

PROJECT NARRATIVE
Revised July 6, 2016

Atlantic Subaru Improvements
124 Waterhouse Road
Bourne, Massachusetts

EXISTING SITE DESCRIPTION

The project area includes two parcels, lot 152 (.94 acres) & lot 153 (3.39 acres) located along the west side of Waterhouse Road at Latitude: 41° 43' 35.6376" N Longitude: -70° 35' 8.7036" W. The property is defined by the Bourne Assessors Department as Map 27 Parcels 152 & 153 and is within the Business 4 zoning district under the Bourne Zoning Bylaw. Lot 153 is abutted by Dornick Road (dirt road) to the west, lot 152 to the north, and Bayview Campground to the south. Lot 152 is abutted by a wooded vacant Lot 154 to the west, Lot 153 to the south and a wooded vacant lot 151 to the north. Lot 153 is currently developed as an automotive dealership with wooded buffer along the north, south and west boundaries. The general topography of the site slopes from south to north with the steepest grades along the southern and western boundaries. The elevation across the property project area varies from 144 to 111 feet above mean sea level.

According to the Barnstable County Soil Survey, the soils underlying the site are classified as Barnstable sandy loam (BbC), which is described as "very stony, moderately well drained soils formed in glacial fluvial deposits on outwash plains, delta, kames, and ice contact deposits". The hydrologic soil group for this soil is A with an estimated infiltration rate of 8.27 in/hr. Based upon the Cape Cod Commission GIS department groundwater contours (August 1998) the depth to water is estimated at approximately elevation 40 feet, which is 80 to 100 feet below existing grade depending upon the specific location at the site.

The site is located within the Bourne Back River Area of Critical Concern (ACEC) and the project area is located entirely within the X-Zone as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel Number 255210 0008F revised August 9, 1999.

Utilities

Existing utilities for Lot 153 are available on the property and include municipal water as well as natural gas, electric, and cable. The existing site drainage system is contained on site and includes deep sump catch basins, which discharge to recharge basins for stormwater management. Public sewers are not available in this area; therefore, an onsite waste water treatment system is located under a portion of the parking area north of the existing building.

Lot 152 is vacant, therefore there are no existing utility connections located on the lot. There is a 20 foot utility easement off the southern boundary which includes both gas and water service to Dornick Road.

Wetland Resources

There is no Massachusetts Department of Environmental Protection (MADEP) regulated wetlands located on the property.

Rare Species Habitat

Lot 153 is not located within critical habitat for endangered or threatened species.

Lot 152 is located within critical habitat for endangered or threatened species.

PROPOSED SITE IMPROVEMENTS

The Applicant proposes to construct a 8,500 square foot addition to the existing service facilities including 8 new service bays, drive thru check-in, customer lounge and showroom. Due to the building expansion, 20 customer parking spaces and 18 display spaces will be eliminated from the existing facilities located on lot 153. Therefore, an additional parking and vehicle display area will be constructed on the abutting Lot 152 to provide an additional 111 vehicles spaces. A summary of the proposed improvements is provided below.

Existing Building Area	= 11,100 sf
Proposed Addition	
• 8 Service bays	= 3,360 sf
• Customer Lounge	= 1,363 sf
• Showroom	= 1,980 sf
• Drive Thru	= 1,800 sf
<hr/> Total Proposed Addition	<hr/> = 8,503 sf

Total Building Area = 19,603Sf

Total Existing Paved Surface (Lot 153 only)	= 37,045 sf
Additional Proposed Paved Surface (Lot 152)	= 23,500 sf
Additional Proposed Paved Surface (Lot 153)	= 1,742 sf

Total Impervious Area = 62,287 sf

Existing Spaces

Display	148
Customer/Employee (includes 1 handicapped space)	20
Gravel Lot (Rear)	20
<hr/> Total Existing Spaces	<hr/> 188

Display (Existing)	148
Spaces Removed	-18
Spaces Converted To Customer (Includes Handicapped Space)	-26
<hr/> Total Existing To Remain	<hr/> 104

Customer/Employee (includes 1 handicapped)	20
Customer/Employee Removed	-20
Customer/Employee Added (Converted From Display)	+25
<hr/> Total Customer/Employee Parking	<hr/> 25

Gravel Lot 20

Total Existing Spaces to Remains 149

Proposed Spaces (Lot 153)	
Existing Display Spaces to Remain	104
New Display Spaces to be added	<u>12</u>
Total Display Spaces	116
Customer Spaces(Converted from display & includes 2 handicapped with aisle)	25
Formalized Gravel Lot	20
Proposed Spaces (Lot 152)	
New Display Spaces	<u>111</u>
Total Spaces Lot 153	161
Total Spaces Lot 152	111
Total Spaces	272

The total limit of disturbance associated with construction is 73,220 sf. All disturbed areas will be loam and seeded as indicated on the plans.

