



# TOWN OF FRANKLIN

## DEPARTMENT OF PUBLIC WORKS

Franklin Municipal Building  
257 Fisher Street  
Franklin, MA 02038-3026

July 20, 2023

Mr. Greg Rondeau, Chairman  
Members of the Franklin Planning Board  
355 East Central Street  
Franklin, MA 02038

**RE: Site Plan Modification – New Warehouses, #100 Financial Park**

Dear Mr. Chairman and Members:

We have reviewed the revised materials for the subject project and offer the following comments:

1. There are two runs of HDPE pipe called out on the plans, one 30" diameter along the south side of Building #1 and one 18" diameter along the north side of Building #2. The Board typically requires reinforced concrete pipe for on-site drainage systems, if the applicant proposes to use HDPE for some of the drainage pipes a waiver should be requested.
2. Building #1 calls out for a van ramp into the building, a gas trap should be identified on the plans where any interior floor drains are connected to the sewer system. This work should also be coordinated with the Plumbing Inspector.
3. There are several different types of curbing called out on the plan: vertical granite, concrete curb, sloped granite edging, and cape cod berm. The applicant should indicate to the Board which type of curbing is to be used where and why.
4. It appears that the total amount of retained runoff does not meet the Town bylaw 153-16B requirement of 1" x the total amount of post-construction impervious area.

Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

Michael Maglio, P.E.  
Town Engineer

# Town of Franklin

355 East Central Street  
Franklin, Massachusetts 02038-1352



Phone: (508) 520-4907  
www.franklinma.gov

## DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

**DATE:** July 19, 2023  
**TO:** Franklin Planning Board  
**FROM:** Department of Planning and Community Development  
**RE:** 100-200 Financial Way  
Site Plan Modification

---

The DPCD has reviewed the above referenced Site Plan Modification application for the Monday, July 24, 2023 Planning Board meeting and offers the following commentary:

### **General:**

1. The site is located at 100-200 Financial Way, and located in the Industrial Zoning District.
2. The proposed project includes the construction of a 220,000 sq/ft warehouse and a 65,000 sq/ft warehouse.
3. The Applicant has filed a NOI with the Conservation Commission.

### **Waivers:**

- §185-21 – Parking, reduce from the required amount of 350 spaces to 262 spaces.

### **Comments from June 5, 2023 Meeting:**

1. The Planning Board requested more sidewalks be added to the plans, especially around the pond area.
2. Show existing zoning chart adding the increase and decrease in impervious and parking.
3. Provide a draft ANR plan for site.
4. Provide the total amount of loading docks being constructed.
5. Provide height of buildings on the Site Plan.
6. Provide a street view from Washington showing the proposed buildings on site.
7. Show existing height of current building to the new building being proposed.

Mr. Gregory Rondeau, Chairman

May 25, 2023

Page 1



Highpoint Engineering, Inc.

Response to Comments #1 – 07-17-2023

May 25, 2023

Mr. Gregory Rondeau, Chairman

Franklin Planning Board

355 East Central Street

Franklin, MA 02038

**Re: Warehouse/Industrial Development**

**100 Financial Park**

**Site Plan Application**

Dear Mr. Rondeau:

BETA Group, Inc. is pleased to provide engineering peer review services for the proposed project entitled “**Warehouse / Industrial Development**” located at 100 Financial Park in Franklin, Massachusetts. This letter is provided to outline findings, comments, and recommendations.

### **BASIS OF REVIEW**

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

- Site Plan Review Application Package, prepared by Highpoint Engineering, Inc. of Dedham, MA (“Highpoint”), including the following:
  - Cover letter
  - Form P Application for Approval of a Site Plan
  - Certificate of Ownership
  - Form R Site Plan Review Waiver Request
  - 2020 Approval Not Required Plan
  - 2021 Site Plan Review Modification Decision & 2021 Mylar Parking Plan
  - Site Plan Review Narrative
  - Certified Abutters List
  - Franklin Best Development Guidebook – Checklist for Designers
  - 2018 Easement Plan
  - Filing Fee Calculations Worksheet & Checks
- Plans (45 sheets) entitled: **Warehouse Industrial Development Site Development Plans 100/200 Financial Park Franklin Massachusetts**, dated May 11, 2023, prepared by Highpoint.
- **Stormwater Management Analysis** dated March 11, 2023, prepared by Highpoint.
- **Traffic Impact and Access Study, dated April 2023, prepared by MDM Transportation**



***Consultants, Inc.***

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

- 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

**INTRODUCTION**

The project site includes two parcels, Lots 312-020-000 and 312-020-001, with a total area of 51.045 acres, located at 100 Financial Park in the Town of Franklin (the “Site”). The Site and all the surrounding lots are located within the Industrial zoning district. The Site is located within a Water Resource District.

The existing Site is the location of a 1-story office building with a footprint area of 183,306± sq. ft. and a 2-story warehouse building with a footprint area of 57,570± sq. ft. Paved parking areas are located to the north and south of the buildings. Access to the Site is provided within Financial Park, a private roadway which connects to Washington Street to the east. The northernmost and westernmost portions of the Site are generally woodlands with flagged wetland resources areas present. A wetland resource area is also present to the north of the existing office building.

