

ACEC/Maine DOT Bridge Design Subcommittee

MEETING AGENDA

July 14, 2020

Location

Virtual

Time

1:00 PM to 3:00 PM

Purpose of Meeting

2nd Quarter Meeting - 2020

Invitees

- | | |
|---|--------------------------------|
| ★ Jeff Folsom, MaineDOT | ★ Jason Gallant, HDR |
| ★ Leanne Timberlake, MaineDOT | ★ Jenn MacGregor, Kleinfelder |
| ★ Garrett Gustafson, MaineDOT | ★ Jaime French, Fuss & O'Neill |
| ★ Laura Krusinski, MaineDOT | ★ Adam Stockin, WSP |
| <input type="checkbox"/> Kathy Parlin, MaineDOT | ★ Josh Olund, HNTB |
| <input type="checkbox"/> Ben Foster, MaineDOT | |

AGENDA ITEMS

1. Introductions
 - a. This is Jaime and Jenn's last meeting.
 - b. Adam Stockin will lead the next meeting, which is his last.
 - c. Chris Taylor is scheduled to rotate onto the committee for the next meeting as well as a member from HTA (yet to be determined).

2. Information Dissemination by MaineDOT
 - a. Contracting /workload
 - 2020 work plan update- JSF
 - Starting to determine work plan. Not sure about funding
 - Trying to fund a few projects as PE only to get some engineering started to put on shelf for when construction funds become available
 - INFRA grant
 - Received \$38 million to cover 7 bridges (asked for 8)
 - Partially funded in last year's program. Will fund the rest of the work.
 - BUILD grants
 - Partially funded in last year's program, awaiting decision.
 - Ticonic Bridge between Waterville and Winslow
 - "6 Pack" package

- Grant funding generally covers higher-priority roadways, which decreases attention to lower priority roads.
- Looking at decreasing levels of services on Level 5 and 6 roadways. Start to post and/or close if necessary

b. MaineDOT Staffing Update:

- New Positions
 - New Staff Engineer - Erin Brewer
 - Promotion for Gary Libby technician to Utility Coordination
- Retirements
 - Roger Sproul has retired for the second time
- Other
 - MaineDOT not under a hard hiring freeze. Internal positions are able to move fairly well
- Return to work plan
 - Teleworking is going well, most everybody continues to work at home. At-home workflow will likely continue for the foreseeable future and a gradual return to work will occur later, over a few months.

3. Summary of Designer Meetings (Rich, Garrett)

a. March 11th

- Shallow cover over box culvert projects. Guardrail details provided on Standard Detail 6060(22) is not crash tested. The DOT found a long-span guardrail detail that meets crash level TL- 3 with Timber posts. However, the Highway program shying away from timber posts. One project attached guardrail to the culvert. <https://www.roadsidepooledfund.org/longitudinal-barrier/midwest-guardrail-system-for-long-span-culvert/>
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- Hydraulic Modeling of two streams of different water shed areas and considering concurrent flood frequencies. Guidance from VTrans with table that MaineDOT found helpful to aid in less conservative designs. See attached.
- Longer span box culverts. Some potential issues from fabrication with cracking in the top slab. Possibly not checking the cracking moment and/or deflections. What to look out for in submittals? No change in policy at this point.
- Joe Stillwell fabrication engineer. Shop drawings submittals and calcs. through Doc express. Emails received from InfoTech.
- BDG re-write

b. April 2nd

- BDG – restructuring first couple of chapters

- Chapter 5 can stay intact
- Focus on the beginning and procedures.
- c. April 8th
 - Discussion of challenges working at home.
 - BDG outline – what might be unnecessary and could be eliminated.
- d. May 6th
 - BDG Discussion first couple of chapters – no distinct progress to report.

