

Project Narrative

1196 Main Street, Hingham MA

March 25, 2024

Revised June 2024

Project Description

The project proponent, Michael Theriault, proposes to construct a new Single-Family home, driveway with 2 wetland crossings, and necessary utilities at 1196 Main Street in Hingham, Massachusetts. The parcel is shown as Lot 68 on Map 204 of the Town of Hingham Assessors Maps. The parcel currently has limited frontage along Main Street and an Approval Not Required Plan has been prepared to reconfigure the property line with 1192 Main Street. The ANR plan will provide both properties with appropriate frontage and lot area. The 1196 Main Street property is shown as Lot B and is comprised of approximately 7.67± acres of which approximately 3 acres is contiguous upland. The parcel has frontage on Main Street to the west and is surrounded by developed properties to the north, east and south. The property contains two Bordering Vegetated Wetland (BVW) areas. One BVW system is located within the entire easterly portion of the property. The second BVW system is located in the western/central portion of the site and is associated with an intermittent stream flowing offsite in a closed drainage system to the northeast. The intermittent stream flows in an easterly direction from the western portion of the BVW area towards the closed drainage inlet located on the abutting #5 Queen Anne Lane property. The intermittent stream also flows in a northerly direction from the central portion of the BVW area towards the drainage inlet. The limits of the BVW were delineated by Environmental Consulting and Restoration, LLC in September of 2022, refer to ECR Wetland Delineation memorandum. The property is currently undeveloped and largely wooded with a small portion of impervious driveway associated with the abutting 1192 Main Street property. The western/central BVW collects surrounding stormwater runoff from Main Street and the abutting developments. The site is located within a Zone X as shown on the most current FEMA Flood Map (25023C0092K) with an effective date July 6, 2021, and is not located within a special flood zone area. The property is not located within any area of Estimated Habitat of Rare Wildlife or Priority Habitat for Rare Species according to the most recent mapping of the Natural Heritage and Endangered Species Program (NHESP). The site is located within an Outstanding Resource Water – Public Water Supply Watershed and Zone II Wellhead Protection Area associated with Accord Brook.

The site contains active groundwater monitoring wells under RTN 4-0134, Former Queen Anne's ARCO SAP #137821 for Equilon Enterprises LLC dba Shell Oil Products US. Many of the monitoring wells have been decommissioned. Sovereign Consulting, Inc. continues to conduct groundwater sampling on the site through active monitoring wells MW-34D, 34S, 34M and MW-33D, 33S, 33M. The proposed project excavation shall be coordinated with Sovereign Consulting Inc. to ensure that should any hazardous materials be encountered; the RAM Plan procedures are followed.

The work proposed under this Notice of Intent is for the construction of a new single-family home with a gravel driveway, two wetland crossings, crushed stone trench, two rain gardens, roof subsurface infiltration chamber system and associated utilities. The first wetland crossing is proposed along the intermittent stream in the western portion of the site and the second crossing is proposed at an existing crossing with a 24" RCP culvert. The new crossing will consist of a precast bottomless concrete box

culvert to minimize impacts to the wetland and intermittent stream and the second crossing will improve the existing 24" culvert with concrete headwalls. In compliance with the Massachusetts River and Stream Crossing Standards, the new crossing has been designed to meet the General Standards with the bottomless box culvert providing a natural substrate within the structure with a minimum width of 1.2 times the bank width and an openness ratio of greater than 0.82 ft. The existing bank width is approximately 13 ft resulting in 15.6 ft min. culvert span. The culvert width is proposed at 16 ft. with an openness ratio of 3.4 ft.

The proposed house is located within the rear or easterly portion of the site. This area is the only location that provides an appropriate area to install a septic system outside of the 100-foot buffer of the BVW as required by the Hingham Board of Health regulations. The proposed 12 ft wide gravel driveway will provide access from Main Street. The wetland impact associated with the driveway crossings is approximately 476 square feet of wetland fill and approximately 345 square feet of temporary construction impact for a total of 821 square feet of wetland impact. There is approximately 8 linear feet of bank impact due to the utility installation at the crossing. Replication (2:1 ratio) is required per the Hingham Wetland Rules and Regulations. Approximately 1,736 square feet of wetland mitigation has been provided along the western side of the central BVW area. Within the 50-foot wetland buffer there is approximately 4,031 square feet of alteration for the gravel driveway. Relief is requested from the Buffer Zone Mitigation Policy, as wooded buffer zone would be altered to provide additional buffer zone mitigation. Two rain gardens along the driveway and a roof infiltration chamber system are proposed to address the increase in runoff, as detailed in the Stormwater Report. Retaining walls are proposed at the first crossing associated with the culvert to minimize impacts to the wetland and buffer zone areas while headwalls are proposed to be added to the existing 24" culvert at the second crossing. The use of the retaining wall shown in the northern area of the property allows for the grading needed for the proposed septic system. Erosion control barriers will be placed along the proposed limit of work. Construction access to the proposed single-family dwelling will be accessed through the proposed driveway indicated on the plan.

