

CITY OF NEWTON  
Department of Public Works  
ENGINEERING DIVISION

MEMORANDUM

To: Council Rick Lipof, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 180 Wells Avenue

Date: January 10, 2020

CC: Barney Heath, Director of Planning  
Jennifer Caira, Chief Planner  
Lou Taverna, PE City Engineer  
Nadia Khan, Committee Clerk  
Neil Cronin, Sr. Planner

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

180 Wells Avenue  
Prepared by: Site Design Engineering, LLC.  
Dated: December 9, 2019

Executive Summary:

In 2015 a Special Permit was Granted for this site for an attached building and expanded parking lot, and a second driveway apron with drainage improvements. Based on a site visit the following improvements were made: such as the driveway apron from the rear portion of the property to the south side of Wells Avenue; and it appears some drainage system was installed, (see following photos).

This submission has the same added building connected to the existing office space and a detached parking garage.



*Drainage swale and new driveway apron*

*This driveway apron transverses a City Utility Easement that needs a License Agreement*





*Some sort of drainage structure yet uncompleted.*

The drainage analysis submitted utilizes appropriate methodology, however the analysis is based on the City's old stand of 6.5 inches over a 24-hour period the current standard is 8.78-inches, the Hydrocad calculations need to be resubmitted to reflect the current storm standard. The stormwater management system Best Management Practices (BMP) is partially expectable, however it does not address sweeping intervals of the parking lot and parking garage, nor the cleaning and removal of debris of gutters.

I have concerns about groundwater mounding within the vicinity of the proposed underground infiltration system, a mounding analysis will be required that demonstrates that localized groundwater mounding will not have a negative affect to the abutting property or to infrastructure within the City Easement. I will require that an impervious barrier be placed along the southerly side of the proposed infiltration system to help prevent horizontal migration of infiltrated water towards the abutter(s).

Although the soils logs locations are provided in the report and shown with a scaled down plan, I will require that they be shown accurately on Sheet C1.4 on the Drainage & Utility Plan.

Construction Management:

1. A construction management plan is needed for this project. At a minimum, it must address the following: staging site for construction materials and equipment, parking for construction workers vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of the general contractor. It shall also address anticipated dewatering during construction, site safety & stability, siltation & dust control and noise impact to abutters.
2. Stabilized driveway construction entrance(s) will be required for the duration of the construction which will provide a truck wash to prevent tracking of mud and silt onto City streets.
3. Catch basins within and downstream of the construction zone in Wells Avenue will be required to have siltation control installed for the duration of the project and must be identified on the site plan.

Drainage:

1. A final Operations and Maintenance (O&M) plan for the long-term maintenance of the proposed stormwater management facilities needs to be drafted and submitted for review. Once approved the O&M must be adopted by the applicant/property owner, 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.
2. 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, trench drains, and pipe(s) are the sole responsibility of the property owner(s).
3. When a connection to the City's drainage system is proposed, prior to approval of the Building Permit a Closed-Circuit Television (CCTV) inspection shall be performed and witnessed by the Engineering Division, the applicant shall retain a contractor that specializes in CCTV inspection. The applicant shall contact the Engineering Division 48 hours in advance to schedule an appointment. At the end of the inspection the video or CD shall be given to the inspector. Furthermore, upon completion of the connection to the drainage system a Post – Construction video inspection shall also take place and

witnessed as described above. This is required regardless of the connection point; the intent is to ensure that there are no downstream blockages or damaged pipe so that the contractor of record is not held accountable for preexisting conditions.

Environmental:

1. Has a 21E Investigation and report been performed on the site, if so, copies of the report should be submitted to the Newton Board of Health and Engineering Division.
2. Are there any existing underground oil or fuel tanks? Have they been removed, if they have been, evidence of the proper removal should be submitted to the Newton Fire Department and the Board of Health.
3. A General Construction Permit will be required as the construction activity area is greater than 1 acre of disturbance.

Sanitary Sewer & Domestic Water Service(s):

1. The sizing of the pump, pump performance curves, and hydraulic calculations will be required for the Utility Connection permit.
2. Details of the forced main connection into the sewer manhole are needed.
3. All new sewer service(s) shall be pressure tested in accordance to the City Construction Specifications & Standards and inspected via Closed Circuit Television CCTV inspection after installation is completed. A copy of the video inspection and written report shall be submitted to the City Engineer or his representative. The sewer service will NOT be accepted until the two methods of inspection are completed AND witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until these tests are completed to the satisfaction of the City Engineer.
4. All sanitary sewer manhole(s) shall be vacuum tested in accordance to the City's Construction Standards & Specifications, the sewer service and manhole will NOT be accepted until the manhole(s) pass the testing requirements. 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 to the satisfaction of the City Engineer and a written report of the test results is submitted to the City Engineer.

5. With the exception of natural gas service(s), all utility trenches within the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E up to within 18-inches of the asphalt binder level, after which Dense Grade Gravel compacted to 95 % Proctor Testing shall be placed over the CDF. Details of this requirement is the Engineering Division website "Standard Construction Details".
6. Fire Flow testing is required for the proposed fire suppression system. The applicant must coordinate the fire flow test with both the Newton Fire Department and the Utilities Division, representative of each department shall witness the testing. Test results shall be submitted in a written report along with hydraulic calculations that demonstrate the required size of the fire suppression system, these calculations shall be submitted to the Newton Fire Department for approval, and copies give to the Engineering Division.
7. All water services shall be chlorinated, and pressure tested in accordance to the AWWA and the City Construction Standards & Specifications prior to coming online. These tests MUST be witnessed by a representative of the Engineering Division.
8. Approval of the final configurations of the water service(s) shall be determined by the Utilities Division, the engineer of record shall submit a plan to the Director of Utilities for approval.

General:

1. All trench excavation shall comply with Massachusetts General Law Chapter 82A, Trench Excavation Safety Requirements, and OSHA Standards to protect the general public from unauthorized access to unattended trenches or excavations. Trench Excavation Permit is required prior to any construction. This applies to all trenches on public and private property. *This note shall be incorporated onto the final plans.*
2. All tree removal shall comply with the City's Tree Ordinance.
3. The contractor of record 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 services 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 Engineer's Inspector has given their approval. *This note shall be incorporated onto the final plans.*

4. The applicant shall apply for a Building Permit with the Inspectional Services Department prior to ANY construction.
5. Before requesting a Certificate of Occupancy, an As Built plan shall be submitted to the Engineering Division in both digital and paper format. The plan shall show all utilities and final grades, any easements and improvements and limits of restoration. The plan shall include profiles of the various new utilities including but not limited to rim & invert elevations (City of Newton Datum), slopes of pipes, pipe materials, and swing ties from permanent building corners. The as built shall be stamped by both a Massachusetts Registered Professional Engineer and Registered Professional Land Surveyor. Once the As built plan is received the Engineering Division shall perform a final site inspection and then make a determination to issue a Certificate of Occupancy. *This note shall be incorporated onto the final plans.*
6. All site work including trench restoration, sidewalk, curb ,apron and loam border (where applicable) shall be completed before a Certificate of Occupancy is issued. *This note shall be incorporated onto the final plans.*
7. The contractor of record shall contact the Newton Police Department 48-hours in advanced and arrange for Police Detail to help residents and commuters navigate around the construction zone.
8. If any changes from the final approved design plan that are required due to unforeseen site conditions, the contractor of record shall contact the design engineer of record and submit revised design and stamped full scale plans for review and approval prior to continuing with construction.

Note: If the plans are updated it is the responsibility of the applicant to provide all City Departments [ ISD, Conservation Commission, Planning 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 at 617-796-1023.