November 2, 2022

Ms. Breeka Lí Goodlander, Agent
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: Franklin Heights – 0 Lincoln Street
MassDEP File No. Not Yet Issued
Notice of Intent Peer Review

Dear Ms. Goodlander:

BETA Group, Inc. (BETA) has reviewed documents and plans for the project entitled: ***Franklin Heights – Parcel B,*** located at ***0 Lincoln Street*** in Franklin, Massachusetts. This letter is provided to present BETA's findings, comments and recommendations.

BASIS OF REVIEW

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

- Notice of Intent entitled ***Re: NOI, 0 Lincoln St (Parcel ID# 219-178-002-000), Franklin,*** MA; prepared by Creative Land & Water Engineering, Inc.; dated September 21, 2022.
- Plans (12 Sheets) entitled ***Franklin Heights, Parcel B, 40B Development Plan***; prepared by Guerriere & Halnon, Inc.; dated September 14, 2022; stamped and signed by Robert E. Constantine II, MA P.L.S. No. 49611 and Robert J. Duff, MA P.E. No. 40707.
- ***Stormwater Report, Franklin Heights, Parcel B, 40B Development Plan***; prepared by Guerriere & Halnon, Inc.; dated September 14, 2022; stamped and signed by Robert J. Duff, MA P.E. No. 40707.
- Plan (1 Sheet) entitled ***Stream Crossing and Wetland Replication Plan***; prepared by Creative Land & Water Engineering, LLC.; dated July 20, 2022; revised through September 16, 2022; stamped and signed by Desheng Wang, MA P.E. No. 39511.

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

- Site Visit on October 25, 2022
- ***Massachusetts Wetlands Protection Act 310 CMR 10.00*** effective October 24, 2014
- ***Massachusetts Stormwater Handbook*** effective January 2, 2008 by MassDEP
- ***Stormwater Management Chapter 153 From the Code of the Town of Franklin,*** Adopted May 2, 2007
- ***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

SITE AND PROJECT DESCRIPTION

The Site includes two (2) parcels located at 0 Lincoln Street in Franklin, Massachusetts, further identified by the Franklin Assessor's Office as Assessor's Parcel 219-178-001-005 ("Parcel A") and Assessor's Parcel 219-178-002-000 ("Parcel B"). The Site is bounded on all sides by residential development and to the west

by Lincoln Street. Parcel A consists of the existing Franklin Heights apartment and condominium complex and is improved by paved private roadways (Trooper Paul Barry Way, Shayne Road, and Leanne Way), maintained landscape areas, stormwater management infrastructure, and utilities. Parcel B is an undeveloped, wooded parcel featuring a centrally located area of upland vegetated by species including sugar maple (*Acer saccharum*), Eastern white pine (*Pinus strobus*), and roundleaf greenbrier (*Smilax rotundifolia*). Gentle topographic relief from the central upland area is present on all sides.

Several Resource Areas Subject to Protection under the Massachusetts Wetlands Protection Act (M.G.L. ch.131 s.40) and its implementing regulations at 310 CMR 10.00 (collectively "the Act"), as well as the Town of Franklin Wetlands Protection Bylaw (Chapter 181) and its associated regulations (collectively "the Bylaw") are present at the Site and include the following:

- Inland Bank (to intermittent stream);
- Bordering Vegetated Wetland (BVW);
- Land Under Water (LUW); and
- Isolated Vegetated Wetland (IVW).

The boundaries of BVW and IVW were previously confirmed by an Order of Resource Area Delineation (ORAD) issued under MassDEP File No. 159-1249 on May 17, 2022 and recorded at the Norfolk County Registry of Deeds in Land Court Book 7224, Page 356. The ORAD does not indicate that Bank boundaries were approved; however, the potential presence of Vernal Pools are incorporated by reference.

The Site is not located within any Wellhead Protections Areas (Zone I, Zone II, & Interim) or Surface Water Protection Areas (Zone A, B, or C). There are also no Outstanding Resource Waters (ORWs) or Areas of Critical Environmental Concern (ACEC) present, and the most recent Natural Heritage and Endangered Species Program (NHESP) mapping does not depict any Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife at the Site. There are no NHESP-mapped Certified or Potential Vernal Pools located within 100 feet of the Site.

Natural Resource Conservation Service (NRCS) soil maps indicate the presence various soil groups at the Site including Woodbridge Fine Sandy Loam with a Hydrologic Soil Group (HSG) rating of C/D, Paxton Fine Sandy Loam with a HSG rating of C, and Whitman Fine Sandy Loam with a HSG rating of D.