Stormwater Management

The proposed Stormwater Management System is designed to meet the Town of Bourne stormwater management requirements. Although this site does not fall within MassDEP wetland jurisdiction, the Massachusetts Stormwater Standards were applied to the stormwater management design to the greatest extent practicable. The stormwater management design includes a bioretention area to treat and infiltrate the first 1” of runoff from the proposed new vehicle display area on Lot 152. Overflow for the bioretention area will discharge, via a 24” diameter overflow structure, to an underground recharge chamber field located under the proposed new 23,500 sf paved vehicle display area. The design also includes the installation of three additional underground pre-cast recharge basins and the relocation of one catch basin and recharge basin system to accommodate the additional parking on Lot 153. As part of the proposed building expansion, the existing gravel parking lot at the rear of the facilities will be re-graded and formalized drainage provided with a vegetated swale, small infiltration basin and catch basin/recharge basins. Deep sump catch basins are provided to capture sediment and outlet pipe hoods are provided to separate oils and grease as well as floatable debris. Similar to the existing facilities, all vehicle maintenance will occur within the service bays. Wash water will be captured within the relocated underground holding tank, which will be continue to be emptied monthly.

Additional design details are included on the Grading and Drainage Plans and Stormwater Analysis and Drainage Report.

Utilities

Gas, electric, cable, and telephone service will be accessed through existing services currently installed on-site. Design and sizing of the proposed utilities will be coordinated with all appropriate utility companies.

Wastewater

The existing system is comprised of 2,000 gallon septic tank with a FAST 1.5 advanced treatment system, distribution box and conventional gravity leaching trench system for disposal. The original design plans, details and calculations were submitted to, and approved by, the Bourne Board of Health. The FAST 1.5 advanced treatment system was a requirement through the Cape Cod Commission (CCC) review. The

existing approved design flow for the site is 740 gallons per day (gpd) and is based on the plans provided to us dated March 19, 1997.

The proposed renovations require the existing septic system to be relocated to the new parking area north of the proposed building additions. A new 2,000 gallon septic tank with FAST 1.5 advanced treatment system, distribution box and leaching field are proposed. Some portions of the FAST 1.5 system can be reused for the new system. Based on the proposed uses, the calculated design flow based on Title 5 is 672 gpd, therefore there is no increase from the permitted design flow. The original system was permitted for a design flow greater than the actual flow. Septic system upgrade plans have been submitted and approved by the Bourne Board of Health.

Lighting

Exterior site and parking lighting will be kept to a minimum and include the following;

- Relocation of existing light poles along with additional building lighting as indicated on the plans; and
- 9 new lights in the proposed display area on Lot 152. The new lighting will be the same product used at the existing facilities. Cree Lighting - Edge Series.

<http://lighting.cree.com/products/outdoor/area/cree-edge-series>



Cree Edge Series Outdoor Area Square Luminaire

All exterior lighting fixtures and poles at the existing facilities are white with a 27-foot mounting height. The height includes a 24' pole set on 3' concrete base. Most of the fixtures are 233W on the exterior perimeter of the facilities and entrance drive with 137W fixtures and poles closer to the building and in the rear. The front fixtures may be a slightly higher wattage to highlight the cars along the front of the facility.

The lighting style for the new display area will match the existing facilities and will include white fixtures/brackets, 17' white poles with 3' concrete base (total height of 20 feet).

Landscape Design and Buffer

The landscape design objective for the proposed facility improvements is to minimize the impacts of the proposed addition through the creation of a sustainable landscape that blends into the site's natural

surroundings while providing aesthetic improvements to the overall site appearance. The overall design emphasizes the use of native plantings and strives to integrate the proposed development's needs into the site's surrounding environment.

Landscape buffers have been provided along Waterhouse Road on both properties. The proposed buffer on Lot 153 provides additional screening to the existing formal landscape while maintaining selective views and site lines of the facility. The proposed buffer enhancement will include a mix of trees, shrubs perennials and grasses. Proposed plant species include:

Trees

Red Maple
Gray Birch
Flowering Dogwood
Tupelo
Red Oak

Shrubs

Chokeberry
Summer Sweet
Sweet Fern
Inkberry
Winterberry
Bayberry
Low bush blueberry

Perennials and Grasses

Sea Oats
Blazing Star
Switch Grass
Bluestem
Golden Road

The proposed buffer on Lot 152 will maintain the existing vegetation between the proposed vehicle display lot and the road to the greatest extent practicable. Due to concerns with tree falling hazards, selective thinning is proposed within the buffer to remove deadwood and unhealthy/damaged trees. The selected trees will be flagged and assessed in the field by a certified arborist. The arborist's report will be provided prior to any tree removal. The proposed undisturbed vegetated buffer varies in width from 30' to 40' and will be supplemented with additional plantings along the interior edge. Supplemental buffer planting will include the native evergreen trees and a mix of native shrubs currently present on the vacant lot including:

Trees

White Pine
American Holly

Shrubs

Chokeberry
Bayberry
Mountain Laurel