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December 5, 2025

Devens Enterprise Commission
c/o Neil Angus, FAICP CEP, LFA, LEED AP
Director/Land Use Administrator
33 Andrews Parkway
Devens, MA 01434

RE: Nitsch Project #9419
Commonwealth Fusion (CFS-3)
125 Hospital Road
Site Plan and Stormwater Review
Devens, MA

Dear Neil Angus:

Nitsch Engineering (Nitsch) received and reviewed the Site Plans (the Plans) entitled "Commonwealth Fusion Systems Campus Building 3", dated October 23, 2025, prepared by Vanasse Hangen Brustline, Inc. (VHB) for the Devens Enterprise Commission (DEC). In addition, Nitsch has received and reviewed the following documents:

1. Stormwater Management Report, prepared by VHB, dated October 2025;
2. Draft Soil Management Plan, prepared by Boston Environmental Corporation, dated September 2025;
3. Geotechnical Engineering Report, prepared by GZA, dated October 28, 2025;
4. Level 2 Unified Permit Application, prepared by VHB, dated October 2025; and
5. Level 2 Unified Permit, Checklist for Determination of Completeness, dated October 2025.

Nitsch 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.

PROJECT UNDERSTANDING

The Applicant, Pivotal Devens, LLC., is proposing the expansion of the existing corporate Commonwealth Fusion Systems (CFS) campus and Research & Development (R&D) facility on an approximately 35.7-acre parcel of land located at 125 Hospital Road. CFS has previously permitted the first two buildings on campus (CFS-1 and CFS-2). CFS-1 is complete, and CFS-2 is currently under construction. The Applicant is now proposing an additional Project, CFS-3, consisting of an office, R&D facility, and manufacturing space, which will function as a highly specialized heat-transfer research facility. The Project also proposes a 600-space parking garage structure, new surface parking and access roads, as well as associated landscaping, site utilities, and new stormwater management systems. CFS has partnered with Pivotal Manufacturing Partners to develop and own the CFS-3 building.

CFS is also currently permitting another development, CFS-4, which proposes two buildings and two large exterior industrial equipment pads, located to the west of CFS-3. Please note that design and construction of the CFS-3 and CFS-4 facilities are on independent schedules and are being permitted separately under different applicants; reciprocal easements will be created between property owners to allow access, utilities, stormwater management systems, and amenities to be shared between the two sites.

The Project site subject to this review is located at 125 Hospital Road within the Innovation and Technology Business Zoning District, and the Limit of Work totals ±14.1 acres. The site is currently a combination of areas previously disturbed by the development of CFS-1 and CFS-2 and undeveloped woodlands with generally hilly topography. The site is split within the Watershed (southern portion of site) and Aquifer (northern portion of site) Water Resource Protection Districts (WRPD) and is partially located in the Slope Resource Area Overlay (northwestern portion of site). The Applicant is proposing two subsurface infiltration systems to manage stormwater runoff generated by the proposed Project.

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

DEC SITE DESIGN STANDARDS

1. **Exhibit C of the Zoning By-Laws** requires that Research & Development Office Uses provide three (3) parking spaces per 1,000 square feet (SF) of Gross Floor Area (GFA), and Manufacturing & Industrial Uses provide two (2) spaces per 1,000 SF of GFA. According to the building area and use table on Sheet C1.02, the Project consists of 90,000 SF of GFA for R&D Office Uses and 204,100 SF of GFA for Manufacturing and Industrial Uses, therefore requiring 678 parking spaces. However, the Applicant has categorized all 294,100 SF of GFA as Manufacturing and Industrial Use, resulting in a required parking total of 589 spaces.

   The Project proposes 657 parking spaces in total, with both surface lots and a 600-space parking garage. Based on the existing parking shortage, Nitsch observed the amount of proposed parking may not accommodate the existing overflow. Furthermore, Devens staff questioned the need for a larger garage than what is currently proposed by the Applicant.

   Please note that parking demand for the site is being reviewed under a separate letter by transportation. For details, see the Traffic Review Comments dated November 7, 2025 (see Comments 12 and 15 within the Traffic Review Letter) for additional details.

2. **974 CMR 3.04(3)(a)2.a** requires that parking lots, loading dock areas, and driveways shall be constructed of bituminous concrete pavement. The construction specifications shall be the following: Compacted subgrade, free of frost, roots, and debris; 8 inches of compacted gravel sub-base conforming to Massachusetts Highway Department Standard Specifications for Highways and Bridges (MHDSSHB) M.1.03.0 Type A; 4 inches of compacted gravel base conforming to MHDSSHB M.1.03.0 Type B; 2 inches of bituminous concrete binder course; 1½ inches of bituminous concrete top course. The Applicant should revise the detail on Sheet C6.01 to comply with this standard.

