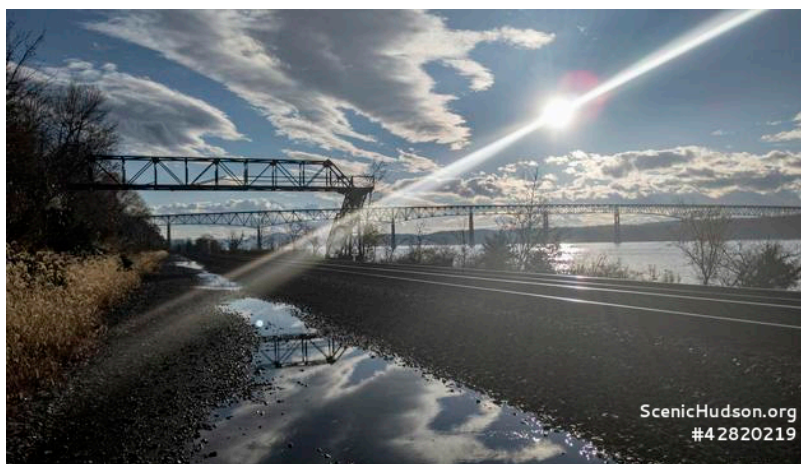
It is safe to say that attendees were in overwhelming agreement that preservation and restoration of these bridges are very important

to the region from various perspectives, including: historic preservation; river access, health and safety; and economic development.

Brainstorming among participants during the last half hour was strongly encouraged, and participants were up to the task! Topics included, but were not limited to: design and construction mechanisms, schedule, funding sources, and post-construction memorandums of understanding.

The initial findings of the Cultural Resource Survey were discussed with the 40 participants during the Charette. A complete set of the slides presented at the Charette are available in the Appendix G. General Challenges and Opportunities that were raised by participants of the Charette included the following (in no particular order):

- Challenges:
 - State procurement requirements
 - Prevailing wages
 - Many grants require the recipient to be a not-for-profit.
 - Matching funds requires significant coordination- who is a match for others?
 - Cobbling grants requires close coordination of the various timelines.
 - Liability is a big issue. (Can the bridge owner of record lease to a not-for-profit to maintain the bridge?).
 - Ownership and maintenance post rehabilitation.



Looking South at Poet's Walk and Kingston Rhinecliff Bridge

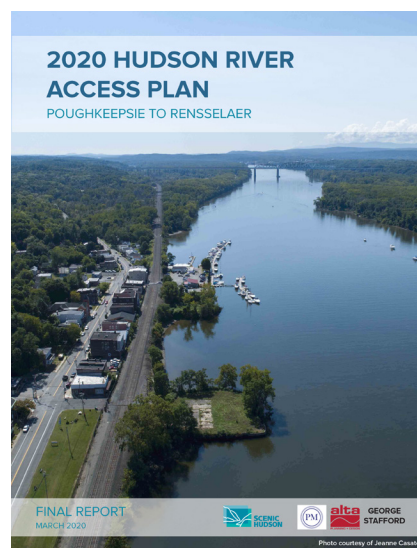
- There are other historic bridges on or near the corridor. Should they be addressed now or in a future contract?
- Opportunities
 - Greenway's Empire State Trail is a current example of a successful collaborative effort.
 - The Coal Dock Lane Emergency Repair in December 2020 is another example of a collaborative solution.
 - Bundling is not only for the bridge construction. We can also bundle items such as permits, design, rail flagging services, etc.
 - Memorandums of Understanding. For example, NYS Parks does cooperative agreements and MOUs with not-for-profit entities.
 - Corporate Sponsorships
 - Public/Private Partnerships (friends group)

In the brainstorming and open discussion many common interests were observed. For example, the unique cluster of 12 historic truss bridges in such close proximity to each other is very rare. To optimize public and private funds for the project, and streamline contractual barriers, the creation of a not-for-profit LLC may be the best path forward.

Many bridges are in poor condition (lack of wood decks), and a couple are in serious condition and need immediate attention as they

pose a safety threat to Amtrak passengers and staff and bridge users. The Coal Dock Lane bridge underwent emergency repairs during the development of the CRS due to structural issues, including a failed steel floor beam directly over Amtrak tracks. The Crum Elbow - FDR bridge was recommended for immediate removal by FHWA inspections back in 2014 due to serious steel deterioration. It's been seven years – and the historic bridge can be repaired rather than removed – but we need to act now.

