

RESEARCH ARTICLE

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# In search of America's old covered bridges

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## Abstract

America's first documented wooden covered bridge was erected at Philadelphia, Pennsylvania in 1805. Hundreds were constructed within two decades and at least 10,000 by the later 1800s. As settlers moved West, broad rivers were crossed with inventive structures incorporating timber trusses ingeniously developed by carpenters. Called covered bridges because of the roof and siding needed to protect the timber trusses, they became ubiquitous features on the American landscape. Over the past two centuries, most covered bridges were lost to flood, ice, arson, lightening, decay, as well as "progress," replaced by "modern" iron, concrete, and steel spans. Of some 700 covered bridges remaining, many are mere replicas of their original forms no longer supported by timber trusses. Genuine historic bridges remain largely from the last half of the 1800s while civic boosterism has led to claims of earlier dates with often questionable authenticity. This essay presents three wooden covered bridges constructed in the 1820s along a 10-mile stretch of the Wallkill River in New Paltz, New York. Of the three, only Perrine's Bridge, constructed first in 1821 and covered in 1822, is still standing with intact Burr timber trusses. Perrine's is an iconic structure with exceptional heritage value because of authentic re-building and restoration in 1834, 1846, 1917, and 1968. Using documentary records, this essay establishes an accurate intertwined chronology for the three bridges, detailing nineteenth century building practices and contentious mid-twentieth century struggles pitting preservationists wanting authentic restoration against those wanting removal.

**Keywords:** Covered Bridge, Timber truss, Burr truss, Town lattice truss, Perrine's Bridge, New Paltz Bridge, Phillies Bridge, New York State, New Paltz, Conservation, Restoration

## 1 Introduction

Wooden covered bridges have a more than 200-year history in the United States. By the last quarter of the 19th century there were more than 10,000 spread across some 30 states. Most are now gone because of flood, ice, arson, lightening, decay, as well as 'progress' as they were replaced by modern structures. Many of the 700 or so historic covered bridges that remain are not authentic and have only limited heritage value, mere structural echoes of the past with questionable patrimony. Lovers of covered bridges often struggle to document and preserve those that still stand and are shaken when natural and human forces bring about unfortunate loss, sadly still an all too common occurrence. Although New York State has less than 10% of the covered bridges it once had, the 33 that remain are among the country's finest

and oldest. While there are presumed dates for most of those still standing, there rarely is a chronological building history from the original erection to the present.

This study of three New Paltz, New York covered bridges establishes a chronology that marks Perrine's Bridge, the only one of the three still standing, as among America's oldest covered bridges. The story begins in the early 1820s, chronicling the evolutionary and interconnected lifecycles of the bridges within the context of regional history. It provides a narrative that reveals progressive authenticities, the layers of re-building that occurred as circumstances demanded. With each re-building, carpenters laboured pragmatically, using recycled old wood whenever possible in order to fashion improved timber trusses to support the long spans. Taking a broad view, this analysis underscores that covering helps lengthen lifespan, bridges are not immutable over their lifespan, wooden bridges require maintenance, failures were inevitable requiring even sometimes re-building with different trusses, and that whatever the

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structure, each was susceptible to not only structural deterioration but also adverse impacts from seasonal freshets and ice flows. Using Town, County, and State documentation, which is supported by contemporaneous handwritten records and photographic evidence, this narrative underscores that claims of historical authenticity must be credible and based on fact and not local boosterism.

## 2 Research issues surrounding authenticity

While three covered bridges in a single valley may not be fully representative of the thousands of structures erected and overtime rebuilt, their historical analysis encounters common research issues. In the United States, the 20th century brought an international outlook as well as an increasing awareness and appreciation of local heritage, including landscapes and historic structures like covered bridges. Conservation historically was initiated in a local area before expanding outward at varying speeds depending on the nature of media at the time, principally newspapers. With the expansion of social media over the past two decades, the pace of interaction between grassroots efforts and the world beyond has become more immediate and effective. Judging landscape features as 'historic' and worth preserving rather than merely 'old' to be replaced did not occur suddenly in most communities, but rather evolved at different paces.

### 2.1 Historical records

The formal documentation of covered bridges alongside other historic buildings began in 1933 with the Historic American Buildings Survey (HABS) and its successor, the Historic American Engineering Record (HAER). Measured drawings (plans, elevations, sections, joint details), written chronicles, and black-and-white photographs from these efforts now have been digitized and are available free via the Library of Congress website.<sup>1</sup> The Federal Highway Administration's National Historic Covered Bridge Preservation Program (NHCBP) was in existence from 1998 to 2019 to preserve, rehabilitate, or restore the nation's historic spans. Periodic grants are awarded for eligible projects. In 2003, the Burlington Charter for the Preservation of Historic Covered Bridges provided general guidance for maintaining the historic structural and material integrity of covered bridges.<sup>2</sup> Soon after, in 2005 a *Covered Bridge Manual* was published with technical information on the preservation of covered bridges.<sup>3</sup> The publication in 2019 of the

*Guidelines for Rehabilitating Historic Covered Bridges* was a major step forward in providing specific, detailed standards and 'best practices' regarding maintenance and reconstruction to insure the authenticity of covered bridges (Marston and Vitanza 2019). Unlike knowledge a half century ago, these materials are of extraordinary value to those who maintain or need to restore extant covered bridges.

### 2.2 Practice

Given that the timber trusses of a covered bridge are the essential components and not the cover—roof and siding—traditional timber framers are key in insuring authenticity with major repairs or rebuilding. In most regions of the United States today there are experienced timber framers, contractors, and engineers who have both restored as well as constructed anew covered bridges using traditional practices. Their successful efforts are chronicled on websites and in videos, which can be easily located by searching 'covered bridges' on Facebook. Still, it is worth emphasising that there continues a variety of attitudes, including those of traditional timber framers, professional engineers, and the general public. While some want to save the original using traditional methods, others are satisfied with a fake replica and are principally concerned with a cost-efficient result.

### 2.3 Dating

The governmental publications presented above all highlight the need for the preparation of an Historic Structure Report for a target bridge in order to record defining features that may be related to past conditions and subsequent repairs. While it is recommended that archival research be done, it is rare for these to encompass the breadth of Town, County, State records and contemporaneous handwritten documents utilised for the covered bridges as presented in this essay.

In the United States, a covered bridge is judged historic if it has an authentic truss that supports the bridge as it was originally designed, and authentic if it has a working truss even if more recently rebuilt. Whether with bold numbers on the portal, on a plaque, on a webpage, or on what appears to be an authoritative list, most North American covered bridges have a date of construction attached to them. The general public rarely questions these dates, accepting any bridge dated 19th century as sufficiently 'old'. It is uncommon for researchers to probe deeply into often difficult to locate past records to confirm or question any customary date or even recognise that sequential rebuilding of covered bridges over time was the norm. However, a single date is rarely sufficient. The result is that many covered bridges carry inaccurate dates.

<sup>1</sup><https://www.nps.gov/hdp/project/coveredbridges/publications.htm#2015> [https://www.loc.gov/rr/print/list/088\\_covb.html](https://www.loc.gov/rr/print/list/088_covb.html) and <https://www.nps.gov/hdp/project/coveredbridges/surveys.htm>

<sup>2</sup>[http://www.coveredbridgesociety.org/downloads/burlington-charter\\_06jun2003.pdf](http://www.coveredbridgesociety.org/downloads/burlington-charter_06jun2003.pdf)

<sup>3</sup><https://www.fhwa.dot.gov/publications/research/infrastructure/structures/04098/index.cfm>

As new information appears through the research of a small number of scholars and the handful of practitioners whose experience with covered bridges over decades brings forth new information, corrections are made principally on websites such as Covered Spans of Yesteryear, a chronicle of all known covered bridges in the United States and Canada, past and present.<sup>4</sup> No organisation is more prominent than the National Society for the Preservation of Covered Bridges (NSPCB), which compiles the *World Guide to Covered Bridges* (2009), maintaining as well records of and publicising changes in the state of North America's covered bridges.<sup>5</sup> The work of this national organisation is supplemented by covered bridge societies in a handful of states as well as even a larger number of place-specific Facebook pages.

### 3 The context

New Paltz is an old settlement in southeastern New York State, having been first inhabited by Europeans in 1678 as a result of a Fall 1677 contract with Esopus Munsee Indians granting a community of 12 French Huguenots ownership of some 40,000 sparsely populated acres. The initial patentee hamlet was on a raised site along the east bank of the Wallkill River once occupied by the indigenous tribe. The population of Huguenots grew to 130 as recorded in 1703, then 1263 in 1782, before quadrupling to 4612 in 1820, including immigrants from other European countries as well as enslaved Africans. During the 18th century, the economy expanded as families moved from the core settlement to new farm homesites throughout the town and beyond, some in the fertile bottomlands along the Wallkill River. These proliferating locations became the dots that subsequently were connected to form a complex road network that included bridges.

With the Treaty of Ghent that ended the War of 1812 near the end of 1814, the agricultural economy in New Paltz expanded quickly to include manufacturing and commerce, bringing increased wealth to the town. While the extension and improvement of roads in towns throughout New York like New Paltz had already begun in the 1790s, there were accelerating efforts from 1815 onward to modernize roadbuilding and erect covered bridges in order to expand markets. Into the early decade of the 1800s, only fords, ferries, and makeshift timber trestle bridges that were highly vulnerable to frequent destruction were used to cross streams. The volume of petitions presented to the New York State Legislature for approval of entrepreneurial turnpike

companies and toll bridge companies swelled from 1815 on. The New Paltz community was among the most vigorous in improving transportation to and from the village in four directions.

The Wallkill River was once crossed by five timber covered bridges, three of which were within a distance of 10 miles (Fig. 1). At the end of the 19th century, the three covered bridges were in three different towns because of changes in town administrative boundaries between 1843 and 1853. During those 10 years, the Town of New Paltz shrunk in size as some areas on the south and north banks of the Wallkill River were added to two existing towns (Esopus in 1843 and Rosendale in 1844) and as two new towns were created (Gardiner in 1853 and Lloyd in 1845). Thus, any covered bridge constructed in New Paltz before 1843 was originally in the Town of New Paltz even as they are identified now with other adjacent towns.

So-called authoritative sources, both printed and ephemeral, generally have stated the age of the three covered bridges, one to the north and one to the south of the village of New Paltz, as follows: Phillies (c. 1840–1952); Perrine's (1834/1844/1850/1860 - still standing); New Paltz (c. 1850–1891). Two other covered bridges across the Wallkill were 6 miles farther south than Phillies Bridge: Galeville (c. 1850–1940) and Wallkill (c. 1850–1915). In April 1843, a bridge across the Wallkill near the junction of the Shawangunk Kill at a place called Steep Rocks was authorised, but apparently not constructed. Another notable bridge in the Wallkill watershed crossed the Shawangunk Kill, a left bank tributary at Ganaghote/Tuthilltown (1845–1930s).

None of the commonly accepted dates for the *initial* construction are accurate.

