



Hinsdale, NH – Brattleboro, VT Connecticut River Bridge Project

Project Advisory Committee Meeting #4

**230 Main Street
Brattleboro, VT**

MINUTES

June 12, 2017

Project Advisory Committee: Peter Elwell (Chair), *Town Manager, Town of Brattleboro, VT*; Michael Abbott, *Representative, New Hampshire State Legislature*; Jen Austin, *The Downtown Brattleboro Alliance*; Mollie Burke, *Representative, Vermont State Legislature*; Jill Collins, *Town Administrator, Town of Hinsdale*; Steve Diorio, *Board of Selectmen, Town of Hinsdale, NH*; Jay Ebbighausen, *Town of Hinsdale, NH, Former Selectman*; John Gomarlo, *Member/Resident, Southwest Region Planning Commission (SWRPC) Transportation Advisory Committee/Town of Winchester, NH*; Bob Harcke, *President, Hinsdale Commercial and Industrial Development Commission*; Kathryn Lynch, *Community Development Coordinator, Town of Hinsdale*; Fred Moriarty, *Board of Trustees Treasurer, Brattleboro Museum and Art Center*; Kate O'Conner, *Brattleboro Area Chamber of Commerce*; Lew Sorenson, *Member/Resident, Windham Regional Commission (WRC) Transportation Committee/Town of Dummerston, VT*

Project Advisory Committee Lead Team: Dan Landry, *Vermont Agency of Transportation (VTTrans)*; Don Lyford, *New Hampshire Department of Transportation (NHDOT)*; J. B. Mack, *SWRPC*; Erica Roper, *WRC*; Bill Saffian, *NHDOT*

Guests: Steve Barrett, *Brattleboro Department of Public Works*; Joshua Carnes, *Brattleboro Department of Public Works*; Kevin O'Conner, *Brattleboro Reformer*; Michael Fifield, *Barrows and Fisher Oil Company*

I. Welcome and Introductions

Chair Elwell called the meeting to order at 2:03 p.m. and all attendees introduced themselves.

II. Approval of Minutes of April 24, 2017 Meeting

The minutes of April 24, 2017 were approved by unanimous vote.

III. Bridge Design

Bill Saffian announced that today the Committee will discuss pier shapes, pier surface treatments and bridge bumpouts. Bill projected a Computer-aided design (CAD) drawing of the proposed Hinsdale-Brattleboro Bridge on the wall to show three dimensional views of different pier and bumpout designs. He referenced a handout (see attached) that had visuals and photo examples showing pier shapes, pier surface treatments and cost comparisons by pier shape. Bill discussed the first page of the handout which shows the two-column and modified v pier shape with dry laid stone (1a and 1b in the handout). He noted that the dry laid stone has the appearance of having various stone sizes. Bill stated that both pier designs are designed to break up river ice, but noted that the two-column design would require a special base that came to a point

on the upstream side of each pier. Peter Elwell asked if the CAD model shows the depth of the water levels surrounding the bridge, but Bill responded that there is no representation of the underground water or soil levels in the model yet. Kathryn Lynch asked if the footing of the two-column pier will be visible above the water. Bill noted that the footing would be underwater. Lew Sorenson asked how high the icebreaking feature of the bridge would need to be. Bill said that the NHDOT needs to study more historical records, but the ice breaker will probably need to be at least 3 feet above the water.

Bill Saffian presented the second set of options, the two-column with solid infill wall with rough texture and the modified v shape with rough texture (2a and 2b in handout). Bill noted that the photo example in the handout was not the best, but it shows a close up on the stones. The rough texture design shows stippled concrete with each faux stone measuring roughly 1 inch in diameter. Lew Sorenson asked if the total area of the form liner can be wider than what's shown in the pictures. Bill responded that it could be wider.

