

**BUREAU OF ENVIRONMENT  
CONFERENCE REPORT**

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** January 19, 2022

**LOCATION OF CONFERENCE:** Virtual meeting held via Zoom

**ATTENDED BY:**

**NHDOT**

Andrew O’Sullivan  
Joshua Brown  
Matt Urban  
Jon Evans  
Mark Hemmerlein  
Arin Mills  
Marc Laurin  
Kerry Ryan  
Leah Savage  
Jonathan Hebert  
Margarete Baldwin  
Tobey Reynolds  
Rebecca Martin

**ACOE**

Mike Hicks

**EPA**

Absent

**NHDES**

Karl Benedict  
Lori Sommer  
Cheryl Bondi  
Mary Ann Tilton  
Eben Lewis

**NHB**

Jessica Bouchard

**NH Fish & Game**

Absent

**Federal Highway**

Absent

**The Nature Conservancy**

Pete Steckler

**Consultants/ Public  
Participants**

Liviu Sfintescu  
Stephanie Camay  
Pete Walker  
Dave Cloutier  
Jason Hilton  
Greg Goodrich  
Bob Landry  
Nicole Martin  
Frank Koczalka  
Mike McCrory  
Nancy Merrill

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

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**Finalize Meeting Minutes**

Finalized and approved the December 15, 2021 meeting minutes.

**Hooksett, #29611 (X-A004(199)):****Meeting Discussion:****Presentation of project limits and design alternatives**

Liviu presented the project limits and the project design alternatives.

The project reconstructs approximately 1.4 miles of Route 3 from Alice Avenue to Whitehall Road. There are currently two design alternatives under consideration for the Route 3 corridor (a 3-lane and a 5-lane alternative) as well as proposed improvements at each of the three signalized intersections (Alice Avenue, Mammoth Road, Martins Ferry Road) to improve traffic flow. The 3-lane alternative would widen the roadway from the existing width of approx. 34 feet – 42 feet to 60 feet. The 5-lane alternative would widen the roadway from the existing width of approx. 34 feet -42 feet to 80 feet. At the Alice Avenue and Whitehall Road intersections, additional turning lanes are proposed. Two alternatives are considered at the Mammoth Road intersection: a signalized intersection with additional through and turning lanes and a 2-lane roundabout. The proposed improvements at Mammoth Road may require modifications to the existing culverts/headwalls that convey Messer Brook across the intersection. The extent of the proposed roadway work onto the culvert has not been analyzed in detail yet.

In the existing condition, several sections of the corridor feature open drainage of the side of the road. Both proposed alternatives include addition of curb and sidewalks on both sides of the roadway. Significant drainage improvements will be required to construct new drainage closed systems and treat and convey the proposed roadway runoff outside of the project area. This will be analyzed in subsequent phases of the design.

The project objectives are to address safety concerns, alleviate corridor congestion, enhance bicycle and pedestrian facilities, and improve business access.

**Presentation of natural resources**

Stephanie presented the existing natural resources located along the corridor:

- Conservation Lands – none within project limits
- Wetlands / Surface Waters - a slide showing the NWI and 2 slides showing the current delineation were presented. To date, only wetlands located within the limits of the NHDOT right-of-way have been delineated. Additional delineation is needed for wetlands outside of NHDOT right-of-way that could be impacted by the Project.
- Messer Brook Stream Crossing – inlet and outlet may be impacted depending on the intersection improvements at Mammoth Road

- Floodplains/Floodways – Zone X and Zone AE at the Messer Brook crossing
- Water Quality – 13 potential best management practice (BMP) sites were identified based on the existing terrain topography. These will be refined as the design advances.
- Threatened or Endangered Species/Natural Communities – IPac planning identified the potential presence of northern long-eared bat (NLEB); small whorled pogonia, and bald eagle. No critical habitats were identified. The request to the New Hampshire Natural Heritage Bureau is pending.
- The project may include impacts more than 300 feet from the roadway, so the team will need to consider next steps for the NLEB review and consultation.
- For the small whorled pogonia, the project team will be looking for habitat during future field reviews.
- Wildlife and fisheries – no wildlife refuge islands or fish hatcheries; 4 wildlife corridors crossing Route 3 within project limits.
- One of the wildlife corridors is associated with Messer Brook.
- Wildlife Action Plan – no highest ranked wildlife habitats within project limits, supporting habitat is near the project area
- Agricultural land - statewide and locally important soils classified by the USDA Natural Resources have been identified. The Project is not anticipated to impact agriculture lands.

