BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: August 19, 2020
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Sarah Large
Matt Urban
Ron Crickard
Mark Hemmerlein
Jon Evans
Meli Dube
John Sargent
Jason Tremblay
Marc Laurin
Maggie Baldwin
Kathy Corliss

ACOE
Mike Hicks

EPA
Beth Alafat
Jeanie Brochi

Federal Highway Administration
Jaimie Sikora

NHDES
Lori Sommer
Karl Benedict

NHB
Amy Lamb

NH Fish & Game
Carol Henderson

Consultants/ Public Participants
Raymond Hanf
David Smith
Lee Carbonneau
Stephen Hoffmann
Christine Perron
Samuel White
Jennifer Zorn
Seth Hill
Jennifer Riordan

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

(When viewing these minutes online, click on a project to zoom to the minutes for that project.)

NOTES ON CONFERENCE:

Finalize Meeting Minutes
Finalized and approved the July 15, 2020 meeting minutes.

Dover-Rochester, #29440
Sarah Large introduced the project and invited the speakers to control the screen for the slide show presentation.

Ray Hanf of HNTB provided an overview of the project scope which includes the installation of all electronic tolling infrastructure to replace existing toll facilities on the Spaulding Turnpike in Dover and Rochester in desperate need of repair. The old equipment will be demolished and a new single overhead gantry installed at each location. Median concrete barrier will be installed, closed system drainage in conjunction with water quality treatment features (gravel wetlands) will be implemented at both locations, as well as additional features to address water quality in areas outside of those that are directed to the gravel wetlands. Both project locations are in MS4 communities. The roadway pavements will be replaced or rehabilitated, depending upon the existing condition and future traffic volumes. Two soundwalls will be constructed at the Rochester site, each along the northbound barrel. The southerly soundwall will begin almost 0.5 miles south of the existing toll plaza, just to the south of the Tebbetts Road overpass and continue southerly for 3,550'. The northerly soundwall will begin approximately 0.25 miles north of the existing toll plaza and continue for 2,400'.

The project goals include transition to new toll collection operations and replacement of outdated infrastructure. The benefits of these improvements are reduced energy use and vehicle emissions, improved traveler safety and mobility, replacement of deteriorated toll infrastructure, and automation of toll collection operations. Slides showing the Dover and Rochester project locations on the Spaulding Turnpike were presented, highlighting existing toll facility locations and the proposed sound walls in Rochester north and south of the toll plaza. In Dover, three lanes will be continued through the new toll zone then reduced to two lanes. Two lanes only will be constructed at the Rochester site.

Lee Carbonneau provided an overview of the current status of agency coordination and noted that while the project is not aware of impacts to historical resources at this time, further coordination is expected as well as attendance at a cultural resource agency meeting in the future. There are no impacts expected to conservation lands or floodplains in Dover or Rochester. Outreach letters have also been sent to city officials soliciting concerns and mitigation approaches.

Only one threatened or endangered species, the northern long-eared bat, was reported for the project. There is potential for summer roosting at toll plaza facilities in both locations and trees will be cleared in Rochester for sound wall construction. Approximately 3.5 acres of clearing is expected. The project expects to use the 4(D) rule key in the US Fish and Wildlife Service consultation process.

There are no jurisdictional wetlands or streams in Dover, but there will be approximately 35,000 sf of paving and earthwork in protected shoreland of the Bellamy River. A Permit by Notification is anticipated. Direct permanent impacts for sound wall construction in Rochester include approximately 35,400 square feet of fill in nine wetlands, loss of one medium value vernal pool and culverting 326 linear feet of four Tier 1 intermittent streams. A preliminary ARM fund estimate for direct, permanent impacts is approximately $450,000. Temporary and secondary impacts have not yet been quantified. Additional detail was provided for the vernal pool bisected by a sound wall, and impacts to intermittent Stream RS2, which parallels the sound wall. There are also resource impacts within ¼ mile of the Cocheco River, a Designated River, so coordination with the Local River Advisory Committee will be necessary.

Applicable water quality regulations were noted and proposed stormwater BMPs were discussed. Three gravel wetlands will be constructed in Dover, and one gravel wetland will be constructed in Rochester. Subsequent to the meeting, Mark Hemmerlein, the Department's Water Quality Program Manager who was in attendance at the meeting, indicated in a follow up e-mail that while the gravel wetlands may be more appropriate in Dover as the receiving waterbodies are estuaries, they may not be the best treatment measure in Rochester. Mark suggested that the use of wet extended detention basins may be more appropriate in Rochester from the cost, effectiveness and long term maintenance perspectives. Impervious surfaces in Dover will increase by about 17,000 square feet, and will decrease by approximately 60,000 square feet in Rochester.

