

AMORY ENGINEERS, P.C.

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25 DEPOT STREET, P.O. BOX 1768
DUXBURY, MASSACHUSETTS 02331-1768

TEL.: 781-934-0178 • FAX: 781-934-6499
WWW.AMORYENGINEERS.COM

December 22, 2022

Hingham Planning Board
210 Central Street
Hingham, MA 02043

Subject: **213-215 Cushing Street, Definitive Flexible Residential Development Plan**

Dear Board Members:

At Mr. Silveira's request, we have reviewed the following documents pertaining to the proposed definitive Flexible Residential Development Plan at the subject site:

- Definitive FRD Plan (16 sheets), dated November 21, 2022, prepared by Crocker Design Group (CDG)
- Stormwater Management Report, dated November 21, 2022, prepared by CDG
- Transmittal letter from Drohan, Tocchio & Morgan, P.C., dated November 28, 2022 along with Application for Zoning Hearing (Form 2), Application for Site Plan Approval, Application for Modification, Rescission or Amendment of Definitive Subdivision Plan (Form C-1), A-3 and Supplement to Application for Site Plan Approval of Definitive Flexible Residential Development

The purpose of our review has been to evaluate conformance with the Hingham Zoning Bylaw (ZBL), Planning Board Rules and Regulations (R&R), MassDEP Stormwater Management Standards (SMS) and good engineering practice.

Background

The project site consists of two parcels with a total land area of about 7.48-acres. The parcel at 213 Cushing Street is a 7.01-acre parcel of woodland and wetlands which was the subject of a two lot subdivision approved in 1965. The parcel at 215 Cushing Street is about 0.47-acre and contains an existing single family dwelling with a paved driveway off Cushing Street. The parcels are located in Residence District C and the rear of the property (western end) is also within the Accord Pond Watershed and Hingham Aquifer Protection District. Most of the site is within a MassDEP mapped Zone II to a public well. The northwest corner of the property is also within FEMA Flood Zone AE.

A Special Permit A3 was granted by the Planning Board on March 25, 2022 for a preliminary Flexible Residential Development (FRD) consisting of eight lots on this property. The proposed roadway and sidewalk is identical to the roadway and sidewalk shown on the preliminary FRD plan except that the preliminary plan proposed a condominium, whereas the definitive plan shows a roadway layout with individual residential lots. The proposed residential lots range in size from 9,893 s.f. to 14,749 s.f. The open space lot is proposed to be owned by a homeowner's association. Proposed building layouts are essentially the same as the preliminary FRD plan except for some minor shifting of Unit 1, six feet east and Units 6 and 7, two feet east. The major change to the stormwater system is replacing an open-air basin adjacent to Cushing Street with a

subsurface infiltration system consisting of concrete drywells surrounded by crushed stone. A walking path is proposed through the open space buffer that surrounds the outer perimeter of the property. As was proposed with the preliminary FRD plan, the units would be served by a shared septic system, Town water, natural gas and underground electric and communication utilities. The Supplement to Application for Site Plan Approval of Definitive Flexible Residential Development indicates that the proposed subdivision road would remain a private way.

The Applicant is seeking a number of waivers from the R&R which are listed on Sheet C-4. The waivers seek relief from the width of the right-of-way (§4.B(3) Table 1); the minimum centerline radius of the roadway (§4.B(3) Table 1); the property line and paved radii of the cul-de-sac turnaround (§4.B(4)(b)); the requirements of the typical road cross section (Figure 1) and the width of utility easements (§4.F).

Comments

Compliance with the Zoning Bylaw

1. ZBL §IV-D.8.d considers surface retention and detention ponds to be wetlands, which should not be counted toward the minimum open space percentage. The note on Sheet C-4 states that “minimum open space calculation includes tree preservation, basins and septic areas and excludes wetlands, individual house lots and any/all green space within the R.O.W.” The note goes on to read “basins account for 5.7% of open space (less than the 9.2% allowed).” This should be explained further as we question why basins are included in the open space calculation.
2. As was the case with the preliminary FRD plan, the 100 foot wide perimeter buffer from adjacent properties will not be provided along portions of the north east and south property lines as required by ZBL §IV-D.9.d. Also, since this application is also for Site Plan Approval, the Tree Yard should be shown on the plans along with a tree protection plan in accordance with ZBL §I-I.5.h. The plan should include an inventory of mature trees to be removed and planted to confirm compliance with ZBL §I-I.6.d(ii).
3. In accordance with ZBL §IV-D.10.e, the plans should contain a note stating that “no lot shall be further subdivided.”

Compliance with the Planning Board Rules and Regulations

1. R&R §3.C.2(a) requires two permanent benchmarks to be shown on the plan. No benchmarks are shown on the plans.
2. R&R §3.C.2(l) requires the proposed size, type and species of proposed trees to be shown on the plan. Proposed street trees and a ten foot wide street tree planting strip should be in accordance with R&R §5.B4.
3. R&R §4.B(4)(b) requires sloped granite curbing around the inside island of a cul-de-sac turnaround. Cape Cod berm is proposed.

