

THE BRIDGER



The Vermont Covered Bridge Society Newsletter – Winter 2023

Melanie Schropp, Editor

Vermont Covered Bridge Society Annual Fall Meeting Woodstock, Vermont September 30, 2023

Minutes prepared by Melanie Schropp

There were 31 members in attendance, including one who attended via Zoom.

I. Call to Order

At 10:29 a.m., President Joe Nelson called the meeting to order.

II. Officers' Reports

Reading of Minutes

Secretary Melanie Schropp read the minutes of the June 10, 2023, meeting. There being no corrections, the minutes were accepted as presented.

Treasurer's Report

Treasurer Dan Monger presented the most recent treasurer's report. He distributed copies of his report to the members in attendance.

- Our Union Bank checking account balance has grown steadily in recent years, primarily because of the work of Beth and the Events and Fundraising Committees.

12/31/2020 - \$13,200.21
12/31/2021 - \$16,446.94
12/31/2022 - \$21,127.47

- Our operating budget reflects 55% of our total funds.

- There was discussion about setting aside an annual amount for grants.

III. Committee Reports

Bridge Watch Committee

In the absence of Chair John Weaver, Secretary Melanie Schropp read the report.

- The Depot Covered Bridge has been repaired and is open to traffic.

- The Cambridge Junction Covered Bridge received extensive boarding damage and minor eroding at one wing wall during the July flooding.

- The Schoolhouse Covered Bridge in Lyndon has repair issues still outstanding. We have a new bridge watcher in Brattleboro for the Creamery Covered Bridge – Jill MacMenamin.

- The Warren Lincoln Gap Covered Bridge repairs appear to be well under way.

- John participated in the recent update of the VCBS Bridge Watch Handbook, regarding limits to the watch function and limited liability insurance coverage.

- There was a question about the status of the Kingsley Covered Bridge. It was reported that the repair work is off schedule because of the July flooding, and an extension request was submitted to the state. It looks like repairs might continue through the spring of 2024.

Communications Committee Report

At the request of Chair Joe Nelson, Steve Miyamoto reported on the Communications Committee.

- Editor Melanie Schropp continues to prepare quarterly editions of our newsletter, *The Bridger*.

- The current edition of our newsletter is available on the web site – vermontbridges.org. Access to older editions is available through the Member Portal. The Member Portal is available to all members, but members must request access via email.

- The Member Portal also grants members access to the Member Handbook; the Bridge Watch Handbook; and the Lost Bridges articles, pictures, and location.

President: Joe Nelson, P.O. Box 267, Jericho, VT 05465, email: jcarlnelson@yahoo.com

Vice President: Steve Miyamoto, 8 Ridge Rd., Essex Junction, VT 05452, email: spmiyamoto@comcast.net

Secretary: Melanie Schropp, 9860 Gregg Rd., Fredericktown, OH 43019, email: mschropp@att.net

Treasurer: Dan Monger, 26 Lake St., Tunkhannock, PA 18657-7128, email: teelmonger@ptd.net

Events Committee

Chair M. Beth Brown-Limmer presented her report.

Beth covered some housekeeping items and information about the current event.

- Beth explained the location of the rest rooms.
- Beth gave the location of the sales table and silent auction table. Joe Nelson will be happy to sign his book for anyone who buys it today. Bids for the silent auction will close at 2:00 p.m. Door prizes will also be awarded in that room.
- Lunch will be served in the dining room downstairs. Take a seat at one of the tables, and lunch will be brought around to you.
- Author Bob Dover, of Maryland, will be our speaker after lunch.

Copies of the Events Committee Report were available on the back table.

Recap of 2023 Events

VCBS Spring Meeting – The annual spring meeting was held on Saturday, June 10, 2023, at the Battenkill Grange Picnic Pavilion at the Bridge-at-the-Green in West Arlington. There were 26 members in attendance for the business meeting and picnic lunch. Photojournalist Craig Light from *Vermont Magazine* spoke to the group. A silent auction of 23 items netted the VCBS over \$400.

Sunday, June 18, Middletown Springs Father's Day Strawberry Festival – Thanks to Middletown Springs Historical Society President David Wright for inviting us to this event free of charge. Sales were approximately \$150.

Jeffersonville July 4th Celebration – We returned to this well-attended event. Again, we manned a booth, distributed pamphlets, and sold items. The weather was hot and humid and drove the crowd to nearly zero by 1:30 p.m. Two new members were recruited, and approximately \$225 in sales were netted. The vendor fee was just \$25.

