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January 14, 2021

Devens Enterprise Commission
c/o Mr. Neil Angus, AICP CEP, LEED AP
Environmental Planner
33 Andrews Parkway
Devens, MA 01434

RE: Nitsch Project #9419
Commonwealth Fusion (CFS-1)
Site Plan and Stormwater Review
Devens, MA

Dear Mr. Angus:

This letter is regarding the Phase 2 – CFS-1 Manufacturing Building, located at 117 Hospital Road, Devens, Massachusetts (HEI). In response to our initial letter issued December 12, 2020, Nitsch Engineering has received and reviewed the following revised documents:

1. Site Plans (the Plans) entitled, "Phase 2 – CFS-1 Manufacturing Building, Lot 1 – 117 Hospital Road, Devens, Massachusetts", prepared by Highpoint Engineering, Inc. (HEI), revised 01/06/2021, including Landscape Plans, prepared by Lemon Brooke LLC, dated 01/06/2021;
2. Cover Letter, 117 Hospital Road – Lot 1, Revised Submission, prepared by HEI, dated 01/06/2021;
3. SV-1-SV-7 Plan, Existing Conditions Plan of Land, Devens, 111 Hospital Road, Devens, Massachusetts, prepared by VHB, dated 07/21/2020;
4. Supplemental Stormwater Management Report, Phase 2-CFS-1-Site Development, prepared by HEI, dated 01/06/2020;
5. Devens Enterprise Commission, Devens Regional Enterprise Zone, Permit Application; and
6. Revised Project Narrative, prepared by HEI, dated 01/06/2021.

Nitsch Engineering is providing comments with respect to Site Plan and Stormwater Management in this letter. Please note that traffic and landscape review are being provided in separate letters.

Many of our updated comments identify updates to be incorporated into the final plans and Stormwater Report for the project. **As an overall comment, we request that the final Stormwater Report be comprehensive in addressing all comments (i.e., not an additional supplement, but a final document with all required documentation).** This will provide a comprehensive record of the stormwater design for the project.

For clarity, we have provided our initial comments from December 12, 2020 in black font, the Highpoint Engineering Inc. (HEI) response in **red** font, and our updated response is provided in **black** font.

DEC REGULATORY CONFORMANCE

Based on Nitsch Engineering's review of the submitted documents and the above-referenced regulations, we offer the following comments for consideration:

DEC SITE PLAN REVIEW DESIGN STANDARDS

1. The CFS-1 project is the first phase of the two-phase Commonwealth Fusion project. We understand that CFS-1 is expected to be built first and construction of CFS-2 will begin during construction of CFS-1. Since CFS-2 has a much longer construction timeline (three to four [3 to 4] years), CFS-1 will be done prior to the completion of CFS-2. To understand the interim condition, the Applicant should

provide grading, utility, and layout phasing plans for the period when CFS-1 is complete, but CFS-2 is under construction. Specifically, these plans should address the following:

a. The layout plan should clarify the intended circulation routes (including emergency vehicle access) around the CFS-1 building while the CFS-2 roadways are under construction. There will be dead-ends created during CFS-2 construction and it is unclear how fire truck would exit the site.

HEI Response (12/14/2020): A temporary road will connect the east driveway with the west driveway at the northerly limit of work. An interim condition plan will be submitted for DEC staff and Devens Fire Department review.

Nitsch Response (01/14/2021): Comment closed pending the submission of interim layout and materials plan to Devens Fire Department and the DEC.

b. The utility plan should clarify temporary utility connections at the seams of the limits of work. We note that the proposed sewer collects flow from the proposed building and routes it to the north for continuation by the CFS-2 development. There is also a sewer main within Hospital Road that is routed through the site and appears to be being replaced by the proposed project. The Applicant should provide clarification for how this sewer system operates in the existing and interim condition (before CFS-2 is complete).

HEI Response (12/14/2020): The existing sewer serves the site and Grant Road development area. The sewer relocation will be completed prior final connection to existing sewer manholes. Temporary bypass pumping will be staged to maintain flow during the interconnect. Final sewer connection logistics plan will be reviewed with Devens utilities.

Nitsch Response (01/14/2021): Comment closed pending the submission of sewer phasing/logistics plan to Devens Utilities and the DEC.

c. We also note that the proposed CFS-1 grades do not tie into the existing grades, rather the proposed CFS-2 grades. This should be addressed in the phasing plan.

