



January 31, 2024

Mr. Gregory Rondeau, Chairman  
355 East Central Street  
Franklin, MA 02038

**Re: 25 Forge Parkway  
Site Plan Modification**

Dear Mr. Rondeau:

BETA Group, Inc. is pleased to provide our engineering peer review services for the proposed site plan modification entitled "**Site Development Plans for 25 Forge Parkway**" located at 25 Forge Parkway in Franklin, Massachusetts. This letter is provided to outline findings, comments, and recommendations.

## **BASIS OF REVIEW**

The following documents were received by BETA in response to our original comments on January 15<sup>th</sup>, and formed the basis of the review:

- Revised Site plans entitled **Site Development Plans for 25 Forge Parkway**; sheets C-103, C-502 & C-503, prepared by Brian D. Jones, P.E. with Allen & Major Associates, Inc.; dated February 15, 2023, revised January 19, 2024.
- Response letter addressed to Gregory Rondeau, Chairman Franklin Planning Board, prepared by Allen & Major Associates, Inc.; dated January 22, 2024.

Review by BETA will include the above items along with the following, as applicable:

- **Zoning Chapter 185 From the Code of the Town of Franklin**, current through July 2021
- **Zoning Map of the Town of Franklin, Massachusetts**, attested to October 7, 2020
- **Stormwater Management Chapter 153 From the Code of the Town of Franklin**, Adopted May 2, 2007
- **Subdivision Regulations Chapter 300 From the Code of the Town of Franklin**, current through March 8, 2021
- **Wetlands Protection Chapter 181 From the Code of the Town of Franklin**, dated August 20, 1997
- **Town of Franklin Best Development Practices Guidebook**, dated September 2016

## **INTRODUCTION**

The project site includes one parcel, Lot 275-014, with a total area of 5.91 acres located at 25 Forge Parkway in the Town of Franklin (the "Site"). The Site and all the surrounding lots are located within the Industrial zoning district. The Site is not located within the Water Resource District.

The existing Site is the location of a 1-story brick building with a footprint area of 18,619± sq. ft. An existing paved 50 space parking lot and access driveway from Forge Parkway are each located on the westerly edge of the building with access to a loading dock at the rear of the building. The northerly area behind the building is currently wooded. A wooded strip is located east of the building and along the frontage in front of the building. Bordering vegetated wetlands have been flagged along the eastern and westerly edges of the parcel. The wetlands at the rear of the site are along the banks of a pond.

Topography within the limit of work generally slopes west across the lot. There is a ridge that separates this area from the pond which is approximately 12' high and slopes at a 3h:1v slope down to the edge of the pond. The Site is not located within a wellhead protection area, a FEMA mapped 100-year floodplain, an NHESP-mapped estimated habitat of rare or endangered species, or any other critical area. NRCS soil maps indicate the presence of Ridgebury fine sandy loam with a Hydrologic Soil Group (HSG) rating of D (low infiltration potential when unsaturated) and Charlton-Hollis-Rock Complex with an HSG rating of A (high infiltration potential when unsaturated). The development area is primarily located within the HSG A soils area.

The original project as proposed was approved on May 23, 2023. The approved Site development included a new 16,000 sq. ft. warehouse building with an additional 38,000 ± sq. ft. of paved area to add 17 parking spaces and truck access to the warehouse. All these improvements were located at the rear of the site behind the existing office building. This amendment as proposed is to add a 25-space parking lot in front of the existing building which will access the main driveway 50' in from the entrance at Forge Parkway. Sidewalks from the pavement to 3 entrances on the existing building will also be provided. The grade along the front of the building will be cut approximately 9' across the entire surface area so that now the building will be readily visible from Forge Parkway. Lighting for the new pavement will be provided by 4-wall packs on the face of the building and a 20' pole mounted unit in the middle front of the parking lot. Stormwater from the proposed pavement area will be collected by a proprietary separator at the front left corner of the pavement. Runoff collected in this separator and the existing ditch at the east side of the existing structure will be collected and directed into a subsurface infiltration system beneath the entrance drive. The discharge from this system will be directed into an existing catch basin in the main driveway which will be converted into a manhole. A new proprietary separator will be installed on the downgradient edge of the entrance driveway up to the new lot to replace the catch basin that was converted to a manhole.

## **FINDINGS, COMMENTS, AND RECOMMENDATIONS**

### **ZONING**

The Site is located within the industrial (I) Zoning District. The proposed use is Warehouse, which is permitted within this district.

### **SCHEDULE OF LOT, AREA, FRONTAGE, YARD, AND HEIGHT REQUIREMENTS (§185 ATTACHMENT 9)**

As shown on the schedule on the Zoning table on Sheet C-102 of the set, the Site meets the requirements for lot area, depth, frontage, width. The proposed building will meet the front, side, and rear yards and building height is also identified as a 1 story warehouse.

