



December 5, 2024

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

**Re: 124-126 Grove Street
Site Plan Modification**

Dear Mr. Rondeau:

BETA Group, Inc. (BETA) has reviewed documents for the project entitled “**124/126 Grove Street Building Expansion**” located at 126 Grove Street in the Town of Franklin, MA. This letter is provided to outline BETA’s findings, comments, and recommendations.

Basis of Review

The following documents were received by BETA and form the basis of the review:

- Form P Application for Approval of Site Plan Modification including:
 - Project Description
 - Certificate of Ownership
 - Certified Abutters list
- Stormwater Report for Site Plan Modification, 124-126 Grove Street, Franklin, MA prepared by Guerriere & Halnon, Inc, Inc. of Franklin, MA, dated November 05,2024, including:
 - Detail Drawings (3 sheets) for Contech CMP detention systems dated 11/7/2024.
- **Geotechnical Engineering Report Proposed Warehouse Addition, 126 Grove Street**, Prepared by Northeast Geotechnical, Inc of North Attleboro, MA dated August 23,2024.
- Cross section prepared by Shea Concrete Products for Grove Street, Franklin, MA dated 09-19-2024.
- Site Plans (17 sheets) entitled: **124/126 Grove Street, Site Plan Modification**, dated November 05, 2024, prepared by Guerriere & Halnon, Inc, Inc. of Franklin, MA dated November 05,2024.
- Memorandum to Amanda Cavaliere, Guerriere & Halnon, Inc from Mr Jeffery S. Dirk, PE, Vanasse & Associates, Inc. RE: **Preliminary Traffic Impact Assessment, New England Appliance Group Expansion-124-126 Grove Street**, dated October 12,2023.
- 7 Day VCU-ATR for Prime Park just east of Grove Street from 06/01 thru 06/07/2023., prepared by Precision Data Industries, LLC, Hudson, MA.

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

- Site Visit
- **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

1.0 SITE AND PROJECT DESCRIPTION

The project site includes two parcels, Map 295, Lots 3 & 4, with a total area of 37.59 acres located at 124-126 Grove Street in the Town of Franklin (the "Site"). The Site and all the surrounding lots are located within the Industrial zoning district. The Site is partially located within the Water Resource Protection District.

The existing Site is the location of a 1-story warehouse building with a footprint area of 270,000± sq. ft. and a 3-story multi use building with a footprint area of 35,760± sq. ft. the site is located along the east side of Grove Street with the easterly property line along the RTE 495 right of Way. The larger warehouse building is located on the west side closest to Grove Street. Loading docks are located along the southerly edge of the building and are directly accessed by a driveway opening on Grove Street. Paved parking areas which serve this structure are all located between the building and Grove Street at the southwest corner of the parcel adjacent to the driveway entrance. The driveway for this building proceeds around the entirety of the building and exits onto Grove Street at the northwest corner of the building. A separate entrance driveway, north of the warehouse building provides access to the multi-use building at 124 Grove Street. This driveway also provides access to the Amego School, which is located east of the driveway opposite the northeast corner of the warehouse building.

The building and parking at 124 Grove Street are located east and south of the warehouse building at 126 Grove Street. The RTE 495 Right of Way bounds the east property line of the parcel at 124 Grove Street. There is a flagged wetland which parallels the southerly property line starting from a point near the southwest corner of the building at 126 Grove.

Topography at the Site generally slopes to the south towards the wetland resource areas. The Site is partially located within a Zone II wellhead protection area. Portions of the Site to the north and west are within a FEMA-mapped 100-year flood zone (Zone AE). The Site is not located within an NHESP-mapped estimated habitat of rare or endangered species, or any other critical area. NRCS soil maps indicate the presence of Charlton Hollis-Rock Complex, Merrimac fine sandy loam, Windsor loamy sand, Hinckley loamy sand, Ridgebury fine sandy Lom and Udorthents sandy, all with a Hydrologic Soil Group (HSG) rating of A (high infiltration potential). There are 3 stormwater features on the 2 sites which are flagged as wetlands based upon their age. Two of them are located on the 126 Grove Street parcel. The first is located north of the building between the two driveways and identified as Basin 3 on the plans. This basin accepts runoff from the roof of the building and a portion of the access driveway. The second, which is identified as Basin 2 on the plans is located at the southeast corner of the building and accepts runoff from the remainder of the access driveway and parking on the lot and the overflow from Basin 3. Basin 1 is on the 124 Grove Street parcel, and it accepts runoff from roof and all the pavement area. There are 2 cells in this basin located on both sides of the wetlands that traverse the site. The cell south of the wetlands accepts runoff from the parking south of the wetlands. The cell north of the wetlands accepts runoff from the remainder of the site including a 12" RCP connection with the Amego School site.

