# Environmental Services



# Engineering Services

February 1, 2023

Ms. Karen Sherman Town Planner Town of Holliston 703 Washington Street Holliston, MA 01746

Re: Definitive Open Space Residential Development (OSRD) Peer Review #2
"The Trails at Jennings Hill" Jennings Road Holliston, MA
CMG ID 2022-008

Dear Karen.

CMG is providing this letter report detailing our second engineering peer review of the "Trails at Jennings Hill" Definitive Open Space Residential Development in Holliston, MA (the "Site"). The project Applicant, Starr Construction, Inc. is proposing to construct a four (4) lot open space residential development (OSRD) on Assessor's Parcel Map 11 Block 4 Lot 2.

The existing property currently consists of approximately 7.88 +/- Acres located within the Agricultural-Residential B (RES-B) and Groundwater Protection Zoning Districts. This lot was created by a subdivision from the original parcel through an Approval Not Required (ANR) plan for #103 Jennings Road endorsed by the Planning Board on October 7, 2021. This project will require Definitive Subdivision Approval, Site Plan Review, and a Scenic Road Permit.

CMG is in receipt of the following documents:

- "The Trails at Jennings Hill Definitive Open Space Residential Subdivision Plan in Holliston, Massachusetts" prepared by Guerriere & Halnon, Inc., date August 16, 2022, revise date January 5, 2023.
- "Stormwater Report The Trails at Jennings Hill Jennings Road, Holliston, MA" prepared by Guerriere & Halnon, Inc., date August 30, 2022, revise date January 5, 2023.
- Exhibit Plans including: "Intersection Sight Distance", "Fire Truck Turning Plan", & "House Distances" prepared by Guerriere & Halnon, Inc., date January 5, 2023.
- Comment / Response Letter "Definitive Open Space Residential Development (OSRD) "The Trails at Jennings Hill Jennings Road Holliston, MA" prepared by Guerriere & Halnon, Inc. date January 11, 2023.

CMG is providing the following additional technical comments for the Planning Board's consideration based on our review of the above listed documents:

# **Holliston Zoning By-Law Comments:**

1. Section V-H 4.C. Open Space – Sheet 2 of 7 incorrectly identifies the original parcel area to include the adjacent residential property cut out as an ANR lot in 2021. The current property area being developed as an OSRD = 343,060 +/- s.f (7.88 +/- Acres) should be used to calculate the required open space.

G&H Response (1/11/23): When the property of Lot 1 was subdivided out of the parcel, the Planning Board required that the open space of Lot 2 would include the total area of the original property before the subdivision.

#### **Comment Addressed**

2. Section V-H 6.A 2) - Applicant should verify with the Fire Department what size vehicle will need to access the cul-de-sac and provide a truck turning diagram to verify there is adequate pavement width for the required design vehicle. The proposed cul-de-sac turnaround proposes a large island in the middle and is not dimensioned and the type of pavement edging / curbing is not identified on the plan.

G&H Response (1/11/23): The proposed 52' cul-de-sac radius and 28' internal island radius for the edge of the pavement has been labeled on sheet 4. Also, a separate plan sheet 2 of 3 of the exhibit plan package is attached to show the truck turning diagram.

#### **Comment Addressed**

3. Section V-H 8.A (Common Open Space Ownership and Management) The Application narrative states: "The proposal is to establish a Conservation Restriction over the Open Space with its dedication either to the Town of Holliston or to a Homeowner's Association which will be responsible for the maintenance of the Open Space Parcel". CMG recommends the Planning Board make this a "condition of approval" and the Applicant provide the proper "conservation restriction" documentation in accordance with the Zoning By-Law for review and approval by the Planning Board.

G&H Response (1/11/23): As recommended by this comment, the applicant requests that this item be made a condition of approval

#### CMG recommends the Planning Board consider this as a Condition of Approval

4. Section V-H 8.B (Common Open Space Ownership and Management) Applicant should address how the open space shall be available for use by the general public. It appears there is adequate room to construct public access parking spaces on one side or the other of the proposed OSRD driveway. CMG recommends the proposed access path could be relocated to allow access from these spaces to the existing trails within the open space parcel.

