NHDOT / ACEC-NH Bridge Subcommittee Meeting Minutes

September 8, 2017

Invitees: (Check Mark Denotes Attendance)	
Bob Landry, NHDOT ✓ Angela Hubbard, NHDOT ✓ Joe Adams, NHDOT ✓ John Poisson, NHDOT ✓ David Scott, NHDOT ✓ Tony Weatherbee, NHDOT	✓ Tom Kendrick, MJ ✓ Bob Durfee, D&K ✓ Steve Hodgdon, VHB ✓ John Watters, GPI Adam Stockin, WSP ✓ Tom Levins, GM2

Location: NHDOT – Large Highway Design Conference Room Time: 10:00 AM – 11:30 AM

Notes By: S. Hodgdon

Third Quarter Meeting 2017 (1st meeting of this subcommittee)

Introductory Remarks

- All present introduced themselves. Steve Boyington attended the meeting in the absence of Adam Stockin. Bob Landry was unable to attend.
- Tom Kendrick noted that he and Steve Hodgdon had encouraged Bob and the NHDOT to consider having this subcommittee based on the success MaineDOT has had with a similar group. Tom K. and Steve met with Bob, David, and Joe earlier this summer to plan and discuss how to get this group and meetings started.

Establishing Mission/Goals of this subcommittee

- Joe mentioned that Bob Landry had some specific goals that he believes are important for this subcommittee. These are:
    - Improve how the Department provides/shares information with consultants; especially topics related to changes in practice or details that evolve from the In-House section.
    - Enable consultants to provide advice and other information related to innovation, concerns, and other topics aimed to help the Department
- Tom K. noted that a set of sample goals developed for the MaineDOT subcommittee was provided to all as a starting point (see MaineDOT example).

- In general, the group expressed that the core goals described in the Maine example seemed relevant and appropriate for this committee too but some rewording is needed.
    - GOALS OF THE NHDOT/ACEC-NH BRIDGE SUBCOMMITTEE
        - Improve the dissemination of information between the Bureau of Bridge Design and Consultants by conducting regular quarterly meetings and publishing meeting minutes to an accessible website within one month of the meeting date.
        - Foster and identify mutually beneficial training and development opportunities offered by FHWA and other resources.
        - Provide the Department technical or procedural information from the Consultant community to help improve or address issues of interest or need.
- Expectations of the consultant representatives was discussed including:
    - Active participation that includes attendance and contributions to the discussions/topics/needs.
    - Consultants are representing the ACEC community first and foremost and are not here to leverage their firm to a professional advantage.
    - Getting notes done promptly and published quickly.
- The topic of sharing NHDOT In-House notes/meetings was discussed. The Department expressed concern that such notes could be misconstrued by readers as a directive or policy.
    - Tom K. and a few other attendees encouraged the Department to consider sharing as much as possible.
    - Steve suggested that a standard disclaimer could be affixed to all notes.
    - Angela indicated that the Department would likely post related notes separately to the website.

<u>Select NHDOT and Consultant Co-Chairs</u>

- Tom K. explained that the Department chair would typically be responsible for reserving a room for the meetings, reminding attendees of the meeting, and ensuring the Department reviews the draft meeting minutes. The consultant chair works with the note-taker and coordinates with the Department chair on administrative tasks like uploading notes and other information from consultant members. The consultant chair also reminds other consultant members of any action items that they may be responsible for.
- Angela volunteered to be the Department Chair and the group agreed that Tom K. is a good choice for the first consultant chair based on his experience with the MaineDOT subcommittee.

Typical Meeting Agenda

- The group thought the agenda developed for this meeting was good. Perhaps move discussion of staff changes up. Typical agenda would include the following:
    - Introductions
    - Department staff changes (promotions, new-hires, retirements, etc.)
    - Summary of In-House Design section staff meetings/topics of interest
    - Bridge Design Manual progress/updates
    - Bridge Bureau workload and anticipated consultant support needs
    - Potential NHDOT and Consultant training opportunities
    - Subcommittee Membership Rotation Status

Tom Kendrick, Bob Durfee, Bob Landry, Angela Hubbard	Sept. 2017 to Sept. 2019
Steve Hodgdon, John Watters, Joe Adams, John Poisson	Sept. 2017 to Sept. 2020
Adam Stockin, Tom Levins, David Scott, Tony Weatherbee	Sept. 2017 to Sept. 2021

    - Next Meeting Date
- The 10 AM time worked for everyone. This would be the default unless a conflict arises with group or availability of room.