Ray provided the proposed schedule for the project. The advertising date is February 2021, with construction starting in spring 2021 and completed in November 2022. The meeting was opened up for questions. Sarah began the roll call request for comments/questions:

Karl Benedict suggested that the project goals include the benefit of the sound walls, as these will have the greatest resource impact. He emphasized that a thorough discussion of vernal pool and stream impact avoidance will be essential in the wetland permit application. Karl asked if the northern sound wall could be shortened to Station 908+50 to avoid the vernal pool, and Ray discussed the tradeoffs with noise protection for two benefactors and four receptors. Karl also asked if Stream RS2 could be relocated in the ROW instead of placed in a culvert under the sound wall foundation. Ray noted that this option was considered, but there was no room to re-establish an open channel at the toe of slope. Karl also noted that access and construction impacts have not been accounted for, and Lee concurred. Karl noted that the wetland impacts are approaching 1 acre, therefore a public hearing and longer review times may apply.

Lori Sommer noted that the vernal pool impacts appear to be addressed adequately, and asked the project team to consider relocating egg masses or tadpoles to an alternative vernal pool prior to construction. She suggested that perhaps the City Concrete site might be appropriate. She also noted that any additional clearing in wetlands for sound wall construction would be considered a secondary or temporary impact, and that the project team should reach out to the US Army Corps for guidance on mitigating those impacts. Lori also offered to review any local mitigation projects that the City of Rochester may suggest.

Carol Henderson also voiced concern for the vernal pool impacts, and asked if the wall could be shifted to avoid running right down the middle of the pool. Ray described alternative wall alignments that were considered and indicated the presence of an important exit ramp sign with a concrete base that makes shifting the wall closer to the Turnpike difficult. Carol also mentioned that the median concrete barriers impede wildlife crossings, and recommended that the installation be minimized to what is necessary only, be the minimal possible height and have gaps if possible. Lee noted that the sound walls will also impede wildlife movements across the Turnpike, but there may be opportunities to modify the median in the gap between the northern and southern walls so wildlife can cross the Turnpike.

Amy Lamb had no comments.

Beth Alafat also mentioned the need to avoid and minimize impacts, to be specific about the alternatives considered, and to develop the goals into a statement of project purpose. She asked if there was an alternative noise barrier to wall construction, or if the design could be altered to reduce impacts. Beth also supported the relocation of vernal pool species to a safe location as suggested by Lori.

It was noted that the USACE is the lead federal agency, not FHWA, and Jamie Sikora had no comments on the project.

Jon Evans noted that although this is not a federal project, the DOT will still comply with NEPA, and NEPA treats sound as an environmental resource. The sound wall mitigates sound impacts, and altering the configuration or location needs to be balanced with the impacts to other natural resources.

Jeannie Brochi asked when the project might come back to the natural resource agency meeting, and Ray replied that it might be as early as September or possibly October.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Lee, # 41322 (X-A004(593))

Stephen Hoffmann reintroduced the Lee 41322 project involving the replacement of the structure carrying NH Route 125 over the Little River. The project was last presented at the October 2019 Resource Agency Meeting. The purpose of this meeting was to discuss the results of the stream assessment that was completed in November 2019 and revisit the alternatives analysis that was introduced at the meeting previously attended. Additional input from the Resource Agencies is being sought for consideration in the alternatives analysis prior to selecting a preferred alternative.

The purpose/need of the project is to address the serious condition of the existing 18' wide x 12' high corrugated metal pipe (CMP) which is on the State Red List, the undesirable approach alignment of the existing bridge, and the undersized hydraulic opening of the existing bridge.

The project has been progressing slowly due to delays in scheduling public meetings. However, a public officials meeting is tentatively planned for October 2020, with a public informational meeting to follow. The project is scheduled to advertise in 2022, with permitting likely getting underway sometime in 2021.

A stream assessment was completed in November 2019. The drainage area at the bridge is 18.4 square miles, making this a Tier 3 stream crossing. The average measured bankfull width is 32 feet. The average entrenchment ratio is 2.5 at the crossing and 3.1 along the reference reach. Based on the results of the stream crossing assessment and the Rosgen Stream Classification System, the Little River at the crossing location is a C5 stream channel. According to the NH Stream Crossing Guidelines, Type C channels have high entrenchment ratios (>2.2) and therefore commonly access well developed floodplains to accommodate high flow stages, are typically sinuous with low slopes, and commonly consist of riffle/pool sequences (not the case with the Little River). According to the Rosgen Classification System, C5 channels have a very high sensitivity to disturbance, fair recovery potential, very high sediment supply, very high streambank erosion potential, and very high vegetation controlling influence. These characteristics are consistent with the field observations of the Little River in the vicinity of the project area. The two major concerns with Type C channels are channel stability and lateral extension.