G&H Response (1/11/23): The east side of the property and proposed open space border on an existing Town owned open space, Parcel I of the Highlands of Holliston Subdivision. The proposed east end of the proposed open space is 200 feet from Mohawk Path through the Parcel I open space trail. We do not recommend the suggestion of providing additional parking for the access from Jennings Road. We suggest the parking could be accomplished on Mohawk Path with not further disturbance to the open space.

CMG Comment #2: CMG is in agreement with this recommendation. Additional information and plans for open space parking on Mohawk Path should be provided for review and discussion by the Planning Board.

5. Section V-L – Definitive plan should note the project is located within a Groundwater Protection District Zone III. The project's residential use complies with this section.

*G&H Response (1/11/23): The Groundwater Protection District Zone III has been added as Note 6 of the General Notes on Sheet 3 Existing Conditions.* 

CMG Comment #2: A note is not provided on Sheet 3. CMG recommends this be noted on both the General Notes Title Sheet 1 of 10 and the Existing Conditions Sheet 2 of 10.

# **Holliston Planning Board Subdivision Rules and Regulations Comments:**

6. Section 4.3.1 o – Registry of Deeds 3-1/2 in. square is not provided on all definitive plan sheets.

G&H Response (1/11/23): Registry of Deeds 3-1/2 in square is located on all sheets that will be required to be recorded at the Registry of Deeds.

# **Comment Addressed**

7. Section 4.3.1 p – Plan & Profile of the proposed street is not provided.

G&H Response (1/11/23): Plan and profile provided, see sheet 7 of 9.

CMG Comment #2: Plan and profile sheet 6 of 10 should also show subsurface drainage, grates /rim elevations, pipe inverts, water service, and gas utility services.

8. Section 4.3.1 q – Existing centerline profile and stationing of Jennings Road for 100 ft. in each direction is not provided.

G&H Response (1/11/23): The Jennings Road profile has been added to the plan and profile plan of Jennings Circle on Sheet 6.

#### **Comment Addressed**

9. Section 4.3.1 s – Site's location with a "Groundwater Protection District Zone III" should be noted on the plan set.

G&H Response (1/11/23): See General Note 6 on sheet 2 of 9 of Existing Conditions.

CMG Comment #2: Comment Remains (See Comment 5.0)

10. Section 4.3.1 t – Proposed water supply system layout and details are not provided.

G&H Response (1/11/23): Proposed water system layout and details are provided on sheet 5, 7 and 8.

CMG Comment #2: Existing and proposed water main line size, type, length, and depth should be shown on both the Plan & Profile views on sheet 6 of 10. CMG also recommends a note specifying all water main & service connections to conform with applicable Town of Holliston Water Regulations and Water Department contact information be provided within the plan set.

11. Section 4.3.1 u – Locus map scale is not provided consistent with this section.

G&H Response (1/11/23): Locus Map on Cover at 1" = 300'.

# **Comment Addressed**

12. Section 4.3.1 v – Detail drawings of proposed construction features including roadway cross sections, utility and drainage details, etc. are not provided.

*G&H Response* (1/11/23): *Additional details have been provided on sheet 8, and 9.* 

# **Comment Addressed**

13. Section 4.3.1. w – Location of proposed landscaping along with planting details is not provided.

G&H Response (1/11/23): Proposed street trees and detail have been added to sheet 5, 7, and 8.

CMG Comment #2: Sheets 4, 6, and 8 show a 5 ft. wide tree planting easement and the locations of proposed street trees and a planting detail. However, the number, type, species and landscape planting schedule are not provided.

14. Section 4.3.4.1 – Typical Street cross-section is not provided.

G&H Response (1/11/23): Typical Street cross-section has been provided see sheet 8.

#### **Comment Addressed**

15. Section 4.3.4.3 – List of waivers from strict compliance with the Rules and Regulations should be provided in narrative form and on the Definitive Subdivision Plan Title Sheet.

