BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: October 19, 2016
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Matt Urban
Sarah Large
Ron Crickard
Mark Hemmerlein
Marc Laurin
Kerry Ryan
Jon Evans
Anthony Weatherbee
Chris Carucci
Dave Smith
Victoria Chase
Gerald Bedard
Jon Hebert
Wendy Johnson
Ron Kleiner
Jessica D'Entremont
Charles Blackman
Maggie Baldwin
Keith Cota

Army Corps of Engineers
Michael Hicks

NHDES
Gino Infascelli
Lori Sommer
Mary Ann Tilton

NH Fish & Game
Carol Henderson

NH Natural Heritage Bureau
Amy Lamb

Consultants/Public Participants
Christine Perron
Vicki Chase
Mike Long
David Kull
Jed Merrow
Steve Hodgdon
Peter Walker
Chris Bean
Leo Tidd
Mark Hutchins
Michael Fowler
Janusz Czuzowski
Steve Hoffmann
Ben Martin

(When viewing these minutes online, click on an attendee to send an e-mail)

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NOTES ON CONFERENCE:

Finalization of September Meeting Minutes

The September 21st meeting minutes were not finalized. Matt Urban indicated that we would like to finalize them with the October meeting minutes at the November 16th meeting. No objections to finalizing the minutes at that time were made.

Andover 208/137, Non-Federal, 41189

Tony Weatherbee presented the project. The project scope is to rehabilitate the bridge that carries Rte. 11 over Sucker Brook (208/137). The existing structure is a concrete culvert bridge that has a span of 29'-0". Proposed work consists of the following: place sandbag cofferdams and temporary scaffolding, install weepers, face headwalls, install toewalls below the stream bed, repair the inside of the arch, and place riprap level with the streambed.

Gino Infascelli asked if the permit issued for this structure back in 2003 was for this same project. Matt Urban said that the proposed work did not take place under the permit from 2003. Since the meeting, Tony found out that the work done under the previous permit was separate from the work that is currently proposed. Tony asked if the permit previously issued could be readdressed to assist with the proposed project. G. Infascelli said unfortunately no.

Lori Sommer asked if the riprap will act like a shelf. Carol Henderson asked if the riprap could be made flat on the top for critters to cross. T. Weatherbee said that riprap is placed level with the streambed, so the flat top would only be exposed during no water conditions at the abutment. Also, the riprap will silt in over time, creating a smooth surface.

Mary-Ann Tilton asked what the stream order is. T. Weatherbee said it is a Tier 3 crossing.

M. Urban said that the wetland type is Forested PFO and there is River next to it. Tony said that all impacts are to the channel and bank.

C. Henderson noted that there were no NHB records.

M. Urban asked if there were any mitigation concerns and everyone agreed that no mitigation was required.

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

Francestown 139/102, Non-Federal, 41182

Tony Weatherbee provided an overview of the project. The project scope is to rehabilitate the bridge that carries Rte. 136 over Whiting Brook (139/102). The existing structure is a concrete slab bridge that has a span of 10'-0" and a width of 32'-5". The slab is supported by stone abutments. Proposed work consists of the following: place sandbag cofferdams and temporary scaffolding, strip, patch, membrane and pave the deck, point the stone abutments, install concrete toewalls and repair the southwest wing wall.

Carol Henderson asked what it meant to point the stone wall. T. Weatherbee said that stones that have fallen out of the wall will be replaced and joints between the stones will be filled with grout to solidify the wall.

T. Weatherbee said that there are forested wetlands on both sides of the stream. C. Henderson asked if the wall would be the same construction as before and T. Weatherbee said yes. She also noted that there were no NHB records.

M. Urban asked if there was a need for mitigation. Lori Sommer asked if the wingwalls would be extended. T. Weatherbee said the wingwalls will not be extended. M. Urban said that it is a Tier 3 watershed. A toewall will be installed in front of the wingwalls and rip rap at bed grade but they will not be extended. L. Sommer said that that mitigation is not required.

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

Grantham 140/069, Non-Federal, 41188
Tony Weatherbee provided an overview of the project. The project scope is to rehabilitate the bridge that carries Rte. 114 over Stocker Pond Outlet (140/069). The existing structure is a concrete slab bridge that has a span of 24'-0" and a width of 36'-3". Proposed work consists of the following: place sandbag cofferdams and temporary scaffolding, replace the deck, and place riprap at stream bed if missing.

Matt Urban described the wetted channel lines vs. OHW (ordinary high water) lines on pictures and on the plan. T. Weatherbee said that riprap is proposed in front of all the abutments even though there is already riprap at some locations. T. Weatherbee showed an image of an ATV bridge located downstream.

T. Weatherbee said that it is possible for the project to be constructed using concrete anchor bolts drilled into the abutments to support the staging. M. Urban said that the water level when he was there was knee to thigh deep. Carol Henderson asked if we prefer to stage construction with the anchor bolts. T. Weatherbee said that it saves us time to be out of the water, but we would like to get the permit just in case.

Amy Lamb said that there are no NHB records in the area. Lori Sommer said that mitigation is not required.

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

Enfield #12967B, (X-A001(087))
Jon Evans began by giving a brief overview of the project. This project involves pedestrian improvements and pavement rehabilitation along Main Street in Enfield, NH. The project begins approximately 350 feet north of the Main Street/Bridge Street intersection and proceeds north/northeast approximately 650 feet to a point approximately 250 feet to the northeast of the Main Street/Sargent Street intersection.