Ownership and maintenance responsibilities has been the subject of debate between Amtrak, CSX, state and local officials and property owners in the past two decades. Our research has found extensive competing legal interpretations of ownership and liability. We have provided a small sampling of the correspondence on the Coal Dock Lane bridge in Appendix F as an example of the “orphan bridge” issue facing all twelve bridges.



Hudson River Access Plan identified Recommendation 3 as a high priority project to save the 12 bridges

A NEW PARADIGM

The consensus from the Charette was to put the legal issues on the “back burner,” as this longstanding legal debate is responsible for the current situation. For the benefit of all parties, and public safety, repairing these bridges must be put back on the “front burner.”

We are recommending a new paradigm. Much has changed since these bridges were built to accommodate 4 tracks over 100 years ago. The 4 tracks have been reduced to 2 tracks. Track and bridge ownership, and maintenance responsibilities have changed several times. Adjacent land ownership, and uses, changed for most of these bridges.

The new paradigm includes:

- A mix of bridge ownership. A few landowners may wish to take over ownership of the bridges from CSX/Amtrak. Other bridges may have ownership assumed by a Limited Liability Company (LLC), depending on how discussions evolve in 2021.
- CSX/Amtrak, in recognition that a safe bridge means safe passage for their staff and patrons, should waive any permit and flagging costs when the bridges need maintenance and/or repair going forward.
- NYSDOT will need to update its bridge inspection database to reflect changing ownership / maintenance dynamics.



Midwood Bridge



Hopeland Bridge area

The purpose of the CRS is to document the historical importance of each of these 12 bridges. The path forward from the input received at the Charette is succinctly summarized in the accompanying Multi-Step Plan. All concerned with maintaining these bridges in a safe manner are encouraged to review the plan and act accordingly. The plan is intended to be a “living document” that will be updated and re-circulated as preservation efforts advance.

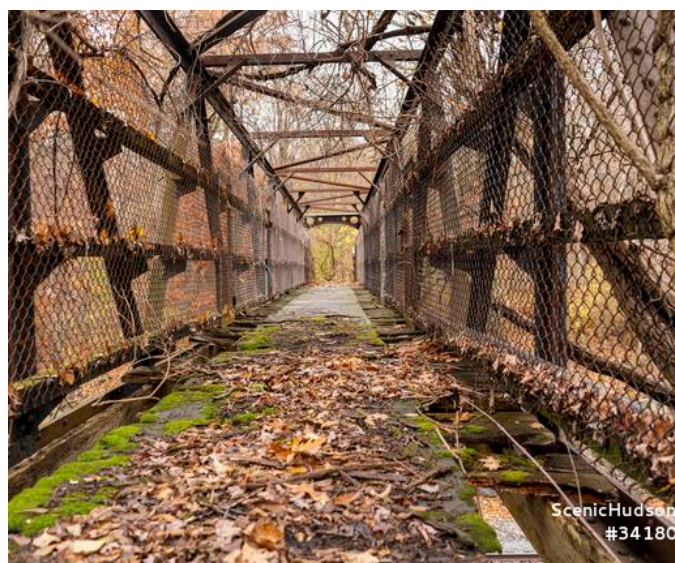
TIMELINE

It cannot be emphasized enough that time is of the essence. A potentially catastrophic structural failure and safety issue was narrowly averted in 2020 by numerous public/private parties putting years of legal squabbling aside to prevent the fracture critical (one bridge component fails, the entire bridge fails) failure of the Coal Dock Lane bridge. Coal Dock Lane should serve as a wake-up call for the other 11 bridges. The Crum Elbow - FDR bridge was recommended for removal in 2014. Now is the time to act; refer to the Multi-Step Plan for a proposed timeline.

RECOMMENDATION

The work involved in compiling this Cultural Resource Survey, conducting the Charette, and assisting parties in doing emergency repairs to the Coal Dock Lane bridge has resulted in this report’s strong recommendation that the Crum Elbow - FDR, Coal Dock Lane, and

Former Dominican Camp bridges receive determinations of eligibility and second, be nominated to join the other 9 bridges as being listed on and protected by the National Register of Historic Places. The Multi-Step Plan provides that path forward. The Plan will be a separate, living document as it is subject to multiple revisions in 2021 due to the number of funding and contractual combinations.



Amtrak fencing around Former Dominican Camp