HEI Response (12/14/2020): The projects will commence within 1-3 months of each other with CFS-1 commencing first, general earthwork and grading will occur simultaneously between the two projects. General contractors will coordinate interim grading coordination between the two projects.

Nitsch Response (01/14/2021): Understood. Given the amount of cut/fill proposed on the site, an interim grading plan may be necessary to clarify the coordination between the two (2) sites. We recommend that an interim grading/phasing plan be submitted to clarify these conditions. We note that this may require additional drainage and/or erosion sediment controls during construction. Comment closed pending the submission of this information to the DEC.

2. The Existing Conditions Plan (Sheet C200) is not stamped by a Professional Land Surveyor (PLS). As this plan shows property line information, we recommend that it should be stamped by a PLS.

HEI Response (12/14/2020): A standard existing conditions plan will be provided with the revised plans.

Nitsch Response (01/14/2021): Stamped and signed SV-1-SV-7, Existing Conditions Plan of Land, Devens, 111 Hospital Road, Devens, Massachusetts, prepared by VHB, has been included with this submission. Comment closed.

3. The parking space counts within the Application for Level 2 – Unified Permit, Site Plan Review and in the Parking Summary table on Sheet C401 do not appear to be consistent with the parking shown on the plan. The Applicant should review these discrepancies and confirm the proposed number of spaces is in accordance with **974 CMR 3.04(3)(a)1.**

   HEI Response (12/14/2020): The plans and application will be revised to reconcile parking counts for consistency.

   Nitsch Response (01/14/2021): The parking count on the plan, the Parking Demand Summary Table, and narrative have been updated to match. Comment closed.

4. All of the proposed accessible parking spaces are provided in the eastern parking lot. The Applicant should confirm that no additional accessible spaces are needed in the western parking lot.

   HEI Response (12/14/2020): The project team will verify the need for accessible parking at the west parking lot and if required, depict on the revised plans.

   Nitsch Response (01/14/2021): We note that no additional accessible spaces were added to the west parking lot in the revised plans. We recommend that the accessible spaces be better distributed between the east and west parking lots for use by both visitors and employees. Comment closed pending the incorporation of this information into the final plans.

5. There are three (3) parking spaces proposed near the guard house at the front entrance. These are not accounted for in the parking summary and are assumed to be provided for staff and visitors. The Applicant should confirm the intended use of the spaces and determine the numbers of spaces can be reduced.

   HEI Response (12/14/2020): The parking spaces at the guard house are intended for visitors to temporarily park if communications with the CFS security team is required prior to site entry.

   Nitsch Response (01/14/2021): Understood. Comment closed.

6. **974 CMR 2.07(2), Table 1** provides design standards by roadway classification. It is unclear if the proposed roadways would be classified as internal driveways or local roads. In either case, the proposed roadways range in width between 25 and 30 feet, which exceeds the design widths for both classifications. The Applicant should evaluate the potential to reduce the roadway width and meet the appropriate design standards.

   HEI Response (12/14/2020): The project driveways are not subdivision roadways as defined in 974 CMR2.0 – Subdivision. The 25' wide east driveway width is intended to accommodate wide-load magnet distribution between CFS-1 and CFS-2. The 30' wide west driveway is the primary service route and was designed at 30' to accommodate potential 2-way truck traffic at completion of Phase 1.

   Nitsch Response (01/14/2021): As previously discussed with HEI and described in our initial comment, the roadways shall be reduced to a maximum of 24 feet wide to meet the

DEC regulations. We note that other developments within Devens have implemented 24-foot roadways with truck traffic without issue. This reduction in pavement should result in a decrease in the sizing of the proposed subsurface systems. The reduced roadway widths and associated drainage changes should be incorporated into the final plan set. Nitsch Engineering understands the final plan set will be provided for our review prior to the submittal of the Building Permit application.

7. **974 CMR 2.07(3)** requires traffic calming measures to be integrated into roadways. The Applicant should provide traffic calming measures accordingly, including reduced roadway width, raised intersections, signalized/raised crosswalks, or speed humps.

   HEI Response (12/14/2020): The project driveways are not subdivision roadways as defined in 974 CMR2.0 – Subdivision. Therefore, application of traffic calming measures is not warranted or necessary.