Department updates and staff changes (promotions, new-hires, retirements, etc.)

- Joe mentioned that the Bureau is fully staffed. Recently hired Jacqueline Hozza, a UNH graduate, as a CE-1. She will be in construction and then transitioning In-House sometime this fall. Also, hired Laith Querreh as a CE-1 (although may jump to a CE-3 based on qualifications) in the Existing Bridge Section.
- Bryan Lynch retired. Nancy Mayville also retired but is working for the Department part-time. Nancy may discontinue her part-time work later this year.
- Tom K. asked if there has been any progress on filling the previous position that Steve Liakos held. Joe was not sure. There was discussion at the Department of making this role part of a full-time PM position.
- The Bureau of Bridge Design is now involving entire office in reviewing plans/proposals. As an example, Tony Weatherbee is helping Joe Adams review the Claremont 27691 proposals.
- Angela noted that the Department website has been setup for the Committee to disseminate information. The website includes the minutes from the planning meeting in June and In-House Meeting Minutes. See the following link:

https://www.nh.gov/dot/org/projectdevelopment/bridgedesign/committees/index.htm

- Angela noted that a memorandum would be coming out shortly (October) on the girder haunch detail used between the top beam flange and underside of the concrete deck slab. The recent spall that fell on I-93 came from a section of this haunch concrete that was formed beyond the edges of the flange. Originally, the widened haunch was detailed so that it would obscure remnants of deck form hangers and to allow for more economical form hangers on the top flange.
    - The Department may require precast deck panels over all tier 1 and tier 2 roadways.
    - More information on this detail is being investigated by the Department
        - location along beams (negative moment regions, all, etc.)
    - Some discussion of the group on this issue included:
        - Any potential issues with exterior slab where it is thickened and formed to the beam flange? John P. noted that the interior girder haunches are more difficult to see and inspect and require traffic control, lane closures, and snooper vehicles but the exterior is more visible to inspectors.
        - Does the protective coating process on weathering steel induce tensile stresses in adjacent concrete? Angela noted some diagonal cracks observed (in NY) with weathering steel beams.
        - Is the haunch area subject to difficulties in consolidation when concrete is placed?
        - Having concrete against the side of the flange results in a sharp edge. There could be inherent stress risers here too with abrupt change in section and material.
    - The current standard detail is to construct the haunch to the width of the top flange on interior beams/girders.
- Angela noted that staff from the Department are registering with TRB to take advantage of technical webinars that are available. She encouraged consultants to do this too if they are not already doing so. (See attached research document).
- Joe and Angela explained that there will be new guidance on heat welded barrier membrane. The manufacturer will not honor their warranty unless there is at least 2 inches of pavement over the membrane. Sometimes projects are detailed and/or constructed where traffic is allowed just on the 1" binder course over the membrane. To ensure warranty, consideration of using temporary pavement or the final pavement should be made. Perhaps final paving course placed with temporary pavement marking tape. For all projects, it will be necessary to get the input of the District Construction Engineer on this issue when a project must be phased or open to traffic during construction.
- Joe mentioned that the Department received a Fast Lane grant of $5M for Lancaster-Guildhall.

- Joe noted that the Department is receiving $16M back from FHWA to redistribute to projects. There is a push to get these out by the end of the current federal fiscal year (September 30th). Some money can/will go towards payment on GARVEE bonds.

Summary of In-House Design Section staff meetings

- Angela noted that she would send out or post information to the website.
- There appears to be some confusion on backfill for sign structures based on plans that Angela has seen recently. Typically, just item 206.1 is used as this includes excavation and backfill per the specification. Granular borrow for backfill is not used unless the foundation is in bedrock/ledge and there is not enough granular material to backfill with. Some guidance on this will be added in the Bridge Design Manual and perhaps a "Note to Designer" added to the standard foundation detail sheet. {*After the meeting, Angela found this information is noted in the BDM Ch. 10, App. 10.3-A1, G. Pay Items and Limits. She will improve on the wording to make it clearer. See attached copy.*}

NHDOT Bridge Design Manual Status

- Angela passed out a copy of the Chapter 7 thru 9 Table of Contents. (See copy attached)
- Goal is to have Chapter 7 done by the end of this year. The structural steel, expansion joints, deck, and bearing sections are complete.
- Next is Chapter 8 followed by efforts to finalize Chapter 9.

