2023 VTrans Large-scale Bicycle and Pedestrian Grant Application

1. Project Title: Sanborn Covered Bridge Revitalization Project

2. Applicant Name(s): Town of Lyndon

3. Project Contact Info:
   a. Name: Nicole Gratton
   b. Mailing Address: PO Box 167
   c. Town: Lyndonville
   d. Zip Code: 05851
   e. Email Address: ngratton@nvda.net
   f. Phone Number: (802) 731-1399

4. Fiscal Information:
   a. Accounting System ☐ Automated ☐ Manual ☑ Combination
   b. Unique Entity Identifier # EB2KCCKX33G7
   c. Fiscal Year End Month December

5. RPC(s) Northeastern VT Dev. As

6. Primary Facility Type: ☐ Sidewalk ☐ Bike Lane ☐ Shared-use Path
   ☐ Shoulder
   ☑ Other (Please describe) Bridge as trail connector for walking and biki

7. Approximate project length in feet : 118

8. Project Description: Please give a brief description of the project (100 words or less.) Detailed information should be submitted as part of addressing the selection criteria. Be sure to include identifying streets or landmarks that the proposed project links at either end (e.g. New concrete sidewalk with granite curbing on Main St. from Elm St. to Maple St.).

The Sanborn Covered Bridge project will connect existing and planned recreation trails across the Passumpsic River in Lyndonville. The Paths Around Lyndon walking network and VAST use the bridge as a trail connector, and would be able to continue to do so. Kingdom Trails Association mountain bike trails hope to connect to Lyndonville through the Sanborn CB site as well, dispersing the visitor impacts and economic benefits of the trails to Lyndon.

This project would ensure that the physical structure of the bridge is adequately designed to integrate with the trail network and support the underlying engineering and project administration.

9. **Estimated Project Costs:**

Engineering/Administration/Project Manager: Costs associated with survey, design, plans development, permitting, development of bid documents, bid analysis and Municipal Project Manager - typically around 25% of construction.	Engineering/ Admin/MPM Cost $ 15,000
Right of Way: Cost of appraisals, property owner compensation and associated legal fees (Minimum of $5000 recommended).	ROW Cost $ 5,000
Construction: Cost of paying contractors to build projects, including a reasonable contingency. Please attach as much detail/ backup information as available to support the construction estimate.	Construction Cost $ 330,000
Construction Inspection : Cost to provide oversight of contractor during construction - typically around 15% of construction.	Const. Insp.Cost $ 30,000
TOTAL DESIGN/CONSTRUCTION AMOUNT APPLIED FOR : (including 20% local share)	$ 380,000

10. **Have you received any other grant funding for this project? Please describe and include the source of funding:**

USDA RBDG- Engineering, Bruhn Revitalization Grant- Construction, Vermont Housing & Conservation Board- Construction, Vermont Division for Historic Preservation- Construction, Northern Borders Regional Commission- Construction, VTrans Transportation Alternatives Program- Construction, The Freeman Foundation- Construction, Local ARPA funding- Construction, Local Capital Campaign- Construction and Engineering.

11. **Will you accept an award less than you applied for?** ☑ **YES** ☐ **NO**

IF YES, please indicate below whether local funds will be used to make up the shortfall or if the project scope will be reduced:

☑ Keep Scope of project the same and make up shortfall with other funds

☐ Reduce project scope – Describe and provide cost breakdown (attach backup with supporting materials, if necessary)

Note: If the project scope is to be reduced, document what part of the project you would accept partial funding for and break out the costs associated with that part or segment. Attach additional pages if necessary. If adequate information is not provided, partial funding will not be considered. **Use Partial Funding Template provided by VTrans.**

2023 VTrans Bicycle/Pedestrian Program - Design/Construction Criteria Template

Applicant Name: Town of Lyndon

Project Title--Design/Construction: Sanborn Covered Bridge Revitalization Project

Application Checklist – If any elements are missing, application may not be considered.

Make sure everything is included and pages numbered.

☒ (1) Project Application Form (separate PDF file)

All other materials noted below to be provided in the same order as below.

☒ (2) Project Evaluation Criteria Documentation for the project (completed BELOW)

☒ (3) Project Map(s)

☒ (4) Budget support information (e.g. detailed cost estimate)

☒ (5) RPC review confirmation letter

☒ (6) Current letter of support from the municipal governing body acknowledging their willingness to provide the local match and future maintenance responsibility

☒ (7) Documentation of contact with VTrans District office if project is on the state system

☒ (8) Supporting Documentation (scoping study or equivalent report, maps, and drawings) Note: If the scoping study is in a publicly accessible location online, applicants may provide a link with reference to relevant pages as appropriate.

DESIGN/CONSTRUCTION PROJECTS

1. **Community Need—25 Points:** How does the proposed project contribute to an existing or planned bicycle and/or pedestrian network? If the proposed project is a sidewalk along a street that already has a sidewalk, explain why the redundant facility is needed. What destinations or populations are served? What walking and/or bicycling access or safety problem are you trying to solve?

The Sanborn Covered Bridge is located near the intersection of Routes 122/5/114 in Lyndonville, VT. Currently, due to structural issues, the bridge is used only by pedestrians and snowmobiles. The "Paths Around Lyndon" walking trail and VAST trails use the bridge to cross the Passumpsic River and access the rest of the walking network and the Lyndon terminus for the VAST trail.

The bridge is integral to keeping pedestrians safe through this part of Town because the paths meander towards the river and parallel to vehicular traffic rather than through a major intersection. There are future plans for the bridge to connect with the mountain bike network of the Kingdom Trails Association via the Kingdom Campground to the north.

The bridge is easily accessed as it sits less than a half-mile from the state-designated Lyndonville Village Center and is a destination in and of itself. The site will be further enhanced with a planned two-acre riverfront park at the south end of the bridge. This is a significant public green space for residents of the rental housing along Main Street, many who do not have high quality outdoor space of their own.

A renovated bridge will serve as a northern gateway, welcoming people to Lyndon and the greater Northeast Kingdom. It can continue to provide safe walking routes for locals and visitors, provide a future trailhead and connection point for mountain biking, and create new public outdoor recreation access.

16-25 Points – Project is an important part of a pedestrian or bicycling network and serves obvious bike/ped generators and/or the project includes measures identified in the FHWA STEP initiative.
6-15 Points – Project is in an area of low land use density or not clearly contributing to a local network.
0-5 Points – Unclear how proposed facility contributes to a network or solves a safety problem

2. **Economic Development—10 Points:** How does the project contribute to broad local community and economic development goals? How does the project contribute to ongoing local placemaking or economic development initiatives?

The Sanborn Covered Bridge is one of five covered bridges in Lyndon that make up a significant tourism attraction within a small radius. Most importantly, the Sanborn Bridge is located at a key intersection that many tourists pass through on their way to Kingdom Trails. By creating an attractive, well maintained historic covered bridge and park space, the site can welcome tourists to the region, provide them with information about the Northeast Kingdom, connect them to walking and biking trail networks, and help steer visitors toward downtown amenities. Tourism, especially pedestrian and bike tourism, has been identified in numerous town and regional plans:

1. Better Connections Downtown Master Plan (2023): The Town of Lyndon is engaged in a Better Connections planning process (begun 2021), aimed at improving walking and biking in the downtown core as well as the gateways into the village by improving wayfinding and bike and pedestrian infrastructure. The Sanborn Bridge sits one-half mile from the designated Village Center and is perfectly positioned to be the "call into downtown." Working with SE Group, the design consultants have identified the gateways into Lyndonville as important in setting the tone of a welcoming, vibrant community.
2. A goal of the Regional CEDS Plan (2021) is for the region to "*Partner with local organizations to support healthy lifestyles by expanding bicycle/pedestrian/recreational opportunities, exercise programs, and healthy food options etc." and to "encourage the establishment of diversified attractions that expand the tourism and recreation opportunities" (NVDA CEDS, p.22)* This project clearly meets these goals.
3. Kingdom Trails Network Capacity Study (2021) notes that The Kingdom Trails Association, based in East Burke, has become a victim of its own success; 4-5,000 visitors crowd the town during peak periods. With 800 to 1,200 users per day accessing its trails, capacity issues abound. The Study named its top-priority goal as: "*Relieving the pressure and stress currently being placed on landowners, communities, and roads by planning for managed growth consistent with and respecting the quality of life in the communities*." Recommendations include dispersing visitor traffic, especially to relieve overburdened lodging and food establishments. Three locations in Lyndon are suggested as dispersing "pods": Kingdom Campground, Northern Vermont University, and Lyndon Outing Club. As visitors enter Lyndon on their way to the trail network and other outdoor recreation points, the Sanborn Bridge site offers an easily accessible dispersal point and access to these three pods. Since the Bridge is close to the Village Center, there is a positive impact as visitors park, access the trails, visit Lyndon shops and eateries, and stay in Lyndon accommodations. In order for this outdoor tourism to be sustainable, a more equitable distribution of the economic benefits of regional tourism must be put in place.
4. Finally, the Town of Lyndon Community Visit (Vermont Council on Rural Development, 2017) identified four priority goals, one of which is "Revitalized Downtown Businesses and Storefronts" with a priority action step to "Cultivate a cultural and arts presence in the downtown through murals, capitalizing on the railroad history and heritage, showcasing covered bridges, or developing an arts space/gallery in the downtown (emphasis added, p. 24)." The Sanborn Covered Bridge Revitalization project directly supports this goal.