   Nitsch Response (01/14/2021): The intent of the traffic calming measures are to maintain safety for vehicles and pedestrians as they move throughout the campus. Given the geometry of the roads and the lengths of the straight segments, there is potential for higher speeds in both the east and west driveways. However, we note that both of these are to be accessed via gates, which will effectively control speeds through the site. Upon confirmation from the Applicant that these gates are to remain closed, unless opened by cards or similar, this comment is addressed.

8. **974 CMR 2.07(3)** requires cement concrete or vertical granite curbing (VGC). The Layout and Materials Plan specifies bituminous concrete curb (BCC) and vertical granite curbing. The Applicant should review and address this requirement.

   HEI Response (12/14/2020): The project driveways are not subdivision roadways as defined in 974 CMR2.0 – Subdivision. Bituminous concrete curb is allowed for parking lots as defined in 974 CMR3.0 – Site Plan Review Regulation.

   Nitsch Response (01/14/2021): The BCC is limited to the interior parking areas. Comment closed.

9. **974 CMR 3.04(3)(a)1.h** requires bicycle storage facilities for all developments. From the Landscape Materials Plans, it appears that bicycle storage is provided. However, it should be labeled on the Layout & Materials Plan and detailed within the Site Details. We note that the storage should be covered if the intention is to comply with LEED requirements.

   HEI Response (12/14/2020): The bicycle storage area will be identified and a detail will be provided in the plans. The project will not seek LEED certification and therefore coverage is not proposed.

   Nitsch Response (01/14/2021): The bicycle storage area has been labeled on sheet C400 and added to the site details. The title of the detail is incorrect and should be updated. Comment closed pending the incorporation of this information.

10. **974 CMR 3.04(3)(a)1.d** requires reflective yellow or reflective white paint for parking lot striping. The note in the detail on Sheet C702 should be revised to note that the paint shall be reflective.

    HEI Response (12/14/2020): The plans will be revised.

Nitsch Response (01/14/2021): The note on Sheet C702 has not been updated to include reflective paint. Comment closed pending the incorporation of this information.

11. **974 CMR 3.04(4)(g)** requires standard "STOP" at the intersection of driveways with streets and roads. The Applicant should evaluate the intersections of the internal driveways and curb cuts at Hospital Road to provide adequate signage for traffic safety.

    HEI Response (12/14/2020): Standard "STOP" signs with required traffic markings at driveway intersections will be included on the revised plans.

    Nitsch Response (01/14/2021): Standard "STOP" signs with required traffic markings at driveway intersections with Hospital Road. A detail is still needed and should be added to the final plans. Comment closed pending the incorporation of this information.

12. **974 CMR 3.04(5)** requires that the Applicant shall obtain a letter from Fire Chief stating there is adequate access for fire equipment. This should be provided to the DEC.

    HEI Response (12/14/2020): The applicant acknowledges this request and will coordinate with the Devens Fire Department for approval.

    Nitsch Response (01/14/2021): Comment closed pending submission of the letter to the DEC.

13. **974 CMR 3.04(10)** requires that all proposed developments shall demonstrate that they have made reasonable efforts to consider and implement transportation demand management strategies early in the site planning and layout process. These include providing 5% of total parking spaces for each of the following: ridesharing, hybrid or zero/low-emitting vehicles, and hybrid/electrical vehicle plug-in/recharge stations. We note that the Applicant has provided reduced parking as a TDM strategy, but the specific designations of other types of spaces has not been provided. The Applicant should review and address this requirement.

    HEI Response (12/14/2020): The applicant will review this requirement with respect to the specific requirements of the tenant. Hybrid/ electric vehicle and designated rideshare spaces will be added to the revised plan.

    Nitsch Response (01/14/2021): The Applicant has designated 10 Electric Vehicle and seven (7) Ride Share parking spaces in the western parking lot. We note that these both account for 2-3% of the total parking spaces, rather than the target of 5%. The Applicant has indicated this is based on the anticipated requirements of the tenant. We recommend that the designated spaces be better distributed between the east and west parking lots for use by both visitors and employees. Comment closed pending the incorporation of this information into the final plans.