The wetland impact is being filed as a limited crossing under 310 CMR 10.53(3)(e) as there are no other feasible means of access to this upland portion of the site which would result in lesser impacts to wetland resources, including any adjacent land currently owned by the same owner while meeting the requirements of the Hingham Zoning By-law. In compliance with the Department of Environmental Protection Wetland Program Policy 88-2, the project has been designed to, "minimize to the greatest extent possible disruption of wetlands."

Applicable erosion control measures will be in place prior to the start of construction, to ensure there will be no impact to the wetland resource area. The stockpile area will be located outside of the 50-foot buffer and will be protected with a contiguous line of silt sock along with other applicable locations as necessary. Additional erosion control information and construction details are shown on the detail plan attached to this submittal.

Performance Standard Analysis

As stated in the attached Wetland Delineation Report by ECR, LLC dated 11/21/22, Bordering Vegetated Wetlands (BVW) are identified on the lot. Majority of the work taking place is within the 50 foot and 100 foot buffer, while there is a much smaller area of work located within the 50 foot buffer. Compliance with the Wetlands Protection Act and Hingham Wetland Regulations is demonstrated for work shown in both buffer area's as follows:

Compliance with Performance Standards for Bank, Section 10.54(4), DEP Wetland Protection Act Regulations

The proposed work complies with the Massachusetts DEP Wetland Protection Act Regulations Performance Standard for work on a Bank as follows:

- The proposed stream crossing has been designed to minimize the impacts to the intermittent stream and associated bank by meeting the general design standards for River and Stream Crossings. The crossing shall not impact the physical stability of the bank by spanning the full bank width and providing adequate cross section to maintain the carrying capacity of the existing channel within the bank. The culvert shall be a bottomless concrete box culvert which will maintain the natural substrate within the stream bed allowing the bank to provide breeding habitat, escape cover and food for fisheries.
- The proposed headwalls for the existing 24-inch culvert at the second crossing shall protect the driveway with minimal impact to the existing stream.

Compliance with Performance Standards for Bordering Vegetated Wetlands, Section 10.55(4), DEP Wetland Protection Act Regulations

The proposed work complies with the Massachusetts DEP Wetland Protection Act Regulations Performance Standard for work within Bordering Vegetated Wetlands as follows:

- The approximate wetland impacts include 476 square feet of permanent fill and 345 square feet of temporary alteration for the two crossings. The proposed wetland mitigation area is approximately 1,736 square feet, a 2:1 ratio. The wetland mitigation area is located along the central wetland area within the site and shall have an unrestricted hydraulic connection to the existing stream. The wetland mitigation area shall be established with indigenous wetland plant species.
- The site is not located within an Area of Critical Environmental Concern (ACEC) as designated under M.G.L. c. 21A, Sec 2(7) and 301 CMR 12.00.

Compliance with Performance Standards for Work in Land Under Inland Water Bodies and Waterways – Rivers, Creeks, Streams, Ponds, Lakes, Ditches or Flats, Section 17.3(d), Hingham Wetland Regulations

The proposed work complies with the Hingham Wetland Regulations Performance Standards for work in Land Under Inland Water Bodies and Waterways as follows:

- (1) A proposed project shall not cause any adverse effect or cumulative adverse effect upon the wetland values of Land Under an Inland Water Body.

The project proposes to span the intermittent stream including the associated bank with a bottomless concrete box culvert to minimize impact upon the wetland values of Land Under an Inland Water Body.

- (2) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

The project does not pose an adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species. No ACECs and no NHESP Estimated & Priority Habitats are identified onsite, per MassMapper and the Wetland Delineation Report.

- (3) Refer to HWR 23.0 et seq. for additional project-specific performance standards.

Refer to Compliance with Performance Standards for Filling below.

- (4) Performance standards for activities or work proposed in the buffer zone to an Inland Bank or Inland Beach are specified in HWR 22.0.

Refer to Compliance with Performance Standards for Work in the Buffer Zone below.

- (5) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

Compliance with Performance Standards for Work on Inland Bank, Section 19.2(d), Hingham Wetland Regulations

The proposed work complies with the Hingham Wetland Regulations Performance Standards for work on Inland Bank as follows:

- (6) A proposed project shall not cause any adverse effect or cumulative adverse effect upon the wetland values of Inland Bank or Inland Beach.