Photos and aerial imagery of the structure and the Little River were reviewed to highlight existing conditions, including the skew of the upstream section of river to the existing structure and the scoured condition of the outlet. Resources identified to date include a Zone A 100-year floodplain and floodplain wetlands adjacent to a Tier 3 crossing (Priority Resource Areas identified by the NHDES Wetland Permit Planning Tool). The Little River is part of the Lamprey River watershed Designated River system. A rare plant survey is scheduled to be completed this summer for tufted loosestrife, which is known to occur nearby, and small whorled pogonia, which could occur in this county. There are known records of American eel and Blanding's turtle in the vicinity of the project. NH Fish & Game has recommended a time of year restriction for in water work from April 15-July 1.

Mr. Hoffmann reviewed the conceptual design alternatives currently under consideration. Mr. Hoffmann also noted that the bridge spans were approximate and are based on the minimum span lengths required to accommodate the different stream alignment options. Impact numbers at this phase in the design are still conceptual.

Alternative 1 maintains the downstream channel alignment and shifts the upstream channel alignment to match the original 1937 structure outlet alignment (pre-CMP condition).

Minimum Span Length:	80'-00"
Existing Channel Impacts:	125 LF
Bank Impacts:	132 LF
Proposed New Channel:	122 LF
Palustrine Wetland Impacts:	47 SF
General Design Criteria (Env-Wt 904.01):	YES
100-Year Storm:	YES
Estimated entrenchment ratio:	1.1
Wildlife Passage:	One Side
ROW Impacts:	3,800 SF
Bridge Cost:	1.825 M

Alternative 2 maintains the upstream channel alignment and shifts the downstream channel alignment to match the original 1937 structure outlet alignment (pre-CMP condition).

Minimum Span Length:	90'-00"
Existing Channel Impacts:	98 LF
Bank Impacts:	62 LF
Proposed New Channel:	148 LF
Palustrine Wetland Impacts:	126 SF
General Design Criteria (Env-Wt 904.01):	YES
100-Year Storm:	YES
Estimated entrenchment ratio:	1.5
Wildlife Passage:	Both Sides
ROW Impacts:	3,600 SF
Bridge Cost:	1.975 M

Alternative 3A realigns the upstream and downstream channel to its pre-CMP condition.

Minimum Span Length:	120'-00"
Existing Channel Impacts:	195 LF
Bank Impacts:	231 LF
Proposed New Channel:	232 LF
Palustrine Wetland Impacts:	137 SF
General Design Criteria (Env-Wt 904.01):	YES
100-Year Storm:	YES
Estimated entrenchment ratio:	2.5
Wildlife Passage:	Both Sides
ROW Impacts:	8,600 SF
Bridge Cost:	2.6 M

Alternative 3B realigns the upstream and downstream channel to its pre-CMP condition, and also includes the filling of the existing downstream scour hole and constructing a new stream bank in the southeast quadrant.

Minimum Span Length:	120'-00"
Existing Channel Impacts:	+ 125 LF (320 LF TOTAL)
Bank Impacts:	Same As 3A
Proposed New Channel:	Same As 3A
Palustrine Wetland Impacts:	+ 200 SF (337 SF TOTAL)
General Design Criteria (Env-Wt 904.01):	Same As 3A
100-Year Storm:	Same As 3A
Wbf x Entrenchment Ratio:	Same As 3A
Wildlife Passage:	Same As 3A
ROW Impacts:	15400 SF
Bridge Cost:	2.85 M

Factors such as ROW impacts, bridge costs, and the entrenchment ratios are preliminary estimates. The cost estimates do not include ROW acquisition, permitting/mitigation, traffic control, or approach roadway costs.

Additional considerations in design included channel stability, lateral extension, and access to the adjacent floodplain. Soft armoring, particularly on the downstream side where bank erosion is occurring, is another option that will be considered as the project progresses.

The next steps involve scheduling public meetings, obtaining LAC input, selecting a preferred alternative, and refining the impacts.