Proposed work is associated with a residential development pursuant to M.G.L. Chapter 40B (40B) and includes the following activities (collectively referred to as "the Project"):

- Construction of a looped bituminous concrete roadway with a single entrance/egress off Trooper Paul Barry Way;
- Construction of a wetland and intermittent stream crossing consisting of an open-bottom culvert and retaining walls;
- Construction of 60 residential units, 19 of which are within Buffer Zone;
- Construction of a sidewalk with a grass buffer along one (1) side of the new roadway;
- Construction of driveways and parking areas for each unit;
- Construction of a closed drainage system that directs runoff to two (2) infiltration basins, one (1) of which is within Buffer Zone;
- Installation of new water and sewer utilities with service off of Trooper Paul Barry Way;
- Re-grading of Parcel B, including backfill at the western portion of the Site, with increases in elevation of up to twelve (12) feet; and
- Planting of various trees and shrubs.

The Project will result in direct impacts to Bank, BVW, and LUW. As a 40B development, it is assumed that the Bylaw has been or will be waived by the Franklin Zoning Board of Appeals (ZBA); therefore, the Project is being reviewed only under the Act.

ADMINISTRATIVE AND PLAN COMMENTS

The plan set (as identified above) is missing information and requires additional information for clarity.

Table 1. NOI Plan

NOI Plan Requirements	Yes	No
North Arrow	✓	
Registered PLS Stamp (Existing Condition Plans Only)	✓	
Assessors' Reference		✓
Abutting Property Assessors' Reference		✓
Survey Benchmark		✓
Existing Conditions Topography (with source and date of survey)		✓ (See Comment A4)
Accurate Plan Scale	✓	
Plan Scale 1" = 40' or smaller	✓	

PLAN AND GENERAL COMMENTS AND RECOMMENDATIONS

A1. No file number or technical comments have been issued by the Massachusetts Department of Environmental Protection (MassDEP) as of 10/31/2022.

A2. Depict Assessors' references for both the Site and the abutting properties on the plans.

A3. Include at least one (1) survey benchmark on the plans.

A4. Include the date(s) and method(s) of the topographic survey in the plan notes.

A5. Depict the proposed tree line on the Site development plans.

A6. Provide a detail of the proposed retaining wall at the stream/BVW crossing.

A7. Revise the WPA Form 3 to detail all temporary and permanent impacts to BVW, Bank, and LUW.

A8. Depict the limit of erosion controls on all plan sheets.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW

BETA conducted a site visit and regulatory review of the submitted revised documents and plans, focusing on compliance with Resource Area definitions and Performance Standards set forth in the Act.

As noted above, Resource Area boundaries at the Site were previously approved under an ORAD; however, the ORAD appears to only have explicitly approved the boundaries of BVW and IVW and stated the potential for presence of Vernal Pools. Therefore, BETA only assessed Resource Area flagging in the field associated with the intermittent stream southwest of 52 Leanne Way.

The NOI application does not include any narrative information documenting compliance with the applicable Performance Standards and does not disclose all permanent and temporary Resource Area impacts that will result from the Project. In addition, the wetland replication area requires further detail on construction and sequencing to ensure a high likelihood of successful implementation per the

Massachusetts Inland Wetland Replication Guidelines. While Conservation Commissions generally do not dictate construction means and methods, ensuring the likelihood of replication area success is crucial in demonstrating compliance with the BVW Performance Standards.

Although the Applicant has indicated that the proposed stream/BVW crossing will fully adhere to the Massachusetts Stream Crossing Standards, insufficient information and conflicting calculations were provided. BETA also observed hydrologic/hydraulic conditions associated with the stream that may warrant modifications to the design in order to maintain upstream hydrology and comply with the Water Depth and Velocity Standard (Stream Crossing Standard 6). Further information from the Applicant will also be required to demonstrate that the proposed design reflects a minimization of impacts associated with the stream/BVW crossing.

At this time, the Applicant has not provided sufficient information to describe the Site, the work, or the effects of the work on the interests of the Act.

RESOURCE AREA BOUNDARY COMMENTS AND RECOMMENDATIONS

BETA conducted a Site visit on October 25, 2022 to assess existing conditions, particularly with regards to the proposed stream crossing and adjacent BVW replication area. BETA observed numerous wetland flags in the field and considered their location when reviewing the proposed BVW replication area.