The project proposes to span the intermittent stream including the associated bank with a bottomless concrete box culvert to minimize impact upon the wetland values of the bank.

- (7) A proposed project shall be permitted only if there is no adverse effect on bank stability, bank height, ground water and surface water quality, the water carrying capacity of an existing channel within a bank, and the capacity of the bank to provide habitat for fisheries and /or wildlife.

The proposed crossing has been designed to comply with the general standards of the Massachusetts River and Stream Crossing Standards and shall maintain the bank's stability, height, width, groundwater and water quality, the capacity of the stream channel and the capacity of the bank to provide habitat for fisheries and wildlife.

- (8) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

The project does not pose an adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species. No ACECs and no NHESP Estimated & Priority Habitats are identified onsite, per MassMapper and the Wetland Delineation Report.

- (9) Refer to HWR 23.0 et seq. for additional project-specific performance standards.

Refer to Compliance with Performance Standards for Filling below.

- (10) Performance standards for activities or work proposed in the buffer zone to an Inland Bank or Inland Beach are specified in HWR 22.0.

Refer to Compliance with Performance Standards for Work in the Buffer Zone below.

- (11) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

This application is presented to the Conservation Commission for their review.

Compliance with Performance Standards for Work in the Buffer Zone, Section 22.0(d), Hingham Wetland Regulations

The proposed work complies with the Hingham Wetland Regulations Performance Standards for work in the Buffer Zone as follows:

(1) The intent of the Conservation Commission is to move all structures and activities as far away as possible from any Resource Area, in order to protect the wetland values of Resource Areas.

The new dwelling and accessory structures were located to minimize impact to the resource area and their buffer zones and to meet the applicants' desires for the property. The proposed Single-Family dwelling within the 50'-100' buffer are located over a large wooded area of the upland. The house was designed to be as far pushed to the east to alleviate the amount of runoff going to the intermittent stream and for the grading constraints the property has. The 2 new wetland crossings associated with the new driveway however are located in the 50-foot buffer and locations are situated to minimize impacts to the wetlands and provide access to the properties' upland area.

(2) Except as otherwise specified, Resource Area buffers shall be retained and maintained in a naturally vegetated condition. Where buffer disturbance has occurred during construction, revegetation with native vegetation may be required.

The area of proposed work within the buffer zones has been mitigated to be as small as possible. A siltation barrier will be maintained along the limit of work to define and control the work area.

(3) The Commission may require that already-altered buffer zone be restored in order to protect or improve Resource Area values. Restoration means planting native vegetation, grading, correcting site drainage, removing debris, or other measures which will improve, restore and protect the wetland values of the Resource Area.

A 1,736 square foot mitigation area has been provided on the site plan. Approximately 2,705 square feet of impervious area associated with the single-family dwelling is proposed within the 50' – 100' buffer. For the wetland mitigation area, similar species of plants will be planted to match the existing vegetation within the wetland.

(4) Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.37 for Coastal Resource Areas or 310 CMR 10.59 for Inland Resource Areas.

The project does not pose an adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species. No ACECs and no NHESP Estimated & Priority Habitats are identified onsite, per MassMapper and the Wetland Delineation Report.

(5) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

This application is presented to the Conservation Commission for their review.

Compliance with Performance Standards for filling, Section 23.6, Hingham Wetland Regulations

The proposed work complies with the Hingham Wetland Regulations Performance Standards for filling as follows:

(a) No fill shall be placed in any Resource Area or any buffer zone so as to alter the flow of surface water in a way that the Conservation Commission feels will adversely affect the wetland values of the Resource Area(s).

The direction of flow is not altered. Flow continues to be directed to the western wetland area through the intermittent stream. The eastern side of the property still flows towards the drainage easement set between 9 Queen Anne Lane and 11 Queen Anne Lane.

(b) No filling or excavation or other alteration of salt marshes shall be permitted.

No fill in salt marsh is proposed.

(c) The Commission at its discretion may allow the filling of up to 2,500 square feet of Vegetated Wetland for a limited project...

The limited project proposes to fill 476 square feet of wetland and use the 2:1 Wetland restoration method set forward by the Hingham Stormwater Regulations to put back approximately 1,736 square feet.

(d) Compatible fill shall be used for beach and dune nourishment projects.

No beach or dune nourishment is proposed.

(e) Dumping of lawn wastes, brush or leaves or other materials or debris is not permitted in any Resource Area.

No dumping in the resource area is proposed. The owners understand resource areas are protected.

(f) The Commission is authorized to deny any filling of any Resource Area in order to protect the wetland values of the Resource Area.

This application is presented to the Conservation Commission for their review.