

Jeb Pittsinger
16 Beverly Road Reading, MA, 01867

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PROJECT NARRATIVE

Location

The site is located on the northwest side of Beverly Road, east of the Interstation 93 on-ramp and southwest of Grove Street. The parcel encompasses approximately 1.03 acres of and contains a single-family home with a wooden deck along the southern edge of the house, a paved driveway, and a landscaped yard. Approximately 15 feet from the rear of the house is a reinforced concrete retaining wall with a chain-link fence embedded into the top of the wall. The retaining wall is constructed of reinforced concrete and is approximately 10 to 15 feet tall and descends to a forested wetland system as the bottom of the slope. Extending along the bottom and directed adjacent to the bottom of the wall is a shallow ridge of side-cast material, excavated when installing the retaining wall. Topography on the site slopes steeply down to the northwest in the areas directly north and south of the wall. The existing retaining wall is within the 25 ft. Zone of Natural Vegetation and all areas above the wall have been maintained. The existing single-family house is also within the 25 ft Zone of Natural Vegetation. The wall has active weep holes and the dwellings footing drains exit from the face of the wall.

A secondary retaining wall exists to the northeast of the single-family dwelling. This modular block retaining wall is approximately 4 ft tall and approximately 30 ft long. The wall was installed by the homeowner but was not previously permitted. It is being included within this NOI for approval.

Resource Areas

The site contained inland bordering vegetated wetlands and were delineated by a certified wetland scientist from Oxbow Associates, Inc. in October of 2022.

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There is a scrub-shrub wetland located directly northwest of the house that expands into an emergent wetland further to the north and is associated with a series of intermittent streams and excavated canals. The streams flow northward where they converge with the Ipswich River. According to the latest USGS topographical maps and the USGS StreamStats program, there are no perennial streams within 200-feet of the subject property.

Additional recourse areas and or their associated buffers are not within the project limits.

Oxbow Associates delineated the greatest horizontal extent of the wetland resource areas with blue plastic flags labeled A1 to A9 based on topography, hydric soils, predominance of wetland vegetation, and other indicators of hydrology, including the limit of standing water, silt-stained leaves, and buttressed tree roots. The A-series flags delineate the edge of the Bordering Vegetated Wetland (BVW; 310 CMR 10.55) along the toe of slope of the retaining wall. The Wetland Evaluation Mapp (Figure 1) shows the location of these flags and the estimated buffer zones which extend onto the property.

Vegetation associated with the wetland includes, red maple (*Acer rubrum*), eastern white pine (*Pinus strobus*), yellow birch (*Betula alleghaniensis*), pin oak (*Quercus palustris*), sweet pepperbush (*Clethra alnifolia*), highbush blueberry (*Vaccinium corymbosum*), glossy buckthorn (*Frangula alnus*), common winterberry (*Ilex verticillata*), multiflora rose (*Rosa multiflora*), poison ivy (*Toxicodendron radicans*), cinnamon fern (*Osmundastrum cinnamomeum*), royal fern (*Osmunda regalis*), sensitive fern (*Onoclea sensibilis*), evergreen wood fern (*Dryopteris intermedia*), skunk cabbage (*Symplocarpus foetidus*), jewelweed (*Impatiens capensis*), beggar-ticks (*Bidens* spp.), irises (*Iris* sp.), tussock sedge (*Carex stricta*), and common reed (*Phragmites australis*).

Vegetation associated with the upland areas includes, oaks (*Quercus* spp.), black cherry (*Prunus serotina*), eastern white pine, white oak (*Q. alba*), juniper (*Juniperus* spp.), maple-leaved viburnum (*Viburnum acerifolium*), Japanese barberry (*Berberis thunbergii*), Asiatic bittersweet (*Celastrus orbiculatus*), Virginia creeper (*Parthenocissus quinquefolia*), grape (*Vitis* spp.), roundleaf greenbrier (*Smilax rotundifolia*), black raspberry (*Rubus occidentalis*), northern dewberry (*Rubus flagellaris*), wintergreen (*Gaultheria procumbens*), garlic mustard (*Alliaria petiolata*), Pennsylvania sedge (*Carex pensylvanica*), bedstraw (*Galium* spp.), and goldenrod (*Solidago* spp.)