### **PARKING, LOADING AND DRIVEWAY REQUIREMENTS (§185-21)**

Access to the proposed warehouse and expanded parking area will come through the existing entrance from Forge Parkway. The width of the entrance drive is 26'± wide as it passes in front of the existing building. There is vertical granite curbing along the entrance driveway and in front of the existing building. The curbing changes to a bituminous berm around the parking spaces and landscape islands. There are currently 50 parking spaces on the site including 3 accessible spaces. There is a paved approach driveway to a loading area on the north side of the existing building off the entrance driveway. The proposed pavement expansion will extend north beyond the existing pavement edge. The bituminous berm will be

removed, and the proposed pavement will match the existing edge. The existing landscaped islands in the parking lot will be maintained.

The 35MPH sight triangle requirement according to AASHTO (390') is shown on sheet C-102. As shown, this sight line runs through the middle of the proposed spaces along this edge of the pavement. The sight line in front of the parking spaces will provide a 300'± site line which is sufficient for the posted speed limit.

- P1. In accordance with §185-21, C. (5). Parking lots for 20 or more cars shall contain or be bordered within 5' by at least one tree per 10 parking spaces, ..... , with not less than 40 square feet of unpaved soil area per tree. Thus, for the proposed 25 additional spaces this would require that 3 additional trees be planted. As shown there will be 6 deciduous trees planted and an additional 7 Eastern Red Cedars which would meet this requirement. BETA recommends that the proposed cedars be moved since they will interfere with the sight distance to the east for vehicles exiting the site.

**A&M: The cedar trees have been removed from the plan to address the comment above.**

**BETA1: Comment addressed, no further comments.**

## **CURBING (§185-29)**

A Cape cod berm is being proposed around the new pavement area. The existing Granite Curbing along the west face of the existing building will also be removed and replaced with Cape Cod Berm.

- C1. The proposed edge around the new pavement as proposed will be Cape Cod Berm. This matches the existing curb treatment on the site. Since this waiver was granted in the original approval, BETA will defer this to the Board whether vertical curbing should be used for this area.

**A&M: As mentioned above, the cape cod berm at the entrance and along the front of the building have been changed to vertical granite.**

**BETA: No further comments**

## **STORMWATER MANAGEMENT**

The stormwater management design for the previously proposed improvements has been reviewed and approved. For the proposed additional parking spaces at the front of the building, a subsurface infiltration system is proposed beneath the entrance driveway. Runoff will be collected by a proprietary separator in the front left corner of the lot. In addition, the runoff that enters the existing drainage swale along the east side of the building will be collected and directed into the infiltration system. The system will be like the earlier proposed system in that it will be 4 rows of 3 Cul-Tec model SC-740. The inlet row will be an Isolator row which will provide the pretreatment requirements of the system. Overflow from this system will be conveyed to an existing catch basin along the east edge of the entrance into the site from Forge Parkway. This catch basin will be converted to a manhole and to replace the basin, a new proprietary separator inlet will be added along the edge of the entrance driveway just downgradient of the new access

driveway to the parking lot which will also be directed into the new infiltration system. Ultimately, all runoff collected on site will discharge into the Forge Parkway collection and treatment system.

### **STORMWATER MANAGEMENT REGULATIONS (CHAPTER 153)**

The project proposes to disturb land in excess of one acre within the Town of Franklin. It is therefore subject to the Stormwater Management Regulations. The project is also required to comply with the Town of Franklin Best Development Practices Guidebook (BDPG). Compliance with these regulations is outlined below and throughout the following sections.

### **SUBDIVISION REGULATIONS - STORMWATER MANAGEMENT REGULATIONS (§300-11)**

Additional requirements for stormwater management are outlined in §300-11 of the Town of Franklin Subdivision Regulations.

SW1. A waiver from §300-11.B(2.a) was granted by the Board in the prior approval to allow the use of HDPE piping in lieu of RCP. The proposed additional piping will all be HDPE. The depth of cover for this additional piping exceeds 3'. BETA will defer this issue to the Board.

**A&M: As mentioned above, enclosed is a letter requesting that the Board grant a waiver for the use of HDPE pipe.**

**BETA: As previously noted, Beta has no issue with the granting of the waiver but will defer this issue to the Board.**

### **MASSDEP STORMWATER STANDARDS**

The project is subject to the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

**NO UNTREATED STORMWATER (STANDARD NUMBER 1):** *No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.* The project amendment will not result in an untreated discharge into the waters of the Commonwealth. All runoff from the proposed impervious surfaces will be treated in accordance with the requirements of the standards.