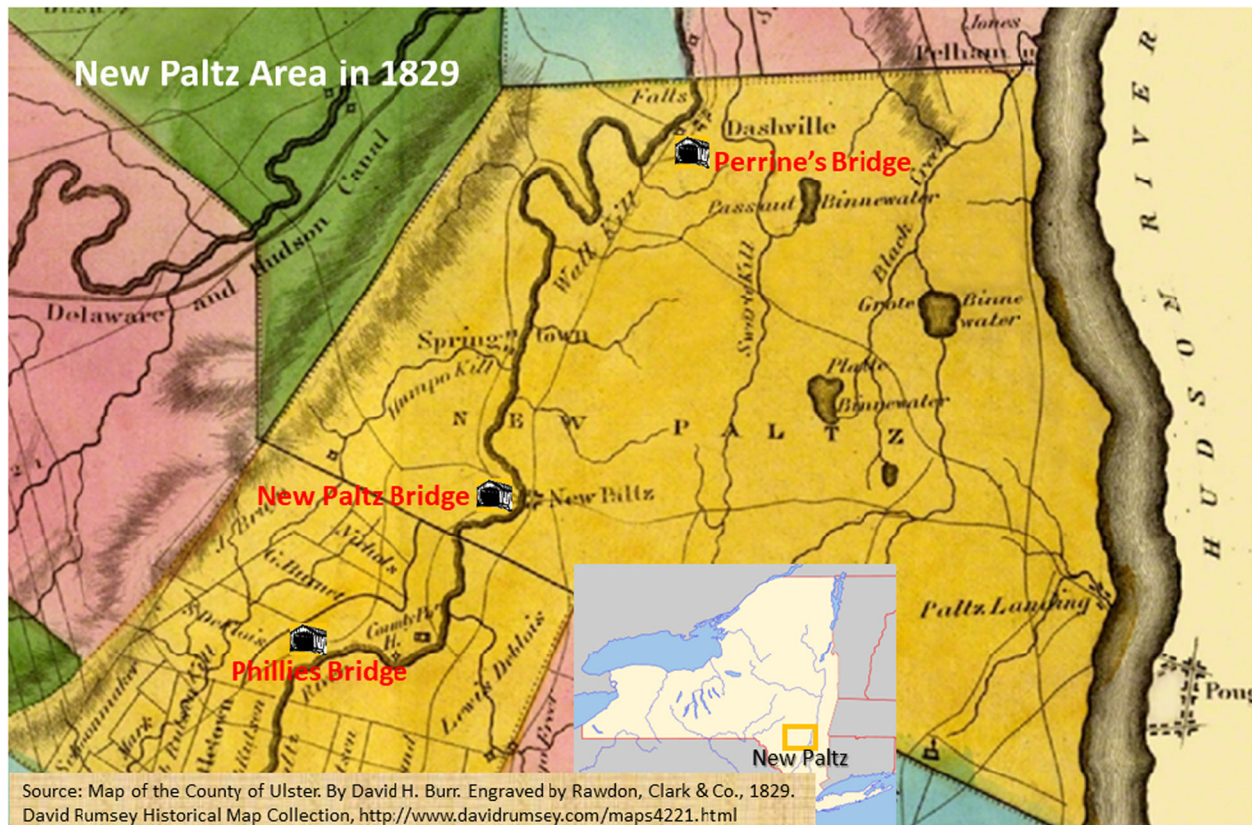
Early 19th century information gathered from official State, County, and Town records show clearly that the three covered bridges date much earlier than generally accepted. These sources place their construction in a brief period of 6 years in the 1820s—New Paltz (1820/1821 'covered'), Perrine's (1821/1822 'completed'), and Phillies (1826/1827 'covered') with the rationale for two dates explained later. In the discussion below, the New Paltz Bridge and Phillies Bridge will be discussed together since their structural evolution, according to available information, was interrelated. Treated separately will be Perrine's Bridge.

During the 1820s, all three of these covered bridges were in the Town of New Paltz since it had not yet been reduced in size, 'dismembered', as recounted by Ralph LeFevre, revered Huguenot patentee descendant and historian (LeFevre 1903, 6). It is not surprising that the one identified as New Paltz was first since the village was the core settlement in the town. The bridge was constructed at the foot of a newly aligned Main Street linking the east

<sup>4</sup><http://www.lostbridges.org/>

<sup>5</sup><http://www.coveredbridgesociety.org/> The most recent *World Guide* is the 7th edition dated 2009 with updates through March 23, 2021 available via an online pdf <http://www.coveredbridgesociety.org/downloads/wg-update.pdf>





**Fig. 1** The Town of New Paltz, 1829, with bridge and other locations (Source: *Map of the County of Ulster*. By David H. Burr; <http://www.davidrumsey.com/maps4221.html>)

side with the west side of the Wallkill River. The eastern bridgehead of the New Paltz Bridge was on a high bank location several hundred feet to the south of earlier crossings, first by a scow ferry and later by a trestle bridge that subsequent records refer to as the 'Old Bridge'.

The combination of private enterprise, wealth, vision, optimism, and bridge-building innovations spurred progress in the 1820s. Where fords, ferries, and low-lying timber trestle bridges once had served as practical passages across narrow and slow-moving streams, broader streams had long remained impediments until new structural patterns—called 'trusses'—offered greater and greater strength, flexibility, and efficiency in bridge-building across wider streams. In the early and mid-nineteenth century, the development of timber trusses by inventive carpenters (housewrights and millwrights, even some architects) launched the spread of wooden covered bridges, playing a role similar to canals and railroads in opening America to westward-bound possibilities, including commerce and settlement.

#### 4 Covered bridges and timber trusses

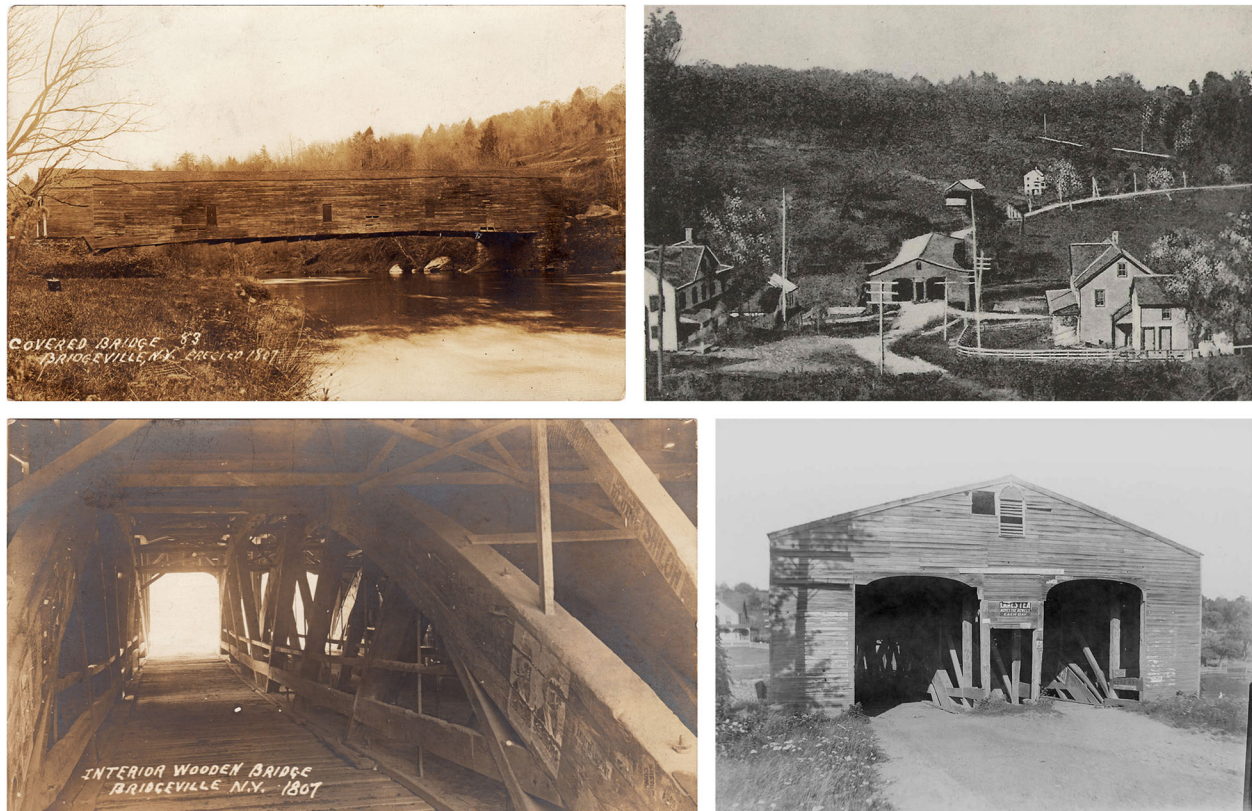
'New York State was once a vast proving ground for covered bridges' where bridge builders experimented with

timber structures that would carry heavy loads and span broad watercourses, according to Allen (1957, 80), the author of the earliest authoritative books on North America's covered bridges. The first covered bridge in New York State was constructed in 1807 over the Never-sink River at a location that came to be known as Bridgeville, about 40 miles south of New Paltz and 4 miles east of Monticello in Ulster County,<sup>6</sup> just 2 years after the first documented covered bridge in the United States was erected in Philadelphia. The Bridgeville Bridge, which was double-barreled with a pedestrian walkway in between two travel lanes (Fig. 2), was a critical link in the 57-mile-long Newburgh-Cochecton Turnpike linking the port of Newburgh on the Hudson River to the Delaware River at Cochecton.

In order to span a distance of 160 ft between the stone abutments at Bridgeville, the interior timberwork supporting the Bridgeville structure was necessarily complex and heavy even as the bridge had an unremarkable sawn

<sup>6</sup>Ulster County was one of New York State's original 12 counties. Its boundaries included all of what is today Sullivan County and portions of the present-day Delaware, Orange, and Greene Counties. Since the creation of Sullivan County in 1809, Bridgeville has been in Sullivan County, but originally was in Ulster County.





**Fig. 2** Four early 20th century views of the 1807 Bridgeville Bridge, New York State's first covered bridge (Source: Todd Clark Collection)

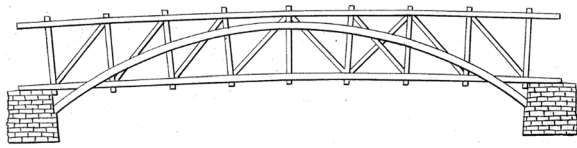
pine board cover. Achieving a sufficiently strong supporting structure no doubt took experimentation and resourcefulness. We do not know conclusively what the nature of the interior timberwork was originally or what alterations may have taken place in the decades after the bridge was first erected. However, two photographs of the interior as the bridge approached its centennial in 1907 reveal not only a multiplicity of horizontal and vertical braces but also substantial timber arches that reach near to the portal entry. The massive arches shown in these photographs are called tied arches and were either anchored to the lower chords or went past the end of the lower chords onto the upper portion of the masonry abutments, unlike later classic Burr trusses, which are extensively discussed below. The builders were not following a published plan as they erected the bridge, but instead improvised based on experience, pragmatism, and ingenuity.

At Cohecton, a succession of three timber bridges were constructed between 1817 and 1854 to span the 500 plus feet crossing of the Delaware River. Intermittent ferry service while rebuilding connected New York with Damascus, Pennsylvania to allow travellers to continue along other turnpikes heading westward. This turnpike route together with the Union Bridge (also with variations of the Burr truss) that linked Lansingburgh

with Waterford across the Hudson River north of Albany, were popularly known among the earliest 'Gateways to the West'. Plans for the Erie Canal, which became an even greater Gateway to the West, were being formalised with surveying and funding in this time period also. The canal's construction joining the Hudson River with the Great Lakes began in 1817 but took until Fall 1825 to open.

In Kingston, the seat of Ulster County 15 miles north of New Paltz, the loss of a bridge in March 1818 to freshet flooding precipitated quick action in the State Legislature. Authorization to raise \$2000 for a new Kingston Bridge occurred on April 3, 1818. for the location where the Ulster and Delaware Turnpike crossed the Esopus Creek. Although the documents do not call it a 'covered bridge', Kingston's new bridge foreshadowed the next decade's flurry of bridge-building initiatives in Ulster County.

It is fair to ponder at this juncture—even before evidence is provided—why mid-19th century dates were generally accepted rather than actual dates 20 to 30 years earlier. Many of America's first community histories were inspired by the nation's centennial celebrations in the 1870s and were written in the late 19th and early 20th centuries. Personal recollections were the most common source for these histories and



**Fig. 3** Theodore Burr's original patents were lost in a Patent Office fire in 1836. This recreated drawing is his U.S. Patent No. 2769X, April 3, 1817

(Source: <https://pdfpiw.uspto.gov/piw?Docid=X0002769&idkey=NONE&homeurl=http%3A%252F%252Fpatft.uspto.gov%252Fnethtml%252FPTO%252Fpatimg.htm>)

those alive at the time likely had personal familiarity with a mid-19th century bridge but generally lacked detailed knowledge of previous structures. Printed images of earlier bridges rarely existed to contradict what they believed.