The presentation concluded with the project schedule. Liviu indicated that the project is in preliminary design. The project is scheduled to advertise in 2026.

#### **Questions/Open Discussion:**

- Karl Benedict – Messer Brook seems to be a primary resource within the project limits. The existing outlet is perched. If the alternative includes reconstruction, evaluate the outlet and consider retrofit. Also, maintain a buffer around the brook and avoid wetlands to the extent practicable, including the BMP locations. If existing stormwater system can be retrofit, consider avoiding direct conveyance to Messer Brook.
- Lori Sommer – the floodplain wetlands adjacent Messer Brook (Tier 3) will be a Priority Resource Area (PRA) that requires mitigation if impacted.
- Mike Hicks – since the project will disturb less than 3 acres of fill in the waters of the US, it can move forward with a General Permit. Floodplain mitigation will be required at a 1-to-1 ratio. Coordinate with NOAA regarding Essential Fish Habitat.

- Jessica Bouchard – the Heritage Program request for the project was received January 6 and is pending. The team can expect to receive a response soon.
- Peter Steckler – presence of American eel in Messer Brook (upstream and downstream of the culvert). Messer Brook is also an important wildlife corridor.
- Mark Hemmerlein – stormwater management will be a challenge for this project, especially if the 5-lane alternative is the preferred alternative. The team should focus on identifying where point source water is going, particularly for the larger neighborhoods west of Mammoth Road (by Zachary Drive/Embassy Avenue) and follow where it leaves the project area to a Water of the US. Drainage likely goes to Messer Brook and/or adjacent wetlands.
- Liviu confirmed that there are no bridges in the project area and that the project will return to another NRACM when a preferred alternative and impacts have been identified.

**Jaffrey, #16307 (X-A001(234)):**

Pete Walker (VHB) introduced the project, which proposes a new traffic connection with a river crossing south (400' upstream) of the existing Main Street bridge. This portion of the river is impounded due to the Contoocook River Dam located near Main Street. At the October 20, 2021 NRAM, we discussed the challenges associated with the stream geomorphic assessment since the crossing is proposed over an impounded reach of the river. Therefore, the reference reach stream type (C5) should be interpreted cautiously as the reach type may differ at the impounded crossing location. However, VHB believes that a bankfull width (BFW) of 54 feet is appropriate for the crossing location since it aligns with regional geometry regressions. We also have surveyed bathymetry data at the proposed crossing location that can help us estimate appropriate BFW and bankfull depth since field measurements are not practical in this impounded reach. If we assume that the stream type at the crossing location is the same as the downstream reference reach, then the minimum Entrenchment Ratio for the C-type stream would be 2.2, making a fully compliant bridge span ~120 feet. As this analysis was used to advance the design of the proposed new bridge, the design team began to realize a 120-foot clear span bridge does not appear to appropriately fit the topography of the crossing location.

Greg Goodrich (VHB) described the 120-foot and 92-foot clear span alternatives. The 120-foot clear span would push the abutments far back into the existing embankments west and east of the river. Therefore, a 92-foot clear span would better align with the current channel bank geometry but would require the submission of an Alternative Design Request (ADR) in accordance with the Stream Crossing Rules. There is a negligible difference in hydrology between the 92-foot clear span and the 120-foot clear span, as both can accommodate the 100-year (Q100) design storm flows. The proposed crossing is located at a natural constriction point of the channel which explains why the water levels match between the two span alternatives. The 92-foot clear span still pushes back into the western embankment but better fits the existing grades along the eastern embankment. Furthermore, both span alternatives allow for the construction of a 5-foot-wide terrestrial wildlife shelf located approximately 2 feet above the ordinary high-water (OHW) elevation. The OHW elevation is approximately 1005.9 which correlates to the water stains

observed on downstream dam abutments. The 92-foot clear span also provides an additional 1.5 feet of vertical clearance to the wildlife shelf (totaling 5.5 feet tall) compared to the 120-foot clear span alternative.