The Northern Rail Trail (formerly the Northern Railroad) passes over Main Street within the project area via a narrow, low clearance bridge. For multiple years the Department has been

working to address various concerns associated with this crossing. In 2010 when the Shaker Bridge was closed due to structural concerns and in advance of the replacement effort, the Department was forced to construct a bypass road around the Northern Rail Trail Bridge in order to allow emergency vehicles, delivery trucks and school buses to access the neighborhood between Mascoma Lake and the rail trail.

Upon completion of the newly constructed Shaker Bridge, the Department began investigating various alternatives which would address vehicle and pedestrian passage issues at the Main St./Northern Rail Trail crossing. Among the alternatives that were reviewed were several which would have eliminated the Northern Rail Trail Bridge over Main Street through the creation of an at-grade Main Street crossing. These alternatives were met with opposition and concern over an at-grade crossing. As a result the Town of Enfield and the Department developed a conceptual plan which would leave the existing Northern Rail Trail Bridge over Main Street intact, would enhance pedestrian access through the project area and would allow for the creation of a multi-use recreational area on the former motel property between the rail trail and Mascoma Lake. The former motel property is owned by the NH Department of Transportation and the Town of Enfield holds an access agreement allowing it to use the property for recreational purposes.

Chris Carucci explained the details of the proposed improvements which were advanced based upon the Town of Enfield's conceptual plan. The intent of this effort is to rehabilitate the Main St pavement and connect the sidewalks on either side of the project area to allow for continuous pedestrian access between Enfield Village and Mascoma Lake. This will be achieved by constructing a sidewalk across the former motel property between the Northern Rail Trail and Mascoma Lake to the east of the Northern Rail Trail Bridge. A portion of the pavement along the bypass road will be removed to offset the additional pavement/impervious surface area necessary to construct the new sidewalk and make the bypass road less likely to be used by unauthorized traffic. Gates will also be installed to prevent vehicles from accessing the northern rail trail. The main street pavement surface within the project area will be rehabilitated, an enlarged shoulder will be constructed to the east of the Northern Rail Trail Bridge, and an existing gravel shoulder on Main St will be rehabilitated. Minor changes to the Main St profile and cross slope will improve drainage and gain several inches of clearance beneath the bridge. The parking area on the former motel property will be resurfaced with crushed stone and landscaping features such as boulders or blocks, and plantings will be installed between the lake and the parking area.

C. Carucci noted that no wetland impacts are anticipated as a result of this project, however the project is within the protected shoreland of Lake Mascoma and as such the Department will be submitting a shoreland permit application to NHDES. C. Carucci also noted that the total area of disturbance was anticipated to be approximately 1.1 acres, approximately 0.98 acres of which are within the protected shoreland. C. Carucci also noted that tree clearing is not anticipated as a result of this project.

J. Evans noted that the Town of Enfield is very much in support of this plan, and would like to ultimately turn this property into a multi-use recreational facility. J. Evans noted that although this project has been designed to accommodate for potential future recreational development of this property, the Town's desire to develop this property into a recreational facility in the future is

outside the purpose of this project which is simply to address pedestrian and vehicular access and safety issues along this section of Main Street.

Carol Henderson indicated that this property looks like it would be a desirable location for a potential Fish and Game project. Mark Hemmerlein noted that there is a nearby public motorized boat launch on the other side of the recently reconstructed Shaker Bridge. J. Evans noted that several other agencies have also indicated interest in this property and acknowledged that any potential sale of this property would be subject to the NH Council on Resources and Development's surplus land review process. C. Henderson asked that it be noted in the meeting minutes that future development of this site, beyond the scope of the project, be coordinated with NH Fish and Game in order to ensure that additional recreational enhancement opportunities are not overlooked.

C. Henderson noted that although she was aware of several threatened or endangered wildlife records in the Mascoma Lake area, she did not feel the project as proposed would impact these species and as such did not have any threatened or endangered wildlife concerns.

This project has been previously discussed at the 10/20/1999, 6/18/2003, 2/18/2004, and 3/17/2010 Monthly Natural Resource Agency Coordination Meetings.

Bedford-Merrimack #16100 Bedford Toll Plaza (Non-Federal)

Jon Evans began by giving a brief overview of the project. This project involves the conversion of the existing Bedford Toll Plaza into an open road toll facility similar to those which have already been constructed along I-95 in Hampton and I-93 in Hooksett. Open road tolling allows for the electronic collection of tolls at highway speed without requiring vehicles to stop or slow in order to pay the toll as is the case at the existing conventional toll plaza. J. Evans noted that while this project is located adjacent to two sections of the proposed Nashua-Merrimack-Bedford, 13761 F.E. Everett Turnpike widening project, the Bedford 16100 project is unrelated as it is intended simply to install open road tolling at the Bedford Toll plaza within an area that was recently widened through the installation of the Airport Access Road/Exit 13 interchange.

Dave Smith provided an overview of the project design details. The project involves the implementation of open road tolling at the Bedford Toll plaza by converting 6 of the 13 existing conventional toll lanes into 4 open road toll lanes. The necessary E-ZPass infrastructure would be installed on a full span toll gantry which would be placed over the open road toll lanes. For safety reasons the high-speed lanes would be separated both directionally and from the adjacent conventional toll plazas through the construction of three concrete barriers. In order to maintain 4 conventional toll lanes in each direction an additional cash lane will be constructed on the east side of the plaza which may require modification of the existing administration building.