Bill Saffian presented the third option, the solid wall pier with rustication (3 in the handout). Unlike the other dry laid stone, the pattern for this option has the appearance of uniform size blocks. Bill noted that there is steel armor on the upstream side. J.B. Mack asked how large the armor extended from the point for this option and Bill responded that it extends 8 inches on both sides of the pier from the upstream point.

Bill Saffian turned the Committee's attention to the fourth page of the handout which shows the cost of each option. Bill noted that the concrete cost accounts for the volume of concrete that the company anticipates to use for each pier design. Bill discussed the three components of the bridge pier which include the pier stem, the pier protection feature and the pier footing. He explained that NHDOT does not yet know what the exact footing size will be for any design, however the same offset dimensions from face of pier stem to face of pier protection element to face of pier footing were used to determine the estimated size for all three pier options. This allows a relative comparison of volume of concrete needed for each pier type. He also noted that the texture of the pier does not influence the overall cost of the pier. The difference in cost between each pier design is driven by the costs to form the pier. Bill explained that the costs listed in the handout are not the overall final cost of the substructure elements but are simply estimates to provide a basis of comparison between the different options and shapes.

Bill Saffian noted that the modified v pier does not need pier protection, however the pier stem shape is more expensive due to the form work needed to for the structure. Bill noted that the solid wall pier option is more expensive due to the overall size of the structure and the amount of concrete needed to develop that option. He noted that NHDOT does not yet know the size of the foundation of the structure yet which will mainly depend on the riverbed soil conditions. When the subsurface analysis is completed, they will be able to determine how big the footings need to be and whether or not the footings will require piles. Steve Diorio asked if there is a difference in stability and durability in the three options that were presented today. Bill responded that there is no difference in stability and durability. J.B. Mack asked if there is a timeframe for determining the design for the pier footings. Bill responded that they will be getting the information by August but that is not when they will have the overall preliminary design. By next fall the preliminary design should be finalized. Bill noted that the expense of the pilings (if needed) will be the most expensive component. There is only a cost difference of around 3% between the various pier shapes and form liner options which is not a lot with regards to the overall cost of the bridge project. Peter Elwell asked about the amount of steel within each option and Bill responded that the design of the pier determines the amount of steel reinforcing required. However, the difference in the amount of steel required for the pier types will be minimal and that it is the concrete that constitutes the bulk of each pier's material costs. This is why the concrete is used as the basis of comparison. Bill pointed out that there will be a 9 foot height difference between the shortest pier and the tallest pier. The tallest pier will be on the center island. Bill also noted that the difference between the pier heights will not be noticeable or visible due to the fact that much of the change in height will be underwater and underground.

Bill Saffian showed the committee a visual representation of the bridge from the Vermont and New Hampshire side. Erica Roper asked if a footing underneath the water would cause drafting issues for boats along the river and Bill noted that the footing elements would be designed to be deep enough that it should not be an issue. Mike Fifield noted that the portion of the water below the bridge is a no wave zone so boaters should be boating under the bridge slowly anyway. Bill said that if this becomes an issue, the footing could be elevated to make it visible so that the boaters are able to see it when they boat by the footings. Don Lyford asked if the footings are typically 3 feet under the water. Bill responded that Don was correct and that it should be enough of a draft for a relatively small boat to safely cross. Bill noted that once the committee decides on the shape design, changes like the footing depth can still be made within the selected option. Fred Moriarty asked if NHDOT has information about changes to the water level created by the Vernon Dam. Bill said he was not sure if NHDOT had access to that information, but would look into it. Peter Elwell noted that the dam has new data from the Federal Energy Regulatory Commission regarding water levels and that the committee could get that for Bill if needed.

Bob Harcke asked that from an economic stand point, would the two column structure be cheaper no matter what the committee decides. Bill responded that without knowing the exact footing level and design, it would be hard to tell for certain but it is likely to be a cheaper option. Peter Elwell asked if there needs to be a choice made today and Bill said that the sooner a decision is made, the better. Kathryn Lynch said that the committee needs to decide on a design that is best for the region due to the amount of ice and not just the cheapest option. She said that the committee should make a choice today because they are all well informed of the options.