In the 1820s, the timber truss of choice for spanning broad rivers was a variant of the evolving Burr truss. Close comparisons of old bridges described with Burr trusses reveal a multiplicity of timber truss configurations, including timber-tied arches attached to a bottom chord, that go beyond the Burr classic multiple kingpost truss in between a pair of arches reaching to the abutments. Following Burr's formal patent approval in 1817 (Fig. 3) and coupled with intense marketing, there was a veritable boom of bridge-building using variations of Burr trusses throughout New York and adjacent states. Theodore Burr published a notice 'To Bridge Builders and Others' in his Upstate New York hometown newspaper on April 22, 1818 that was repeated weekly until the following February. He declared that he 'devoted 18 years of his life to the theory and practice of bridge building exclusively ... building 45 bridges of various magnitudes, with arches from 60 to 367 ft span.'<sup>7</sup> Nonetheless, it was rare for early 19th century handwritten documents by town highway superintendents as well as subsequent printed construction, repair, and alteration records at the county and state level to contain specific references to Burr, arch, or truss. A Burr was essentially the basic truss design available that local carpenters freely modified often without paying a patent fee.

In the 1842 book about his American trip, Charles Dickens used both 'roofed' and 'covered' to describe a 'wooden bridge' across the Susquehanna River at Harrisburg, Pennsylvania. He did not call the structure a 'covered bridge' or mention specifically the presence of

timber trusses or a named truss like Burr, noting, 'It was profoundly dark: perplexed, with great beams, crossing and recrossing it at every possible angle; and through the broad chinks and crevices in the floor, the rapid river gleamed, far down below, like a legion of eyes. We had no lamps; and as the horses stumbled and floundered through this place, towards the distant speck of dying light, it seemed interminable' (Dickens 1842, 35–36). His comment no doubt reflected the fact that Britain generally had no tradition of trussed or even covered bridges.

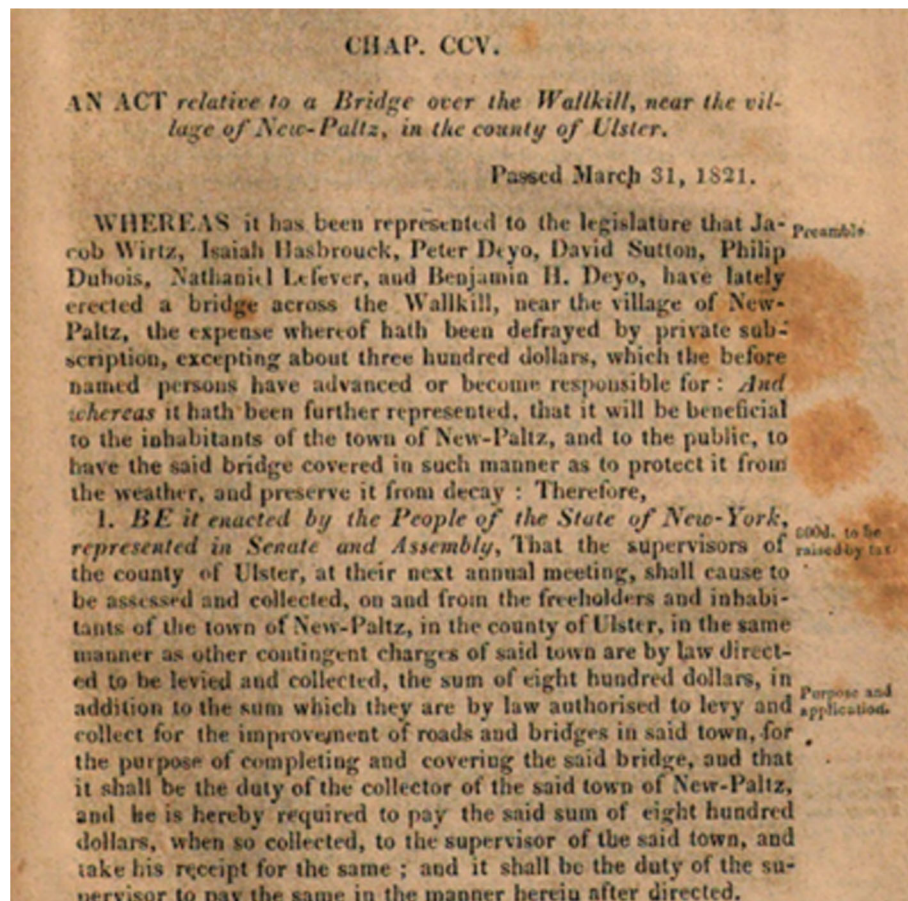
About a quarter of America's covered bridges surviving into the twenty-first century utilise variants of Burr's trusses, but most of these do not date from the first half of the nineteenth century. Other early 19th century covered bridges by notable bridge builders like Lewis Wernwag and Timothy Palmer are no longer extant and moreover beyond the scope of this essay. Large numbers of ordinary timber-framed bridges, many with open, uncovered trusses or covered with shingles or clapboard, were constructed in New York. Built quickly and cheaply to meet pressing needs, they were sometimes mentioned in town records but rarely photographed, thus lost to memory. On the other hand, more than 20 covered pony truss bridges crossing the Delaware & Hudson Canal, whose course followed the Rondout Creek into which the Wallkill River flowed, are visible in extant photographs and worthy of study.

Words such as 'covered bridges' do not appear in the 19th century archives in the Town of New Paltz, County of Ulster, and State of New York archives. Of course, during the first half of the 19th century timber/wood was the essential building material for virtually all bridges and was likely implied without the need to state it. Bridge-builders who were skilled carpenters worked with masons to construct abutments. Beyond Theodore Burr's efforts, new timber truss designs emerged from the ingenuity of others that were adapted by local carpenters to meet the practical requirements of their sites, each one different in terms of the landing location for abutments, seasonal flow of water, and the availability of timber.<sup>8</sup> It is certain that contracts were written and drawings done for the first 1820s covered bridges, but, at least in the New Paltz archives none have been located. Moreover, even without formal drawings or engineering training, local carpenters were able to replicate what they saw or heard about, freely improvising to meet perceived needs for a span sufficiently strong to allow for the passage of heavy loads of logs, stone, and hay as well as herds of livestock.

<sup>7</sup>*Oxford Gazette*, April 22, 1818, p. 1. Burr moved from Torrington, CT to Oxford NY in 1792 and left in 1818 for Northumberland, PA along the Susquehanna River where he had been constructing magnificent covered bridges during the 1810s. Burr died virtually penniless at the age of 51 in 1822. His 1818 Oxford newspaper notice warned "... all persons against an infringement of his patent," which was all too often ignored as covered bridges with Burr trusses proliferated without his involvement.

<sup>8</sup>For a full illustrated discussion of trusses and their use in the construction process, see Miller and Knapp (2014), 54–117. And Christianson and Marston (2005), 4–48.





**Fig. 4** Excerpt from the enabling legislation for the New Paltz Bridge (Source: 'AN ACT relative to a Bridge over the Wallkill, near the village of New-Paltz, in the county of Ulster,' March 31, 1821)

## 5 New Paltz Covered Bridge and Phillies Covered Bridge

Even when the words 'bridge' and 'covered' were employed in official records, they often were not adjacent, thus not easily discoverable. In the 1821 State record regarding a new bridge crossing the Wallkill River at the village of New Paltz, it was not stated that this was to be a 'covered bridge' or a 'roofed bridge'. Instead, there was just a declaration ... that it would be beneficial to the inhabitants of the town of New-Paltz, and to the public, to have the said bridge covered in such a manner as to protect it from the weather and preserve it from decay.<sup>9</sup> A total of \$800 was assessed 'for the completing and covering of said bridge.'<sup>9</sup> Without using the term 'covered bridge', this document states clearly that a timber-trussed bridge was erected in New Paltz *before* March 31, 1821 with a 'cover'—roof and siding—slated to be *added* after March

31, 1821 (Fig. 4). Since construction is often a slow process, the actual date, subject to further verification, is likely 1820. Of course, the rationale for the cover was to protect the timber truss, but no records directly state that. Although specific dated information is scanty, covering a timber bridge a year or more after its completion was not unusual during this early period.

The Act also included cautions concerning overtaxing the capacity of the structure that would lead to it being 'impaired, weakened or injured,' further stressing 'that it should not be lawful for any person or persons, to drive any horse or team on the said bridge faster than on a walk, nor for any drover to drive a larger number of cattle than fifteen, over or on the said bridge, at any one time'. Today we may judge these admonitions as quaint echoes from simpler times, but they are no different than modern load limit warnings on bridges, too often violated with disastrous consequences.

Until this record came to light in Fall 2020, it had been generally accepted that the first covered bridge at the New Paltz crossing was circa 1850. Given the fame of the Burr truss after its use across the Hudson River in

<sup>9</sup>"AN ACT relative to a Bridge over the Wallkill, near the village of New-Paltz, in the county of Ulster," March 31, 1821, "Laws of the State of New York, Passed at the Forty-Second, Forty-Third and Forty-Fourth sessions of the Legislature, January 1819 to April 1821", Volume 5, pages 185–186.

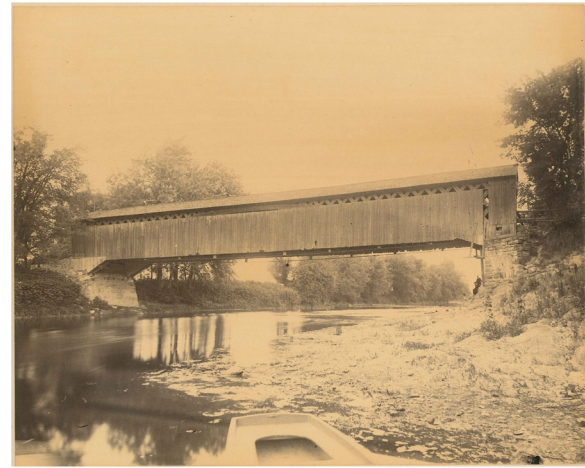


1804 and elsewhere in the region, it is likely to have been employed with multiple kingpost trusses or some variant on the New Paltz Bridge in 1820. The geometrical form of the multiple kingpost—a centre timber kingpost with right-angle symmetrical panels on each side of the centre that incorporate diagonal timbers angled away from the centre—kept the bridge rigid while an arch seated into the abutments carried the dead and live load of the bridge. Used alone, multiple kingpost trusses generally supported bridges less than 100 ft long while the addition of an arch increased the potential span; in this case the length was 153 ft.

The available documents do not indicate who built the original New Paltz Bridge or the other two in the Town of New Paltz in the 1820s. Could it have been Major Salmon Wheat, whose home was just 12 miles up the Wallkill River in the Town of Wallkill? Major Wheat had already succeeded in constructing notable bridges with arches such as the one at Bridgeville in 1807 and Cohecton in 1817 and 1822 as well as others not as well known in the region.

Unfortunately, gaps in the handwritten records and some missing formal records at the county level frustrate the full sequential documentation of how each of the New Paltz Bridges was maintained and/or changed before being replaced. It is fortunate that contemporaneous information about nearby Phillis Bridge, especially, and Perrine's Bridges to a lesser degree can be used to fill in some gaps in the record of the New Paltz Bridge. All three bridges were under the supervision of the same New Paltz Roads and Bridges Committee who dutifully kept minutes—some of which are missing—moving decisions from the Town level via the Supervisor to the joint Ulster County Board of Supervisors, and then upward to the State Legislature where there were also committees dealing with roads and bridges. Fortunately, once newspapers began in New Paltz in 1860, floods, ice, and bridge dilapidation and repair were reportable news, while earlier such notes were only in personal diaries.