Karl Benedict (NHDES) reiterated that the project will likely require an ADR due to the geomorphic incompatibility caused by the dam. He suggested that we compare the reference reach BFW with the on-site BFW, along with the operating levels of dam in the ADR narrative in support of the 92-foot clear span. He acknowledged that the 92-foot clear span design is appropriate for the proposed location given the altered stream reach. The ADR should show that the design meets all design criteria at the crossing location geomorphically, hydraulically, and regarding aquatic organism passage. P. Walker added that we can only estimate the BFW at the impoundment because it is below the impounded water level.

Lori Sommer (NHDES) and K. Benedict concurred that a compliant crossing that fully spans the jurisdictional banks of the river would not require mitigation in accordance with Env-Wt 904.05(f)(1), as long as there are no Priority Resource Area (PRA) impacts.

L. Sommer concurred that any impacts below the proposed bridge and within the riverbank to construct the wildlife shelf would not require mitigation. She also commented on the riprap extension beyond the crossing along the banks. G. Goodrich stated that this aspect of the design is not yet final, that the riprap limits will be adjusted to better match in with existing banks and will be designed to not inhibit wildlife passage. Finally, she mentioned that removal of the Contoocook River Dam could be a mitigation strategy if mitigation was triggered. P. Walker stated that dam removal would be beyond the scope of the project.

Lori asked about coordination with the Contoocook and North Branch Rivers Local Advisory Committee (LAC). Pete responded that the LAC commented during the National Environmental Policy Act (NEPA) phase. Nevertheless, that coordination will be renewed, as will coordination with the Jaffrey Conservation Commission during the permitting phase.

Mike Hicks (USACE) stated that the Contoocook River is Essential Fish Habitat (EFH), so coordination with the National Marine Fisheries Service (NMFS) would be needed. P. Walker stated that the Federal Highway Administration (FHWA) is the lead federal agency for this project and replied that EFH coordination was completed during the NEPA phase. The US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) is done (although NLEB survey of buildings to be demolished will need to occur), Division of Historical Resources (DHR) coordination is ongoing, and floodplain impacts will be further evaluated to determine if they would require compensation. Bob Landry indicated that FHWA has already coordinated with the US Coast Guard (USCG) who deemed the project location non-navigable. VHB will include USCG documentation in the wetlands permit application.

Pete Steckler (TNC) had no comments.

*Jessica Bouchard (NHB) did not attend the meeting since the Datacheck Letter (NHB19-0664) indicated that there are no rare, threatened, or endangered (RTE) species within the project vicinity at the time the letter was issued (per her email on 1/18/22). However, prior to the*

*meeting, she recommended updating the Datacheck Letter because new occurrences are continuously being documented. This will occur during the permitting phase.*

**Claremont, #13248:**

Pete Walker (VHB) introduced the project, which seeks to address transportation deficiencies at the intersection of NH 12/103 and North Street and the adjacent roadway approaches. The key items are the replacement of the undersized Stevens Brook culvert, raising the profile of NH 12/103 that is in the Sugar River floodplain to attenuate flooding concerns, and the proposed impacts to the Stevens Brook Conservation Easement located between NH 12/103 and Sugar River. This easement was initially created to mitigate impacts associated with the adjacent commercial development (Tractor Supply). The City will be requesting an Alternative Design Request (ADR) for the proposed box culvert as it does not fully comply with the Stream Crossing Rules. We propose unavoidable impacts to the bed and banks of Stevens Brook required to replace and extend the existing culvert. The replaced culvert will be able to convey the 100-year design storm flows, will have a shallower grade, and will be more suitable for aquatic organism passage since it will not have an overhanging outlet as the existing culvert does. Impacts to Sugar River are limited to the upper limits of the bank (no bed impacts are proposed) and have been minimized to the extent practical through the design of steep slopes for the raised portion of NH 12/103 to minimize encroachment into the bank. No change to the base flood elevation of Sugar River will result from the limited extent of the proposed impacts. Finally, there is a National Environmental Policy Act (NEPA) commitment for the project to offset any impacts to the existing 0.83-acre conservation easement. We currently propose approximately 0.32 acre of impact to this easement. The project will impact approximately 0.4 acre of wetlands and about 792 lin ft of stream resource. Mitigation is therefore required. The City is proposing to mitigate by preservation of lands adjacent to the Whitewater Reservoir water supply.