DEC STORMWATER DESIGN STANDARDS

14. **974 CMR 3.04(4)(b)** requires Stormwater Management options shall include green infrastructure and LID techniques, including but not limited to vegetated swales, rain gardens, bio-filtration landscape islands, rainwater harvesting, and pervious pavement, where feasible, to achieve infiltration/capture/reuse of stormwater runoff on-site. The proposed stormwater management design primarily uses a large number of proprietary water quality structures for pretreatment prior to

discharging to underground infiltration systems. While we appreciate that there are three (3) rain gardens within the site, the Applicant should further evaluate incorporating LID techniques throughout the site for pretreatment. We note that there appear to be locations on the site where LID techniques may be appropriate, such as porous pavement on sidewalks or parking stalls, roadside swales, and additional bioretention basins in parking islands. There are also opportunities to directly infiltrate the clean roof water that does not require pre-treatment. The Applicant should review and address this requirement.

HEI Response (12/14/2020): Three rain gardens are proposed within the proposed parking areas. Roadway/shoulder edge conditions and tree preservation goals dictate a traditional curb/ closed drainage system design. The applicant will consider previous asphalt or paver systems, however we note the project provide 100% recharge as designed, which achieves the goals of this section.

Nitsch Response (01/14/2021): As noted by the HEI response, we concur that there are opportunities to further incorporate porous pavement into the project site. We also suggest that Rain Garden #3 be expanded to the north to provide pretreatment for the entire eastern parking lot. This is a minimal change to the currently proposed design, which would result in the removal of Water Quality Unit 13. These should be evaluated and incorporated into the final plan set.

15. **974 CMR 3.04(4)(b)(4)** requires that catch basins or other drainage features in loading/unloading and/or fueling areas shall be equipped with post-indicator valves (which are to remain in the closed position) on the outlets for containment in the event of any spills. The Applicant should review and address this requirement.

HEI Response (12/14/2020): The loading area is not covered and open to rainfall. Installing a post indicator valve on drain line in closed position will eliminate free draining of the dock area. We note the drainage in this area is riveted to a water quality inlet which will capture and contain a spill.

Nitsch Response (01/14/2021): While we understand the need for free drainage, installation of the post indicator valve is still required by DEC Design Standards. Based on our conversations with Neil Angus and HEI, it is acceptable for the post-indicator valve to be left in the open position with signage that directs the operator to close the valve in the event of a spill. Comment closed pending the incorporation of this design change.

16. **974 CMR 4.08(2)(c)(ii)** requires irrigation water shall be derived from detained treated stormwater (stormwater harvesting), or roof drainage to the maximum extent feasible. On-site cisterns may be installed to store water for irrigation. Can the Applicant please confirm if irrigation is intended? If so, the Applicant should review and address this requirement.

HEI Response (12/14/2020): Due to the size of the campus, the applicant intends to install an irrigation well to serve the entire development. The Well Permit Application will be submitted to Devens Utilities for approval.

Nitsch Response (01/14/2021): Although this requirement has not been met, the proposed stormwater approach will provide a project that exceeds the recharge requirement and promotes replenishment of the aquifer. Based on conversations with Neil Angus, the project has evaluated the balance of these stormwater requirements (infiltration and reuse) and the proposed design is satisfactory. We note that rainwater harvesting should continue

to be considered on a project-by-project basis for the proposed campus, particularly in areas that may not be as suitable for infiltration. Comment closed.

17. **974 CMR 4.08(2)(c)(vi)** requires all projects shall incorporate LID techniques for stormwater management to the maximum extent feasible. For projects proposing traditional closed drainage systems, the Applicant shall demonstrate to the satisfaction of the DEC why LID stormwater management design methods are not feasible. The Applicant should review and address this requirement.

    HEI Response (12/14/2020): LID measures to promote infiltration will be redundant as the design provides stormwater recharge at multiple locations to mimic hydrological conditions and provides 100% recharge up to and including the 100-year storm event.

    Nitsch Response (01/14/2021): As noted in Comment #14, we concur with HEI that there are opportunities to further incorporate porous pavement into the project site. We also suggest that Rain Garden #3 be expanded to the north to provide pretreatment for the entire eastern parking lot. This is a minimal change to the currently proposed design, which would result in the removal of Water Quality Unit 13. These should be evaluated and incorporated into the final plan set.

18. **974 CMR 4.08(3)(a)** requires that biofiltration basins shall be the preferred method to reduce curbing, piping and structures and provide additional overland treatment and recharge. They shall be designed in accordance with the Handbook. The Applicant should review and address this requirement.

