

August 7, 2024

Franklin Planning Board  
C/O Mr Gregory Rondeau  
355 East Central Street  
Franklin, MA 02038

**Re: Nylah Crossing LLC  
240 East Central Street & Lewis Street  
Site Plan Peer Review**

Dear Franklin Board Members,

Thank you for taking the time to review the proposed project entitled "Site Plan Review 240 East Central Street & 9 Lewis Street". Please see below our response to comments received from Stephen Borgatti and Matthew J. Crowley of Beta in the letter dated July 18, 2024.

General Review Comment

G1. Provide information on the existing sewer easement located along the southern side of the Site. Confirm that proposed site features, including drainage, gas, and water utilities as well as paving and the southwestern building corner, can be constructed within this easement. MPD: No response

BETA2: No information has been provided. BETA notes proposed site features within the easement are now limited to paving, curbing, and fencing.

MPD: Attached is the plan entitled "Town of Franklin, Massachusetts Roadway Improvement Project" prepared by GCG Associates Inc dated 3/13/2015 Sheet 3 of 19 show the sewer lateral and the connection to Lewis Street sewer main. The information also of the sewer easement taking Norfolk registry of Deeds Book 2741 page 135. All drainage structures were also relocated from the easement.

BETA3: The referenced information does not appear to be included in the submission documents. Comment remains. BETA notes the proposed work within the easement is now limited to paving, curbing, fencing, and two pole mounted luminaires (refer to comment SL3).

MPD3: Luminaire has been relocated and information is attached with this submittal.

BETA4: Information provided, no further comments.

Town of Franklin Zoning

Z1. Clarify the nature of the proposed commercial uses and confirm it will be a permitted use.

Response: This property is zoned as Commercial I and in accordance with the town of Franklin's bylaw *Chapter 185 - Zoning Attachment 8* the accessory use of Professional Office, Studio is deemed a permitted use.

BETA2: Information provided. BETA defers to the Board to determine if any conditions or restrictions are required to ensure the proposed commercial use remains as a permitted use in the future.

- Z2. BETA defers to the zoning compliance officer to determine if a 20-foot setback is required along the westerly property line.

Response: This property is zoned as Commercial I and in accordance with the town of Franklin's bylaw *Chapter 185 - Zoning Attachment 9* the minimum side yard dimension is 0'. The abutting property is also zone Commercial I and not residential, avoiding the enactment of a 20' setback.

BETA2: BETA defers this issue and the determination of which lot lines qualify as side vs. rear to the Zoning Compliance Officer.

- Z3. Depict existing and proposed sidewalk width on the plans. The sidewalk along the frontage must be at least 6 feet in width. BETA defers to the Town if a smaller width may be appropriate to match the existing sidewalk, if needed (§185-28).

Response: V-101 Existing Conditions and C-102 Layout and Materials Plan have been updated to include the width of the sidewalks. The sidewalk to the right of the entrance where the proposed sidewalk transitions into the existing sidewalk is 5.4' and the proposed sidewalk is 5'.

BETA2: BETA recommends matching the width of the existing sidewalk within the right-of-way and defers this matter to the Board.

- Z4. BETA defers to the Planning Board to confirm the installation of sidewalks on Lewis Street is not useful (§185-28).

Response: The proposed sidewalk on Lewis Street has been removed from C-102 Layout and Materials Plan.

BETA2: No further comment.

- Z5. BETA defers to the Town whether vertical granite curb should be provided at the Lewis Street driveway egress (§185-28) and notes that the existing edge treatment along the roadway is Cape Cod berm.

Response: Plans will be updated to reflect the decision of the Town of Franklin.

BETA2: BETA defers this issue to the Planning Board.

- Z6. Provide note that all planting shall come from the Best Development Practice Guidebook (§185-31.C.(3).(k)).

Response: All planting shall come from the Best Development Practice Guidebook.

BETA: Note has not been added to the landscaping plan nor had the designer confirmed that proposed plantings are from the list. Comment remains.