**POST-DEVELOPMENT PEAK DISCHARGE RATES (STANDARD NUMBER 2):** *Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.* The project amendment proposes an increase in impervious area and changes to site hydrology. Stormwater runoff will be mitigated via a new subsurface infiltration BMP. Calculations indicate a decrease in peak discharge rate to all watersheds.

**RECHARGE TO GROUNDWATER (STANDARD NUMBER 3):** *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.* NRCS soil maps indicate that soil in the area of proposed infiltration system is Charlton-Hollis-Rock complex with a Hydrologic Soil Group (HSG) rating of A (high infiltration potential). The proposed building area is identified as Ridgebury, fine sandy loam with a HSG Rating of C (moderate infiltration potential).

The Applicant has conducted test pits at the Site indicating that subsurface soil is loamy sand. The depth of the test pits was limited to a depth of 9'. Groundwater and/or redoximorphic features were not indicated on the test pit logs, therefore, ESHGW was not established.

Based upon the Hydro-CAD input and printout, 73,865 sq. ft. of impervious surfaces on site will be directed to infiltration structures which will provide a static storage volume of 24,020 cu. ft. Thus, 63.7% of the impervious surfaces will now be directed to infiltration which will provide 2.48" of storage. Thus, the system will now comply with both the Massachusetts stormwater standards and the Town of Franklin by law requirements.

**TOTAL SUSPENDED SOLIDS (STANDARD NUMBER 4):** *For new development, stormwater management systems must be designed to remove 80% (90% per Town Bylaw) of the annual load of Total Suspended Solids (TSS).* The runoff from the proposed additional impervious surfaces will flow through a single treatment train. The project is required to treat the 1.0-inch water quality volume per Town Bylaws. The static storage volume provided in the proposed infiltration BMP is more than what is required. The Isolator Row will provide the pretreatment required. The designer has assumed 82.7% TSS Removal Rate for the proprietary inlet unit. As a practice, the allowed rate of removal for these proprietary units has been reduced to 50% of the reported rate. Utilizing this rate, TSS Removal rate for the proposed additional surfaces as amended would be 89 %

**HIGHER POTENTIAL POLLUTANT LOADS (STANDARD NUMBER 5):** *Stormwater discharges from Land Uses with Higher Potential Pollutant Loads (LUHPPLs) require the use of specific stormwater management BMPs.* The project is not considered a LUHPPL – **not applicable.**

**CRITICAL AREAS (STANDARD NUMBER 6):** *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.* The project is not located within a critical area – **not applicable.**

**REDEVELOPMENT (STANDARD NUMBER 7):** *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.* Although most of the proposed development is new impervious surfaces beyond the limit of the existing impervious surfaces, the project is a mix of new development and redevelopment. As noted above, 63.7% of the impervious surfaces on site will be directed to a subsurface infiltration structure which will provide the recharge and treatment intended by the by law and the Stormwater Handbook.

**EROSION AND SEDIMENT CONTROLS (STANDARD NUMBER 8):** *Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.* As the project proposes to disturb greater than one acre of land, it will be required to file a Notice of Intent with EPA and develop a Stormwater Pollution Prevention Plan (SWPPP). Erosion control measures are depicted on the plans include silt fence, inlet protection, stabilized construction entrance, dust control, and designated stockpile area.

SW2. The applicant is reminded that a Stormwater permit from the Franklin DPW is required based upon the size of the disturbance and that the permit should be updated to include the proposed modification.

**A&M: Understood, the applicant will file the necessary permit amendments as directed by the DPW.**

**BETA: No further comments**

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**OPERATIONS/MAINTENANCE PLAN (STANDARD NUMBER 9):** *A Long-Term Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed.* A Stormwater Operation and Maintenance Manual was provided with the Stormwater Management Report.

**ILLICIT DISCHARGES (STANDARD NUMBER 10):** *All illicit discharges to the stormwater management system are prohibited.* An Illicit Discharge Compliance Statement was provided with the submission.

## **WETLANDS PROTECTION**

The proposed amendment to the project is outside of the Areas Subject to Protection and Jurisdiction of the Franklin Conservation Commission. BETA recommends that the applicant file the revised plans and drainage report with the Franklin Conservation Commission and request a modification to their order of conditions to reference the revised information.

**A&M: On January 11, 2024, the applicant appeared before the Franklin Conservation Commission. The Commission voted to approve the revised site plans and drainage report and amend the order of conditions to reflect the revised site plan.**

**BETA: No further comments**

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,

BETA Group, Inc.



Gary D. James, P.E.  
Senior Project Engineer

cc: Amy Love, Town Planner