While investigating the wetland resource area on the site, OA documented soil profiles throughout the area in question. Portions of the delineation coincide with the extent of the sidecast material excavated during the wall installation. Evidence of historic manipulation could be observed in the areas where work occurred. Soils examined inside the delineated wetland, 13-foot north of flag A3, exhibited a buried O-horizon (organic) 5-inches below sandy-loam fill material, followed by a depleted matrix, indicative of a high-water table and sufficient hydrology for a wetland.

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Horizon	Depth	Color	Notes
O	1-0"	10YR 2/1	Fibric, organic
A ₁	0-5"	10YR 2/2	Sandy loam
O _b	5-12"	10YR 2/1	Fibric, organic
C ₁	12-18"+	10YR 4/2	Course sand with 5% gravel, stripped matrix

Soil profiles observed within the lawn were composed of backfilled material deposited following the construction of the retaining wall.

According to the 15th Edition (effective August 1, 2021) of the Natural Heritage and Endangered Species Program’s (NHESP), Massachusetts Natural Heritage Atlas and the 2021 MassGIS data layers, there are no mapped habitats for state-listed wildlife species or certified or potential vernal pools on or immediately adjacent to the property.

According to the latest FEMA National Flood Insurance Program map (25017C0292E, effective June 4, 2010) a portion of the property is mapped as Zone “X,” indicating that it is within the 500-year floodplain, but is not mapped within the 100-year floodplain, indicating there is no Bordering Land Subject to Flooding (BLSF; 310 CMR 10.57) on the property

Proposed Project

The project is proposing to install a single car garage with accessory apartment (above), retaining wall, driveway extension, patio, grading, associated utilities, and a deck to replace and expand the existing. Four existing trees (over 6 inches) are proposed to be removed and the applicant is proposing landscaping throughout the project that will replace the trees according to the standard tree and shrub replacement guide. All elements will be within the 100 ft buffer zone of a bordering vegetated wetland. The garage, site work and deck will be within the 35 ft No Structure Zone and the 25 ft. Zone of Natural Vegetation. However, both the existing retaining wall and single-family residence are within the 35 ft No Structure Zone, and the 25 ft. Zone of Natural Vegetation.

The existing lot is 1.03 acres +/- and is current 97% open space. The proposed changes maintains over 93% open space.

Footings drains for the proposed garage will connect to the existing discharge. No surface run off will be discharged. No catch basins are currently located in the area of the property and all impermeable areas will drain to permeable areas. Engineered infiltration is not recommended in the area of the proposed project due to the existing retaining walls and basement. The existing retaining wall has weep holes to limit the amount of hydrostatic pressure behind the wall. If the drainage and weep holes are working correctly, any water that infiltrates near the wall will exit out the weep holes. If the drainage and weep holes are not working correctly, water that infiltrates near the wall could build up and cause the existing wall to fail.

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Town of Reading General Bylaws and Wetland Protection Regulations

Section 3 Performance Standards for Resource Areas

D Zone of Natural Vegetation

1 Bordering any wetland, the Commission may require a Zone of Natural Vegetation (ZNV) of sufficient width and vegetative community type to assure that silt, soil, fertilizer in solution, organic chemicals, herbicides, organic manures, oils, or petroleum products which may be carried by surface run-off shall not reach that wetland, but instead will be trapped by the natural mulch, soil and roots; and that light levels and temperature shall be moderated; and that dispersal of seeds of exotic or otherwise disruptive plant species, such as phragmites reed and purple loosestrife (*Lythrum salicaria*) shall be avoided; and that other alterations shall be avoided or mitigated within the wetland.

