

May 01, 2024

To: Mr. Gregory Rondeau, Chairman
Town of Franklin Planning Board
355 East Central Street
Franklin, MA 02038

A&M Project #: 1362-25
Re: 6 Forge Parkway
Industrial Building
Response to
Review Comments

Copy: Donegal, LLC

Dear Mr. Rondeau,

Allen & Major (A&M) is in receipt of review comments from the BETA Group, Inc., dated April 19, 2024, and received on 04-22-24 for the above referenced project. Please find A&M's responses to these comments below. The most recent comments are provided along with A&M's responses in **bold**. For ease of review, comments that have been addressed are omitted.

BETA Group, Inc.:

SP2. A photometric plan has and shows light spillage onto the adjacent 4 Forge Parkway and 8 Forge Parkway properties. Revise lighting design to eliminate/minimize spillage.

A&M Response: An updated photometric plan has been provided minimizing the spillage over the property line.

SP4. Some screening will be provided by the berm and vegetation to remain; however, BETA notes this will be limited to vegetation located within the roadway right-of-way as vegetation on the lot will generally be cleared in this area. BETA recommends for the applicant to discuss this issue with the Board.

A&M Response: As requested by the board, several cross sections were provided to show the extents of the existing vegetation and that the project is not visible from the road.

SW2. Although this portion of the site driveway is outside the proposed limits of construction, the applicant should evaluate if a practicable improvement can be made for the approximate 3,000 sq. ft. of impervious area that currently appears to drain untreated to the Forge Parkway drainage system, such as catch basin inlet filters or hoods.

A&M Response: Runoff is captured by two existing catch basins in the driveway prior to flowing to Forge Parkway. Both existing catch basins are already fitted with hoods.

SW3. The HydroCAD model has been revised to account for this existing swale. BETA completed a site observation during a storm event and observed the swale to vary in cross-section, depth, and slope. Due to variations in topography there also appears to be a hump on the east side of the swale that acts as a weir, thereby restricting flows from the upper reaches and promoting infiltration over 400+ feet of pervious surfaces. The designer should evaluate options to maintain existing treatment.

A&M Response: Although it is noted by the reviewer that the existing swale varies, the swale modeled in HydroCAD is representative of the average conditions along the length of the existing conveyance course, both in width and cross section. Based upon the survey data and a comparison of published LIDAR elevation data (both current 2021 & historic 2011), the design intent of the swale was for conveyance to the east side of the property and not as a means of impedance to facilitate infiltration. In the proposed condition, stormwater from this offsite flow is attenuated utilizing an extensive stone apron then conveyed through more than 200 feet for wooded vegetation, which a wooded buffer is a means of treatment.

SW4. Plan revised. Provide detail for oil/water separator.

A&M Response: The requested details were provided on sheet C-507.

SW5. *Model revised. Adjust the Tc flow path for subcatchments A-1 and B-2 to extend to design point SP-3 to reflect the change from flow through a grassed swale to flow through an HDPE pipe. Update time of concentration. A minimum Tc of 6 minutes should be utilized if necessary. Also, update the post-development HydroCAD model to use a cover type of "roof" for the A-1 and B-2 buildings, rather than "grass."*

A&M Response: The Tc flow path for both A-1 and B-2 are set to 8 minutes to represent the flow through the internal roof drainage system of the building. The flow path is adjusted through the downstream reach to account for the reduction in path of travel.

SW7. *Refer to Comment SW3.*

A&M Response: See response for SW3.

SW8. *The Standards require a minimum of three test pits for each infiltration basin. Only one of the conducted test pits was located within the basin footprint and has an associated seasonal high groundwater elevation (2.75' below the proposed system bottom). TP-3 was terminated at a depth of six feet due to refusal. In consideration of the critical nature of this system to the site development, additional test pits should be performed within the footprint of the basin.*

A&M Response: The requirement for test pits for infiltration basins is to conduct the "borings or test pits in the layer where infiltration is proposed". As four test pits (TP-2 thru TP-5) and five borings (GEO-1 thru GEO-5) were all advanced into or past the layer where infiltration is proposed, it is our professional opinion that the minimum exploration has been met. Contrary to the review comment, there was no ledge encountered within TP-3 nor any of the test pits conducted on the parcel and that refusal within TP-3 was likely a boulder, unable to be moved by the small backhoe on site conducting the exploration and presumed to be movable during full excavation activity on site during construction.

SW9. *BETA concurs there was no ledge encountered in TP-8; however, it was located approximately 150 feet from the proposed infiltration system. A test pit within the system footprint should be conducted during the design phase.*

A&M Response: As there was no redoximorphic features indicated in TP-8 and seepage was observed to be 13' from the surface (@Elev 266.7+/-) which is approximately 4.8 feet below the bottom of this stormwater basin, it is unlikely that the soil conditions will contradict those found at TP-8. Additionally, the requirement for test pits for infiltration basins is to conduct the "borings or test pits in the layer where infiltration is proposed". As there were a total of 13 tests (borings & test pits) all of which were all advanced into or past the layer where infiltration is proposed, we respectfully request that the advancement of additional confirmatory tests pits prior to the start of construction be made a condition of approval.

SW11. *A note has been provided on Sheet C-504 indicating that buried fill material in the subgrade will be removed and replaced with native soils. Provide note identifying requirements for backfill material to be placed between the system bottom elevation and the existing ground surface. Backfill material must meet or exceed the hydraulic conductivity utilized in the HydroCAD model. Based upon data obtained in conjunction with comment SW8, BETA recommends for a simple cross-section detail to be provided to assist the contractor during construction.*

A&M Response: A cross-section showing the area in question has been added to sheet C-107, as requested. It is noted on the section, and on the detail on sheet C-504, that once the fill material is removed it shall be replaced with dense-graded crushed stone (Massachusetts department of transportation [MassDOT] item M2.01.7), or gravel borrow (MassDOT item M1.03.0 type b).

Very Truly Yours,

ALLEN & MAJOR ASSOCIATES, INC



Michael A. Malynowski, PE - Senior Project Manager

Attachments:

1. Site Development Plans, revised as of April 29, 2024
2. Drainage Report, revised as of April 29, 2024