



April 21, 2021

Ref: 73152.00

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

Re: 16 Bulge Road - Devens, MA

Dear Mr. Angus,

Below are responses to compiled review comments provided on the April 8, 2021 from Mass Development, Peer Reviewers, and the Devens Enterprise Commission. Comments are reiterated below with VHB responses following in italics.

DEC Site Plan Review Design Standards Comments

Comment 1: 974 CMR 3.04(3)(a)4.d requires that Commercial, Industrial, and Multi-Family Residential driveway widths shall be no greater than 14 feet for a one-way driveway. The proposed one-way loop driveway is currently shown as 20 feet wide. This pavement width should be reevaluated with the intention of reducing the pavement width to meet this requirement.

Response: A 20-foot width is provided for Fire Department access and to accommodate tractor trailer access to the loading dock. A 14-foot wide driveway will be insufficient for tractor trailers using the service driveway to stay within the limits of paving.

Comment 2: 974 CMR 3.04(3)(a)1.d requires reflective yellow or reflective white paint for parking lot striping. A detail for the accessible spaces is included on sheet C-6.01, however a detail should be added for the standard spaces. The striping details should include reference to reflective paint for compliance with the requirements of 974 CMR 3.04(3)(a)1.d.

Response: A detail for standard parking spaces has been added to sheet C-6.01.

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Comment 3: 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.

Response: *We have requested a letter from the Fire Chief stating there is adequate access for fire equipment. This letter will be provided to the DEC upon receipt.*

Comment 4A: The site is located within the Zone II and Aquifer subdistrict of the Water Resource Protection Overlay District. The Applicant shall review these requirements and provide required documentation if applicable.

974 CMR 4.09(2)(b)2 requires a Hazardous Material Spill Response Plan that lists methods for the interception and isolation of potential spills of hazardous materials for review and approval by the DEC as part of a Unified Permit Application. Clean-up of spills shall be completed in accordance with the Hazardous Material Spill Response Plan or as specified in the Devens Spill Prevention Control and Countermeasure Plan;

Response: *The storage of Hazardous Materials is not anticipated in quantities that require a Hazardous Material Spill Response Plan. The building tenant will provide (removed material) Safety Data Sheets required for specific products by United States Federal Law and typical quantities, locations and method of storage on site to the DEC prior to occupancy. A Hazardous Material Spill Response Plan will be prepared prior to occupancy, if required based upon these materials and quantities.*

Comment 4B: 974 CMR 4.09(2)(b)2 requires a list of all Hazardous Materials proposed to be used on-site (type, quantity, location and method of storage);

Response: *See above response to comment 4A.*

Comment 4C: 974 CMR 4.09(2)(b)3 requires Groundwater Quality Monitoring Plan (GWQMP) to be developed for industrial projects and/or uses involving the handling, treatment, storage, or generation of hazardous waste as defined under 310 CMR 30.000 in excess of those quantities allowed for a Very Small Quantity Generator;

Response: *The handling, treatment, storage or generation of hazardous waste as defined under 310 CMR 30.000 in excess of quantities allowed for a very small quantity generator is not anticipated. The tenant will provide a Groundwater Quality Monitoring Plan if required.*

Comment 4D: 974 CMR 4.09(5) provides requirements for control of hazardous waste and materials in the WRP District; and



Response: *The tenant does not anticipate generating sufficient hazardous waste or hazardous materials to meet the control requirements.*

Comment 4E: 974 CMR 4.09(6) refers to the storage of fuel and combustible and flammable liquids, as defined by 42 U.S.C. section 6901-6922i, G.L. c. 148, and 527 CMR 9.00.

Response: *(Note 527 CMR 9.00 has been deleted, the new code reference is 527 CMR 1.00) All storage of fuel, combustible liquids and flammable liquids will be in accordance with Massachusetts Fire Code 527 CMR 1.00.*

Comment 5: We note that the current site plan proposes all parking in the front of the building, which is not consistent with the requirements 974 CMR 3.04(3)(a)1. We understand that you have been in discussions with the Applicant regarding this aspect of the site design and are working with them to review alternative configurations for the building and parking. This includes keeping the parking in the front with the condition that they reduce the size of the parking lot and develop a design will fully screen the parking through a combination of landscaping and grading.

Response: *The applicant is seeking a waiver for parking in front of the building.*

Comment 6: The plans currently do not provide sidewalk connections to stone dust trail on either side of the parking lot. The plan currently requires walking through parking lot to access these trails. Additional sidewalks along perimeter driveways could increase access to these paths and minimize pedestrian/vehicular conflicts in the parking lots.

Response: *Crosswalks and sidewalks are provided to access the stone dust trail as indicated on sheet C-3.00. The trails will not be publicly accessible and therefore will not connect to paths beyond the site.*

Comment 7: The Applicant notes in the narrative that they are promoting multi-modal transit to the facility, including bicycle access. However, there only appear to be three (3) bike racks located at the facility. The Applicant should review the amount of racks proposed and confirm it is adequate for the anticipated demand.

Response: *The plans will be adjusted to include a minimum of 19 bicycle racks including a minimum of 15 covered bicycle racks. The shelter covering the bicycle racks has not been selected at this time.*

Comment 8: The limit of work should be provided on all plans, including the Grading Plan, to clearly indicate the proximity of the work to the Slope Resource Area and its buffers. It appears that there are minor encroachments on the 50-foot Slope Resource Area Buffer adjacent



to Stormwater Basin 1A that may be avoidable with minor adjustments to the basin geometry.

Response: The limit of work will be shown on all revised plans. There is no encroachment into the 50-foot Slope Resource Area and its buffer.

Comment 9: The layout of the stone dust path appears to require minor tree clearing along the site perimeter, which appears to be avoidable. The Applicant should review these areas and reduce tree removal as much as possible.

Response: The proposed stone dust path has been located to avoid tree removal. No trees will be removed for the installation of the stone dust path.

DEC Stormwater Design Standards Comments

Comment 10: 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 provide more clarity on how the oil/water separator and post indicator valve are functioning at the loading dock area. It is unclear how stormwater is directed to the oil/water separator versus the sediment forebay outlet pipe.

Response: We request to leave the PIV in the open position to allow stormwater to flow through the oil/water separator as designed. This system will be inspected on a regular basis as required by the stormwater operations and maintenance plan and would be closed by the tenant in the event of a spill.

Comment 11: 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. There appears to be potential for bioretention in the island in the center of the parking lot. The island is already being used to capture stormwater but is not specifically labeled, designed, or detailed as a bioretention basin. The Applicant should review and address this requirement.

Response: The island in the center of the parking lot is proposed to be used as a drainage swale for conveyance reducing curbing, piping, and to reduce structures given the 400 foot length of this central island.

Comment 12: 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. Table 1 provided in the Stormwater Report indicates that this requirement has been met, however there is text in the Stormwater Report stating that the proposed conditions result in a slightly larger peak discharge (pages 8 and 15). The Applicant should provide clarification on this.

Response: *The summary of peak discharge rates provided in table 1 reflects the reduction in stormwater rate for the 2-, 10-, 25-, 50-, and 100-year storm event provided with the proposed design. The increase in peaks noted in the report on page 8 and 15 are remnant text that was inadvertently not removed following final adjustments of the stormwater design that achieved the required reduction in peak rate.*

Comment 13: 947 CMR 4.08(4)(c) requires the Applicant to utilize banks steeper than 3:1 (horizontal to vertical) only to tie into headwall/outfall structures. Banks steeper than 3:1 shall transition to slopes of less than 3:1 as quickly as possible to minimize areas of potential erosion. Specific post-construction erosion control methods shall be detailed to ensure temporary and permanent stabilization of such areas will be achieved. It appears the Applicant has met the slope requirement based on measurements of the scaled plan. However, the Applicant should also provide cross sections details of the sediment forebay and infiltration basin to provide a better understanding of the BMP. Additionally, the Applicant should indicate stabilization methods on Erosion and Sediment Control Plan.