Topography at the Site generally slopes to the north and west 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 Merrimac fine sandy loam, Merrimac-Urban land, Hinckley loamy sand, and Udorthents, sandy, all with a Hydrologic Soil Group (HSG) rating of A (high infiltration potential).

The project proposes to construct two new warehouse buildings with footprint areas of 224,300± sq. ft and 70,500 ± sq. ft. The existing office building will be demolished, and the existing warehouse building will be retained. The existing parking layout will be replaced with new areas of paved parking proposed and existing areas either retained, removed, or reconfigured. A new loading area with heavy duty pavement is proposed in the central area of the Site between the two new buildings. Additional proposed site features include retaining walls, sidewalks, repairs to Financial Park and driveways, and new water, electric, telecommunication, sewer, and gas utilities. Stormwater management is proposed via new closed drainage systems which will convey stormwater runoff to several new subsurface infiltration systems and rain gardens.

## FIELD VISIT

BETA conducted a site visit on 5/26/2023 to review existing site features. BETA observed that Site conditions are generally consistent with the plans. Findings associated with site observations are as noted throughout this report.

## FINDINGS, COMMENTS, AND RECOMMENDATIONS

### GENERAL

- G1. Show the easement on Sheets C301 & 302 and continue the right-side of the easement on sheet C201.

**HEI RESPONSE:** The parking and access easements for benefit of 300 Financial Way have been added to the drawing sheets.

- G2. Confirm legal right to install Rain Gardens within the Access & Utility easement associated with the Ring Road.

**HEI RESPONSE:** Confirmed. The Access and Utility easement associated with the Ring Road is non-exclusive and does not prohibit installation of drainage facilities. Additionally, the road maintenance agreement and associated addenda indicate that the owner of Lot 5A is responsible for maintenance and repair of the landscaped areas on each side of the Ring Road on Lot 5A, where the Rain Gardens are proposed. A copy of the legal opinion will be provided at the peer reviewer's request.

### ZONING

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

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

The Site meets the requirements for lot area, depth, frontage, width, yard widths, building height, and impervious area coverage.

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

The project proposes to retain the existing "Financial Park" private roadway, which connects to Washington Street to the east and Grove St to the west. Several driveways are proposed which will connect to the Financial Park ring road and provide access to various parking areas. Proposed driveways are 24' in width.

Three warehouse buildings are proposed with approximate floor areas of 220,000 ± Sq. ft., 65,000 ± Sq. Ft., and 65,000 ± Sq. Ft. Required parking for warehouses is calculated as 1 space per 1,000 Sq. Ft., resulting in required parking quantities of 220, 65, and 65 spaces respectively. Provided parking is approximately 191 spaces for Building 1, 69 spaces for Building 2, and 24 spaces for Building 3.

The Applicant has requested a waiver from the need to provide the required parking on the grounds that actual demand is significantly lower than that required by the regulations.

Accessible parking spaces are required in accordance with the Americans with Disabilities Act (ADA) and Massachusetts Architectural Access Board (MAAB). Required/Provided accessible parking is as follows:

	Required	Required (Van)	Provided	Provided (Van)
Building 1	7	2	8	4
Building 2	3	1	3	2
Building 3	1	1	0	0

P1. BETA defers to the Town regarding approval of the requested waiver.

**HEI RESPONSE: Acknowledged.**

P2. The Parking Summary on Sheet C100 does not include the parking requirements for the proposed office space in Buildings 1 or 2. Sheet C300 indicates that there is 12,000 square feet of office proposed in Building 1 and another 6,000 square feet proposed in Building 2. Revise the parking summary table appropriately.

**HEI RESPONSE: The drawing sheet has been revised to include separate off street parking demand requirements by use. The revised parking demand for the Project is 413 spaces, with the request waiver to allow 216 spaces to be constructed.**

P3. The existing parking spaces south of building 2 which are scheduled to remain, have not been included in the parking summary. There is a Parking Easement identified on the ANR Plan included in the application package revised 08/31/20. Is this parking area for the benefit of the Building on Lot 4A?

**HEI RESPONSE: Acknowledged. The parking area south of Building 2 is a Parking Easement for the benefit of Lot 4A/300 Financial Way. The Easement has been added the drawings sheets for clarity.**

P4. Provide required van-accessible parking space for Building 3.

**HEI RESPONSE: An accessible van parking space has been added to the drawing sheets, together with identification of accessible signage in accordance with MAAB/ADA regulations.**

- P5. Provide accessible route (521 CMR 20) for the accessible parking spaces located within the southern parking area to remain.

**HEI RESPONSE:** The accessible spaces within the southern parking area are not intended to remain for purposes of access to Building 2 or 3. These spaces served the original office building to be demolished. The spaces will be abandoned, signage removed, and restriped as standard spaces.

- P6. Provide turning plan for access to western trailer storage area. The median to the south of this area and small curb radii may inhibit vehicles accessing this area.

**HEI RESPONSE:** A tractor trailer maneuvering plan is submitted under separate cover to demonstrate adequate access is provided to the trailer storage area.