Response 2: Note has been added to sheet C-105 Landscaping plan.

BETA3: Comment Addressed.

Z7. Indicate if site lighting is proposed and provide photometric plan if applicable (§185-31.C.(3).(l)).

Response: Scone lighting will be used to reduce potential disruption for abutting properties. A finalized lighting and photometric plan will be provided and added to the plan set later.

BETA2: Lighting information will be reviewed upon receipt.

BETA3: Refer to Comment SL3.

**Response 3:** Sheet C-106 Photometric Plan revised to address comments.

Z8. Provide sight line information at the exit to Lewis Street (§185-31.C.(3).(t)).

Response: Sight line information has been added to C-102 Layout and Materials Plan.

BETA2: Comment addressed

Z9. Provide information on compliance with the required number of inclusionary units per (§185-31.C.(F)).

Response: One (1) of the fourteen (14) units will be allocated to affordable housing as required. Planning Board to decide on the exact unit.

BETA2: Comment addressed

#### Traffic Assessment and Impact

T1. The Planning Board should discuss whether a Traffic Impact Analysis is warranted for this project.

Response: Traffic engineer to provide traffic analysis at a later date.

BETA2: See Section Trip Generation below. (comment addressed)

T2. Provide detail for typical pavement cross section with proposed materials and thickness of each pavement/subbase layer.

Response: Pavement cross section detail is on sheet C-107 Construction Details.

BETA2: Information provided. BETA defers to the design engineer to confirm the suitability of the proposed materials/structure. No further comment.

T3. Confirm that the proposed configuration has been reviewed by the Town Fire Department.

Response: Noted

BETA2: BETA will defer this to the Board

T4. Provide details and grading for residential driveways. BETA notes that the “residential driveway” detail provided is for driveways with a grass strip and sidewalk that does not seem applicable to the

Site.

Response: Based on site layout changes made in C-102 Layout and Materials Plan there are no longer “residential driveways” therefore the details and additional grading were not included.

BETA2: Design revised. Comment dismissed.

- T5. Confirm there is adequate maneuvering space for vehicles to exit the garages (20' driveway aisle) and adequate turning radius for the largest vehicle anticipated on site, such as a waste collection or delivery.

Response: A vehicle turning analysis was completed and residential vehicles can exit all garages safely and both a pumper truck and garbage truck have adequate turning radius to safely maneuver on the site.

BETA2: BETA recommends that the garage space be shown for this analysis and that the results of the analysis be shown on the plans

Response: The garage space has been included on sheet C-107 Turning Analysis Plan.

BETA3: The aisle width between buildings has been widened to 27.0' in most locations, which is adequate for traffic turning in and out of the garage spaces. However, for Units 1 & 2, the aisle width will remain at 20'. Provide turning movements to demonstrate that vehicles can enter and exit these 2 garages within the limits imposed by the curbing opposite the garage entrance.

Response 3: The garage space has been included on sheet C-107 and C-108 Turning Analysis Plan.

BETA4: The paths overlap inside the garage so it will likely take multiple movements to enter and exit these 2 garages. BETA will defer this to the Board.

- T6. Depict existing sidewalk and Lewis Street edge of pavement on the plans.

Response: Existing sidewalk on Lewis Street is shown in both the V-101 Existing Conditions and C-102 Layout and Materials Plan.

BETA2: Comment addressed

- T7. Proposed curb ramp types should be designated on the plans.

Response: The curb ramp types are found on C-111 Construction Details and have been added to C-102 Layout and Materials Plan.

BETA2: Comment addressed

- T8. Indicate location of door for commercial area and confirm there is adequate space for opening and maneuvering in accordance with applicable ADA regulations.

Response: The location of the entrance to the commercial area has been added to C-102 Layout and Materials Plan and the building department will determine ADA regulation applicability.

BETA2: Information provided. BETA recommends for ADA applicability to be coordinated with the Building Commissioner during the design phase.

### Signage and Lighting

SL1. Provide detail for “visitor parking” sign. Provide details or MUTCD reference for other proposed signs.

