

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: December 16, 2015

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Matt Urban

Ron Crickard

Anthony Weatherbee

Joe Adams

Army Corps of Engineers

Michael Hicks

NHDES

Gino Infascelli

Lori Sommer

NH Fish & Game

Carol Henderson

NH Natural Heritage Bureau

Amy Lamb

FST

David McNamara

Normandeau

Ian Broadwater

**Belknap County
Conservation**

Lisa Morin

Bedford, 16156, X-A001(160)

Stantec presented an update to the 16156 - Bowman Brook culvert project. It had previously been presented at the July 16, 2014 meeting. The project involves the addressing of the red listed culvert, which crosses under NH Route 114 and the Old Bedford Road bridge at a 45 degree skew. At the time, two options were presented:

- The preferred option was to shorten and then slip line the remaining length of existing 87"x 83" corrugated metal pipe.
- The alternative was to construct a 23' wide box culvert off line.

The purpose of this meeting was to confirm concurrence with the preferred option of shortening and sliplining the existing culvert and discuss potential mitigation options. The two options were briefly reviewed by Stantec. There was concurrence on the preferred option. The alternative to build a new box culvert was determined not to be practicable. While the 23' width met Stream Crossing criteria, the need for a bend, and length of culvert negated some of the benefit.

The preferred alternative is to remove approximately 40' at the inlet and outlet ends of the existing pipe, and slipline the remaining 130' of pipe. Proposed mitigation was presented as follows:

- Cutting back of the existing pipe will create an additional 80' of natural streambed, which will be constructed to mimic the existing streambed.
- An overflow pipe in the 3-4' diameter range will be installed, crossing perpendicular to NH Route 114, and then under the Old Bedford Road bridge to mitigate any changes in flood elevations due to the sliplining. The diameter will be determined during final design modeling, but will be sized to match or lower flood elevations upstream of the culvert.
- An existing perch at the outlet of the current pipe will be corrected during construction of the new pipe end.

- Pending ROW approval, plantings are proposed along the stream edge to provide shade. These would be located on private property, so will require concurrence of the property owner.

Following the presentation, there were several questions and discussion:

Michael Hicks asked – Could the overflow pipe run parallel to the existing culvert?

Stantec – No, the overflow will be too large to fit between the existing culvert and the bridge piers and foundations.

Gino Infascelli recalled a 48” overflow had been discussed.

Stantec noted it may have been, based on current modeling it looked like the pipe would need to be in that general range of 3-4’ in diameter.

Carol Henderson asked if the plans were the same as before, and if the perch would be addressed.

Stantec confirmed the perch would be addressed. The plans are generally the same, the final length of pipe had been extended to accommodate an existing sewer force main. At the previous meeting a reduction of approximately 100’ of existing pipe had been discussed, due to the force main, that number is now 80’.

M. Hicks noted this brook is an Essential Fish Habitat.

Normandeau confirmed the steps proposed at the outlet will improve passage through the corridor.

M. Hicks asked about tree clearing.

Stantec confirmed there would be some, mostly on the inlet side. The project will need to address Northern Long Eared Bats as part of the permitting process.

It was confirmed that this is a Tier 3 stream.

Lori Sommer asked about the stream design in the sections where the pipe is removed.

Stantec responded that the existing channel widths and slope will be mimicked to the extent practical, and stream bed materials will also be designed to match the existing bed in the immediate vicinity.

Amy Lamb noted the NHB request needs to be updated, and that there had been no hits initially. She would also like to review any proposed plantings.

Stantec agreed with both points.

C. Henderson asked if there were a way to roughen the sliplining.

Stantec noted it is possible. General discussion about the topic followed, including the possibility of differing sliplining or pipe rehabilitation methods that may allow for the sliplining. Stantec agreed that roughening of the bottom will be included. If it is not feasible due to hydraulics the project will return to a future Natural Resource Coordination meeting to discuss additional options.

The meeting concluded with the following agreements:

- The four mitigation measures presented would be acceptable, and no additional mitigation will be required.
- The sliplining will include a roughened bottom.
- NHB review will be updated.
- Plantings will be submitted for review.
- There will be further coordination regarding tree clearing due to the Northern Long Eared Bats during the permitting process.