



1285 Washington Street,
Weymouth, MA 02189

May 25, 2023

Town of Randolph Conservation Commission

Town Hall

41 South Main Street

Randolph, MA 02368

Subject: 16 Fencourt Avenue

Randolph, MA 02368

On behalf of our client, we are pleased to submit the attached revised plans for the proposed development project at the subject site. These plans were revised to address comments received from the Peer Review and the Design Review Board with respect to site design compliance. Our responses to each of the comments are listed below:

For continuity, we have copied the original peer review comment by Weston and Sampson dated March 3, 2023 comments and provided a response in bold.

NOI Review

While noted in the applicant's cover letter as being part of the NOI submission, the following was not provided in the materials provided to Weston & Sampson:

- Affidavit of service
- Notification to abutters

Response: The proof of Notification to abutters and Affidavit of service is attached.

Review Observations

3. The NOI states "This project will result in alteration to Buffer Zone of BVW only; no resource areas". However, there appears to be a 6-inch PVC storm drain pipe and outfall (and also assuming there will be rip rap at the end of the outfall) in the BVW at the northern border of the BVW as shown on Sheet C-3 and C-4. It is recommended that the pipe and outfall be removed from the BVW resource area. If this is not possible, the NOI form and cover letter should be updated to reflect the BVW impacts and a plan for wetland restoration/replication should be provided to the commission.

Response: All stormwater overflow pipes have been removed from the wetland resource areas.

4. A materials laydown area was not noted on the project plans. It should be confirmed that the laydown areas will be within the limit of work and outside wetland resource areas.

Response: Materials laydown area has been added to the plan which is shown outside of resource area.

6. The NOI submission package appears complete with the exception of the affidavit of service and notification to abutters, as mentioned above.

Response: The proof of Notification to abutters and Affidavit of service is attached.

Conclusions

1. It appears that this NOI package is substantially complete with the noted exception of the affidavit of service and notification to abutters. If not already done, the proponent should provide proof of mailing to the commission.

Response: The proof of Notification to abutters and Affidavit of service is attached.

3. There will be impacts to BVW. The applicant should remove work from within the BVW area. If this is not possible, the applicant will need to update the NOI form and cover letter to describe and quantify BVW impacts as well as provide a BVW restoration/replication plan to the commission for approval. The proponent will also need to address each of the BVW performance standards provided in 310 CMR 10.55 (4).

Response: All stormwater overflow pipes have been removed from the wetland resource areas.

4. The applicant should confirm that any laydown areas will be in the limit of work as depicted on the plans and outside wetland resource areas.

Response: Materials laydown area has been added to the plan which is shown outside of resource area.

Stormwater Review

Standard 2: Post Development Peak Discharge Rates

The stormwater report analyzed the site for storm events with recurrence intervals of 2, 10, 25, and 100-year using NOAA Atlas 14 rainfall data. The analysis indicates that the post-redevelopment peak discharge rates will be less than existing condition peak discharge rates, however the following issues are noted in the stormwater management report:

- The stormwater narrative includes a summary of peak discharges for pre and post development conditions. It is unclear how the numbers in the summary table were derived as they do not seem

to match numbers presented in the HydroCAD models. We recommend that the engineer review and revise this.

Response: The report has been revised.

- The existing conditions HydroCAD model has three separate design points; wetland, Fencourt Ave and 12" RCP. The proposed conditions model does not show the corresponding impacts on those three same design points, and the peak discharge summary table only gives peak discharges from the site in total, but that total is questionable because the summation does not appear to have been done using hydrograph routing. The same three design points from the existing model should be used in the proposed model. This means that infiltration system 1 should be routed to a Fencourt Ave design point together with subcatchment 7S. Likewise, infiltration systems 2, 3, and 4 should be routed to a wetland design point together with 6S. Subcatchment 5S should be routed to a 12" RCP design point. Then, the peak discharge summary table should be set up to show pre vs. post development peak discharges at each of the three design points after hydrographs are routed together into these design points in the model to ensure that peak discharges are mitigated at each of the three. We recommend that the engineer review and make these revisions.

Response: The pre and post development analysis has been included for each discharge points.

- Several differences between the plan used in the stormwater report vs. the updated plan were noted, which may have an impact on the stormwater peak discharge calculations. These differences include:

- o Additional impervious area was added where there was formerly grasscrete pavers on the west side of the site to the north and south of the building.
- o A landscape island was eliminated along the front of the westerly building.
- o Impervious parking was eliminated at the southeast area of the site
- o Areas that appeared to be dumpster pads were eliminated.

We recommend that the engineer review and update the calculations to reflect current plans.

Response: The area calculations have been updated.

Standard 3: Recharge to Groundwater

This standard requires that the site infiltration mimic preconstruction conditions for small storms based on the proposed increase in impervious areas. The following items are noted:

- The calculation of volume available in the subsurface chambers for recharge volume purposes appears to have been calculated incorrectly, see comment under Standard 4. We recommend that the engineer review and revise this.

Response: The area calculations have been updated.

- Test pits were performed to confirm soil type in the central area of the site, but none were performed within or in close proximity to the footprint of infiltration systems #s 1 and 2. We recommend that the applicant perform test pits in these locations or commit to doing so and reporting back to the conservation commission with this information prior to construction of the proposed systems.

Response: We performed numerous test pits on site and have good coverage of the overall site. The soil conditions and estimated groundwater elevations appear to be consistent throughout the site. We agree to perform additional test pit at the specific surface retention system location to further verify the soil conditions prior to construction.