   Response: 974 CMR 3.04(3)(a)2.c allows modifications to the pavement construction specification. The pavement section proposed for the project will be modified to match the recommendations contained within the final Geotechnical Report by GZA for truck loading applications. There is a separate "Loading Dock Pad / Compactor Pad" detail for those applications found on Sheet C6.01.

3. **974 CMR 3.04(3)(a)2.b** mandates that the portion of the parking lots, loading docks, and driveway subject to truck traffic and truck/container storage shall be constructed of bituminous concrete pavement. The construction specifications shall be the following: Compacted subgrade, free of frost, roots, and debris; 8 inches of compacted gravel sub-base conforming to MHDSSHB M.1.03.0 Type A (http://www.mhd.state.ma.us/downloads/manuals/1995Mspecs.pdf); 4 inches of compacted gravel base conforming to MHDSSHB M.1.03.0 Type B; 3 inches of bituminous concrete base course; 1½ inches of bituminous concrete binder course; 1½ inches of bituminous concrete top course. The Applicant should identify areas subject to truck traffic on Sheets C3.01 and C3.02 and include a detail for bituminous concrete pavement subject to truck traffic to comply with this standard.

   Alternatively, per 974 CMR 3.04(6)(a)4, the Applicant may place service areas, dumpsters, or open storage areas on cement concrete pads.

   Response: 974 CMR 3.04(3)(a)2.c allows modifications to the pavement construction specification. The pavement section proposed for the project will be modified to match the recommendations contained

within the final Geotechnical Report by GZA for truck loading applications. There is a separate "Loading Dock Pad / Compactor Pad" detail for those applications found on Sheet C6.01.

With regards to additional loading from magnet transport activities, CFS will utilize special transport vehicles that mitigates the wheel loads and if necessary may use temporary means of reducing stresses such as timber cribbing or steel plating to protect the road during transport. If this approach changes for any reason in the future and a new pavement design is needed, we will work with the geotechnical engineer to update the pavement section.

4. **974 CMR 3.04(3)(a)2.d** requires parking spaces and striping shall be painted according to the MHDSSHB. Lines shall be located along the sides and unless curbing is present, at the head of parking stalls. Lines shall be a minimum of 4 inches wide and shall be one consistent color, either reflective yellow or reflective white paint. While we believe that this standard has been met, the Applicant should provide pavement marking details to confirm compliance.

   Response: Notes have been added to sheets C3.01 and C3.02 to clarify this requirement. Please also note that these types of details will be included in the construction specification documents when those are prepared in the future.

5. **974 CMR 3.04(3)(a)(2.f)(v)** requires that Low Impact Development (LID) techniques shall be incorporated in accordance with 974 CMR 4.08 to the maximum extent feasible. The Applicant should consider incorporating additional LID techniques. Possible techniques include, but are not limited to, the construction of new walkways, the terraced plaza, and parking stalls with permeable materials, including porous asphalt or porous pavers. See Comments 7, 21, and 31.

   Response: Permeable pavers and pavement is not suitable for this site; however, alternative methods of LID and water management will be explored, including collection water in tree wells and implementation of raingardens.

   1. Pervious paving materials are not practical on a site when the vast majority of pavement is subject to truck traffic. While there are small stretches of single-aisle parking areas, we have long-term viability concerns about having an abrupt change in material/pavement section directly abutting the heavy magnet transport route.

   2. Porous pavement is an expensive redundancy – the design already puts all collected storm water in the ground such that there are no surface water discharges, and adding these features does not further reduce stormwater runoff nor provide environmental benefits lacking from the proposed design.

   Regarding sidewalks: the majority of sidewalks on the site are located in the campus green. While not accounted for in this way in the stormwater report, these sidewalks are "disconnected" impervious areas that would qualify for LID Design Credit 3 per the Massachusetts Stormwater Handbook.

   Also please recognize that the 600-space parking garage itself is an example of low-impact design. Parking garages are a compact alternative to sprawling surface lots that come with associated stormwater runoff, pollution, and heat-island impacts.

6. **974 CMR 3.04(3)(a)(4.b)** requires that the driveway entrance radii curves shall be designed to accommodate the turning radii of the vehicles using the entrance. We note that the Applicant has provided turning movements for the Devens Tower Ladder and Devens Engine 4 on Sheet C7.01. The Applicant should confirm that driveway radii curves are adequate to accommodate typical vehicles entering and exiting the site. If vehicles larger than the Tower Ladder and Engine 4 are anticipated, the

Applicant should provide additional turning movements to confirm compliance with this requirement. Additionally, the Applicant should clarify how the project expansion of CFS-3 and CFS-4 may alter the site driveway access and demand for delivery and emergency vehicles.

Please note that this project is also being reviewed under a separate letter by transportation engineers. Please refer to the Traffic Review Comments dated November 7, 2025 for additional details.

