Town of Ashland
MASSACHUSETTS

Comments on Filing

Date: 7/17/2019

Responses Date: 10/22/2019 , Revised: 11/18/2019

Application Type: NOI File No. 95-931

Applicant Name: Mass DOT

Project Address: Route 126 (Pond Street)

* Only open comments from 11/04/2019 Conservation Commission Hearing are noted below:

Comments:

9. In 2.2.1 of the narrative, installation of Erosion and Sediment Control BMPs is mentioned, but the types used are not described until Section 10.1.1 and 10.1.2. Please describe the types of erosion controls to be used (no hay).

Response (10/22/2019) *The Stormwater Report (included in the Appendix F of the NOI) in Section 10 beginning on p. 39 contains the list and description of the primary erosion control techniques proposed (including compost filter tubes, sedimentation fence barriers, and a stabilized construction entrance).*

Response **So noted. If sediment basins are used, it will need approval by the Conservation Commission and this can be a condition of the Order.**

20. CAD files and pdf shall be submitted to the Conservation Agent, Maeghan Dos Anjos. The CAD files will need to be georeferenced to NAD State Plane 83 feet. After speaking with Danielle Spicer on 7/15/2019, a condition will be needed for the Order requiring CAD files at the time of the preconstruction meeting.

Response (10/22/2019) *So noted.*

Response **So noted. We will provide an AUTOCAD file of the wetland lines and buffer lines for the Town's use prior to construction.**

25. Per standard 2 of the Massahcusetts Stormwater Handbook, BMPs must be installed to attenuate dishcarges where an increase is present within the 100 year 24 hour storms. BMPs are restricted due to site constraints (spacing, high groundwater etc.). This should be discussed with the Commission as you are charged with meeting this standard at the maximum extent practicable.

Response (10/22/2019)

The project is meeting the Standards to the maximum extent practicable; as it was noted on p. 25 of the Stormwater Report, implementations of stormwater BMPs such as detention basins, subsurface infiltration basins, etc. for peak rate and volume attenuation in this area were considered; however, they are not feasible due to the limited space within the existing Right-Of-Way (ROW), the high seasonal high groundwater elevation, and existing utilities.

We have requested that additional borings be done near the southern portion of the project where groundwater may not be as high and some drywells may be able to be installed; however, those borings are still waiting to be scheduled by MassDOT. Once the borings are performed, we will submit the findings.

Response

Three additional borings were done by Lamson Engineering Corporation from October 28th - 30th near Spy Glass Hill Drive. The following are the groundwater elevations noted:

- **HB-1, GW not encountered (boring terminated at 8')**
- **HB-2, GW encountered 10' below surface**
- **HB-3, GW encountered 5.8' below surface**

Within the area of HB-3 there is not enough separation to install a drywell and provide 2' of separation between the bottom of the system and groundwater; however, the other two borings indicate groundwater is deep enough to provide separation. Two (2) drywells have been added at Spy Glass Hill Drive in the northwest corner of the roundabout, providing approximately 420 CF of volume for infiltration. Four (4) drywells have been added at Spy Glass Hill drive in the southwest corner of the roundabout providing approximately 400 CF of volume for infiltration. Since HB-1 was terminated at 8', it was assumed GW could be at that elevation; therefore, the four drywells within this location are only 6' below surface to provide 2' of separation to potential groundwater. Revised Drainage & Utility Plan Sheet 94 is attached to these responses.

26. Recharge is not being met at all. The narrative states that you do not have enough space, yet the added impervious area is over 80,000 square feet. Did you consider off-site BMPs? Are there other options available?

Response (10/22/2019)

The majority of the increase in impervious area is due to compliance with complete streets.

We have requested that additional borings be done near the southern portion of the project where groundwater may not be as high and some drywells may be able to be installed; however, those borings are still waiting to be scheduled by MassDOT. Once the borings are performed, we will submit the findings.