#### **INDUSTRIAL DISTRICT PERFORMANCE CONTROLS (§185-22)**

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

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

**HEI RESPONSE:** The proposed use is allowed by right within the Industrial District. A tenant has not been identified for either of the proposed buildings. When a tenant is identified, the Applicant will consult with the tenant regarding the requirements §185-22 and their obligation to demonstrate compliance with §185-22 during design of the tenant improvements and building permit application/review. Enforcement of §185-22.A will be at the discretion of the Zoning Enforcement Officer (ZEO).

#### **FLOODPLAIN DISTRICT (§185-24)**

A FEMA-mapped 100-year floodzone (Zone AE) is located along the northern and western limits of the Site (Approx. elevation 241' to 241.4'). No work is proposed within this area and all proposed grading is above this elevation.

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

No sidewalks are proposed along Financial Park under this project. Several pedestrian walkways are proposed throughout the Site, generally along parking areas with connections to building entrances.

Proposed curbing includes precast concrete curb, sloped granite curb, vertical granite curb, and cape cod berm along the limits of new parking areas.

- C1. Provide detail for precast concrete curb and cape cod berm.

**HEI RESPONSE:** Curb layout and materials specification is revised to include only vertical granite curb, precast concrete curb, or monolithic concrete curb/sidewalk in accordance with the Planning Board's requirements.

### **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 submitted planset appears to be in compliance with the drawing requirements except as noted below:

- S1. Depict areas included in the floodplain district (§185-31.C.3(g)).

**HEI RESPONSE:** These flood plain district areas are depicted on the existing conditions plans and related drawings. No Project activity is proposed within the floodplain district.

- S2. Indicate means of waste disposal and proposed dumpster locations, if applicable (§185-31.C.3(i)).

**HEI RESPONSE:** Waste disposal/refuse compactor areas (two for Building 1, one for Building 2) are identified on the drawing sheets within the loading areas. Final locations shall be determine by the selected Tenant for each building.

- S3. Provide note indicating that all proposed plantings come from the Best Development Practices Guidebook (§185-31.C.3(k)).

**HEI RESPONSE:** A note indicating that all proposed plantings come from the Best Development Practices Guidebook has been provided on the landscape planting plans.

### **LANDSCAPING AND SCREENING (§185-35)**

The project proposes outdoor parking for 10 or more cars and loading and service areas which must be screened in accordance with this section. Abutting residential districts are located across Washington Street to the East. Existing vegetation along the western side of Washington Street will be retained to provide required screening.

Proposed landscaping includes tree, shrub, and grass plantings proposed within landscaping islands, around the parking lot perimeter, and along Financial Park. Grassed areas throughout the Site will be seeded with native seed mix.

- LA1. Provide required tree and shrub plantings for bioretention basin in accordance with V2C2 Page 27 of the MA Stormwater Handbook. Good practice is to include at least one tree or shrub per 50 square feet of bioretention area, and at least 3 species each of herbaceous perennials and shrubs. Acceptable plant species are identified in the handbook.

**HEI RESPONSE:** Tree and shrub planting details for the bioretention basins / rain gardens in accordance with the Handbook will be included in the final construction document Plans and submitted for record prior to the Pre-Construction Meeting.



## UTILITIES

Proposed utility include domestic water, water for fire protection, sanitary sewer, underground electric, gas, and telecommunications. Each utility will connect to an existing service within the Financial Park development. Existing utilities will generally be retained for Building 3.

U1. Provide detail for water/sewer crossings.

**HEI RESPONSE:** A detail has been added to the detail sheets to identify standard water/sewer crossing construction requirements. The Applicant's Engineer has consulted with the Franklin Engineering and Department of Public Works regarding the design of the water and sewer utilities for the Projects. Recommended revisions to the Project utility design are incorporated into the drawings sheets.

## 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.

W1. Confirm that the warehouse uses will not include any storage of toxic or hazardous materials (§185-40.D.1(a)).

**HEI RESPONSE:** The proposed use is allowed by right within the Industrial District and no prohibitions for warehouse use are defined in the Water Resource District regulations. A tenant has not been identified for either of the proposed buildings. When a tenant is identified, the Applicant will consult with the tenant regarding the requirements of the Water Resources District, §185-40.D.1(a), and the Tenant's obligation to demonstrate compliance with §185-40.D.1(a) during design of the tenant improvements and building permit application/review. Enforcement of §185-40.D.1(a) will be at the discretion of the Zoning Enforcement Officer (ZEO).

## STORMWATER MANAGEMENT

The stormwater management design proposes two rain gardens and seven subsurface infiltration systems to capture, store, and infiltrate stormwater. Conveyance to these BMPs will be achieved via new closed drainage systems consisting of catch basins, manholes, water quality units, and roof leaders. Portions of the existing closed drainage system in the southern area of the Site will also be retained. Stormwater BMPs are proposed to connect to each other in series; overflow from these systems will ultimately discharge to the L-series wetlands in the northern portion of the Site through an existing culvert.

SW1. Depict existing topography on Grading & Drainage Plans, and Watershed Plans.

**HEI RESPONSE:** Existing topography has been added to the Grading & Drainage Plans and the Watershed Plans

SW2. Provide labels for contours in the area of SWM-1 and SWM-7.

