



February 10, 2023

Planning Board
Town of Hingham
Attn: Michael Silveira
210 Central Street
Hingham, MA 02043
Phone (781) 741-1419

**RE: Peer Review + Town Comments Response Letter
Proposed Flexible Residential Development**

Dear Members of the Board;

This letter is submitted in response to the peer review comments received by Patrick G. Brennan, P.E. of Amory Engineers, P.C. and the Traffic Engineering peer review provided by Jeffrey S. Dirk, P.E., PTOE, FITE of Vanasse & Associates, Inc. regarding the proposed Definitive Flexible Residential Development for the properties at 213-215 Cushing Street in Hingham, Massachusetts. Comments were also provided by the Hingham Fire Department, Hingham Municipal Lighting Plant (HMLP), Weir River Water System (WRWS), and Planning Department. Crocker Design Group, LLC (CDG) has reviewed the comments and offers the following responses, below. In addition, the following revised and supporting documents are enclosed:

- Available Service Letter – Provided by Weir River Water System (Exhibit A);
- Definitive FRD Plan – Prepared by Crocker Design Group - Revised February 9, 2023 (Exhibit B); and
- Stormwater Management Report – Prepared by Crocker Design Group – Revised February 6, 2023 (Exhibit C).

Peer Review by Amory Engineers, P.C.

Mr. Brennan’s original comments are in italic text with CDG’s responses in **bold** below each comment.

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.*

CDG has revised the Open Space area to exclude any drainage areas or green space within the R.O.W.; decreasing the total Open Space land area by approximately 11,445 S.F. The Open

Space calculation has also been revised to exclude the land area within the Subdivision R.O.W.; decreasing the total land area within the site to approximately 298,104 S.F. These updates result in a total Open Space percentage of 52.9% – which is consistent with the 53% Open Space approved as part of the Special Permit A3 and is excess of the minimum 40% required. See Sheet C-5 for the revised Open Space area and calculations.

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-1.5.h. The plan should include an inventory of mature trees to be removed and planted to confirm compliance with ZBL §I-1.6.d(ii).*

The Open Space buffer along the perimeter of the site is substantially unchanged from that previously approved by the Special Permit A3. An inventory of mature trees on the site is provided on Sheet C-3 of the Plan Set. The updated Plan Set also includes a Proposed Landscape Plan, prepared by Hawk Design, Inc., that outlines the proposed tree mitigation and planting schedule. As the proposed Definitive FRD has been revised to omit individual house lots, CDG has not included Tree Yards on the plans.

3. *In accordance with ZBL §IV-D.10.e, the plans should contain a note stating that “no lot shall be further subdivided.”*

A note has been added to Sheet C-4 of the Definitive FRD Plan Set indicating that the lot shall not 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.*

Two permanent benchmarks have been added to the plan and are shown on Sheet C-5 of the Plan set.

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.*

The proposed size, type, and species of all proposed trees are shown on the Proposed Landscape Plan, prepared by Hawk Design, Inc., and provided herewith. The Applicant is seeking waiver from section 5.B4(1) of the Town of Hingham Planning Board Rules and Regulations adopted under the Subdivision Control Law (Subdivision Rules and Regulations) to allow for the trees to be offset 20' from the right-of-way.

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.*

The Applicant is seeking a waiver from Section 4.B(4)(b) of the Subdivision Rules and Regulations to allow Cape Cod berm.

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.*

The Applicant is seeking waiver from Section 4.C(1) of the Subdivision Rules and Regulations to allow retention and subsurface discharge of stormwater from the right-of-way. The roadway is proposed to remain a private road, and any maintenance and upkeep of the system will be the obligation of, and conducted by, the Condominium Association.

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.*

CDG has revised the plans to replace the flared end section of the proposed drainage outfall with a masonry headwall. These updates are reflected on Sheet C-6 and Detail Sheet C-10.1 of the Plan set.

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.*

The Applicant is seeking waiver from Section 4.E of the Subdivision Rules and Regulations. The roadway is proposed to remain a private road, and any maintenance and upkeep of the system will be the obligation of, and conducted by, the Condominium Association.

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.*

The Applicant is seeking waiver from Section 4.E of the Subdivision Rules and Regulations to allow the side slope of stormwater facilities to be 33% or 3:1. The proposed slope which is consistent with the Massachusetts Stormwater Handbook criteria.

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.*

A letter from Weir River Water System is attached as Exhibit A, which provides that there is capacity to support the proposed project. The plans have been revised to include a second fire hydrant that will be located near the intersection of the proposed roadway and Cushing Street. This change is reflected on Sheet C-8 of the Definitive FRD Plan Set.

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.*

A 10' wide easement from the edge of the public way (Cushing Street) and around the HMLP underground electric distribution system has been added to the plans. These changes are reflected on Sheets C-4 and C-7 of the Plan Set.

10. *R&R §5.L1(4) requires HDPE drain pipe to have rubber gaskets. This should be specified on the plans.*

A note has been added to both the Precast Concrete Drain Manhole and Single Grate Catch Basin details on Sheet C-10.1, requiring that all joints for HDPE pipes be sealed with rubber gaskets.

