

## **PROJECT DESCRIPTION**

### **1. Introduction**

The purpose of this project is to permit a proposed addition associated with a single-family home and applicable mitigation plantings located at 14 Arnold Road (the site). The proposed project also includes the removal of an existing garage and associated pavement. The Town of Hingham Assessors Department references the site as Map 90 Lot 84. The proposed project also includes native mitigation plantings. The proposed project occurs within the 100-foot buffer zone to Bordering Vegetated Wetlands. Prior to the start of work, erosion controls will be installed in order to protect wetland resource areas. This application is being submitted in accordance with the Massachusetts Wetlands Protection Act and the Town of Hingham Wetlands Protection Bylaw

### **2. Site Description**

The site is located to the east of Arnold Road and consists of a single-family home with an associated paved driveway, garage, decking, shed, maintained lawn, landscaped areas, etc. A Bordering Vegetated Wetland was located by S.R.E. on March 6, 2020 off site to the south. Environmental Consulting & Restoration, LLC (ECR) performed a review of the wetland delineation and confirms that it accurately marks the limit of the offsite wetland. As a result of the field work and review of available environmental databases, ECR is able to confirm that the site contains the following wetland resource areas and areas of Conservation Commission jurisdiction:

- Bordering Vegetated Wetlands (BVW)
- 100-foot buffer zone to BVW

#### Notes:

1. The site is not located within an area mapped as Priority Habitat & Estimated Habitat for Rare Species according to the Massachusetts Natural Heritage & Endangered Species Program (MaNHESP).
2. The site does not contain or is near a Certified Vernal Pool according to the MaNHESP.
3. The site is not located within an area mapped as Land Subject to Flooding according to the FEMA Maps.
4. The site does not contain or is near a U.S.G.S. mapped stream.
5. The site is not located within an Area of Critical Environmental Concern (ACEC).

### **3. Proposed Activities**

The purpose of this application is to authorize the construction of an addition associated with a single-family home and applicable mitigation plantings located at 14 Arnold Road. The proposed project also includes the removal of an existing garage and associated pavement. The proposed project is located within the 100-foot buffer zone to BVW. Please note, the proposed addition is located within an area of existing paved driveway and maintained lawn. The proposed project will involve the following activities:

- Installation of Erosion Controls – Prior to the start of work, an erosion control line will be installed along the proposed limit of work to protect the downgradient BVW.
- Proposed Removal of an Existing Garage – The existing garage proposed to be removed is located to the southeast of the existing home within the 100-foot buffer zone. The existing garage is surrounded by maintained lawn and the existing paved driveway. Access to remove the garage shall be via the existing driveway. The existing garage is proposed to be razed and all material removed from the site and disposed of offsite at an appropriate facility. The existing paved driveway surrounding the garage is proposed to be removed as well. All disturbed areas associated with the removal of the existing garage and driveway shall be restored as lawn. The proposed lawn will consist of environmentally friendly grass seed mix that requires little maintenance needs such as irrigation and fertilization. ECR recommends using a grass seed mix with a high content of tall fescues, which requires less irrigation and fertilization needs.

- Proposed Construction of an Addition – The proposed addition to the existing home is located to the south of the existing home. The proposed addition is located entirely within the existing paved driveway and maintained lawn. The proposed addition includes approximately 240 square feet of new impervious system which has been accounted for with a proposed mitigation planting area as documented in section 4 below. The proposed addition is located within the 100-foot buffer zone to BVW. All roof runoff shall be channeled to downspouts and to a drywell or similar recharge system, see the detail on the attached plan for more information. The work area shall be accessed via the existing driveway. All material and equipment storage shall be located outside the 50-foot buffer zone.
- Re-Landscape Activities - All disturbed areas surrounding the proposed work areas described above will be re-landscaped to stabilize the area as lawn and/or landscape beds. All landscape plant materials proposed within the 100-foot buffer zone at the site will consist of native plant species chosen from the attached plant list, which contains a variety of native plant species that would be acceptable for use in the buffer zone. The proposed lawn will consist of environmentally friendly grass seed mix that requires little maintenance needs such as irrigation and fertilization. ECR recommends using a grass seed mix with a high content of tall fescues, which requires less irrigation and fertilization needs.