On April 11, 1845, the State Legislature passed another Act for 'building' a bridge across the Wallkill at New Paltz village.<sup>10</sup> The amount noted was \$1500, approximately twice what was indicated in the 1821 document for covering the bridge. Why rebuilding was necessary was not explained. Our knowledge of Phillis Bridge and late nineteenth photograph suggests strongly, a Town lattice truss was employed during the rebuilding. In general, flood or ice flow or even structural failure would necessitate either a full or partial rebuild. Further, on January 26, 1869, within 25 years of the 1845 rebuilding, a newspaper noted



**Fig. 5** Taken between 1870 and 1891, this is the only known photograph of the New Paltz Bridge (Source: Schoonmaker 1893)

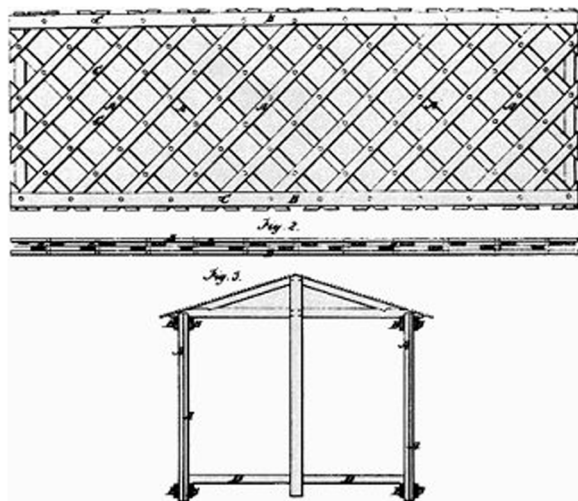
that the Commissioners of Highways insisted that the New Paltz Bridge required repairs and 'was unsafe for crossing. Those who cross it therefore do so at their own risk'. Occurring in the depth of winter with the river frozen over suggests that deteriorating conditions had accumulated until extreme intervention was necessary. An additional note stated, 'Arches are to be placed on the outside and connecting rods of iron need to brace it. After today (Thursday) no crossing of teams will be allowed over the bridge, and a road will be opened for travel on the ice just below.'<sup>11</sup> Adding arches to Town lattice truss bridge structures elsewhere had by this time become common.

Curiously, there is only one known photograph of the New Paltz covered bridge, which is in an 1893 publication (Fig. 5). Yet, it is not clear when the photograph was taken. In fact, by 1893, the wooden covered bridge had already been removed, replaced in 1891 by an iron bridge on the old abutments of the covered bridge as can be seen in photographs of the iron bridge. It remains bewildering as to why there is only this single photograph, and most unfortunately missing is an image of the interior. The bridge was within a few minutes walking distance from the busy New Paltz depot with thrice-daily train service after 1870 that brought hundreds of guests to mountain resorts and boarding houses, and a few steps farther was the New Paltz Normal School that had hundreds of students year-round.

Thus, we have an 1821 document making the case for putting a cover on a newly erected bridge, which likely had a version of the Burr truss since protecting these timbers was the purpose of the roof and sides, and some 70 years later a photograph with tantalising clues to identifiable truss patterns. The photograph reveals through the slender openings between the roof and the siding both a lattice and a midspan curve of an arch. The glimpses of the continuous geometrical shapes

<sup>10</sup> "An ACT for building a bridge across the Wallkill at New-Paltz village," *Laws of the State of New York passed at the Sixty-eighth session of the Legislature April, 11, 1845*, p. 42.

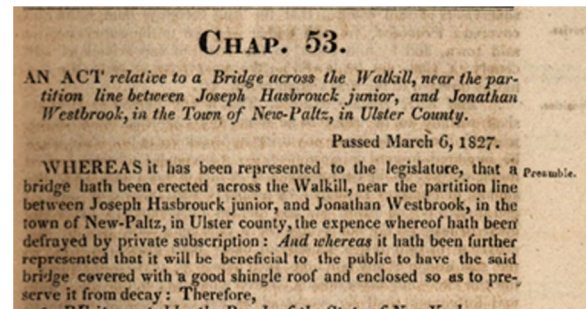
<sup>11</sup> *New Paltz Independent*, January 28, 1869, p. 2.



**Fig. 6** Ithiel Town, Patent Number 3169X - Truss Bridge. 3169X, issued January 28, 1820  
(Source: <https://pdfpiw.uspto.gov/piw?PageNum=0&idkey=NONE&SectionNum=3&HomeUrl=&docid=X0003169>)

affirm that a lattice truss at some point replaced what had been the original truss. The visibility of a lattice in the photograph led many to assume that the New Paltz Bridge had a Town lattice truss from its earliest days, presumably circa 1850 without any awareness that a New Paltz covered bridge existed decades earlier. However, as established above, a bridge at this location was covered in 1821.

If one accepts that a New Paltz *covered* bridge dates to 1821 and, in fact, had been constructed a year earlier in 1820, then a Town lattice truss was a doubtful option. Ithiel Town patented his garden trellis-like truss only in January 1820 (Fig. 6). It is unlikely his truss was a structural component of the first New Paltz covered bridge or even as we will see below with Phillies Bridge when it was covered in 1827. Town subsequently improved his patent in 1835 after which its use became widespread, as it was promoted by traveling salesmen. The relative simplicity of the Town lattice, a crisscrossed assemblage of narrow planks, was popularized in a small book published in 1821 (an expanded edition in 1839) with a long title and subtitle: *A description of Ithiel Town's improvement in the construction of wood and iron bridges: intended as a general system of bridge-building for rivers, creeks, and harbours of whatever kind of bottoms, and for any practicable width of span or opening, in every part of the country*. In this book, Town excoriated past wooden covered bridge building in America, claiming that there had been 'The great destruction of bridges, which takes place every 3 or 4 years, in many parts of the country ... An immense amount of capital is every year sacrificed in this country, in the construction of



**Fig. 7** The enabling legislation for the covering of Phillies Bridge  
(Source: *Laws of the State of New York ...* March 6, 1827)

bridges only, either on bad principles, or on good principles badly executed.' (Town 1839, 4).

The building and rebuilding of Ulster and adjacent county bridges may well suggest that problems persisted in the original structures just as Ithiel Town opined, necessitating bridgewrights to consider new options. Less than a quarter century after the initial erection on April 11, 1845, as mentioned above, a legislative Act authorized \$1500 to be 'assessed, levied and collected, by tax on all taxable property in the Town of New Paltz ... for the purpose of building a bridge across the Wallkill at New-Paltz village'.<sup>12</sup> The circumstances that led to this building—actually replacement—are not clear from the written record. However, if we look at available documents in sequence for Phillies Bridge, there are some plausible answers.

Just as with the covering of the New Paltz Bridge in 1821 over an already erected bridge, perhaps a year old, a March 6, 1827 Legislative Act concerned covering Phillies Bridge (Fig. 7). Using slightly different language, it declared, '... that a bridge hath been erected across the Wallkill ... that ... will be beneficial to the public to have the said bridge covered with a good shingle roof and enclosed so as to preserve it from decay ...' \$600 was to be allocated 'for completing and covering the said bridge'.<sup>13</sup> This Act had similar warning language to that of the New Paltz Bridge concerning speed and weight limits.

Just a bit more than 13 years after being covered, an Act of the State Legislature dated May 14, 1840 called for the 'building of a bridge across the Wallkill ... on the abutments now erected' at the Phillies Bridge location. This necessarily begs the question what happened to the earlier 1827 covered bridge and what was the nature of the truss that supported it. A reputable source wrote that the previous bridge had been 'flood-wrecked'

<sup>12</sup>*Laws of the State of New York passed at the Sixty-eighth session*, April 11, 1845, p. 42.

<sup>13</sup>*Laws of the State of New York passed at the Fiftieth session of the Legislature*, March 6, 1827, pp. 35–36.





**Fig. 8** Concerned with liability issues related to the deterioration of the covered bridge, the Town of Gardiner burned Phillie Bridge in August 1952, whereupon it fell into the Wallkill River (Source: Haviland-Heidgerd Historical Collection, Elting Memorial Library, Erna DeWitt Photographs)

with the rescued timbers collected and sold for \$84.82.<sup>14</sup> Efforts continue in search of local meteorological records that would confirm damage by a destructive natural event. In any case, a total of \$1800 was to be ‘assessed, levied and collected’, mainly from New Paltz but also from the neighboring towns of Marlboro and Plattekill, whose residents would benefit from the bridge. A replacement was built, which continued in use into the 20th century, as verified by photographic and textual evidence of its interior. Phillie Bridge was condemned in 1906, then repaired, and condemned again in 1948 before being burned in 1952 by the Town of Gardiner that regarded it as a liability (Fig. 8).

Rather remarkably, copies of two handwritten documents discovered in early 2021 reference the 1840 ‘building’ of this bridge ‘near the Guilford Church’, which in fact was the Phillie Bridge replacement.<sup>15</sup>

<sup>14</sup>Richard Sanders Allen, “Covered Bridges in Ulster County, New York,” *Covered Bridge Topics* (Summer, 1955), XIII.2: 4 that quotes from an unpublished paper by Kenneth Hasbrouck, “History of Phillie Bridge.”

<sup>15</sup>I am grateful to Trish Kane, Collections Curator of the Theodore Burr Covered Bridge Resource Center, Oxford, New York for sharing these two documents from the John and Katharine Poteet Collection. Trish Kane also provided me with a copy of an article “Covered Bridges in Ulster County, New York” written by Richard Sanders Allen (1955) that was published in *Covered Bridge Topics* (Summer, 1955), XIII.2: 1, 4–6 that references the original Contract that at the time was in the possession of Joseph E. Hasbrouck of Modena, New York.

*Specification for a Bridge to be built over Wallkill Creek in the Town of New Paltz.*

*Said bridge is to be built on the plan of Ithiel Town's Patent Single Lattice—*  
*The sides to be 16 feet high, and framed with two double tiers of Chord Plank running the whole length of the Bridge as represented on the plan— The Chord plank to be 28 ft long 3 by 12 inches at top & bottom & 3 by 10 & 3 by 9 for the intermediates— The Lattice plank to be 22 ft long 3 by 11 inches— the whole faithfully and properly secured at each intersection with two-inch oak Trunnails as also represented on a plan—*

**Fig. 9** Dated June 29, 1840, this initial passage from the multi-page handwritten contract for the re-building of Phillie Bridge, also known as Guilford Bridge, states, ‘Said bridge is to be built on the plan of Ithiel Town's Patent Single Lattice...’ with details concerning timber to be used specified. (Source: Theodore Burr Covered Bridge Resource Center, Oxford, New York John and Katharine Poteet Collection)

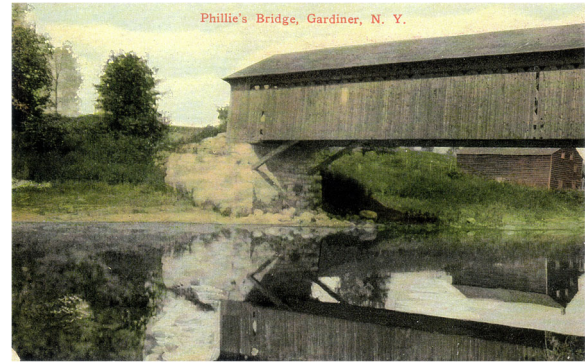
The document is a signed contract dated June 29, 1840, a month and a half after the legislative act. Titled ‘Specification for a Bridge to be built over Wallkill Creek in the Town of New Paltz’, it is the most comprehensive document known for any covered bridge in the Wallkill River Valley. Not only does it specify that ‘Said bridge is to be built on the plan of Ithiel Town's Patent Single Lattice,’ the dimensions of chord planks, lattice planks, floor timbers, and cross bracing are precisely stated with ‘... the whole faithfully and properly secured at each intersection with “two-inch oak Trunnails” [sic] as also represented on the plan’. Work on the 172-ft-long bridge was to be completed by September 1, just 2 months after the signed contract with a warranty of 1 year. Interestingly, the lumber was not to be sourced locally, but was to ‘...be delivered at the Landing opposite Poughkeepsie’ on the Hudson River and hauled to the site. The old abutments were raised 5 feet and reinforced with stone ice breakers constructed for protection, a likely clue that the earlier loss had been due to flood or ice (Fig. 9).

A petition to the New York State Assembly dated January 12, 1842, which was acknowledged by the Clerk of the Assembly on August 14, 1842, affirmed that the rebuilt Phillie Bridge was completed. A subsequent petition from the subscribers who supported the erection of the bridge made the case that the funds approved in May 1840 were insufficient and asked the Legislature to pass an Act directing the County Board of Supervisors to raise enough funds to make up for the shortfall. That such an act does not appear in the records suggests either that a formal act was not required, the issue was addressed administratively, or was insufficiently compelling to move forward legislatively.