Response: *Where slopes exceed 3:1 erosion control blanket is required. See sheet C-3.00 and C7.01. A typical Infiltration/Detention Basin detail and a Typical Basin Cross Section have been added to sheet C6.03.*

Comment 14: 947 CMR 4.08(6)(c) requires that all drainage structures shall be constructed of pre-cast concrete. The Applicant should confirm this requirement and add a note to each drainage structure detail.

Response: *Details have been updated to require pre-cast concrete.*

Comment 15: 947 CMR 4.09(2)(c)1. requires that projects located in the Zone II WRP shall utilize BMPs to comply with the SMS requirements for total suspended solids, petroleum hydrocarbons, lead, zinc, copper, and nitrogen removal rates from runoff prior to groundwater recharging and/or stormwater discharging from the site. Water quality evaluations shall be based on a two-year storm event. Biofiltration systems for stormwater pollution mitigation are required to the maximum extent feasible. The Applicant should review and address this requirement for all stormwater management systems proposed with the Wellhead Protection Area Zone II (INF 2, INF 3, StormTrap).



Response: *It is noted that Biofiltration systems are required to the maximum extent feasible. The Massachusetts Stormwater Handbook, Volume 2, Chapter 2; provides pollutant removal efficiencies for infiltration basins to be 80 % total suspended solids (TSS) with pretreatment, 50%-60% for nitrogen, 85%-90% for metals (copper, lead, zinc). In comparison to Biofiltration systems noted to have removal rates of 90% TSS with pretreatment, 30%-50% nitrogen removal, 40%-90% metals. Petroleum hydrocarbons can be separated from water within the deep sump hooded catch basins. The infiltrating stormwater management systems proposed within the Wellhead Protection Area Zone II exceed removal rates of a Bioretention system.*

Stormwater Design and Calculations Peer Review Comments

Comment 16: An Authorized Use Limitation (AUL) was placed on the site due to residual pesticide contamination in the soil. This is described at a high-level in the Narrative, however we request that the Applicant confirm that the approach for widespread infiltration across the site is consistent with the terms of the AUL.

Response: *The approach for widespread infiltration is not in contrast to the provisions in the AUL. Pesticides were not encountered in groundwater above applicable standards. Infiltration of snow melt and precipitation was not contemplated in the AUL as a condition that would be inconsistent with the protection to human health and welfare or the environment.*

Comment 17: It appears Infiltration Basin 1A is mislabeled on the Proposed Drainage Area Figure. The Applicant should address this for clarity.

Response: *This has been corrected in the stormwater report.*

Comment 18: The Operations and Maintenance Location Plan indicates that the Stormwater Management StormTrap Chamber System is detention, however the HydroCAD model indicates that infiltration is accounted for. Additionally, the Stormwater Report list the StormTrap as contributing to the recharge requirement. The Applicant should address this inconsistency for clarity.

Response: *The StormTrap System is labeled for detention and infiltration.*

Comment 19: The column header label (including units) should be added to column 3 on the Provided Recharge Volume and Drawdown Times Summary Table in Appendix C of the Stormwater Report to clarify the provided recharge.

Response: *This has been corrected in the stormwater report.*



Comment 20: The HydroCAD model indicates that drainage that flows to the Existing Depression overflows to the Bulge Road design point. It does not appear that an overflow is modeled in HydroCAD or indicated on the Plans. Can the Applicant please provide justification for this routing?

Response: *This was reanalyzed within the updated model/stormwater report.*

Comment 21: There is a minor discrepancy between the plans and the HydroCAD report for the outlet elevation of Infiltration Basin 1. This should be reviewed and updated for consistency.

Response: *The has been corrected on the plans.*

Conformance with the MassDEP Stormwater Standards Peer Review Comments

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

Comment 22: Standard 3 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) and within a Zone II or Interim Wellhead Protection Area, at least 44% of the total suspended solids must be removed prior to discharge to the infiltration structure. While we believe this requirement has been met, discrepancies were noticed between the 'Pretreatment Vol Provided (Vol. below weir in HydroCad)' and the HydroCAD printouts provided in the 'SFB Pretreatment Calculations' for SFB 1A and 2 in the Stormwater Report. Additionally, a cross section detail of the sediment forebay should be provided indicating that the basin is lined to prevent infiltration.

Response: *HydroCad printouts have been updated in the stormwater management report indicating the Pretreatment Volume.*

Comment: 23 Standard 8 is covered by a National Pollutant Discharge Elimination System (NPDES) Construction General Permit but no SWPPP has been submitted. A SWPPP should be submitted to the DEC before land disturbance begins.

Response: *Understood. A SWPPP will be submitted to the DEC before land disturbance commences.*



We have the following comments regarding the submitted Erosion and Sediment Control Plan:

Comment 23A: The Applicant provided a Site Logistics within the narrative package that has some inconsistencies with the Erosion and Sediment Control Plan (C-7.00). This includes the designated areas for soil stockpiles and construction parking. These should be reviewed and addressed for consistency;

Response: The soil stockpile area shown on sheet C-7.00 will be updated to match the stockpile area indicated on the Site Logistics plan.

Comment 23B: Related to phasing and limits of disturbance, we suggest that the Applicant review logistics plan and minimize removal of existing trees to accommodate the construction staging for Phase 1; and

Response: Removal of trees outside the perimeter loop road and along Bulge Road has been minimized. Removal of trees within the loop road are required for construction logistics and for placement of excess topsoil from the project. Tree removal can be reduced within the future expansion area if a suitable receiving site is available within Devens for the surplus topsoil. The applicant is exploring options for sites at Devens to receive excess topsoil, however, a site has not been identified at this time.

Comment 23C: The sediment basin location shown on the Erosion and Sediment Control Plan (C-7.00) is located at the highest point on the site, which will make it difficult to use to collect water from the disturbed area during construction. This should be reviewed and adjusted based on anticipated grading and low points.

Response: The sediment basin shown on sheet C-7.00 is provided as a potential location. The location of sediment basins shall be adjusted as determined by the contractor during various stages of construction.

Comment 24: Standard 10 prohibits illicit discharges to the stormwater management systems. The Illicit Discharge Statement should be provided and signed by the Engineer of Record.

Response: The Illicit Discharge Statement will be provided as requested.



Devens Engineering Comments:

Stormwater Report:

“Project Description”

Comment 25: Section **MUST** start with a statement acknowledging that portions of the proposed outfalls are connected to a system which directly discharges to the Cold Spring Brook, a tributary of the Nashua River (an impaired waterway), and that the connected portion of the site system has been design to be fully compliant with all requirements of the MA MS4 General Permit and conditions of the Devens NOI including reduction of applicable impairments in the Nashua R. The overall stormwater system should be reviewed by the DEC consultant to ensure that the proposed system adequately addresses all relevant issues.

Response: This statement has been added to Stormwater Report.

Comment 26: No changes to the post development flows from the SW Chamber under the front parking lot will be allowed without prior written approval from MassDevelopment Engineering.

Response: Comment acknowledged.

Comment 27: Local Municipal Rules and Regulations Section should acknowledge the MA MS4 General Permit as well as the Devens NOI.

Response: These associated reference Regulations have been added to the Stormwater Report.

Comment 28: “Standard 4: Water Quality” - Include statement describing how site system addresses impairment components in Nashua R. (i.e., phosphorous, etc.)

Response: The following statement has been added to the Stormwater Report. “The Nashua River has a TMDL for Pathogen, and an impairment for Phosphorous. Volume 2, Chapter 2 of the Massachusetts Stormwater Handbook notes that Infiltration Basins have pollutant removal efficiencies of 90 % for Pathogens and 60% to 70% removal of Phosphorous.”

Comment 29: Applicant is advised that a municipal stormwater IDDE regulation is being promulgated and this site will be subject to the proposed regulations.

Response: Understood. The storm sewer and sanitary sewer systems have been designed to be completely separate.

Comment 30: A stormwater connection approval letter is required as a condition of approval.



Response: Understood.

Plans:

Comment 31: At connection to municipal stormwater system in Bulge Rd (CB 1313) – a note needs to be added which states “Existing CB to be inspected prior to conversion to a DMH. Depending upon the condition of the structure and the status of work on the Bulge Road reconstruction project the structure may need to be replaced prior to connection”.