D. Smith noted that as this area was recently reconstructed and widened during the construction of the Manchester Airport Access Road, very little roadway widening will be necessary to accommodate for the proposed open road toll plaza design and as such very few natural and cultural resource impacts are anticipated. D. Smith noted that slight roadway widening would be necessary at 3 out of the 4 quadrants of the proposed plaza configuration which would require the following approximate increases in impervious surface area:

- Northbound, South of Toll Plaza = 16, 010 sf (0.368 acres)
- Northbound, North of Toll Plaza = 19,364 sf (0.445 acres)
- Southbound, South of Toll Plaza = 2,799 sf (0.064 acres)

D. Smith also noted that the extent of the existing pavement would actually be reduced by approximately 23,860 sf (0.548 acres) at the northwest quadrant adjacent to the southbound approach to the toll plaza. These changes would result in net increase of approximately 14,313 sf (0.329 acres) within the project area. The Department is investigating various best management practices and drainage options to treat the additional runoff resulting from these increases. These treatment measures may include alterations to the existing water quality treatment areas which were constructed in association with the Airport Access Road.

D. Smith noted that permanent wetland impacts (approximately 6,600 sf) were anticipated on the inside of the curve to the southwest of the plaza and were associated with minor slope widening in this location. J. Evans noted that Normandeau Associates had indicated that this wetland was basically a wet meadow which was periodically mowed.

D. Smith indicated that the signs approaching the toll plaza from both the north and south would need to be adjusted to accommodate for the new plaza design and updated guidelines since the construction of the airport access road. As a result of the proposed sign package, it is anticipated that an additional 400 sf of temporary impacts would be necessary on the northbound side of the turnpike just to the north of the existing soundwall.

D. Smith noted that in order to accommodate for the additional effort required to plow the proposed open road toll facility, the Department also needs to install two maintenance vehicle ramps at exit 12 in Merrimack. This exit currently only contains a southbound on-ramp and a northbound off ramp and would require southbound maintenance vehicles to go all the way to exit 11 (approximately 4 miles away) to turn around to complete plowing operations on the northbound side. As such, a southbound maintenance ramp would be constructed between the Turnpike and Back River Road and an additional northbound maintenance ramp would be constructed between Bedford Rd and the Turnpike.

D. Smith noted that the project would likely advertise sometime in the spring of 2017 with construction beginning early in the summer of 2017. The anticipated project completion date would be in the fall of 2018.

J. Evans noted that both Sebbins Brook and Pointer Club Brook are both located within the project area; however impacts to both of these surface waters are not anticipated. He also noted that although wetlands in the area of the proposed Exit 12 maintenance ramps had not yet been delineated, any impacts in this area were anticipated to be minimal and as such impacts are not anticipated to require mitigation. Lori Sommer agreed that as long as the mitigation thresholds were not exceeded mitigation would not be necessary.

J. Evans noted that the main project area associated with the open road toll conversion would not require any tree removal; however the construction of the proposed maintenance ramps at exit 12 in Merrimack would require trees to be removed at both ramp locations. J. Evans noted that as the entire state is listed as potential habitat for the federally listed northern long eared bat, the proposed

tree removal in the area of the proposed maintenance ramps must be reviewed by the US Fish and Wildlife Service. He noted that as the proposed tree removal is would be completed in proximity to the Turnpike and there are no known northern long-eared bat roost trees or bat hibernacula within or nearby the project area, the Department intends to work with the US Army Corps of Engineers as the lead federal agency to utilize the 4(D) rule of the endangered species act without the implementation of any avoidance and minimization measures. Mike Hicks agreed with this approach and indicated that he would assist the Department in coordinating this effort with the US Fish and Wildlife Service. He also encouraged the Department to complete an updated IPaC search to ensure no other federally listed threatened or endangered species were within the project area that should be coordinated at the same time. J. Evans indicated that the most recent NH Natural Heritage Bureau search did not indicate the presence of any federally listed threatened or endangered species were within the project area but that he would complete the necessary IPaC search.

J. Evans noted that the most recent NH Natural Heritage Bureau search was completed about a year ago and therefore an updated search would be submitted in the near future. He noted however that the most recent search indicated the potential presence of the bird's foot violet, a state listed threatened species. J. Evans indicated that the Department was aware of the existence of this plant species throughout the corridor of the F.E. Everett Turnpike. He noted that the nearest known location was to the south of the existing soundwall which is approximately 1,000 feet from any proposed efforts. He also noted that it was his understanding that the bird's foot violet grows primarily in cleared areas and requires special mowing practices which avoid mowing during the spring at a height greater than 6 inches. As the areas that would be disturbed in association with the proposed project would either be in a forested area (at the exit 12 maintenance ramps) or within areas which are frequently mowed starting in the spring at a height below 6 inches, J. Evans felt impacts to any bird's foot violet plants were unlikely. He also mentioned that he had completed several field reviews of the project area, including during the spring flower season and did not note the presence of any bird's foot violets. Amy Lamb noted that although an updated heritage bureau search was necessary, she agreed that it was unlikely that the bird's foot violet was present within the proposed impact areas and as such no further investigation related to the presence of this species would be necessary unless the project limits changed substantially.

Carol Henderson requested that the Department limit the use of concrete barrier as much as possible as it can cause wildlife to become trapped within the highway which usually results in mortality. D. Smith indicated that the use of concrete barrier would be minimized as much as possible while still meeting the necessary design safety requirements.