*G&H Response (1/11/23): List of waivers has been added to the Cover Sheet.* 

CMG Comment #2: CMG recommends the Planning Board review each waiver request individually and offers the following additional comments:

Waiver Request 1: Section 5.2.4(B) Sidewalk. CMG understands the Planning Board requested the Applicant provide a gravel sidewalk for a portion of the project. However, proposed gravel sidewalks may not conform to ADA / AAB handicap accessible requirements and will require more frequent long-term maintenance. CMG recommends bituminous sidewalks and concrete ramp be provided to allow for compliance with ADA/AAB regulations.

Waiver Request 2: Section 5.2.5.5 Curbs. CMG recommends both 30' radii roadway entrance roundings be constructed of vertical granite curbing at the intersection of Jennings Road. CMG does not have an issue with the allowance of cape cod berm throughout the remainder of the roadway.

Waiver Request 3: Section 5.3.3 Min. 12" RCP. CMG is in agreement with this request.

Wavier Request 4: Section 5.4.3 Exterior Lighting. Additional information and lighting specifications should be provided to the Planning Board to verify the proposed post lights are Dark Sky Compliant.

16. Section 5.2.1 a – Proposed intersection and OSRD driveway grades are not provided

G&H Response (1/11/23): The slope of the road is 1.29% from Jennings Road to the island of the cul-de-sac. This is now shown on the profile on sheet 6. The maximum slope of Lot driveways are Lot 1-7.1%, Lot 2-10%, Lot 3-15%, and Lot 4-13.84%, all with vertical curves at top and bottom.

## **Comment Addressed**

17. Section 5.2.1 i – Proposed driveway intersection sight distances are not provided

G&H Response (1/11/23): There is a plan attached, sheet 1 of 3 of the exhibit package that shows the existing sight distance at the intersection of Jennings Road and proposed Jennings Circle. This plan also shows additional sight distance that can be achieved if 3 additional trees on the project site are removed. We request a review by the Board to determine if the additional sight distance is required for this intersection considering the intersection is near the end of a dead end road, and the concern about the scenic road.

CMG Comment #2: Applicant must provide documentation the proposed street is designed in compliance with the minimum sight distance requirements indicated in the latest edition of the ITE Transportation and Traffic Engineering Handbook.

18. Section 5.2.3 – Roadway grades are not provided (Also See 4.3.1 p)

G&H Response (1/11/23): The proposed road grade is 1.29% to the curb at the center island, then it flows around the curbing at 0.6% to the low point catch basin, on the other side of the Island, the outer perimeter of the cul-de-sac is sloped 2% toward the island radius. See Plan and Profile Sheet 7.

CMG Comment #2: Cul-de-sac grade (0.6%) is less than the minimum allowable 1% around the island and may allow for surface ponding if not properly constructed. CMG recommends G&H evaluate if a minimum 1% gutter slope is possible to the catch basin inlet.

19. Section 5.2.4 b – The cul-de-sac turnaround diameter is not provided

*G&H Response* (1/11/23): The radius of the curbing for the island is 28' and the cul-de-sac is 52 feet. These radii are shown on sheet 4.

#### Comment Addressed

20. Section 5.2.4 b – A sidewalk is not provided and no waiver is requested.

G&H Response (1/11/23): The Planning Board suggested a gravel sidewalk from Jennings Road into the site, and bituminous concrete sidewalk between the driveways. There is a 5-foot grass strip proposed between the cape cod berm and the 5-foot sidewalk.

CMG Comment #2: CMG understands the Planning Board requested the Applicant provide a gravel sidewalk for a portion of the project. However, any proposed gravel sidewalks may not conform to applicable ADA / AAB handicap accessible requirements and will also require more frequent long-term maintenance.

CMG recommends bituminous sidewalks and concrete ramp be provided to allow for compliance with ADA/AAB regulations. An ADA / AAB compliant concrete ramp and or sidewalk transition detail for the beginning of the sidewalk at Jennings Road and spot grades to confirm compliance should be provided.