6-10 Points – Specific references to community planning or economic development documents that support the project.

0-5 Points – Vague or non-existent references to community planning or economic development documents that support the project

3. **<u>Well-supported budget —20 points:</u>** How were the project costs developed? Are all required project elements (admin, engineering, construction, inspection) adequately budgeted for? Be sure to include backup documentation for project costs. Include reasonable contingency for inflation over the life of the project.

The project costs are based on the preliminary assessment and cost estimate from bridgewright Jan Lewandoski (2021).The Preliminary Budget is attached to this application. The engineering and predevelopment costs were developed by Dubois & King Engineering and Isaac Wagner of Wagner Development Partners. Both entities have experience in the costs associated with this type of project. There is a 20% contingency in the budget for all aspects of the project given the preliminary nature of the project budget. A more detailed cost estimate is part of the engineering work, and is expected to be drafted by the end of 2023.

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11-20 Points – Cost is well documented/detailed and consistent with bid history on similar projects.

0-10 Points – Cost is significantly less than similar projects, no detail provided or missing costs.

4. **<u>Complexity—10 points:</u>** What complexities does your proposed project have and how do you plan to address them? Response must address need for right of way, anticipated permitting, natural resource constraints or identified cultural resource (historic or archaeologic) impacts anticipated for the project. If a scoping or planning report is attached, please highlight or reference the applicable sections.

The complexities of the project include anticipated permitting including NEPA review (environmental) and Section 106 review (historic and archeological) both of which are being addressed and supported by the other entities in the funding stack. Judy Erhlich, VTrans, will be preparing the Section 106 Review. The NEPA review will be conducted under a USDA Community Facilities grant. The right-of-way is not an issue as the bridge rests on a municipally maintained roadway. The project is collaborating with Vermont River Conservancy through the Vermont Housing & Conservation Board to address natural resource constraints. The Bridge is in the floodway but is preexisting and an upriver bridge acts as a protector to the Sanborn Bridge. The Project Manager is working with the Vermont Agency of Natural Resources River Corridor Specialist, Sacha Pealer.

6-10 Points – Fewer complexities, or thorough identification of multiple complexities and specific efforts taken to address them.

0-5 Points – Complexities include ROW acquisition, significant permitting challenges, design constraints, significant structural components such as bridges or retaining walls, etc.

5. **<u>Project coordination – 5 points:</u>** To your knowledge, are there other state or local projects in the same area that might impact the project timeline and schedule for completion? Is the project on a state-maintained route? Is the funding being used for elements of a larger project funded through other sources?

There are no known state or local projects in the vicinity that will impact the project timeline or schedule for completion. The project is on a municipally maintained route. The funding is being used for elements of a larger project funded through other sources (please see attached Sources and Uses document).

3-5 Points – No conflicting projects.

0-2 Points – Several conflicts or coordination needs.

6. **<u>Equity—10 Points:</u>** How does your project directly address the needs of more vulnerable populations, specifically the needs of children, older persons, people with mobility challenges and low- or moderate-income households? What outreach was performed to include disadvantaged communities, especially low income, BIPOC, people with disabilities and others, in the planning of this project.

The Sanborn Covered Bridge Project supports vulnerable populations, most notably the residents of low-income housing (approximately 30+ units) located along Main Street, and within a quarter mile of the site. Many of the residents along Main Street lack outdoor spaces and would benefit from access to high quality public outdoor recreation opportunities close to their homes. As part of the Better Connections planning process, purposeful outreach and engagement was directed toward the residents of the low-income housing community on Main Street. On March 28, 2021 (see attached flyer noting Olivia Place (RuralEdge low-income housing residence)), with the support of Community Workshop, an informal discussion circle was held to gather the input of residents about improvements that could be made to better connect where they live to downtown and nearby outdoor recreation assets. The group noted the proximity to park spaces and the desire to have these spaces be improved for usability.

We are committed, throughout the design and engineering process, to provide all ages and abilities access to the site and the ability to enjoy the bridge and adjoining park space. The park space is being designed to offer both active recreational trail connections and more passive recreation options such as bird watching and picnicking. The Bridge is located on the Paths Around Lyndon walking trail, which is actively used by residents and visitors. The walking trail helps promote health and wellbeing, providing safe outdoor recreation and connection with nature.

6-10 Points – Project that provides direct access to a vulnerable population e.g. a sidewalk from an underserved community, a senior center, or community center to a downtown or clear documentation of outreach to disadvantaged populations.

1-5 Points – Equity is only addressed in broad terms.

0 Points – Equity not addressed.

7. **Multi-modal potential —5 points:** How does your proposed project coordinate with other modes of transportation? Will it improve walking or bicycling access to transit, rail service or park and ride facilities?

The Sanborn Covered Bridge currently serves pedestrians (Paths Around Lyndon network) and snowmobilers (VAST). The project has the potential to serve as a trailhead for the Kingdom Trails mountain bike network, providing the necessary dispersal of riders throughout the network. A half-mile west of the site is a Park and Ride facility on the Paths Around Lyndon walking trail. There are existing sidewalks from downtown Lyndonville to the Bridge and a new crosswalk at the entrance to the covered bridge will improve pedestrian safety.

5 Points – Project provides direct access to another transportation mode e.g. a sidewalk that connects directly to a transit stop or park and ride

0-4 Points – Project is part of a larger plan to connect to another transportation mode in the near future

8. **State designated centers —5 points:** Is the proposed project within a state designated center?

No. The site is located less than a half-mile from the designated Village Center of Lyndonville, VT.

5 Points – Project is contained primarily within a state designated center (such as downtowns, villages, or neighborhood growth centers recognized by the Vermont Department of Housing and Community Development).

0-4 Points – Project leads to, but is not primarily within, a state designated center.

Designated centers can be confirmed on the state Planning Atlas - http://maps.vermont.gov/ACCD/PlanningAtlas/index.html?viewer=PlanningAtlas .

9. **Project Management—10 Points:** Describe your plan for keeping this project moving forward. What management practices do you now have, or plan to put in place, to successfully administer the project from design through construction? Who will manage the project (municipal staff, RPC, consultant, or other)?

Nicole Gratton, Regional Planner at Northern Vermont Development Association (NVDA, the Regional Planning Commission) is the Project Manager for the Sanborn Covered Bridge Project. Following initial interest from a community group, Ms. Gratton has supported all aspects of this project. She began this project as the Planning Director for the Town of Lyndon and is now continuing to support it as the Project Manager at NVDA. She will continue to ensure the project moves forward and meets its milestones. The engineering is managed by Dubois & King and Ms. Gratton continues to coordinate with the team.

6-10 Points – Plan outlined for managing the project, including adequate or additional staffing.

0-5 Points – Vague or ill-defined management plan.