**Fig. 10** Phillie's Bridge interior timber structure—Town lattice truss and added arch (Source: National Society for the Preservation of Covered Bridges, Brainerd Collection, 1941)



**Fig. 11** Exterior western end of Phillie's Bridge (Source: Ronald G. Knapp Collection, undated)

As mentioned above, just 5 years after the rebuilding of Phillie's Bridge, a legislative Act dated April 11, 1845 led to the rebuilding of the New Paltz Bridge. Given that we have clear documentation that a Town lattice truss was employed in 1840 in the rebuilding of Phillie's Bridge, there is high probability that the same truss type was used in the 1845 reconstruction of the New Paltz Bridge, just 4 miles north of Phillie's Bridge. There is also firm information from a newspaper note indicating that interior arches were subsequently installed in January 1869, a pattern often used with Town lattice trusses.<sup>16</sup> By mid-century, arches were being added to Town lattice trusses to strengthen and increase load capacity of the bridge. We can glimpse both of these through a narrow gap near the roof of the New Paltz Bridge photograph, thus the photograph is after 1869.

A photograph of the interior of Phillie's Bridge, rebuilt after the likely 1840 flood and that survived to 1952, clearly shows a Town lattice with an auxiliary arch, although there is no newspaper or other report of its installation (Fig. 10). Early 20th century photographs of side and interior views of Phillie's Bridge show the presence of arches, just as can be seen in the photograph of the New Paltz Bridge (Fig. 11). By 1869, Phillie's Bridge was in the Town of Gardiner rather than in the Town of New Paltz with less reporting of its condition.

While not foolproof, this cross-referencing of documentation of nearby bridges is compelling. Available information that these timber bridges had trusses—first a variant of the Burr truss, then replacement with a Town lattice truss, and afterwards with an arch added—underscores that bridges are not immutable over their lifespan, that covering helps lengthen lifespan, that wooden bridges require maintenance, even re-building with a different truss, and that whatever the structure, each is susceptible to both structural deterioration as well as impacts from the kind of seasonal freshets and ice flows

that periodically impact the Wallkill River Valley. Since newspapers after 1860 reported news of such natural occurrences regularly, it can be assumed that such events occurred earlier but were not publicly recounted.

Gaps in the documentary records unfortunately disguise some of the physical changes that took place with both the New Paltz Bridge and Phillie's Bridge over seven decades. Yet, it is clear that from 1821 until near the end of the 19th century, a covered bridge crossed the Wallkill River at the foot of Main Street in the village. Minor repairs with associated costs to New Paltz bridges appear in the Roads and Bridges Committee Minutes. As discussed above, reports indicate that major renovations were approved in 1845 and completed around 1850. Surveys of New Paltz newspapers, which began only in 1860, include advertisements that state 'near the bridge' but nowhere mention a 'covered bridge'.

A March 11, 1891 notice in the *New Paltz Times* stated 'A new bridge should take the place of the old one which spans the Wallkill, in our village. One of iron, and without covering would be in keeping with the car of progress.'<sup>17</sup> The next month another even more strongly stated, 'A new bridge is very much needed .... The old one is quite dilapidated, especially on the north side, and we have our doubts about its [sic] being safe at the present time. An iron bridge, like the one in Alliger-ville is needed. No more wooden ones.'<sup>18</sup> Efforts continued to repair and brace up the bridge, but according to a news report, the Commissioner of Highways 'found it impossible and has condemned the same. People who cross do so at their own risk. A new iron bridge will soon take its place'.<sup>19</sup> On July 8, 1891, after reviewing six proposals, The Groton Bridge and Manufacturing Company received a \$6770 contract for an iron bridge 153 ft long, 18 ft wide with a 5-ft-wide sidewalk to be installed

<sup>16</sup>*New Paltz Independent*, January 28, 1869, p. 2

<sup>17</sup>*New Paltz Times*, March 11, 1891, p. 3.

<sup>18</sup>*New Paltz Times*, April 15, 1891, p. 3.

<sup>19</sup>*New Paltz Times*, May 27, 1891, p. 3.



**Fig. 12** The New Paltz iron bridge after 1891 (Source: Haviland-Heidgerd Historical Collection, Elting Memorial Library, Gift of Irene Martin, Postcard)

in about 2 months. A temporary bridge was placed for interim use.<sup>20</sup> In late July, the flooring of the old wooden bridge was removed and placed on the temporary crossing a bit downstream at the old scow and trestle bridge location. New stone abutments were constructed, iron components for the new bridge arrived, and road approach work continued into mid-October. After deck planks were put in place on October 14, 1891, the next day 'Benj. Gillett and son were the first to drive a drove of cattle over the new iron bridge in New Paltz.'<sup>21</sup> There are numerous photographs of the 'modern' single-lane iron bridge with a common Pratt truss that proudly showed the emblem of The Groton Bridge Building Company (Fig. 12). The iron bridge crossing at the foot of Main Street in New Paltz was a critically important node linking the broader community in the Wallkill River Valley to the commercial core for nearly a half century. It was condemned in 1938, then replaced in 1941 with the iron components sold for scrap, melted, and used to make weapons for the unfolding war effort. The 1941 two-lane bridge served as the crossing until October 2016 when it was replaced by a two-lane weathering steel through-truss bridge.

## 6 Perrine's Bridge—a 200 year history

Located approximately 4 miles north of the village of New Paltz, Perrine's Bridge today is the only extant covered bridge across the Wallkill River. As an existing bridge with a span of 136' 3" and length of 154' 4" feet that has outlasted all other wooden covered bridges in Ulster County except for four much shorter ones deep in the Catskill Mountains, there has been a good deal of secondary literature mentioning it. Perrine's Bridge was named after James Perrine (1801–1860), son of French immigrant James W Perrin and Huguenot descendant

Catherine Freer, who operated a hotel and tavern starting in the 1820–1830s on the south side of the Wallkill River at the covered bridge location. Nearby areas were part of the Perrine farm. Straddling the Wallkill River, Perrine's Bridge today links the hamlet of Rifton in the Town of Esopus with Tillson hamlet in the Town of Rosendale.

Perrine's Bridge is indeed not only an iconic structure representative of past timber construction practices, it is of exceptional heritage value because of its authenticity (Fig. 13). Like the New Paltz Bridge and Phillies Bridge that were first constructed in the 1820s, each underwent repair and rebuilding during their lifespans: New Paltz (1820/1821 to 1891), Perrine's (1821/1822 to the present), and Phillies (1826/1827 to 1952)—the first paired dates being the year erected and the second when covered. That Perrine's Bridge came second in the order of building after the centrality of the New Paltz Bridge no doubt arose from the fact that it was a necessary crossing on the road north to Kingston, the county seat.

Since no contracts exist for the original 1820s construction of these three bridges, the carpenters and crew must for the moment be unnamed, yet were skilled working with timber in building dwellings, churches, and halls on land. Their experience as 'bridge carpenters', on the other hand, working over moving water was no doubt new to them as was how to assemble the components of the preferred truss at the time, a version of the Burr truss. It is possible that one or more master carpenters visited the Union Bridge across the Hudson River near Albany that had been erected in 1804 and covered in 1814, or the 1807 Bridgeville Bridge that was once in the southern part of Ulster County, or another timber bridge somewhere in the region, using variants of the arch to support bridges of these lengths. The situation was quite unlike the erecting of covered bridges in the last quarter of the century where there were known construction firms doing the work in many counties throughout the USA. Given that the named commissioners supervising construction of the New Paltz, Perrine's, and Phillies Bridges were all prominent citizens in the Town of New Paltz and, where appropriate, adjacent towns, it is certain that they knew the most competent and reliable carpenters to carry out such vital projects. Since the commissioners were also investors in the projects, they had an incentive to choose wisely.

Still, actual labour on bridge projects was empirical and pragmatic, and certainly not based on engineering concepts and stress analysis as was the case later in the century. What bridge builders could draw upon was experience, common sense, and ingenuity as they tackled issues relating to joining timbers in optimal ways for strength and longevity. Inevitably, there were failures

<sup>20</sup>New Paltz Times, July 15, 1891, p. 2.

<sup>21</sup>New Paltz Times, October 21, 1891, p. 3.





**Fig. 13** Mid-20th-century image of Perrine's Bridge with its Burr truss visible (Source: Klyne Esopus Historical Society Museum, John Grady Collection)

that needed to be corrected, which is one reason that structures were warranted for at least a year. Subsequent documented allocations for minor repairs are common in minutes of the New Paltz Town Road and Bridges Committee.

Three years ago, I made an effort to sort through claims about Perrine's Bridge, affirming at that time that the date of construction was 1846 and the builder was the carpenter Rosencrans Wood who was known formally as John R. Wood. I acknowledged then that there were earlier authorized bridges at the site but presumed that they were not covered. However, working through all the records again in 2020–2021, especially those related to the New Paltz Bridge and the Phillies Bridge, I have been convinced that Perrine's *covered* bridge can be dated to 1821/1822. Between then and now, I feel comfortable in asserting that Perrine's was rebuilt, repaired, and even restored but always with some form of the Burr truss over a period of two centuries. This is unlike the New Paltz Bridge and Phillies Bridge that began with some variant of an arch before being rebuilt with a Town lattice truss, then years later had an arch added to lengthen their lifespan. As for Perrine's Bridge, it is certain that the somewhat classic Burr truss visible today that was renovated in 1968 and can be seen in early 20th century photographs was there in 1846 for a hundred and twenty-two years, and—even if in a

modified precursor form—in 1834 and perhaps even initially in 1821. While it is not possible to assess how much old wood was recycled with each of these rebuildings, it is reasonable to believe that carpenters of the time would not have been wasteful with timber that remained from earlier bridges.

As with the New Paltz Bridge and Phillies Bridge discussed above, the language concerning the initial Perrine's Bridge is less than direct concerning its structure, materials, and uses. New York Legislative Acts authorising the erecting of most bridges in the early 19th century, as discussed earlier, did not specify that a bridge was to be covered, nor state the building material—timber—nor the structure supporting it—truss type or trestle. The enabling legislation focused instead on identifying the commissioners, time frame, and sometimes tolls for specific users. It was common to indicate if the bridge funding was by private subscription or whether it required additional tax levies. It was only with subsequent requests for smaller amounts of funding that the words 'covering' and 'completing' entered the language of authorizing Acts that were to be raised by tax levies.

On April 22, 1822 in the *Laws of the State of New York*, there is a description of 'AN ACT relative to a Bridge over the Wallkill, near the house of James Perrine, in the Town of New Paltz, in the County of Ulster'. The WHEREAS paragraph states that a group of named



individuals ‘... have lately erected a bridge across the Wallkill, in the Town of New Paltz, the expenses whereof hath been defrayed by private subscription, excepting about two hundred and twenty-five dollars, which the before named persons have advanced, or become responsible for: and whereas it hath been further represented that the said bridge is not completed, and that it will be beneficial to the inhabitants of the towns of New Paltz, Hurley, and Esopus, to have the same finished in a proper and substantial manner.’<sup>22</sup> This was followed by a clear statement that the funds should be ‘assessed and collected, on and from freeholders and inhabitants’ of the three towns: New Paltz \$300; Hurley \$100; and Esopus \$100 ‘for the purpose of completing the said bridge’. Four named commissioners were appointed ‘to superintend the completing of said bridge’. The act then details how any excess funds left from the \$500 could be distributed ‘to the overseers of the poor’. This Act clearly states a Perrine’s Bridge was ‘lately erected’ by April 22, 1822 but does not specifically make clear when this was accomplished. Unfortunately, there are no meteorological records to tell us whether the river was frozen during the winter, which might have facilitated erection process.

A handwritten document dated January 17, 1823 and signed by commissioner John Van Nostrand declared that \$291 dollars of the \$300 noted in the Act had been ‘raised in the Town of New Paltz to complete the bridge over the Wallkill near the home of James Perrine ... and I promise to pay the laborers and also pay for all the timber bord [sic], plank and all other materials for completing the said bridge ....’<sup>23</sup>

Given that all the legislative documents of New Paltz Bridge, Phillis Bridge, and Perrine’s Bridge state clearly that the bridges had been erected, it is reasonable to assume that the additional funds were for the installation of a cover. In the case of the \$800 for ‘completing and covering’ the New Paltz Bridge and \$600 for ‘completing and covering’ Phillis Bridge, it is plausible that the \$500 for ‘all the timber bord [sic], plank and all other materials for completing the said bridge’ was earmarked for the roof and sides at Perrine’s without explicitly stating ‘covering’. If this is accepted, then the first covered Perrine’s Bridge can be dated to 1822.