The project proposes to construct an 85,150± addition to the existing warehouse at 126 Grove Street. The addition will be primarily on the north side of the existing building and will cover the Basin 3 area and access driveway on this side of the building. Since the addition will cutoff the second access for this site, a new connection will be made with the driveway currently serving the Amego School and the 124 Grove Street site. In addition to the building addition, 2 additional parking lots will be added at the southwest corner of the parcel near Grove Street. The pavement at the southeast corner of the warehouse building will also be expanded to provide trailer parking. This expansion will displace a large portion of basin 2. Along the edge of the pavement at the trailer parking site, a concrete block retaining wall ranging in height up to 23' is proposed. A large subsurface detention system, 348' x 74' x 9', deep will be installed behind

the wall, which will discharge directly into basin 2. Except for the driveway crossover from the 126 Grove Street site onto the 124 Grove Street access driveway, no other changes are proposed on the 124 Grove Street site.

2.0 SITE VISIT

BETA visited the Site on December 4, 2024. Observed conditions were generally consistent with the existing conditions plan except as noted below and throughout this report.

3.0 TOWN OF FRANKLIN ZONING REQUIREMENTS

The project is subject to the Town of Franklin zoning regulations outlined under Chapter 185. Review comments related to the zoning bylaw are provided in the following sections.

The project is located in the Industrial (I) zoning district and proposes a building expansion that will retain the existing use as a Warehouse/Distribution Facility. This use is permitted by right in the Industrial zoning district.

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

The project will comply with dimensional requirements for lot area, frontage, lot depth, lot width, front yard, side yard, rear yard, building coverage, and maximum impervious coverage.

Project notes indicate that Lots 295-3 and 295-4 will be combined via an ANR plan, which will allow sufficient space to meet side yard requirements.

- Z1. BETA recommends a condition requiring the site plan modification approval to be contingent on filing of the ANR, which is required to meet side yard requirements.

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

Refer to Traffic Assessment section below.

INDUSTRIAL DISTRICT PERFORMANCE CONTROLS (§185-22)

The project is located within an Industrial District and therefore must conform to these requirements.

- Z2. Provide data quantifying anticipated sound, noise, vibrations, odor, and flashing to determine conformity with these requirements (§185-22.A).

EARTH REMOVAL (§185-23)

The project is anticipated to require significant earth disturbance and may require further permitting under this section.

- Z3. Quantify approximate required earth removal volume to determine if a Special Permit is required.

SIDEWALKS (§185-28) AND CURBING (§185-29)

The project is not located within a Commercial I, Commercial II, or Business zone and thus new sidewalks are not required along street frontage. No existing sidewalks are present along Grove Street in this area. New sidewalks and pedestrian walkways are proposed in the southern parking area.

Proposed curbing includes modified cape cod berm along the limits of new parking areas.

SITE PLAN AND DESIGN REVIEW (§185-31)

The project has been submitted for Site Plan Review and is required to conform to the requirements of this section. The submission is in compliance with this section except as noted below:

- Z4. Provide note on the Landscaping Plan stipulating that all plantings shall come from the Best Development Practices Guidebook (§185-31.C.3(k)).
- Z5. Provide required photometric plan (§185-31.C.3(l)).

LANDSCAPING AND SCREENING (§185-35)

Refer to Landscape and Grading section below.