Response

As noted above, a total of six drywells have been added to the project. Two (2) drywells have been added at Spy Glass Hill Drive in the northwest corner of the roundabout, providing approximately 420 CF of volume for infiltration. Four (4) drywells have been added at Spy Glass Hill Drive in the southwest corner of the roundabout providing approximately 400 CF of volume for infiltration, for a total of 820CF of volume provided for recharge. Revised Drainage & Utility Plan Sheet 94 which shows the added drywells is attached to these responses.

27. Under Section 6.1 of the Stormwater Report, it is mentioned that the long term pollution prevention measures will be combined with the Town of Ashland's Department of Public Works. However, in in the Operations and Maintenance Plan, Mass DOT is responsible for Route 126. Please clarify.

Response (10/22/2019)

Section 6.1 incorrectly stated that the Ashland DPW would maintain the roadway. Route 126 is a State Route and MassDOT will be responsible for operation and maintenance of the roadway.

Response

Section 6.1. of the Stormwater Report was revised and attached to these responses.

29. Was a site inspection done to look at the existing outfalls, and culverts? If so, what is the quality of these outfalls, pipes, culverts, headwalls and other drainage structures? Will any of these need to be improved as part of the project?

Response (10/22/2019)

At the request of the Town of Ashland and MassDOT, Green performed a visual evaluation of the existing culvert and headwall openings (only) along different Stations of the project route, on March of 2019. On August 6, 2019, a CCTV (Closed Circuit Television) camera mounted to a remote operated vehicle was used to perform a visual investigation of the conditions of the inside of the culverts. We are currently in the process of developing Inspection Findings and Recommendations for the project, that will be shared with MassDOT upon completion.

Response

Based on the results of the CCTV evaluation, replacement of culverts 1, 3 and 4 is recommended:

1. **Culvert 1 at Sta. 37+50 (248-249 Pond Street) was noted to have bulged east headwall, deteriorated ceiling steel plate, and partially collapsing west end, therefore, it is recommended for replacement with a precast box culvert with an equivalent capacity and dimensions of the original culvert; however, the culvert will be deeper to provide baffles and a natural stream bottom.**
2. **Culvert 3 at Sta. 80+40 (71-72 Pond Street) appears to have been damaged at some point in the past and series of pipes were installed within the culvert cross section, backfilled, then paved over, significantly restricting flow and flow capacity within the culvert. Therefore, it is recommended for replacement with a precast box culvert with an equivalent capacity and dimensions of the original culvert; however, the culvert will be deeper to provide baffles and a natural stream bottom.**
3. **Culvert 4 at Sta. 90+00 (Market Basket Plaza) was revealed to have local failures and debris restricting flow capacity in Segment 1, and Segment 2 appeared to have been damaged at some point in the past and series of pipes were installed within the culvert cross section, backfilled, then paved over. Therefore, both segments are recommended for replacement with precast box culverts of the same size/capacity with a large special drainage structure at the existing manhole within the roadway. This culvert collects runoff from a closed drainage system; therefore, a natural stream bottom is not recommended nor proposed for this culvert.**

Revised Drainage & Utility Plan (Sheet 94, 96, 97, 99, 101, 104, 105, and 106) along with Drainage & Utility Details (Sheets 188-189) reflect these changes noted above and are attached to these responses.

30. Under Section 9 of the Stormwater Report, catch basins with a minimum depth of 4 feet are to be specified, and all outlets will have hoods and traps. Are these specified on the plans?

Response (10/22/2019) *Proposed catch basins have been specified with a depth of 4 feet sump and hoods on Drainage & Utility Details Sheet 187.*

Response **What is noted in Volume 2, Chapter 2 of the Stormwater manual is to "*Make the sump depth (distance from the bottom of the outlet pipe to the bottom of the basin) at least four feet times the diameter of the outlet pipe and more if the contributing drainage area has a high sediment load*." All catch basins within the road have 12" outlet pipes exiting them, which meets the 4' sump requirement. There is one catch basin at Sta 15+50 located within an existing swale to pick up runoff that has a 15" outlet pipe. Since this catch basin is not located within the roadway nor does it collect runoff from the roadway or other areas of high sediment a 4' sump is sufficient for this basin.**

47. According to the National Wetland Plant List developed from the Army Corps of Engineers (2016), the Ostrya virginiana is a Faculative Upland plant. The Ostrya virginiana is listed in the replication chart on Sheets 181, 183 and 184.

