

New Hampshire Department of Transportation
BUREAU OF BRIDGE DESIGN
 Office Meeting Minutes - October 25, 2018

In Attendance (X):

<u>Administration</u>		<u>Consultant Section</u>			<u>In-House Design</u>			
X	Bob Landry	LRL	X	Joe Adams	JCA	X	David Scott	DLS
	Lynn Paquette	LP	X	Bob Juliano	RAJ	X	Bill Saffian	WPS
			X	Mike Licciardi	MGL	X	Jason Tremblay	JAT
			X	John Sargent	JAS	X	Tony Weatherbee	ANW
						X	Sue Guptill	SMG
						X	Aaron Janssen	ACJ
						X	Pete Parenteau	PJP
			X	Nick Goulas	NBG	X	Angela Hubbard	ABH
			X	John Poisson	JTP	X	Chelsea Noyes	CKN
			X	Laith Qurreh	LOQ		Kevin Daigle	KFD
						X	Phil Brogan	PAB
						X	Mark Wagner	MGW
			X	Jerry Zoller	JSZ	X	Jackie Hozza	JEH

Trainees

Guests

Existing Br Section

Items: DLS presentation

1. From LRL's staff meeting, there was discussion about allowing participation in non-DOT sponsored professional events in which your time will be paid by NHDOT but registration will be paid by the staff. An example would be an ASCE breakfast. When details are finalized, it is anticipated that the employee will use a work code of #904.
2. David mentioned that at the next staff meeting he would like to discuss horizontal steel requirements in substructures and to focus on the increases of the horizontal steel required from Section 5.10.8, as pointed out by MGL. ABH mentioned that the calculations have changed and that she will look into it more.
3. NBG sent an email Thursday, October 18, 2018 to everyone regarding a bridge in Warner carrying NH 103 over I-89 SB and the Warner River. His purpose was to dramatically illustrate the concentrated salt-related paint deterioration on the steel beams over the Interstate versus the beams in the adjacent span over the river. ABH suggested that the designer should talk to the design chief about the use of weathering steel and the tunnel effect at such locations. She also suggested that we should discuss it more and change how we look at it using criteria, such as height over water or height over the Interstate. JSZ referenced previous discussions about coating bridges over the interstate due to exposure to air-borne salt-laden road salts. [See Appendix (attached) and also pages 5-7 of BIOCC minutes at S:\Bridge-Design\ADMIN\BIOCC\2016-April 18-BIOCC Meeting Minutes.doc.]
4. DLS mentioned that there will be a group to discuss cost estimates for FOPIS to provide consistency for bridge driven projects. Should it be the Total Project cost (with or without CE), or bridge items only as determined by ProMIS and/or other means. WPS has started a spreadsheet for this calculation.
5. ACJ has the ability to set up Webex meetings for conference calls. It provides the ability to share a computer display with all participants. Also, the camera in the large Highway Design

Conference Room is not set up for Citrix. If you are traveling and want to view a meeting in that conference room, check the connections on the computer you will be bringing, before you travel. LRL said his computer has the ability to connect via VPN and others can use it if needed.

6. LRL thanked everyone for the input for advertising the FY18 bridge program.
7. JAT discussed that at the Lebanon site for his Statewide Scour project, he was informed that two deer were hit. It was thought that the deer would have crossed underneath the bridge but now that the slope is all stone they aren't using it and crossing the road from above. A one foot wide wildlife "trail" that was picked up by survey was not labeled and was not put back with the stoning of the slope. Further investigation into the matter revealed that plan prep had labeled it on the plan but when they went out to do their field check did not see the trail and removed the label from the text drawing. Based on some design constraints (wetland and floodway impacts), the path would not have been recreated even if the label had shown up on the plans.
8. LRL asked if there was any feedback on the Bridge Design Organization Chart that was presented at the last meeting (see previous meeting minutes) for proposed teams structure. He explained his reasoning for the recommended changes and to solicit comments.

Round the Table:

LRL : will be putting out a list of design build projects. If you would like to volunteer to work on one, just ask him.

CKN: mentioned that on the tubs downstairs, she had to rearrange some boxes and has put them on the tubs that we don't use much - mostly #13 and up.

JAT: mentioned that Jim Bowles noted that for a three phase project, the portable lights for the working area in the middle segment should not be placed between the barriers. Rather, they should be located off the travel way, behind the guard rail, and pointed at the barrier.