Response: Detail for visitors parking sign is on sheet C-107 Construction Details.

BETA2: The detail has been provided on sheet C-109. Comment addressed.

SL2. Evaluate the placement of the “do not enter” sign and requirement for “one-way” signs per the MUTCD.

Response: Noted

BETA2: Comment remains. BETA notes that “do not enter” signs are typically provided on both sides of the driveway and a “one way” sign on one side.

Response : An additional “do not enter sign” has been provided on Lewis Street to ensure there is one both sides of the driveway. This update is on sheet C-102 Layout and Materials Plan.

BETA3: Comment addressed.

SL3. Clarify if site lighting is proposed. BETA recommends that lighting be provided to promote visitor and resident safety.

Response: Scone lighting will be used to reduce potential disruption for abutting properties. A finalized lighting and photometric plan will be provided and added to the plan set later.

BETA2: Lighting information will be reviewed upon receipt.

BETA3: A lighting photometric plan has been submitted, which proposes to use a combination of pole and wall mounted lighting. BETA has the following comments.

- Lighting levels are only projected to the property lines and spillage is anticipated onto 230 and 244 East Central Street and 29 Lewis Street.
- The two lights at the Lewis Street entrance are in the sewer easement (directly over the sewer line) and should be relocated outside the easement.
- Mounting heights and any proposed use of cutoffs/shielding for pole mounted luminaires should be clearly identified on the plans.

In accordance with the comments above BETA recommends that the lighting be modified to eliminate any light projection beyond the property limits.

Response 3: C-106 Photometric Plan revised to address comments.

BETA4: There is some spillage onto East Central Street and Lewis Street. The spillage onto East Central Street is more significant but is anticipated to be less than a typical streetlight. In addition, there is some spillage (0.1 fc) onto the residences at 244 East Central Street and the lot area at 29 Lewis Street. A waiver is needed for each of these locations where the light extends beyond the property line.

Response: C-106 Photometric Plan revised to address comments

### Utilities

U1. BETA defers to the preference of the Board on providing overhead or underground electric services.

Response: Plans will reflect the Board's decision once made.

BETA2: BETA defers this item to the Board

U2. Review design of southern drainage system. Two catch basins are proposed to be located directly over an existing sewer line to remain. This will impact the ability to repair or replace the sewer line in the future and there may be direct conflict or adverse impacts from loading on the sewer line. Confirm legal right to place these structures within the easement.

Response: The drainage layout has been updated on C-104 Utilities Plan to avoid these conflicts.

BETA2: The catch basins have been relocated outside the limits of the easement. Comment addressed.

U3. Provide details for fire hydrant and associated gate valve.

Response: The detail for the proposed fire hydrant and gate valve is on sheet C-107 Construction Detail

BETA2: Comment addressed.

U4. Evaluate layout of fire protection service and route directly to sprinkler room, if required.

Response: The sprinkler room and water service to it is found on sheet C-102 Layout and Materials Plan by Unit 14 in Building "A".

BETA2: Utility layout identified on Sheet C-104 for Building A only. BETA will defer this issue to the Fire Department.

U5. Confirm legal right to place a portion of the overhead electric line within the boundaries of the abutting property to the west.

Response: This is to be determined by the local power and light distributor in the area.

BETA2: Comment Remains

Response: The overhead wire connections are no longer applicable. The power company to meet on site and is currently designing transformers for this development. Additionally, transformer locations have been added to sheet C-104 Utility Plan.

BETA3: Transformer will be located along Lewis Street and come directly from utility pole at driveway entrance. Comment no longer applies to site design. Issue dismissed.

## Landscaping Treatment & Grading

LA1. Confirm that proposed tree will not conflict with new overhead electric line.

Response: The placement of trees has been evaluated and should not conflict with overhead electric line.

BETA2: No further comment.

LA2. Indicate treatment of existing trees along Lewis Street and depict location on the plans.

Response: The trees on Lewis Street were removed by the previous owner of the property.