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

Nashua-Merrimack-Bedford #13761 (Non-Federal)

Jed Merrow introduced the project. The primary purpose of the project is to relieve traffic congestion on the turnpike segments that are two lanes in each direction, presumably by widening to three lanes. There are three segments that would be widened: From Exit 8 in Nashua to Exit 10 in Merrimack, from Exit 11 to a point north of Exit 12 in Merrimack, and north of Exit 13 (Airport Access Road) to the I-293 interchange in Bedford. The road would be kept on the existing

alignment where possible, with widening to both the middle (median) and outside edges and a jersey barrier in the median. NHDOT plans to prepare an environmental assessment with FHWA as the lead federal agency; although it is a turnpike-funded project, it is a project of Divisional Interest. Mike Hicks will send a letter to FHWA once this is confirmed.
Design work has only begun very recently.

J. Merrow described existing natural resources that have been identified to date. The southern segment has areas of intact wildlife habitat on both sides of the highway, especially around Pennichuck Brook. The middle segment has areas of intact habitat and conservation lands in several locations along the corridor, notably the Birches Open Space, Wildcat Falls Conservation Area, Indian Rock Open Space, and Dumpling Brook Wildlife Management Area, all on the west side of the turnpike. The northern segment has only a few smaller patches of intact habitat and conservation land.

Exemplary Natural Communities include a high-gradient rocky riverbank system (the Souhegan River) and red maple floodplain forest (along Baboosic Brook). The state-endangered brook floater, state-threatened bird-foot violet, state-endangered eastern hognose snake, state-endangered New England cottontail, and state-special concern wood turtle are all found in multiple places along the corridor. Carol Henderson noted that the brook floater, although it is not shown as occurring in Naticook Brook, but may occur in the brook or associated ponds. The state-threatened northern black racer had been found near the northern end of the southern segment, but the habitat may no longer be present. A state-endangered Blanding's Turtle was found on the edge of the turnpike north of the Souhegan River, and several other state-listed species have been found nearby. Carol Henderson asked about cottontail habitat and noted they could occur in any dense shrubby or early successional areas, including shrub swamps and urban areas. The Souhegan River and a portion of Naticook Brook are designated Essential Fish Habitat, which will require coordination with the National Marine Fisheries Service. The Souhegan is also a Designated River in the state rivers program. The study area is also within the northern long-eared bat's range, so tree clearing would need to be addressed.

Wetlands occur in many places along the corridor and have been delineated and mapped. Notable wetlands include the areas along Pennichuck Brook, a wetland complex between Wildcat Falls Conservation Area and the turnpike, a shrub swamp along the east side of the northern segment, and wetlands within the I-293 interchange. There are also several potential vernal pools. Waterways include Pennichuck Brook (also called Bowers Pond in the project area), Naticook Brook, Souhegan River, Baboosic Brook, and two unnamed streams, all of which are believed to be perennial streams. Most of the streams are impaired in terms of water quality, and the unnamed stream just south of the I-293 interchange has very high chloride levels.

The Pennichuck Brook bridges will need to be replaced. The Souhegan River bridge is fairly new and sufficiently wide to accommodate a wider turnpike, and will not be altered. At Baboosic Brook, the existing twin 15-foot wide box culverts are in good condition but will need to be extended or replaced. The floodplain and floodway are mapped as reaching several feet above the turnpike elevation. The Town of Merrimack is studying all of the structures along the brook from Bedford Road (upstream) to the Merrimack River. MJ has requested the hydraulic study done for

that project. Baboosic Brook also has an exemplary natural community, rare species, and wetlands. The three other stream culverts will probably need to be extended or replaced.

Potential impacts to these resources have not yet been determined, with the exception of Pennichuck Brook, where several bridge alternatives are under consideration. A matrix was handed out which lists the 7 alternatives and options that have been considered to date. The cost estimates include approximate mitigation costs (based on the stream calculator). Alternatives 2 and 4 involve temporary causeways and bridge, resulting in higher temporary impacts and cost without other advantages. Alternative 5 involves rehabilitation, but would still involve permanent impacts and would not address structural concerns with the existing bridges. Alternative 6 would require one lane of traffic in each direction, which would result in substantial traffic delays. Alternative 7 would involve removing both causeways, which would increase the amount of aquatic habitat but would cost around $24.5 million. For these reasons, Alternatives 2, 4, 5, 6, and 7 were proposed to be eliminated. There was general agreement with this decision.

Alternative 1 proposes a 14-foot shift in the alignment to the east and widening without a temporary causeway or bridge, so temporary impacts would be lower. Alternative 3 would maintain the existing centerline but would require a temporary causeway and bridge. Either Alternative 1 or 3 could be constructed with 2:1 or 1.5:1 side slopes or with retaining walls. Additionally, alternatives that would result in “net zero” impacts to the brook were investigated. This would be accomplished by reducing the lengths of the causeways and constructing longer bridges. The longer bridges would require deeper steel beams, so the road profile would have to be raised, resulting in more fill in the brook along the sides of the alignment. To compensate for the additional fill, more of the causeways would have to be removed, making the bridges even longer and much more expensive. For this reason, “net zero” alternatives with 2:1 or 1.5:1 side slopes would not be feasible, and it was agreed did not need further study. Net zero alternatives with retaining walls will continue to be studied, although it was noted that retaining walls have higher initial costs and long-term maintenance and replacement costs.