Response: This note has been added to sheet C-4.00.

Comment 32: Add sign indicating “No Right Turn” at westerly most driveway connection to Bulge Road.

Response: A “No Right Turn” sign will be provided at the western most driveway to Bulge Road.

As usual we reserve the right to provide additional questions/comments as they may arise.

Devens Environmental Comments:

Comment 33: In the Level 2 Permit Application Narrative, the following is stated:
*“H(2) Existing Easements, Covenants, Restrictions and Institutional Controls
The Site was first developed in the early 1960s with the Davao Housing Area, which included 19 multi-family residential buildings associated with Fort Devens. Prior to the completion of the Davao Housing Area buildings in 1962, pesticides were applied to the building foundations and frost walls. Subsurface investigations between 2000 and 2014 on the Site revealed impacted surficial soils in close proximity to the building foundations. The primary pesticides identified at the Site are aldrin and dieldrin; groundwater impacts were not identified. In 2017, an AUL was placed on the disposal site to maintain a Condition of No Significant Risk for potential receptors. The AUL limits the future use of the Site due to the residual pesticide contamination in soil that exceeds residential risk based limits, but allows commercial/industrial use. A Partial Permanent Solution Statement (PSS) and Method 3 Risk Assessment were prepared for RTN 2-662 in February 2018 to address the on-Site pesticide contamination.”*

Please describe how the requirements of the 2017 AUL (specifically with respect to Section 1- Activities and Uses Consistent with Maintaining No Significant Risk Conditions which under item (vi) allows for “soil excavation provided it is conducted in accordance with a Soil Management Plan and Health and Safety Plan in accordance with” items (i) and (ii) under Section 3 – Obligations and Conditions) have been or will be met prior to initiating excavation activities on the site.



Response: *The requirements of the 2017 AUL will be met through the submittal of a Soil Management Plan (SMP), Health and Safety Plan (HASP), and a Release Abatement Measure (RAM) to Mass Development/Devens Enterprise Commission (DEC), and MassDEP (RAM only). The SMP will adhere to the requirements of both the Mass Development and H&A (2000) Devens-specific SMP provisions.*

This project complies with the Activities and Uses Consistent with Maintaining No Significant Risk Conditions.

(iii) *“Uses of the Portion of the Property for...recreational area....so long as uses are incidental to commercial uses and in the Opinion of a Licensed Site Professional, the exposed soil are either a) not contaminated based on the results of a Risk Characterization or post-analytical data; or b) soil exposure is restricted through pavement, three feet of clean soil, or other suitable barrier.”*

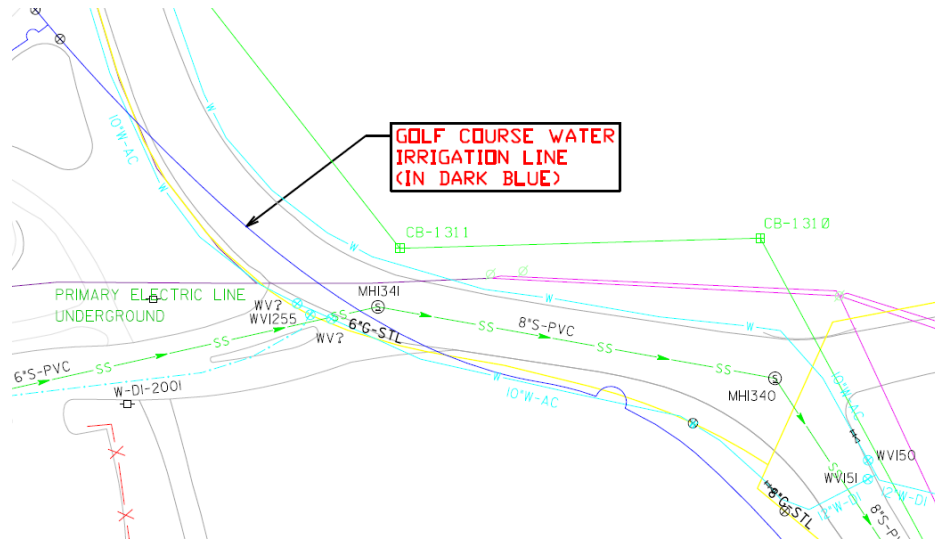
Although the Site underwent pesticide soil removal. The proposed development will undergo soil sampling to assess for remaining pesticide impacts. The data will be used to manage soil stockpiles, assess a proposed outdoor picnic area, and review soil conditions for a walking trail to be used solely for the future site occupants. All of these tasks are incidental to the development of a commercial site under the AUL.

Comment 34: The reference to the AUL will need to be identified on the Level I plan and should be referenced in the LDA and Deed.

Response: *The reference “Notice of Activity and Use Limitation M.G.L. c. 21E, Subsection 6 and 310 CMR 40.0000, Disposal Site Name: Fort Devens, Former Davao Housing Area, MassDEP Release Tracking No.(s): 2-0000662” will be provided on the Level 1 plan.*

Devens Utilities Comments:

Comment 35: Devens GIS shows a golf course water irrigation line close to the existing sewer manhole that the new sewer from the site would tie into on Bulge Road near the entrance driveway to the golf course clubhouse. That SMH is noted as MH 1341 on the following plan.



The irrigation line is shown in dark blue. This line as shown on the plan should be taken as an approximate location since I am not sure if we accurate information as to its exact location. Since this is a private line, it may not be marked out by Dig-Safe when the project's contractor submits a Dig-Safe request. Also shown on the plan is an approximate location of the underground primary electric feed to the clubhouse. This underground line is referred to in Utility Plan C-5 comment below.

Response: *Acknowledged. The irrigation line and the underground electric have been added to the plan based on the provided GIS. A test pit is noted to be required to identify location and elevation of the comm and electric. Some adjustment to the manhole location may be required based upon actual location of the irrigation main and electric/comm conduit.*

Demo Plan C-2:

Comment 36: A callout on the eastern edge of the site, where the existing sewer is routed to the northeast, says that portion of sewer is to remain. That is not correct. That portion of sewer is to be removed and disposed within the site limits in accordance with Note 2 on the plan.

Response: *The existing sewer on the northeast of the site will be abandoned in place. Existing sewer manholes will be demolished in place and backfilled.*



Comment 37: The existing sewer line through the site must be maintained to serve the golf course maintenance facility at 28 Bulge Road until the new sewer line is in service. I did not notice this declaration on the plans but it should be made clear that a plan will need to be developed to switch over to the new sewer from the existing with minimal impact to service to the golf course facility.

Response: *Confirmed. The existing sewer to the golf course maintenance facility will remain active throughout construction and be tied into the new sewer connection on Bulge Road. A note has been added to sheet C-4.00 for the contractor to coordinate the switch over to the new sewer connection with the golf course facility.*

Layout and Materials Plan C-3:

Comment 38: There is a callout on this plan and on C-5 for “proposed 20’ sewer easement” on a portion of the existing sewer on the northeast section of the site. That portion of the sewer is to be removed or abandoned in place so no easement should be needed there.

Response: *The easement will be provided over the existing sewer to remain for the golf course facility and the associated new connection to Bulge Road. No sewer easement will be provided on the section abandoned on the eastern side of the site.*

Utility Plan C-5:

Comment 39: A callout at the connection of the new sewer to an existing SMH downstream of new SMH-4 in Bulge Road says to connect using an exterior drop. Devens Utilities does not allow exterior drops. Drop should be internal using materials such as provided by Reliner or equal.

Response: *The drop manhole detail has been revised to require Reliner interior drop. See sheet C-6.02.*

Comment 39A: Connecting to this existing SMH at the proposed invert elevation of 284.7 may result in interference with an existing underground primary electric/communication ductbank, which is adjacent to the existing SMH and serves the golf course clubhouse. This ductbank is not shown on the plans but should be. A test pit should probably be required in that location to confirm the location and elevation of the ductbank.



Depending on the elevation of that ductbank, a drop manhole using the proposed invert elevation may not be possible at that location.

