

CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Council Mark Laredo, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 19 -21 Beaconwood Road

Date: May 25, 2017

CC: Barney Heath, Director Planning Dept.
James McGonagall, Commissioner DPW
Ted Jerdee, Director of Utilities
Lou Taverna, PE City Engineer
Nadia Khan, Committee Clerk
Neal Cronin, Sr. Planner

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

19-21 Beaconwood Road
Newton, MA

Prepared by: Verne T. Porter, Jr., PLS

Dated: March 8, 2017

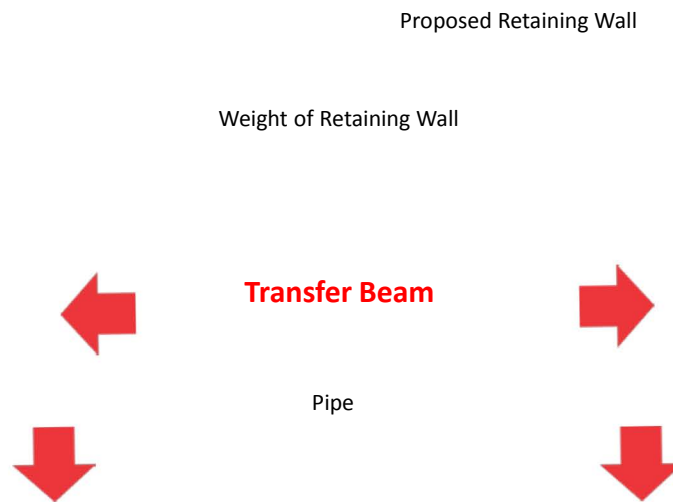
Executive Summary:

This application entails the demolition of an existing two family dwelling and the construction of a new two family unit on a 9,602 square foot (0.22 acre) lot. The site has 85 feet of frontage on Beaconwood Road along the southeast, commercial property to the northeast & west, and residential units along the south. The site is traversed by a City Utility Drainage Easement that runs [east to west] along the back yard of the lot. Should this permit be approved, the property owner shall obtain a License Agreement with the Law Department for the retaining walls and patios that are proposed over this easement.

Furthermore, if approved; prior to a Building Permit the applicant/contractor of record shall arrange for a Closed Circuit Television (CCTV) Inspection of the drain pipe prior

to construction and post construction prior to applying for a Certificate of Occupancy for either unit.

The site's topography has a high point at elevation 99-feet towards the front, and slopes to the rear at a low point within a depressed area at an elevation just below 95-feet. The engineer of record is proposing to construct retaining walls near the side property lines which would allow the site to be filled and flattened for use as a patio area. A concern of this is that the load carrying capacity of the drain pipe needs to be determined due to added weight of the retaining walls and added soil. At a minimum a registered geotechnical engineer shall submit a certified report that determines the capacity of said drain pipe, with the added loads. At a minimum the footings of the proposed retaining walls shall be "bridged" so that the weight of the proposed retaining walls do not bear down onto the drain pipe but rather distribute the load beyond the pipe limits, see sketch below.



The proposed retaining walls do not appear to act as “dams” since the property on either side of this lot slopes away from the respective common property lines.

The engineer of record has designed a stormwater collection and infiltration system to substantially reduce runoff from the site, in conformance to the Department of Environmental Protection (DEP) and DPW Stormwater Policy.

Furthermore the Operations & Maintenance plan submitted is acceptable. The O&M must be adopted by the property owner(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 and the City Clerk.

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).

Finally in concert with the installation, abandonment and remodeling of the driveway aprons, the entire frontage of sidewalks shall be reconstructed to current standards using cement concrete for the aprons & walks, and granite curbing.

Construction Management:

1. A construction management plan is needed for this project. At a minimum, it must address the following: staging site for construction equipment, construction materials, parking of construction worker's vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of contractor. It shall also address any anticipated dewatering during construction, site safety & stability, and impact to abutting properties.
2. Stabilized driveway entrances are needed during construction which will provide a tire wash and mud removal to ensure City streets are kept clean.

Environmental:

1. Has a 21E investigation & report been performed on the site, if so copies of the report should be submitted the Newton Board of Health and the Engineering Division.
2. Are there any existing underground oil or fuel tanks, are they to be removed, if they have been evidence should be submitted to the Newton Fire Department, and Newton Board of Health.

Sewer:

1. The sewer service configuration is unacceptable; a manhole shall be installed at the junction of the two service connections which then connects to the main.

2. A detailed profile is needed which shows the existing water main, proposed water service(s), sewer main and proposed sewer service(s) with the slopes and inverts labeled to ensure that there are no conflicts between the sewer services and the water service. The minimum slope for a service is 2.0%, with a maximum of 10%. Pipe material shall be 6" diameter SDR 35 PVC pipe within 10' of the dwelling then 4" pipe per Massachusetts State Plumbing Code. In order to verify the slopes and inverts of the proposed service connection, two manholes of the existing sanitary sewer system need to be identified on the plan with rim & invert elevations. The crown of the service connection & the sewer man need to match.
3. 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.
4. Use City of Newton Details in lieu of the details submitted they are in PDF format on the City's website.
5. 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.
6. 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.***
7. 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.

Water:

1. 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.
2. 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. 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*
2. All tree removal shall comply with the City's Tree Ordinance.
3. 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.*
4. 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.*
5. The applicant will have to apply for a Building Permits with the Department of Inspectional Service prior to any construction.
6. 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.***

7. All site work including trench restoration must be 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.