W1. BVW boundaries were previously approved under the ORAD; however, it is unclear whether the boundaries of Bank and the intermittent status of the associated stream were approved. BETA generally observed the Bank flagging in the field to accurately delineate the top of Bank where flags were present, i.e., the first observable break in slope/mean annual flood level. Based on information accessed through the Massachusetts Geographic Information Systems (MassGIS) website and the United States Geologic Survey (USGS) StreamStats tool, the stream does not appear on USGS topographic maps and is not associated with a drainage area greater than 0.50 square miles; therefore, the stream qualifies as intermittent.

W2. Provide additional Bank delineation of the BKN series to depict the location of the stream channel along the BVW replication area.

W3. Provide calculations to demonstrate whether the IVWs at the Site have the water holding capacity to qualify as ILSF and be afforded protection under the Act.

CONSTRUCTION COMMENTS AND RECOMMENDATIONS

W4. The Project will result in approximately 9.6 acres of clearing and grubbing. Provide a phasing plan to supplement the erosion control plan that limits the total area of disturbance at the Site at a one time. The proposed single line of perimeter erosion controls is anticipated to be insufficient for the large area of clearing where soils are associated with high runoff volumes.

W5. The Erosion Control Plan indicates that the Site will be cleared following construction of the construction entrance and installation of erosion controls. Clarify whether the construction entrance will include full construction of the stream/BVW crossing, or if a temporary crossing is required. Should a temporary crossing be required, provide construction details.

W6. The Applicant should confirm whether additional test pits will be conducted for this Project. Test pit data provided on the Plans is dated 2005 and should be reconfirmed as discussed in Comment SW18. Conducting test pits at the Site would require approval from the Conservation Commission

and would not qualify for the exemption at 310 CMR 10.02(2)(b)2.g. if Resource Area crossings are required.

W7. Revise the Erosion Control Plan to include a note stating clearing of the BVW and BVW replication area is prohibited until the Wetland Scientist reviews the area for woody plants to potentially transplant, as indicated on the Stream crossing and Wetland Replication Plan.

W8. The proposed 2V:1H slope at the west side of the site will be stabilized as "designed by others". Provide the method(s) and timing of both temporary and permanent slope stabilization to prevent sedimentation of the downgradient BVW. The Applicant should consider use of native seed mixes with wildlife habitat / pollinator habitat value for permanent stabilization where within Buffer Zone.

W9. Provide a plan that depicts all Resource Area impacts associated with the Project, as the Stream Crossing and Wetland Replication Plan does not accurately disclose all impacts. It appears that temporary impacts are anticipated to be required for the following:

a. Stream water control (if applicable);
b. Construction of the stream/BVW crossing and retaining walls;
c. Construction of the BVW replication area; and
d. Installation of erosion controls along/over the BVW boundary between flags B30A/B34AN and B40AN/B44A.

W10. Erosion controls consisting of siltation fencing and compost filter tubes are proposed to be installed across the stream as depicted on the Wetland Replication & Stream Crossing Plan, which is not a typical method of in-water erosion, sedimentation, and/or turbidity control. Clarify what time of year the crossing work will occur, what erosion controls will be used for in-water work, and how water will be controlled during construction of the crossing. To comply with the Section 404 Massachusetts General Permit, in-water controls should only be in place while required to complete the crossing work. Based on BETA's experience with the Franklin Conservation Commission, the Commission may wish to clarify if they would prefer the use of alternative erosion controls.

W11. To apprise the Conservation Commission of federal permitting requirements, the Project will be required to obtain U.S. Army Corps of Engineers (USACE) approval under the Section 404 Massachusetts General Permit prior to commencing construction.

MITIGATION COMMENTS AND RECOMMENDATIONS

The mitigation comments and recommendations for the Project are primarily related to the proposed BVW replication area. BVW replication area comments consider the Massachusetts Inland Wetland Replication Guidelines and generally accepted wetland science/construction procedures.

W12. If available, the BVW replication area should be backfilled initially with native hydric soils, with creating a soil blend having high organic content as a way to supplement native soils. The Applicant should estimate the volume of hydric soils that can be reused from the permanent BVW impact area associated with the crossing. Based on hand auger soil sampling conducted during BETA's Site visit, soils within the proposed replication area consist of shallow refusal and gravelly A- and B-layers. Onsite soils used for a supplemental hydric soil blend should be assessed for appropriate composition, and compost used for the supplemental hydric soil blend should consist of clean leaf mulch. It is recommended that the contractor target 50% organic matter by volume

when creating supplemental hydric soils; therefore, additional compost will be required beyond the 1/3 composition indicated on the plans.