Response: Additional turning movements for the WB-67 tractor trailer design vehicle are provided in attached graphics. Movements are shown at the driveway entrances on Hospital Road as well as at the loading docks for CFS-3.

7. **974 CMR 3.04(3)(a)(4.h)** mandates that applicants are encouraged to utilize pervious paving materials for the construction of driveways. Refer to 974 CMR 4.08(5) for LID techniques and pervious paving construction details. The Applicant should review and address this requirement. See Comments 5, 26, and 31.

   Response: Permeable pavers and pavement is not suitable for this site; however, alternative methods of LID and water management will be explored for this site, including collection water in tree wells and implementation of raingardens.

8. **974 CMR 3.04(3)(a)(5)** requires that access to buildings be kept clear of hazardous substances and obstacles that may, in the opinion of the fire officials, impede the proper placement of fire apparatus and personnel in case of emergency. The Applicant shall obtain a letter from the Devens Fire Chief stating there is adequate access for fire equipment. Access for fire equipment shall be provided and maintained on at least two sides of the building. Fire lanes shall be designated with pavement marking and signage. The Applicant should provide a letter from the Devens Fire Chief confirming compliance with this requirement.

   Response: Plans were submitted for review by the Fire Chief. Letter pending.

9. **974 CMR 3.04(3)(a)(6)** requires that if an Applicant proposes parking lot construction phasing, the Applicant shall demonstrate that the portion to be constructed is sufficient for the needs of the users of the proposed structure. The unconstructed parking area shall be large enough for anticipated needs and shall be shown in a contrasting graphic pattern delineated on the Site Plan. The Parking Lot Phasing plan shall address erosion and sediment controls before and during construction and specifically cite measures to be implemented to minimize soil compaction in areas not to be paved until later phases. Surety or other adequate performance assurance to construct the parking lot at a specified time in the future may be required. The DEC may then approve the parking lot phasing if it determines sufficient parking will be provided for current needs and adequate assurance exists to construct the remaining parking area when needed.

   Based on a site visit and discussion with the Applicant's Representative conducted on October 29, 2025 (described in further detail below, see Comment 15), existing employee parking is located at the proposed CFS-3 site. The Applicant should provide a parking phasing and logistics plan to demonstrate how existing employees, construction traffic and laydown will be safely accommodated on site. Please note that construction parking and shuttle program will be further reviewed by transportation under a separate letter.

   Response: This comment and our response apply equally to CFS-3 and CFS-4. There is no parking lot construction phasing planned in association with either project. CFS-4 requires no additional parking

and the CFS-3 project proposes a 600 space parking garage to satisfy the long term needs of the campus.

For the project record the following information about parking was provided in the CFS-3 permit narrative:

> CFS has experienced significant growth, surpassing initial employment projections made during the campus' permitting phase. As of August 2025, CFS employs over 1,000 people, with approximately 700 located in Devens. To address their parking needs, CFS has adopted several strategies including using internal roadways on the Oak Street parcel for parking, leasing off-site parking spaces with a shuttle service connecting the campus to these locations, and coordinating shuttle services between Devens and Cambridge. Additionally, they are sharing temporary contractor parking. To accommodate this unexpected workforce expansion/parking requirement, the CFS-3 building program includes construction of a 600-space parking garage in addition to 57 surface parking spaces near the main entrance of the CFS-3 building for visitor parking, mobility impaired and courtesy EV charging. Upon completion of construction the campus will have 970 parking spaces at the following locations:

Parcel	Building	Surface Spaces	Garage Spaces
111 Hospital Rd	CFS-2	25	--
111 Hospital Rd	CFS-4	--	--
117 Hospital Rd	CFS-1	288	--
125 Hospital Rd	CFS-3	57	600
	Totals	370 sp	600 sp

> CFS anticipates potential growth of 100-150 additional employees to be stationed at Devens over the course of the next 3-5 years for which the parking supply will be right-sized.

> CFS anticipates additional growth of approximately 100–150 employees at Devens over the next 3–5 years; the proposed parking program has been sized to accommodate this anticipated growth in conjunction with the continued TDM measures.

In response to your request for additional information regarding construction schedule and parking availability, the following response was provided to you for a similar comment on CFS-4:

> CFS has effectively managed employee parking demand through off-site parking, shuttle services, and other transportation demand management (TDM) strategies, minimizing impacts on the Devens community. These measures will continue, and parking operations will be coordinated closely with construction logistics for CFS-3 and CFS-4.
>
> While the overall logistics framework applies to both projects, the timing and intensity of construction activities—and the use of Oak Street—will differ for each building program to avoid overlapping impacts, as follows:
>
> **Construction Laydown and Parking:**

- The **CFS-2** construction team (Bond) **is presently** utilizing a portion of the **CFS-3** building site for construction laydown and parking.
- **Pivotal** (Owners of CFS-3 parcel) have contractually agreed to allow the use of the **CFS-3** building site for **CFS-4** construction laydown, staging and parking.
- The **CFS-3** team (Evans) will utilize the **CFS-3 building site** for their construction laydown needs. In addition, significant contractor parking can be accommodated on the CFS-3 building site during construction.