BETA2: Information provided. Issue dismissed.

LA3. Review grading in the northwest parking area. Based on the proposed spot grades and CB rim elevation this area is virtually flat and ponding/icing may result.

Response: Grading was reviewed to ensure positive grading and drainage in the northwest parking area.

BETA2: Based upon the spot grades shown on sheet C-103, the slope across the northwest parking lot is only 0.08% from the edge of the sidewalk to the catch basin. In addition, based upon the slope across the site BETA recommends that the garage locations including slab elevations be identified to show how they will relate to the proposed gutter line. Currently the proposed 283 & 284 contours between the buildings are each incorrect. Once garage slab elevations are identified, BETA also recommends that the first-floor elevations for each of the units be revisited.

Response 2: The slope across the northwest parking lot has been regraded at 2%.

BETA3: The First-Floor elevation identified on Sheet C-103 indicates that the Building A units will be 9" lower than the proposed garage slab, which is 6" below the adjacent driveway pavement. No first-Floor Elevation is indicated for Building B units. BETA recommends that the designer revisit these elevations.

Response 3: Elevation on sheet C-103 Grading Plan corrected.

BETA4: First Floor Elevations indicated at Elevation 285.50 which is 6" above garage slab. Issue resolved. Correct first floor elevations on Sheet C106 from 285.0 -285.5, and all building elevations on sheets C107 & 108.

**Response 4:** Elevations corrected on the above sheets.

LA4. Indicate if any dumpsters or waste collection and disposal measures are proposed.

Response: There is no dumpster or waste collection because trash removal will be private collection.

BETA2: Comment remains. Explanation does not answer the issue of waste collection. If the waste collection is private collection than demonstrate pick up methodology since driveway is one way.

Response: A turning analysis showing garbage collection path using a garbage truck has been added

to the plan set as sheet C-107 Turning Analysis Plan. Garbage will be collected at the end of each driveway at the discussed frequency.

BETA3: Turning movements have been provided that demonstrate the waste collection vehicle can navigate through the site and the waste collection vehicle is identified as "rear-load." BETA anticipates that waste receptacles will need to be placed in front of garages or doorways and there may be some impact to typical vehicle operations on waste collection days. Waste collection locations should be identified for Unit 1 and the commercial unit where the driveway width is limited to 20 feet.

Response 3: Trash collection is organized through a private company with smaller trucks with the ability to navigate through the driveway. Trash bins will be located on the recess area next to the garage, not blocking driveway. The trash bin for the commercial space can be placed on the west side of the building while awaits trash collection. Not blocking pedestrian movement or car maneuverability.

BETA4: It appears that trash receptacles will always be visible. The receptacles for the commercial space will be visible from East Central Street. BETA recommends that the design consider some means of screening these receptacles from view during off collection days and defers this issue to the Board.

**Response 4:** 48"x48" area with screening fence added adjacent to commercial area for trash receptacles.

#### Stormwater Management

SW1. Confirm that DMH-2 is properly sized to allow 4 pipe connections at the proposed pipe angles. A larger diameter structure may be required.

Response: DMH-2 will have an inner diameter of 60" to allow for all the pipe connections to be possible.

BETA2: Comment addressed.

SW2. Available documentation indicates a release of fuel oil on the abutting property that has impacted soil and groundwater. Recommend the Applicant have a qualified environmental professional evaluate if the infiltration basin could potentially exacerbate site conditions related to this release per stormwater Standard 3.

Response: Owner will take the necessary steps to ensure there is no impact to soil and groundwater.

BETA2: Comment remains. Explanation does not respond to the issue. LSP report should be provided.

Response: LSP report will be provided in the future

BETA3: LSP Report was provided. Issue resolved.

SW3. Indicate anticipated route for stormwater in the event of system overflow.

Response: In the event of system overflow, the flow will be diverted back to the inlet pipe and discharge at the overflow located below the gutters or will surcharge the upstream catch basin.