21. Section 5.2.4 b – Granite edging type SA is not specified for use within the cul-de-sac and a construction detail is not provided.

G&H Response (1/11/23): Proposed is a 12" modified cape cod berm with a granite curb inlet at the catch basin. The location and details have been provided on sheet 8 and 9.

Comment Addressed – Also See Comment 15 regarding "Waiver Request 2".

22. Section 5.2.4 b - The Applicant is proposing an island in the center of the cul-de-sac turnaround which is to be utilized for stormwater drainage. However, the plans do not provide specific construction dimensions, curbing, or edging details to evaluate the proposed design and emergency vehicle access.

G&H Response (1/11/23): Requested information has been provided on sheet 5, 7 and a separate sheet is provided to demonstrate the turning motion of the fire truck.

# **Comment Addressed**

- 23. Sections 5.2.5.3 & 5.2.5.4 Pavement cross-section should be provided on the Detail Sheet specifying the required gravel base and bituminous pavement specifications.
  - G&H Response (1/11/23): Requested pavement detail information has been provided on sheet 8.
  - CMG Comment #2: Comment partially addressed. Detail should also specify 12" gravel base and bituminous binder / finish pavement materials in accordance with Section 5.2.5.3 and 5.2.5.4 of the subdivision rules and regulations.
- 24. Section 5.2.5.5 Curbing details are not provided. Curb radii at Jennings Road intersection and culde-sac roundings should be labeled on the plan.
  - G&H Response (1/11/23): Requested detail information has been provided on sheet 8 and a 30' pavement radii labeled on plans for all transition areas.
  - CMG Comment #2: Vertical Granite curbing detail should be provided for proposed roadway entrance roundings.
- 25. Section 5.3.3 All drain pipes shall be 12" diameter minimum and made of reinforced concrete pipe. No waiver is requested.
  - G&H Response (1/11/23): Requested waiver to provide drain pipe sizes and materials as required to control the stormwater and water quality as proposed on the plans.
  - CMG Comment #2: Applicant is requesting a waiver for Planning Board consideration. CMG is in agreement with this request.
- 26. Section 5.4.2 Water system piping, valves, hydrants, water services, and construction details are not shown on the plans.
  - *G&H Response (1/11/23): Requested detail information has been provide on sheet 8.*
  - CMG Comment #2: Existing and proposed water main line size, type, length, and depth should be shown on both the Plan & Profile views on sheet 6 of 10. Water service valve locations for individual lots are not shown. Residential water service line for Lot 1 is shown as going through a catch basin structure.
  - CMG also recommends a Note be provided specifying all water main & service connections to conform with applicable Town of Holliston Water Regulations and Water Department contact information.
- 27. Section 5.4.3 Street lighting is not provided and no waiver is requested.
  - G&H Response (1/11/23): Requested waiver provided to allow light posts at each driveway.
  - CMG Comment #2: Applicant is requesting a waiver for Planning Board consideration. CMG is in agreement with this request and recommend the Applicant provide lighting specifications to verify post lights are Dark Sky Compliant.
- 28. Section 5.4.4 Proposed underground gas and or electric / cable / telephone utilities layout and/or construction details are not shown on the plan set.
  - G&H Response (1/11/23): Requested light post layout has been shown on the plans and detail information has been provided on sheet 8.
  - CMG Comment #2: CMG recommends approximate locations for electric/cable/telephone service boxes be shown as it appears they may fall within the 5 ft. tree easement. Applicant may wish to consider providing a 10 ft. wide tree and utility access easement to provide adequate room for both.

An existing gas main is shown in Jennings Road. A proposed gas utility service for the project and individual homes should be shown on both the Plan and Profile if natural gas service is to be provided.

Proposed limits of pavement sawcut limits for all utility connections within Jennings Road should be shown along with a pavement repair detail.