Soils Management

- Because soils need to be balanced on the campus the **CFS-4** team will be moving topsoil generated at CFS-4 **to the CFS-3 site and the area west of CFS-2**, and borrowing fill material **from the CFS-3** site to bring the CFS-4 site to subgrade.

Construction Sequencing and Overlap:

- **CFS-4** is scheduled to start construction in **spring 2026**, coinciding with the **expected substantial completion of CFS-2**.
- **CFS-3** is scheduled to start in **spring 2027**, coinciding with the **substantial completion of CFS-4**, subject to normal construction contingencies.

Note that Bond is the contractor for both the CFS-2 and CFS-4 activities. They are already occupying the CFS-3 site and will not require 2x laydown space. Further, since CFS-2 will be winding down when CFS-4 site work begins, the reduction in CFS-2 space demand for contractor parking will offset the new needs for CFS-4 thereby eliminating parking pressure during the transition phase of those two projects. Similarly, the CFS-3 construction ramp-up coincides with CFS-4 ramp-down because their respective construction starts are 1-year apart, and the construction duration of CFS-4 is a little more than a year.

Use of Oak Street by the CFS-3 and CFS-4 Construction teams:

Oak Street real estate is needed for soils management and parking.

- Excess topsoil and unsuitables - required to remain on-site - will be placed at Oak Street only if/when the volume of excess material(s) is greater than the storage capacity of the soils stockpile area west of CFS-2 and re-use on the CFS-3 site. Initial estimates suggest excess soils could range from 0 to 10,000 cu yds.
- CFS is presently parking ~125 cars along the existing Oak St roadway.
- Contractor parking at Oak St will be required during the clearing phase of CFS-3 and CFS-4, which is anticipated to be done together.

Anticipating parking needs and potential need to stockpile excess soils, CFS plans to clear an area in Spring 2026 that would facilitate continued temporary employee parking at Oak St while also reserving an area for stockpiles and contingency space for use by any of the construction teams.

Schedule for Parking Garage

One school of thought is that the parking garage should be constructed early in the CFS-3 phase, and even to have it constructed with CFS-4. While that would solve most parking concerns, it cannot happen early because the circulation drives to access the garage are needed by the construction

teams. Further, neither team can allow employee traffic though a controlled construction site - in vehicles and walking – for safety, insurance and other practical considerations.

The parking garage construction will not begin until summer of 2027. Depending upon phasing and occupancy permits, it may be possible to allow CFS employee and contractor parking in the parking garage during the second half of the CFS-3 construction.

Given that no formal phasing of permanent parking lot construction is proposed, a 974 CMR 3.04(3)(a)(6) "Parking Lot Phasing Plan" is not applicable in the conventional sense. However, the preliminary construction logistics plan submitted with the CFS-3 Level 2 permit application, together with the construction sequencing and parking strategy described above, provides the requested demonstration that:

1. Existing employees, construction traffic, and laydown will be safely and adequately accommodated on site and via off-site/shuttle arrangements during construction; and

2. The long-term parking supply (including the 600-space CFS-3 garage) will be available in a timely manner to meet anticipated future needs.

We understand that detailed construction parking and the shuttle program will be further reviewed by the transportation reviewer under a separate letter, and we will coordinate with that review as needed.

10. **974 CMR 3.04(6)(a)(1.c)** requires that principle building entries shall have an accessible pedestrian walkway connecting to pedestrian walkways within abutting Rights-of-Way or ways. The Applicant should label which entrance is the principle building entrance and confirm compliance with this standard.

Response: Sheet C3.02 has been revised to clarify the location of the principle entrance, which is located at the southeastern corner of the building near the drop off circle. Accessible routes are provided from drop-off and parking areas to the principle entrance within the CFS-3 site. Accessible interconnectivity within the campus is provided by connecting accessible walkways across the campus green, which in turn connect to Hospital Road.

11. **974 CMR 3.04(6)(a)(1.d)** mandates that if pedestrian paved areas, such as a plaza, are larger than 20 square feet, pavement shall be cement concrete (pervious preferred) modified with a Solar Reflectance Index (SRI) of 29 or greater. Open grid pavement systems that are at least 50% pervious are a suitable alternative. Refer to 974 CMR 4.08(5) for LID techniques construction specifications. The Applicant should review and address this requirement. The terraced patio and concrete sidewalks located to the south of the CFS-3 building should be constructed in compliance with this standard.