August 15-19, State Fair in Rutland – The vendor fee for the week was \$220. Sales were brisk at this successful event. Thanks to volunteers Paul Limmer, Karen Tryon, Peter and Barb Cosgrove, Kevin and Maureen Mitchell, Joe Mitchell, and Steve Brown of New Hampshire.

September 16 and 17, Chester Festival (or "Chestival") – This was a new event for us. I was told it would be very busy, and it was. We grossed \$850 in sales on Saturday alone. Sales on Sunday were much lighter, but with a non-

profit vendor fee of \$50, we made that back in the first 15 minutes. Thanks to Barb Cosgrove for helping during the busiest time. We will need volunteers for next year. Please mark your calendar for the third weekend of September 2024.

Remaining Events for 2023

November 18, Craft Fair at Lothrop School in Pittsford – 9:00 a.m. – 2:00 p.m. The vendor fee of \$25 supports the Christmas Child Fund in Pittsford. We went to this event last year and did quite well for a short, local event.

December 2, Second Annual Holiday Decorations Hanging on six Rutland County covered bridges. The Kingsley Covered Bridge in East Clarendon will not be included, since it is currently undergoing rehabilitation. We may add the Halpin Covered Bridge in Middlebury (Addison County).

Other than one or two speaking engagements, such as at the Clarendon Historical Society meeting on September 18, I expect a quiet spell through the winter. We look forward to seeing you in Charlotte in June. Watch *The Bridger* for details.

Fundraising Committee

Acting Chair M. Beth Brown-Limmer presented her report.

- We ordered 500 calendars for 2024, and there are fewer than 70 left to sell. The number of retail stores selling our calendars increased over last year. Calendars were available for sale at the meeting, as well as on the web site at vermontbridges.org. They are also available at the following locations:

- Rosie's Restaurant, Middlebury
- Yankee Book Shop, Woodstock
- Gift Wrecked, Newport
- Bennington Monument Gift Shop, Bennington
- Marshfield General Store, Marshfield
- Artisan's Gallery, Waitsfield
- Vermont Book Shop, Middlebury
- Carr's Gifts, Brandon
- Northshire Book Store, Manchester
- The Red Mill, Jericho
- Phoenix Books; Rutland, Essex, and Burlington
- Village Square Booksellers, Bellows Falls

- In addition to the calendars, Peter Cosgrove's 1,000-piece covered bridge jigsaw puzzles were very popular.

Thanks to Fundraising Committee members Paul Limmer, Peter and Barb Cosgrove, Steve Miyamoto, and Glenn Dunn. Thanks to Liam McKone, who single-handedly set up a VCBS sales booth at the Cambridge Junction Covered Bridge for those participating in the National Society for the Preservation of Covered Bridges (NSPCB) Safari on September 23, 2023.

Thanks to Karen, Nancy, Rhonda, and Miles. Thanks, also, to Steve Brown of New Hampshire, Steve Miyamoto, and Peter Cosgrove for their work on the Google slide show.

New members are always welcome to join the Fundraising and Events Committees. The more workers we have, the more we can do.

Membership Committee

Chair Dan Monger presented his report. He distributed copies of his report to the members in attendance.

There was much discussion about membership dues, and whether to raise them and by how much. Suggestions will be reviewed at a future VCBS Board of Directors meeting.

- Add a Junior Bridger membership for those under age 18
- Omit the Family membership category
- Limit Lifetime memberships to those over 55
- Same or different fees for how members receive their newsletters

While hard-copy versions of the newsletter are available to any member who wants them, all members are encouraged to request to receive their newsletters electronically to save on the cost of printing, paper, and postage.

Publicity Committee

In the absence of Chair Liam McKone, Secretary Melanie Schropp read the report.

Expenditures

- Four new VCBS banners at about \$270 plus \$30 for mileage = \$300
- Liam may submit his lodging and mileage from his attendance last weekend at the Lake Champlain Basin Program Summit if he is successful in his proposal for a grant to set up a pilot project on covered bridges.

Actions

- Acquired two 3x6 banners and two 2x3 banners for displays. Liam has one set, and Beth has one set, available on request for events

- *Vermont Magazine* published an article on the VCBS in their Fall 2023 issue.

- Developing procedures for publicity for both regular meetings and special events
- Still seeking volunteers to help with the Publicity Committee

Youth Education & Advancement Committee

Chair Jeanne Baudry presented her report.

- Jeanne would like to change the name of her committee to "Education Committee," since we will be educating adults as well as youth, like the members of the 251 Club.