WATER RESOURCES DISTRICT (§185-40)

The Site is located within the Town of Franklin Water Resources District and a Zone II Wellhead Protection Area. The project does not include any use that would be prohibited in this district, provided that warehouse uses are not used for storage of any materials identified in §185-40.D.1.

- Z6. Confirm that the warehouse uses will not include any storage of materials identified in §185-40.D.1 (a, d, h, n, o, p, q, r, and s).

4.0 TRAFFIC ASSESSMENT AND IMPACT

The Applicant provided a Preliminary Transportation Impact Assessment (TIA) focused on the impacts associated with the proposed expansion of the warehouse and the relocation of the truck entrance.

GENERAL TRAFFIC COMMENTS

- T1. Based on the traffic volume data provided, an operational assessment should be conducted at the Grove Street and Prime Park intersection to understand the impacts associated with shifting the entering truck traffic to this intersection. A Level of Service (LOS) analysis of both the AM and PM peak hours is recommended.
- T2. The TIA should discuss and clarify if any additional traffic is expected to be generated based on the proposed expansion of the warehouse.
- T3. Evaluate if a heavy duty pavement section is needed for the proposed loading areas and driveways that will primarily accommodate trucks and large vehicles.

SIGHT DISTANCE

- T4. The TIA states that selective trimming/vegetation removal will be required to exceed the recommended minimum sight distances at the Prime Park and 122 Grove Street. Provide a plan illustrating the extent of the existing vegetation trimming/removal that is required. This plan should also evaluate and depict existing and proposed sight distance triangles at both Prime Park and the southern driveway entrance.

SITE ACCESS AND CIRCULATION

Access to the Site is proposed via three existing curb cuts to remain along Grove Street. The southernmost curb cut functions are a driveway entrance to the southern and western parking areas and the southern loading areas. The northern curb cut connects to Prime Park which provides access to #124 Grove Street and the eastern loading areas for the proposed #126 Grove Street building addition. The central curb cut currently connects to a driveway entrance which spans the northern perimeter of the existing building but will be modified to include provide access for a new loading area west of the building addition. Additional internal driveways are present along the eastern side of the building.

- T5. Confirm that the proposed configuration has been reviewed by the Town Fire Department.

- T6. Provide vehicle turning exhibits to depict how a typical heavy vehicle will enter, exit, and traverse the Site as well as access each proposed loading area.

PARKING AND LOADING

Required parking is defined by §185-21 of the Town Zoning Bylaw. The proposed development includes nonresidential buildings including industrial buildings and warehouses. Approximate required parking is calculated as follows:

Use Designation	Criteria	Building Area	Required Parking
Warehouse (126 Grove Street)	1 space per 1,000 SF gross of floor area	355,000 ± Sq. Ft.	355 ± Spaces
Industrial (Assumed for 124 Grove St)	1 space per 400 SF gross of floor area	33,760 Sq. Ft. x 3 Floors = 107,280 Sq. Ft.	268 ± Spaces
Total			623 ± Spaces

The project proposes approximately 700 parking spaces across all parking lots, existing and proposed, throughout the 124 – 126 Grove Street property. 184 of these spaces are located in vicinity to the #126 Grove Street building, while the remaining 516 spaces are near to the #124 Grove Street Building.

The revised parking layout will retain seventeen (17) spaces which are identified as accessible, and no new accessible parking spaces are proposed. Five (5) of these spaces are located near #126 Grove Street while the remaining twelve (12) are located near #124 Grove Street. These quantities are not compliant with the requirements of 521 CMR 23.2.1 for the respective number of total proposed post-development parking spaces for each building. None of the accessible parking spaces have been designed as van accessible and the majority of spaces appear to lack required access aisles and signage, in violation of 521 CMR 23.2.1.

All new maneuvering aisles are at least 24 feet wide; parking spaces are 9 feet wide and 19 feet long. The existing maneuvering aisle in the parking area west of the #126 Grove Street building is only 20 feet wide, though this is an existing nonconformity. Several parking spaces have been designed with electric charging stations. The southern parking area also includes 31 tractor trailer parking spaces designed to be 12 feet wide and 50 feet long.