**HEI RESPONSE:** Contour labels have been added to the Grading and Drainage Plan (Sheets C400 and C401).

SW3. Indicate proposed treatment of the existing catch basin near EX. DMH-9, which is not depicted on the drainage plans.

**HEI RESPONSE:** The Site Preparation & Erosion Control Plan has been revised to show the existing catch basin near EX. DMH-9 to be removed and disposed.

SW4. BETA observed that the western detention basin was filled with water and overgrown with vegetation, suggesting it may not function as originally designed. BETA defers to the Town whether restoration and maintenance of this basin should be required under this application.

**HEI RESPONSE:** The western detention basin serves stormwater discharges from multiple parcels within the Financial Way campus. The basin is operated and managed under a Reciprocal Easement Agreement (REA) that provides for rights and responsibilities of maintenance between the three parties identified within the REA including the BFCCPS, 300 Financial Way, and the Project site. The Applicant will coordinate with the other entities listed in the REA regarding required cleaning and maintenance of the western detention basin in accordance with obligations summarized in the REA.

#### **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.

SW5. Indicate any existing or proposed easements for the conveyance of stormwater across property lines. The proposed stormwater management system is dependent on conveying stormwater from Lot 5B to Lot 5A which must be maintained in perpetuity (§153-15.A(11) & §300-11.A(6)).

**HEI RESPONSE:** Stormwater management for the campus is managed under a Reciprocal Easement Agreement, and rights to generate, manage, and discharge stormwater across parcels is summarized in the REA. The REA allows for a mutual easement for the natural runoff of surface water between lot owners, but no drainage using a stormwater management apparatus may be used to drain on another lot without prior written consent of the lot owner.

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

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

SW6. Revise proposed drainage pipe to be reinforced concrete or request waiver (§300-11.B(2.a)).

**HEI RESPONSE:** Drainage pipe is specified as Reinforce Concrete Pipe (RCP) throughout the Project site, except for the header/roof drain leader collector pipe and drain-pipe manifolds and inlet/outlet pipes associated with the HDPE subsurface detention/infiltration system. The Applicant requests a waiver of the specified RCP pipe material and allow HDPE pipe for the roof drain collector due to the multiple entrance locations, and the subsurface HDPE stormwater chamber system to allow for use of standard pipes and fittings.

SW7. Provide Type B winged headwall at all outfalls (§300-11.B(2.c)).

**HEI RESPONSE:** The stormwater design proposes to connect the proposed Project's stormwater collection system into the existing drainage system prior to the discharge/outfall location at the North Pond. This is to avoid disturbance of the bordering vegetated wetland and pond in the interest of environmental resource area protection. No headwalls are proposed.

#### **MASSDEP REPORTABLE RELEASES**

The MassDEP Waste Site / Reportable Release database identified the Stie as the location of a reportable release under Release Tracking Number (RTN) 2-4017015. Available documentation indicates that the release originated from the discovery of Methyl Tert-butyl Ether (MTBE) in groundwater circa 2001. Response actions included the installation of monitoring wells to sample contaminant levels. Sampling conducted circa 2003 did not detect MTBE concentration above reportable limits. A Response Action Outcome (RAO) Statement was submitted to MassDEP supporting a condition of "No Significant Risk." The RTN has since been closed.

SW8. Indicate if existing monitoring wells will be retained.

**HEI RESPONSE:** The Applicant intends to abandon and remove the existing monitor wells within the Project site under the direction of a Licensed Site Professional and/or Geotechnical Engineer in accordance with local and state regulations.

#### **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 proposes to connect new closed drainage systems to existing outfalls located within wetland resource areas. Existing splashpads are located at each outfall for erosion control.

- SW9. Verify condition of existing outfalls at DB, J, and L-series wetlands. BETA could not locate the existing outfalls associated with the north “detention pond” in the field nor their respective splashpads. Confirm that inverts for these outfalls is above the typical water elevation for these ponds.

HEI RESPONSE: Existing Splashpad #1 and #2, as referenced on the Grading and Drainage Plan, should be labeled as existing pipe inverts. Pipe inverts and associated splashpads are set below the average water elevation per the original design by CE Maguire, Inc. in October of 1980. HEI is proposing to reuse all existing outfalls of the existing drainage discharging to the North Pond.

- SW10. BETA recommends relocating existing splashpads 1 and 2 to outside of the L-series wetland boundaries.

HEI RESPONSE: The Project design proposes to retain and utilize the existing discharge pipes and associated splashpads to the North Pond in their current location. This is proposed to avoid disturbance of the bordering vegetated wetland and pond in the interest of environmental resource area protection.

- SW11. Provide sizing calculations for existing splash pads to remain to confirm they are adequately sized to convey anticipated stormwater runoff.

HEI RESPONSE: The Project design proposes to retain and utilize the existing pipe inverts and splashpads.

**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 changes to site hydrology and ground cover which will impact stormwater flow to the analyzed design points. Stormwater runoff will be mitigated via capture, storage, and infiltration within nine new stormwater BMPs.

Calculations indicate a net increase in peak discharge rate for the 2-, 10-, and 25-year storm events for POA A and the 2-year storm event for POA C. These design points represent the wetlands located to the west of the Site for which no new BMPs are proposed. The stormwater mitigation narrative notes that POA A is a previously constructed detention basin sized for a larger inflow capacity.