- Jeanne asked if she has a budget for this new committee for supplies like binders and copies. Joe explained that she will have an opportunity at a Board meeting to request her budget for 2024.

- Jeanne has been working on expanding the binders that Joe gave her for distribution to schools in the Northeast Kingdom. She is including applications to join the VCBS.

- Jeanne invited Joe, Maureen, and Kevin Mitchell to talk about partnerships with youth clubs, like the 4-H, Boy Scouts, and Girl Scouts. Joe and Maureen talked about their own experiences with bridge-building projects and how they could be used to spark interest about covered bridges among youth. They also discussed opportunities to earn related badges by bridge watching and volunteering.

- Kevin, Maureen, and Beth met the two 4-H leaders for southern Vermont on August 15 at the Rutland Fair. Maureen, Kevin, and Joe also met with the SCOUT State Leader at the fair.

IV. Old Business

Joe Nelson opened the floor for any old business.

- Beth reminded those in attendance of the caravan after the meeting to visit nearby covered bridges.

V. New Business

Joe Nelson opened the floor for any new business.

Dan reviewed the question of whether to raise our membership dues.

- Dan talked about the increase in overhead expenses.
- Quarterly printing and mailing of *The Bridger*
- Monthly rental fee for climate-controlled storage of our archived materials

- Additional Directors/Officers liability insurance
 - Our current supply of VCBS brochures is nearly depleted. If we are going to raise the dues, we should make that decision before we print new pamphlets.

- Beth would like to see each person have their own membership, instead of having couple or family memberships. She would also like to add a “Junior Bridger” membership for those under 18 to encourage youth participation. That membership fee should be kept low.

- Bill Caswell discussed the NSPCB Covered Bridge Safari that was held in Vermont last weekend.

79 people (from 11 states) participated

While visiting the Flint Covered Bridge in Tunbridge, members saw (and some photographed) a loaded school bus travel over the bridge, violating the posted load limit, endangering the student-passengers and the historic bridge. The VCBS Board of Directors will contact the school about this danger.

The Miller Run Covered Bridge in Lyndon was struck by two Penske trucks.

Bill presented the book *Theodore Burr and the Bridging of America: The Man, Fellow Bridge Builders, and Their Forgotten Timber Spans*. The book is available on Amazon for \$60 hard back and \$58 paper back. Co-authors Ronald G. Knapp and Terry E. Miller are donating a portion of the proceeds of the sales to the NSPCB.

Having completed the agenda, President Joe Nelson adjourned the meeting.

After the meeting, members enjoyed lunch in the dining room, which included a surprise celebration of President Joe Nelson’s birthday, complete with cake and ice cream. Following lunch, author Bob Dover spoke to the group about his books *Bridgespotting* and *Bridgespotting Part 2*. The focus of his presentation was on how a bridge enthusiast researched and documented bridges from the perspective of why people gather at bridges.

Interested members participated in a caravan to visit nearby covered bridges.

Events Committee

- by Beth Brown Limmer, Chair

Since the last issue of *The Bridger*, there have been several events: the Chester Festival, the Fall Meeting, and the Pittsford Craft Fair. All were successful. And the “season” continues with Moonlight Madness at the Brandon Town Hall on December 8 and the hanging of holiday decorations on the covered bridges in Rutland County.

My thanks to everyone who has helped at VCBS events in 2023. I wish everyone a happy holiday season. Winter well, and I hope to see you at the Spring Meeting on Saturday, June 8, 2024, at the Charlotte Senior Center.

Membership Committee

- by Dan Monger, Chair

We currently have 217 memberships, including:

- 7 Student
- 71 Individual Yearly
- 48 Family Yearly
- 47 Single Lifetime
- 37 Couple Lifetime
- 7 Business, Organization, or Municipality

This represents an increase of 6 Individual Memberships, 8 Family Memberships, and 3 Couple Lifetime Memberships from three months earlier. Thanks go out to Beth Brown for these increases. Of our membership,

118 (54.4%) are residents of Vermont, 28 (12.9%) are residents of other New England states, 59 (27.2%) are residents of states outside of New England east of the Mississippi, 11 (5%) are residents of states west of the Mississippi, and 1 (.5%) is international (Canada).

Some of our members are receiving their hard copy of *The Bridger* with the mailing label marked in red. This indicates that your membership has inadvertently lapsed. Membership fees are due in January. Annual members are in good standing if their dues have been paid by the previous fall quarter.