- T7. Provide table identifying the required parking spaces based on proposed/existing uses and gross floor area. Clarify existing uses in the #124 Grove Street building.
- T8. Provide the required number of parking spaces or request relief from the Planning Board per §185-21.A(4). Although 700 total parking spaces are proposed, parking spaces more than 300 feet from the building entrance they serve may not be counted towards fulfilling of parking requirements unless the Planning Board determines the circumstances justify this greater separation of parking from use (§185-21.C(6)).
- T9. Provide a total of 6 accessible parking spaces in the #126 Grove Street parking lot, 1 of which must be designed as van accessible.
- T10. Revise locations of accessible parking spaces for #126 Grove Street to be as near as possible to the building entrance and provide required accessible route per 521 CMR 20.
- T11. Revise all accessible parking spaces to include the required access aisle and signage.
- T12. BETA defers to the Town if the existing parking spaces to remain at #124 Grove Street should also be modified to address the previous review comments.

T13. Identify snow storage areas for the parking area and driveway.

5.0 SIGNAGE AND LIGHTING

The project proposes “do not enter” signs, electric vehicle signs, stop signs, and handicap parking sign.

SL1. Include “van accessible” designation on handicap parking sign detail.

Lighting plans and photometric plans have not been provided. Several existing luminaires are present throughout the Site, but no proposed lighting is identified on the plans.

The Illuminating Engineers Society of North America (IESNA) recommends the following illuminance for parking lots:

Level	Horizontal Illuminance (Min)	Vertical Illuminance (Min.)	Uniformity Ratio (Max/Min)
Basic Maintained Illuminance	0.2	0.1	20/1
Enhanced Security Illuminance	0.5	0.25	15/1

Luminance within the new southern parking area may be inadequate if no new lighting is proposed.

SL2. Provide photometric plan to confirm adequacy of existing site lighting.

SL3. Indicate proposed treatment of the existing light pole that is located within the footprint of the southern parking area driveway.

SL4. The TIA states that “One Way” and “Do Not Enter” signs should be provided within the NEAG site to restrict the use of the proposed driveway to entering trucks only. Show the proposed location of these signs on the site plans.

SL5. Add the “Snow Storage Prohibited” sign to the Construction Details plan sheet.

SL6. Provide additional detail for the proposed crosswalk markings, such as width, line thickness and spacing, and color.

6.0 UTILITIES

Proposed utilities depicted on the plans include domestic water, fire service, sanitary sewer, electric service, and gas service. Existing utilities will generally be retained except for portions of the water service which conflict with the proposed building and proposed drainage system. As such, the existing water service along the northern driveway, including two hydrants, will be removed. A third hydrant will also be removed from the southern driveway. Existing hydrants will remain along Prime Park to facilitate fire-fighting along the northern side of the building. One new fire hydrant is proposed near the southeastern building corner.

U1. Confirm with the Fire Department that the removal of three fire hydrants will not impair fire safety.

U2. Confirm that adequate water will be provided following the removal of the northern 8” CLDI water pipe. In addition, the plans should indicate what will happen at each end of the water mains that will be cutoff by the proposed building.

- U3. Confirm with the utility provider that the proposed entrance to the southern parking area is acceptable. BETA observed several utility poles and electrical equipment in this area and the proposed driveway appears to conflict with a guy wire.

7.0 LANDSCAPE TREATMENT & GRADING

The project proposes a small number of tree and shrub plantings around the southern parking area and the northern loading area. New plantings are generally proposed around parking areas or within landscaping islands.

Per §185-21.C.(5), the project is required to provide 1 tree per 10 parking spaces. For 184 spaces, 19 trees are required. The planting plan includes 13 new trees and several existing trees to meet this requirement.

The project includes outdoor parking for 10 or more cars as well as loading areas and is required to provide screening in accordance with §185-35. A residential use is located to the northwest of the project across Grove Street with a potential sight line to the proposed loading area. The project will also remove existing trees in this area. No new screening is proposed.