29. Section 5.5.1 - Sidewalks are not shown and a waiver is not requested.

G&H Response (1/11/23): Requested waiver provided to allow gravel sidewalk to access the first driveway and bituminous concrete placed between driveways. Location of the sidewalk is 5' offset along the curb as shown on the plans with a grass strip.

CMG Comment #2: \*See CMG Comments #15 & #20.

30. Section 5.5.3 – Street sign & stop sign locations, proposed pavement markings, and construction details are not provided.

*G&H Response* (1/11/23): Requested sign and details are shown on the plans.

CMG Comment #2: Painted stop bar location and pavement painting detail is not provided. Stop sign post detail does not provide a "breakaway" style post fitting. Same detail is required for the street sign post.

31. Section 5.5.5 – Applicant is requesting approval to remove the existing 24" Oak tree at the right-of-way intersection with Jennings Road. Street tree locations, tree planting species, caliper, and planting details should be included on the plan set including the replacement for the 24" Oak tree.

G&H Response (1/11/23): There is a 14" Oak within the Jennings Road ROW. There are other trees, on as large as 24" in the property of the project near the ROW that must be removed for the construction of the proposed Jennings Circle. It is our understanding that discussions are underway with the Tree Warden as to replacement plantings. There is a review of item 17 above that will also involve a possible 3 additional trees that may need to be removed from the project site. We suggest this item be a condition of approval.

CMG Comment #2: CMG recommends the appropriate tree planting schedule, locations, and details be provided within the Plan set as required to confirm compliance with all applicable Town regulations.

32. Section 9.3.a - Scenic Road Regulations: Any tree removed shall be replaced with trees of a species, size and at a location approved by the Board (Also see Comment 31).

*G&H Response (1/11/23): We agree.* 

CMG Comment #2: See previous Comment 31.

# **General Engineering & Drainage Design Comments**

33. CMG recommends a concrete structure such as a catch basin be utilized for the overflow structure within the cul-de-sac landscape area. The proposed 18" HDPE structure will be subject to damage by winter snow plowing / storage and most likely require frequent maintenance.

G&H Response (1/11/23): 4' precast concrete DMH proposed

#### **Comment Addressed**

34. Outlet pipe size, type, length, slope, and outlet invert are not listed on Sheet 5 of 7.

G&H Response (1/11/23): Request information provided on sheet 5 of 10.

#### **Comment Addressed**

35. Grate inlet capacity should be evaluated for the 25-year storm to determine if a double grate catch basin is necessary within the cul-de-sac.

G&H Response (1/11/23): Proposed 100-year storm is 1.6 cfs to catch basin with curb inlet. Single grate with curb inlet is adequate.

#### **Comment Addressed**

36. CMG recommends a residential driveway typical cross-section and roadway transition detail be provided.

*G&H Response (1/11/23): Typical driveway cross sections shown on sheet 8.* 

CMG Comment #2: Detail should be provided to show driveway transition from cul-de-sac gutter line through the bituminous sidewalk to the edge of the right of way to insure the sidewalk crossings will meet ADA / AAB compliance standards at each driveway location. CMG recommends G&H also confirm if the cape cod berm will be contiguous along the outside edge of the cul-de-sac across the end of each driveway.

37. Proposed top and bottom of wall spot grades should be provided for the proposed retaining wall along the east side of Lot 1 as it appears to be greater than 4 ft. in height. CMG recommends the design of the retaining wall and fencing for any wall sections 4 ft. in height or greater be prepared by a licensed structural engineer prior to construction.

*G&H Response (1/11/23): Requested note and spot grades added to grading plan.* 

#### **Comment Addressed**

38. Roof drain piping size, material, and layout should be shown if piped directly to the proposed drywell systems.

G&H Response (1/11/23): There is no intended connection of roof runoff to the infiltration systems. At this time the intent will be for the roof runoff to flow overland to the proposed infiltration systems.

# **Comment Addressed**

**Stormwater Standard 1:** No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.

39. Rip-rap aprons dimensions and a detail should be provided. Applicant's engineer should also provide design calculations for proposed riprap aprons to verify the apron size will be able to handle 100-year flow events.