Bridge Bureau workload and Consultant Support

- Although the Bureau of Bridge Design is fully staffed, they are feeling under-staffed. There are a lot of projects being pushed out in September. Next year they plan on staggering the project deliveries to avoid such surges.
- Dave Scott noted that there continues to be a lot of maintenance and preservation type projects. Some of these projects are expected to be delivered by consultants and will likely be identified in December.
- Joe noted that there are two current postings for LOI's on the website 1) Statewide Scour and 2) Woodstock. The Department will be adding more soon.

Potential NHDOT and Consultant Training

- Joe indicated that the Department is trying to get Part 2 of the Skewed/Curved Bridge course. Part 1 had been done earlier this year.
- John Watters noted that NHI courses are becoming more available on the web. There is an NBIS training course that has been streamlined to five (5) days for Professional

Engineers (FHWA-NHI-130056) with a prerequisite course (1 of 3 options including two that are web-based).

- Steve H. noted that there is an interesting course related to Service Design of Bridges that may be of interest and relevance based on the renewed focus on maintenance and preservation of bridges.

Subcommittee Membership

Tom Kendrick, Bob Durfee, Bob Landry, Angela Hubbard	Sept. 2017 to Sept. 2019
Steve Hodgdon, John Watters, Joe Adams, John Poisson	Sept. 2017 to Sept. 2020
Adam Stockin, Tom Levins, David Scott, Tony Weatherbee	Sept. 2017 to Sept. 2021

Next Meeting - Friday December 1st

Attachments:

- NHDOT Research Document (4 pages)
- Draft Chapter 7 thru 9 TOC from NHDOT Bridge Design Manual (5 pages)
- Last page of BDM Appendix 10.3-A1

I have attempted to summarize discussions held during this meeting as accurately as possible. If there are any items discussed herein that are misrepresented in any way, please contact me by September 25th. In the absence of any corrections or clarifications, it will be understood that these minutes accurately summarize the discussions at the meeting.

Respectfully Submitted,

Steven M. Hodgdon

Steven Hodgdon

NHDOT Research….
Is something you should know about.

NHDOT Research Unit

Bureau of Materials and Research

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Concord, NH
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(603) 271-3151

Ann Scholz
Research Engineer
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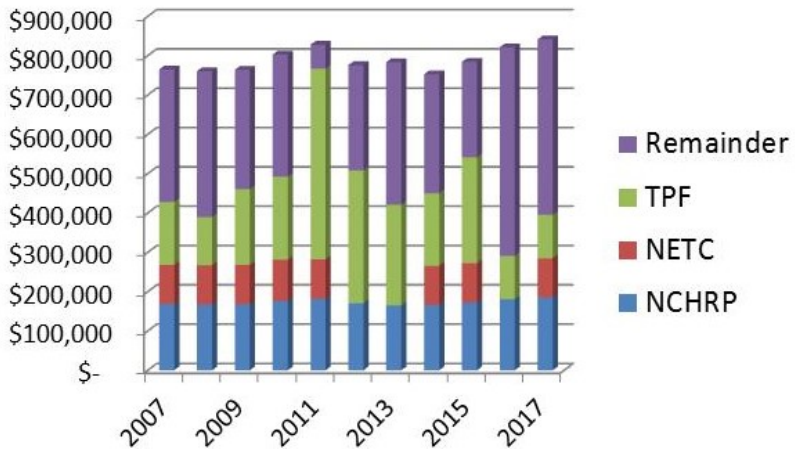
NHDOT Research on the Web