Handwritten minutes dated March 22, 1825 indicated small amounts were appropriated ‘for repairing the bridge across the Wall Kill near the house of James Perins [sic]’: \$12.50 on March 22, 1825 with an

additional \$11 allocation on March 17, 1827.<sup>24</sup> Whether these repairs were normal maintenance or resulted from structural difficulties that required remedy is not clear. Beyond the hamlet that had grown around the bridgehead to Perrine’s Bridge, there were powerful commercial forces emerging that might have signalled a need for improvement of the 1821/1822 crossing. Most significant was the explosion of mills at the falls just a short distance downstream from Perrine’s Bridge. On April 24, 1832, a Legislative Act incorporated the Dashville Falls Manufacturing Company ‘for the purpose of manufacturing cotton and woollen goods and machinery, or either of them separately, and for the purpose of constructing hydraulic works, to apply the waters of the Wallkill, at the falls known by the name of Dashville Falls, in the town of New Paltz ....’<sup>25</sup> By mid-century, industry expanded from a sawmill, grist mill, flour mill, cotton and woollen mills, and machine shops to include a worsted yarn factory, carpet mills, blasting powder mill, and a knife factory. There were more than one thousand workers employed at the mill complex by mid-century. Moreover, the productive farms northward between the village of New Paltz and Perrine’s Bridge sought improved routes north to the markets that were reachable via the Delaware & Hudson Canal at Rosendale and beyond at Rondout on the Hudson River where produce could be carried to New York City by sloops.

‘DESTRUCTIVE FRESHET’ proclaimed an early Spring 1832 newspaper article in a neighboring county indicating ‘after a long and stormy Winter ... the effect of late rains to a height unknown for many years ... have carried away bridges, dams, and mills’ in the Wallkill, Esopus, and Rondout valleys, including part of Perrine’s Bridge.<sup>26</sup> What was necessary to create a temporary crossing has not been verified. On May 6, 1834, the State Legislature approved another Act ‘to build a bridge at the place called Perrine’s Bridge’ and raise by tax levy \$700 by the County, and \$500 by the Town of New Paltz, a modest enough sum that suggests much of the wood from the original crossing was salvaged and reused.<sup>27</sup> A handwritten document dated June 10, 1834 affirmed that ‘At a special meeting of the citizens of the town of New Paltz,’ the \$500 was approved.<sup>28</sup> The erection of the 1834 Perrine’s Bridge was

<sup>22</sup>*Laws of the State of New York passed at the Forty-fifth session*, April 22, 1822, p. 185–186.

<sup>23</sup>Peter and Josiah P. LeFevre Family Papers: “The Bontecoe LeFevres,” Historic Huguenot Street Archives.

<sup>24</sup>New Paltz Town Records “Record Book of Elections, Town Meetings, and Highway Business,” Historic Huguenot Street Archives.

<sup>25</sup>“AN ACT to incorporate the Dashville Falls Manufacturing Company,” *Laws of the State of New York passed at the Fifty-seventh session of the Legislature*, April 24, 1832, p. 409.

<sup>26</sup>*Delaware Gazette*, March 21, 1832, p. 1.

<sup>27</sup>“AN ACT to authorize the supervisors of the county of Ulster, to raise money to build a bridge across the Wallkill, in the Town of New-Paltz,” *Laws of the State of New York passed at the Fifty-seventh session of the Legislature* 1834, pp. 578–579.

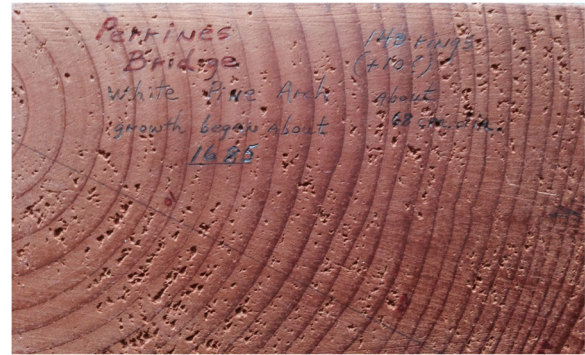
<sup>28</sup>New Paltz Town Records “Record Book of Elections, Town Meetings, and Highway Business,” Historic Huguenot Street Archives.

a replacement in whole or in part, improvements to meet both emerging commercial needs to move goods and produce, according to many accounts, and to facilitate travel by workers living north of the Wallkill to the Dashville mills. Because of the span of the river at that site and the earlier bridge, it is certain that a timber truss was required, which would have necessitated a roof and wall covering 'to complete the bridge'.

On April 12, 1842, the Legislature approved the annexation of portions of New Paltz to the south of the Wallkill that included both the Dashville mills and Perrine's Bridge, adding them to the Town of Esopus that already existed to the north.<sup>29</sup> Since rivers often served as natural boundaries, it is unclear what led to the decision for the administrative boundary of the Town of Esopus to reach south beyond the river into the Town of New Paltz. In any case, after that date Perrine's Bridge legitimately can be placed in the Town of Esopus and served as the link across the Wallkill to the newly created Town of Rosendale that took shape in 1844 through other boundary adjustments.

With the increase in road traffic, commerce, and the prospects of increasing prosperity upon completion of the Delaware & Hudson Canal that would bring coal from northeastern Pennsylvania to the Hudson River, the legislature approved the Rosendale and New Paltz Turnpike Company on April 25, 1845. The roadway was to be four rods wide with a new bridge across the Wallkill no less than 16 ft wide, 'well secured by a railing or otherwise on each side, with a railing not less than four and a half feet high'. Proposed tolls were presented in detail, including pedestrians, with exemptions only for those 'going to or returning from places of religious worship; going to or returning from a grist mill with a grist'.<sup>30</sup> How this turnpike would have replaced or deviated from the existing road to Kingston through Perrine's Bridge via Rosendale was not stated. In any case, there is no subsequent record that the road and competing bridge were constructed.

It is possible that this effort to construct a *new* bridge distinct from the existing Perrine's Bridge may suggest there were issues with Perrine's that were impacting traffic. In this regard, just a year later on May 13, 1846, a replacement bridge was authorised at the Perrine's site: 'commencing and including the site of the present bridge, called Perrin's [sic], near the house of John R. Wood, and Refton [sic] Mills or Arnold's Factory ...'



**Fig. 14** Increment analysis of a section of the timber arch (Source: Paul Huth, Director Emeritus, Daniel Smiley Research Center, Mohonk Preserve. Specimen and notes in the personal collection of Ronald G. Knapp)

with two-thirds of the funds raised from the taxable property in both Esopus and Rosendale with the remainder from all other county towns. The commissioners were urged to proceed 'with all proper diligence' in completing the bridge. This rebuild employed a Burr truss that continued to support the bridge until restoration in 1968 and now to the present in 2021. As I determined earlier, the carpenter Rosencrans Wood, who was known formally as John R. Wood (1802–1869) and whose property was nearby, constructed the 1846 Perrine's Bridge. Beyond timber, he chose locally available raw materials for the abutments, including local bluestone and fast-setting Rosendale Cement that had been discovered just decades before during the nearby construction of the Delaware & Hudson Canal. Wood, the carpenter, crafted each of the Burr trusses from mature white pine trees, as confirmed by studies done when the bridge was rebuilt, and the arches repaired in 1968. Paul Huth, Director of Research Emeritus at the Mohonk Preserve, did an analysis in 1977 of a cross section of one of the surviving arch timbers and of incremental borings. He determined that the original white pine log was some 27 in. in diameter when alive. He counted some 143 annual rings and estimated about an additional 10 rings had been lost in the arch preparation, thus determining that the tree that ultimately served as an arch started growing between 1682 and 1692 (Fig. 14).

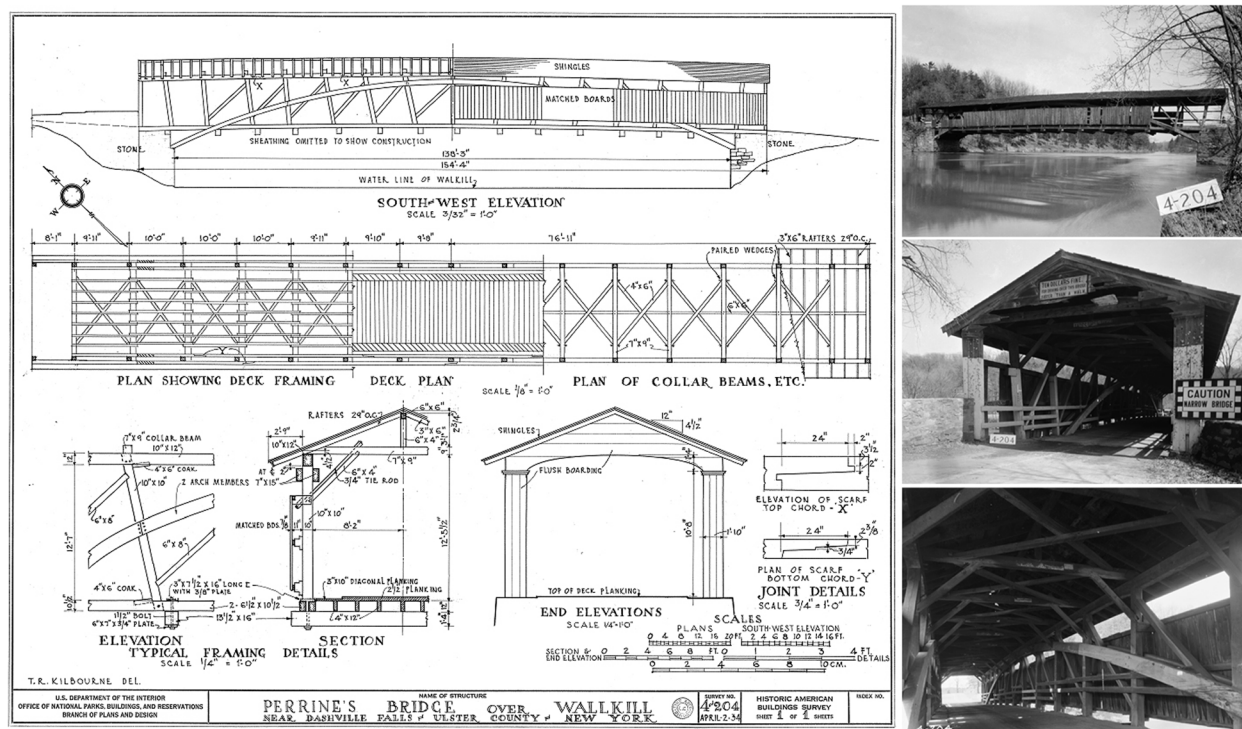
Rosencrans Wood's newspaper obituary, which highlighted the hotels he owned later in life and not his work as a carpenter, stated that he was 'a man of very few words, but of excellent judgment in business matters, and beginning life penniless had accumulated considerable wealth'.<sup>31</sup> The John R. Wood farm was auctioned on March 12, 1887.<sup>32</sup> This corrects claims

<sup>29</sup>AN ACT to set off a portion of the town of New-Paltz to the town of Esopus," *Laws of the State of New York passed at the Sixty-fifth session of the Legislature April 12, 1842*, p. 403. This transfer of land was delayed until 1843.

<sup>30</sup>AN ACT to incorporate the Rosendale New-Paltz Turnpike Company," *Laws of the State of New York passed at the Sixty-eighth session of the Legislature April 25, 1845*, pp. 79–80.

<sup>31</sup>*New Paltz Independent*, October 7, 1869, p. 2.

<sup>32</sup>*New Paltz Times*, February 23, 1887, p. 2.