Standard 4: Total Suspended Solids (TSS) Removal

The proposed treatment trains of Best Management Practices (BMPs) are required to meet or exceed treatment standards for both the MSH and Town Regs. Due to the extensive work on the site, this project appears to fall under the criteria for “New Development” from the Town Regs, which are more stringent than the MSH. The Town Reg requires the removal of 90% of the average annual load of TSS and 60% of Phosphorous. The following items are noted from a review of the stormwater management report:

- There are two conflicting versions of the TSS removal calculations found in the report. The first one, found in the narrative, indicates 100% TSS removal and uses greater than allowable removal rates for the subsurface infiltration structures per the MSH. The second is toward the latter part of the report and indicates an overall 85% TSS removal rate. Plans indicate that in all cases the treatment train will consist of deep sump hooded catch basins, followed by stormceptor units and subsurface infiltration structures. Based on commonly accepted TSS removal rates in the MSH and proprietary rates published for stormceptor units, we believe that the 90% TSS removal rate may be achievable but needs to be properly documented in the report. We recommend that the engineer review and revise the report to use the DEP standard TSS removal spreadsheet or equivalent, showing all three components of the treatment train.

Response: The TSS calculations have been revised.

- The report includes a calculation for required water quality volume and compares this against a calculation of actual volume available in the subsurface infiltration systems. The calculation of available volume appears to be incorrect as it includes the entire volume of the subsurface chambers, whereas the MSH requires that the available volume should be calculated as the volume below the lowest outlet from each system, which in this case are the outlet orifices. We recommend that the engineer review and revise this calculation to correct this.

Response: The report has been revised that the water quality and recharge volume reflect the system volume under the orifices.

Standard 6: Protection of Critical Areas

The engineer has not commented on whether the site is located within a critical area as defined in the MSH. We recommend that the engineer evaluate this and provide these findings in the stormwater management report.

Response: The site is not within a critical area. See additional exhibit on report last page.

Standard 7: Redevelopments

Due to the extensive nature of the work onsite, the project should be categorized as a new development and as such should fully meet the standards of the MSH and local regs. We recommend that the engineer review and revise the stormwater management report to ensure full compliance based on the comments provided herein under other standards.

Response: The check list has been revised to show the project as New Development.

Standard 8: Construction Period Pollution Prevention and Erosion/Sedimentation Control

The engineer has provided an erosion and sedimentation control plan. Due to the fact that the site will disturb more than one acre, a Stormwater Pollution Prevention Plan (SWPPP) will be required to obtain coverage under the NPDES Construction General Permit. The erosion and sedimentation control plan appears adequate.

Response: A SWPPP will be prepared and a NPDES will be filed with EPA prior to construction. Checklist has been revised.

General Comments

Stormwater Report:

- The proposed conditions subcatchment map in the report reflects an older version of the plan. This should be updated.

Response: The report has been updated to reflect the revised plans.

- The bottom of chamber elevations stated in the report differ from the elevations of the chambers for each of the four subsurface systems on the plans by a consistent 0.05'. We recommend review and revisions.

Response: The report has been updated to reflect the revised plans.

- The outlet pipes from each of the outlet control structures are not included in the HydroCAD model for any of the subsurface structures. This should be included as the primary outlet for each, with orifices and weir routed into it. Additionally, overflow weirs have not been included in the model. We recommend review and revisions.

Response: The report has been updated to reflect the revised plans. The weir was in the model since the water level never reach the weir discharge stages at all system and there is no effect to the calculations.

Plans:

- Sheets C-3 and C-4 show the outlet pipe from Infiltration System #4 extending several feet into the wetlands. Other outlet pipes are also relatively close to the edge of the wetlands. The engineer should terminate the pipe outside of the wetlands and verify that all outlet pipes leave sufficient space for the installation of the stone outlet protection as detailed on C-7.

Response: All the outlet pipes have been pulled back from the resource areas.

- Generic R-tank details are included in the plans. We recommend that the engineer provide cross sections specific to each chamber field to clarify the height and elevations of each system.

Response: We have revised the Stormwater System Elevations Table on Sheet C8 to show the type of module and system height for each of the systems.

In addition to the responses of peer review comments, the plans have been revised to address the Design Review Board comments with the following changes:

- The 3 dumpsters have been consolidated into a compactor station at the northern side of the site. 8' enclosure is now shown to provide screening of the equipment.
- Minor curb alignment and type have been adjusted to accommodate fire truck access.
- Additional sidewalks and crosswalks were added to improve pedestrian circulation.
- Parking near the childcare outdoor playing area has been reduced to increase green space and snow storage for winter conditions.
- Electric car charging stations (4 spaces) are added.
- The access drive behind the western building was removed. The limit of clearing is now restricted to 10' beyond the building footprint for the west wall to provide natural screening and preservation of existing vegetation.
- Bollards are added to protect the proposed transformer.
- The drain manhole connection is added for infiltration system #1 overflow onto the Fencourt Avenue drainage system.
- Infiltration system #4 has been reconfigured to provide additional separation between the system and the sewer line.
- A proposed irrigation well is proposed between the access drive and the wetland resource area.

We believe that we have addressed each of the comments. Please review this re-submittal package and let us know if there are any additional concerns on this project.

Regards,



Chi Y. Man, PE

Managing Partner