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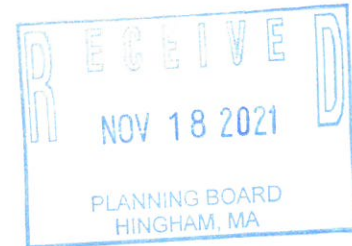
WATER WORKS • WATER RESOURCES • CIVIL WORKS

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November 18, 2021

Hingham Planning Board  
210 Central Street  
Hingham, MA 02043



Subject: **0 & 3 Home Meadows Lane, Site Plans**

Dear Planning Board Members:

This is to advise that we have reviewed the following documents pertaining to the proposed Site Plans for single-family dwellings at 0 and 3 Home Meadows Lane:

- Proposed Site Plan, 0 Home Meadows Lane (8 sheets), revised November 18, 2021,<sup>1</sup> prepared by Crocker Design Group (CDG)
- Proposed Site Plan, 3 Home Meadows Lane (8 sheets), revised November 18, 2021,<sup>1</sup> prepared by CDG
- Stormwater Management Report for 3 & 0 Home Meadows Lane, revised November 12, 2021, prepared by CDG
- Response to comments letter from CDG, dated November 16, 2021

The documents have been revised to address comments contained in our October 22, 2021 letter to the Board. Below are our original comments in plain text, followed by the current status of each in **bold text**.

1. We have the following concerns about the stormwater analysis and design:
  - a. The subcatchment delineations should be revised. In the existing conditions analysis we agree with the delineation of subcatchment E-2, but all of the E-1's should be redefined. They should either all be a single subcatchment or three separate subcatchments approximately delineated by the red lines shown on the attached mark-up of the Existing Watershed Plan. The post-development subcatchments should be delineated in a similar fashion. **Addressed – the subcatchment delineations have been revised as suggested.**
  - b. Time of concentration calculations should be provided. **Addressed – Time of concentration calculations have been included in the HydroCAD models.**
  - c. The Outlet Control Structure should be modeled as a separate pond in the post-development HydroCAD model so that outflow from the subsurface infiltration system is modeled correctly. **Addressed – the subsurface infiltration system and**

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<sup>1</sup> The original resubmittal included plans revised November 16, 2021. We reviewed those plans and had a couple of comment which we forwarded to CDG via email (copy attached). CDG subsequently submitted the November 18, 2021 plans.

- outlet control structure have been redesigned and modeled correctly in HydroCAD.**
- d. The invert out of the Outlet Control Structure is modeled at El. 19.6 and specified to be 19.6 on the detail but it is specified to be El. 20.0 in plan. The elevation needs to be 20.0 to provide the specified slope between the Outlet Control Structure and the next manhole downstream. **Addressed – the downstream pipe network has been revised to accommodate the redesign of the subsurface infiltration system and outlet control structure.**
  - e. The bottom of stone elevation should be El. 18.8 in the Proposed Elevations table of the SC-310 StormTech Chamber Specifications on Sheet C-5.2. The system volume is also incorrectly noted as 8,978 cubic feet (c.f.), it should be 8,460 c.f. **Addressed – the redesigned subsurface infiltration system is correctly detailed on the plans and modeled correctly in HydroCAD.**
  - f. The invert elevations of the outlets to the isolator rows and the manifolds should be specified for the three structures that discharge into the subsurface infiltration system. Inverts to the isolator rows must be below the inverts to the manifolds. **Addressed – the elevations have been revised to be consistent with the revised design.**
  - g. The porous paver driveway on Lot 2 is modeled with all flow discharging into the porous pavers, but in reality there will be runoff that will flow into the catch basin – see the attached Table 203e – Runoff Curve Numbers for Porous Pavement & Surface Mined Areas. The model should be revised to reflect this. **Addressed – the model has been revised with the correct runoff curve number of 57 for the porous pavers.**
  - h. Section 4.1 Standard 3: Recharge Calculations in the Stormwater Management Report indicates that there are stage/storage tables included, yet the tables are not included. **Addressed – the revised HydroCAD model includes the stage/storage tables.**
2. Catch basin details should specify the gas-trap hoods in the basins. **Addressed – gas-trap hoods are specified on the catch basin details.**
  3. It is unclear what the Plan View is depicting on the Typical Roof Drain Detail, Sheet C-5.1 (both Site Plans). **Addressed – the “plan view” has been removed from the detail.**
  4. All of the catch basin and manhole details include a note indicating that the contractor is to provide buoyancy calculations for the structures. The engineer should be responsible for providing buoyancy calculations. We note that based on the test holes and depth to groundwater buoyancy should not be an issue. **Addressed – buoyancy calculations have been included in the Stormwater Report and the notes have been changed to direct the reader to refer to the Stormwater Report for the calculations. Structures are detailed/specified accordingly.**
  5. The proposed retaining walls on Lot 1 will be up to 15 feet high. Retaining walls greater than four feet in height require a building permit. We note that the Stone Strong Retaining Wall Cross Section on Sheet C-5.1 specifies that the walls are to be designed

by a Massachusetts Professional Engineer, which is required by code. **Informational, no response required.**

6. We believe that the proposed erosion controls will adequately mitigate potential erosion and sedimentation during construction. **Informational, no response required.**
7. We assume that the septic system designs will be reviewed by the Board of Health so we have not reviewed these. **In the response, CDG stated that the septic design plans have been submitted to the Board of Health and are being peer reviewed by Chessia Consulting.**

Please give us a call should you have any question.

Very truly yours,

AMORY ENGINEERS, P.C.

By:



Patrick G. Brennan, P.E.



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