- LA1. Provide required screening of the northwestern loading area (§185-35.A & B).
- LA2. Provide information on seed mixes for disturbed areas; use of native seeding is encouraged especially in areas which are not required to be a fine lawn.
- LA3. The Board should consider whether new tree plantings are needed along Prime Park and the northern driveway to replace landscaping that will be removed for the proposed building.

The project includes regrading throughout the project area including the construction of several retaining walls. Several existing wetland areas will be backfilled for the construction of the new building addition and parking area. Proposed walls are designated to be designed by others and will be as great as 25 feet in height.

- LA4. Provide detail and design specifications for proposed retaining wall.
- LA5. BETA recommends that earthwork notes be added to the plans reflecting the geotechnical engineering recommendations outlined on pages 9 thru 17 of the Northeast Geotechnical, Inc. Geotechnical Engineering Report.

8.0 STORMWATER MANAGEMENT

The proposed stormwater management design consists of a new subsurface detention system located in the expanded southern parking area. Stormwater runoff will be conveyed to this system via a combination of new and existing closed drainage system consisting of catch basins, manholes, and water quality units. A new outfall is proposed in the southeastern corner of the Site to convey stormwater from the subsurface system to an existing stormwater feature identified as "Basin #2."

Additional stormwater measures include a shallow swale located in the southwestern portion of the Site.

GENERAL

- SW1. Consider providing a grate or similar measure at the 36" outfall to prohibit access by pedestrians and wildlife.
- SW2. Provide catch basin catchment areas to ensure that impervious surface area does not exceed ¼ of an acre and treatment is being provided by deep sump catch basin in accordance with the handbook.

- SW3. Provide measures to restore Basin #2. BETA observed some shrub plantings in the far edges of the basins which may impair basin functioning. Denser vegetation is present in the wetland portion of the basin, and it is unclear if this area will properly function as an infiltration basin. Also identify proposed access to the basin, as the proposed retaining wall and tractor trailer parking area will require removal of the existing unpaved pathway which slopes down to the basin.
- SW4. Provide invert information for existing sewer line and water services at crossings with proposed drainage pipe.
- SW5. Provide detail for typical catch basins and drainage manholes.
- SW6. Provide detail for DMH 24-17 or update internal weir wall detail to show location of weir wall within this drainage manhole.
- SW7. Revise impermeable liner for subsurface system to extend along all sides of the basin. If stormwater is allowed to migrate towards the retaining walls, wall stability may be impacted.
- SW8. The Board should consider whether fencing should be provided around Basin #2. The basin is 7 feet deep and could pose a safety hazard to workers and site visitors at #124 and #126 Grove Street.
- SW9. The rim elevations indicated for riser nos. 2 & 4 on sheet 11 of 17 appear to be incorrect since they are indicated to be 12-16' below grade.

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.

- SW10. BETA notes that the required 20 feet setback to the property line has not been met for Basin #1. However, this is an existing nonconformity. (§300-11.A(7.a)).
- SW11. Provide pipe sizing calculations for the 25-year storm to demonstrate that the design velocity for storm drains, catch basins, and related installations is between 2.5 and 10.0 feet per second. (§300-11.B(1)).
- SW12. Provide catch basin detail indicating a 4' sump (§300-11.B(3.c)).

BEST DEVELOPMENT PRACTICES GUIDEBOOK

The project is required to comply with the requirements of the Town of Franklin 2021 Best Development Practices Guidebook (BDPG).

- SW13. Indicate if proposed seed mix and plantings will reflect native vegetation, particularly near woodland areas (BDPG Page 7).
- SW14. Confirm that landscaping plan has been designed in accordance with the planting bed and seeding guidelines outlined on Page 13.

MASSDEP STORMWATER STANDARDS

The project is subject to the Wetlands Protection Act and to Town regulation §153-3 and therefore must comply with the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

LOW IMPACT DEVELOPMENT (LID) TECHNIQUES

The project does not include substantial LID measures.

SW15. Revise MassDEP Checklist to exclude “no disturbance to any wetland resource areas” and “minimizing disturbance to existing trees and shrubs.” The proposed impacts to Basins #2 and #3 will include disturbance to wetland resource areas and existing vegetation.