Karl Benedict provided input on how NHDES regulations would apply to the project. He mentioned that based on the bankfull width (32') x entrenchment ratio (3.1 – Reference Reach) a span of 99.2' would be required to achieve full geomorphic compatibility. Depending on the final span length of the preferred alternative, approval as an alternative design may or may not be required. Mr. Benedict also referred to the bank stabilization rules and indicated that the project team was on the right track with the mention of soft armoring/bioengineering. Mr. Benedict indicated that he understands the stability concerns with the downstream scour hole but advocated for not filling it due to the resulting loss in flood storage. Mr. Benedict also pointed out what appeared to be a tributary shown on the 1937 plans in the southeast bridge quadrant. Mr. Hoffmann explained that a delineation had been completed and there was a discontinuous intermittent stream and palustrine forested wetland that had been delineated in that area that drains to the Little River. Mr. Benedict wanted to ensure that this area was considered in the impacts. Mr. Benedict also suggested that based on the substrate and stream type, future monitoring would be a permit condition in order to monitor the stability of the crossing. Mr. Benedict indicated that he could see potential benefits of each crossing, but there is a balance between minimizing impacts while meeting geomorphic compatibility. Karl indicated that the project seemed to be on the right track with providing wildlife passage and geomorphic compatibility and he would prefer to see a span between 90'-120' while retaining the scour hole for flood storage.

Lori Sommer agreed with Karl's comments and stressed the importance of the wildlife connectivity at this crossing, referencing the Nature Conservancy's Connect the Coast Initiative. Ms. Sommer was also in favor of retaining the scour hole. Ms. Sommer asked whether the conservation commission had been contacted. Christine Perron indicated that the Conservation Commission had been contacted regarding the project and potential mitigation projects, however, no response had been received at this time. Ms. Sommer will provide a contact at the Conservation Commission.

Carol Henderson was also in agreement that the scour hole should be left alone to fill naturally. She also provided clarification on the time of year restriction. The restriction is associated with anadromous fish, not the American eel or Blanding's turtle identified on the NHB Report. Ms. Henderson also stated that wildlife friendly erosion control matting should be used during construction.

Amy Lamb mentioned that American featherfoil and tufted loosestrife were identified on the NHB Report. The tufted loosestrife typically flowers in June and she was hoping for the plant survey to be completed during that time. Ms. Perron acknowledged that the plant survey had been delayed but noted that it was scheduled to be completed the following week.

Beth Alafat concurred with Karl and Lori's comments. She also asked if suitable Blanding's turtle habitat is present in the project area and suggested showing invasive species on the plans and developing a management plan if invasive species are present.

Pete Steckler was unable to attend the meeting but Sarah Large provided a summary of the comments he provided via email prior to the meeting. The project is located within an important wildlife corridor and part of the Connect the Coast Initiative. Wildlife passage is a priority, especially under-road passage in the dry. Mr. Steckler mentioned the possibility of coordinating with the project team to use camera traps to document wildlife passage at this location before and after construction.

This project was previously discussed at the 10/19/2019 Monthly Natural Resource Agency Coordination Meeting.

Plaistow-Kingston, #10044E (X-A000(378))

Jennifer Zorn (MJ) provided a brief overview of the project history. The overall Plaistow-Kingston, 10044 project was 6 miles in length and previously designed, and has been vetted through the NEPA process and Public Hearing process in 2004/2005. Most of the overall project has been constructed, with the exception of Contract E, the project at-hand. Contract E consists of the widening of NH 125 from just north of the Old County Road intersection in Plaistow to just south of Newton Junction Road/Hunt Road intersection in Kingston and is approximately 1.8 miles in length. A redesign of this last section has been undertaken due to the decrease in actual traffic volumes versus the projected traffic volumes. This current design calls for a reduction in the project's footprint from the previously proposed five-lane roadway. The current design call for a three-lane roadway where the center lane is a dedicated two-way left turning lane.

She explained that the focus of the NEPA Reevaluation is to determine if new resources are present in the 1.8 mile segment and if impacts to the resources will be altered from what was proposed/presented for the project in the 2005 NEPA Environmental Assessment. The 2004/2005 project within the 1.8-mile segment anticipated 1.95 acres of wetland impact. It was previously agreed that if impacts due to the redesign were greater than 1.95 acres, the additional impacts would be compensated for by NHDOT in the form of an ARM Fund Payment. Based upon preliminary design, the anticipated wetland impacts for redesign of Contract E are 0.5 acres; therefore, this impact was previously addressed in the mitigation package as part of the former NHDES wetland permit (#2004-00763).