BETA2: It appears that Unit Nos. 8 & 14 may be flooded if the system overflows. BETA recommends that the overall grading be modified to ensure that the Lewis Street driveway entrance will act as the final overflow.

Response 2: Discussed with Beta Engineering.

BETA3: See Comment LA3 above. In addition, review Building B to determine if any impacts to drainage patterns from the adjacent site will be impacted/blocked. In conjunction with comment SW8 below, BETA recommends that the design identify how runoff from the west of the building will be collected and directed east around the building.

Response: We propose a infiltration trench drain along the entire property to collect all water runoff on the west side of the building, addressing runoff from not only our property but also any impact from the adjacent property.

BETA4: BETA offers the following comments on the design of the infiltration trench:

- a. There are no design elevations identified and the trench is wrapped with a filter fabric which prevent fines from coming into the trench but will also become impermeable over time.
- b. Runoff will have to penetrate 6" of topsoil to enter the trench. During frozen ground conditions this will not be possible.

BETA recommends that the design provide some means of runoff collection through area drains which can then be directed into the trench through perforated piping. The proposed width of the trench as indicated on Sheet C-104 is only 12" wide. Thus, storage capability will be limited to 111 cu. ft. with an exfiltration rate of only 0.017 cfs. BETA recommends that the width be increased to 24", which would effectively double the storage volume and exfiltration rate.

**Response:** The infiltration trench is now a trench drain, elevations have been added to the utilities plan.

SW4. Separate DP-1 into two analysis points: one for the East Central Street drainage system and one for the abutting property to the west.

Response: DP-1 was already divided to capture the changes associated with the new development.

BETA2: Comment remains, DP-1 is only one watershed and has not been divided. In addition, explain how runoff from the west side of Building will travel around Building B.

Response 2: DP-1 has been divided into 2 areas, there are now 4 design points. Runoff from the west side of building b now discharges to DP-4.

BETA3: Comment remains. The calculations dated 06/12/2024 do not show DP-4.

Response 3: Drainage basin DP-1 stay the same. We added the infiltration trench drain to collect water runoff on the west side of the building. Any overflow will be directed to the drainage basin on the center of the driveway.

SW5. Clarify routing for systems 1P and 12P. The model shows primary discharge through a 12" orifice

Response: Correct, the orifices represent entrances to the 12" HDPE pipes.

BETA2: Comment remains. There is no primary discharge from either of the two infiltration systems depicted on the plans or shown on the details. BETA recommends that this discharge capability be removed from the calculation.

Response 2: Primary Discharges have been removed from the model.

BETA3: As requested, the Hydro-CAD calculations have been modified to eliminate the orifices. Comment addressed.

SW6.to DP-3 and DP-2, respectively, but no orifices are depicted on the plans.

Response: The orifices represent the entrance to the 12" HDPE pipes.

BETA2: No further comment.

SW7. Provide spot grades at the residential driveway entrances to confirm whether offsite roadway flow will reach the proposed stormwater management system.

Response: Spot grades have been added to the C-103 Grading Plan

BETA2: The driveway entrances from Lewis court have been removed from the design. Comment dismissed.

SW8. Review HydroCAD model for subcatchment P-2:

- a. Confirm area attributed to grass and paved parking.
- b. Revise time of concentration to reflect the post-development site layout.

Response: Grass and paved areas have been confirmed and the time of concentration has been updated.

BETA2: Comment remains. There are no paved roads discharging towards DP P-3. The Tc calculation has not been corrected either. The maximum sheet flow length should be 50'. BETA recommends that the flow paths be identified on the watershed plans which support the calculations.

Response 2: Maximum sheetflow length is now 50'. The Tc has been updated to show pipe flow after the shallow concentrated flow condition.

BETA3: The Tc for watershed P-2 has been modified to a 6.0 minute minimum. However, the Tc calculation for watershed P-1 continues to show a 358' travel distance. As requested, the flow paths should be identified on the watershed plans which support the calculations. This also applies to the Existing Conditions analysis. The Tc for watersheds E-2&3 have been assumed as the minimum of 6.0 minutes. The flow path shown on the watershed plans for watershed E-2 is greater than 300' which would normally result in a Tc greater than 6.0 minutes. BETA recommends that the designer review the existing conditions watershed delineation and travel paths.