Calculations indicate a new decrease in peak discharge rate for all other storm events and points of analysis.

- SW12. Provide summary table for changes in runoff volume for all design points and storm events (BDPG Page 8).

HEI RESPONSE: Runoff volumes for all design points and storm events have been added to “Table 5 – Summary of Pre- and Post-Development Peak Rates of Runoff” of the Revised Stormwater Report.

- SW13. Provide required peak flow mitigation for POA A. Although originally designed as a Detention Pond, this area has been flagged as a wetland and is overgrown with vegetation, impairing proper function. Given the significant decrease in peak discharge rate to POA C, BETA recommends redirecting a small portion of the POA A catchment to the proposed stormwater management system to meet this standard.

HEI RESPONSE: The Project design is revised to reduce peak flows to POA-A for the 2-year, 10-year and 100-year storm event, with a de minimus 0.09 CFS increase in peak runoff for the 25-yr storm. However, as demonstrated in Table 5 of the Revised Stormwater Report, the volume of stormwater released to POA A in the 25-year storm is less than Pre-Development conditions. We note that the West Detention Basin has capacity to accept additional peak runoff and still maintain its original stormwater control design assumptions, as demonstrated and approved under the abutting 300 Financial Way development project.

- SW14. Review existing watershed plans:

- a. Adjust the southern boundary of Watershed EX-D. An existing catch basin is located along the eastern wall of 200 Financial Park which conveys stormwater runoff to EX-D, but has not been included in the watershed.

HEI RESPONSE: Watershed EX-D has been revised to include the existing catch basin located along the eastern wall of 200 Financial Park.

- b. Model areas of dense tree vegetation as “woodlands,” rather than grass.

HEI RESPONSE: The hydrology has been revised to account for the dense tree land use areas within EX-D and EX-E and are modeled as woodlands.

- SW15. Clarify intended routing of rain garden underdrains. If underdrains will connect to adjacent subsurface stormwater basins, then they must be included in the hydroCAD model.

HEI RESPONSE: The design has been modified, and the proposed rain garden underdrains are designed to provide supplemental Water Quality Volume in addition to the stone voids and promote infiltration. These are not designed to connect to the subsurface stormwater detention/infiltration systems. Therefore, the routing is included in the HydroCAD model.

- SW16. Revise grading design to account for landscaping islands within parking lot interiors. Include spot grades at corners to ensure positive flow towards the intended catch basin.

**HEI RESPONSE:** Spot grades have been added within the parking lot and trailer storage limits to the West of the site. Refer to the Grading and Drainage Plans (Sheets C400 and C401).

- SW17. Review pipe sizing calculation for DMH-16 to WQU-4 and DMH-7 to Splashpad-1. The peak flow is greater than the design flow.

**HEI RESPONSE:** The pipe capacity analysis has been revised for the stormwater collection system at the discharge locations to the North Pond. The pipe segments connecting DMH-24, DMH-30, DMH-7, and invert/splashpad #1; and the pipe segment DMH-9 to invert/splashpad #2 operate under surcharge conditions similar to existing conditions. We note that the proposed surcharge condition occurs in less pipe length than what is assumed exists today based upon the original drainage system design, resulting in an improvement in surcharge condition.

Based upon the pipe capacity analysis, the surcharge condition does not backwater into any water quality inlet devices, the subsurface infiltration facilities, rain gardens, nor catch basin inlets. Refer to the revised pipe capacity analysis included in the revised Stormwater Report.

**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 the soils at the site are Merrimac-Urban Land, Udorthents, sandy, Hinckley loamy sand, and Merrimac fine sandy loam, all rated in Hydrologic Soil Group (HSG) A (high infiltration potential).

A Geotechnical Report prepared by McArdle Gannon Associates, Inc., has been included in the submission. Geotechnical analysis included eight test pits conducted throughout the Site. Underlying soil in the area of proposed infiltration was generally identified as Sand or Sandy Loam and groundwater was identified between 4.6' to 9' below grade.

The project proposes two rain gardens and seven subsurface infiltration systems to provide groundwater recharge. The project is anticipated to provide a recharge volume well in excess of what is required. Calculations have been provided indicating that all BMPs will drawdown within 72 hours.

- SW18. Review model for Rain Gardens 1 and 2:

- a. Revise top elevation for "Custom Stage Data" model to match rain garden schedule.

**HEI RESPONSE:** The rain garden schedule has been revised to match the HydroCad model.

- b. Revise bottom elevation for “Subsoil” portion of the model to match rain garden schedule. Revise to utilize a consistent Voids % for all elevations.

HEI RESPONSE: The bottom elevation of the subsoil has been revised to match both the HydroCAD model and the rain garden schedule. The varying void ratios shown below the rain garden bottom elevation account for the different soil materials. The first 3-inches is mulch having a void ratio of 25%, then 3-feet of ‘engineered planting soil’ with a void ratio of 25%, then 2.75-feet of gravel with a void ratio of 40%.

- c. Provide min. 3-inch freeboard above ponding elevation for rain gardens, in accordance with MA Stormwater Handbook V2C2 Page 27.