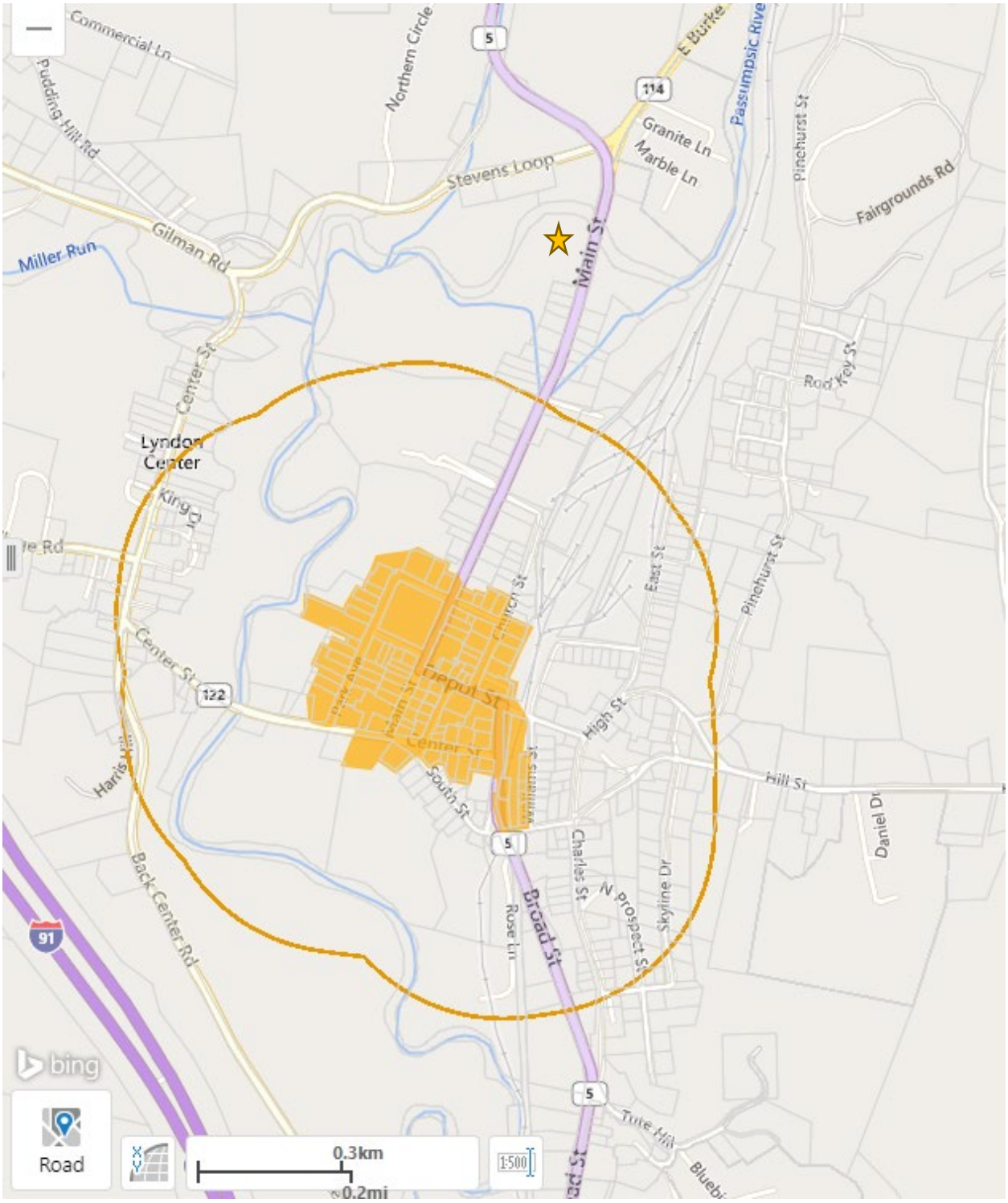
Town of Lyndon

Sanborn Covered Bridge Revitalization Project

Map Appendices:

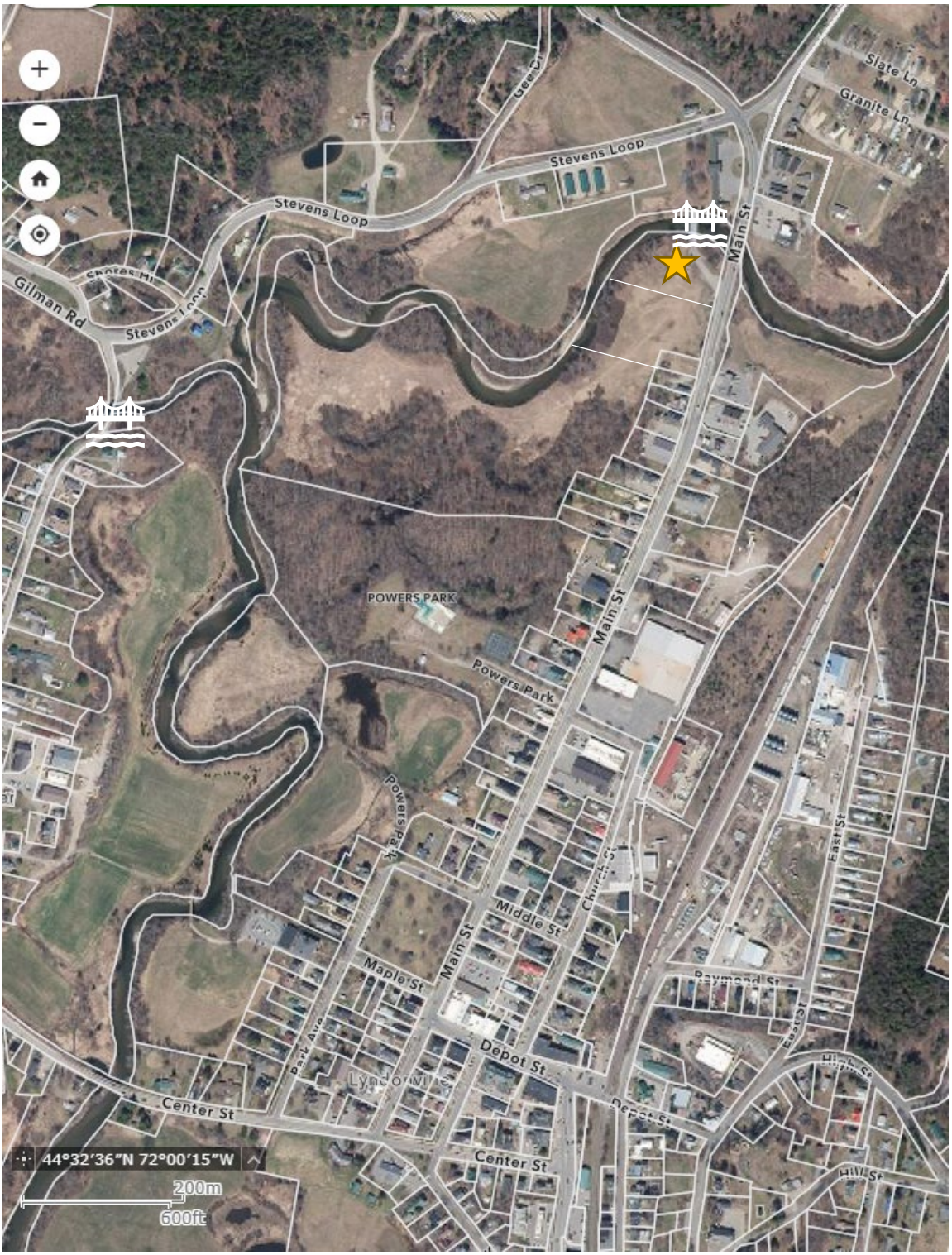
1. Concept Map for Sanborn Covered Bridge & Riverfront Park
2. Village Center Map with .25-mile planning buffer
3. Orthographic/Road Map of project area
4. Trail Connection Maps including Paths Around Lyndon, BCBSVT walking maps, VAST