BETA recommends revising the Wetland Replication & Stream Crossing plan notes to reference the items above.

W13. A note should be added to the Wetland Replication & Stream Crossing Plan indicating that the subgrade of the BVW replication area should be loosened prior to placing hydric soil backfill to provide sufficient vegetation rooting depth. If a heavily compacted C-layer is encountered, it is recommended that additional excavation/aeration occur to provide greater than 12 inches of hydric soils in the replication area.

W14. Provide the specification sheet for the New England Wetland Plants Wetland Seed Mix for the contractor's reference.

W15. Include a note on the Wetland Replication and Stream Crossing Plan requiring the BVW replication area to be overseeded by doubling the recommended application rate and include a note requiring placing clean straw mulch over the seed to promote stability in the replication area until germination occurs.

W16. Depict supplemental erosion controls directly upgradient of the BVW replication area on the Stream Crossing and Wetland Replication Plan.

W17. Provide a narrative describing how Buffer Zone temporarily impacted by the Project will be restored following construction. Based on the provided plans, wooded areas will be cleared to access the BVW replication area and conduct grading, but no Buffer Zone replanting is depicted on the plans.

W18. Provide a method for restoring temporary BVW/Bank/LUW impact areas and describe how Banks under the crossing will be graded and permanently stabilized and include notes pertaining to Resource Area restoration on the plan set.

WPA Performance Standards Comments and Recommendations

The Project, according to the WPA Form 3, proposes 947 square feet of BVW impacts. However, the Applicant is required to quantify all temporary and permanent Resource Area impacts and demonstrate how the applicable Performance Standards are met. The submitted NOI does not provide information on compliance with Performance Standards. Additional information is also required to document compliance with the Massachusetts Stream Crossing Standards.

Bank (310 CMR 10.54)

W19. Depict all temporary and permanent Bank impacts associated with the construction of the crossing. It is anticipated that a Wildlife Habitat Evaluation for Bank impacts will not be required pursuant to 310 CMR 10.54(4)(a)6.

W20. Provide a narrative to demonstrate compliance with the Performance Standards at 310 CMR 10.54(4).

W21. The following comments are provided regarding the Massachusetts Stream Crossing Standards:

a. The proposed crossing appears to meet the Massachusetts Stream Crossing Standards 1 through 4 (Type of Crossing, Embedment, Crossing Span, and Openness Ratio). However, the Applicant should clarify the proposed Openness Ratio. The Openness Ratio is listed as

0.30, which does not meet the 0.82 requirement. However, the design appears to provide sufficient openness in excess of the requirement.

b. Provide information to demonstrate compliance with Standard 5 (Substrate).

c. Provide survey cross sections of the stream to demonstrate that the appropriate water depth and velocity will be achieved (Standard 6). Based on BETA's Site visit, it appears that a one (1)-foot-deep channel may be too deep for this location. The existing stream in this location appears to seep through a discrete hummock under low flow conditions and overtops the hummock in higher flow scenarios. Additional spot shots and revised channel grading should be provided to demonstrate that the deeper upstream water levels observed during the Site visit, which appeared to be a result of the existing hydraulic restriction, will not be adversely affected. The proposed channel grading should result in hydraulic conditions comparable existing conditions.

Bordering Vegetated Wetland (310 CMR 10.55)

W22. Provide a narrative describing the "Avoid/Minimize/Mitigate" considerations that were assessed during the design of the Project.

W23. Although the Applicant has proposed a replication area that exceeds the size of the proposed BVW impacts, no discussion of BVW Performance Standards was included in the NOI. Demonstrate that the Project adheres to the Performance Standards at 310 CMR 10.55(4)(b).

W24. Provide depth to groundwater within the replication area to demonstrate that the proposed grading will result in Estimated Seasonal High Ground Water (ESHGW) levels occurring within 12 inches of the final surface elevation.

Land Under Water (310 CMR 10.56)

W25. Depict all temporary and permanent LUW impacts associated with the construction of the crossing.

W26. Provide a narrative demonstrating compliance with 310 CMR 10.56(4).

STORMWATER MANAGEMENT REVIEW

The stormwater management design proposes to collect stormwater runoff into two new infiltration basins, one located on the northern side of the Site, and one located on the western side of the Site. Conveyance to these systems is provided via a new closed drainage system consisting of catch basins and drain manholes. Overflow from basin #1 will be directed to basin #2. Overflow from Basin #2 will be discharged to the west, just beyond the limits of the stream, via a new outfall.