    HEI Response (12/14/2020): The three rain garden areas within the parking lots are intended to provide biofiltration requirements prior to recharge.

    Nitsch Response (01/14/2021): As noted in Comment #14, we suggest that Rain Garden #3 be expanded to the north to provide pretreatment for the entire eastern parking lot. This is a minimal change to the currently proposed design, which would result in the removal of Water Quality Unit 13. This should be evaluated and incorporated into the final plan set.

19. **974 CMR 4.08(3)(b)** requires the post-development peak rate of stormwater discharge off-site shall not be greater than the pre-development peak rate of stormwater discharge for the 2, 10, 25, 50 and 100-year storm events from any point of discharge on the site. It appears the stormwater report does not include the analysis for the 50-year storm. The Applicant should review and address this requirement.

    HEI Response (12/14/2020): The analysis demonstrates that the stormwater management system collects, stores, and infiltrates total runoff for the 100-year storm event. Running the hydrology model for a 50-year storm will be redundant. This will be provided if the DEC staff require it.

    Nitsch Response (01/14/2021): The Supplemental Stormwater Management Report includes the 50-year storm for the post-conditions. However, the 50-year storm was not included in the pre-development HydroCAD report. The 50-year storm for the pre- and post-conditions should be provided in the final Stormwater Report to meet this requirement. Comment closed pending the incorporation of this information.

20. **974 CMR 4.08(3)(d)** requires that side slopes above the design water level shall be 3:1 (horizontal to vertical) or flatter and conform to the slope of the existing topography without abrupt or unnatural

breaks in slope. The detail for the rain garden shows the side slopes as 2:1. The Applicant should review and address this requirement.

HEI Response (12/14/2020): Rain garden RG-3 will be modified to a 3:1 sideslope. Rain gardens RG-1 and RG-2 include a 6:1 approach slope for 3' and 2:1 slope for 12" water depth. Average side slope at surface runoff entrance location is greater than 3:1. The detail will be revised to reflect this condition.

Nitsch Response (01/14/2021): The detail has been updated to reflect the design intent, which appears to accommodate the intent of the requirement while working within the space available. We note that the steeper portions of the rain garden slope should be closely monitored for erosion until full stabilization is achieved. Comment closed.

STORMWATER DESIGN AND CALCULATIONS

21. In the Site Plan Application, the Applicant notes that the project will require the relocation of an existing 30-inch diameter storm drainage pipe they believe extends into the site from Hospital Road. Based on the existing and proposed conditions plan, it was difficult to understand the extents of this relocation work. We also note that the Applicant is requesting additional information about the system to confirm its extents and condition, including cleaning, video-inspection, and dye-testing. We agree that additional information is needed to understand the full scope of this work and how it impacts the proposed project.

    HEI Response (12/14/2020): The applicant acknowledges this comment and will continue to coordinate final design of the drain relocation with Devens Engineering.

    Nitsch Response (01/14/2021): Understood. This design should be incorporated into the final plan set. Nitsch Engineering understands the final plan set will be provided for our review prior to the submittal of the Building Permit application.

22. Many of the subsurface infiltration systems do not have a specified overflow. In the event of a surcharge condition, the Applicant should evaluate where the water would overflow to confirm that it will not impact buildings or abutting properties.

    HEI Response (12/14/2020): The engineer will evaluate this requirement. Overflows are for rainfall events exceeding the 100-year storm event and will not impact abutting properties as required in DEP SWMP and the Regulation.

    Nitsch Response (01/14/2021): This comment has not been fully addressed. We recommend that emergency overflows be provided for all subsurface systems, in the case that the subsurface system becomes clogged or surcharged.

23. It appears that many of the subsurface infiltration system do not fill up completely in the 100-year storm. There may be potential to make the systems more efficient. This should be evaluated in concert with Comment #22 and the emergency overflow from these systems.
    HEI Response (12/14/2020): The engineer will evaluate this condition.

    Nitsch Response (01/14/2021): It is indicated in the Supplemental Stormwater Management Report that the infiltration systems have been reduced in size where appropriate, however,

the HydroCAD for the subsurface infiltration systems for the 100-year storm was not provided. Therefore, the sizing and efficiency of the systems cannot be verified.

24. There are two pipes at the north portion of the site that are intended to connect to CFS-2. It is our understanding that CFS-1 will be complete before CFS-2 is complete. The Applicant should clarify how will this stormwater be handled in the interim condition.