Map 1: Concept Map for Sanborn Covered Bridge & Riverfront Park



Map 2: Village Center Designation & .25-mile planning buffer

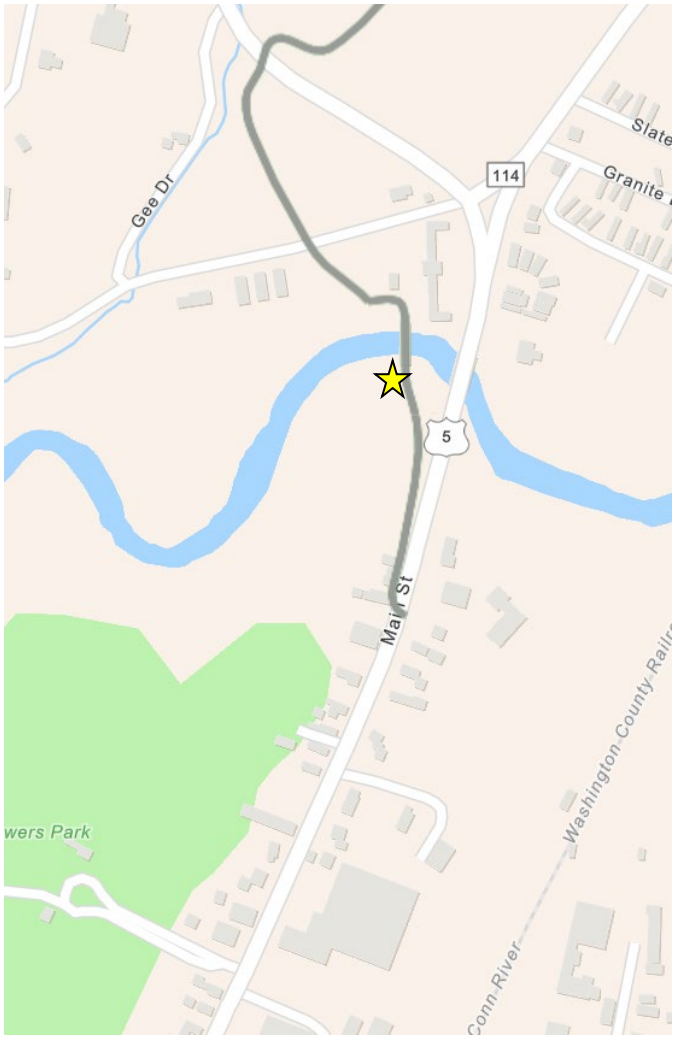
*Please note that a large portion of the .25-mile planning buffer is within the Passumpsic River river corridor and Special Flood Hazards Area which does not allow for development. While a .25-mile butter seems like plenty of space to encourage compact development close to the Village Center, in the case of Lyndon, it is a bit distorted. Development must occur in a more linear fashion, following Route 5/Main Street.



Map 3: Orthographic & Road Map with site identified

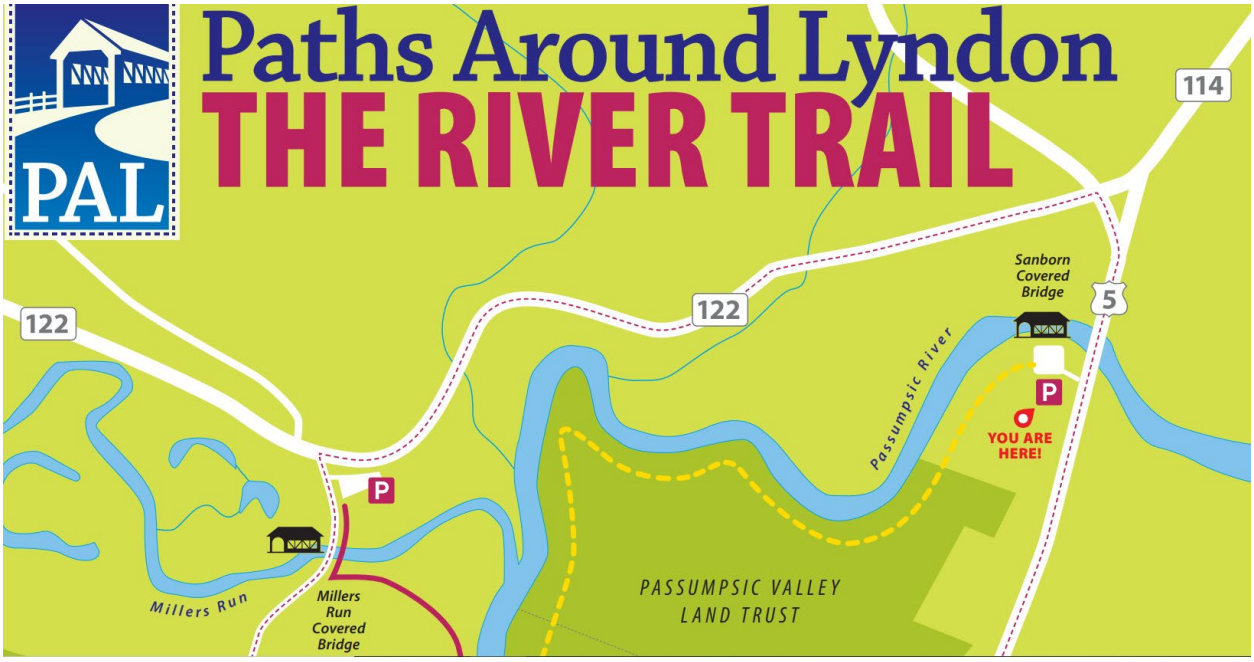
*Sanborn Covered Bridge and Millers Run Covered Bridge are identified with symbols

Trail Connection Maps:



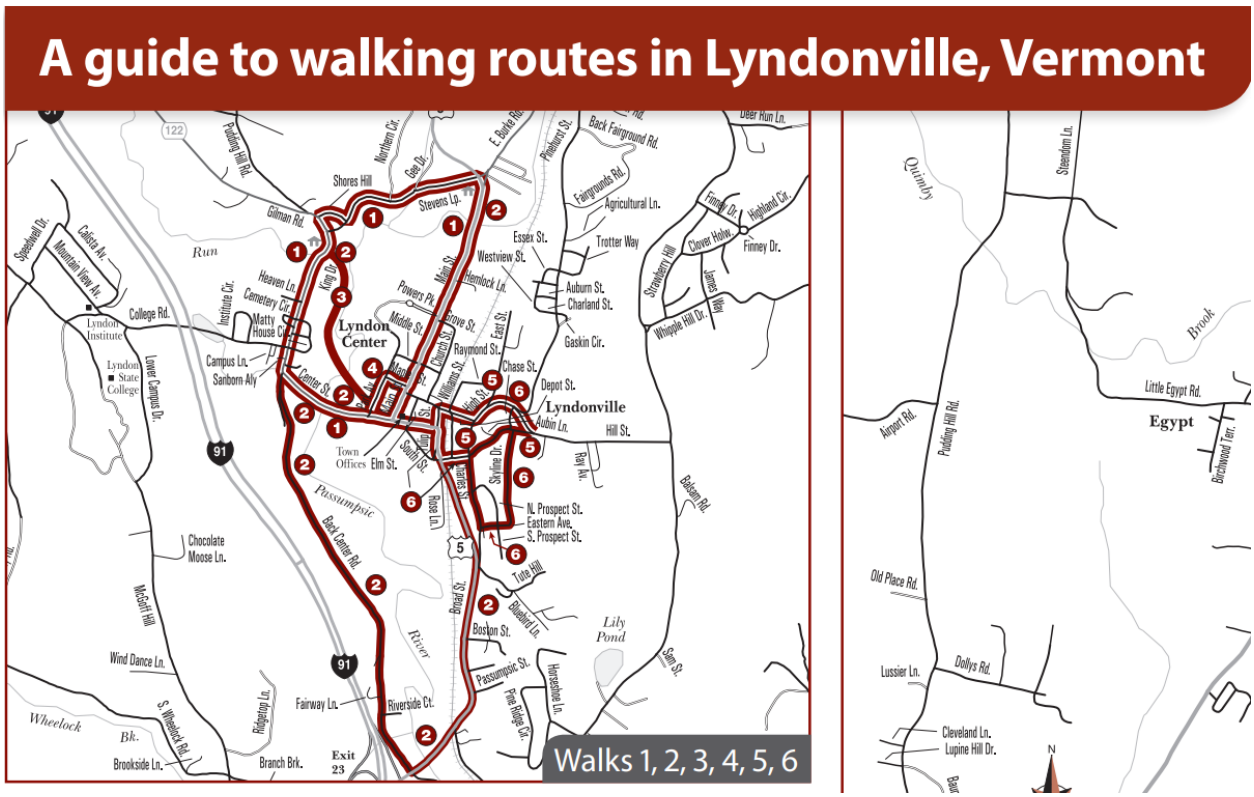
Map 4a: Vermont Association of Snow Travelers map

*Yellow Start notes where the Sanborn Covered Bridge is located, with the trail network using the bridge to connect to Lyndonville



Map 4b: Paths Around Lyndon: The River Trail map

*Walkers can travel along routes 122 and then onto 5, but frequently cut across the corner lot and walk through the Sanborn Covered Bridge rather than through a very busy intersection.