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 does not propose any new discharges to wetlands. An existing outfall from Basin #2 will be replaced. This outfall discharges to the 50-foot buffer zone to a wetland resource area. An existing riprap apron will be retained. The project will also remove an existing outfall which discharge directly to the Basin #2 wetlands. A new emergency spillway is also proposed for Basin #2.

SW16. Provide calculations for sizing of riprap aprons, including existing aprons to remain. Replace existing apron at the OCS 24-1 outlet if needed based on calculations.

SW17. Restore the existing riprap apron at the Basin #1 spillway. BETA observed that the apron is generally degraded and may not function correctly.

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 proposes to mitigate increases to runoff rates with the use of a subsurface detention system and two existing infiltration basins. Calculations indicate a decrease in peak discharge rate and runoff volume to the point of analysis at the southern wetlands.

SW18. Existing basin #2 has been designated as a wetland resource area. Provide an interim point of analysis at the wetland boundary and demonstrate that a net decrease in peak discharge rate and runoff volume is proposed.

SW19. Existing basin nos. 1 & 2 are each indicated as infiltration basins in the stormwater report relative to treatment. The test pit data conducted adjacent to Basin #2 indicate that the height above groundwater and the soils will qualify this basin, however there is no test pit data regarding basin No. 1. BETA recommends that test pit data be conducted in Basin 1 to confirm depth to groundwater and soil type. In addition, if conditions qualify the basins then exfiltration should be assumed for both existing and proposed conditions in the hydro cad analysis.

SW20. Revise hydroCAD model to account for the existing low area south of the southwestern building corner. Based on grading, this area is expected to function as a detention basin under pre-development conditions and should be modeled as such.

SW21. Review the northern boundary of subcatchment PR-4. Based on the grading plan, stormwater runoff from Prime Park will flow into the subcatchment.

SW22. Identify time of concentration flowpaths on the watershed plans.

SW23. Provide rim elevations for existing catch basins to remain in the southern parking area to confirm that the proposed expansion will be properly graded to the drainage system.

SW24. Review HydroCAD model for subcatchment PR-6 and EX-6: Revise area modelled as “water surface” to match the pond’s surface area up to the contour reflecting the static water level at elevation 256.20.

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 indicates the presence of Charlton Hollis-Rock Complex, Merrimac fine sandy loam, Windsor loamy sand, Hinckley loamy sand, Ridgebury fine sandy Lom and Udorthents sandy, all with a Hydrologic Soil Group (HSG) rating of A (high infiltration potential).

Test pits and soil borings conducted in the vicinity of the proposed subsurface detention system and Basin #2 indicate that subsurface soils are predominantly sand. Depth to groundwater identified in these locations was highly variable and ranged from 8’ to 20’ below existing grade. Infiltration rates have not been accounted for in the hydroCAD model, resulting in a more conservative model for existing basins to remain.

Groundwater recharge is proposed via two existing infiltration basins. Note that the project includes the removal of one existing infiltration basin and no new infiltration practices are proposed.

The project is expected to provide a recharge volume in excess of what is required for the total post-development impervious area within the limit of work.

Calculations have been provided indicating all BMPs will drawdown within 72 hours.

SW25. Due to NRCS soil classification of A/D soils BETA recommends infiltration tests be conducted in Basin #2 to determine infiltration rate, confirm drawdown calculations, and determine whether a subdrain should be included in the design. BETA notes that the presence of wetlands suggests that the capacity for infiltration in this area may be limited.

SW26. Verify that test pits have been logged by a qualified soils professional.

SW27. Revise design of the subsurface detention basin to account for identified groundwater elevations. The groundwater depth of 18’ below grade for boring B-8, for example, corresponds to an elevation of 256.2’ ±, well above the system bottom elevation of 252’. If the system bottom cannot be raised, a watertight seal or similar means may be required to prevent groundwater intrusion.

SW28. A portion of Basin #2 is a wetland resource area and therefore the ability to infiltrate groundwater to provide recharge may be limited. Recommend separating the non-wetland portion of the basin from the wetland portion of the basin in the provided recharge volume calculations.