The anticipated impacts to the stream crossings (Little River) were not included in the 2004 NHDES permit. Seth Hill (GM2) presented the alternative analysis of the treatments to the stream crossings (NH 125 and Diamond Oaks Road, a private road) and stated that the preferred option is to extend the existing culvert under NH 125 (and not replace it). Factors considered included: existing fishery habitat in the Little River; condition of the existing culverts ("good" condition with a long service life based upon a recent inspection); impacts to wetlands and stream bank; costs; and other factors.

Seth Hill provided details on the factors that were considered by the Department and GM2 in their evaluation of the alternatives, including:

1. NH 125 culvert extension only - no hydraulic concerns would occur with a 3 to 4 foot extension, the 100-year flood elevation would be below NH 125, temporary and permanent impacts are minor, with an estimated cost of $23,000;
2. hydraulically compliant crossings - would require installation of 16 foot by 5 foot rigid frame structures be installed at NH 125 and Diamond Oaks Road, increase the temporary and permanent impacts to Little River, with estimated costs of $1,337,000, and;
3. stream crossing rule compliant crossings – would require installation of 29 foot by 4 foot rigid box structures at NH 125 and Diamond Oaks Road, permanent impacts would be less than alternative 2 due to the width spanning the river, but the impacts would still be greater than alternative #1, and the most costly option estimated at $1,734,000.

Jennifer Zorn reviewed the anticipated project schedule that entails the completion of the NEPA Reevaluation, Slope and Drain, a second Public Informational Meeting, and a Public Hearing by the end of 2020. After this, Final Design, permits, and ROW would occur from 2021 to 2023. Construction is anticipated to begin in late 2023 or 2024.

The following questions and comments were made by participants in the meeting:

Karl Benedict (NHDES):

- Inquired if wetland impacts would occur within BMP areas. Seth Hill stated that no impacts to wetlands are anticipated. The areas shown during the presentation are the general locations of the BMPs, not the BMPs footprints.
- Inquired as to the type of BMPs proposed. Seth replied that location A would be a treatment swale, and the B, C, D & G locations would all be wet extended detention basins.
- Requested that impacts to the stream and banks (Little River) be expressed in linear feet. GM2 agreed.
- Asked that consideration be given to get the headwalls out of the ordinary high water of Little River. GM2 will evaluate.
- Requested that any temporary impacts needed for clean water bypass measures during construction be noted in the future. GM2 agreed.
- Inquired if vernal pools were identified during the wetland delineation effort. Jennifer Zorn stated that none were found by either MJ or GM2.
- Requested clarification to the impacts to stream bank versus stream bed to the Little River. GM2 agreed.

Lori Sommer (NHDES):

- Concurred with Karl that impacts to Little River be expressed in linear feet. GM2 agreed.
- Questions the overtopping of Diamond Oaks Road by the Little River. Tim Mallette spoke about the rare occurrence that Diamond Oaks Boulevard would overtop and how it is a very shallow overtopping in real world conditions. Also, the overtopping is wide and does not cause erosion. Seth stated that due to these facts, the Department has determined that the exiting culvert on Diamond Hill Road would be left as is.
- Requested a summary of the mitigation package associated with the 2004 NHDES wetland permit. Marc Laurin briefly described the mitigation sites and will send information on the approved mitigation package to Lori.

Carol Henderson (NHF&G):

- Requested a current NHNHB search. GM2 agreed.
- After the second PIM, she requested that the project team return to a future NRACM to continue the discussion. Maggie Baldwin agreed.

Amy Lamb (NHNHB):

- NHB data search is now expired. There is new record for a Blanding's Turtle in the project area in the Misery Hill area. Carol recommended the project team contact Kim Tuttle for recommendations. GM2 agreed.

Beth Alafat (USEPA):

- Requested that indirect impacts to wetlands be reviewed based upon the BMP locations. GM2 agreed (assumed to be done during the permit phase/Final Design of the project).
- Requested that infiltration practices be used where appropriate. GM2 will evaluate.

Regarding Stream Mitigation, Marc Laurin will send the approved mitigation package to Lori Sommer for review in order to help determine if some of the mitigation already completed for the project has benefits and mitigation purposes associated with streams that could be credited or considered as mitigation for the anticipated stream impacts to the Little River.

This project was previously discussed at the 10-18-2000, 01-16-2002, 08-21-2002, 07-16-2003, 08-07-2003, 09-17-2003, 04-12-2005, and 03-20-19 Monthly Natural Resource Agency Coordination Meeting.