Map 5c: Blue Cross Blue Shield walking map, Lyndon Vermont

*note the small bridge symbol next to #1 in the upper righthand corner noting the trail passage through the Sanborn CB

Sanborn Covered Bridge, Lyndon, VT

Development Budget

May 26, 2022

Sources and Uses

	Budget Phase I	Vermont Housing and Conservation Board	Town of Lyndon	Preservation Trust of Vermont Bruhn Grant	Freeman Foundation	NBRC	USDA RBDG	ARPA	TAP	Capital Campaign	USDA Community Facilities	VOREC	VDHP	Congressionally Directed Spending Scenario	VHCB REDI	BikePed	TOTAL	Notes
ACQUISITION																		
Land	10,000		10,000														10,000	completed
Land- survey boundaries	4,460		4,460														4,460	completed
Legal - Title and Recording	1,175		1,175														1,175	completed
Subtotal Acquisition	15,635	0	15,635	0	0	0	0	0	0	0					0	0	15,635	
Aquisition Contingency	0																	
Total Acquisition	**15,635**	**0**	**15,635**	**0**	**0**	**0**	**0**	**0**	**0**	**0**					**0**	**0**	**(15,635)**	
CONSTRUCTION HARD COSTS																		
Construction - Rennovation																		
Truss reframing	950,000	84,000	10,000	84,000	23,000	288,000		84,000		84,000			16,000	277,000			950,000	J. Lewandowski Report 12-4-22
Replace abuttments and bed timbers	380,000		30,000		45,000				232,000							73,000	380,000	J. Lewandowski Report 12-4-22
Replace floor system	110,000															110,000	110,000	J. Lewandowski Report 12-4-22
Replace/rehab roof system	40,000															40,000	40,000	J. Lewandowski Report 12-4-22
Replace/rehab sidewall boarding	15,000															15,000	15,000	J. Lewandowski Report 12-4-22
Reconnecting to trails, Sidewalk, landscaping, sig	200,000										125,000	75,000					200,000	WDP guesstimate
Subtotal Hard Costs	1,695,000	84,000	40,000	84,000	68,000	288,000	0	84,000	232,000	84,000	125,000	75,000	16,000	277,000	0	238,000	1,695,000	
Owner Contingency 20%	339,000	16,000	10,000	16,000	17,000	55,000	0	16,000	58,000	16,000	25,000	16,000	4,000	43,000		47,000	339,000	high range for contingency due to prelmina
Total Hard Costs	**2,034,000**	**100,000**	**50,000**	**100,000**	**85,000**	**343,000**	**0**	**100,000**	**290,000**	**100,000**	**150,000**	**91,000**	**20,000**	**320,000**	**0**	**285,000**	**2,034,000**	
SOFT COSTS																		
Engineering - Survey and base plan	5,000						4,870											Dubois & King proposal 2-10-22
Engineering - Design	115,500						78,500			37,000							115,500	Dubois & King proposal 2-10-22
Engineering - Permitting	5,000								4,000	1,000								Dubois & King proposal 2-10-22
Engineering - Bidding	10,000																	Assumption from Dubois & King proposal 2-
Engineering - Construction Oversight	45,000		30,000		15,000					10,000								Dubois & King proposal 2-10-22
Grantwriting Support	15,000														15,000			WDP assumption, likely low end of range
Project Management	30,000		30,000													15,000		From NBRC Applicaton
NBRC Grant Admin	7,000					7,000												Required NBRC to LDD
Other Grant Admin	7,000		7,000															
Cost Estimating	4,000						4,000											Based on WDP experience, need a more gra
NEPA Environmental Review Preparation- with floodpl	6,000								6,000									Dubois & King proposal 2-10-22
Phase I ESA	3,500		3,500															WDP experience
Section 106 Historic Review	0								0									WDP experience
Archeological Resource Assessment	1,000						1,000											WDP experience
Archeological Phase I Survey	6,000						4,000			2,000								Dubois & King proposal 2-10-22
Geotech and Soil Borings, Hyraulic and Hyrdologic	9,000						7,630											Dubois & King proposal 2-10-22
Legal/Accounting	5,000		5,000															
Hazardous material testing	1,500		1,500															
Permit Fees	2,000		2,000															
Construction period Inusrance	3,000		3,000															
Other																		
Other																		
Other																		
Subtotal Soft Cost	280,500	0	82,000	0	15,000	7,000	100,000	0	10,000	50,000	0	0	0	0	15,000	15,000	294,000	
Soft Costs Contingency 20%	56,100									0	0	59,000		0			59,000	
Total Soft Costs	**336,600**	**0**	**82,000**	**0**	**15,000**	**7,000**	**100,000**	**0**	**10,000**	**50,000**	**0**	**59,000**	**0**	**0**	**15,000**	**15,000**	**353,000**	
TOTAL DEVELOPMENT COSTS	**2,386,235**	**100,000**	**147,635**	**100,000**	**100,000**	**350,000**	**100,000**	**100,000**	**300,000**	**150,000**	**150,000**	**150,000**	**20,000**	**320,000**	**15,000**	**300,000**	**2,402,635**	

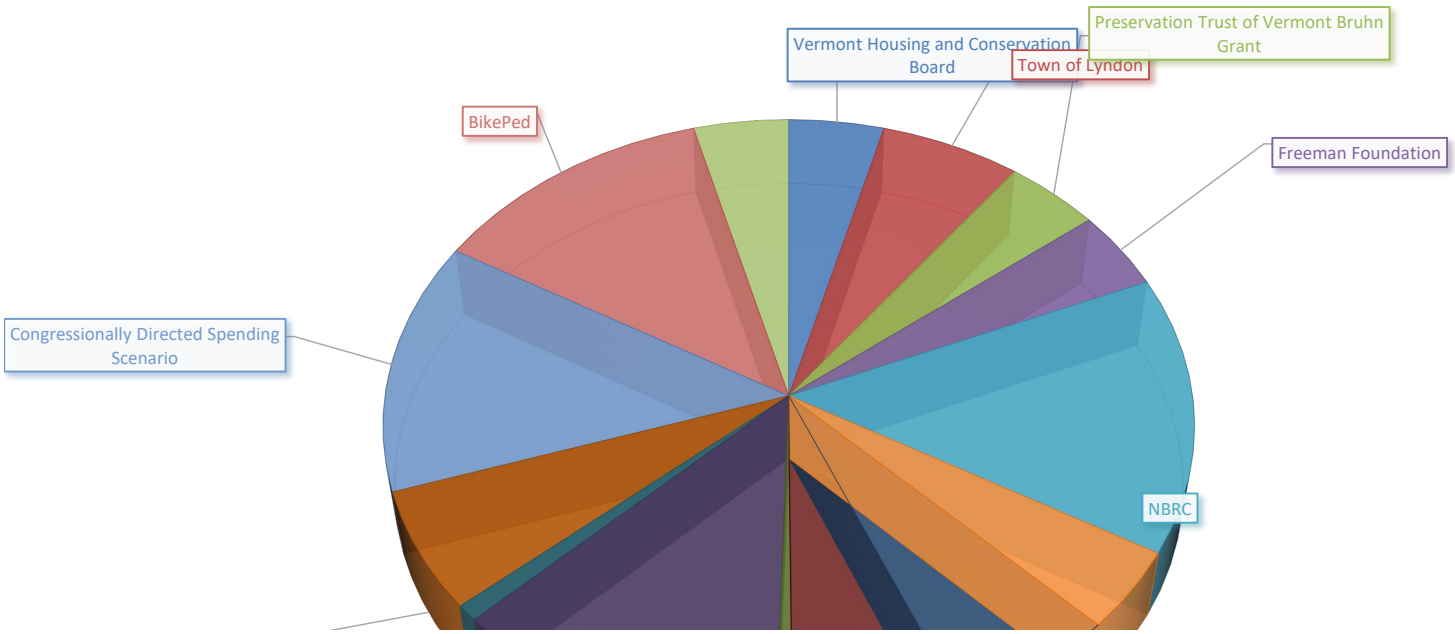
Sanborn Covered Bridge, Lyndon, VT
Development Budget

May 26, 2022

Summary

Total Finished SF:		Owner Contingency:	20.0%
Total Construciton	$1,848,000	Soft Cost Contingency:	20.0%
Total Construciton Cost Per SF	#DIV/0!	Estimating Contingency:	0.0%
Total Development Cost Per SF:	#DIV/0!	Operating Income Trending	
		Operating Expense Trending	

SOURCES	Phase I	Federal	Non-Federal	% of Total Development Cost	Status	Amortization	Term
Vermont Housing and Conservation Board	100,000		100,000	4.53%	committed		
Town of Lyndon	147,635		147,635	6.69%	committed (cash and in-kind)		
Preservation Trust of Vermont Bruhn Grant	100,000	100,000		4.53%	committed		
Freeman Foundation	100,000		100,000	4.53%	committed		
NBRC	350,000	350,000		15.86%	committed		
ARPA	100,000	100,000		4.53%	committed		
USDA Rural Development Community Facilities	150,000	150,000		6.80%	identified		
Capital Campaign	150,000		150,000	6.80%	committed		
VHCB REDI	15,000		15,000	0.68%	committed		
TAP	300,000	300,000		13.60%	committed		
VDHP	20,000		20,000	0.91%	committed		
VOREC	150,000		150,000	6.80%	identified		
Congressionally Directed Spending Scenario	320,000	320,000		14.50%	identified		
BikePed	300,000	300,000		13.60%	identified		
USDA RBDG	100,000	100,000		4.53%	committed		
TOTAL SOURCES	2,402,635	1,720,000	682,635				
		1	28%				
USES							
Acquisition Land	15,635			0.66%			
Construction Hard Costs	2,034,000			85.24%			
Soft Costs	336,600			14.11%			
TOTAL USES	2,386,235			100%			
(Gap)	16,400	1,720,000	682,635				