HEI RESPONSE: The two (2) rain garden designs are revised to provide 3-inches of freeboard from the 100-year ponding elevation to the top of the rain gardens. Both rain gardens are designed with a top of berm elevation of 250.50. Rain garden #1 has a 100-year peak elevation of 250.21, which provides 0.29’ of separation and rain garden #2 has a 100-year peak elevation of 250.19 providing 0.31’ of separation.

- d. Review peak elevation for rain gardens, which are above top of pond elevations.

HEI RESPONSE: The two (2) rain gardens are redesigned to prevent the 100-year storm peak elevation from exceeding the top of rain garden berm elevation of 250.50.

- e. Provide spot grades and labels for contours around proposed rain gardens to clarify intended berm height.

HEI RESPONSE: Spot grades and contour labels have been added to the Plans.

- SW19. Review model for SWM-1. Three outlet pipes are depicted on the plans, but only two are accounted for in the model.

HEI RESPONSE: SWM-1 has been removed from the proposed design. See revised Hydrology Report and the drawing sheets.

- SW20. Review model for SWM-5. Based on the design depicted on the plans, the routing for the 9x24” orifices (Device #2) should be to Device #3, rather than “primary.” Recommend reviewing the necessity of multiple orifices in this system, as flow will ultimately be constrained by the single 24” RCP outlet

HEI RESPONSE: Noted. The outlet controls for SWM-5 have been revised and the HydroCAD model reanalyzed. See revised Stormwater Report.

SW21. Review model for SWM-6:

- a. The peak elevation of 267.7' is above the pavement elevation in this area.

HEI RESPONSE: The 100-year peak elevation for SWM-6 has been reduced to 259.47 which is within the stone cover of the system.

- b. Two outlet devices are depicted at elevation 257.95', but only one outlet pipe is depicted on the plans.

HEI RESPONSE: The Plans and HydroCAD model are revised to coordinate the number of outlets.

SW22. Review model for SWM-7; the bottom/top of stone/elevation utilized in the model are inconsistent with the plans.

HEI RESPONSE: SWM-7 has been removed from the proposed design. See revised Stormwater Report.

SW23. Depict test pit locations on the drainage plans to show their location relative to proposed stormwater BMPs.

HEI RESPONSE: Test pit locations have been added to the background of the Grading and Drainage Plans (Sheet C500/C501)

SW24. Conduct test pits in the area of Rain Garden #1, SWM-1, SWM-2, SWM-4, and SWM-7.

HEI RESPONSE: As explained at the first Planning Board hearing, the current tenant's lease requirements limited the locations that test pits could be excavated and witnessed due to sensitivity with their operations. The Applicant agrees that additional test pits should be witnessed within these areas prior to construction to verify soil and groundwater conditions. The test pit logs will be reviewed with the Peer Reviewer to demonstrate compliance with the design requirements and assumptions prior to construction.

SW25. Review separation to groundwater for the following:

- a. SWM-1 & 7: The groundwater elevation in nearby TP-1 is 250.38' ±, which is well above the system bottom of 243.5'.

HEI RESPONSE: SWM-1 and SWM-7 have been removed from the proposed design.



- b. SWM-2: The groundwater elevation in nearby TP-1 is 250.38' ±, which is above the system bottom elevation of 250.0'.

**HEI RESPONSE:** HEI has revised the proposed drainage design and reduced the number of subsurface stormwater systems. Refer to the Subsurface Infiltration System Schedule on Sheets C400 and C401 which shows the relative ESHGW elevations with respect to the system design elevations. An exhibit entitled "Estimated Groundwater Map" is included in the Figures portion of the revised Stormwater Report to demonstrate how ESHGW is established based upon monitor well readings. A Frimpter GW correction factor of 1.3' is applied in addition to the ESHGW values measured in the field.

- c. SWM-3: The groundwater elevation in nearby TP-1 is 250.38' ±, which is above the system bottom elevation of 244.0'.

**HEI RESPONSE:** Refer to HEI's response to SW25(b).

- d. SWM-4: The groundwater elevation in nearby TP-1 is 250.38' ±, which is above the system bottom elevation of 243.0'.

**HEI RESPONSE:** Refer to HEI's response to SW25(b).

**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 project proposes treatment trains generally consisting of deep sump catch basins, water quality units, and subsurface infiltration systems or rain gardens. The project is anticipated to provide TSS removal more than what is required.

The project proposes to provide the 1.0-inch water quality volume via nine new infiltration BMPs. However, the provided volume is less than what is required.

As a project which discharges to a critical area (See Standard 6), the project is required to provide 44% pretreatment prior to discharge to all infiltration BMPs. Pretreatment is generally provided via deep sump catch basins and water quality units but has not been achieved for the proposed rain gardens.

SW26. For a new Site, meet one of the following criteria (§153-16.B(1))

- a. Retain the volume of runoff equivalent to, or greater than, 1.0 inch multiplied by the total post-construction impervious surface area on the Site; and/or
- b. Remove 90% of the average annual post-construction load of TSS and 60% of the average annual load of total phosphorus.

**HEI RESPONSE:** The revised design meets both listed criteria. Refer to the calculations included in Appendix B of this Revised Stormwater Report.