Response: A test pit will be performed during construction prior to installation to determine if any adjustments are required. See note added to sheet C-4.00.

Comment 40: The existing sewer line that is routed through the front of the site adjacent to Bulge Road and is to remain throughout the project should be inspected via CCTV before and after construction to ensure construction does not damage that line. Any damage done during construction will need to be repaired by the contractor or project proponent.

Response: A note requiring CCTV inspection has been added to C4.00.

Comment 41: The existing SMH (Devens SMH 777), where a new sewer line would connect upstream of new SMH-1, is a brick manhole. Construction to connect to that brick manhole may result in damage requiring rehabilitation or replacement of that manhole. Given the location of that manhole in a proposed paved section of the parking area, a new frame and cover adjusted to the proposed grade should probably be called for at a minimum.

Response: A note to raise frame and cover has been added on sheet C 4.00. The condition of the existing manhole will also be evaluated at the time of the CCTV inspection.

Comment 42: Proposed sewer pipe lengths and slopes should be included on the plan.

Response: This information has been Included on sheet C 4.00.

Comment 43: The invert elevation of the proposed 6" sewer service at its terminus with the proposed building is not shown but should be.

Response: This information has been added to sheet C 4.00.

Comment 44: At the proposed location in Bulge Road where a water tapping sleeve and valve connection to the existing water line is called for, the plan shows the existing 6" gas line just to the west of the existing water main there. Devens GIS shows that gas line on the east side of the water main, which might make it difficult to make the connection at that location. Also, trying to make a full-size live tap (i.e, 10") on a 10" AC pipe is generally



not a good idea. If the connection is to be made there, a test pit to confirm the location and elevation of the gas line should be done.

Response: The connection point to the main in Bulge Road has been revised and coordinated with Mark Cohen from Mass Development.

Comment 44A: Also, if this connection is made in the dry, rather than via a live tap to avoid doing a full-size tap on an AC pipe, coordination with the golf course (and possibly the Devens Fire Dept) would be required to minimize domestic and fire service disruption to the clubhouse.

Response: A note has been added to sheet C-4.00 to coordinate with the golf course and Devens Fire Department if the connection is made in the dry.

Comment 44B: We should discuss options for making this water connection, including possibly moving the connection further to the west on Bulge Road past where the gas line diverges from the water line or connecting to the existing 10" water line where it enters the site.

Response: The location of the water service connection has been adjusted based upon review with Mark Cohen from Mass Development.

Comment 45: Is the 10" water connection to the back (north side) of the proposed building intended for fire service? If so, the Devens Fire Dept may require a particular type of connection at that location. This should be coordinated with the Devens Fire Chief Tim Kelly.

Response: Yes, the 10-inch water connection at the back (north side) of the building is for the fire service. This will be coordinated with Devens Fire Chief Tim Kelly

Comment 46: Recommend adding a water valve on the 10"W loop at back of building to the west of the proposed hydrant there to be able to better isolate necessary work for the future building to minimize potential impacts to the currently proposed building.

Response A water valve added has been added on the 10" water loop as requested. See sheet C-4.00.

Comment 47: The line depicting the proposed 10"W from the road to the building extends past its interconnection with the 10" water loop directly in front of the building. Unless



installation of a cross is intended at that location, that line should terminate at the tee with the loop. I believe this is a minor drafting issue but should be cleaned up to prevent confusion.

Response: This has been adjusted on sheet C-4.00.

Site Details 2 Plan G-2:

Comment 48: Exterior Drop SMH detail is shown but, as mentioned in a previous comment above, Devens does not allow exterior drops. Drop SMHs should be internal using materials such as provided by Reliner or equal.

Response: The exterior drop has been revised to an interior drop provided by Reliner.

Existing Conditions Plan:

Comment 49: Several callouts for “proposed 20’ sewer easement” are shown but don’t point anywhere near existing sewer lines. And at least one of those callouts is in an area where the existing sewer is to be removed or abandoned so no easement would be required there.

Response: The easement will be provided over the existing sewer to remain for the golf course facility and the associated new connection to Bulge Road. No sewer easement will be provided on the section abandoned on the eastern side of the site.

DEC Staff and Sound Study Comments

Comment 50: Level 1 lotting plan will be required to create lot.

Response: Understood. The Level 1 plan is being prepared to create the lot.

Comment 51: Property contains priority habitat of the Blanding’s Turtle, a Threatened species of rare species by the Natural Heritage and Endangered Species Program (NHESP). Copy of Turtle Protection Plan required and final approval from NHESP.

Response: A copy of the Turtle Protection Plan is enclosed.



Comment 52: Project narrative discusses the project being located in the Aquifer Water Resources Protection District. While the majority of the property is within this District, a portion is within the Zone 2 Water Resources Protection District. The Applicant should address how the project complies or will comply with the applicable requirements under 974 CMR 4.09(2)(a),(b) and (c).

Response: *The Stormwater Report has been updated to address compliance with the Zone 2 Water Resources Protection District.*

Comment 53: MassDevelopment design approval letter needed prior to public hearing.

Response: *The approval letter from Mass Development is anticipated prior to the public hearing and will be provided upon receipt.*

Comment 54: Plans propose more than one space per employee. Consider reserve parking options and reducing total # of parking spaces based on carpooling and alternative transportation options being proposed/available. Also revise parking calculations based on square footage of business office (1 sp/1,000sf) and manufacturing (2sp/1,000sf). Based on the SF mix, the maximum amount of allowable parking is 236 spaces.

Response: *The total area of the facility is 150,843 square-feet for the purpose of manufacturing allowing a maximum of 302 parking spaces. The 299 parking spaces provided is required for normal operation of the facility. The facility includes 48,000 square-feet of office space that will be occupied by 48 employees. The general manufacturing area in the facility will be 68,960 square-feet and staffed by 138 employees. The facility will also include a 15,000 square-feet molding manufacturing area staffed by 85 employees and a 12,300 square-foot pump assembly area staffed by 40 employees. The 299 parking spaces accounts for 12 staff using ride sharing or alternative transportation to travel to and from the facility.*

Comment 55: Stretch code – project proposes 299 spaces but anticipates a likely future expansion that will put the facility over 300 spaces and 1000 ADT. This will likely trigger the building to have to meet MA Stretch Code standards, but if facility is aiming for LEED Gold, this should not be an issue.

Response: *Comment acknowledged.*



Comment 56: Eliminate parking lot access drive parallel to Bulge Road that has no parking. Route traffic through parking lot and use this space to dispose of excess material and provide better landscape screening of the sea of parking and the building.

Response: This access drive has been eliminated.

Comment 57: Will need waiver to allow more than 10% of parking in front of building.

Response: The applicant is requesting a waiver to allow more than 10% of parking in front of the building.

Comment 58: Tenant still not identified in submittal. Will need to include a condition that any tenant will require review and approval by the DEC prior to occupancy to ensure consistency with permitted uses in this district. May want to introduce tenant at public hearing if available.

Response: The tenant will be introduced following approvals.

Comment 59: Sheet C-1.00 needs MA PE stamp.

Response: This has been corrected.

Comment 60: Site lighting plan needs space for chairman's signature.

Response: A space for the chairman's signature will be added to the lighting plan for signature.

Comment 61: Site lighting plan needs graphic scale, north arrow and stamp and space for chairman's signature. Specific lighting details should be provided for all fixture types and highlighted on lighting spec sheets on sheet C-6.05 to ensure compliance with 974 CMR 3.04 and 4.04 (dark, earth-tone color, 3000K or less, shielding, etc...)

Response: The graphic scale, north arrow, stamp, and space for chairman's signature will be added to the lighting plan. Cut sheets for the lighting fixtures will be provided.

Comment 62: C-1.00: General Note #15 - reference Devens Soil Management Policy, UXO requirements, and AUL for site.



Response: General note 15 has been updated to reference the Devens Soil Management policy, UXO requirements, and the AUL for the site.

Comment 63: C-2.00: Note #13 - reference Devens Soil Management Policy, UXO requirements, and AUL for site.

Response: General note 15 has been updated to reference the Devens Soil Management policy, UXO requirements, and the AUL for the site.