NVDA
Northeastern Vermont Development Association
www.nvda.net • 1-802-748-5181

May 11, 2023

Peter Pochop
Bicycle and Pedestrian Project Manager
Vermont Agency of Transportation
Barre City Place, 219 North Main St. - 4th floor
Barre, VT 05641

Dear Mr. Pochop:

Please accept this letter of support for the Town of Lyndon's Bicycle and Pedestrian Program grant application for their Sanborn Covered Bridge project. The town is seeking funding to cover the development costs for the historic Sanborn Covered Bridge revitalization project. This project will help revitalize not only a great historic asset in the community but also help revitalize a designated Village Center in the heart of our region.
This highly visible project will directly benefit the Lyndon community and provide a benefit to tourism in our region. Importantly, the historic significance of this bridge is that it is one of only two remaining Paddleford Truss type bridges in Vermont, the other being a much smaller and privately owned bridge in Irasburg, and the Sanborn is the longest single-span Paddleford (118') in Vermont, New Hampshire, and Maine.

As a part of our work at the Northeastern Vermont Development Association (NVDA) we support communities interested in revitalizing historic assets and maintaining public infrastructure. This important project furthers the following goal from the 2018 *Regional Plan for the Northeast Kingdom*:

"*Significant historic, cultural, and scenic resources in the region should be identified and preserved.*"

The Sanborn Covered Bridge Revitalization Project is also consistent with the Northern Vermont Economic Development District CEDS 2021-2025 because it will: build economic resilience in the community; improve infrastructure; and promote the quality of life in a rural community.

The Sanborn Covered Bridge project will provide a great public space for locals and tourists, thereby supporting existing and emerging small businesses in Lyndon and beyond and ensure the longevity of a valuable historic and cultural resource. The project will culminate with a public resource that can generate tourist traffic that will ripple into Lyndon's downtown and into surrounding communities such as Burke, St. Johnsbury, Kirby, Sutton, and Wheelock. NVDA strongly encourages your program's support.

Sincerely,

David Snedeker

David Snedeker
Executive Director

Town of Lyndon

P.O. Box 167
Lyndonville, VT 05851
(802) 626-5834 Office • (802) 626-1265 Fax

Justin M. Smith
Municipal Administrator
justin@lyndonvt.org

May 5, 2023

Peter Pochop
Bicycle and Pedestrian Program
Vermont Agency of Transportation
peter.pochop@vermont.gov

Dear Peter,

The Town of Lyndon is the "Covered Bridge Capital of the NEK" with five historic covered bridges. The covered bridges have been and continue to be a part of our local identity and a major attraction for visitors to the region. It is our goal to improve, maintain, and enhance the covered bridges for our community. Our current emphasis is on the Sanborn Covered Bridge, one of only two remaining Paddleford Truss type bridges in Vermont.

Our Envision Lyndon Municipal Plan (2020) specifically notes the goal to "preserve, restore, and continue the use of historic structures and sites, such as the Shores Museum and Lyndon's covered bridges" (Objective 8.1, p.68). We have small projects occurring at all the bridge sites. Investing in the restoration and revitalization of the Sanborn Covered Bridge has taken priority, in part due to its urgent need for repairs, and because of its historical significance, highly visible location, and ability to connect to outdoor recreation trails and downtown Lyndonville.

The Sanborn Covered Bridge Revitalization Project is a sizeable project for the small town like Lyndon to undertake. Building off an initial bridge assessment conducted by covered bridge specialist, Jan Lewandoski, the project requires over $1.5M in investment. The Town has been hard at work securing grant funding, building a local capital campaign, and seeking support from foundations to make this project possible.

We acknowledge that the 20% match required for the Bicycle and Pedestrian Program grant. This match will be provided by the Town's FY2024 general budget, with a line item for grant matches of $30,000 which is the typical amount reserved for grant matches, and $45,000 of the required match being provided by a secured commitment from the Freeman Foundation. The funding award letter from The Freeman Foundation is attached to this letter for your reference.

The Town is committed to the future maintenance of the covered bridges. We repair bridges post collision, have a restricted fund to support maintenance and upkeep projects, and work closely with supporting organizations.

Thank you for reviewing the Sanborn Covered Bridge Revitalization project application to the 2023 Federal Aid Bicycle and Pedestrian Grant Program. We hope VTrans will be among the supporters of this project.

Sincerely,

Justin M. Smith
Municipal Administrator
Town of Lyndon

Preservation Trust of Vermont

104 Church Street, Suite 21
Burlington, VT 05401-4449
802.658.6647 | www.ptvermont.org
ESTABLISHED 1980

June 20, 2022

Town of Lyndon
Attn: Nicole Gratton, Planning Director
PO Box 167
Lyndonville, VT 05851

Dear Nicole:

On behalf of the Preservation Trust of Vermont and the Freeman Foundation, I am pleased to inform you that the town of Lyndon has been awarded a $100,000 for the Sanborn Covered Bridge project. Its purpose is to assist with the rehabilitation of the bridge. Before work is underway, please be in touch with us to review plans and to discuss grant payments.

Enclosed is a Grant Agreement that describes the grant payment process and the Grantees' responsibilities. Please read the Agreement, and if you are in agreement with the terms, please sign where indicated and return the original to me in the enclosed envelope. A copy of the Grant Agreement is also enclosed for your records. We have also enclosed a W-9 form, which will need to be signed and returned with the grant agreement. The Secretary of the Interior's Standards for Rehabilitation and Preservation are enclosed. For more detailed information you can access the entire document at:
https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf

Please remember that any publicity about your project should include recognition of the Freeman Foundation and Preservation Trust of Vermont. We suggest using the credit line: ***This project was assisted by a Preservation Grant, made possible by a partnership between the Freeman Foundation and the Preservation Trust of Vermont.***

I am very pleased that we are able to assist your project. We are grateful to the Freeman Foundation for making this program possible.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Ben Doyle
President

Enclosures: Grant agreement, Sec'y. of Interior Standards, 10 Tips for a Historic Preservation Project, W-9 Form

Hi Nicole,
I am writing to acknowledge receipt of your email informing me of the project. I have cc'd Shauna Clifford and Logan Perron for their awareness as well. If you need assistance for any work within our ROW or with the project itself, please reach out to Shauna and Logan. They would be glad to help you.

Thanks,
-Mike

Michael Booth | District Transportation Administrator
District Maintenance and Fleet Division
District 7 – St. Johnsbury
District 9 – Derby
(802) 498-8419 (Cell)
michael.booth@vermont.gov