Response (10/22/2019) *Correct, the Ostrya virginiana is a Facultative Upland Plant. The plant is listed on the replication plans (tables); however, the plans show that the plant is proposed in a flat area approximately 7 feet above the proposed wetlands replication areas.*

It was asked by the Commission during the hearing if we would consider using *Cornus racemosa* instead of *Cornus amomum* in a replication area?

Response **Silky Dogwood (*Cornus amomum*) is a Facultative Wetland (FACW) shrub and more readily available, while Gray Dogwood (*Cornus racemosa*) is just Facultative (FAC) shrub that occurs equally in wetlands and non-wetlands. We recommend keeping the Silky Dogwood (*Cornus amomum*).**

50. A pipe or culvert appears to be proposed within Algonquin Trail and would hydrologically (by way of flow) connect the replication area with Wetland system "L". Please confirm if a pipe or culvert is proposed and revise the plans to reflect this, if necessary.

Response (10/22/2019) *A 61'L x 36"W x 44"H precast concrete box culvert is proposed with a natural stream bottom. See Sheet 99 (Drainage and Utility Plans 8 out of 17). Also, please refer to the Item 997.5 Special Drainage Structure No.5 in the Appendix C - Special Provisions for proposed 36"Wx24"H precast concrete box culvert specifications at Sta. 900+85 (Algonquin Trail).*

Response **As a result of the 11/09/2019 site visit with four Conservation Commission members and Susan McArthur from MassDOT Environmental, and an additional site visit by the Ashland Conservation Agent Maeghan Dos Anjos on 11/13/2019, it was determined that the Wetland series L is not a wetland, but rather an old detention basin: the plants in that area appear to be mostly upland and the soils are not hydric. Therefore, we are removing Wetland series L, the impacts that were related to it, and the associated proposed replication area #2 from the project.**

Consequently, new permanent BVW impacts are 3,798 square feet, and new temporary BVW impacts are 2,904 square feet.

In addition, as a result of the 11/09/2019 and 11/13/2019 site visits the wetland flag F-4 at Butterfield Drive was removed due to the wetland flags being placed very conservatively in this area. We revised the Wetland Replication area #1 to reflect the updated wetland line and gained some room for additional replication in this location. Total replication area is now 4,012 square feet.

Revised Form 3 as well as revised Figures 8D and 8E reflecting the changes noted above are attached to these responses.

<u>Additional Questions from the 11/04/2019 Conservation Commission Hearing</u>

A. Will there be an increase in runoff to the existing detention basin at Sta. 16

Response **The existing detention basin is Discharge Point (DP-3) in the Stormwater Report. The drainage design was revised to reduce peak rates and volume to this discharge point prior to the 10/22/2019 re-submission; however, updated calculations were inadvertently not included. Attached are the revised hydrocad calculations that show a net reduction in peak rates and runoff to DP-3 as well as the revised peak rate tables from the stormwater report.**

Enclosures

1. WPA Form 3, page 3, revised 11/18/2019
2. Subsurface Exploration Program Proposed Additional Borings HB-1, HB-2, & HB-3 Along Route 126 (Pond Street), Ashland, MA, dated 11/01/2019
3. Figures 8D & 8E, last revised 11/18/2019
4. Stormwater Report Section 6.1 Long-Term Pollution Prevention Plan
5. Stormwater Report: revised Tables 4.2, 4.3 & 4.4 and proposed hydrocad calculations.
6. Revised Plans:
    - Sheets 94, 96, 97, 99, 101, 104, 105, and 106, Drainage & Utility, last revised 11/18/2019
    - Sheets 188-189, Drainage & Utility Details, last revised 11/18/2019
    - Sheet 185, Wetland Replication, last revised 11/18/2019

Note: Wetland Replication Plan Sheet 184 was removed from the plan set as there is no longer replication proposed at Algonquin Trail.