In summary, Alternatives 1 and 3 with 2:1 and 1.5:1 side slopes and retaining walls will be studied, along with net zero options with retaining walls. Ideally the design would include a shelf for wildlife travel under the bridge, although terrestrial wildlife numbers might be low. Mr. Hicks noted that there is floodplain and floodway and associated regulatory requirements at this location, typically requiring no increase in the base flood elevation. FEMA regulations may be revised soon. Pennichuck Brook and associated wetlands are prime wetlands in Nashua, which have stricter impact and mitigation considerations. MJ will follow up on a question regarding ownership of the land at/under Pennichuck Brook. Regarding mitigation, the NHDOT owns a parcel north of the Souhegan River, between the Wildcat Falls Open Space and the turnpike, with a high quality wetland complex and potential mitigation value. NHDOT will provide the consultant team with a list of surplus properties. Ms. Sommer noted that a parcel with high conservation value was preserved within the Pennichuck Brook watershed that could be an example for this project’s mitigation.

Nest steps include historical and archeological resource studies, evaluating the mainline widening impacts, avoidance and minimization of impacts, Baboosic Brook alternatives. The Draft EA is

planned to be available in June 2017. Coordination regarding conservation land impacts should commence as soon as possible.

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

Ossipee #14749 (X-A000(490))

Christine Perron provided an overview of the project's status and proposed impacts. The project proposes to replace three bridges and rehabilitate 3.4 miles of NH Route 16/25. The bridges span the Lovell River, Bearcamp River, and Bearcamp River Relief. The bridge over the Lovell River will be replaced on the same alignment and a temporary bridge will be installed upstream to maintain traffic during construction. The bridges over the Bearcamp River and Bearcamp Relief will be replaced on the same alignment using slide-in bridge construction, which involves building the new bridge next to the existing bridge, closing the road for a 60-hour period per bridge, and sliding the new bridge into place.

This project was last discussed at the August 17, 2016 resource agency meeting. The only substantial change in the project's design since that meeting involves the proposed pavement treatment. The original treatment was going to result in raising the roadway approximately 12" in some locations, which would require slope widening. Pavement treatment that is now proposed will result in only a ½" raise in roadway, so widening slopes will not be necessary. The only exception to this is the slope widening that will be necessary at the Lovell River and Bearcamp River bridges to match the approach roadway into the new bridges that will be installed at a higher elevation.

The project schedule was reviewed. The project is near the end of the preliminary design phase, with a draft NEPA document to be completed in early November and a DOT Public Hearing expected in early December. Once the Hearing Commission makes a finding of necessity, the NEPA document will be finalized and final design of the project will begin. At this time, an advertising date in the summer of 2018 is anticipated. Based on the current schedule, permit applications will be prepared in mid-2017. The project will be reviewed with the resource agencies once more, prior to submittal of permit applications.

The Lovell River and Bearcamp River bridges are Tier 3 stream crossings. The Lovell River has a bankfull width of 45' based on field measurements. The span recommended by the Stream Crossing Guidelines (1.2x bankfull+2') is 56'long. The existing span is 58' long. The proposed span is 97'long, with the new abutments placed behind existing abutments and the existing abutments removed. The stream crossing general design criteria and Tier 3 design criteria were reviewed. The existing span meets these design criteria, including the opportunity for wildlife passage under the bridge (smaller animals) and accommodating the 100-year storm. The proposed span would also meet these design criteria. The new bridge would have abutments further back from the top of bank and could seek to improve wildlife passage by providing a more level shelf in the riprap.

The Bearcamp River has an estimated bankfull width of 145'. This is calculated from the regional geometry curves based on a drainage area of 150 square miles. At the time of the stream assessment, the river was too deep to obtain accurate field measurements of bankfull width. A laser distance finder was used in the field and resulted in bankfull measurements of approximately 120'. Measuring the distance from top of bank to top of bank off the plan shows a width of approximately 135'. Based on these numbers, the calculated bankfull width of 145' seems reasonable. The span recommended by the Stream Crossing Guidelines (1.2x bankfull+2') is 176'long. The existing 5-span bridge is 392' long. The proposed 3-span bridge will be 410' long with the new abutments placed behind existing abutments and existing abutments removed. In addition, the new bridge will have two piers instead of four. The two

existing piers currently in the river channel will be removed. The two new piers will be located near the top of bank, with riprap around each pier. Ample opportunity for wildlife passage exists at this bridge since it spans portions of the adjacent floodplain. The bridge will also accommodate the 100-year storm.

Gino Infascelli commented that, with the proposed piers on the bank of the Bearcamp River, the design does not technically span the river according to the NHDES definition of span. Therefore, the Bearcamp River bridge would need to be permitted as an alternative design under the Stream Crossing Rules.

Drainage work along the 3.4-mile project will consist of two culvert replacements. One of the culverts carries a perennial stream and has a drainage area of 0.2 square miles, making this a Tier 1 stream crossing. The culvert is a 36" corrugated metal pipe. Another 36" pipe is located immediately downstream under a railroad line. Therefore, the culvert under NH Route 16 will not be upsized and will be replaced in-kind.

Preliminary wetland impacts were reviewed. Impacts at the Lovell River will consist of the following:
Wetlands (wet ditch) – 3,532 sq ft permanent; 0 sq ft temporary
The wet ditch will be reconstructed at new toe of slope.
Bank – 2,669 sq ft permanent; 2,090 sq ft temporary; 200 linear feet permanent
Permanent bank impacts are due to riprap that will be placed in front of new abutments.
Channel – 0 sq ft permanent; 0 sq ft temporary

Impacts at the Bearcamp River will consist of the following:
Wetlands (forested wetland) – 0 sq ft permanent; 19,926 sq ft temporary
This area includes any wetland within the limits of a proposed construction easement. If forested wetlands will be temporarily impacted during construction, impacts will consist of clearing but not grubbing.
Bank – 606 sq ft permanent; 3,043 sq ft temporary; 100 linear feet permanent
Channel – 585 sq ft permanent; 1,344 sq ft temporary; 68 linear feet permanent
Permanent bank and channel impacts are due to riprap that will be placed around the new piers.