Website Update

The member portal on our website continues to grow. A few more Lost Bridges series are now available. We currently have the Lost Bridges of the Otter Creek, Lost Railroad Bridges of Vermont, Lost Pony Truss Bridges of Vermont, Lost Bridges of the White River, and Lost Bridges of the Missisquoi. Next up is the Lost Bridges of

the Winooski River, as well as the Lost Bridges of the Connecticut River.

The portal is available to all VCBS members. If you have not done so already, email a request to join to vermontcoveredbridgesociety@gmail.com.

Social Media

Our social media continues to grow! We now have over 3,200 members on the Vermont's Covered Bridges Facebook Group.

VCBS Brochure

We have formed a workgroup to update our brochure. We have met several times and are working hard on the development of a new brochure to use as a communication and recruitment tool. We hope to have the final product available early next year.

Online Merchandise Orders

We welcome VCBS member Diane Sullivan to the order fulfillment team. Diane has volunteered to help fill your online orders. Welcome, Diane!

Bridge Watch

Sanborn Covered Bridge – John Weaver

John Weaver was notified by the Vermont Agency of Transportation that the Sanborn Covered Bridge project in Lyndonville is under design by the town and the VAOT Municipal Assistance Bureau. Dubois & King is the design firm.

Kingsley Covered Bridge – John Weaver

John Weaver was notified by the Vermont Agency of Transportation that construction is underway at the Kingsley Covered Bridge in Clarendon, and things are going well. The contractor lost his initial shoring structure in the July flooding, so he had to start over. Thankfully, the covered bridge was not yet on the shoring.

Salisbury-Cornwall Covered Bridge –

John Weaver

The Salisbury-Cornwall Covered Bridge burned down several years ago. John Weaver was notified by the Vermont Agency of Transportation that they are just beginning a new project to construct basically the same covered bridge on the existing abutments and pier.

Warren Covered Bridge – Steve Miyamoto

The Warren Covered Bridge is in repairs. Miles Jenness has been keeping us up to date on the progress.

“Hi Steve,

We started the project on September 11th, and it took us 2 days to jack the bridge up and remove the bearing blocks, wear boards, decking and stringers. Originally we were only supposed to be replacing the bearing blocks and 5 stringers, and jack the bridge up so that the GC (Parent Construction) could do some work on the abutments. However, when we had removed the wear boards, the entirety of the decking as well as all of the stringers were found to be rotten enough as to need replacing. We will be replacing the softwood stringers with #1 grade white oak, and also replacing the decking with white oak. The stringers and all lower framing will be protected with parapet flashing, and we will be cutting the new decking so that it has a canted top so that water rolls off of it. The decking will also be slightly spaced apart to further the longevity of the decking. Right now, the project will take a little longer than we had planned, as we had to order more stringer material and that will take at least 5 weeks to be delivered. I think we'll be done by mid-November. A big thanks to Parent Construction and the

Town of Warren for the care they are taking of the bridge. We really love working on these structures and will always make time for covered bridges. Cheers,

Miles Jenness (he/him)
 Vermont Heavy Timber
 802.540.5988
 Instagram: vtheavymtimber”

Creamery Bridge Native Plant Restoration Project

- by Melanie Schropp

VCBS Bridgewater Jil MacMenamin submitted this recent photo of the Creamery Covered Bridge in Brattleboro, along with the photo of the nearby historical marker.



Photo by Jil MacMenamin, October 2022



Photo by Jil MacMenamin, October 2023

Inscription on the marker:

“At 140 years old, Creamery Bridge is a local treasure both for its history ad aesthetics. Brattleboro Recreation & Parks Department is tasked with stewarding the structure and the site (a task greatly supported by volunteers as well!) Since Tropical Storm Irene in 2011, the adjacent banks of Whetstone Brook have become inundated with knotweed (Fallopia japonica), an exotic invasive plant. Knotweed disrupts ecological systems by spreading rapidly, displacing native vegetation, destabilizing soil and depleting nutrients of sedimentary leaf litter. Tropical Storm Irene helped this plant spread by scouring river banks that were already infested with Knotweed, breaking the plant into fragments that were then able to root into freshly scoured banks downstream.

“In 2018, Brattleboro Recreation & Parks, with cooperation from an abutting landowner, began restoring the banks of the Whetstone at the Creamery Bridge site. The first phase was to gain control of the knotweed infestation by judiciously applying a wetlands-approved herbicide. In 2019, after spot treating the remaining knotweed plants, the banks of the brook will be replanted with native plants that are better able to provide shade for the brook, stability for the soil, and food for insects and animals. Planning and advisory support is being given by Connecticut River Conservancy and Brattleboro Floral Arts & Garden Club.”