Response: Concur, the terraced patio and concrete sidewalks to the south of CFS-3 will be constructed in compliance with 974 CMR 3.04(6)(a)(1.d) with concrete at SRI 29 or greater.

12. **974 CMR 3.04(6)(a)(2.b)** decrees that vertical granite curb, where provided, shall be Type VA4 as specified in Section M9.04.1 of the MHDSSHB with a 6-inch reveal. Granite transition stones shall be installed when vertical granite curb changes profile to sloped granite curbing or Cape Cod berm or where curbing transitions to areas with no curbs. The Applicant should specify Type VA4 on the Vertical Granite Curb detail provided on Sheet C6.01 to confirm compliance with this requirement.

Response: The vertical granite curb detail on Sheet C6.01 has been revised to meet this requirement.

13. **974 CMR 3.04(6)(a)(4.c)** decrees that open storage areas shall be designated on site plans. No open or exterior storage is permitted in undesignated locations. The Applicant should confirm that there are no proposed open storage areas on site

    Response: This comment made us reflect on our practices more; CFS will require external open storage at some future point in time. There will be no external open storage on the CFS-3 parcel, however, CFS will designated an area north of CFS-4 an open storage space to comply with DEC Rules and Regulations.

14. **974 CMR 3.04(6)(a)(4.d)** requires that recycling storage and management details shall be provided. For facilities that generate food waste, details on the collection, storage and management of compostable materials shall be provided. The Applicant should confirm if food waste will be generated on site, and if so, how it is being managed and source separated.

    Response**:** There are no available compost transportation companies in Devens to pickup and compost food waste. Additionally, internal and external infrastructure of CFS-3 and the existing CFS-1 building were not designed to support a composting or food waste management program.

SITE PLAN DESIGN AND CALCULATIONS

15. Nitsch performed a site visit on October 29, 2025, to observe the proposed site. The Applicant's representative, Rich Holcomb, was present during the site visit and provided general information. Also in attendance was Beth Suedmeyer, Devens' Associate Planner, and Sandra Brock and Kathryn Piasecki from Nitsch.

16. We note that the Applicant has provided turning movements for the Devens Tower Ladder and Devens Engine 4 on Sheet C7.01. The Applicant should also provide turning movements demonstrating adequate access to the loading docks located on the western side of the building.

    Response: Additional turning movements for the WB-67 tractor trailer design vehicle are provided in attached graphics. Movements are shown at the driveway entrances on Hospital Road as well as at the loading docks for CFS-3.

17. The Applicant should evaluate the intersections of the internal driveways to provide adequate signage for traffic safety. The Applicant should provide a full signage plan with proposed wayfinding signage for the site.

    Response: It is likely that wayfinding signage will be expanded on the site over that which exists today, and if so, signage will match existing.

18. The construction of a modular block retaining wall will require geogrid reinforcement. Given the proximity of the retaining wall to the steel beam guardrail, subsurface utilities, and site lighting, the Applicant should review for potential conflicts and show limits of work and approximate extents of geogrid limits on the plans for coordination purposes.

    Response: As noted on Sheet C6.01, the retaining wall detail is provided for general information only. Final stamped design of the wall shall be provided by contractor based on geotechnical engineer recommendations. It is premature to include full engineering design of retaining walls on permit level plans. VHB understands that there is concern over the proximity of guard rails, fences, and light poles

to the back of wall; these are engineering problems that can be solved by using deep post embedment depths, Versalok “sleeve-it” style products, alternative anchoring systems, or wall products with integrated traffic barriers

19. We note that the guardrails and light poles are shown within 3 feet of the retaining wall, which generally is not allowed. Within 3 feet of the retaining wall, guardrails and light poles require deeper posts or special foundation designs. The Applicant should provide details showing alternate posts & foundations for those within 3 feet of the back of the wall.

Response: Please see previous response. We agree that guard rails or light poles close to retaining walls might need deeper posts or special foundation designs, which will be developed in the future at an appropriate time. We believe that there is enough room between face-of-curb and face-of-wall to fit the site elements on the plan.

Also please consider if these comments are more appropriately addressed in the CFS-4 review. For example, the closest light pole to a retaining wall on the CFS-3 project is approximately 15 ft.

20. The Modular Retaining Wall Detail on C6.03 is very simple and does not show guardrails or foundations behind the wall. It also doesn’t show underground utilities located within the backfill limits. While we understand that this is a schematic detail provided for general information, the detail should, at a minimum, be indicative of the actual final conditions to provide the Contractor with the proper information and constraints needed to provide a suitable final wall design.

As currently shown, the detail shows a vegetated slope behind the wall, but the actual wall will support a roadway and/or generator pads. The detail should reflect the proposed conditions behind the wall so the Contractor is aware the wall must be designed to support vehicles and heavy equipment. The Applicant should revise the detail to show other constraints such as guardrails, light posts, and underground utilities that will impact the design of the wall and require coordination during construction.

