

Definitive Subdivision Open Space Development: Direct Impact Report
Revised: October 2019

1) Environmental analysis:

The site, designated by the assessors as R07-1-0, is in the southern portion of the town of Littleton, MA. The site is composed of a variety of different soil types ranging from hydraulic soil group B to D. Located throughout the site are Bordering Vegetative Wetlands (BVW) and a stream flows outside the North Western property limit. Due to the various wetland fingers of BVW located on site, work is proposed to be done within the 100' Buffer, and one wetland crossing is proposed to reach an upland area of development. The work associated with this project will comply with the Wetlands Protection Act as well as the Town of Littleton Wetland Bylaw.

Vegetative coverage analysis

The site consists of a variety of landscapes including wetlands, mature trees, vegetative areas, and open fields. The existing house, 195 Tahattawan Road, will be retained. The intent is to maintain the existing house and associated out structures on a lot. The land to the south and east of the house is mostly meadow with the land sloping from the east to the west. Most of the property to the west and southwest of the house is wooded with a mix of deciduous and evergreen trees. The property has several ridges that run north south from Harwood Ave to the rear of the property.

Visual Analysis

The property fronts on Tahattawan Road and Harwood Ave. There is a meadow to the southeast of 195 Tahattawan Road yet the view of it is blocked by a hedgerow of trees east of 195 and perpendicular to Tahattawan Road and by a hedgerow along Tahattawan Road. The hedgerow street scape along Tahattawan Road and the wooded edge along Harwood Ave provide a vegetative canopy over much of the project site's frontage. By developing the property as an Open Space Development most all of the vegetative canopy along the existing roads will remain intact. The visual character of the property is the canopy over the adjacent roads. There are no vistas to speak of on or across the project property.

Surface water and groundwater quality and level

The proposed development of single-family homes is subject to the Massachusetts Stormwater Management Standards. Best management practices proposed will include a combination of closed and open drainage in a de-centralized manner. The project will use catch basins, a sand filter, a sediment forebay, and an infiltration basin. The majority of roof run off will be collected within the above BMP's. Proposed lots 1 and 2 will use Stormtech Chambers to capture and infiltrate roof runoff. As outlined in the Stormwater best practices, runoff will be treated to remove eighty percent of the Total

Suspended Solids (TSS) prior to infiltration or discharge. Domestic waste water will be treated through on-site shared septic system design, Perc-Rite drip system, in accordance with the Title 5 and the Littleton Board of Health regulations. The domestic wastewater will be collected via an E-One low pressure force main, and pumped to a common septic tank, and dosing chamber before being pumped to the leaching area.

Effects and priority and estimated habitat for rare and endangered species, outstanding botanical features and scenic or historic environs

The subject property is not within any Estimated Habitat for Rare or Endangered Species. This is based upon the most recent mapping on the MASS GIS layer for NHESP. There is a flagged potential vernal pool located just off the subject property to the northeast of the site. The homestead at 195 Tahattawan Road is one of the older dwellings in Littleton and the surrounding community having been built in the early 1700's. Because of the historical significance, the existing dwelling will remain.

Capability of soils, vegetative cover and proposed erosion-control efforts to support proposed development

Based upon the Natural Resources Conservation Service Web Soil Survey, the project site has a wide variety of soil groups. The site includes Canton, Carlton-Hollis-Rock outcrop complex, Paxton, Woodbridge, Ridgebury, Whitman and Freetown Muck soils. These soils will help direct the design of the septic systems and stormwater management based on their hydrologic group ratings and percolation rates. The type and classification of the soils will also have an impact on the type of best management practices used for the development.

Erosion controls will be used throughout the development during the construction process until the project has been completed and stabilized. These will include Construction entrance(s), siltation barriers, silt sacks and erosion matts. Using best management practices, the project will protect the resource areas from unintended impacts.

Relationship to the requirements of the Wetland Protection Act

The development of the project will require the filing of a Notice of Intent for a detailed approach to the work within the Wetland Protection and the Littleton Conservation Commission's jurisdiction. Stormwater management, the access to various dwellings and yard areas will require review and development in harmony with the State and local regulations.

2) Traffic Study (Moderate Project):

See traffic study prepared by The Engineering Corp.

Goldsmith, Prest & Ringwall, Inc.

3) Sanitary Sewer Study:

As mentioned previously the project will have on-site shared septic system, Perc-Rite drip system, designed in accordance with the Massachusetts Title 5 and the Littleton Board of Health regulations. The domestic wastewater will be collected via a E-One low pressure force main, and pumped to a common septic tank, and dosing chamber before being pumped to the leaching area. The proposed system will have no impact on existing sanitary systems.

4) Water Study:

Town water exists on both Tahattawan Road and Harwood Road. The project proposes to extend the use of the public water system into Dennis Circle. The proposed water mains, services, and hydrants have been designed in accordance with the Littleton Water Department. See provided emails from the Town of Littleton Water Department.

5) Public Works Cost:

After speaking with Chris Stoddard, from the Town of Littleton highway Department (LHD) about aggregate costs per lane mile for projected Public Works costs, the budget for LHD is broken down as follows:

\$674,212	Salary
\$74,717	Expenses
\$76,300	Road Maintenance
\$200,000	Snow Removal (annually projected, including roof shoveling)
\$1,025,229	Total

The Town of Littleton contains roughly 62 miles of roadway, therefor, the cost per mile is \$16,536±/mile. Healy Corner is proposed to be 0.12 miles of public road for an annual Public Works cost of \$2,036±.

6) Municipal Service Costs:

Given the approximate proposed sale price for each dwelling to be around \$700,000-\$1,000,000 (two back lots) to calculate the tax revenue generation for the entire Healy Corner Subdivision, given the tax value of \$18.24/\$1,000.00, is as follows:

15 Lots valued at a conservative \$700,000±, will generate \$12,800± per lot annually; 2 Lots valued at a conservative \$900,000±, will generate \$16,500± per lot annually; Meaning Healy Corner as an entire development will generate roughly \$225,000± annually. It is under our impression the annual tax revenue for the entire project will offset both Municipal service and Public Works costs.