

CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Council Gregory Schwartz, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 156 Otis Street

Date: May 2, 2018

CC: Barney Heath, Director of Planning
Jennifer Caira, Chief Planner
Lou Taverna, PE City Engineer
Nadia Khan, Committee Clerk
Michael Gelba, Sr. Planner
Natasha Bhan, Permits Engineer

In reference to the above site, I have the following comments for a plan entitled:

*Grading, Drainage & Utility Plan
Showing Proposed Conditions at
156 Otis Street
Prepared By: VTP Associates, Inc.
Dated: February 23, 2018
Revised: March 21, 2018*

Executive Summary:

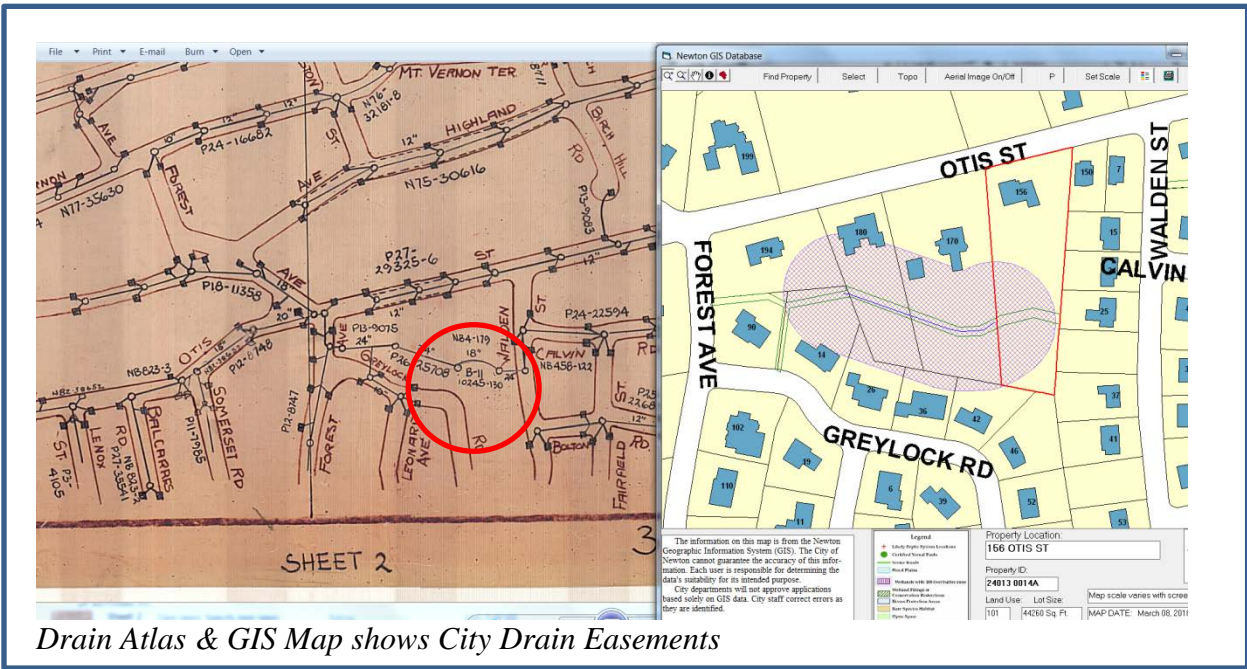
This project entails the demolition of an existing single family dwelling and subdividing the lot by creating a rear lot subdivision. If the special permit is approved an Approval Not Required (ANR) plan will be needed in accordance to Massachusetts General Laws Chapter 41 Section 81P requiring the two separate lots be combined into one lot.



Drain easement & Stream

The site is just over 1-acre; it is heavily wooded with mature trees, dense ground cover, and vines. The property is bound on the north by Otis Street, and on the west, south and east by residential homes. Towards the rear portion of the lot a 15-foot wide City Drain Easement traverses the site; according to the following plans drain pipes were installed to channel the brook. A stream was flowing on the surface during a site visit yesterday. The stream elevation drops approximately 18-feet from west to east. It is important to note that no heavy equipment will be allowed to cross the drainage easement.

The site has a high point of 138' near the western property line then slopes towards the eastern property line at elevation 118-feet. Near the southern property line a high point of 136' slopes fairly steeply down towards the drain easement. Ultimately the entire site drains from the west towards the east.



The engineer has designed a stormwater system to store the 100 year storm event from all impervious surfaces and calculations have been submitted to the Conservation Commission which proves that the systems will drain within the required 72 hours mandated by the DEP by having an overflow connection to the drainage system in Otis Street.

In light of this, the engineer needs to perform a *pre & post Closed Circuit Television (CCTV)* inspection of the drain pipe in Otis Street and submit capacity calculations to verify that there is no impact to the City system downstream. Otis Street was paved in 2015, a five [5] year moratorium on the street is in place until 2020; any trench work within the street will require curb line to curb line cold planning and overlay for the entire frontage of the property. Additionally cement concrete sidewalk and granite curbing will be required.