Response 3: Comment addressed Hydrologic report revised.

BETA4: Updated analysis provided; however, additional recommended modifications are as follows.

1. The Tc calculation for E-2 does not appear correct. Based upon the plans the grade for over 220' is negligible. In addition, the Tc should be calculated for all existing conditions watersheds rather than using an assumed minimum of 6.0 minutes. If calculations show less than 6 minutes they may be rounded up to the minimum of 6 minutes.
2. The CN Values used in the HydroCAD analysis are all associated with HSG B; however, the test pit data indicates that the soils are HSG A (loamy sand). Revise the CN values to reflect the field verified conditions.
3. The flow into infiltration system #2 is limited to half the roof area of Building A. The lawn area between the building and Lewis Street should be routed separately and the delineations for watersheds should be updated.
4. Review existing topography on the subject site as it relates to the proposed/recently constructed grading on the adjacent 230 E. Central Street Site. It is anticipated that there may be no direct flow towards 230 East Central Street and that all runoff from the site will flow towards Lewis Street. Following review, the HydroCAD analysis may only require a single design point at the catch basin just north of the proposed exist from the site onto Lewis Street.
5. The HydroCAD analysis for the ponds has been modeled such that they show no discharge. Rather they stop the water surface elevation at 280. Based upon the calculations infiltration system No. 1 has reached capacity at the peak of the 25- year storm. Based upon this scenario, CB 3 will become the outlet and runoff will flow from the catch basin onto Lewis Street. The calculations should be modified to show the catch basin grate as the outlet and show what the flow rates should be expected from the driveway.

**Response:** The Tc calculation for E-2 has been corrected, and all other Tc calculations were confirmed, and 6 minutes was only used as a minimum Tc. All CN values were updated to reflect A soils. Infiltration system #2 is now only receiving half the roof area of the building. CB 3 is now the primary outlet for infiltration system #1.

SW9. Conduct test pits in the vicinity of the eastern subsurface systems to confirm suitability of this area for infiltration.

Response: Test pits were conducted on 5/22/24 in the footprint of the eastern stormwater system.

BETA2: Provide results of the test pit information

Response 2: Test Pit logs on sheet V-101 Existing Conditions have been logged and confirm the ESHWT to be at 13 feet below grade.

BETA3: The 3 test pits are not located in the location of the proposed easterly subsurface infiltration system along Lewis Street. In accordance with the handbook, a minimum of 2 soil observations are required at this location. Comment remains.

Response 3: The proper soil test location cannot be performed at this time. We propose to submit additional soil data after the demolition of the building is done and the site is clear. We are confident the soil types throughout the property are consistent with the soil encountered on locations where we excavated.

BETA4: BETA recommends for the designer to provide the Board with additional context on why the test pits cannot be performed during the design phase. If the Board elects to allow the additional test pits as a condition of approval BETA recommends they are performed within a specific timeline in the early stages of construction.

**Response:** Additional soil test performed. Test Pit 4, 5, 6 and 7 information added to the plans

SW10. Revise system bottoms for subsurface infiltration systems to provide at least 2' separation to groundwater. Test Pits 1 and 2 were completed to a depth of 8' below grade, or approximate elevation 275', while the system bottom elevation is 276.48'. As groundwater was not encountered, elevation 275' should be assumed to be the estimated seasonal high groundwater elevation. It is BETA's understanding that groundwater was encountered several feet below the system bottom on the adjacent 230 East Central Site during construction.

Response: Test pits were conducted in the footprint of the western stormwater system again to confirm ESHWT which was approximately 13' below grade.

BETA2: Provide updated test pit information. The test pit data shown on Sheet V-1 does not confirm that the depth of the excavation extended to 13' and there is no other test pit data provided.