SW29. BETA notes that a 50’ setback is required between infiltration basins and surface waters, which includes wetlands. As wetlands are present in Basin #2, this setback is not provided. However, this is an existing nonconformity. BETA defers to the Town.

SW30. Clarify the intent of the Earth Berm detail, which identifies a berm consisting of low permeability fill. The existing berm for Basin #2 is outside the limit of work, so it is unclear if the berm is intended to be replaced for consistency with the detail. BETA notes that the existing berm has several trees and shrubs growing on it which could impact stability. Plas should identify measures to be implemented to bring berm to current standards.

TOTAL SUSPENDED SOLIDS (STANDARD NUMBER 4): For new development, stormwater management systems must be designed to remove 80% of the annual load of Total Suspended Solids (TSS).

The project includes the following treatment train:

Treatment Train	SCM 1	SCM 2	Infiltration BMP
1	Deep Sump Catch Basin	Water Quality Unit	Infiltration Basin*

*Treatment capacity for the infiltration basin is impacted by the presence of wetlands.

The project has been designed to provide 62.5% TSS removal as pretreatment prior to discharge to the infiltration Basin via the proposed water quality units (Contech Hydrodynamic Separator). A theoretical 80% TSS removal would be achieved via the infiltration basin.

The proposed infiltration Basins have been sized to treat the required 1-inch water quality volume for the project area.

Note that the project is subject to §153-16.B of the Town of Franklin Stormwater Regulations, requiring additional treatment standards for new development and redevelopment Sites. The project will meet these standards by retaining the runoff volume equivalent to 1.0" multiplied by the "total" post-construction impervious area not just the increase.

Per Standard 6, the project is required to provide at least 44% TSS removal as pretreatment. Pretreatment is provided via deep sump catch basins and proprietary water quality units.

A Long Term Pollution Prevention Plan is included in the O&M Plan.

SW31. Utilization of Infiltration Basin Nos. 1 & 2 for total phosphorous removal required by the by law is predicated on their ability to qualify as infiltration basins. Additional information should be provided to indicate that these 2 basins will qualify as infiltration basins and provide the treatment assumed in the report. (See SW19 above)

SW32. Due to the presence of wetlands within Basin #2, the 80% TSS removal requirement should be achieved prior to discharge to the wetlands. BETA recommends that the design review the potential to provide the 80% TSS Removal in that portion of the basin outside the limits of the wetlands prior to using this wetland area for excess storage.

SW33. Provide required pretreatment for Basin #1. The TSS worksheet lists a vegetated filter strip, but stormwater runoff from the parking lot conveyed over a paved spillway without pretreatment.

SW34. Remove pretreatment devices from TSS worksheet for total TSS; the 80% TSS provided by the infiltration basin is inclusive of required pretreatment.

SW35. Indicate if existing catch basins to remain are deep-sump.

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 includes a warehouse which is not typically considered a LUHPPL.

CRITICAL AREAS (STANDARD NUMBER 6): *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.*

The Site is located within a MassDEP mapped wellhead protection area – Zone II which is a critical area. Treatment trains have been designed with the required 44% pretreatment and to treat the 1.0” water quality volume. Catch basins proprietary separators, subsurface structures, and infiltration basins are considered suitable SCMs for use in Zone II wellhead protection areas.

REDEVELOPMENT (STANDARD NUMBER 7): *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.*

The project does not qualify as a redevelopment – **standard not applicable.**

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, a Notice of Intent will be required to file with EPA including development of a Stormwater Pollution Prevention Plan (SWPPP). A basic SWPPP was provided as part of the stormwater report, though the plan lacks the majority of the information required by the EPA.

Erosion control measures are depicted on the plans including perimeter erosion controls (compost sock), inlet protection, and stabilized construction entrance.

SW36. It should be noted that a stormwater management permit from the DPW will be required for the overall site disturbance which includes the development and submission of a SWPPP.

SW37. Provide specific maintenance requirements for construction-period erosion controls.