The Operations and Maintenance (O&M) plan for Stormwater Management Facilities is acceptable, it must be adopted by applicant(s)/homeowner(s), incorporated into the deeds; and recorded at the Middlesex Registry of Deeds. A copy of the recording instrument shall be submitted to the Engineering Division. It is imperative to note that the ownership, operation, and maintenance of the proposed drainage system and all appurtenances including but not limited to the drywells, catch basins, and pipes are the sole responsibility of the property owner(s).

The grades of the proposed retaining wall near the easterly property line do not have sufficient grades to clearly understand the height of this wall, this needs attention & clarification. A guard rail may be needed if the driveway elevations are above the proposed wall which appears to be the case based on the grades provided: (bottom of wall 116.6' and grades on the driveway between 122 - 123 feet).

The 15-foot wide driveway may not be sufficient for the Fire Department, specifically during the winter when snow banks on both sides of the driveway will further restrict the width for safe passage and apparatus setup.

Finally a couple of site sections would be useful to help clarify the grading specifically in areas of the retaining walls.

Construction Management:

1. How the site will be stabilized during construction, a substantial tree & ground cover removal program is expected, with a vast areas of bare soils exposed, how will the neighbors properties, the drainage easement, the brook and Otis Street be protected from siltation, excessive runoff during construction?
2. How will bare soil and stock piles be protected from scouring and runoff? A detailed construction management plan is warranted for this site.

Sewer:

1. The existing water & sewer services to the building shall be cut and capped at the main and be completely removed from the main and the site then properly back filled. The Engineering Division must inspect this work; failure to having this work inspected may result in the delay of issuance of the Utility Connection Permit.

2. With the exception of natural gas service(s), all utility trenches with the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E, detail is available in the City of Newton Construction Standards Detail Book.
3. All new sewer service and/or structures shall be pressure tested or videotaped after final installation is complete. Method of final inspection shall be determined solely by the construction inspector from the City Engineering Division. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and a written report is received by the City Engineer. *This note must be added to the final approved plans.*
4. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and a written report is received by the City Engineer. *This note must be added to the final approved plans.*

Water:

1. Fire flow testing is required for the proposed fire suppression system. The applicant must coordinate this test with both the Newton Fire Department and the Utilities Division; representatives of each department shall witness the testing, test results shall be submitted in a write report. Hydraulic calculation shall be submitted to the Newton Fire Department for approval.
2. All water connections shall be chlorinated & pressure tested in accordance to AWWA and the City of Newton Construction Standards and Specifications prior to opening the connection to existing pipes. *This note must be added to the final approved plans.*
3. Approval of the final configuration of the water service(s) shall be determined by the Utilities Division, the engineer of record should submit a plan to the Director of Utilities for approval

General:

1. Otis Street was paved in 2015, a 5 year moratorium on the street is in place until 2020; any trench work within the street will require curb line to curb line cold planning and overlay for the entire frontage of the property. Additionally cement concrete sidewalk and granite curbing will be required.
2. Prior to and demolition & construction the applicant shall have the culvert inspected via a Closed Circuit Television Inspection (CCTV). The Engineering & Utilities Division shall be given 48 hours prior notice to the date of the CCTV inspection to arrange an Inspector to witness the inspection.
3. Snow storage areas need to be identified on the site plan.
4. The existing driveway apron shall be remodeled as a compliant City sidewalk; the new driveway apron shall conform to the City's Construction standards.
5. The applicant's contractor shall apply with the DPW for Utilities Connection permits. Note that the winter moratorium will be in effect on December 15th no excavations will be allowed with public right of ways until April 15th.
6. All siltation control systems shall be installed and inspected by the Conservation Commission Agent(s) prior to any construction. *This note must be incorporated onto the final contract plans.*
7. All trench excavation contractors shall comply with Massachusetts General Laws Chapter 82A, Trench Excavation Safety Requirements, to protect the general public from unauthorized access to unattended trenches. Trench Excavation Permit required. This applies to all trenches on public and private property. *This note shall be incorporated onto the plans*
8. All tree removal shall comply with the City's Tree Ordinance.
9. The contractor is responsible for contacting the Engineering Division and scheduling an appointment 48 hours prior to the date when the utilities will be made available for an inspection of water services, sewer service, and drainage system installation. The utility in question shall be fully exposed for the inspector to view; backfilling shall only take place when the City's Inspector has given their approval. *This note should be incorporated onto the plans*
10. The applicant will have to apply for Street Opening, Sidewalk Crossing, and Utilities Connecting permits with the Department of Public Works prior to any construction. *This note must be incorporated onto the site plan.*

11. The applicant will have to apply for a Building Permits with the Department of Inspectional Service prior to any construction.

12. Prior to Occupancy Permit being issued, an As-Built Plan shall be submitted to the Engineering Division in both digital format and in hard copy. The plan should show all utilities and final grades, any easements and final grading, improvements and limits of restoration work. The plan shall also include profiles of the various new utilities, indicating rim & invert elevations, slopes of pipes, pipe material, and swing ties from permanent building corners. *This note must be incorporated onto the final contract plans.*

13. All site work including trench restoration must being completed before a Certificate of Occupancy is issued. *This note must be incorporated onto the site plan.*

Note: If the plans are updated it is the responsibility of the Applicant to provide all City Departments [Conservation Commission, ISD, and Engineering] involved in the permitting and approval process with complete and consistent plans.

If you have any questions or concerns please feel free to contact me @ 617-796-1023.