Response 2: Test Pit logs from sheet V-101 Existing Conditions have been logged and confirm the ESHWT to be at 13 feet below grade.

BETA3: Information provided. Comment dismissed.

SW11. Provide required mounding analysis where infiltration BMPs have less than 4 feet of separation to estimated seasonal high groundwater.

Response: A mounding analysis has been completed and can be found in the Stormwater Report under Appendix C entitled Subsurface Exploration Data.

BETA2: Mounding analysis has been provided however results for system 2 shows a 4.31' mound which far exceeds the 1.48' separation documented by the test pit data. BETA recommends that the designer review the overall recharge volume considered in each of the analyses and clarify the initial saturated thickness, which appears to be the depth to groundwater rather than thickness of the aquifer. If updated test pit data confirms greater than 4' of separation to groundwater is provided, the mounding analysis may no longer be necessary.

Response 2: Test Pit logs from sheet V-101 Existing Conditions have been logged and confirm the ESHWT to be at 13 feet below grade.

BETA3: Separation to Estimated Seasonal High Groundwater is greater than 4 feet and a mounding analysis is no longer required. Comment dismissed.

SW12. A setback of at least 10 feet from property lines and buildings for all SCMs is typically required per (MA Handbook V1C1 Pg 8). Coordinate with the DPW to determine if any impacts to the roadway subgrade will result from installation of the subsurface systems.

Response: We will coordinate with the DPW to inquire about any impacts to the roadway with the subsurface systems.

BETA2: BETA will defer this issue to the DPW and notes the current setback is approximately 8 feet.

SW13. Confirm that the infiltration of stormwater near building foundations will not impair the stability of the proposed buildings or #244 East Central Street. Consider providing an impermeable liner between

the proposed infiltration system and the #244 property if necessary.

Response: According to MASSDEP Volume 2 Chapter 2 infiltration practices need to be at least 10' from building foundations.

BETA2: Comment remains. In accordance with Volume 1, Chapter 1 setbacks range from 10- 100'. Since system for pond 12P is between the buildings an impermeable liner should be considered.

Response 2: Impermeable barrier has been added to both infiltration systems and can be seen on sheet C-103 Grading Plan.

BETA3: BETA recommends that the impermeable barrier extend to a depth below the foundation footings. Show the barrier on the detail on Sheet C-202 and clarify if geotextile will be proposed on the bottom of the system.

Response 3: Impermeable barrier added, and detail sheet revised.

BETA 4: Detail revised to show impermeable barrier. Update detail to clarify if the designer will require the "optional non-woven geotextile" to be installed.

**Response:** Detail revised removing the "optional" wording from the detail

SW14. Provide required 44% pretreatment for infiltration structures. Per V1C1 Page 11 of the MA Stormwater Handbook, the 25% TSS removal for deep sump catch basins is provided only if the structure is off-line. The pretreatment manholes are in-line and therefore do not provide any additional pretreatment. Additionally, no secondary pretreatment SCM has been provided for the eastern subsurface infiltration systems.

Response: A second TSS removal sheet has been added to Appendix I entitled TSS Removal Calculations has been added to address the concerns mentioned above.

BETA2: Comment remains. The pretreatment manhole is still in-line and therefor is not entitled to a 25% TSS Removal rate.

Response 2: The pretreatment manhole has been switched to a hydrodynamic separator and is entitled to the 44% pretreatment removal per discussion with BETA Engineering.

BETA3: Comment addressed.

SW15. Clarify is additional pretreatment is to be provided within the Chambermaxx retention system with the "containment row" options.

Response: A new design for this treatment train has been provided and it only includes rooftop runoff which does not require pretreatment.

BETA2: Comment remains. BETA agrees that for system 1 roof runoff does not require pretreatment. However, the question remains is additional pretreatment to be provided by the containment row? If yes than the TSS Removal calculations should be modified accordingly.

Response 2: A new design for this treatment train is proposed which includes a hydrodynamic

separator, a containment row is not needed.