Response: Please see previous responses. All retaining walls on site will receive their own specific, stamped, engineered drawings that take into account all site conditions. As noted, retaining walls will not be built to the generic detail on Sheet C6.03. It is possible that modular block retaining walls are not feasible in certain locations, and alternative designs such as cast in place gravity walls will be required. It is premature to provide this level of detail at this stage.

21. The Applicant should provide additional grading details on the utility pads located to the west of the site to demonstrate which direction runoff is flowing and confirm there will be no ponding. Additionally, the Applicant should provide top of wall and bottom of wall elevations.

Response: Additional spot grades will be provided on the site plans. However please note that this grading may change as the electrical engineers further develop their equipment design. It is even possible that area drains within utility pads may be needed to provide drainage in the final design; however, the broader point is that the stormwater system has the capacity to accept and treat these areas at the designated design points, per the permit plans.

22. We note that the geotechnical report provides Lateral Earth Pressures criteria for general retaining walls. However, if the Contractor is expected to provide the final design for the modular block walls, additional design criteria specific to geogrid supported modular block walls should be provided, including, but not limited to, allowable bearing pressure for block walls, minimum recommended toe embedment, and global slope stability.

Response: See previous responses concerning retaining wall design. The relevant information will be provided to the wall engineer at an appropriate time.

23. The soils on site are noted as loamy sand/sandy soils and therefore it is critical to provide adequate slope stabilization during and immediately following construction. Based on preliminary review of the geotechnical report by a structural engineer, adequate analysis and recommendations for slope stability are provided. The Applicant should continue to coordinate closely with geotechnical engineers to confirm adequate slope stabilization is provided throughout construction.

Response: Agreed.

24. While we understand that the Applicant has not performed detailed cut and fill calculations, the Applicant should confirm if the soil stockpile located to the west of the site is a permanent condition. Additionally, the Applicant should review proposed grading of the stockpile and limits of work for constructability.

Response: The soil stockpile west of the site is intended to be a permanent condition. Based on our preliminary calculations, this stockpile will contain the majority of excess topsoil generated by the site. It is possible additional stockpile area will be required on the Oak Street parcel depending on how design develops.

DEC STORMWATER DESIGN STANDARDS

25. **974 CMR 3.04(4)(a)(2)** mandates that the DEC encourages Applicants to consider the site's location, abutting and on-site natural resources, and topographic characteristics. All Applicants shall avoid and/or minimize clearing of mature vegetation. We note that the Applicant is seeking a waiver from 974 CMR 3.02.3.(b)6.a, as the Project cannot be adjusted to preserve trees within the limit of disturbance. We note that the Applicant may also require a waiver from this standard.

Response: Applicant will seek a waiver if the DEC decides that it is warranted.

26. **974 CMR 3.04(4)(b)** requires that Site-generated stormwater be managed on-site to meet green field requirements. Conveyance to a common system (operated by the owners of more than one lot), or to the Devens Stormwater System (DSS) managed by MassDevelopment, are options once green field requirements have been met and all reuse and on-site infiltration methods have been exhausted. 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. Stormwater treatment trains may include a combination of LID techniques in addition to Conveyance Structures, Detention Basins, Extended Detention Basins, Retention Basins, swales and infiltration structures, water harvesting devices, and proprietary filtration and separation devices.

We note that there may be additional opportunities to incorporate LID techniques in addition to traditional conveyance systems to decentralize infiltration at the site. Potential LID techniques include, but are not limited to, constructing new concrete sidewalks, terraced patio, and surface parking stalls with permeable materials and rainwater harvesting to off-set potable water use both inside the building, as well as for irrigation. See Comments 5, 7, 29, and 31.

Response: Please refer to response to comment 5.

27. **974 CMR 3.04(4)(b)(4)** decrees 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 add post-indicator valves to DMH-319 or WQU-2; DMH-604; and DMH-113 or WQU-1 in order to isolate any potential spills prior to infiltration.

    Response: This site does not contain any outdoor vehicle fueling areas, only typical recessed warehouse loading docks. The term “post indicator valve” implies that the valve’s state of “open” or “closed” needs to be visible from the surface, while the requirement that the valve defaults to the “closed” position creates great risk during precipitation events—especially when located in the main drainage trunk line (such as with the above-suggested manholes). VHB understands the desire for an emergency shut off valve to protect the subsurface infiltration basin from spills, which can be provided in a downstream manhole, defaulting to the open position, to be closed in the event of a spill. We trust this meets the intent of this regulation.