Comment 64: On Sheet C-3.00 tables, add area devoted to open space, area paved, and number of employees expected per shift, and the gross floor area of office and manufacturing uses.

Response: The area devoted to open space, paved area, number of employees on the largest shift and gross floor area of office and manufacturing have been added to sheet C-3.00

Comment 65: C-5.00: Note #2 – reference need to coordinate with Devens Engineering and utilities on required public sewer easement.

Response: Note 2 on sheet C-5.00 has been modified as required.

Comment 66: C-7.01: DEC E&S Control Notes - #9 and 10 are duplicates – add the following missing note:

Response: OK.

Comment 67: Permanent seeding shall be undertaken in the spring from March through May, and in late summer and early fall from August to October 15. During the peak summer months and in the fall after October 15, when seeding is found to be impractical, an appropriate temporary mulch and/or non-asphaltic soil tackifier with winter rye shall be applied. Permanent seeding may be undertaken during the summer if plans provide for adequate mulching and watering.

Response: Ok. We will add these requirements to the Landscape Plan Notes section.

Comment 68: Verify no Golf course wells within 200 feet.



Response: The Patton Well is located approximately 2,000 feet south of the site off of Patton Road. This was the only well identified in the vicinity of the golf course based on a search of the Massachusetts Energy & Environmental Affairs Data Portal

Comment 69: Provide details for 6,000 gallon nitrogen tank and pad and any accessory equipment (i.e., ground-mounted pumps, any other fueling procedures). Also need details for mechanical equipment pad. Chillers and any other exterior equipment (typ.) should also be shown.

Response: Details of the 6,000 gallon nitrogen tank will be provided. Details of the mechanical equipment pads will be prepared as part of the construction documents provided for the building permit.

Comment 70: Provide details for all proposed landscape features, including smoke shelter area, plazas, activity lawn area, and stonedust trail. Include details and locations for walks, walls, and fences including dimensions, materials, and finishes.

Response: The smoking shelter has not been selected at this time. The shelter will be provided for review and approval once selected. The shelter is anticipated to be a metal frame with clear enclosure.

All plaza areas will be broom finished concrete with a 6 foot on center checkerboard scoring pattern on a 45 degree angle to the edge of plaza. Walkways will be broom finish concrete as indicated on sheet C-3.00.

There are no walls proposed. A concrete slope with guard rail will be provided between the at grade loading bay and the dock height loading bay. A lot curb will be provided to accommodate up to two feet of grade change at the sidewalk entering the site from Bulge Road.

The activity lawn will be loam and seed as indicated on sheet L-1.00.

The walking trail will be a stone dust path as indicated on sheet C-6.01. Any area on Site used for recreation, and not otherwise covered by a hardscape surface, will be assessed for pesticide impacts to a depth of 3 feet. Where pesticides are encountered that exceed the PSS guidance a "suitable barrier" as prescribed by the AUL will be designed. A typical detail will be provided depicting a permeable geotextile membrane applied to the



graded Site soils, with an additional 6 inches of stonedust added to the walking trail if it did not otherwise require a "suitable barrier".

The only fence proposed is the enclosure for the dumpster area. This is detailed on sheet C-6.04

Comment 71: Show abutters and easements etc. on Site plans and include Flood Insurance Rate Map (FIRM) panel number, zone designation, and base flood elevation.

Response: *Abutters have been added to Site Plans. FEMA Flood information has been added to sheet C 1.00, note 3, under Existing Conditions Information.*

Sound Study:

Comment 72: Need to see the CadnaA modeling files to confirm that the results are accurate.

Response: *VHB will provide Cadna files representing daytime, nighttime, and mitigated conditions.*

Comment 73: The six (6) rooftop AC units, eight (8) exhaust fans on the rooftop, and three (3) chillers located at ground level on the north of the proposed building are expected to operate at all times. That includes times outside of "Daytime hours", which is defined as 7:00 A.M. to 6:00 P.M. on weekdays.

Response: *Even though the proposed facility will operate during the typical daytime business hours, the mechanical equipment (AC units, exhaust fans, and chillers) will potentially operate outside of the daytime hours.*

Comment 74: The CNG gas tank located at ground level on the east side of the proposed building, and tractor trailers are expected to operate only during "Daytime hours". That would not include nighttime hours after 6:00 P.M and before 7:00 A.M. on weekdays, all weekend time periods and during legal holidays. Is this prudent or realistic? what was used for trucks? Again, this will be in the modeling files.

Response: *Deliveries will only be scheduled during the typical business operating hours. A line source was included in the model to account for truck traversing the site. The reference sound level was based information from FHWA's TNM User's Guide assuming truck traveling at 15 mph.*



Comment 75: Expected sound level increases resulting from the project are compliant with noise limits prescribed by the DEC Industrial Performance Standards (IPS) (310 CMR 4.05), except at location "R3 – Eastern PL". The expected daytime sound levels produced by the proposed operation would increase the daytime ambient sound level by seventeen (17) decibels at "R3 – Eastern PL", which is seven (7) decibels more than is allowed by the DEC IPS at any commercial or industrial property line. That property line currently has no permanent sensitive receptors of concern, and also there is no rationale for "leaving sound capacity" for a future expansion in that direction. However, the proponent should have a plan for additional mitigation while maintaining compliance at all other modeled sensitive receptors, if something were to change in the future, or if there were substantiated complaints where meeting the IPS requirements would be necessary to address compliance at that location. We request that the applicant develop a firm plan and proposal for that possible future mitigation, and provide that "future" solution in the forthcoming CadnaA modeling files, if needed.

Response: *The gas filling operations is the dominant noise source contributing to the overall sound level along the eastern property line. Since the gas filling operations is an infrequent occurrence (expected one a month), the Proponent will coordinate with the future abutter to determine an acceptable time period for the operations. If necessary, potential mitigation plan could include a solid wall along the eastern property line to reduce the Project's sound levels to comply with the IPS requirements if sensitive receptors are developed at the abutting properties in the future.*

IBI Group

3.0: SITE PLAN

3.02: REQUIREMENTS

3.02 (3) (b) 6a states that "All existing landscape features, especially existing trees and woodland to remain, shall be shown on ALL site plan sheets.

Comment 76: Identify and indicate all trees with a minimum caliper of 12" within 100' of lot lines.

Response: *All trees within 100 feet of Bulge Road have been located with the exception of the area of the stormwater management system at the southern corner of the site. We will not be locating trees within 100 feet boundary when there is no work proposed within those areas. All trees with a minimum caliper of 12 inches located in areas of work within 100 feet of the boundary including the adjusted stormwater management area at the southern corner of the site will be included on the final plans for endorsement.*

Comment 76A: Identify the silt sock/silt fence barrier at the LOW as the limit of tree clearing on all plans.



Response: *The silt sock/silt fence barrier at the limit of work will be also identified as the limit of tree clearing on all site plans.*

Comment 76B: The silt sock/silt fence barrier may serve as tree protection for the trees in the center of the site and in adjacent woodlands in addition to serving as the erosion control barrier provided that it remains in place for the duration of construction activity. Add this requirement to the callout and identify it as the edge of tree protection.

Response: *The silt sock/silt fence barrier will be noted as tree protection for the surrounding woodlands.*

Comment 76C: The large number of trees on the west undeveloped side of the site between the building and the loop road should be identified for protection.

Response: *This area will be cleared for spreading surplus material generated by the building and parking construction and in anticipation of future building expansion.*

Comment 76D: Identify all individual existing trees to main and be protected on all plans. Clearly label or include in the plan legend and reference the tree protection requirements included elsewhere in the application.

Response: *Tree protection fence is identified sheet C-7.00 to indicate existing trees to remain within the limit of work .*

Comment 76E: Ensure that all trees to remain are not subjected to regrading.

Response: *Tree protection fence is included on the grading and drainage plan sheet C-4.00 with limits of grading outside the tree protection area.*

3.02 (3) (b) 6b requires planting plans to indicate the locations of all proposed lighting and the dimension, materials and finishes of all walks, walls and fences.