BETA3: Comment addressed.

SW16. Remove pretreatment devices from TSS worksheet for total TSS; the 80% TSS provided by the subsurface system is inclusive of required pretreatment.

Response: A second TSS removal sheet has been added to Appendix I entitled TSS Removal Calculations has been added to address the concerns mentioned above.

BETA2: Comment remains. Calculations have not been corrected.

Response 2: The pretreatment manhole has been switched to a hydrodynamic separator and is entitled to the 44% pretreatment removal per discussion with BETA Engineering.

BETA3: Comment addressed.

SW17. Provide callout for the two stone hatched areas on Sheet C-101, presumed to be anti-tracking pads. Provide details as applicable.

Response: The callout for both hatched areas has been provided on sheet C-101 Demolition, Erosion and Sediment Control Plan

BETA2: Detail has not been provided

Response 2: Detail will be provided on sheet C-200.

BETA3: Comment addressed. Detail provided.

SW18. Clarify proposed construction sequence as it relates to construction entrance location during demolition. The northern anti-tracking pad overlaps with the existing northern building.

Response: The house has been demolished and therefore the tracking pads are in the correct location.

BETA 2: Information provided. Comment addressed.

SW19. Clearly indicate inlet protection will be provided at all new catch basins until the Site is fully stabilized. In coordination with the DPW provide inlet protection at existing catch basins adjacent to the site on East Central Street and Lewis Street.

Response: Inlet protection has been added to sheet C-101 Erosion and Sediment Control plan.

BETA2: Silt sacks have been depicted; however, it is not clear that they are associated with proposed catchment structures and are not coincident with the revised location of structures shown on Sheet C-104. Also, no inlet protection is called out on Sheet C-101 for the existing catch basins in Lewis Street.

Response 2: Based on updated drainage design silt sack inlet protection has been placed on all catch

basins inside of the site and where necessary on Lewis and E Central Street.

BETA3: Comment addressed.

SW20. Provide a map, drawn to scale, that shows the location of all stormwater BMPs in each treatment train and snow storage areas.

Response: BMP treatment trains are displayed on the C-103 Grading Plan and C-104 Utility Plans.

BETA 2: Comment remains. Plan is required as part of O&M Plan.

Response 2: O&M Plan can be found in Appendix A entitled Inspection and Maintenance Log of the Long Term Pollution Prevention and Stormwater Operations and Maintenance Plan.

BETA3: Comment addressed.

SW21. Provide approximate annual maintenance budget.

Response: This is provided in the Stormwater Report under Appendix J entitled Long-Term Pollution Prevention and Stormwater Operation & Maintenance Plan.

BETA 2: Comment addressed.

SW22. Provide signature of owner on the O&M Plan.

Response: This is provided in the Stormwater Report under Appendix J entitled Long-Term Pollution Prevention and Stormwater Operation & Maintenance Plan.

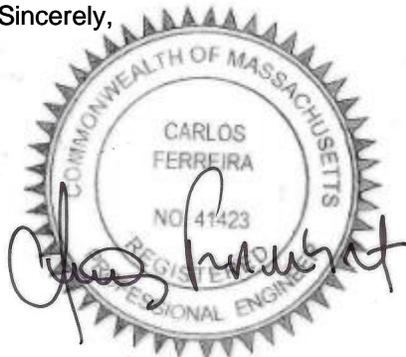
BETA 2: Comment remains. Signature not provided.

Response 2: Signature has been provided

BETA3: Comment addressed.

Please do not hesitate to call me at 508-331-7261, if there are any questions or additional information is required.

Sincerely,

A circular professional engineer seal for the Commonwealth of Massachusetts. The seal contains the text "COMMONWEALTH OF MASSACHUSETTS" around the top edge, "CARLOS FERREIRA" in the center, and "NO. 41423" below the name. At the bottom, it says "REGISTERED PROFESSIONAL ENGINEER". A handwritten signature in black ink is written over the seal.

Carlos Ferreira | Principal