GENERAL

SW1. The 100-year flood is defined by DEP as the anticipated water surface elevation resulting from 7.0" of rainfall in a 24-hour period. Revise calculations accordingly.

SW2. BETA recommends that the design engineer review the proposed grades around Basin #1. As shown on the detail on sheet 11 of 12, the top of the embankment is Elevation 153.50. The grading, as shown on Sheet 5 of 12, has the crest at Elevation 153.0 with a top width of 0.0'. BETA recommends that the width of the embankment at the crest be a minimum of 4'.

SW3. In accordance with Volume 2, Chapter 2 of the Stormwater Handbook, an emergency low level dewatering device is required and should be provided at each basin.

SW4. Clarify the methodology used for design and sizing of the proposed culvert at the roadway crossing.

SW5. The design calculations for the piping from the stormwater collection system assume free discharge. However, based upon the HYDRO-CAD calculations, this system will be submerged by ponding in the basins during the 10-year storm. BETA recommends that the inverts into the basin be raised sufficiently to avoid surcharging the inlet pipe into the basin at the peak of the 10-year storm.

SW6. Indicate material and depth of rip-rap spillway. Provide impervious barrier, typically a curb, through the full depth of the spillway material to prevent stormwater flow through riprap below the intended invert elevation.

MASSDEP STORMWATER STANDARDS

The project is subject to the Massachusetts Stormwater Standards (310 CMR 10.05(6)(k-m)) 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 one new outfall which will discharge stormwater runoff to an area immediately upgradient of the nearby stream. The discharge location is within the 25-foot wetland buffer zone. A riprap apron is proposed to mitigate erosion potential. Stormwater runoff from the Project area will be treated by subsurface infiltration systems prior to discharge.

SW7. Provide calculations for sizing of riprap apron.

SW8. Depict proposed headwalls on the plans.

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 an increase in impervious area and changes to Site hydrology. Stormwater runoff will further be mitigated via new infiltration basins. Calculations indicate a decrease in peak discharge rate and runoff volume to all watersheds.

SW9. Based upon the contours shown, runoff from the two isolated wetlands along the southerly property line does not flow towards the culvert beneath the driveway into 611 Lincoln Street. These should be treated as a separate and distinct analysis points for both existing and proposed conditions.

SW10. Indicate existing conditions flowpath on the watershed plans and provide calculations to determine time of concentration. Woodland conditions combined with a long flow path length will result in a time of concentration greater than the 6-minute minimum used in the model.

SW11. Depict limit of work and tree clearing on the watershed plans.

SW12. Expand subcatchment PR-2 to include any portions of Leanne Way and Trooper Paul Barry Way that will be graded towards proposed catch basins.

SW13. Revise subcatchment boundaries to include the footprint of Basin #2 within subcatchment PR-2.

SW14. Clarify method of routing building roofs to stormwater BMPs. As no roof leaders are proposed, roofs must be sloped towards the road to match proposed routing.

SW15. Model infiltration basin footprints as "Water Surface, impervious" to avoid "double-counting" infiltration that will occur in these areas.

RECHARGE TO GROUNDWATER (STANDARD NUMBER 3): *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.* NRCS soil maps indicate that soil in the area of proposed modifications is predominantly Woodbridge Fine Sandy Loam with HSGR C/D (low infiltration when unsaturated, very low when saturated), Paxton Fine Sandy Loam with HSGR C, Whitman Fine Sandy Loam with HSGR D, and Ridgebury Fine Sandy Loam with HSGR D.

Test pits conducted at the Site by the Applicant indicate that underlying soils are predominantly Very Fine Sand beneath Sandy Loam with depth to groundwater ranging from 13" to 36" below grade.

Recharge is proposed via a new two new infiltration basins which will capture runoff from the majority of impervious areas. The proposed system will provide a recharge volume in excess of what is required. Drawdown calculations indicate that basins will drain within 72 hours.

SW16. In accordance with the Stormwater Handbook, two test pits in the footprint of each stormwater basin are required. Test pits in the vicinity of each basin (TP 10, 11, 12, and 20) show variable groundwater depth. Based upon the depth to groundwater indicated in the adjacent test pits to each basin, it appears that the bottom of each basin will be less than 2' above groundwater. Additional test pits will clarify actual ESHGW elevations required for the design.