4. R&R §4.C(1) prohibits “retention or direct subsurface discharge of storm water.” There is a proposed subsurface infiltration system that is designed to retain and infiltrate runoff from the easterly 280 feet of roadway.
5. R&R §4.C(e) and §5.L1(9) require a concrete or masonry headwall at the outfall end of all drains. Flared end sections are proposed.
6. R&R §4.E requires that all stormwater management structures for detention and/or retention be open basins constructed of natural earth material with loam and seed surface. As noted above, a subsurface infiltration system is proposed.
7. R&R §4.E also limits the maximum side slope of stormwater facilities to 25% or 4H:1V. The side slopes of the proposed basins are 3:1.
8. R&R §4.L(6) requires documentation that there will be a minimum of 1,000 gallons of water per minute at the proposed fire hydrant. Documentation should be provided to verify this. We also believe that a hydrant should be located near Cushing Street since the nearest hydrants along Cushing Street are about 340 feet and 500 feet from the proposed road intersection.
9. R&R §4.L(7)a. requires a ten foot wide electric easement around all Hingham Municipal Lighting Plant (HMLP) infrastructure. The Applicant should coordinate with HMLP as necessary and the easements, if required, should be shown on the definitive plan.
10. R&R §5.L1(4) requires HDPE drain pipe to have rubber gaskets. This should be specified on the plans.
11. R&R §5.L1(5); §5.R1(22) and §5.T3(6) require granite curb inlets at all catch basins. Curb inlets are not proposed.
12. R&R §5.Q1(1) requires drain manholes to have bricked inverts. This should be specified on the Precast Concrete Drain Manhole detail on Sheet C-10.1
13. R&R §5.R1(6) requires catch basins to be five feet in diameter and 8’-6” deep. The proposed catch basins are four foot diameter with a four foot sump, which is MassDOT and industry standard.
14. R&R §5.X1(1) requires frames on catch basins and drain manholes to be set in a full bed of mortar with a maximum of four and minimum of two courses of bricks for adjustment to finish grade. The catch basin and manhole details on Sheet C-10.1 should specify this requirement.
15. R&R §5.L2(8) requires twelve inches of gravel base for sidewalks. The sidewalk detail on Sheet C10.1 should specify this. We note that the detail shows a concrete sidewalk and

- the plans and application materials indicate a “paved” sidewalk, which could be either concrete or bituminous concrete. Clarification is needed.
16. Proposed street lights are shown on the Utilities Plan (Sheet C-8). Specifications of the street lights should be provided to verify compliance with R&R §5.X3.
 17. There should be a loam and seed detail that specifies a minimum of six inches of loam in accordance with R&R §5.A4(3).
 18. R&R §5.C4(1) requires granite Hingham Highway bounds to be set at all street intersections and at all points of change in direction or curvature of streets. R&R §5.C4(3) also requires at least one sideline of each lot be marked with a bound. A bound/monument detail should be shown on the plans.

General, Utilities, Stormwater & Erosion Control

1. The proposed roadway and sidewalk pavement is located within a foot of the proposed right-of-way line along the south side of the road and about half of the north side. This will make maintenance of the road and sidewalk difficult without disturbing adjacent private property.
2. Proposed grading off the northeast corner of the unit on Lot 3 indicates that the retaining wall will be about five feet high. This will require a building permit and engineered design.
3. We recommend that the proposed guardrail shown on the retaining wall adjacent to the driveway on Lot 3 be extended to the northeast, around the turnaround to about Sta. 5+10.
4. The Cape Cod Berm Detail on Sheet C-10.1 should show the berm to be placed monolithically with both the binder and surface courses of pavement so that runoff may be controlled during the time between the placement of pavement courses.
5. Access routes to the drainage basins for maintenance equipment should be shown on the plans. Same should be shown for access to the septic system leaching facility.
6. The storm event elevations for Drywell System DW-1 are incorrect on Sheet C-6.
7. The Catch Basin Leaching Pit (DW-1) Detail on Sheet C-10.3 shows an 8-inch PVC pipe between the catch basin and drywell. This should be 12-inch HDPE and it should be noted that there is a water quality unit between the catch basin and drywell.
8. The HydroCAD model for Drywell System DW-1 should be revised to model the actual outlet from the system (CB-8 grate) and account for storage in the depression above the system.
9. The proposed ten foot long sleeves shown at sewer/water crossings should be twenty feet long (ten feet either side of the utilities).
10. The surface of the proposed walking trail is specified to be bark mulch. This surface would not be ADA compliant.

11. Notes related to electrical service on Sheet C-1 should reference HMLP, not National Grid.

Please give us a call should you have any question.



Very truly yours,

AMORY ENGINEERS, P.C.

By:

A handwritten signature in cursive script that reads "Patrick G. Brennan".

Patrick G. Brennan, P.E.

PGB