- SW27. Revise calculations for required water quality volume to include all impervious areas, including roofs. Per V1C1 Page 9 of the MA Stormwater Handbook, the required water quality volume includes the total impervious area of the Site.

HEI RESPONSE: The design is revised to account for the required water quality volume (WQV) for all impervious areas, including roofs. The required WQV for ground surface runoff is calculated by converting the required water quality volume to an equivalent water quality flow rate (Q). The Q value and catchment plans were provided to the vendor, Contech, to assist with design of the four (4) water quality units proposed throughout the site. In addition, two (2) rain gardens proposed provide the required WQV for ground surface discharges. For the building roofs, four (4) subsurface infiltration systems provide the required WQV. See the revised Stormwater Report.

- SW28. Clarify location of sediment forebays for Rain Gardens, which have been sized in the Stormwater Report but are not depicted on the plans.

HEI RESPONSE: The design is revised to incorporate three (3) sediment forebays to provide pre-treatment upgradient of the discharge point to the rain gardens. The forebay sizing calculations are included in Appendix B of the revised Stormwater Report.

- SW29. Provide required 44% Pretreatment for Rain Gardens. Note that the 90% TSS removal credit requires one of the specific pretreatment options identified on V2C2, Page 25 of the MA Stormwater Handbook.

HEI RESPONSE: See HEI's response to SW28. Sediment forebays have been provided upgradient of the discharge point of the rain gardens, to achieve the estimated 90% TSS removal credit. See revised TSS calculations in Appendix B of the revised Stormwater Report.

- SW30. Provide calculations or supporting documentation for EX-WQI-22, EX-WQI-24, and EX-WQI-25 to demonstrate that adequate pretreatment will be provided for SWM-7. Labels on manhole covers for these devices suggest they are Hydroworks units.

HEI RESPONSE: The sizing reports originally submitted as part of the 300 Financial Park design review for EX-WQI-22, EX-WQI-24, and EX-WQI-25 are added to Appendix C of the revised Stormwater Report.

- SW31. Revise stormwater management system to remove at least 60% of nitrogen loading from post-development stormwater (BDPG Pg. 8)

HEI RESPONSE: An nitrogen loading reduction analysis is summarized in the exhibit entitled, "Downstream Receiving Waterbody Impairment Analysis" located in Appendix C of the revised Stormwater Report.

SW32. Identify discharge points in each of the TSS Removal charts.

HEI RESPONSE: Discharge points are added to the TSS Removal Charts located in Appendix B of the revised Stormwater Report.

Highpoint conducted an informal review of the BETA peer review report with Gary James. Mr. James suggested that the Applicant provides additional water quality improvements for the existing watershed discharging into the J-Series Wetlands (POA C – Wetlands -WEST). This is requested to improve existing stormwater discharges from the access road where feasible to meet the Maximum Extent Practicable standard for the redevelopment portion of the Project site.

The proposed drainage design is revised to replace the existing catch basin which receives surface runoff from the ring road and discharges directly to the J-Series Wetlands with a Contech CDS2105-4-C Water Quality Unit with a catch basin grate. Highpoint intends to conduct a follow-up site visit to verify the existing catch basin receives adequate runoff to warrant a water quality unit at this location.

**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 parking lot with a high-intensity use (1,000 vehicle trips per day or more) which is considered a LUHPPL. The project is required to conform to this section. Deep sump catch basins, proprietary separators, rain gardens, and subsurface structures are considered recommended BMPs for LUHPPLs. A Spill Prevention, Containment, and Countermeasure Plan has been included with the Stormwater Report.

SW33. Revise narrative to identify the Site as a LUHPPL.

HEI RESPONSE: The Project site is not a LUHPPL as it does not generate greater than 1,000 vehicle trips per day. Regardless, the Project pretreats the 1.0" WQV due to its location within a Critical Area (Zone II of a Public Water Supply).

SW34. Provide means of emergency shut-off of the stormwater management system.

HEI RESPONSE: The Applicant request reconsideration of this request as the Project is not a LUHPPL.

**CRITICAL AREAS (STANDARD NUMBER 6):** *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.* The project includes stormwater discharges to a Zone II Wellhead protection area which is a critical area. Deep sump catch basins, proprietary separators, rain gardens, and subsurface structures are considered recommended BMPs for this type of critical area. The project has been designed to provide 44% pretreatment and the 1.0-inch water quality volume, except as noted under the Standard 4 section above.

**REDEVELOPMENT (STANDARD NUMBER 7):** *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.* The project does not meet the definition of a redevelopment – The applicant has considered the site as new development and has not reviewed the development under redevelopment criteria.

**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 straw wattle, inlet protection, and stabilized construction entrance. A Construction Period Operation and Maintenance Plan is included in the Stormwater Report including waste disposal, dust monitoring, spill prevention, and monitoring.

SW35. Provide description of construction and stockpile and/or excess materials removed from the Site expected to be stored on-site, including controls to reduce pollutants and storage practices (§15312.L).

**HEI RESPONSE:** Excavated soils from grading activities and demolition debris will be temporarily stockpiled onsite prior to onsite reuse or removal from the site. Construction materials including building materials, fill, piping, conduit, and other components of the stormwater systems and utilities, may also be temporarily stored onsite prior to use. Construction material and soil storage stockpile areas will be placed in accordance with the General Contractor's management requirements. Soil stockpile areas will be surrounded by compost-filled filter sock barriers to control pollutants. Excess materials will be removed from the site prior to completion of construction activities.