On November 21, 2023, I interviewed Dan Healey, a licensed Forester with Long View Forest Management, 31 Ferry Road, Hartland, Vermont, www.longviewforest.com. Mr. Healey was the Project Manager on the Creamery Bridge project. The

town of Brattleboro sought his expertise on this project that was both aesthetic and ecological. After Tropical Storm Irene blew through the state of Vermont in August 2011, the native plants along the banks of the Whetstone were washed away and replaced by the invasive knotweed plants that the storm left behind. After years of unfettered growth, the knotweed plants had overtaken the landscape.

Mr. Healey's plan for the project started with the treatment of the three town-owned quadrants under the bridge. This first phase utilized the application of a wetlands-approved herbicide.

With the bank prepared, Mr. Healey's plan called for the live-stake planting of dogwood and willow without the need to dig holes, which together comprised a large part of the re-planting of the bank. The project was completed with the planting of a combination of bare-root plants, including common elderberry, button bush, and winterberry. Mr. Healey worked with the Brattleboro Floral Arts & Garden Club to determine which plants should be used. The plants were then purchased from a native-plant nursery in nearby Amherst, Massachusetts. Students from the Forestry & Natural Resources Program at the Windham Regional Career Center in Brattleboro assisted with the actual planting.

Mr. Healey visits the site under the Creamery Covered Bridge once a year. He examines the area to ensure that the knotweed from the abutting landowner's property, as well as plants that might wash downstream from bank erosion, are controlled and not allowed to resurge in the restoration areas.

The Creamery Bridge Native Plant Restoration Project is a great example of local groups and organizations coming together, offering their talents and skills, to work to achieve a common goal.

Our Covered Bridges and Why They are the Way They Are

- by Joe Nelson

While searching for something of interest to plug into this space, I found in my stacks an ancient CD with a copy of our website when it was called vermontbridges.com. Accessing its Index Page, I opened the chapter called *Bridge Talk*, which holds papers written by members who are experts in the field of wooden bridges, and there I found *Wood Truss Highway Bridges in North America: Repair & Strengthening*, submitted in 2003 by Jan Lewandoski.

The content of Jan's paper might be old stuff to us long-time members of the Society, but you of more recent membership might find the article interesting to read something of the history of the bridges we celebrate today and learn how they got to be the way they are. Jan is the owner of Restoration and Traditional Building, of Greensboro Bend, Vermont. He also wrote *Historic American Roof Trusses* – a detailed and beautifully illustrated study of the trusses that support our historic churches.

Wood Truss Highway Bridges in North America: Repair & Strengthening

By Jan Lewandoski

More than 1,000 wood truss highway bridges – mostly 19th century in origin, continue to carry vehicular traffic in North America. The repair and strengthening of these bridges is made challenging by the need to carry increased highway loads and satisfy modern engineering criteria, while retaining the historic form and (in many cases) the original structural system of the bridge. Solutions, worked out on a case-by-case basis, between contractors, engineers, and state historic preservation officers have ranged from restoration of the original structural system, to improving the strength of the bridge by methods compatible with its historic form, to augmenting or bypassing the historic structural system of the bridge by methods compatible with its historic form, to augmenting or bypassing the historic structural system by means of steel girders or additional piers.

Introduction: During the second half of the 18th century and the first years of the 19th, a number of substantial wooden truss bridges with single spans exceeding 150 feet were constructed both in Europe and North America. Notable among

them were the Schaffhausen Bridge (1758) in Switzerland, Timothy Palmer's trussed arch across the Merrimac in Massachusetts (1794), and Louis Wernwag's 340-foot (104 m.) Colossus in Philadelphia (1812). In spite of their success, these bridge designs were little imitated, perhaps due to their complexity and consequent expense. Rather, there emerged between 1804 and 1840 four patented trusses named for the American designers: the Burr Arch (1804), the Town Lattice (1821), the Long Truss (1834), and the Howe Truss (1840), which established models that dominated North American wooden bridge building until the mid-20th century. Bridges using one of these four trusses account for approximately 80% of the surviving spans longer than 60 feet in North America today. The other 20% use a wide variety of apparently successful, but less popular, trusses, such as the Paddleford, McCallum, or Pratt. Wooden bridges 60 feet and shorter are usually of king or queen post truss type, designs that probably originated in the roof systems of the public buildings of antiquity.

Approximately 20,000 wooden truss bridges were built in the U.S. and Canada between 1794 and 1958. After 1820, the majority were covered bridges, i.e., roofed and sided to protect the woodwork from weather. At least 1,100 are still in use today for vehicular traffic on public highways.