Impacts associated with drainage work, which consists of replacing a Tier 1 stream crossing and replacing a culvert located between two palustrine wetlands, total 1,050 sq ft of temporary wetland impact and 120 sq ft of channel impact.

A summary of preliminary impacts for the overall project was given:

- Total permanent impacts to wetlands: 3,532 sq ft (ditch to be reconstructed)
- Total permanent impacts to channels: 585 sq ft (68 linear feet)
- Total permanent impacts to banks: 3,275 sq ft (300 linear feet)
- Total overall permanent impacts: 7392 sq ft (368 linear feet of bank/channel)

C. Perron asked for input on the proposed impacts relative to the anticipated need for mitigation. Matt Urban commented that the linear feet of the two existing piers could be counted as mitigation credit since the piers will be removed from the river. Lori Sommer agreed and said that the remaining linear feet of permanent bank and channel impacts would require mitigation since the impacts are from new riprap. L. Sommer was agreeable to an in-lieu fee as mitigation; however, she asked that the Department first contact Jan McClure at The Nature Conservancy to determine if there may be appropriate projects in the area that could serve as mitigation instead of the in-lieu fee.

The Bearcamp River is subject to the Shoreland Water Quality Protection Act and the project will require a Shoreland Permit By Notification.

The Bearcamp River is Essential Fish Habitat (EFH) for Atlantic salmon. The EFH Assessment has been submitted to the National Marine Fisheries Service. A response has not yet been received; however, it is not anticipated that the project will be considered a substantial impact to EFH.

A sensitive State-listed plant species occurs to the west of the project area in a location that will not be impacted by the project. A number of exemplary natural communities are located near or adjacent to the project. The one community that is directly adjacent to the project is a kettle hole bog. There is one existing culvert that outlets directly into kettle hole bog and NHDOT is not proposing repairs or replacement of this culvert. The 36" culvert that will be replaced carries a perennial stream under NH Route 16. From the outlet of this culvert, the stream then flows into another 36" culvert located under the rail line and eventually drains into the kettle hole bog system. The NH Natural Heritage Bureau did not have concerns with the proposed culvert replacement since the pipe is not being upsized and drainage patterns will not be altered to direct more roadway runoff into the kettle hole bog. The only other work that is proposed in the vicinity of the bog is paving. Amy Lamb asked that consideration be given to improving stormwater treatment in this area and/or improving the buffer between the roadway and bog.

The federally-listed small whorled pogonia was listed as a potential concern in the USFWS IPaC report. C. Perron noted that she has completed a number of field reviews throughout the project area this summer and approximately 5 years ago. The habitat types that may be impacted by the project primarily consist of mowed roadside, floodplain forest, scrub-shrub and emergent wetlands, and dry oak-pine upland forest, none of which are habitat types where this species is typically found. There is one area at the Lovell River that consists of dense hemlock and red maple with little ground cover. This area has been reviewed on two occasions and small whorled pogonia was not found. An email has been sent to Maria Tur at USFWS to seek concurrence that there are no concerns with this species.

Regarding northern long-eared bat, the project will require some tree clearing; however it is anticipated that the clearing will meet the criteria for concurrence under the FHWS Programmatic Consultation.

The project will result in impacts to the Lovell River and Bearcamp River floodplains. No impacts to the regulatory floodway are anticipated at either river. Floodplain impacts will consist of 1,174 CY of fill. The Department met last week with Mike Hicks (Army Corps) and Jennifer Gilbert (Office of Energy and Planning) to review proposed impacts. The Department is now in the process of identifying proposed mitigation for the floodplain impacts. Some mitigation will be in the form of design elements, such as moving bridge abutments back. There may also be some opportunity to provide an area of flood storage near the Lovell River. The Department will summarize impacts and proposed mitigation in a letter to the Army Corps and Office of Energy and Planning and will continue to coordinate as necessary.

This project has been previously discussed at the 1/16/2016 amd 8/17/2016 Monthly Natural Resource Agency Coordination Meetings.

Sanbornton #16154 (X-A001(158))

Steve Hodgdon (VHB) provided an overview of this project, which involves repair of Sanbornton Bridges #127/099 and #124/096 which carry the northbound and southbound barrels of I-93 over Salmon Brook in the Town of Sanbornton.

Working from a set of slides (see attached), S. Hodgdon explained that northbound bridge is in generally good condition, but some minor repairs to the center joint of the roof slab and two wingwall joints on the downstream abutment, as well as some patching or crack-filling along the roof slab and walls. Short term lane closure and traffic shifts would be required during

construction. Currently, no permanent wetland impacts are anticipated. Temporary impacts would include installation of cofferdams and construction staging in the bed of Salmon Brook. It is not anticipated that construction equipment would need access within the bridge. Rather, short duration cofferdams would be placed intermittently along the culvert walls to repair concrete cracks/spalls which are located below the waterline.

Repairs at the southbound bridge are even more limited. Only minor repairs to the bridge fascias are required. No permanent impacts would be necessary, and temporary impacts would be limited to the installation of staging in the stream bed to allow workers to access the fascias. No dewatering or channel diversion structures are expected.