28. **974 CMR 3.04(4)(c)** requires that the applicant shall include a Stormwater Operations and Maintenance Plan in accordance with 974 CMR 4.08(7) as may be applicable. The Site Plan shall specify the construction and post development Maintenance Schedule in detail on the Utility Plan. This will ensure that all parties understand and are aware that a Stormwater Operations and Maintenance Plan exists. The Applicant should review and address standard by providing applicable note(s) on Sheet C4.01.

    Response: VHB has included the requested notes on the site plans.

29. **974 CMR 4.08(2)(d.ii)** requires that irrigation water 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. On page 12 of the Unified Permit Application, the Applicant states “a permanent irrigation system is not proposed.” However, on page 16 of the Unified Permit Application, the Applicant states that the “proposed irrigation system will incorporate weather sensors and soil moisture sensors.” The Applicant should address this discrepancy and clarify if a permanent irrigation system is proposed; if so, the Applicant should review and address this requirement.

    Response: The use of permanent irrigation is pending assessment of feasibility and cost. If utilized, irrigation will be limited to the Central Green (terraces and lawn area) and will comply with DEC rainwater harvesting requirements.

30. **974 CMR 4.08(2)(d.iii)** requires for all stormwater improvements, drainage calculations shall be prepared by the Applicant's Engineer in accordance with the SMS requirements and shall include design criteria, pre- and post-development drainage areas, and other information to verify the size and effectiveness of the proposed stormwater management technique. "Pre-development" drainage areas shall be considered to be "green fields" regardless of any development or improvements on the site at the time of application. Calculations shall be made separately for each drainage facility, showing its location, the total upstream drainage area, the underlying soil types and the flow paths for the times of concentration, the design runoff, facility size, slope, and capacity and velocity of water through all the site drainage system.

    We note that the Applicant’s Engineer has not provided in-depth existing conditions analysis in the stormwater report. However, given the Applicant’s Engineer’s conservative assumption that the existing peak discharge rates are zero, we feel that the green field requirement has been sufficiently met.

31. **974 CMR 4.08(2)(d.vi)** requires that all projects 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. For LID stormwater controls not referenced in this section (974 CMR 4.08) or the Handbook, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, literature reviews, or other means and receive approval from the DEC before being included in the design of a stormwater management system.

    We note that there may be additional opportunities to incorporate LID techniques in addition to traditional conveyance systems. See Comments 5, 7, 26, and 29.

    Response: Please refer to previous response regarding LID strategies.

32. **974 CMR 4.08(3)(h)** requires that recommended post-construction erosion control methods include geotextile and /or biodegradable erosion control fabrics staked or anchored to the slope, with loose weave to allow vegetative cover to be established. Vegetative cover shall consist of native woody plant species installed as live brush or nursery stock, or native grasses. The Applicant should provide information on post-construction erosion control measures on Sheet C2.00.

    Response: Sheet C2.00 is intended to show construction period erosion control. Post-construction erosion control (i.e. final site stabilization) is provided by seeding/plantings shown on the landscaping sheets (L-001 through LI100). An Erosion Control Blanket detail is also provided on Sheet C6.01.

33. **974 CMR 4.08(3)(i)** requires that stormwater management systems be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total post-construction area on the site. While we believe that this standard has been met through the infiltration of the water quality storm (i.e. 1 inch) over the site's post-construction impervious surface, the Applicant should provide documentation to confirm phosphorus removal.

    Response: Documentation based on EPA performance curves for phosphorus removal in infiltration basins has been added to the Stormwater Report.

34. **974 CMR 4.08(3)(j)** requires the Applicant to support compliance with the Municipal Separate Storm Sewer Systems (MS4) Permit, all Best Management Practices (BMPs) must be optimized for the removal of phosphorus. The justification and design of such BMPs must also include a methodology for assessing BMP performance. Pollutant removal shall be consistent with the Environmental Protection Agency (EPA) Region 1's evaluation tool. The Applicant should review and address this requirement.

    Response: Documentation based on EPA performance curves for phosphorus removal in infiltration basins has been added to the Stormwater Report.

35. **974 CMR 4.08(4)(a)** Minimize basin size to 5,000 square feet per basin or less (by using smaller catchment areas and/or alternative stormwater management design methods) and minimize disturbance to natural or re-established vegetated areas to the maximum extent feasible. If a basin exceeds 5,000 square feet, the Applicant shall demonstrate to the satisfaction of the DEC why a smaller size is not feasible. We note that the footprint of the proposed subsurface infiltration systems, SC-1 and SC-2, are approximately 8,319 and 7,056 square feet, respectively.

There may be opportunities for the Applicant to provide LID strategies, thus reducing the area directed to the subsurface systems and providing an opportunity to decentralize infiltration (see Comments 5, 7, 26, and 31 for additional information).