SW17. Because the Basins will be used to comply with both Standards 2 and 3, a mounding analysis is required per V2C1 of the Stormwater Handbook.

SW18. BETA notes that test pits were completed in October 2005, outside of seasonal high groundwater period. In addition, the logs fail to note soil colors, the depth to mottles, and whether the estimated seasonal high groundwater level noted is based upon observed water or mottles. BETA recommends that additional test pits be conducted throughout the Site to confirm seasonal high groundwater elevation.

SW19. BETA recommends that an agent of the town observe native soils after test pit excavation for the to confirm design assumptions.

SW20. Revise basins to include at least 1' of freeboard between the 100-year peak elevation and the top of the basin.

SW21. Provide a minimum setback between infiltration basin and building foundations – 10 ft when downslope and 100 ft when upslope. The designer must demonstrate that infiltration basins will not adversely impact downslope building foundations, e.g. those buildings with slab elevations located below the basin bottom elevation. The slab elevations should be raised to be above the bottom elevation of infiltration basin #1 (Elev. 248.5').

SW22. Basin 2 is located within 50' of the wetlands and should be reshaped to provide this minimum setback required by Table 3 of V1C1 of the Stormwater Handbook.

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 treatment of pavement areas via deep sump catch basins, sediment forebays, and infiltration

basins. The resulting TSS removal rate is between 80% and 98%. The proposed infiltration basins will treat a water quality volume in excess of what is required.

As a Project with a rapid infiltration rate (>2.4 in/hr), the Project is required to treat the 1.0 inch water quality volume and provide at least 44% TSS removal prior to discharge to an infiltration BMP.

SW23. In accordance with Volume 1, Chapter 1 of the Stormwater Handbook,

> "*The required water Quality Volume equals 1.0 inch of runoff times the **total** impervious area of the post development project….".*

In the determination of compliance with the Stormwater Standards, the stormwater report states for Standard 4,

> "*Since roof runoff is considered clean and not considered to contribute contaminants to stormwater runoff, 101,902 sf of roof area is not included in the required water quality volume. "*

The roof area is part of the Site impervious area and must be considered when calculating the required water quality volume. Accordingly, the water quality volume must be recalculated.

SW24. The impervious area tributary to five of the proposed catch basins exceeds 0.25 acres. In accordance with Volume 2, Chapter 2 of the Stormwater Handbook.
"The contributing drainage area to any deep sump catch basin should not exceed ¼ acre of impervious cover."

These basins will no longer provide the 25% TSS Removal assumed in the analysis. BETA recommends that additional basins be added to meet this design requirement.

SW25. The treatment provided by the deep sump catch basin is part of the pretreatment requirement and cannot be counted in conjunction with the final TSS removal calculation of Basin 2. The outfall from Basin 1 is routed through Basin 2, therefore, the 80% TSS Removal rate of Basin 2 should be included in the final treatment train for Basin 1.

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

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

REDEVELOPMENT (STANDARD NUMBER 7): *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable*. The project is not considered 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, 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 including silt fence, mulch sock, catch basin inlet protection, stabilized construction entrance, and temporary sedimentation basins.

SW26. Recommend requiring the final, completed SWPPP be provided to the Town prior to the start of construction. The provided SWPPP does not include all information required by the EPA.

SW27. Include location of the stabilized construction entrance on the plans.

SW28. Revise construction sequencing plan to clarify that temporary sedimentation basins will not be removed but rather reconfigured into permanent infiltration basins.

SW29. Include site restoration in the construction sequencing.

SW30. Reconcile the two sequencing plans for consistency between the SWPPP and Sheet 4.

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.

SW31. Revise sediment forebay inspection frequency to be monthly and cleaning frequency to four times per year.

SW32. Include inspection and maintenance measures for the outfall and riprap apron.

SW33. Provide plan, drawn to scale, that shows the location of all stormwater BMPs in each treatment train along with the discharge point.

SW34. Include gate or gap in fence to allow vehicular access to the entire infiltration basin perimeter for maintenance.

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

REVIEW SUMMARY

Based on our review of the NOI submittal and Project plans, the Applicant has not submitted sufficient information to describe the Site, the work, and the effects of the work on the interests of the Act. In addition, the Project does not presently comply with the Massachusetts Stormwater Management Regulations.

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

Very truly yours,
BETA Group, Inc.

Jonathan Niro
Environmental Scientist

Stephen Borgatti, PE, MENG
Project Engineer

Laura Krause
Lead Scientist

cc: Amy Love, Town Planner
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