CITY OF NEWTON
ENGINEERING DIVISION

MEMORANDUM

To: Alderman Ted Hess-Mahan, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 170 Needham Street

Date: July 31, 2013

CC: Lou Taverna, PE City Engineer
Frank Nichols, PE Special Projects
Ted Jerdee, Superintendent Utilities
Linda Finucane, Associate City Clerk
Alexandria Ananth, Chief Planner
James Freas, Chief Planner
Stephen Pantalone, Planner

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

Retail Building
170 Needham Street
Newton, MA
Prepared by: Kelly Engineering Group, Inc.
Dated: 6/26/'13

Executive Summary:

The existing building on this lot is to be razed, and a new single story commercial building will be erected. The entire site is within the jurisdiction of the Newton Conservation Commission as it abuts South Meadow Brook.

The City has a trash grate at the inlet of the box culvert that lies between this property and #180 Needham Street. The trash grate collects debris that falls into South Meadow Brook; currently the City only has an easement along the brooks alignment. Access to this trash grate has been via the parking lot on #170 and based on a *"gentlemen's agreement"* between the property owner and the Utilities Division, which has work all these years; however with the placement of the proposed transformer & dumpster, assess will be hindered. I would recommend that the transformer & dumpster be relocated, and

if the access to South Meadow Brook & the trash grate via the new parking lot could be formalized in a format acceptable to the Law Department, it would be very helpful for the Utilities Division for future maintenance. (See photo).

Repaired Walls & Trash Grate: #170 is to the right in this photo.

An existing 15" reinforced concrete drainpipe from Jaconnet Street traverses this property and connects to the South Meadow Brook, which needs to be relocated. In concert with the relocation, a water quality structure should be installed prior to the final connection to South Meadow Brook; this will improve water quality being directed to the brook. Any construction or new landscape features within the limits of Needham Street will need a MassDOT Permit.

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.

Drainage:

1. Based on the narrative of the Stormwater Management Report a double catch basin will be utilized to collect runoff from the parking lot, what is not clear is the existing double catch basin to be re-utilized, if so that has a direct connection to the South Meadow Brook and short circuits the proposed "water quality" structure. The configuration or placement of the water quality structure is not fulfilling its design intent in this case. It should be placed after the double catch basin and before the outfall at the brook.

2. The relocation of the 15" drain pipe needs an easement, the easement is needed for the legal rights of the abutting properties along Jaconnet Street (a private way) since they own to the centerline of the street. Furthermore, it appears that drainage from the abutting lots are piped into the drain manhole within Jaconnet Street. The easement would memorialize the access for maintenance.

3. Details of the recharge chambers are needed, specifically: invert, bottom of stone elevation, depth to ground water. The top of the entire system shall have filter fabric placed over the crushed wash stone, then a 3" layer of Peastone and finally covered with filter fabric.

4. 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. This is for the 15" connection into the box culvert of South Meadow Brook.

5. 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 chambers, catch basins, and pipes are the sole responsibility of the property owner(s).

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. 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.

2. The existing water & sewer services to the building shall be cut and capped at the main and be completely removed from the site and 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**.**

3. Use City of Newton Details in lieu of the details submitted they are in PDF format on the City's website.

4. 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.

5. 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.***

6. 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. 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. For water quality issues a fire hydrant will be required at the end of the proposed water main. This hydrant will be utilized for flushing out the main as required.

3. 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.

4. 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. As of January 1, 2009, 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 is 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. *This note must be incorporated onto the site plan.*

7. All site work must be completed for a Certificate of Occupancy. *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.