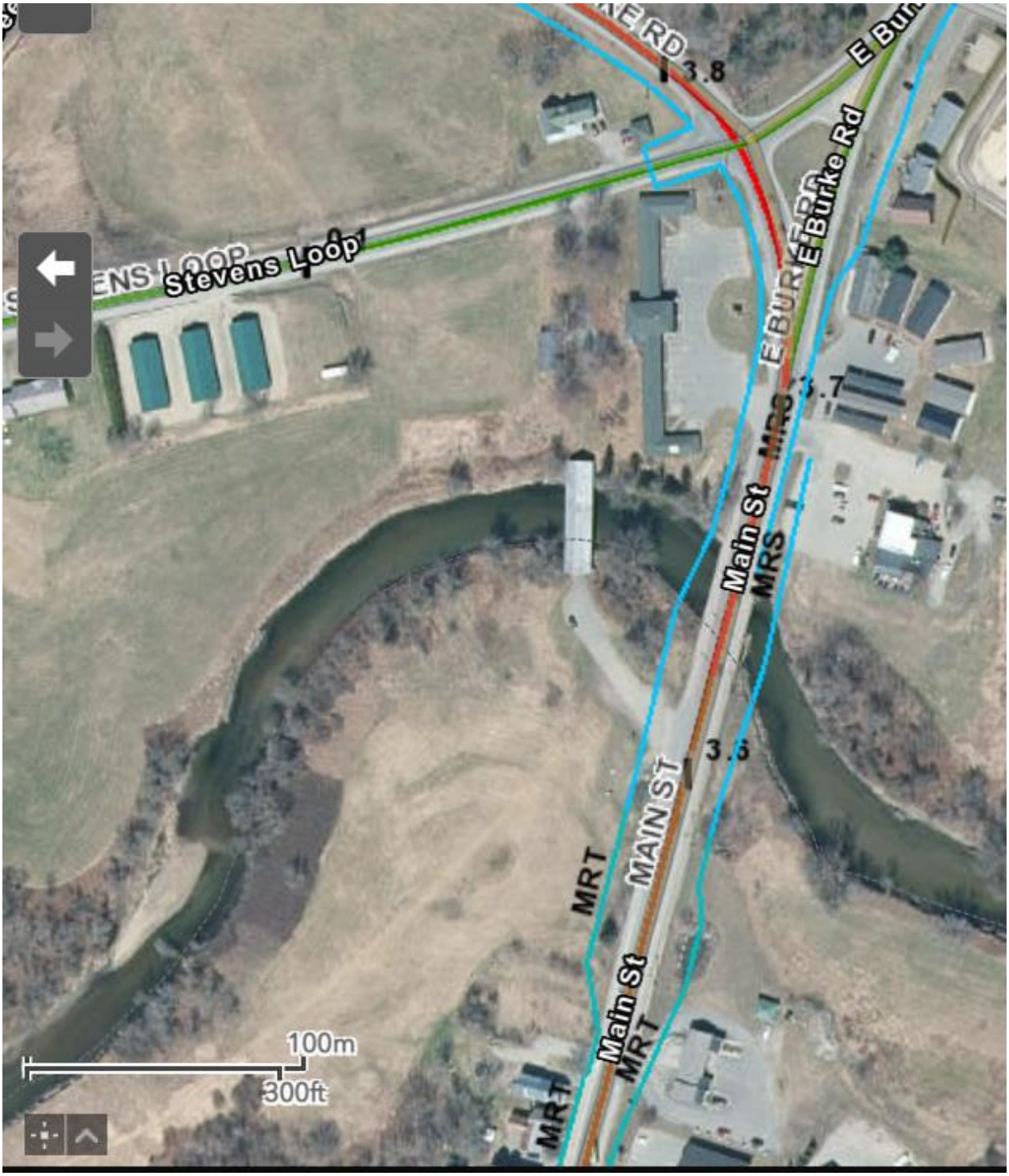
http://vtrans.vermont.gov
VERMONT
AGENCY OF TRANSPORTATION

From: Planning <planning@lyndonvt.org>
Sent: Monday, December 12, 2022 2:33 PM
To: Booth, Michael <Michael.Booth@vermont.gov>
Subject: RE: Town of Lyndon, project

Hi Michael,

The Town of Lyndon is seeking a Transportation Alternative Program grant for the rehabilitation of the Sanborn Covered Bridge in Lyndonville. The TAP application requires proof of notification to the VTrans District Transportation Administrator. The project is primarily on a municipally managed portion of Route 5; however, I was advised that if temporary construction signage might be needed in the state right-of-way during the project, that I should contact you.

I have attached a map to show where the project is located, which you will see is right at the point of change between municipal and state managed roadway.



Project Description: The Sanborn Covered Bridge sits parallel to Route 5 in Lyndonville VT and is not a part of the transportation network for vehicles. The project is seeking to restore the historic covered bridge, create a riverfront park space on the municipally owned lot on the south end of the bridge, and preserve the function of the bridge as a trail connector for bicyclists, pedestrians, and winter snowmobilers. The project will include the reframing and retrussing of the bridge, the building of new bridge abutments, a restored floor and roofing system, and new

sidewalls. Involvement with the State Right-of-Way should be limited to temporary construction signage, as the major point of access to the site is off of Main Street on municipally managed

If you could write back that you acknowledge this potential project, it is a required part of the application. Applications are due Wednesday 12/14/22. I apologize for the short notice. If you have any questions, please reach out. Thank you!

Nicole Gratton
Planning Director
Town of Lyndon
(802)626-3910
planning@lyndonvt.org

ReVamp the 'Ville
#LYNVT

Village Walks & Talks

Monday March 28
Lyndonville

What do you LOVE about living in the 'Ville? What would make the village better for you? Come share your ideas!

Join a neighborhood chat or a downtown walk and enjoy a sweet treat. All welcome!

TALKS

10:00-11:00 AM
Darling Inn Meal Site

1:00-2:00 PM
Cobleigh Public Library

4:00-5:00 PM
Olivia Place Community Room

WALK

5:15-6:30 PM

Meet at Bandstand Park gazebo. Rain, shine, or snow!

Wear comfortable shoes and warm clothing. We will walk down Depot street and back (about 1 mile).

This event is part of Revamp the 'Ville -- a community-driven planning process for downtown Lyndonville. Get more information at tinyurl.com/RevamptheVille. Contact Annie McLean, Project Manager, 802-626-5785

The full report, with images and additional pages, can be found at:
www.lyndonvt.org/sanborn-covered-bridge

Jan Lewandoski
92 Old Pasture Rd.
Greensboro Bend , Vermont
05842

802-533-2561, 802-274-4318
janlewandoski@gmail.com

December 4, 2021

The Sanborn Covered Bridge

Lyndonville, Vermont

A Preservation Trust of Vermont

Technical Assistance Survey

The Sanborn Bridge is a covered Paddleford Truss built in 1869 across the Passumpsic River in Lyndonville. In 1959 it was moved by the noted covered bridge restorer Milton Graton to its current location across the West Branch of the Passumpsic river at the north edge of Town. The total length of the truss is 118 ft. and the clear unsupported span between 100 and 108 ft., depending upon how it is measured.

The Paddleford Truss was designed by Peter Paddleford of Littleton, NH, probably around 1846. It was never patented but was in wide use during the 2nd half of the 19th century in Northeastern Vermont, northern New Hampshire and Western Maine. The Paddleford is a form of Multiple kingpost truss with the main braces in compression and any individual counterbrace acting in tension by means of their crossing, and being joined to, both top and bottom chords, two sequential posts and their two main braces. The main braces and counterbraces run diagonally opposite each other. (see sketch)

The Sanborn trusses are each composed of 14 panels, 7 ft. 7 in. center to center, with two 6 ft. panels which are over the abutments. These trusses have sophisticated engineering refinements such as an increase in size of the columns from the center to the ends, beginning at 7 ½ x 9 towards the center and increasing to 9 ½ x 9 at the abutments. The main braces also increase in size from midspan to the abutments, joining the columns in reflecting the increased load they accumulate over the distance. The counterbraces remain as 4 x 6's everywhere. The top chord, clasping the column is composed of two 3 ½ x 10's on in the inside and a single 5 x 10 on the exterior. These are joined to each other occasionally by 1 ½ inch wooden pins and shoulder into the posts. The bottom chord is composed of pairs of 3 ½ x 12 inch timbers shouldered into the columns on either side. The bottom chord, since it is in tension (as opposed to mostly compression in the top chord) has both pins and wooden shear blocks joining each lamina and the pairs of lamina.

The floor system of the bridge is 18 ft. wide between the trusses, producing a double lane bridge and the possibility of a lot of live load in the past as well as a lot of self weight. The floor system is one layer of 3 inch deck plank supported by variously 3, 4 and 6 x 12 inch joists no more than one foot apart. There is no underfloor diagonal bracing and likely no need for any as the spiking of the floor to that many joists produces a rather rigid diaphragm. The joists are lodged right on top of the bottom chord.

The overhead bracing of the truss is far better than that of most covered bridges. 8x8 x 20 ft. tie beams are tenoned and pinned to the top of each post. The rafters in turn are birds mouthed and tenoned onto the extended tie beam ends. These rafters continue to carry 5 ft. strutted and cantilevered eaves and serve to add all this roof weight and stiffness to the upper level of the two trusses. Over the roadway there are long crossing horizontal diagonal braces tenoned into the ties as well as knee braces. These overhead and floor systems have kept the Sanborn in a relatively straight line, in spite of the fact that both trusses are very sagged and the downstream bottom chord was broken to discontinuity for a number of years until repaired recently.

Where the bridge hits the abutments it is supported on 12 x 12 cantilevered bed timbers between the bottom chords and a concrete beam. The bed timbers are both sacrificial, i.e. to themselves rot rather than the bottom chord, and to spread the load and slightly reduce the span.

The abutments are rather good and very old fieldstone masonry with a less good concrete beam poured on top, suffering from ground and drainage problems.