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.*

The catch basins are proposed to be installed so that the placement of catch basin frame and grate in relationship to roadway gutter lines is six (6) inches into the Cape Cod berm in order to satisfy the requirements of Sections 5.L1(5) and 5.T3(6) of the Subdivision Rules and Regulations. The Applicant is seeking waiver from Section 5.R1(22) to allow a gutter mouth to be installed without a new section of granite curb.

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*

The notes section on the Precast Concrete Drain Manhole has been updated to specify all drain manholes to have bricked inverts rounded into the direction of flow. These changes are reflected on Sheet C-10.1 of the Plan Set.

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.*

The Applicant is seeking waiver from Section 5.R1(6) to allow 4' diameter catch basins with 4' of sump below the lowest invert. As Mr. Brennan has stated above, this is consistent with 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.*

Both the Precast Concrete Drain Manhole and Single Grate Catch Basin details on Sheet C-10.1 have been revised to specify that the frames be provided with a full bed of mortar. A note has been added specifying that no less than 2 courses and no more than 4 courses of brick may be used to adjust the frame elevation to finished grade which can also be seen on Sheet C-10.1.

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.*

The sidewalk detail on Sheet C-10.1 has been revised to specify 12" of gravel base and bituminous concrete as the material. Sheet C-4 has also been revised to identify the proposed sidewalk as bituminous concrete.

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.*

Specifications of the proposed street lights have been provided on the Landscape Plan, prepared by Hawk Design, Inc., which is attached as a supplemental sheet to the Definitive FRD Plan Set. The proposed fixtures are identified as LED with a lumen rating of 4,000 and a 14' mounting height. The Applicant is seeking waiver from Section 5.X3 to allow a reduction in the nominal structure mounting height from 25' to 14'. It is CDG's opinion that a 14' mounting height is sufficient for this type of clustered residential development.

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).*

A loam and seed detail specifying a minimum of six (6") of loam has been added to detail Sheet C-10.1 of the Plan Set.

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.*

Proposed bounds/monuments have been added to the plans at all street intersections and at all points of curvature in the road. Since we no longer are proposing individual house lots the only sidelines of a lot would be where the proposed roadway intersect with Cushing Street. A bound/monument detail has been added to detail Sheet C-10.2.

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.*

The Applicant is seeking waiver from Section 4.B(3)-Table 1 of the Subdivision Rules and Regulations to allow a reduction in the required right-of-way width from 46' to 37' for a minor street. The roadway will remain a private way and under control of the Condominium Association; therefore, private property will not need to be disturbed in order to maintain the road and sidewalk.

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.*

The proposed grading along the retaining wall northeast of Unit 3 has been revised so that no portion of the retaining wall is over 4' in height. Spot shots have also been added to Sheet C-6 of the Plan Set to further clarify that the wall is not to exceed 4' in height.

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.*

The proposed retaining wall has been changed to a landscape boulder wall along the driveway of Unit 3. The guardrail has been extended around the cul-de-sac to approximately station 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.*

The Cape Cod Berm detail on Sheet C-10.1 has been revised to show the berm placed monolithically with both the binder and surface courses of pavement.

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.*

A twenty (20') foot wide easement for the proposed stormwater system is shown on Sheets C-5 and C-6 of the Plan Set. The easement encompasses the entire open basin and 10' on either side of the drainage pipe. We believe no such easement for the shared septic is now necessary, as the individual house lots have been eliminated and the entire lot would be controlled by a Condominium Association.

6. *The storm event elevations for Drywell System DW-1 are incorrect on Sheet C-6.*

The storm event elevations for Drywell System DW-1 have been revised and include the changes recommended in the comment below. These changes are reflected on Sheet C-6 of the Plan Set.

- 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.*

The Catch Basin Leaching Pit (DW-1) Detail on Sheet C-10.3 has been revised to show a 12" HDPE pipe between the catch basin and the drywell. The detail has also been revised to depict the water quality unit that is proposed between the catch basin in the road and drywell system.

- 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.*

The HydroCAD model for Drywell System DW-1 has been revised to model the actual outlet of the system which now would be catch basin CB-1 at el. 68.44. CDG also accounted for a small amount of storage above the rim of the catch basin as the grade will generally be pitched toward the inlet rim. The diameter of the drywells has been adjusted to the exact inner diameter of the eight (8') foot leaching pit provided by Scituate Precast and the storm event elevations have been revised to reflect this change. It should be noted that the entire 100-year storm is contained within the drainage structures and the catch basin outlet would only be necessary for emergency outflow.

- 9. The proposed ten foot long sleeves shown at sewer/water crossings should be twenty feet long (ten feet either side of the utilities).*

The proposed sleeves at the sewer/water intersections have been revised to show 10' on either side of the crossing for a total length of 20'. This change can be seen on Sheet C-8 of the Plan Set.

- 10. The surface of the proposed walking trail is specified to be bark mulch. This surface would not be ADA compliant.*

Based upon comments from the Conservation Commission, we have eliminated the bark mulch and are now just proposing a meandering walking path through the open space area. No installation of material will be necessary.