SW38. Revise limit of work depicted on Sheets 4 and 5 to include wetland replication areas. The erosion and sediment control plan must depict a clear and definite delineation of any areas of vegetation or tree disturbance (§153-12.1).

SW39. Provide description of construction and stockpile and/or excess materials removed from the Site expected to be stored on-site, as well as all other information described in §153-12.L

SW40. Provide anti-tracking measures at all three driveway entrances to ensure all construction vehicle traffic onto or out of the Site is controlled.

SW41. Identify proposed locations for catch basin inlet protection on Sheets 4 and 5.

SW42. Provide criteria for permanent or temporary restoration of disturbed areas including how soon after disturbance these measures will be implemented.

SW43. Provide seed mix for temporary/permanent stabilization.

SW44. Provide location(s) of proposed soil/material stockpile areas and staging areas on plans with erosion and sedimentation control measures to limit transport of materials. Areas should be located outside of buffer zones to the extent practicable.

SW45. Identify provisions for protecting infiltration capacity of existing infiltration basins during construction.

SW46. Revise construction sequence to include restoration and landscaping.

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.

- SW47. Clarify if an existing Operation and Maintenance Plan is in place for the Site, and whether Operation and Maintenance will be performed concurrently with the #124 Grove Street drainage system.
- SW48. Indicate how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance.
- SW49. Provide map, drawn to scale, that shows the location of all stormwater BMPs in each treatment train and snow storage areas.
- SW50. Provide list of drainage easements and the purpose of each, including easement along Prime Park (§ 153-18.B(4)).
- SW51. Provide signature of owner on the O&M Plan (§153-18.B(5)).
- SW52. Revise O&M Plan to include requirement to notify the Director of changes in ownership or assignment of financial responsibility (§153-18.D(1)).
- SW53. Revise O&M Plan to include requirement that amendments to the maintenance schedule must be made by mutual agreement of the Director and the responsible parties (§153-18.D(2)).
- SW54. Clarify means of accessing Basin #2 for maintenance, as the proposed wall will impede access.
- SW55. Include operation and maintenance requirements for outfalls and riprap aprons.
- SW56. Recommend including cut sheet from subsurface detention system manufacturer detailing inspection and maintenance requirements as an attachment to the O&M Plan.

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

9.0 WETLAND RESOURCE AREAS

Wetland resources areas, confirmed by others, shown on the site include:

- Bordering vegetated wetlands
- Isolated Vegetated wetlands

Work is proposed within the boundaries of wetland resource areas and portions of the wetlands will be filled. A wetland replication plan has been provided showing two replication areas in the southern portion of the Site.

Stormwater management improvements are proposed to mitigate increases in peak rate and volume of runoff, promote groundwater recharge, and provide water quality treatments of stormwater runoff from the site (see above).

Erosion controls are shown on the plans to contain sedimentation for the work area (See Standard 8 above).

BETA anticipates further review of wetland resource areas by the Conservation Commission.

10.0 SUMMARY

Based on our review of the Project documents and plans, the Applicant is required to provide additional information to the Planning Board to demonstrate compliance with the MassDEP Stormwater Management Standards, Town Regulations, and generally accepted engineering practices.

BETA has specifically noted the following regarding the Site, in addition to those review comments above:

- The project does not conform to the parking and loading requirements of §185-21 of the Town Zoning Bylaw. The Town should discuss whether strict conformance is required for this project.
- The project does not conform to the requirements of 521 CMR detailing accessible parking requirements.
- The submittal does not provide adequate information on lighting.
- Insufficient information has been provided for restoration of disturbed areas.
- The Stormwater Management Design depends on an existing Infiltration Basin which has been designated as a wetland resource area. It is unclear how the wetlands will impact Basin functionality.
- The submittal does not provide adequate information on erosion controls and operation & maintenance.

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

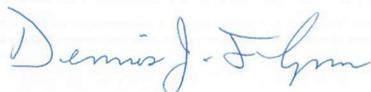
Very truly yours,
BETA Group, Inc.



Stephen Borgatti, PE, MENG
Senior Project Engineer



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



Dennis Flynn, PE PTOE
Associate