G&H Response (1/11/23): The detail is provided on sheet 9. The 100 year storm event outlet is only 0.13 cfs, the proposed rip-rap is adequate.

#### **Comment Addressed**

40. Grass swale grading should be better defined to direct runoff from Lot 4 into the Trench #4 drywell area. A grass swale construction detail needs to be provided.

G&H Response (1/11/23): Excavation of grass swales in lot 1 and lot 4 have been replaced with diversion berms with 3 to 1 grass slopes to permit the same action.

#### **Comment Addressed**

**Stormwater Standard 2:** Stormwater management systems shall be designed so that post development peak discharge rates do not exceed pre-development peak discharge rates.

41. Table 2 "Summary of Peak Runoffs Leaving the Project Site" show a substantial increase in off-site runoff during the 10-year (11900% Increase) and 25-year (3818 % Increase) storm events. CMG recommends the Applicant's Engineer review their calculations and revise as necessary as the Table values do not match the supporting calculations provided in Appendix A.

G&H Response (1/11/23): Revised calculations using Hydrocad have been used for the redesign of the infiltration systems. The values in the Table match the supporting calculations provided in Appendix 3 of the Stormwater Report.

#### **Comment Addressed**

42. All five (5) of the proposed infiltration systems do not provide 1 ft. of freeboard during the 100-year storm event.

G&H Response (1/11/23): See Table in revised report and grading plan, adjustments provided to provide a minimum 1 foot of freeboard.

#### **Comment Addressed**

43. Standard 2 waiver box is incorrectly checked on the Stormwater checklist page 4 of 9.

*G&H Response* (1/11/23): *Checklist corrected.* 

#### **Comment Addressed**

**Stormwater Standard 3:** Loss of annual recharge of groundwater shall be eliminated or minimized.

44. Some test pit labeling doesn't correspond with logs shown on Sheet 3 of 7 (i.e. Plan shows DTH-STW1D and log lists STM-1; Test Pit STM-2 is not shown on the plan). CMG further recommends test pit ground elevations and EHGW elevations also be listed on the log forms to allow for comparison with drywell design data.

*G&H Response (1/11/23): Requested elevations provided on the log forms on sheet 10.* 

#### **Comment Addressed**

45. CMG recommends drywell trench cross-section details should reference the relevant depth to soil mottling and/or test pit date used to determine EHGW. It appears Road Trench (EHGW = 291.4) and Trench 1 (EHGW = 284.0) elevations are 1 ft. higher than depicted on Sheet 5 of 7 based on the nearest soil testing data. Applicant's Engineer should verify all EHGW values and revise design as necessary.

G&H Response (1/11/23): Redoximorphic models or groundwater were never located in any of the conducted test pits and references are only to maximum depth in a soil test pit.

# **Comment Addressed**

46. CMG believes the proposed drywell systems meet the required recharge volume standard. However, the proposed volume provided value (24,588.04 CF) noted in the Stormwater Report Page 4 doesn't match the volumes shown for each drywell's "Worksheet for Recharge Design" summary sheets. These values should match.

*G&H Response* (1/11/23): The volumes have been changed to demonstrate that the static volume in the proposed infiltration systems satisfy both the recharge and water quality volume.

#### **Comment Addressed**

**Stormwater Standard 4:** Stormwater management systems shall be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS).

47. Stormwater report should note the water quality volume (WQV) = 1 in. must be used as Site is located within an area with a rapid infiltration rate (greater than 2.4 in / hr)

G&H Response (1/11/23): The correction was made in the calculations of the Stormwater Report, See the Standard 4 Water Quality section.

#### **Comment Addressed**

48. In order to take the 50% TSS removal credit for the grass swale it must be designed in accordance with the MA-DEP Stormwater Management Standards and a construction detail provided.

*G&H Response (1/11/23): Grass channel has been provided along with a detail.* 

CMG Comment #2: TSS Worksheet "Individual Lot Infiltration Systems" incorrectly lists deep sump and hooded catch basin as part of the treatment train and should be revised.