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

The electrical utilities and easements shown on Sheets C-4 and C-8 identify Hingham Municipal Lighting Plant as the controlling entity.

Traffic Engineering Peer Review

Mr. Dirk's original comments are in italic text with CDG's responses in **bold** below each comment.

1. *The relocation of the retaining wall adjacent to and north of the proposed roadway should be shown on the Definitive FRD Plan along with the associated regrading and tree removal (see attached plan).*

McMahon and Associates performed a site visit after the existing street trees were removed by DPW and concluded sight distances for the proposed roadway connection are adequate provided the remaining stumps of the cut trees be ground down.

2. *The sight distances are shown on Drawing No. C-4; however the corresponding sight triangle areas should be added along with a note to indicate: "Signs, landscaping and other features located within sight triangle areas shall be designed, installed and maintained so as not to exceed 2.5-feet in height. Snow windrows located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed."*

The corresponding sight triangles have been added to Sheet C-5 of the Plan Set, as well as the note requested above.

3. *A note should be added stating: "All Signs and pavement markings to be installed within the Project site shall conform to the applicable specifications of the Manual on Uniform Traffic Control Devices (MUTCD)."*

The note has been added to Sheet C-5 of the Plan Set.

4. *Pedestrian crossing warning signs should be added at the crosswalk (W11-2 and W16-7P) and on Cushing Street 125 feet in advance of the crossing (W11-2) in both directions.*

Pedestrian crossing warning signs have been added to the plan and can be seen on Sheet C-5 in the locations requested above.

Planning Board Staff Comments

1. *Could you please clarify what the specific waiver requests are that are listed in the table on sheet C-4?*

A list of waiver requests has been added to the Cover Sheet C-1 of the Plan set.

Hingham Municipal Lighting Plant Comments

1. *HMLP will require 10' wide electric easement from the edge of public way (Cushing st) to and from and around HMLP URD electric distribution system.*

A 10' wide electric easement has been provided and is depicted on Sheets C-4 and C-7 of the Plan Set.

Weir River Water System Comments

1. *It seems they eliminated the hydrant at the corner of this new road and Cushing St. That needs to be added back in. They did however add the 2nd hydrant and extended the main as we required. They just need to make sure any water system work is coordinated with WRWS.*

The plans have been revised to include a second fire hydrant that will be located near the intersection of the proposed roadway and Cushing Street. This update is reflected on Sheet C-8 of the Plan Set. Any proposed work related to the water system shall be coordinated with the Weir River Water System.

2. *An application for service for each house will need to be filed.*

Noted. Applications for service of each house will be filed.

Fire Department Comments

1. *The fire dept. has reviewed the submitted plans for the definitive subdivision at 213/215 Gushing St and we offer the following comments. The plans seem to show a hydrant at the end of the cul de-sac. We would require a hydrant at the entry into the roadway as we forward lay our hoses for fires. We recommend keeping the hydrant in the cul-de-sac as well. This helps Weir River Water with the flushing of lines and also ensures there is a hydrant within 800 feet of any of the properties. The submitted turning templates seem appropriate for our apparatus.*

The plans have been revised to include a second fire hydrant that will be located near the intersection of the proposed roadway and Cushing Street. This update is reflected on Sheet C-8 of the Plan Set.

Should you have any questions or require any further information, please do not hesitate to contact Taylor Corsano at taylorcorsano@crockerdesigngroup.com or 781-919-0808.

Sincerely,
Crocker Design Group LLC



Taylor Corsano
Project Manager

Exhibit A - Available Service Letter from Weir River Water System

Board of Water Commissioners

Joe Fisher, Chair
William Ramsey
Liz Klein



Managing Director / Superintendent
Russell E. Tierney



February 28, 2022

Mathew Collins, Project Engineer
Crocker Design Group
2 Sharp St, Unit B
Hingham, MA 02043
Via Email: mcollins@crockerdesigngroup.com

RE: **Water Service Inquiry**
213 Cushing St – Hingham – Parcel ID: 156-0-9.B

Dear Mathew:

In response to your inquiry, we have determined that the property in question has availability of water service from WRWS. An 8" tapping sleeve and valve comes off the 12" water main on Cushing St and approximately 39 LF of 8" CLDI pipe installed onto the property. Please accept this letter as notification that the WRWS has the capacity to service the property.

Final approval of this project is contingent upon fulfillment of all Weir River Water System requirements as outlined in the Rules and Regulations, which includes, but is not limited to, completed service and water balance program applications, required town permits, and a final inspection by our department.

Should you have any questions or require any additional information, please feel free to contact me at 781-804-2304 or tierneyr@hingham-ma.gov.

Warmest Regards,

A blue ink signature of Russell E. Tierney, which is a stylized, cursive representation of his name.

Russell E. Tierney
Managing Director / Superintendent

Copy: SUEZ – Weir River Water System Operations

Exhibit B – Definitive FRD Plan Set
(Under Separate Cover)

Exhibit C – Stormwater Management Report
(Under Separate Cover)