Response: *The proposed lighting is included on the planting plan, sheet L-1.00. The dimension, materials, and finished of all walks is provided on the site layout plan, sheet C-3.00 for clarity. The only fence proposed is for the dumpster enclosure, detailed on sheet C-6.04*

Comment 77: Indicate all light fixtures shown on E1.2 on the planting plan.

Response: *The proposed lighting is included on the planting plan, sheet L-1.00*

Comment 77A: Confirm that the double-headed fixtures proposed throughout the parking area will be compatible with tree placement.



Response: Planting and/or light poles will be adjusted to avoid conflicts.

Comment 77B: Adjust light fixture or tree placement to ensure that the tree canopy will not interfere with illumination and the light levels indicated on the photometric plan.

Response: Planting and/or light poles will be adjusted to minimize inference with illumination.

Comment 77C: Coordinate the solar canopy/ies indicated on E1.2 with the other site plans.

Response: Solar Canopy is under consideration at this time as an alternate, but not definite.

Comment 77D: Provide information regarding the proposed pavement, including stone dust trail, solar canopy, smoking shelters, dumpster enclosure, site retaining wall, guardrails, light pole bases within parking pavement, and bumpers, including dimensions, materials, and finishes.

Response: The pavement details, stone dust path, dumpster enclosure, guardrails, light pole bases, and concrete bumpers are provided on the detail sheet C-6.01 through C-6.05.

The smoking shelter has not been selected at this time. The shelter will be provided for review and approval once selected. The shelter is anticipated to be a metal frame with clear enclosure.

There are no site retaining walls proposed.

Comment 77E: While not addressed in the Design Standards, the proximity of the smoking shelters to the gathering area would seem to create an unpleasant environment for non-smokers. Relocation of both shelters to the gathering space at the southeast corner of the building should be considered.

Response: The second smoking shelter adjacent to the activity lawn area will be eliminated. Only easternmost shelter will be provided.

Comment 77F: The stone dust path at the periphery of the project is proposed to generally follow existing contours; at several locations the slope of the path would exceed 4%. At the east side of Stormwater Management Basin 1A the path crosses proposed contours at a slope of over 20%. Stone dust paths become difficult to maintain with grades over 3%. Pull the path further from the tree line to enable the path to be regraded or pave those portions of the path with a more stable material.

Response: Stone dust path will be shifted to the west at the southern approach to Stormwater Management Basin 1A to achieve slopes to less than 4 percent.



3.02 (3) (c) 1 states that all site lighting information shall be provided on the site plan, including types of fixtures, heights, photometric diagram, and designation of lights to remain on overnight.

Comment 78: Provide cut sheets and pole height information for all proposed fixtures.

Response: Cut sheets to the proposed fixtures are provided on sheet C-6.05.

Comment 78A: Coordinate the site lighting plans with the other site plans with regard to the solar canopy/ies in the parking area.

Response: The solar canopy is under consideration as a potential alternate. Light poles will be coordinated with the solar canopy if included with the project.

Comment 78B: Identify which fixtures are to remain on overnight.

Response: All exterior lighting will remain on overnight given the multiple shifts and security.

3.02 (3) (e) 5I requires all slopes steeper than 3:1 to be immediately stabilized upon completion.

Comment 79: Consult with the seed supplier to establish an in-depth protocol for achieving immediate stabilization and for the long-term establishment of the plant material for all slopes. Protocol should be established by the seasons and span the first three years. Protocol shall address immediate slope stabilization, watering in the absence of an irrigation system, mulching, erosion control, weed and invasive species control, reseeding, and slope repair. As noted below, two areas of steep, 2:1 slopes are proposed (see item #9). The protocol for these two areas shall not include mowing as they cannot be safely mown. Without mowing, the seed mix will not prevent ecological succession from occurring on these slopes; however, allowing both areas to undergo ecological success seems appropriate for the location. Confirm the intent for both areas and provide a maintenance plan that reflects this direction.

Response: We will consult with the seed supplier for protocol to achieve stabilization and for maintaining areas with 2:1 slopes.

3.04: DESIGN STANDARDS

3.04 (3) (a) 1a calls for a 60' landscaped strip between the property line and a parking lot that is located in front of a building.

Comment 80: The proposed parking lot in front of the building lacks the required buffer; however, with adjustments to the parking, a buffer depth just shy of the 60' dimension can be met.



Response: Plans will be adjusted to increase buffer plantings where feasible without loosing parking spaces.

3.04 (6) (a) 1d calls for pedestrian paved areas larger than 20 sf to be paved with concrete with an SRI of 29 or greater or at least 50% permeable.

Comment 81: Indicate on the drawing that the pavement of the scored patio areas will meet this requirement.

Response: The plaza area will be constructed with cast in place concrete with an SRI of 29 or greater.

3.04 (6) (a) 3 describes the requirements for site lighting fixture color and type, pole heights, light levels, coordination with planting plan, night time illumination, energy efficiency measures, and light trespass.

Comment 82: Provide cut sheets and pole height information for proposed fixtures indicating energy efficiency measures. Confirm fixture and pole color.

Response: The cut sheets for light fixtures is provided on sheet C-6.05.

Comment 82A: The light level for the walk along the south face of the building falls below the 0.5 minimum foot candles. Adjust the site lighting to maintain the minimum illumination.

Response: The lighting plan will be adjusted to bring the light level above the 0.5 minimum foot candles along the south face of the building.

Comment 82B: Indicate all light fixtures shown on E1.2 on the planting plan. Coordinate the solar canopy/ies.

Response: The light fixtures are shown on the planting plan. The solar canopy is under consideration as a potential alternate. Light poles will be coordinated with the solar canopy if included with the project.

Comment 82C: Indicate light fixtures on the planting plan to enable review of the coordination of lighting and planting.

Response: The light fixtures are shown on the planting plan.

Comment 82D: Adjust light fixture or tree placement to ensure that the tree canopy will not interfere with illumination.



Response: Planting and/or light poles will be adjusted to avoid conflicts.

3.04 (8) (c) 2 calls for native plants.

Comment 83: Shrub and groundcover species have not been identified on the plans.

Response: OK. All shrubs and groundcover will be identified on the landscape plans

Comment 83A: Provide the list of proposed groundcover species and indicate where they will be located on the site.

Response: OK. All groundcover will be identified on the landscape plans

Comment 83B: Portions of the site—surrounding Stormwater Management Basins 1, 1A and 2 and surrounding the Activity Lawn Area—are hatched with a symbol not indicated on the plan. Indicate the proposed plant material for this hatch.

Response: OK. Symbol will be added.

Comment 83C: New England aster, *Aster novae-angliae*, is included in the plant schedule but not called for anywhere on the plan. If areas are to be planted with native perennials, supplement this very tall perennial with other native species.

Response: OK. They will be supplemented with other native perennial.

Comment83D: A specific cultivar is called out for Eastern red cedar, *Juniperus virginiana*. Given the genetic diversity and associated resilience that the straight species of any plant brings to the species and ecosystem, unless the native cultivar provides a necessary shorter height, as in the parking islands, the straight native species is preferred. Replace this cultivar with the straight species.

Response: OK.

Comment 83E: As noted elsewhere (see items # 5 and 17), the Robin Hill apple serviceberry, *Amelanchier X grandiflora* 'Robin Hill' should be replaced. If a serviceberry is proposed elsewhere on site, a straight, non-hybrid species should be proposed for the reason noted above.

Response: OK.

3.04 (8) (c) 8 calls for plants within 20' of a road or paved area to be salt tolerant.



Comment 84: The following proposed trees are not tolerant of road salt-- Pin oak, White oak, White pine, White spruce, Red maple, Sugar maple, and Serviceberry. Replace these with species that are tolerant or, where possible, shift them further from the pavement edge.

Response: *We will document how far these are from roadways and adjust as needed. Tree species will be revised as needed. We may still include Red Maple and Oaks in various areas in and around parking areas since we believe these trees are highly durable to salt having worked with them for decades in New England and within parking lots.*

3.04 (8) (d) describes in depth the care to be taken to ensure the survival of existing trees.