NBG: remind everyone that bridge inspection reports are located on line and that you do not have to go to the paper files to make copies of them. Other places to look online are at:

- 1) Via the internet at <ftp://pubftp.nh.gov/DOT/Bridge%20Design/inspection/>
- 2) On the network at N:\Databases\B18-BridgeDesign\ACJ\insphoto
- 3) Through Google Earth using the "inspection report" link within each NHDOT bridge point (see Existing Bridge Section with questions).
- 4) Through BIPR, located at N:\Databases\B18-BridgeDesign\BIPR.mdb
 - a. Launch the Access database, select a bridge, and hit the "Inspection Report" button.

Bridge inspection photos can be accessed at:

- 1) N:\Databases\B18-BridgeDesign\BIPR.mdb
 - a. Launch the Access database, select a bridge, and hit the "Individual" or "Report" buttons.

Prepared by: MGW

Distribute draft for comment: 10/25/18

Final Distribution: 10/31/18

APPENDIX

From: Zoller, Jerry

Sent: Thursday, October 25, 2018 5:30 PM

To: Goulas, Nicholas; Saffian, Bill; Landry, Robert; Adams, Joseph; Brogan, Philip; Daigle, Kevin; Guptill, Sue; Hozza, Jacqueline; Janssen, Aaron; Juliano, Robert; Kleiner, Ron; Licciardi, Michael; Noyes, Chelsea; Paquette, Lynn; Parenteau, Pierre; Richardson, Mark; Sargent, John; Scott, David; Tremblay, Jason; Wagner, Mark; Weatherbee, Anthony

Cc: Morrison, Kenneth; Qurreh, Laith; Poisson, John; Hubbard, Angela

Subject: Example of Concentrated Deterioration

Colleagues,

A couple of comments to add to our brief discussion at the Br Design staff meeting today regarding the paint deterioration on the I-89 overpass fascia girder.

1. My photos of the coating condition are available at the following location from a Oct 2017 I-89 bridge survey:
2. [S:\Global\B18-BridgeDesign\azoller\2018 10 25 Warner NH 103 over I-89](#)
3. The NH 103 bridge shows a very distinctive difference in the degree of corrosion between the I-89 overpass and the river overpass, this being Nick's point. It is evident that the steel over I-89 SB receives the chloride-laden overspray focused on the fascia girder. I agree. This is a typical situation that is most evident on many bridges, especially driving into and around Boston.
4. The corresponding NB bridge photos are also shown. For this bridge, since the bridge is on a curve and super-elevated, the low steel is the last girder encountered traveling NB and it has the greatest corrosion, rather than the leading fascia beam. It may be that the distribution of the chloride-laden overspray is an aerodynamic thing with how the tumbling air passes under the bridge, or it may be a function of a leaking deck.
5. That point aside, the observer should be aware of a few other factors involved with the coating.
6. The original bridge coating from 1966 was again painted by Bridge Maintenance in 1987 (after 21 years) and again by Contract in 1992 (after 5 years).
7. A very important point to keep in mind here is that the painting practice at that time was to only remove loose paint. The loose paint areas were prepared with an SP7 brush blast. That means that only visibly loose paint was removed by light blasting. All **visibly intact** coating remained. Then spot bare steel areas were primed, or double primed, and then the entire girder coated with a color topcoat finish. This was the typical practice by spec.
8. The problem with this practice is that the remaining visibly intact original coating would then continue to age and deteriorate over time and the coating eventually delaminate. So the beam would have areas of newer and older, good and bad once again.
9. An examination of the close-up photos illustrate this point, as well as show evidence of original lead-bearing primer, and mill scale (which also contributes to earlier failure).
10. My overall point here is that the painting practice and coating performance of 1987 and 1992 should not be directly comparable to a paint job today. Our spec today is much more stringent for a longer lasting paint performance. All existing coatings and mill scale are removed 100%, the steel is blasted to a SP10 near white condition with a jagged profile for the paint to adhere to, the steel is tested for the presence of chlorides and any found are removed, the steel is painted with three coats of high performance paint, and the fascia receives a fourth coat of high gloss for additional protection. We no longer use vinyl coatings (which Br Maintenance used) or alkyd coatings (which the Contractor used).

I hope this info is helpful.