    HEI Response (12/14/2020): CFS-1 and CFS-2 site and drainage construction is intended to be completed in tandem prior to completion of CFS-1. CFS-2 prolonged schedule is associated with building construction.

    Nitsch Response (01/14/2021): Construction phasing documentation to confirm the timing of the utilities should be provided. Comment closed pending the submission of construction phasing to the DEC.

25. It appears that Area Drain 1 connects to DMH-3 so that the runoff can be treated for water quality. However, this requires an additional pipe and manhole while also create an undesired pipe crossing as compared to connecting to DMH-4. We recommend that the Applicant consider routing/treating Area Drain 1 closer to the source to avoid the more complicated pipe layout? Also, there are two outlets listed on OWS-1, so the pipe separation at the crossing cannot be verified.

    HEI Response (12/14/2020): The engineer will evaluate the pipe and structure configuration in this area and revise the plans if appropriate.

    Nitsch Response (01/14/2021): The pipe and structure has been revised in the updated plan set. Comment closed.

26. There are some drain manholes that do not have a 0.1-foot drop between the invert in and out to promote positive drainage. There are also some catch basins (CB-12,18,22,23) that have a 3-foot or less rim to invert elevation. These catch basins will likely be hard to construct and will require specialty shallow catch basin structures. The Applicant should review and address these concerns.

    HEI Response (12/14/2020): The engineer will evaluate the drainage structure design to confirm appropriate elevation drop across structures and pipe cover exist.

    Nitsch Response (01/14/2021): It appears there are still some catch basins with exactly 3.0 feet rim to invert; the Applicant should try to increase the rim to invert to greater than 3.0 feet wherever possible to avoid specialty structures. It also appears there are still multiple drain manholes without any drop between invert in and out. The Applicant should try to achieve a 0.1-foot drop between the invert in and out for positive drainage. DMH-20 has an invert out higher than an invert in. The Applicant should address this. Comment closed pending the incorporation of this information.

27. There is a portion of driveway at the northwest portion of the site, flowing north from elevation 286 to 283, that does not seem to be captured in the proposed stormwater management system. The Applicant should review this area.

    HEI Response (12/14/2020): The segment of driveway noted is intended to be collected and treated under the CFS-2 Stormwater Management Design.

Nitsch Response (01/14/2021): Understood. However, it is unclear how the phasing will work as noted in Comment #24. Construction phasing documentation to confirm the timing of the drainage utilities should be provided. Comment closed pending the submission of construction phasing to the DEC.

28. The plans and details refer to the rain gardens as "rain gardens" when the Stormwater Management Report refers to them as "bioretention." Please use one name from clarity and to avoid confusion. Also, the report mentions on page 2 that there are two (2) bioretention basins but it appears there are 3 on the plans. The Applicant should review for consistency.

    HEI Response (12/14/2020): The Report and Plans will be reconciled for consistency between documents.

    Nitsch Response (01/14/2021): The Supplemental Stormwater Management Report and Plans both refer to the three (3) "rain gardens." Comment closed.

29. As the rain gardens/bioretention are proposed for pretreatment, they should include an underdrain and be lined to prevent infiltration. Nitsch also recommends that the filter fabric be removed from between the mulch and soil in the location shown in the detail on sheet C703 as this has been found to cause clogging. We recommend that the Applicant review the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and the UNH Stormwater Center bioretention design standards for alternative sections that do not include filter fabric.

    HEI Response (12/14/2020): The rain gardens/bioretention areas will be revised to include an impermeable liner with an underdrain to prevent infiltration. The detail will be modified on the Plans.

    Nitsch Response (01/14/2021): A liner and underdrain have been added to the rain gardens and the detail has been updated. Comment closed.

30. There are two (2) RD#11 labels on the plan. The Applicant should review and address this.

    HEI Response (12/14/2020): The Plans will be revised.

    Nitsch Response (01/14/2021): The Plans have been updated. Comment closed.

31. Pipe sizing calculations were not provided for the drain line that run down the east side of the site and connects to CFS-2. The applicant should review and address this requirement.

    HEI Response (12/14/2020): The size of the drain to be relocated will be determined by Devens Engineering Requirements.