Mike McCrory (City of Claremont) discussed the permittee-responsible mitigation proposal of conserving three parcels (totaling approximately 44 acres) surrounding the Whitewater Reservoir along the northern border of Claremont. This reservoir provides greater than two thirds of the City's drinking water and is surrounded by parcels that contain the NH Wildlife Action Plan Highest Ranked Habitat and are contiguous with a large area of unfragmented forested land. The City prefers to have a third party steward of the conservation easement and the Upper Valley Land Trust (UVLT) may serve that role.

Following the presentation, Andy O'Sullivan opened the meeting to questions.

Karl Benedict (NHDES) inquired about the alternatives considered to avoid and minimize natural resource impacts. P. Walker described the proposed realignment and steep slopes associated with the profile raise of NH 12/103 to attenuate flooding concerns within the Sugar River floodplain. However, alternatives are limited due to its proximity to Sugar River to the west and bordering palustrine wetlands to the northeast. An alternative discussion will be incorporated into the permit application.

Stormwater treatment swales are currently proposed along North Street. Due to the limited right-of-way and proximity of the Site to Sugar River, there isn't enough space to construct new basins. Mark Hemmerlein (NHDOT) requested that VHB coordinate with NHDOT to discuss the stormwater management details.

Lori Sommer (NHDES) concurred that mitigation will be required for the wetlands and streams given the extent of proposed impacts. The Tractor Supply mitigation project was intended to improve the stream habitat features (including dam removal and fishponds). She is excited that downstream flow will be improved for Stevens Brook, and that the City of Claremont has a mitigation goal. She will assist VHB in determining how to quantify the conservation easement impacts.

L. Sommer requested more information from the City about the Whitewater Reservoir (i.e., use limitations, reserved rights, who manages it, who operates the dam, etc.). She noted that amendment of the Tractor Supply conservation easement may need to be approved by the Attorney General's Charitable Trust Bureau. She also recommended getting more information to the UVLT to prevent delays and prove that they are a willing party in the application, including the submission of the Baseline Documentation Report. Conditions of the permit would then require the development of a Stewardship Management Plan (that considers reservoir activities), making sure there is clear title, and a complete survey of the outer parcel boundaries. L. Sommer agreed that this mitigation proposal appears to have value commensurate to the proposed project impacts. We will need a separate meeting on these mitigation details due to all the separate components and to work out the timeframe. Will need also need to develop a federal mitigation plan (after submission of the application). P. Walker mentioned that the scheduled pre-application meeting for the project on February 9th would be a good opportunity to further discuss these items, provide a status update, and quantify the impacts. If desired, VHB could forward that meeting invitation to Andy O'Sullivan, Marc Laurin, and Jon Evans.

Mike Hicks, (Army Corps) requested clarification of the Section 106 consultation status. P. Walker explained that FHWA served as the lead federal agency for the Section 106 consultation, which resulted an Effect Memo and Memorandum of Agreement (MOA) which details the mitigation for the adverse effects to the Claremont Railway, signed by the City of Claremont, NHDOT, NHDHR, and the Federal Highway Administration (FHWA) pursuant to Section 106. All of the Section 106 mitigation has been completed.

Pete Steckler (TNC) was interested in the proposed baffles and whether the culvert design provided for terrestrial wildlife passage. He suggested we look at the channel width and consider a low flow channel. The terrestrial wildlife connection doesn't need to be above the water level always (just most of the time) which can be accomplished with a low flow channel and flat boulder shelf on one side of the culvert. Boulders could also be used instead of baffles. He offered to share some example project plans with VHB to illustrate the concept. It was noted that it may be challenging to construct a culvert that can convey the BFW and allow space for bank terrestrial wildlife passage. He also requested that a permit condition may require that the resulting mitigation for this project gets incorporated in the GRANIT data (including the Tractor Supply Conservation Easement).