**Stormwater Standard 5:** Land uses with higher potential pollutant loads (LUHPPL), source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.

49. Standard 5 NPDES Multi-sector General Permit box is incorrectly checked on the Stormwater checklist page 6 of 9.

G&H Response (1/11/23): Checklist corrected

#### **Comment Addressed**

**Stormwater Standard 8:** Construction period erosion and sedimentation control

50. The Site is > 1 Acre therefore an EPA NPDES 2022 Construction General Permit (CGP) registration and SWPPP is required to be submitted prior to construction. CMG recommends the Planning Board make this a condition of approval.

*G&H Response* (1/11/23): We agree, request this be a condition of approval.

# CMG recommends the Planning Board consider this as a Condition of Approval

51. The Stormwater Pollution Prevention Plan for Construction Activities is provided as Appendix F of the Stormwater Report does not meet the current EPA NPDES 2022 CGP requirements.

G&H Response (1/11/23): We request that the SWPPP be addressed as a condition of approval. This item is commonly addressed as a condition of approval that the applicant provide the SWPPP prior to the pre-construction meeting.

# CMG recommends the Planning Board consider this as a Condition of Approval

52. CMG recommends the Limits of Erosion control and specified barrier type (i.e. compost filter barrier with silt fencing) be shown on all relevant plan sheets (i.e. Sheet 4 of 7, 5 of 7).

G&H Response (1/11/23): Erosion Control Barrier and construction entrance shown on the erosion control plan and the layout plan and detailed on sheet 9.

#### **Comment Addressed**

53. CMG recommends Mirafi 700x Filter Fabric or approved equal be specified for geotextile fabric beneath stone on construction entrance detail.

*G&H Response* (1/11/23): *Sheet 9 detail shows this item.* 

#### **Comment Addressed**

54. Catch basin "silt sack" erosion protection detail should be provided and locations noted on the Erosion Control Plan.

*G&H Response* (1/11/23): Detail provided and shown on the Erosion Control Plan sheet 7.

#### **Comment Addressed**

55. Size / diameter of the proposed straw wattles is not shown.

G&H Response (1/11/23): 12" min diameter shown on detail for mulch sock on sheet 9.

#### **Comment Addressed**

Stormwater Standard 9: Long term operation and maintenance plan

- 56. CMG recommends the O & M Plan include the following required information:
  - Plan showing the location of all stormwater BMPs maintenance access areas.
  - CMG recommends the log form identify the Site location, responsible party, and both inspection and maintenance frequencies for each BMP in accordance with the MA-DEP Stormwater Management Standards.
  - Snow removal operations should be included in O & M Plan and inspection log form.

G&H Response (1/11/23): A BMP schematic diagram has been added to the O&M Plan. The O&M Plan has been addressed as requested. The snow removal operations were added to the O&M Plan.

CMG Comment #2: The O&M Plan is missing the following required information:

An inspection and maintenance schedule narrative is contained within the O&M plan. However, CMG recommends a schedule in table format be provided for clarity for implementation of routine and non-routine tasks for each stormwater BMP;

A site-specific "Operation and Maintenance Log Form" is not provided for the Long-Term Stormwater O&M plan.

57. Upon completion of construction if the Applicant intends to transfer stormwater operation and maintenance activities to a "homeowners association"; the Applicant must provide a copy of the legal instrument (deed, homeowner's association, or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs.

*G&H Response* (1/11/23): Legal instrument shall be provided by the Applicant.

# CMG recommends the Planning Board consider this as a Condition of Approval

**Stormwater Standard 10:** *Illicit discharges* 

58. The Long-Term O&M Plan includes an "illicit discharge statement" and is in compliance with Standard 10.

*G&H Response* (1/11/23): *We agree.* 

## **Comment Addressed**

If you have any questions or need additional information, please contact me at (774) 241-0901.

Sincerely,

**CMG** 

David T. Faist, PE Principal Engineer