Response: VHB believes that this regulation is more appropriately applied to surface infiltration basins, as opposed to the subsurface basins proposed in this project. There are other requirements within 974 CMR 4.08(4) that can only logically apply to the design of surface basins, including:

1. There is a size exception for constructed wetlands, which are exclusively surface practices.
2. The basin shall be located in natural occurring low spot and complement the natural topographic movement of the site. These statements cannot logically apply to subsurface basins.
3. Side slopes steeper than 3:1 should be avoided unless tying into a headwall. Subsurface basins do not have side slopes or headwalls.
4. Include fencing or screening if the DEC determines that safety or appearance require such measures. Subsurface basins are not visible and do not pose public safety risks.

Please also consider that there is precedent within this campus for subsurface basins larger than 5,000 sf. The nearly-identical concrete chamber system design for CFS-2 has a footprint of over 11,000 sf, exceeding either of the two systems proposed for CFS-3. There are also several site constraints such as challenging topography and heavy pavement loading that leaves little room to separate the systems further or relocate them elsewhere on site.

36. **974 CMR 4.08(6)(a)** requires LID swale systems shall be utilized in parking lots not subject to truck traffic, truck and container storage, and other railroad related vehicles/equipment, to the maximum extent feasible. The Applicant should review and address this requirement.

Response: There are no proposed “parking lots” on the site; there are only three stretches of single-aisle parking bays that directly abut the perimeter access drive, leaving no logical place (such as a center island) to include a LID swale system.

37. **974 CMR 4.08(6)(c)** requires all drainage structures shall be constructed of pre-cast concrete. The Applicant should specify that all drainage structures will be constructed of pre-cast concrete on the details sheet and note pipe materials on Sheets C4.01 and C4.02.

Response: Notes have been added/revised on the detail sheets and appropriate Grading and Drainage and Utility Sheets.

38. **974 CMR 4.08(6)(g)** states that catch basin to catch basin connections are prohibited in paved areas. We note that AD-1 is connected directly AD-2. The Applicant should confirm that there is no issue with resuspension with the chained inlets.

Response: This comment may have been more appropriately made in the CFS-4 comment letters as these particular drains are located within the CFS-4 utility pads. Regardless, we are happy to respond to this comment here. AD-1 and AD-2 are “area drains” rather than catch basins, and being within the utility pad area of CFS-4 their final design will depend on input from the structural and plumbing engineers working on the building design. Their inclusion on these plans was to indicate the intent and feasibility of directing utility pad runoff to the subsurface infiltration basin. Regarding the risk of resuspension: as noted in the CFS-4 documentation, these drains will be incorporated into the overall hazardous material and spill prevention strategy for the entire facility, the design of which is still in progress. With that in mind, we believe that the concerns communicated by this comment are actively being addressed in the CFS-4 comment letters, and we request closing this comment here and continuing the conversation as part of the CFS-4 process.

STORMWATER DESIGN AND CALCULATIONS

39. We note that SC-1 will manage runoff from both CFS-3 and CFS-4 sites. Based on discussions with the Applicant's representative, described above in Comment 15, it is Nitsch's understanding reciprocal easements will be granted between the two Owners.

Response: This understanding is correct.

40. We note that SC-1 appears to be an addition to the subsurface infiltration system proposed with the CFS-4 development. The Applicant should provide additional information on the construction phasing to clarify the planned construction sequence of the addition to SC-1.

Response: It is more accurate to say the SC-1 "expands upon" the subsurface infiltration basin proposed with the CFS-4 development (rather than being "in addition to"). Another way to look at it would be to say that SC-1, as shown in the CFS-3 plans, is the "full build out" of the basin required to support both CFS-3 and CFS-4 in tandem. The smaller version of the basin shown on the CFS-4 plans represents the minimum basin size needed to support the CFS-4 project only, while the basin shown on the CFS-3 plans depicts what is needed to support both projects at once.

41. The Applicant should provide rim and invert elevations for area drains located in the terraced patio on Sheet C4.02.

Response: Additional rim and invert details for these structures will be added to the Site Plans.

42. Unlabeled structures are located at the junctures of pipes on Sheets C4.00-C4.02. The Applicant should clarify the intent of these structures.

Response: These structures are clean outs and appropriate labels have been added to the plans.

43. The Applicant should provide invert elevations for all roof drains to confirm constructability.

Response: VHB has added roof drain inverts to the Site Plans.

44. As currently shown, DMH-007 has three (3) outlet invert elevations listed. However, only one (1) pipe appears to be exiting the structure on Sheet C4.02. The Applicant should review.

Response: VHB has addressed this comment on the Site Plans.

45. Currently, linework for the CFS-4 project is shown above drainage information for CB-101, CB-203, AD-1, AD-2, AD-3, AD-4, DMH-204. The Applicant should address text overlap on Sheet C4.01 to improve readability of the plans.

Response: VHB has addressed this comment on the Site Plans.

If the Commission has any questions, please call.

Very truly yours,

Nitsch Engineering, Inc. Approved by:

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