Comment 85: The silt sock/silt fence barrier indicated on C-7.00 may serve as tree protection for the trees in the center of the site and in adjacent woodlands in addition to an erosion control barrier provided that it remains in place for the duration of construction activity. Add this requirement to the callout and identify it as the edge of tree protection on all plans.

Response: *The silt sock/silt fence barrier will be noted as tree protection for the surrounding woodlands.*

Comment 85A: The stockpile area and construction trailer/laydown/construction parking areas are located within the undeveloped western portion of the site with a significant number of mature trees. Indicate on all the plans how these areas will be accessed during construction and where tree protection fencing will be placed to ensure the protection of the existing trees.

Response: *The trees within undeveloped western portion are proposed to be removed for construction logistics and for placement of excess topsoil from the project. Tree removal can be reduced within the future expansion area if a suitable receiving site is available within Devens for the surplus topsoil. The applicant is exploring options for sites at Devens to receive excess topsoil, however, a site has not been identified at this time.*

Comment 85B: The note on C-7.00 calls for temporary erosion control to be “determined by the contractor during various stages of construction”. Confirm that changes to the location of the silt sock/silt fence that also is serving as tree protection will remain in place for the duration of construction activity.

Response: *A note will be added to sheet C-7.00 require tree protection to remain if adjustments to erosion control measures are required during construction.*

Comment 85C: Amend the Tree Protection notes on L-2.00 to call for tree protection fencing to be erected 12” beyond the tree dripline and maintained for the duration of construction



activity.

Response: OK. This note will be added to sheet L-2.00.

3.04 (8) (f) 1 requires a minimum pitch of 2% for all maintained lawns.

Comment 86: The lawn at the Activity Lawn Area is insufficiently sloped for drainage. Increase the slope of the activity lawn to the required 2%, thereby reducing the extent of regrading west of the lawn, and reducing the loss of trees in the surrounding open, undeveloped area.

Response: The Activity Lawn Area is designed with a slope between 1 to 2 percent to accommodate use of the space for events and provide drainage.

3.04 (8) (f) 2 requires the coverage of all unpaved areas.

Comment 87: The northern edge of the site includes some undisturbed areas labeled as “Existing vegetation to remain”. Confirm that the area is appropriately and sufficiently vegetated, with no invasive plant material. Call for the shoulders and any other areas within this zone that are disturbed during the installation of the proposed stone dust path to be reseeded with the appropriate mix.

Response: The existing vegetated areas along the northern edge of the site consists of a mature wooded area. Invasive plant materials will be managed in accordance with the seasonal maintenance program outlined on sheet L-2.01.

Shoulders of the stone dust path are to receive loam and seed to establish grass in areas disturbed for the installation of the proposed path.

Comment 87A: The effort to reduce manicured lawns on the site is noted and applauded. While a lawn is certainly appropriate for the Activity Lawn, an alternate seed mix would be appropriate for the east and north sides of the building.

Response: A conservation seed mix is proposed for areas beyond the perimeter driveway on the east and north sides of the building.

Comment 87B: Consult with the seed supplier to outline a protocol for the establishment and maintenance of each of the alternate seed mixes proposed for the site.

Response: We will consult with the seed supplier to determine the protocol to establish and maintain this area.

Comment 87C: The narrow swaths of Conservation Seed Mix at the edges and within the proposed



plantings along Bulge Road may be too small to establish the seed mix called for in this area. Consult the seed supplier to set a protocol for the establishment and maintenance of this area.

Response: The Conservation Seed Mix was chosen to blend with the surrounding woodlands. We will consult with the seed supplier to determine the protocol to establish and maintain this area.

3.04 (8) (f) 3 requires any unpaved areas steeper than 3:1 to be planted with shrubs or groundcovers with fibrous root systems.

Comment 88: Two areas of steep, 2:1 slopes exist on the site. As noted above (see item 3.02 #4), the planting for the west side of the Stormwater Management Basin 2 is not identified. The planting plan calls for the steep, 2:1 slope at the west side of the southern driveway between the 302 and 310 contours is to be seeded with the Conservation Seed Mix. As 2:1 slopes cannot be safely mown, consult with the seed supplier to establish an in-depth protocol for achieving immediate stabilization. Protocol should be established by the seasons and span the first three years. Protocol shall address immediate slope stabilization, watering in the absence of an irrigation system, mulching, erosion control, weed and invasive species control, reseeding, and slope repair. Without mowing, the seed mix will not prevent ecological succession from occurring on these slopes; however, allowing both areas to undergo ecological success seems appropriate. Confirm the intent for both areas and provide a maintenance plan that reflects this direction.

Response: We will consult with the seed supplier for protocol to achieve stabilization and for maintaining areas with 2:1 slopes.

3.04 (8) (f) 6 calls for no construction activities on parts of the site that are to be left in their natural state, or specific steps for their decompaction.

Comment 89: The stockpile area and construction trailer/laydown/construction parking areas are located within the undeveloped western portion of the site. Call for the required decompaction following the removal of these elements.

Response: OK.

3.04 (8) (g) 3 requires the screening of parking, loading, trash disposal and storage areas from adjacent Open Space and Recreation Zoning Districts and a public way.

Comment 90: The parking areas, loading dock, dumpsters, mechanical equipment, and nitrogen tank can be presumed to be visible from the Robbins Pond Conservation Area surrounding the site on the west, north and east sides of the site. The front parking areas will be



visible from the public way, Bulge Road, on the south side. As required in **3.04 (8) (g) 6**, screen the views of all of these elements with year-round visually impermeable screening, that are a minimum of two shrubs deep to a minimum depth of 6', that are 3' upon installation, and are spaced at such an interval to achieve a visually impermeable screen within three growing seasons. Currently, the proposed plantings do not meet this requirement for all four sides of the project. Enhance the planting and label the species.

Response: The site is surrounded by a relatively wide buffer of existing vegetation that will not be disturbed. Section 3.04 g.1.a allows projects to utilize the "existing screen/vegetation" as part of the planted buffer to achieve a visually impermeable screen. We don't believe a solid line of plants is necessary or appropriate that is not visually pleasing and complementary, or our site development goals. We will add intermittent masses of plantings that will contribute to the existing screen of vegetation and provide a more natural appeal around the building and access road.

3.04 (8) (g) 5 requires that 50% of built screens such as walls and fences be softened with plantings.

Comment 91: Ensure that the north side of the dumpster enclosure is planted with vegetative screening to soften 50% of the length of the wall. Vegetative screening shall be a minimum of two shrubs deep to a minimum depth of 6' and shall be 3' upon installation.

Response: We will adjust plantings to screen the dumpster enclosure.

3.04 (8) (g) 6 describes screening for parking areas to be visually impermeable year-round at a height of 6'.

Comment 92: The shrub planting for the site has not been identified on the planting plan. Identify the species of the shrubs shown on the plan to ensure that these plantings provide year-round visually impermeable screening to 6'.

Response: We will locate and identify all plantings to provide an appropriate visually impermeable screen to the parking lot to 6' tall.

Comment 92A: Provide the required screening of the parking areas at the paved gathering areas for the benefit of the users.

Response: Screening is provided between the plazas and parking area.

Comment 92B: Note that any evergreen shrubs planted for this purpose need to be installed at a height of 3'. The evergreen currently proposed that would meet this criteria, Northern bayberry, *Myrica pensylvanica*, is listed in the plant schedule with a height of 2-3'. Increase its size if it is used for screening.



Response: The height of the northern bayberry will be increased to 3' tall.

3.04 (8) (h) 2 calls for shade trees at the perimeter of parking areas.

Comment 93: The requirements for trees per length of parking is not calculated site-wide, but for each edge of parking. The west side of the parking area is insufficiently treed. Provide the additional deciduous canopy trees to meet the requirement. Coordinate the tree planting on this side with the proposed solar canopy.

Response: The planting plan will be adjusted to meet the required tree canopy on the west side of the parking area. The proposed solar canopy is under consideration as an alternate. Plantings will be adjusted if the canopy is installed.

Comment 93A: Along the south face, adjacent to Bulge Road, the number of deciduous canopy trees falls short of the required number that includes an additional tree per 50lf of parking.