Carol Henderson asked whether the concrete repairs would involve removal of damaged concrete. S. Hodgdon responded that unsound concrete would be removed using hand tools to ensure that the new concrete adheres properly. C. Henderson requested that the contractor be required to take measures to prevent any deposition of material into the stream. S. Hodgdon confirmed that such measures would be included in the construction requirements, as is standard for these types of projects.

Mary Ann Tilton asked what percentage of the bridge surface area requires repair. S. Hodgdon estimated that the total repair is less than 1% of the total area inside the bridge.
C. Henderson asked when the repairs would be completed. S. Hodgdon responded that the work would likely be conducted in 2018, but that the Department may accelerate this schedule.
Mike Hicks asked for confirmation that all impacts would be temporary, and asked about the cofferdam construction type. S. Hodgdon responded that cofferdams could be constructed of marine plywood. M. Hicks explained that sheet piling or plywood cofferdams would not be considered fill, and therefore would be exempted from Section 404 jurisdiction. Sand bag cofferdam or other fill types would require a permit from the Corps.

Gino Infascelli indicated that, because this is a crossing of a Tier 3 stream, the project would be classified as a major impact project even with the limited impacts.

Mark Hemmerlein asked whether there was any evidence of scour damage to the bridge. S. Hodgdon confirmed that there was no scour observed; the stream is low gradient with low velocities such that this is not a concern.

Matt Urban asked whether there were adjacent wetlands that might be impacted for access. S. Hodgdon replied that wetlands had been delineated within and along the brook, but that the repairs require access by workers with hand tools and light equipment only. No temporary causeway or other impacts are anticipated.

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

Bedford #13953 (Z-A000(143))
Marc Laurin stated that the Wetland Permit applications for the project, the widening of NH 101 from Wallace Road to NH 114/Boynton Street, have been provided to NHDES and ACOE. The

focus of the meeting is to update the impacts to the streams and discuss the appropriate mitigation for the proposed stream impacts throughout the project. He passed around photographs and a handout showing of the proposed stream impact areas. Discussion ensued and the following determinations were made on the project stream impacts:

- Riddle Brook (Wetland #7) - There will be 27 linear feet (lf) of permanent impacts to Riddle Brook resulting from the construction of a new pipe outlet. Consensus was that this impact will be mitigated as part of the ARM fund payment.

- Tributary to Riddle Brook (Wetland #14) - Approximately 155 linear feet of the tributary will be impacted within an existing man-made stone lined channel extending from Wetland #15 to a culvert that directs the flow under NH 101. The channel will be filled in and a stone-lined channel will be re-created to the north of the existing channel. After discussion of the concern by the resource agencies on making the stream more functional with re-vegetating L.Sommer stated that adding some alders or silky dogwood or other vegetation currently present along the slopes would be good. Charlie clarified that the current plan was to plant grass and wildflowers on the southern slope of the new channel bank and that the landscaping plans have not been finalized. L. Sommer asked that DOT run the plant list by DES once the landscaping plan is finalized. M. Laurin stated he would provide

  Mike Hicks inquired about the floodplain impacts in this area. M. Laurin replied that the impacts are estimated to be less than 0.1 acre feet. Relief will be provided with the inclusion of a bypass pipe along the north side of NH 101 from the channel extending west to Riddle Brook that will assist in reducing ponding in this area.

- Tributary to Riddle Brook (Wetland #13) - Matt Urban describe the impacts around the outlet of the culvert under NH 101. The existing stone apron is being put back where it currently exists. Consensus was reached that this was repair of an existing structure and mitigation is not required.

- Intermittent Stream on Meetinghouse Road (Wetland #36) - M. Urban reviewed the area that was designated in the permit application as an intermittent channel. The area has been ditched and is the result of maintenance activity to convey runoff from a 15 inch drain pipe under Meetinghouse Road into the wetland. It is less than 75 linear feet. All agreed that this is not an intermittent channel and will be designated as wetland impacts only.

  Tributary to Bowman Brook (Wetland # 54) - M. Urban described this small channel, located at the toe of NH 101 roadway slope, that appears to have been established in the past by dredging along the edge of an emergent wetland to convey water off the property. Approximately 475 lf of the channel will be impacted due to the widening of NH 101. A new stone-lined channel will be constructed to the south along the proposed roadway slope. M. Laurin described that the channel seems to dissipate downstream into an emergent wetland located at a small stone culvert that extends under an abandoned woods road. This stone culvert, and a newer concrete drive pipe located within the channel, will be removed and a channel established that will improve stream flow and connectivity downstream. An

aerial view (Google Maps) of the area was reviewed and confirmed that this is a jurisdictional channel and it extends to the stone culvert. Lori Sommer noted this is through and emergent wetland and constructing a stone lined channel (class c stone) is not self mitigating. M. Laurin stated that they will re-vegetate the banks of the new channel and that DOT will provide the planting plan once it is more finalized.

- M. Laurin briefly discussed the stream impacts of the Tributary to Bowman Brook at Wetland #57. Impacts will result from construction of an outlet from a proposed Water Quality Basin to be located further downstream (north of the abandoned woods road). These impacts need to be modified as there are errors in their quantification (e.g. some Bank impacts are noted as Channel impacts). Consensus was reached that these impacts will be mitigated as part of the ARM fund payment.

- At another Tributary to Bowman Brook located at Wetland # 58 (near Constitution Drive) an existing stone apron is being put back where it currently exists. These impacts need to be modified as there are errors in their quantification (e.g. some Bank impacts are noted as Channel impacts). Consensus was reached that the impacts was repair of an existing structure and mitigation is not required.