Discussion Topics

- e. Geotechnical (Laura K.)
 - EDC5 summit was not held due to COVID
 - A second EDC report for Q2 2020 was released
- f. Continuation of previous discussion
 - ACEC NH- Knowledge Share- Adam Stockin
 - NHDOT is working through BDG revisions. Draft of Chapter 7- Superstructure, will be given out to the ACEC bridge subcommittee for review
 - Zoom has been used for Public Meetings
 - a. Jeff mentioned that Maine is using a virtual Public Involvement Management Application (PIMA) that is working out very well. So much so that it may become standard practice in smaller towns.
(www.maine.gov/mdot/vpi)
 - NHDOT has not contacted Maine about the GFRP, though Jeff suggested that they contact him if they are able to get the out of state travel approved.
 - PCI has a new Full-Depth Precast Panel Guideline for download that was created by PCI-New England
 - Updates to Construction Cost Estimating
 - Setup of the AASHTOWare estimating program has hit a snag in IT. MaineDOT will have a test run in house before release to the client. Excited for this web based program but must wait a bit.
 - Update on Publishing Standard notes (Microstation & word version) & MaineDOT CADD standards and deliverables
 - No update. Brian Kittredge is retiring. The new person to fill the role will need to get up to speed and may have different ideas.

- Computer simulation for MASH crash testing - NETC style rail, 3-bar, 4-bar, NH style (steel) transitions and Maine style (concrete) transitions. No concrete barrier will be included in the study. Railings passed simulations.
 - Simulation work is completed. July 16th at 10AM, the principal investigator will present a webinar on his findings.
 - Follow up project NETC 20-1 to go out for RFP. Will evaluate in service performance of that style of rail. Gather information on accidents. 20 plus years between Maine and NH. This combined with the simulation will accomplish rail certification.
 - Engineering council approved determination of crashworthiness for bridge and guardrail. Should be posted to website.
 - Sets the stage for bridge rail as being crash worthy. Detail changes are adding steel rail transitions which have been added to the standard detail book.
 - Retain transition detail, may need to make detail changes
 - Bare Concrete Decks: Class A vs Class LP
 - Committee members have gathered information on practices from several other states. This information will be compiled and provided to the committee.
 - Minnesota and Washington state widely use bare decks
 - Carpet drag (VT used to utilize this practice but has since stopped due to finish issues)
 - Shrinkage testing for MaineDOT- Data on A and LP mixes. Purchased prism molds and testing is starting to show some useful data. Showing more shrinkage than desirable. Will look into mix designs.
 - Integral abutments
 - NHDOT Durham Bunker Creek Bridge Information – Adam gave a brief presentation on the project.
 - Research from UMass Lowell. Looking at skews and how they affect integral abutments
 - Josh mentioned that he is designing a 560' long integral bridge in Vermont. Looking to put instrumentation in this structure
- g. New discussion items
- MaineDOT is considering the use of BlueBeam for reviews
 - 50 licenses on order for Bluebeam. Waiting on IT to make it happen.
 - Hope to use the functionality of BB and establish a protocol for comment response.
- h. Potential future discussion topics
- Research project for integral abutments supporting curved bridges ongoing.

- Micropiles for integral abutments
 - Stonington –
 - Laura and Garrett meeting with Erin Gallant with integral micropile work. Using Plaxus 3D model set up. Taken the field data received from the short pile integral abutment at the Nash Stream bridge to calibrate the FEM model.
 - Follow up looking at threaded coupling and the risk of staying at plastic as opposed to elastic and variations of rock seating in bedrock

i. Training Areas

- Looking into training in a web environment
 - NHI courses may be offered in an interactive web conference
 - Structural stability is a course that Maine is looking into.
 - Jeff to reach out to NHI
 - Rich mentioned a Free 2D Hydraulic Course that will be offered in September: *After this meeting Rich was informed that this course was not receiving any additional registrations.*

4. Subcommittee Rotation for Consultants

- Serving on the committee cannot be extended beyond the current 2 years due the interest

(2-yr rotations for new members joining 2014 and later)

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| b. Jennifer McGregor, Kleinfelder (Geotech Rep) | Q2 2018 thru Q2 2020 |
| c. Jaime French, Fuss & O'Neill | Q2 2018 thru Q2 2020 |
| d. Adam Stockin, WSP | Q4 2018 thru Q3 2020 |
| e. Josh Olund, HNTB | Q2 2019 thru Q1 2021 |
| f. Jason Gallant, HDR | Q1 2020 thru Q4 2021 |

5. The Next Meeting is set for Tuesday, September 22, 2020.