SW36. Provide sequence of construction (§153-12.M).

**HEI RESPONSE:** A preliminary construction schedule is submitted under separate cover for review. A detailed Sequence of Construction will be prepared by the selected General Contractor and submitted to the Planning Staff, Engineering/DPW, and the Peer Reviewer for consideration prior to a Pre-Construction Meeting.

SW37. The applicant is reminded that a Stormwater permit from the Franklin DPW is required based upon the size of the disturbance.

**HEI RESPONSE:** The Applicant will coordinate with the selected General Contractor to obtain this permit prior to construction.

- SW38. Recommend revising perimeter controls at wetlands to compost filter tubes for enhanced sedimentation control.

HEI RESPONSE: Perimeter erosion controls are revised to specify compost filter tubes in accordance with the Conservation Commission's requirements.

- SW39. Indicate potential staging and stockpile areas. Recommend including a note or callout prohibiting the placement of stockpiles within wetland buffer zones.

HEI RESPONSE: Potential staging and stockpile areas are shown on Sheets C200 and C201.

- SW40. Provide means of ensuring all construction traffic will be over the anti-tracking pads.

HEI RESPONSE: Construction site access will be the responsibility of the General Contractor. The General Contractor will submit a final Construction Sequencing Plan (CSP) prior to the Pre-Construction Meeting. The CSP will include identification of all temporary and permanent construction equipment access and anti-tracking pad locations.

- SW41. Provide detail for anti-tracking pads.

HEI RESPONSE: An anti-tracking pad detail is included in the Plans.

- SW42. Provide means of protecting proposed stormwater BMPs from construction-period sediment.

HEI RESPONSE: Stormwater BMP's will be protected with standard catch basin inlet silt sack protection, compost-filled filter socks around perimeter of rain garden areas, and diversion swales directing runoff to temporary sediment basins prior to discharge. Final construction phase erosion control management sequencing and device locations will be coordinated with the General Contractor and included in the CSP for review prior to construction.

- SW43. Provide means of maintaining existing flow patterns following the removal of the existing closed drainage system but prior to installation of the proposed system.

HEI RESPONSE: The General Contractor will submit a final Construction Sequencing Plan (CSP) prior to the Pre-Construction Meeting, which will include provisions for maintaining existing flow patterns and integration of temporary erosion control measures to discharge to the existing drainage system with proper sediment removal/pre-treatment.

**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.

SW20. Provide owner signature (§153-18.B(5)).

**HEI RESPONSE:** The Applicant has signed the Report. A copy is included in the revised Stormwater Management Report.

SW21. Include provision requiring a documentation submittal to the DPW confirming when maintenance has been satisfactory completed (§153-18.B(6)).

**HEI RESPONSE:** A provision to submit required documentation regarding satisfactory maintenance to the DPW is included in the O&M Plan

SW22. Provide BMP location map identifying each BMP along with their treatment train to facilitate maintenance.

**HEI RESPONSE:** A Campus Stormwater Management Plan is submitted under separate cover identifying proposed BMP's and treatment train device locations to aid in future maintenance.

SW23. Indicate how future property owners will be notified of the presence of the stormwater management system and the need for maintenance.

**HEI RESPONSE:** The Applicant will include a summary of the existing stormwater management components and locations identified on a BMP location map in future tenant lease documents. The lease documents will refer to the future property owners and tenants being required to execute and manage the Operation and Maintenance Plan.

SW24. Provide estimated operations and maintenance budget.

**HEI RESPONSE:** A summary of the BMP inspection requirements and related budgets is being prepared by the Applicant and will be submitted to the Peer Reviewer under separate cover for review.

SW25. Include operation and maintenance measures for EX WQI-22, 24, and 25.

**HEI RESPONSE:** The operation and maintenance measures for EX WQI-22, EX WQI-24, and EX WQI-25 are included in the Long-Term O&M Plan for 300 Financial Way.

Mr. Gregory Rondeau, Chairman

May 25, 2023

Page 21

SW26. Provide operation and maintenance of outfalls and splashpads.

**HEI RESPONSE:** The operation and maintenance measures for retaining satisfactory operation of existing outfalls is included in the revised Operation and Maintenance Plan.

**ILLICIT DISCHARGES (STANDARD NUMBER 10):** *All illicit discharges to the stormwater management system are prohibited.* An Illicit Discharge Compliance Statement has not been provided.

SW27. Provide illicit discharge compliance statement, including owner's signature.

**HEI RESPONSE:** An Illicit Discharge Statement with Owner's signature is included in the revised Stormwater Report.

## WETLANDS PROTECTION

The Project proposes work within Areas Subject to Protection and Jurisdiction of the Franklin Conservation Commission, including the 100-foot Buffer Zones to a vegetated wetland. The Applicant has submitted an NOI to the Town of Franklin Conservation Commission and must obtain an Order of Conditions to complete the proposed work.

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



Stephen Borgatti, P.E.  
Project Engineer

cc: Amy Love, Town Planner