An Amendment to the permit applications will incorporate the changes discussed at this meeting and will include design and planting plans with appropriate details. DOT will provide this information in early November. L. Sommer stated that this may require a request for a time extension from the Wetlands Bureau. Victoria Chase stressed that the constraints of the project require that the permits be issued by late February or early March 2017.

Amy Lamb stated that there are no NHNHB hits for the project, but reminded DOT that their Memo expires in November.

This project has been previously discussed at the 9/18/2016, 3/19/2017, 6/18/2014, 10/15/2014, 1/20/2016 Monthly Natural Resource Agency Coordination Meetings.

Derry-Londonderry #13065 (IM-0931(201))
Highlights from a PowerPoint presentation as well as key items discussed are note below.

1. <u>Current Status of the Project (Chris Bean, CLD)</u>
    a. FHWA requested a Supplemental DEIS to address new information since the 2007 DEIS.
    b. Updating studies began in June 2016.
    c. SDEIS will update No Build and the 5 Build Alternatives.
    d. Town is managing the SDEIS process phase with oversight by NHDOT.
    e. Once project obtains ROD, NHDOT will take over project management.
    f. Lori Sommer, NHDES, asked who will be the permit applicant. Keith Cota responded NHDOT.
    g. Project Schedule: SDEIS/NEPA and Layout Public Hearing (summer 2017), FEIS/ROD late December 2017, Final Design and Permitting (2018-2019) and Construction Advertisement in late 2019.
2. <u>23 USC 139 (Leo Tidd, LBG)</u>

a. FHWA mandated process intended to formalize agency coordination to identify and address issues to avoid project delays.
b. Original Notice of Intent (NOI) 1998. Revised NOI will be issued.
c. Formal Project Initiation Request will be filed by FHWA.
d. Formal invitation letters to Cooperating and Participating Agencies will be issued by FHWA. USACOE, USEPA, USFWS, NHDES and NHFG to be invited to be Cooperating and Participating. If Federal agency, unless you deny in writing, you are automatically included. Non Federal agencies, a request to be included must be received.
e. A Coordination Plan will be issued by FHWA including a Project Schedule identifying when SDEIS components are expected to be provided for review.
f. Agency Kickoff Coordination call will then be arranged to get comments and concurrence with the project schedule.
g. **Amy Lamb of National Heritage Bureau, a division of NHDRED asked if they would be getting an invite. Leo responded that the letter will invite the lead agency (NHDRED) and copy sub agencies such as NHB and Parks & Recreation that we are aware of that will have an interest.**
h. **Carol Henderson of NHFG asked frequency of review requests and extent of background information that will be available. Leo responded that multiple reviews will be requested, depending on the SDEIS component studies of interest to each specific agency. The coordination plan can address the issue of including sufficient background information to facilitate the agency reviews. For example, information on the description of the alternatives needs to be provided with a deliverable dealing with impacts on wildlife habitat so that the reviewing agency has the appropriate context for their review.**
i. Leo noted the previously proposed eNEPA process will not be employed.

3. <u>Natural Resources Technical Studies Update (Mark Hutchins, NAI)</u>
   a. Water resource updates moving forward. Beaver Brook is an impaired waterway for chlorides so project impacts are being quantified and will need to be addressed. Beginning to identify private wells. Draft of water sections due in early 2017.
   b. Database searches for hazardous waste sites etc. are underway.
4. <u>Natural Resources Technical Studies Update (Vicki Chase, NAI)</u>
   a. Rare Plants: some field work (mostly habitat surveys) has been completed. Additional field review will be required in the spring to get in the "window." So far, no potential species of rare plants have been found.
   b. Bat survey was completed. Many bats confirmed but no Northern Long Eared bats.
   c. General wildlife habitat assessments have been completed.
   d. Wetlands and Vernal Pools have been field verified. Will be relying on delineations and vernal pool studies and soil profiles completed by others. Mitigation options will be presented later in the process.
   e. **Carol Henderson, NHFG asked when the vernal pool studies were completed. Vicki responded 2014 and 2015.**
   f. **Amy Lamb, NHB asked where the rare plant survey was completed. Vicki responded everywhere, along all corridors (except Alternative F, through Downtown Derry, which is entirely developed/urbanized).**

g. **Mike Hicks, ACOE asked if an IPAC database search has been completed. Vicki responded that she believed yes but if not, it will be completed.**

5. General Discussion
    a. Keith Cota encouraged utilization of the project website i93exit4a.com
    b. Keith noted lots of great feedback was received at the 9/27/16 Public Information Meeting. There is a strong desire for this project to move forward.
    c. **Carol Henderson, NHFG asked when invitation letters will be sent. Leo responded in a few weeks. The invitation letters will come from FHWA.**
    d. **Mike Hicks, ACOE asked if an agency site walk would be appropriate before the winter season. Chris Bean responded that field reviews of all the build alternatives would cover a large area, but it will be considered.**
    e. **Mike Hicks, ACOE noted that Jamie Sikora, FHWA will be the lead on the project, there are significant floodplain issues and that the impacts to them will need to be addressed in addition to any wetland impacts."**

This project has not been previously discussed at the 5/28/1997, 3/17/1999, 6/16/1999, 10/20/1999, 11/17/1999, 8/16/2000, 7/18/2001, 8/17/2005, 3/15/2006, 5/17/2007, 1/20/2016, and 2/17/2016 Monthly Natural Resource Agency Coordination Meeting.