While four truss types, along with the king and queen post, dominated design, they were built by a multitude of builders over a vast geographical area, with consequent variation in detail and scale. A Burr truss might have a pair of arches clasping a single line of posts, as in the Village Bridge in Waitsfield, Vermont, or pairs of posts clasping an arch. Some Burr and Long trusses were double-barreled, i.e., a tall third truss, rising to the height of the ridge of the roof, divided the two lanes of traffic, as at the Schoharie Creek crossing in North Blenheim, New York. Town Lattice trusses were typically 14 feet, 6 inches tall and built up out of six layers of three-inch plank, but the 100-foot span double-lattice railroad bridge at Wolcott, Vermont, (1908) has trusses 25 feet tall and 12 lamina thick. Towns, Longs, and Howes were all occasionally assisted by arches. The design of these bridges became very refined. Sophisticated systems for varying the size of posts and braces to reflect loading conditions at different points in a span were developed for the Long trusses at Guilford, Maine, and North Blenheim, New York, by builders lacking the capacity to analyze unit stresses; quantitative engineering analysis of wooden trusses was only just being developed in the 1850's by Herman Haupt in his *General Theory of Bridge Construction* and Squire Whipple in *A Work on Bridge Building*.¹

Length of span was widely experimented with in 19th century wooden bridges. The Columbia Bridge across the Susquehanna River in Pennsylvania was 5,690 feet long and supported by 28 piers, for an average span of 196 feet. Theodore Burr's McCall's Ferry Bridge, also across the Susquehanna, was a single-span of 360 feet. It was unfortunately destroyed by ice in 1815, when only two years old. While the average clear span of the surviving wooden bridges in North America is slightly under 100 feet, there are some notable exceptions. The double-barreled Long truss with arch at North Blenheim, New York, built by Nicholas Powers in 1854 has a single span of 228 feet and currently has one inch of positive camber. The Cornish-Windsor Bridge, a Town Timber Lattice built in 1866 across the Connecticut River between Vermont and New Hampshire has two spans, each 204 feet in the clear and carries a traffic volume of 2,500 vehicles per day.

By the 1970's, wooden bridges were meeting with severe competition from iron and steel trusses and suspension designs. By the early 20th century, reinforced concrete appeared as a rival as well. Nonetheless, the construction of wooden truss bridges persisted on a diminishing scale into the middle of the 20th century. Many continued to be built by local bridge builders in rural towns as part of a continuing craft tradition, "unengineered" in the modern sense of the term and based on sketches or a model rather than a complete set of plans. Others, such as the 108-foot Howe truss on the Rutland Railway at Shoreham Center, Vermont, built in 1897, or the 100-foot double-lattice built in 1908 on the St. Johnsbury and Lake Champlain Railway in Wolcott, Vermont, were designed by professional bridge engineers in distant offices. Quebec and New Brunswick in Canada and Oregon in the U.S. all carried out provincial- and state-funded covered wooden bridge building programs for public highways that lasted into the 1940's and 1950's.

Editor's Note: This article will be continued in the next issue of *The Bridger*.

¹ Squire Whipple privately published *A Work on Bridge Building* in New York in 1847. See also Herman Haupt, *General Theory of Bridge Construction*, Appleton & Co., New York, 1851.

Covered Bridge Gets Full Federal Funding

Story by John Flowers, Addison Independent, November 9, 2023

- Republished with permission

SALISBURY/CORNWALL

- Officials in both Salisbury and Cornwall have just sent the Vermont Agency of Transportation (VTrans) a unified message on a permanent replacement for the historic Station Covered Bridge that once connected their two towns across the Otter Creek via Creek Road (in Salisbury) and Swamp Road (in Cornwall):

The message: Build a new covered bridge, as opposed to a standard steel and concrete span.

It's a solution eligible for full federal funding and one that town officials believe would pay homage to the 1865 covered bridge that was consumed by a suspicious fire on Sept. 10, 2016. They also believe a return to a replica one-lane bridge would perpetuate the message that heavy vehicles aren't welcome on what are fragile access roads – especially on the swampy Cornwall side.

"We are leery of a two-lane bridge because of the problem that Cornwall, in particular, has with the access road," said Cornwall Selectman John Roberts. "We think the road on our side would collapse pretty quickly if we had regular truck traffic on it."

A temporary bridge was installed at the site following the fire, and it's accommodating around 540 vehicles per day. At the same time, VTrans's structures division has been working with Salisbury and Cornwall stakeholders on a Covered Bridge that not only accommodated vehicles, but also served as a home for bats.