**4. Proposed Mitigation**

A portion of the proposed addition is located within the 100-foot buffer zone to BVW. Of that work, approximately 240 square feet will include new impervious surface. As part of the proposed project, a mitigation plan has been designed in order to mitigate the new impervious surface located within the 100-foot buffer zone. The mitigation plan has been designed at a 1:1 ratio to include a total of 240 square feet of native plantings to enhance the 100-foot buffer zone. The proposed mitigation area will be constructed per the following:

1. Prior to the start of work, erosion control barriers shall be installed along the downgradient edge of the mitigation area to protect the nearby BVW.
2. Prior to planting, the existing maintained lawn within the mitigation area shall be turfed-off to expose the native topsoil in preparation for planting.
3. The mitigation area shall be supplemented with 1-2 inches of clean loam where necessary.
4. The mitigation area shall then be hand planted with a mixture of native saplings and shrubs. Shrubs will be spaced 8 feet on center and saplings spaced 12 feet on center within the 100-foot buffer zone to the BVW. A total of 4 shrubs and 2 saplings will be required to cover the 240 square foot mitigation area (see Table 1 below). This plant spacing is based on DEP’s guidance.

**TABLE 1 – BUFFER ZONE MITIGATION PLANT LEGEND**

**TREES**

SPECIES	SIZE (height)	NUMBER
Flowering Dogwood ( <i>Cornus florida</i> )	5 to 6 feet	2
Total		2

**SHRUBS**

SPECIES	SIZE (height)	NUMBER
Witch Hazel ( <i>Hamamelis virginiana</i> )	2 to 3 feet	2
Black Chokeberry ( <i>Aronia melanocarpa</i> )	2 to 3 feet	2
Total		4

5. Upon completion of planting, the root zones of the plants will be mulched with a layer of leaf litter or other natural organic mulch.
6. The remaining restoration area will be scratched and seeded with a conservation/wildlife seed mix at the rate specified by the supplier. Please refer to the seed mix profile included on the proposed mitigation plan for more information.
7. The erosion control barriers will be disassembled and properly disposed of once all site work has been completed and the buffer zone mitigation area has been fully stabilized.
8. A maintenance schedule for irrigation and pruning (as necessary) will be established by the applicant.
9. The restoration area will be inspected each fall for non-native invasive or unwanted plants for a two-year period. If non-native invasive species are found, they will be uprooted and removed from the area.

### **5. Planting Requirements**

Within the buffer zone mitigation area all trees will be installed to a depth as measured from the trunk flare to the bottom of the root ball. The shrubs will be installed in a hole 1.5 feet larger than the ball of the plant and the hole will not be deeper than the depth of the root ball. The hole will be backfilled with soil of the same mix as existing within the surrounding area and compost or other organic amendments will be added to the backfill to increase water-holding capacity. Watering will be of sufficient quantity to penetrate the soil to a depth of eight inches, which will meet the moisture needs of the plant without saturating the soil. All plantings will be done by hand during early spring (March 15<sup>th</sup> to April 30<sup>th</sup>) or late fall (October 15<sup>th</sup> to November 15<sup>th</sup>) seasons and supervised by a qualified wetland scientist. Please note that seed mix germination is optimal in the spring season when soil temperatures are above 45 degrees. If necessary, the plants may require a hand sprayed application of deer repellent to prevent plant death by browsing deer.

### **6. Summary**

Erosion and sediment control measures will be implemented and maintained throughout the duration of the construction process to prevent the conveyance of sedimentation into environmentally sensitive areas. Disturbed areas will be stabilized upon the completion of work, and in the event that intense rainfall is expected, reinforcing control measures will be installed as needed to protect all wetland resource areas. Stockpiling of soils, if any, and materials shall be located beyond the 50-foot buffer zone and surrounded by the erosion controls as necessary. Erosion control measures shall remain in place and be maintained until such time that a Certificate of Compliance has been issued by the Hingham Conservation Commission, stating that the project has been constructed in accordance with the conditions set forth in the Order of Conditions.