Peter Elwell asked the committee if anyone had any comments regarding which option they like the most. There was consensus that the committee would only choose from options 1 and 2. The committee discussed the pros and cons of each option while Bill Saffian showed the committee a visual of the two options with the dry laid stone and rough texture treatments. Michael Abbott noted that the detail of each pier will not be that closely looked at due to how far away cars and pedestrians will be. Peter Elwell asked if the ice levels will reach above the base and damage the sides of the pier. Bill said the modified v shape design would have armor on both sides of the structure and also noted that although the water level may fluctuate, the dam has the capability to maintain the water level under a maximum preferred level. Bill noted that if the protection needs to be altered due to the river's water or ice levels in the future (after construction), there could be reconstruction that would solve any issues, but it would cost money.

Motion: To recommend the two-column pier design option.

Motion made by Mike Abbott. Seconded by Bob Harcke. Motion approved unanimously.

The committee discussed the infill design of the two-column option. Lew Sorenson indicated he favored the look of the I-91 bridge in Brattleboro which has no discernable repetition in its texture. Steve Diorio asked if there was a major cost difference between the dry laid stone and rough texture. Bill Saffian said the cost difference would be negligible.

Motion: To recommend that the two-column pier design have an infill wall with dry laid stone form.

Motion by Steve Diorio. Seconded by Jay Ebbighausen. Motion approved unanimously.

Bill Saffian discussed bumpout options for the bridge. He explained that the bumpout designs are only connected to the deck and not the piers. If a person is standing on the bumpout, they would not be able to see the pier even if the bumpout is located right above the pier. He stated that having a bumpout in the middle of the river would allow for a better overall view. He explained that any costs for the bumpouts would be for the construction company to support the wet concrete before it dries but the cost would be

negligible compared to the bridge's overall cost. Bill introduced three options for the bumpout locations including 1) having one bumpout in the middle of the main river channel, 2) two bumpouts with one each in the middle of the main and side river channels or 3) three bumpouts with one bumpout aligning roughly with the banks of the main channel and one approximately at mid span of the side channel and equally spaced between them. Bill noted that the bumpouts have enough space to hold around 2-3 people comfortably and would stick out roughly four feet at a width of five feet. J.B. Mack stated that the Committee may want to think about options for creating interpretive signage, maps and/or photography for the bumpouts, which might determine the best location for each bumpout. He mentioned that there are some great old renderings and photography showing former uses of Hinsdale Island as an example. Bill noted that this decision on the number and location of bumpouts can be made at another meeting. Peter Elwell agreed and mentioned that the committee members should take time to think on it and decide at the next meeting.

Lew Sorenson asked if NHDOT has any new information it can present on the left turn lanes and vehicle stacking on the Vermont side of the bridge. Bill Saffian noted that by extending the widened part of the bridge on the Vermont side further toward NH, it would possibly eliminate one of the bumpout locations if a bumpout is placed over the VT bank of the main channel. Lew noted the importance of traffic counts for the left turning lane so the committee can decide what should be done. Lew asked Bill to research traffic counts to better help the committee decide what the better option would be. Peter Elwell asked Bill if NHDOT had looked into creating a sidewalk and crosswalk to the south side of the Vermont side of the bridge. Bill noted that NHDOT will discuss this more with VTrans. Fred Moriarty noted that the building next to the bridge will be losing a large portion of their parking spots and that building is an important asset in Brattleboro. Fred asked Bill to consider this in the design process. Bill noted that the current road design takes the least amount of parking spots possible.

IV. Next Meeting

Don Lyford said that the next meeting will be sometime in August and will be scheduled by an online meeting poll.

V. Public Comment

There were no public comments.

VI. Adjourn

The meeting adjourned at 3:50 p.m.

Respectfully submitted,

Ali Gilleran
Office Support