The *Independent* last year reported VTrans had presented the towns with three bridge replacement options: A steel-beam, concrete-deck version; a truss-style option; or another covered bridge.

All three options called for a span length of 150 feet.

Cornwall and Salisbury leaders surveyed their citizens and the replica covered bridge proved the top choice among folks in both towns.

"I think a lot of folks in town who will appreciate that what was destroyed will be replaced," Salisbury selectboard Vice Chair Paul Vaczy said.

Still, VTrans officials returned to the towns this past summer with two final project choices:

- A new steel-girder, two-lane bridge. The estimated \$3.1 million in construction costs would include concrete deck, steel girders, bridge railing, new abutments and roadway approach work. That price tag wouldn't include the option of a "covered-bridge top," or any fire-retardant, insecticide, utility line extension and fire detection features, according to the VTrans drat proposal.

It's a bridge that could be posted for up to 80,000 pounds. The existing support pier in the creek would have to be removed.

"The width of this new bridge will require new abutments, as the existing abutments are too narrow and most probably are not structurally capable of supporting the loads of this new bridge (type)," VTrans Structures Project Manager James B. McCarthy stated in a Sept. 26 letter to officials in both towns.

- A new, one-lane covered bridge built on the existing abutments and pier. A weight limit for the span has yet to be calculated, though the former covered bridge had a load rating of 18 tons (36,000 pounds) for a two-axle truck. Roadway approach work would match the existing width, horizontal and vertical alignment, according to VTrans officials.

The estimated construction cost of \$3.9 million would include fire-retardant, insecticide, utility line extension, fire detection system and sprinkler system (water and chemical.)

While it has a bigger price tag (\$3.9 million versus \$3.1 million), the new covered bridge would ironically be the least costly of the two bridge replacement scenarios for the two towns, based on the federal reimbursement allowance. James B.

McCarthy, a VTrans structures project manager, explained Salisbury and Cornwall had the good fortune of being picked for a limited program that'll pay 100% of construction costs.

"There were a handful of towns whose projects were selected, and this (project) is one of them," McCarthy said, adding, "It saves the state some money, too."

He noted a covered-bridge rebuild has other advantages, in this case.

"For a new covered bridge to be constructed on the existing abutments and pier, this project is considered a rehabilitation, versus... a new bridge," McCarthy explained. "In this case, we can design and construct the covered bridge to the approximate dimensions of the original covered bridge."

Salisbury and Cornwall would only be on the hook for \$15,000 (2.5%) of the preliminary engineering costs.

Though construction costs for the steel-girder option would also be completely bankrolled by the feds, the two towns would owe \$20,000 for preliminary engineering and up to \$750,000 for a covered bridge top and whatever fire-retardant, insecticide, utility linen extension and fire detection features they might choose to include, according to the VTrans draft proposal.

Cornwall and Salisbury had been banking on a larger local outlay for the bridge replacement. The communities each received an insurance settlement after the original covered bridge burned, and in Cornwall's case, it was well into the six figures. Now it appears the towns will have the luxury of investing those funds in other public works and/or capital projects.

For example, Roberts said he'd like to see the town fix the approach road to the bridge.

"There's a kink in the road," he said. "It would be nice to straighten that out so people could see better. On the Salisbury side, it's a straight run.

"If we're going to build a new bridge, why not solve a few other problems," he added.

So when will the new replica bridge go up? It's tentatively slated for VTrans's FY'25 construction season – a year and a half from now. McCarthy said plans call for the road to be closed (with detours) during construction, and he believes the agency will be able to keep open the fishing access near the bridge.

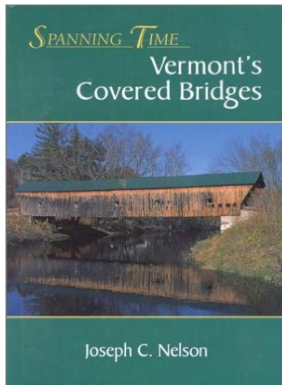
The coming months will see VTrans do more design work and apply for the requisite permits, while town officials will brainstorm ways to keep heavy vehicles from trying to use the new covered span.

John Flowers is at johnf@addisonindependent.com



Cornwall-Salisbury Covered Bridge, Painting by Peter Huntoon

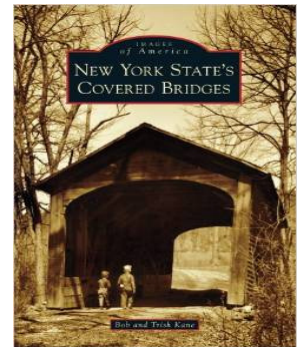
For Sale



Spanning Time: Vermont's Covered Bridges, by Joseph C. Nelson, features 102 color photographs of Vermont's covered bridges in fifteen chapters, each a guided tour. The tours are complete with maps, commentary on the uniqueness of each bridge, and historic highlights about the towns and villages in which the bridges stand.