http://www.nh.gov/dot/org/projectdevelopment/materials/research/index.htm

NHDOT Research Newsletter

http://www.nh.gov/dot/org/projectdevelopment/materials/research/newsletter.htm

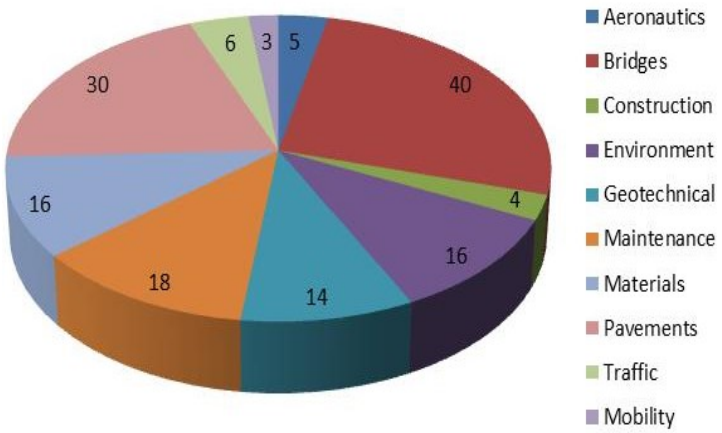
How is research funded?



One-half percent (0.5%) of most federal program funds allocated to the state should be dedicated to Research. Typically, 45% of the allocated dollars fund state research projects. The remaining 55% funds regional or national research projects.

What topic does research cover?

Research topics are unlimited. All Department Bureaus are involved with selecting our research projects and all staff are encouraged to submit research needs.



Who does the research?

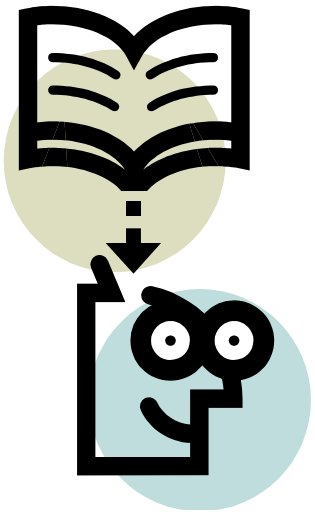
Research studies are generally conducted under agreements or contracts with partners such as the University of New Hampshire, Plymouth State University, University of Vermont, USGS, and ACoE.

Research is the common thread of the Department!

TRB is a wealth of information for YOU

Technical Brief April 2017r

Transportation Research Board



www.trb.org

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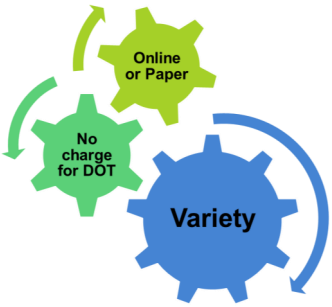
Reports

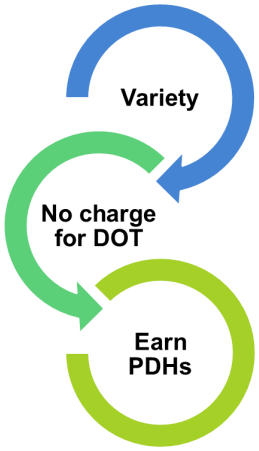
TRB produces reports on a wide range of topics—from aeronautics to bridges to pavements to freight—it's all in there.



Online reports are searchable and viewable at no cost.

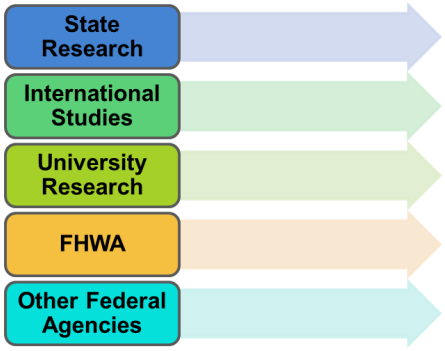
Webinars

Department staff can attend TRB webinars at no charge. Just use your work email to register. Webinars are usually recorded.



TRID—the TRIS and ITRD database

When you want to know more or find out what others have learned, TRID is the place to look. Search TRID



You've Got Answers….
We're Here to Help!

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NHDOT Research Newsletter

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Share YOUR success stories!

Let us help you spread results of what you learned. Valuable information can be passed along to our partners in the New England Transportation Consortium (NETC) or other state highway agencies nationwide.