The City of Claremont is responsible for the project permits, including Alteration of Terrain (AoT), Construction General Permit (CGP), NH Department of Environmental Services (NHDES) Standard Dredge and Fill Wetlands Permit Application, and the US Army Corps of Engineers (USACE) State Programmatic General Permit. The FHWA is the lead federal agency. The National Environmental Policy Act (NEPA) process for this project is complete.

*Jessica Bouchard (NHB) did not attend the meeting since the DataCheck Letter (NHB21-3730) did not have any recorded occurrences for sensitive species or exemplary natural communities near the project area.*

### **North Hampton/Rye, #42312:**

**Presenters:** Tobey Reynolds, NHDOT

Tobey stated the objective of the presentation is to seek input from agency members and provide an overview of the project to restore the seawall revetment along NH 1-A. Multiple storms battered the coast in 2018, causing lasting structural damage to the seawall, originally constructed in 1978. FEMA conducted inspections of the damage in late summer 2018 and issued findings in November 2018. DOT contracted with GZA to develop concept design alternatives and conduct a planning study to allow DOT assess cost estimates, which was completed in April 2021. The study only reviewed portions of the seawall damaged in 2018, no concrete or masonry walls were included in the study. An overview map was shown which depicts 13 coastline sections totaling 2.4 miles between Odiorne Point and Little Boar's Head. The focus of the study was to reconstruct existing revetment with added resiliency, not enhance or build new infrastructure.

The GZA study collected and assimilated existing data along the NH coastline, to include bathymetry, flood water levels/inundation, wave modeling and existing conditions vulnerability to assist in the design concept. 10, 50 and 100-year storm events were studied and the NH Flood Risk Model was used determine flood risk in the proposed design. A medium/low tolerance for flood risk was evaluated. A 25-year design life was used (2050), although Tobey noted it could last longer with ongoing maintenance and this is a typical design life for coastal infrastructure. The design also accounted for 2' sea level rise (SLR) predictions.

Two basic concepts were considered; replace 1978 original construction in-kind or enhance resiliency of the existing design with incorporation of rip rap on the backslope. In both concepts reconstructed the revetment would be constructed to the 1978 height or the existing height (whichever is larger). No tidal delineation has been completed to date and was not part of the GZA study. Slides were shown depicting both the original 1978 design plan and proposed resilient reconstruction concept for all sections. Although design varied per section, the basic design shows large armor stone on ocean side over layers of small rip rap and roadside with a shale core. The shale core would be covered by geotextile fabric to allow structure to maintain while allowing flood waters to pass.

Karl B deferred to Eben Lewis of the DES Coastal Program for comment.



Eben asked is the 100-year elevation shown incorporated SLR or present conditions? Tobey stated SLR was accounted in the design concepts. Eben asked if the design intends to rebuild in the existing footprint? Tobey said the design intends to replace to 1978 or approximate existing location. The approximate slopes of today would be maintained. Eben asked if existing stone would be used, or new material brought in? Tobey stated existing material would be used where possible in an effort to save resources and money, although material like larger stones may need to be brought in. Eben appreciated the use of geotextile to help lessen erosion of shale and continued migration into adjacent salt marsh. Eben anticipated a possible minimum impact project and additional data will need collection, to include a coastal vulnerability assessment and coastal functional assessment. Mean high water and highest observable tide data will also be collected for all sections along project area.

Lori S anticipated project, as proposed, covered under protection of existing infrastructure and will not require mitigation. She asked if design furthers footprint seaward direction to be shown on plans. Eben concurred so long as work is conducted at low tide and above mean high water.

Mike H stated if FEMA is the lead agency NEPA will need to be completed under that agency. He further stated if there was no salt marsh impact the work could likely be done under the programmatic general permit (individual not required).

Pete S- no comment.