Response: We will confirm and add the appropriate numbers of trees along the front buffer at Bulge Road to meet this requirement.

3.04 (8) (h) 3 calls for trees to be set back at least 5' minimum from the face of the curb.

Comment 94: Adjust tree locations as needed to ensure that all trees are a minimum of 5' from the curb.

Response: We will adjust the tree locations to provide 5' minimum setback from the curb.

3.04 (8) (h) 4 requires parking islands to be planted with salt tolerant shrubs not to exceed 4' in height.

Comment 95: The shrubs and groundcovers have not been identified on the plan for the entire site. Provide callout of quantity and species across the site.

Response: We will indicate quantities and species of shrub and groundcover on the landscape plan.

3.04 (8) (l) requires trees per lineal foot of building facades visible from roads and a 20' minimum landscape foundation bed.

Comment 96: Most of the front of the building lacks screening by any deciduous trees due to the tightness of the parking to the building.

Response: We will add dense plantings within the center parking lot island to provide further



screening of the building and parking since we cannot provide the 20' wide landscape space along the front of the building façade.

Comment 96A: The 4' planting bed falls short of the requirement.

Response: See response above for Comment 96

Comment 96B: The inadequate tree and foundation planting may be substituted with remote beds of plantings. Due to the concern for the views of the building from the golf course, replace the smaller proposed Serviceberries (see item #5) in the two parking islands with large deciduous canopy trees to screen the façade from the south.

Response: We will add dense plantings within the center parking lot island to provide further screening of the building and parking since we cannot provide the 20' wide landscape space along the front of the building façade.

3.04 (8) (n) 2 outlines the requirements for a site maintenance plan.

Comment 97: Provide a maintenance plan that addresses tree, shrub, and groundcover management, and integrated turf management/integrated pest management.

Response: A maintenance plan is provided on sheet L-2.01

Comment 97A: Consult with the supplier of alternate seed mixes to set a protocol that will result in the establishment and success of each of the seed mixes on the site given the lack of a temporary irrigation system. Protocols shall be outlined by the seasons and span the first three years. Protocols shall address watering in the absence of an irrigation system, mulching, erosion control, weed, pest, and invasive species control, and reseeding.

Response: We will consult with the seed supplier to determine the protocol to establish and maintain this area.

Comment 97B: Confirm with the seed supplier that the proposed Wildflower Seed mix can be established on the west side of the site that has a significant number of existing trees.

Response: We will consult with the seed supplier to determine the protocol to establish and maintain this area.

Comment 97C: Call for coordination of the snow storage plan with the planting plan to ensure the compatibility of the weight of the snow with the proposed planting.

Response: Noted. We will call for coordination of snow storage with the planting plan.



Comment 97D: Provide a maintenance plan that addresses invasive removal and control and rodent control.

Response: Invasive plant materials will be managed in accordance with the seasonal maintenance program outlined on sheet L-2.01.

3.04 (8) (n) 2g calls for the applicant to identify invasive plant species on the parcel and means and methods for removal and long-term maintenance.

Comment 98: Call for the maintenance plan to address the removal and management of invasive species growing on the site.

Response: We will review this in more detail to determine the necessary approach to invasive plants if located within the developed area.

Traffic Peer Review

Comment 99: In the Roadway Geometry section, all roadways are indicated to be under local jurisdiction. However, according to the Massachusetts Department of Transportation (MassDOT) Road Inventory, all study roadways are “unaccepted by city or town.” It would be preferable to state that the roadways are “under MassDevelopment jurisdiction.”

Response: Noted. This has been updated in the report.

Comment 100: The Patton Road description says it connects Jackson Road in the east with Barnum Road in the west, but the directions are backwards. Please fix.

Response: Noted. This has been updated in the report.

Comment 101: The Barnum Road at Patton Road intersection description says there is sidewalk on the west side of Saratoga Boulevard north of the intersection, but it is on the east side. Please fix.

Response: Noted. This has been updated in the report.

Comment 102: The Bulge Road at Country Club Driveway intersection description refers to the Country Club Driveway westbound approach, but it should be eastbound. Please fix.

Response: Noted. This has been updated in the report.



Comment 103: In the Vehicular Crash History section, Statewide average crash rates are not provided. Please provide those values and compare the calculated crash rates at intersections to them.

Response: *The statewide average crash rates have been added to the report and Table 2 and the corresponding text have been updated to reference the statewide average crash rates. None of the study area intersections exceed the MassDOT statewide average crash rates.*

Comment 104: In the Trip Distribution and Assignment section, please describe how trips were assigned between the three (3) site driveways, including the split between heavy vehicles accessing the loading/receiving docks and the passenger vehicles accessing the parking lot in front of the building, and how passenger cars were split for entering the site between the southern site driveway and the middle site driveway.

Response: *Access to/from the Site will be from three driveways off of Bulge Road. The southern driveway will be one-way into the Site and will provide access to both the parking lot in front of the building and the loading/receiving docks behind the building. The middle driveway will be full access into and out of the Site serving the parking lot in front of the building. The northern driveway will be one-way out of the Site serving the loading/receiving docks behind the building.*

To provide a conservative analysis on the operations of each driveway, Site-generated trips entering and exiting the Site were assigned between the three driveways. The trips were distributed assuming 20-percent would be destined to/from the loading/receiving docks and 80-percent would be destined to/from the parking lot. Of the trips entering the parking lot, it was assumed that 60-percent of the 80-percent would use the middle driveway and the rest would use the south driveway. Therefore, the total breakdown of Site-traffic using each driveway assumed for the capacity analyses was 40-percent of entering traffic via the south driveway, 60-percent of entering traffic and 80-percent of exiting traffic via the middle driveway, and 20-percent of exiting traffic via the north driveway. This distribution was assumed to make sure that some traffic was assigned to each driveway to provide a conservative analysis of intersection operations. It should be noted that each site driveway intersection is expected to operate at LOS A with queues of less than one vehicle and even if the distribution between driveways shifts slightly, operations are not expected to notably change between the three intersections.

Comment 105: In the Traffic Operations Analysis section, please include a table showing the LOS criteria for signalized and unsignalized intersections.

Response: *A table showing the LOS criteria for signalized and unsignalized intersections has been added to the report.*



Comment 106: Please make note of the software used for the LOS analyses and the version used (e.g., Synchro version 10).

Response: *Text has been added to the report to note that Synchro version 10 was used.*

Comment 107: Given the location of the site, depending on future traffic volumes in the area even beyond 2028, it may become necessary to address the traffic flow and conflicts at the triangular area formed by the three (3) intersections of Bulge Road and Patton Road. Long-term improvements for that area should be recommended.

Response: *Mass Development is looking to obtain funding for improvements to the intersection of Patton Road at Bulge Road. These improvements would modify the roadway and intersection geometry by creating one T-intersection and removing the triangular area formed by the three individual intersections. It should be noted until the proposed improvements are funded and constructed, the existing three intersections forming the triangular area are expected to operate at LOS B or better with queues of less than one vehicle length under the 2028 Build Conditions.*

Comment 108: We recommend evaluation of the pavement condition of Bulge Road at each of the three (3) intersection locations formed by the proposed site-access driveways and determine if any improvements are needed, such as pavement reconstruction, signing, and pavement markings.

Response: *As noted above, Mass Development is looking to secure funding for improvements to Bulge Road that would include repaving. As part of the improvement project, other improvements would also be reviewed to determine if necessary, such as additional signage or pavement markings on Bulge Road.*

Comment 109: On the plans, please ensure there is a stop line provided on the approach from the parking lot to Bulge Road on the middle driveway. It may be present but not visible under the proposed property line.

Response: *Noted. A stop line will be provided on the middle driveway approach to Bulge Road.*

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Please feel free to contact me to review any questions regarding the responses above. I can be reached at 401.457.2079.

Sincerely,

Vanasse Hangen Brustlin, Inc.

A handwritten signature in blue ink, appearing to read "J. Stabach", is written over a light blue horizontal line.

Jon Stabach

Project Manager