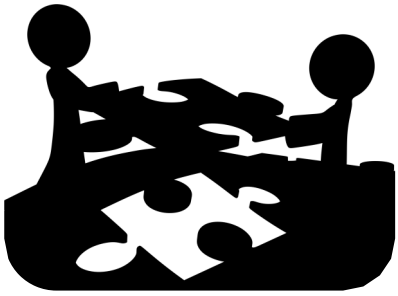
You have a great idea.

- A **material** that saves MONEY
- A **product** that WORKS
- A **method** that is SAFE
- A **technology** that makes SENSE
- A **procedure** that saves TIME

You learned from someone else.

A great idea or product may come from other professionals, situations you experienced, or places you've been. Share it or learn more about it.

Turn innovation into standard practice



- Stormwater treatment
- Erosion control measures
- Pipe rehabilitation techniques
- E-Construction
- **What's next?!**

Let us help you share your knowledge!

You've Got Questions….
We're Here to Help!

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Gather information

When you need to know more , we can help you gather information on methods and materials.

- Literature reviews on previous research
- Survey other state transportation agencies to summarize the state of practice
- Connect you to the right people
- Locate and provide a website link or documents you need

Develop Needs Statements for New Research

Ann Scholz
Research Engineer
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When information is not available, we can help develop research needs statements through state, regional, or national resources.

- NHDOT State Planning and Research Part 2 (SPR2) funded projects
- New England Transportation Consortium (NETC) for address issues of regional interest
- National Cooperative Research Program (NCRP) for projects of national interest

Pooled Funds

Others may be asking the same question. Transportation Pooled Funds (TPF) allow us to commit funds to a topic along with other state DOTs and universities. By pooling money to fund a research project, many are able to get answers to a similar problem.

NHDOT Research on the Web

http://www.nh.gov/dot/org/projectdevelopment/materials/research/index.htm

NHDOT Research Newsletter

http://www.nh.gov/dot/org/projectdevelopment/materials/research/newsletter.htm

Let us help you find answers!

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NOT COMPLETED

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Appendix

NOT COMPLETED

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G. Pay Items and Limits

- ❑ Item 206.1, Common Structure Excavation
  - ⇒ Vertical pay limits shall extend from the bottom of footing (or structural fill) to the existing or proposed ground. If the existing ground is above the proposed ground line, excavation from existing ground to proposed ground is paid for under common excavation. Any additional excavation for the footing is paid for under common structure excavation (see Standard Specifications Section 203). No excavation payment shall be made if the sign footing is entirely above existing ground.
  - ⇒ Horizontal pay limits extend one foot (300 mm) beyond the footing limits on all sides unless founded on more than one foot (300 mm) of structural fill, or if cofferdams are used (see Appendix 10.3-B1).
- ❑ Item 206.1, Common Structure Excavation is measured to the nearest 1 CY
- ❑ Item 508, Structural Fill is measured to the nearest 1 CY
- ❑ Item 520.2, Concrete Class B is measured to the nearest 0.1 CY
- ❑ Item 544.1, Reinforcing Steel (Roadway) is measured to the nearest 1 LB
- ❑ No item is needed for fill since the same material excavated will usually be replaced. If ledge is excavated to construct the footing, check the contract estimate for a good draining replacement material such as Item 209.1, Granular Backfill. Quantify this item and include it in the quantity box on the footing plans.
- ❑ For DMS overhead sign structure and foundation, all items are subsidiary.

H. Inputting Sign Structure and Footing Data into the Database

- ➢ Go to "Add/Change Projects, Bridges or Signs" button.
- ➢ Enter the project number
- ➢ If the project is past the advertising date, click on the "Unlock Project" button to enter information in the window.
- ➢ Click on the "Sign Footing" tab and enter in the year built, town, and inventory number for each sign structure.
- ➢ Close out window
- ➢ Click on the "Misc Menu" tab on the main menu
- ➢ Click on the "Sign Footing" tab
- ➢ Click on the "Edit" tab and enter the sign footing information for each sign structure

I. Design Process and Coordination

See NHDOT Bridge Manual, Chapter 10, Section 10.3.5, Design Process and Coordination for the following:

- Design process and coordination of sign structures and foundations between bureaus and consultants
- Distribution of Plans
- Archiving Plans and Calculations