An appendix provides: A Summary of Vermont's Covered Bridges; A Covered Bridge Glossary; A Bridge Truss section, explaining how trusses work; Thumbnail biographies of the people who designed and built the bridges; A Covered Bridge Reading List for bridge and history buffs; and A detailed Index. *Spanning Time: Vermont's Covered Bridges*: 7" x 10", 288 pages. Published by New England Press of Shelburne, VT. For reviews of the book, go to www.vermontbridges.com/bookreviews.htm. *Spanning Time* is available directly from the author for \$20.00, plus \$3.00 shipping. Send your check or money order to: VCBS, P.O. Box 267, Jericho, VT 05489.

New York State's Covered Bridges - When one typically thinks of covered bridges, New York is not the first state to come to mind, but New York once had over 300 covered bridges. Floods, fires and progress have claimed all but 32. Readers will enjoy seeing NY's current bridges, including the oldest existing covered bridge in the U.S., the Hyde Hall Covered Bridge, located in Glimmerglass State Park, and the world's longest single-span covered bridge in the world, the Blenheim Covered Bridge, washed away by Tropical Storm Irene in 2011. This book also highlights the Theodore Burr Covered Bridge Resource Center in Oxford, NY, the first ever center of its kind specifically designed for covered bridge researchers. For a copy of the tour, contact Bob and Trish Kane, 167 Williams Rd., Sherburne, NY 13460, 607-674-9656, bobtrish68@twc.com.

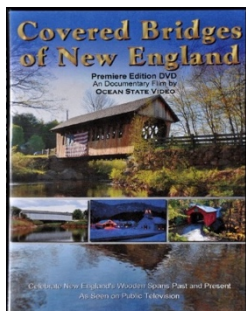
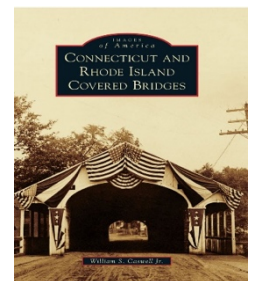


Visions of Vermont art gallery, Jeffersonville, Vermont at: <https://www.visionsofvermont.com/>, 802.644.8183

A special sale for the benefit of the Vermont Covered Bridge Society featuring the works of Eric Tobin. All proceeds of the unframed prints go to the VCBS. Sale of the framed prints will be shared 50/50. They are all Giclée on acid free paper. The glass is non-glare artist's glass.

- 10"x12" unframed, \$125
- 16"x20" unframed, \$175
- 16"x20" matted and framed, \$550
- 20"x24" matted and framed, \$850

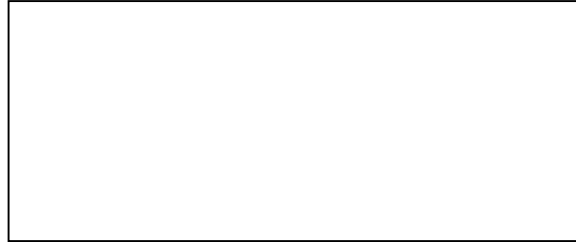
Connecticut and Rhode Island Covered Bridges – Price reduced! During their heyday in the mid- to late 1800s, more than 150 covered bridges dotted the landscape of Connecticut and Rhode Island. Since that time, floods, fires, and progress have claimed all but two of the historic structures. With over 200 images, this book provides insight into the covered bridge history of an area that has not been well documented in the past. To order your signed copy, send \$20.00 to Bill Caswell, 535 Second NH Turnpike, Hillsboro, NH 03244.



Covered Bridges of New England – DVD, During the 19th and early 20 centuries, New England was home to nearly 1,000 covered bridges. Today there are fewer than 200 in the six-state region. This one-hour documentary visits more than 75 bridges and interviews with several of the people dedicated to the preservation of these precious examples of our country's earliest infrastructure. Produced by Ocean State Video of Rhode Island for Public Television. Profits will go to the Vermont Covered Bridge Society's Save-a-Bridge Program. For your copy, send \$10.00 plus \$1.88 shipping to: Vermont Covered Bridge Society, c/o Joe Nelson, P.O. Box 267, Jericho, VT 05465-0267.



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