**Fig. 15** The 1934 Historic American Buildings Survey of Perrine's Bridge was the first formal documentation of its exterior, portal, and interior with scaled drawings (Source: Library of Congress <https://www.loc.gov/pictures/collection/hh/item/ny0850/>)

that it was Benjamin Wood (1780–1838) who built the bridge in 1846, as he had died by then. Although there is no corroborating evidence, it might have been Benjamin, Rosencrans Wood's father, who had been involved with the earlier 1821/1822 and 1834 iterations of Perrine's Bridge.<sup>33</sup>

The Acts of the New York State Legislature do not mention Perrine's Bridge after 1846. While there were notices in local newspapers, none refer specifically to the condition of the bridge. Most of the entries refer to the hotel opposite the bridge, which changed hands several times throughout the 19th century following James Perrine's initial ownership. Though it is not clear when the hotel ceased functioning or was torn down, the name Perrine's continues to be attached to the site and the bridge itself.

There are a small number of undated early photographs of Perrine's Bridge with a plethora of photographic material from the 1930s to the present, thus nearly a century of visual documentation. In 1917 there was 'installation of a new floor system ... the original having been condemned by the State Highway Department' that is affirmed both by a County report as well as a handwritten receipt 'Final payment Perrine's Bridge'

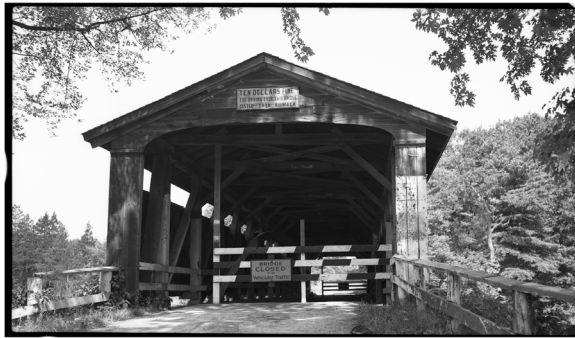
for 'Labor and Material Furnished \$1060.19' from Kingston building contractor T.I. Rifenburg & Sons.<sup>34</sup> Visual evidence from the photographs suggest periodic minor repairs in subsequent years, but no full-scale restoration until 1968. What is most dramatic is that the historical photographic sequence reveals the initially slow, then accelerating deterioration of the exterior covering and also the underlying structure of Perrine's that led ultimately to the urgent restoration carried out in 1968. While the loss of skirting boards on the exterior are obvious, it is the lack of maintenance of the triangular skirts protecting the ends of the timber arches where they seated into the stone abutments that were especially detrimental. Earlier photographs show the skirts in place, but decade-by-decade these critical coverings disappeared. The net result was that water entered the timbers, leading to rotting and destabilisation of the arches that impacted the integrity of the overall structure.

As the only direct route north from New Paltz in southern Ulster County to the county seat at Kingston, Perrine's Bridge continued to serve automobiles and trucks that added to live-load stresses. The alignment of a

<sup>33</sup>Miller (1977) first pointed this out for the 1834 date in her *Timbers of Time*, Arkville, NY: The Erpf Catskill Cultural Center, Inc., 1977, p. 20.

<sup>34</sup>*Proceedings of the Board of Supervisors of Ulster County*, 1917, p. 193. Original receipt dated November 10, 1917 in the Ulster County Archives.

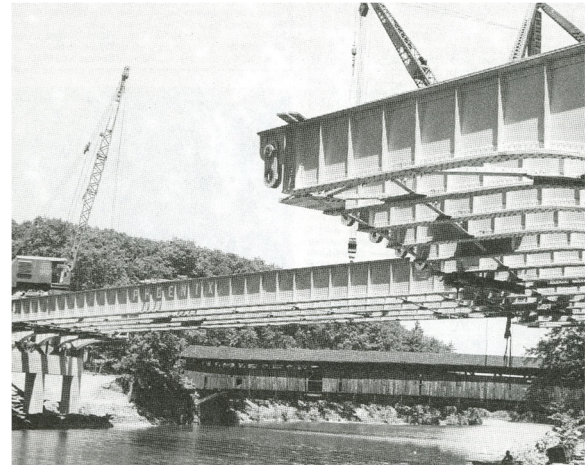




**Fig. 16** Perrine's Bridge was closed to vehicular traffic in 1943 (Source: National Society for the Preservation of Covered Bridges Archive, Gibson Collection ny-56-01 Rifton--Perrine's 1 Aug1943)

new route north of New Paltz to Kingston in the early 1930s straightened and widened the old route leaving just fractured portions signed today as Old Kingston Road. As part of this modernisation, a new steel bridge was constructed across the Wallkill in 1933 that left Perrine's Bridge bypassed but still accessible by vehicles. The following year, the federal Historic American Buildings Survey (HABS) carried out a survey of Perrine's Bridge (Fig. 15). It provided visual evidence of missing wood siding and a sign on the southern entry stating CAUTION NARROW BRIDGE.<sup>35</sup> The limited view of the truss system in the interior reveals it was in reasonable shape although the exposed arches outside indicated deterioration. The HABS photo clearly shows not only a missing skirt where the arches were set into the abutments, but also the reasonably good shape of longer sections of the arch in the interior. The HABS drawings proved an important resource for later restoration. The use of 1850 as the date of original construction lent authority to a date that subsequently was pushed back, first to 1846, then to 1834, and now finally to 1821/1822 on the basis of documentary evidence.

In September 1938, the Rosendale Township Association proposed a public effort to preserve 'Rifton Covered Bridge' by reaching out to other groups and officials to secure support.<sup>36</sup> While this was the first such public effort, no one could have foreseen the twists and turns that would take place over the next 30 years before restoration was completed. Although earlier ownership for Perrine's Bridge is not clear, Ulster County assumed maintenance and preservation responsibilities in



**Fig. 17** The New York State Thruway during construction with Perrine's Bridge beyond (Source: Reproduced on the cover of *Empire State Courier*, March 1994, New York State Covered Bridge Society, originally from *Wall Street Journal*, May 9, 1955 Barium Steel Corporation)

1940. In April 1940, the bridge was condemned and barricaded to vehicular traffic.<sup>37</sup> Photographs taken in 1943 show siding had been replaced. In 1943, a bold 'BRIDGE CLOSED to Vehicular Traffic' sign was attached to a gate with access by pedestrians only permitted (Fig. 16).

With repairs made and Perrine's Bridge bypassed in the 1940s, the 1950s brought with it new threats from several directions. The explanation below is only suggestive of the breadth of the decades of contention that played out in community meetings that are well documented in newspapers. First, with the construction of the New York State Thruway, segments of which began to emerge in 1954, it was discovered that surveyors had delineated a route in Ulster County that would have resulted in the removal of Perrine's Bridge. Responding to public uproar, the Thruway route was moved about 100 ft west, as depicted in these May 9, 1955 and January 29, 2021 photographs of the juxtaposed timber bridge and the divided highway Figs. 17 and 18). There was optimism that repairs would be made to keep the bridge from collapsing. The County authorised a bidding process for repairs in February 1954, but only nine local contractors refused to submit bids. Subsequently, a second proposal the next month gained two bids.<sup>38</sup>

Somewhat surprising to those who had accomplished a victory with the Thruway alignment, a vigorous opposition to saving the bridge was launched after a major flood in August 1955 (Fig. 19). This expanded on an

<sup>35</sup>Perrine's Bridge, Spanning Wallkill River, Rifton, Ulster County, NY, HABS NY,56-RIF.V,1-1934, Library of Congress, <https://www.loc.gov/pictures/collection/hh/item/ny0850/> This record erroneously states that Perrine's Bridge was erected in 1850, perhaps on the basis of a State historic marker with that date that was installed in 1935.

<sup>36</sup>Ulster-wide Cooperation Is Sought to Preserve Rifton Covered Bridge. *The Kingston Daily Freeman*, September 21, 1938, p. 1.

<sup>37</sup>"Perrine's Bridge Closed to Vehicular Traffic," *The Kingston Daily Freeman*, April 16, 1940, p. 2.

<sup>38</sup>"No Bids to Fix Bridge," *New York Times*, February 12, 1954, p. 27. "Perrine's Bridge Proposal on Fund Goes to Committee," *The Kingston Daily Freeman*, April 16, 1954, p. 1.



**Fig. 18** Travelers going north on the New York State Thruway easily spot Perrine's Bridge (Source: Ronald G. Knapp, January 28, 2021)

issue raised by an engineer in 1952 claiming that the Perrine's abutments created a bottleneck restricting the river's flow resulting in perennial spring floods upstream in the New Paltz Flats. This opposition continued for more than a decade, much of it from a group called Wallkill River Valley Flood Control Committee led by prominent community members. During a 1956 Army Corps of Engineers hearing, with more than 300 in attendance, Perrine's was called 'a man-made booby trap' that impeded the flow of the river (Kaplan 1956, 33). A front page article in *The Kingston Daily Freeman* on June 14, 1957 boldly stated 'County Asked to Tear Down Perrine's Bridge'. That was followed by contrasting sustained and increasing demands to preserve the bridge.<sup>39</sup> In a May 15, 1957 letter to Board of Supervisors of Ulster County, the Wallkill River Valley Flood Control Committee Chairman wrote that the bridge 'presents a serious hazard to persons and property' and that if the bridge, which 'seems to be hanging together with gossamer threads' and '... should the bridge suddenly collapse and fall into the river, ... thus forming a dam and preventing normal run-off, the County would be liable for damage to persons and property'.<sup>40</sup> While sympathizing with local farmers impacted by recent flooding, Kenneth Hasbrouck, the head of the Huguenot Historical Society, brought forth documentary evidence of 18th century floods decades before the construction of Perrine's Bridge. Many urged that New York State 'take over' the historic bridge, but this did not occur, and it has remained in Ulster County ownership to the present.

<sup>39</sup>"County Asked to Tear Down Perrine's Bridge," *The Kingston Daily Freeman*, June 14, 1957, p. 1.

<sup>40</sup>The letter titled "Flood Control Committee Calls Attention to Dangerous Condition of the Old Perrine's Bridge" was signed by Chairman Norman Kellar as reported in *The Kingston Daily Freeman*, June 14, 1957, p. 1.



**Fig. 19** Record breaking floods impacted the northeastern section of the United States in August 1955. The bottomlands along the full length of the Wallkill River were extensively inundated as depicted here at the bridge in the village of New Paltz. What is not shown on the left are the submerged stone abutments that remained from the earlier covered bridge and iron bridge. There is little doubt that the destructive power of this flood would have swept away the earlier bridges. (Source: Haviland-Heidgerd Historical Collection, Elting Memorial Library, Erma DeWitt Photographs)

There were signs of optimism and progress, but also of concern and despair. Nearly 5000 signatures eventually were collected county-wide on a petition by Kingston Boy Scout Troop 4 in support of preservation that was presented to Governor Averell Harriman in January 1958. Additional national, state, and local endorsements also were secured well into the 1960s. Preservationists vehemently objected to removal as the battle raged in the press and on banners hung on the side of the bridge. One read 'Help me I'am [sic] Falling' (Folsom 1966, 21).

The newly formed New York State Covered Bridge Society actively lobbied for and publicised the issues. Even though funds totalling \$50,000 were promised, including matching funds from the New York State Historic Site Commission and the Ulster County Board of Supervisors for restoration work, strong opposition continued into 1967, pitting farmers against preservationists. Building on an idea that had been broached a decade earlier to dismantle Perrine's Bridge and move it to a park in the Town of Marbletown, a major push was made in January 1967 in order to avoid 'economic consequences to that small but hardy band of farmers who labour and produce food and fibre on the Wallkill River bottomlands' (Kellar 1967, 6). Wary of imminent collapse due to a storm, Albert E. Milliken, who had been serving as pro bono architect, called for temporary shoring with railroad ties in January 1967. This proved prudent.<sup>41</sup>

<sup>41</sup>"Could Go in Storm, Wary of Perrine Bridge Collapse; Shoring Advised," *The Kingston Daily Freeman*, January 24, 1967, p. 1.