The existing retaining wall and existing single-family house is within the 25 ft Zone of Natural Vegetation. The retaining wall provides a significant barrier against run off. Current surface run off descends from the roadway and infiltrates at the top of the wall. Erosion control is proposed along the top of the existing retaining wall and adjacent slopes to mitigate any potential run off. The area at the base of the wall is unmaintained.

2 Under most conditions, a zone width of a minimum of twenty-five feet would be considered sufficient to accomplish this purpose. A wider ZNV may be required, depending on specific site conditions, such as grades, soil permeability or other impact potential.

See previous response.

3 Excavations for proposed structures extend beyond the finished limits of the structures. The extent of excavation varies depending on: the nature of the structure; the soil; depth of excavation; type of equipment used; construction techniques; slope; incidence of precipitation; groundwater flow; soil saturation and freeze/thaw cycles; existing vegetative cover; or other ground cover. An area of curtilage is developed around structures as a result of access for finish work, maintenance, foot traffic, and machine travel such as lawnmowers; and to provide a clear area for security; and to prevent moisture damage and physical damage from shading and plant structures such as tree limbs.

All excavation will be within the developed portion of the property and the existing retaining wall will remain between all construction work and the delineated wetland.

4 To protect the integrity of the Zone of Natural Vegetation, including the associated root system and canopy, no new foundations, including footings, frost walls or other in-ground structures, shall be permitted within ten feet of the ZNV. Depending on special site conditions, a greater distance may be required. Associated structures, including but

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not limited to the following: cantilevered structures, bay windows, eaves, and, garrisons, or other overhangs, may protrude to no closer than seven feet from the ZNV.

The proposed work will all occur on developed portions of the property that is currently maintained turf. No work will impact the areas that are not currently developed. Four trees will be removed within the maintained area and be replaced.

5 Notwithstanding the standards of the preceding paragraph, the Commission may grant a reduced setback distance of structures from the ZNV as a consideration of specific site conditions, such as limited vegetative cover or an existing developed condition, and provided that a permanent physical delineation, such as a solid hedge or an appropriate permanent fence or wall, of sufficient height, shall be provided and shall be maintained between the structure and the ZNV.

A reduced setback distance is requested considering the following:

- *Physical Delineation: The existing retaining wall is between 10 and 15 feet tall, over 120 ft in length and constructed on reinforced concrete.*
- *Development: All proposed work is within previously developed areas with limited vegetative cover.*

6 Permanent markers shall be installed and maintained in convenient locations along the limits of the ZNV, such as at any corners or along a radius, no more than fifty feet apart. Markers may be stone or concrete bounds, metal pipes or rods, trees, shrubs or other structures as approved.

The existing retaining wall is located between the developed and undeveloped portions of the property and provide a permanent demarcation of the wetland area.

Standard replacement Tree and Shrub policy Reading Wetland Protection Bylaw Section 7.1.

1. Planting within the buffer zone must be a native species or cultivar of a native species approved in advance by the Conservation Commission.

Three trees have been previously removed on the property, two trees (oak and ash) within the 100 ft. buffer and one tree (hemlock) within the Zone of Natural Vegetation. These will be replaced according to the tree replacement property. The applicant is proposing landscaping through the project that will include native species as agree with the Conservation Commission.

2. A tree six inches or greater in caliper that is cut with a remaining tree trunk that is between 8-15 feet tall above grade (called a snag) does not require the installation of a replacement plantings. This option may be preferred by the Commission when a large tree threatens structures but is within the Zone of Natural Vegetation. These snags provide habitat and food for wildlife.

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No snags are being proposed.

3. If any tree within the Buffer Zone is cut down without leaving a snag, the tree shall be replaced with new plantings according to the replacement Tree and Shrub schedule below.

The applicant is proposing landscaping through the project that will include native species as agree with the Conservation Commission.

4. Replacement plantings must be installed within 180 days of the day the existing tree is cut. Replacement plantings that do not survive for at least two growing seasons must be replaced. No Certificate of Compliance shall be issued if the plants have not been established for at least two growing seasons without an established surety acceptable to the Commission.

All replacement plantings will be installed on a timeline agreed with the Conservation Commission.