The upstream side of the Sanborn Bridge carries a cantilevered walkway that came with it from its previous location. It is supported on joists that lodge atop the bottom chord and attach to the roadway joists.

In spite of the many excellences of its construction, the bridge is imperiled and suffers from certain defects, both as a result of being damaged by ice and debris in the river, and some from its original design.

First: The majority of the column bottoms, as well as the counterbrace extensions, both of which carry the bottom chord in tension, have been either broken off entirely or damaged by ice and debris. These same environmental effects have ground away at the upstream bottom chord and changed its shape and reduced its section. At most locations pairs of 5/8 in. steel rods, dropping from the top chord parallel to columns, are adding crucial assistance to the damaged posts in carrying the bottom chord.

Photographs from the moving of the bridge in 1959 (some in the hands of the Lyndon Historical Society, others in Milton Graton's book **The Last** of the Covered Bridge Builders (1978)) show the bridge with its column bottoms intact and only a bit of sag in the trusses. At its previous location it stood higher above the river.

Secondly: The Sanborn truss was only marginally capable, as built, of supporting its span, the wide roadway and traffic, and the extended roof and walkway. The shouldering of the main braces 3 inches into the columns, top and bottom, produced a weakness resulting in the first 2 or 3, more heavily loaded, columns at each truss end to distort and break under the load delivered by the main braces. A bridge of this span and weight would have profited from even larger columns, check bracing behind the columns, or a double posted design. In addition, the bottom chords are suffering localized bending in the areas of the overloaded posts.

A further problem is the bad location of the current bearing of the bottom chords on the abutments, putting maximum loads in the midspan of the panels rather than right behind a column position.

The Bridge looked to be doing reasonably well in 1959, flat or with slightly negative camber, but probably couldn't accommodate any loss of structural integrity such as the post bottoms and failures in the bottom chord.

The Sanborn Bridge is roofed in old, galvanized sheet metal on purlins, not obviously leaking.

The sidewall boarding, both now and in 1959, is only breast height. The 5 ft. overhanging eaves are expected to shelter the trusses from moisture.

The Sanborn is an ambitious and elegant example of the Paddleford Truss, but is endangered by both being too low to the river and its own structural problems. If not for the emergency stabilization carried out by Tim Andrews and the National Society for the Preservation of Covered Bridges in 2014-2015, it may have collapsed. It is one of only two historic Paddlefords left in Vermont and a handful elsewhere.

Sanborn Covered Bridge: Maintenance and Restoration

1. Framing: The Trusses: The trusses are what enable the bridge to span the Passumpsic River and are thus our major concern. Even with damage from ice, flooding, and water infiltration through the side walls and roadway runoff at both ends, the Sanborn has managed to sustain its span for 152 years. However, more than just needing repairs, this Bridge suffers from a condition common to many long span trusses, i.e. the progressive distortion and deterioration (even without wood rot) of the heavily loaded columns and chord members as its accumulated load approaches the abutment. This problem was noted by Ithiel Town (designer of the Town Lattice Truss) in the early 19th century, and was recognized by the builders of the Sanborn when the chose to increase both column and main brace dimensions progressively from mid span to each end.

In addition to the deterioration by load described above, there is the fact that almost every upstream column and counter brace, and many of those downstream have been broken by ice and flood debris in the past. The

downstream chord had at some point rotted completely through and was repaired well, but with temporary intent, in 2014-15. The upstream chord has been ground by ice to an odd, reduced shape. All of this suggests that the Sanborn Bridge needs to be removed from the river, and the trusses dismantled and rebuilt and even strengthened.

There are different possible ways to move the bridge to dry land where it can be worked upon:

One is the method the Gratons used in 1959; building a false bridge under the bridge and rolling it off the river. This might involve a couple of piers in the water and large steel beams spanning between them and the hope that no high water occurs while carrying this out.

A second involves the use of a very large crane to pick the bridge as one and remove it. This is possible but size of the crane will have to be immense due to the long reach, and the rigging will be complicated due to the weakness of parts of the bridge.

A third way is to remove the roof system, which is in good condition and reusable as is, including the overhead tie beams, possibly in two or three segments, by crane. Then, if the floor system of the bridge is supported briefly from at 2 or 3 points, the rest of the bridge can be dismantled and taken away piece by piece, or in segments, to be replaced or restored.

Following these or some other method of removal and dismantling, the trusses can be rebuilt using even larger posts at the first three positions out from each abutment. The current posts, reaching a maximum size of 9 ½ x 9 inches at the first post past the abutment might be changed to 12 x 9 inches and made of a stronger species such as hardwood or Southern Yellow Pine or Douglas Fir. In addition, the bottom chords, at least for their first thirds beyond the abutment can be increased in size to 16 inch deep material in as long lengths as possible. This deeper chord is accommodated by the fact that most of the columns and counterbraces are being changed anyway. A effective scheme of shear blocking, pinning, bolting and dapping the lamina at the columns can be devised.

The top chord material can mostly be reused at size unless some deterioration is discovered while dismantling. The excellent roof system should be reusable as well.

The rebuilt trusses can be stood up when completed, engaged with a floor system, have the roof system put back on, and the entire ensemble boarded and roofed on dry land, then repositioned over the river again by some difficult and expensive means.

2. **Abutments and Bed Timbers:** The stone and moreso the concrete abutments are in poor condition and need to be reconfigured to get the bridge higher above the river. If the Bridge were lifted 2 or 3 feet higher a number of purposes would be served.

First, ice and debris would almost never hit it because any flooding would have spread into the surrounding fields by that point.

Secondly it would make possible the cantilevering of a bed timber, or concrete cantilever, approximately 2 ft. deep that would cause the trusses to spring from immediately behind the first major column, and thus avoid bending and damaging the bottom chord.

The choice of raising the bridge and cantilevering additional support from the abutment will need the consultation and approval of State of Vermont flood plain management officials. However, the act of lifting the bridge significantly higher above the river should render this less difficult.

A side effect of elevating the bridge above the flood is that it will have to be approached by more of a ramp than is currently present for snowmobile, bike and pedestrian access. These ramps will probably need open spandrels underneath to allow flood waters to pass under rather than destroying them.

The abutments to the restored Sanborn should be new due to the poor condition of those existing. They can be made of concrete, fieldstone or large granite blocks. Even though stone foundations and bridge abutments have successfully performed for 1000's of years, far outperforming concrete, you will be fortunate to find any modern engineer willing to specify such a beautiful construction.

3. Floor System: It is hard to understand why a floor system of relatively small joists of variable quality(and spanning 18 ft.) spaced so closely, at 12 inches o.c.) would be built, but the answer may be that it wasn't built that way. Rather, smallish joists were used to maintain headroom on the bridge and just more were added all the time as vehicle loads increased. The

original floor system may have been completely different. If tall vehicles are never to use the Bridge again, a new floor system can be composed of larger joists spaced as wide as 3 ft. apart with a 3 or 4 inch plank floor, and a running surface on top for snowmobiles.

4.Roofing: The roof system composed of tie beams, wind and lateral bracing, rafters, purlins and struts is in good condition except possibly at the portals. A metal roof is the lightest weight covering and sheds snow loads the best and would be a good choice. The roof is not boarded but is just affixed to the purlins.

5. **Sidewall Boarding:** The sidewalls of the Sanborn are only boarded to slightly above waist height. This affords nice views and is no real problem because of the extensive roof overhang. This boarding can be two layers of vertical softwood boards with an outward sloping rail on top.

6. Sidewalk: If the Bridge is not going to be used for vehicles other than snow machines and bicycles, the sidewalk can be removed, although the roof overhang should be maintained, and the Bridge boarded to half height along the truss.

December 4, 2021

Sanborn Covered Bridge: **Cost Estimates**

1. Framing: The Trusses: Remove the Bridge from the river. Dismantle everything but the roof system. Rebuild the trusses with enhanced capacity at certain points. Use the same style of joinery and connectors as in the original. Replace across the river.

Cost: $950,000

2. Abutments and Bed Timbers: Rebuild the abutments higher. Cantilever large dimension bed timbers. Construct access ramps.

Cost: $380,000

3. Floor System: 5 x 14 or similar capacity joists 3 ft. o.c with 4 inch plank flooring.

Cost: $110,000

4. Roofing: New galvanized steel.

Cost: $40,000

5. Sidewall Boarding: 2 layers of waist high 1 inch boards:

Cost: $15,000

6. Sidewalk: Remove at little cost beyond disposal.

Sanborn Covered Bridge, Lyndonville, Vt. from
Downstream