**Fig. 20** In early 1968, Perrine's Bridge was clearly sagging and adorned with signs declaring REMOVE NOT THE OLD LANDMARKS and HELP ME I'AM FALLING (Source: New York State Covered Bridge Society Archives, Stott Anderson Collection, January 15, 1968)

To many in the public, by Spring 1968, the fight seemed to be over. However, John Grady, President of Perrine's Bridge Committee, Inc., who was active in the preservation effort and wrote as a taxpayer, expressed great frustration with 'bureaucratic tactics of New York's governmental agencies'. While stating there were 30 years of failed efforts to preserve the 'architecturally unique' historic structure, he outlined especially the recent initiatives and defeats. One of the most intriguing was a proposal by the Thruway Authority that a rest area be constructed nearby so that travellers could safely park their cars and walk down to appreciate the covered bridge. Not only were there "delays and disappointments" and a "sea of red tape," there was an attempt by unknown persons to burn the vulnerable wooden structure (Grady 1968, 18). Throughout the first half of 1968, the situation seemed quite dire even as funds were being expended for emergency repairs.

Stott Anderson, a member of the New York State Covered Bridge Society, photographically documented the deteriorating bridge and the rescue efforts from January 1968 through the grand opening of the restored Perrine's in June 1969. A mid-January 1968 view reveals the slanted timber bracing of the arches on both ends as well as a significant number of missing vertical siding boards that let precipitation into the interior and hastened deterioration (Fig. 20).

Since the weakest part of the truss structure was the ends of each of the arches, steel plates were bolted at points of stress in June as shown in this photo of Elmer Carney and John Grady, the acknowledged 'Bridge Savers', who were inspecting this intervention and had laboured for more than a decade to restore Perrine's (Fig. 21). In June 1968, there was a breakthrough in the 'long, uphill fight' as the New York State Historic Trust approved a \$25,000

matching grant to Ulster County.<sup>42</sup> Auxiliary facilities such as a museum and a park adjacent to the bridge were floated even as the focus shifted both to bridge restoration and improvements to the site. Anderson's late August 1968 image of the sagging front quarter chord and weakened arch that were braced with structural supports underscored how collapse was forestalled (Fig. 22).

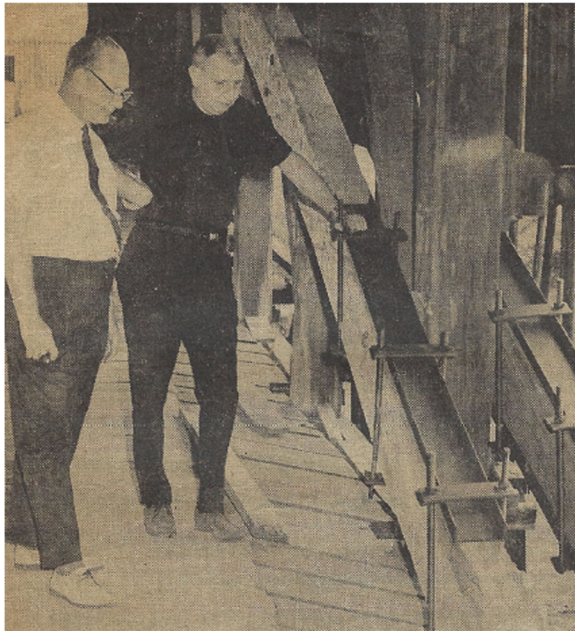
An accelerated bid process unfolded in September 1968 with a commitment from the winning bidder, Standard Bridge Corp. from Albany, that the restoration of the timber portions would be authentic and completed by the end of November. Bid specifications stated, 'It is the intention of these specs to replace all damaged or missing timbers and lumber as noted on the accompanying drawings, with materials as nearly as possible as those which were originally placed in the bridge. All timbers and lumber with the exception of shingles shall be obtained from William Suepfle, Stone Ridge, New York, who will also supply the curved timbers for the arches.'<sup>43</sup> Suepfle located four slightly bowed white pine timbers approximately 30 ft long in the nearby Hurley Mountains, after which the felled trees were taken to a mill in New Jersey specialising in sawing natural bow timbers (Fig. 23). Large-scale drawings prepared by Albert E. Milliken clearly indicated that a clear majority of the wood was to be salvaged with less to be replaced.<sup>44</sup> Complementary working blueprints authorised by the County Department of Highways highlighted the decayed wood that was to be

<sup>42</sup>"Big Breakthrough for Rifton Span," *The Kingston Daily Freeman*, June 7, 1968, p. 28.

<sup>43</sup>Specifications quoted in Patricia Bartels Miller, *Timbers of Time*, Arkville, NY: The Erpf Catskill Cultural Center, Inc., 1977, p. 25.

<sup>44</sup>I am grateful for the architect Bob Milliken who searched through his father Albert E. Milliken's archives for these original drawings and other pertinent documents, including the official county blueprints.





**Fig. 21** John Grady and Elmer Carney inspecting the stabilized arch (Source: 'Bridge Savers', *The Kingston Daily Freeman*, June 25, 1968, p. 1)

replaced with structural grade yellow pine timber as well as what metal reinforcements were to be employed. Work moved quickly yet continued into December. During the first week of January 1969, the restoration was said to be complete.<sup>45</sup> Ongoing discussions continued concerning an associated park, one section in Rifton on the south side of the Wallkill and one in Tillson on the north side, planned amenities that were not all completed.<sup>46</sup> Tentative dedication date was set for June 29.

The Ulster County Legislature proclaimed June 29, 1969 'Perrine's Bridge Day'. The perseverance of community leaders, especially John Grady of Rifton and Elmer Carney of Kingston, who cajoled politicians and kept up a sustained flow of information to the public paid off with more than 2500 jubilant visitors showing up for what was billed as a Perrine's Rededication Ceremony (Fig. 24). Although still called an 1850 bridge at the event, New York State Covered Bridge Society's *Empire State Courier* that devoted its full October 1969 issue to Perrine's Bridge, highlighted the fact that New York State Assembly records had been uncovered that pointed to a predecessor bridge dating to 1834. There also was mention of an old newspaper giving an 1844 date with no details. It is unclear why the 1821 and 1822

and 1846 Acts I found were not retrievable at the time, which, of course, push the date of the first bridge back another decade. Perrine's was listed in the National Register of Historic Places on April 13, 1973.

Beginning in early 1990s, neighbours from the Woodcrest Bruderhof, a Christian community in Rifton, began to notify the Ulster County Department of Public Works of the need for repairs at Perrine's. At that time, no one could have foretold the whiplashed decisions and bureaucratic hoops that delayed the work for more than 3 years. The Kingston newspaper in 1995 alarmingly reported 'The roof is shot, fishermen have pulled off parts of the siding for better access to Wallkill Creek, the stone abutments need replacing and repointing, and the wooden trussing has generally deteriorated.' (Harding 1995, 1). To prevent water damage to the interior, a tarp was placed over the roof. With these emergencies as background, state and federal grants were secured to carry out the work. Initially, volunteer labour was offered by the Bruderhof and their craftsmen that specialised in woodworking. However, federal grant restrictions appeared to nix this generous volunteer carpentry; as a result, projected costs increased, and the project was delayed (Harding 1996, 1). Nonetheless, within a month of this apparent setback, a headline stated, 'Volunteers can restore bridge after all', yet in March 1997 the situation changed leaving the project in limbo as other New York State authorities contradicted the decision (Wakeman 1996, 1; Harding 1997, 1; Mitchell 1997, 1). Work finally progressed on repairing the bridge in late 1997 without employing qualified volunteer labour even though local politicians tried to find a way around the federal statutes. In the decades since 1997, the Bruderhof community has worked closely with the county Department of Public Works to monitor the condition of Perrine's Bridge as well as to carry out minor repairs and clearing graffiti. On April 21, 2015, the Ulster County Legislature approved an authorization of \$350,000 to 'restore deteriorating stone abutments, provide stabilisation to the slopes of the abutments, repair/retrofit/replace wooden structural members, and develop a parcel, including parking, grading, picnic area and bicycle racks'.<sup>47</sup>

## 7 Conclusion—two centuries of Perrine's Bridge

Three bridges were constructed across the Wallkill River in the Town of New Paltz within a span of 10 miles in a brief six-year period in the 1820s—New Paltz (1820/1821 'covered'), Perrine's (1821/1822 'completed'), and Phillips (1826/1827 'covered'). The first date, according

<sup>45</sup>"Done at Last – Perrine's Restored," *The Kingston Daily Freeman*, January 3, 1969, p. 1.

<sup>46</sup>"Perrine Site to Have Park," *The Kingston Daily Freeman*, March 19, 1969, p. 20.

<sup>47</sup>"Resolution No. 148, April 15, 2015, Establishing Capital Project No. 452—Perrine's Bridge Abutment Restoration –Amending the 2015–2020 Capital Improvement Program – Department of Public Works (Buildings & Grounds)."



**Fig. 22** Because one quadrant of the timber structure was on the verge of collapsing in early summer 1968, a stack of stabilizing supports were installed beneath (Source: New York State Covered Bridge Society Archives, Stott Anderson Collection, August 25, 1968)



**Fig. 23** One of the four arched tree trunks being prepared to replace portions of the arches (Source: New York State Covered Bridge Society Archives, Stott Anderson Collection, October 20, 1968)





**Fig. 24** Festivities at the Perrine's Rededication June 29, 1969 (Source: 'Perrine's Covered Bridges', *Empire State Courier*, 4.3 (October 1969), p. 1)

to documents and as discussed above, is the year each bridge was constructed and the second date when the bridge was completed with a roof and siding. The New Paltz Bridge was demolished and replaced with an iron bridge in 1891, and Phillies Bridge was purposely burned after becoming a liability in 1952. Only the Perrine's Bridge has survived into the 21st century, fully 200 years.

It can be stated conclusively that there has been a bridge 'near the house of James Perrine' as 19th century records indicate, since 1821/1822. The 1846 bridge was the successor of one built in 1834, with the original at that site dating back to 1821. We know that the 1846 incarnation was supported with a classic Burr truss that was rejuvenated more than a century later in 1968. Given that a tied timber arch supported New York State's first covered bridge, the 1807 Bridgeville Bridge

also in Ulster County, and variants of Burr's timber trusses were used nearby in New York State, it is likely that the three Wallkill River covered bridges also utilised timber arch forms in the 1820s. Perrine's Bridge seen today, which was fully and authentically restored in 1968 based on its 1846 form, has already passed the half-century mark. The metal plate connecting the 1846 upper segment with the 1968 replacement portion of the arch remains in excellent shape as are the roof and side-walls. The traditional wooden skirts protecting the ends of each arch are now replaced with metal sleeves (Fig. 25).

While Perrine's was deteriorating and its future was being contentiously debated in the 1950s and 1960s, it was routinely claimed to be 'the oldest remaining covered bridge in New York State', 'the oldest of its kind', and 'the last of the large Burr arch truss timber bridges' based on a presumed 1850 construction date. These assertions were not disputed until 2005–2006 when some evidence suggested that the smaller Hyde Hall Bridge in Otsego County was older and dated to 1825. It is claimed that the Hyde Hall Bridge has an early form of a Burr truss, which is quite different from the mature Burr truss that has supported Perrine's Bridge since the 19th century. In 2006, Hyde Hall was judged not only New York's but also 'America's Oldest Covered Bridge' (Conwill 2007, 12–13). Across the nation, there are other covered bridges that date to the 1820s that are clearly 'old', even authentically 'historical' though with incomplete records documenting their lifespan. Rarely can issues of origin and structural evolution be answered definitively because of often incomplete evidence, yet the absence of confirming information does not mean that there were no minor or major interventions during the lifespan of the bridge. Covered bridges are timber



**Fig. 25** These three views of Perrine's Bridge in 2021 reveal that the arches are secure and stabilized as well as all the siding in place. The 1968 construction documents detailed the use of metal reinforcements associated with the arches and lower chords. With the arches, where old wood abutted new wood, ½ inch steel plates were bolted above and below. The lower chord that runs the full length of the span was strengthened with 78 bowtie-shaped overlapping fishplates of various sizes where the timbers were spliced. The exposed section of the arch was creosoted in 1968 and subsequently sheathed with a metal sleeve (Source: Ronald G. Knapp photograph, interior February 2, 2021; exterior January 28, 2021)

structures requiring alterations over time to address deterioration, damage, even rebuilding and replacement with salvaged or new components because of constant exposure to the elements, floods, ice, and modern loads. It is time to acknowledge the complex trajectories of all historic covered bridges and not see them as historically static. Applying a single date to a timber structure without explanation, as is all too often the norm, is insufficient in expressing historical authenticity.

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