    Nitsch Response (01/14/2021): Understood. As noted in Comment #21, this design should be incorporated into the final plan set. Nitsch Engineering understands the final plan set will be provided for our review prior to the submittal of the Building Permit application.

32. Adjacent to the stone-wrapped interceptor drain (also noted as a gravel trench drain), there is a thick black box that is not labeled in the plans. The Applicant should label this and clarify if it is part of the proposed stormwater management system. Additionally, a detail should be provided for the stone-wrapped interceptor drain.

HEI Response (12/14/2020): The box is a plaza amenity and not part of the drainage system design. An interceptor drain detail will be added, and the plans revised.

Nitsch Response (01/14/2021): A detail has been added to the Plans. The Plans should be updated to avoid the dual names (Stone Wrapped Interceptor Drain vs Gravel Trench Drain) for clarity. The details name should be updated to match. Comment closed pending the incorporation of this information.

CONFORMANCE WITH THE MASSDEP STORMWATER STANDARDS

In accordance with **974 CMR 4.08(2)(a),** Nitsch Engineering reviewed the stormwater design and calculations for general conformance with the MassDEP Stormwater Standards. Based on this review, Nitsch Engineering offers the following comments:

33. **Standard 3** requires the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook. Based on Hydraulic Soil Group A soils a recharge volume of 0.6 inches over the impervious area is required for the site. Although we believe there is likely enough storage to meet this requirement, a breakdown of the storage provided in each system compared to the impervious areas within each drainage area would be helpful. The recharge volume should only include the storage volume below the outlet of each of the systems.

    HEI Response (12/14/2020): Recharge volume calculations were included in appendix B of the Stormwater Report. The design provides 100% infiltration up to the 100-year event (8.2" rainfall). The presumption is 0.6" of recharge is provided.

    Nitsch Response (01/14/2021): Although the provided recharge calculations are different than required by MassDEP, we note that the Applicant intends to infiltrate up to the 100-year storm event and this exceeds the MassDEP requirement. Comment closed.

34. **Standard 3** also required that to ensure the long-term operation of infiltration BMPs, pretreatment is required before discharge to an infiltration BMP. For infiltration of stormwater runoff from land uses with higher potential pollutant loads, discharges to the ground within an area with a rapid infiltration rate (greater than 2.4 inches per hour), at least 44% of the total suspended solids must be removed prior to discharge to the infiltration structure. Based on the TSS removal works sheets, the rain gardens are being used as pretreatment, therefore water quality volume sizing calculation should be provided for the rain gardens. Also, an impermeable liner should be installed below grade to prevent infiltration in the rain garden to achieve the pre-treatment. The Applicant should review and address this requirement.

    HEI Response (12/14/2020): Water quality sizing will be provided for the proposed rain gardens/bioretention areas, and an impermeable liner will be installed to prevent infiltration. The detail will be revised on the Plans.

    Nitsch Response (01/14/2021): The rain gardens have been revised to include a liner and underdrain. Water Quality Volume Calculations for the three (3) rain gardens have also been provided in the Supplemental Stormwater Management Report. However, when the required storage volumes are compared to the provided storage volumes in the HydroCAD model, the storage requirements are not met. The Applicant should review and address this

requirement by providing a HydroCAD that demonstrates the 1-inch storm is treated by the rain garden without bypassing.

35. **Standard 8** is covered by a National Pollutant Discharge Elimination System (NPDES) Construction General Permit but no Stormwater Pollution Prevention Plan (SWPPP) has been submitted. A SWPPP should be submitted to the DEC before land disturbance begins.

    HEI Response (12/14/2020): An EPA NPDES Construction General Permit will be applied for 14 days prior to construction, and a Stormwater Pollution Prevention Plan will be prepared for the Project. A copy will be submitted to the DEC upon request.

    Nitsch Response (01/14/2021): Comment closed pending submission of the SWPPP to the DEC.

36. **Standard 10** prohibits illicit discharges to the stormwater management systems. The Illicit Discharge Statement should be provided and signed by the engineer of record.

    HEI Response (12/14/2020): The owner/operator will submit an illicit discharge statement prior to operating the stormwater management system.

    Nitsch Response (01/14/2021): Comment closed pending submission of the Illicit Discharge Statement to the DEC.

If the Commission has any questions, please call.

Very truly yours,

Nitsch Engineering, Inc.

Paige Simmons, PE, LEED GA
Project Engineer

Approved By:

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