

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 – 145 Warren Street

Date: February 22, 2021

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

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

*Topographic Site Plan
Showing Proposed Conditions at
#145 Warren Street
Newton, MA
Prepared by: VTP Associates Inc.
Dated: November 4, 2020
Revised: January 20, 2021
&
Turning Radius Plan
Prepared by: VTP Associates Inc.
Dated: February 12, 2021*

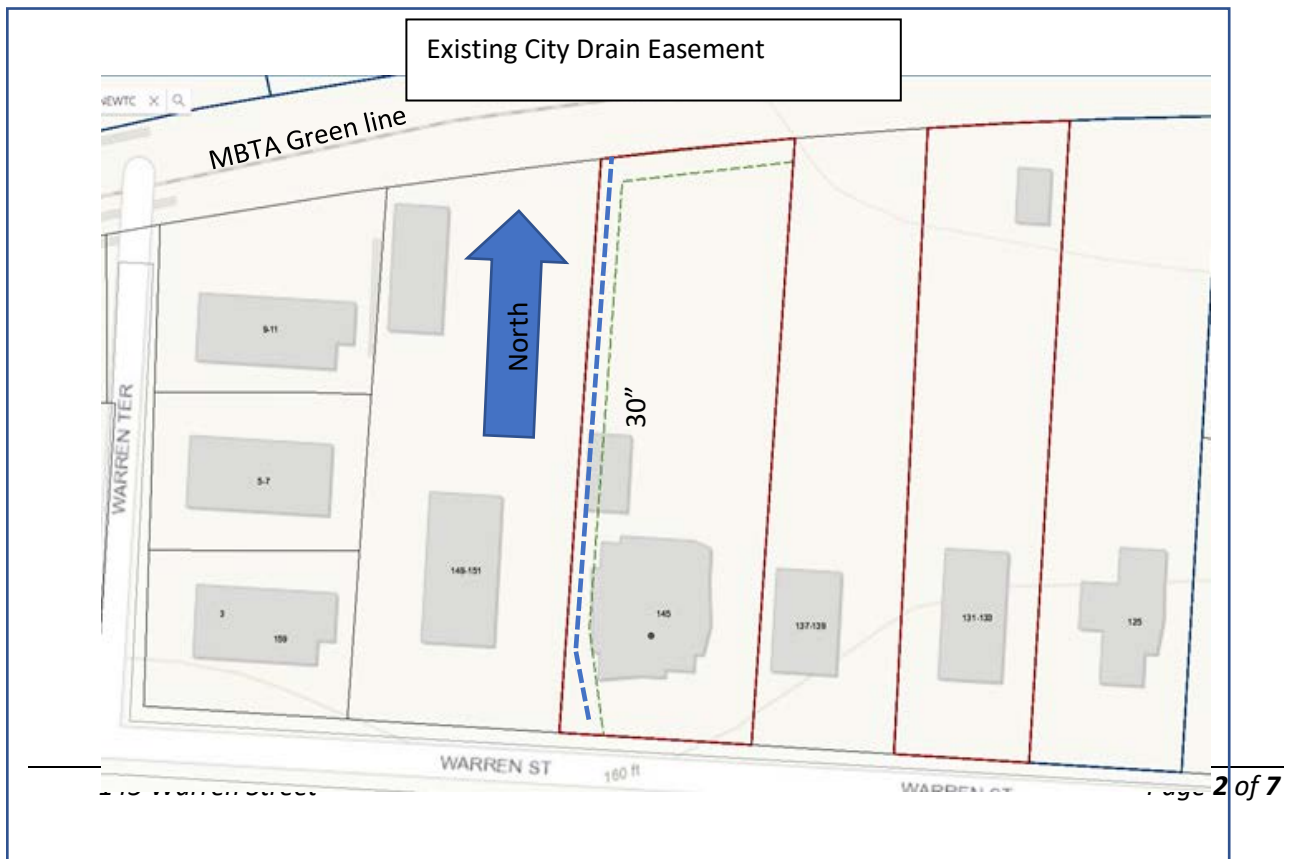
Executive Summary:

This application entails an addition to an existing circa 1930 single-family dwelling and the construction of three-additional unit residential units. The property has 22,383 square feet [0.51 acres] with 90 feet of frontage along Warren Street. The site is bound by residential

homes on the east & west, Warren Street to the south and the MBTA green line along its northern border. The site has a high point at elevation of 163-feet near Warren Street and slopes down towards the north near the MBTA tracks at elevation of 149-feet.

Access to the units, garages and auto court is provided via driveway located near the easterly property line. The driveway has a retaining wall near the property line for a distance of +/- 150-feet and is 6-feet at the high point. Retaining walls over 4 feet high will need a structural engineers design to ensure that the wall does not fail in (overturning, sliding or settlement) along with a safety fence along the top of the wall, detailed analysis including wall drainage and detailed grading and/or section(s), and finished surfaces will be required when applying for a Building Permit with the Inspectional Services Department.

A 10-ft. wide City drain main easement traverses the property along the north and west property lines, a 30-inch drainpipe transmits stormwater from the road collection system through the lot and into the wetlands along the MBTA. The design has a proposed retaining wall located adjacent to the drainage easement; should this application be approved; the actual position of the drainpipe must be delineated with a Closed-Circuit Television and sonic tracer to ensure that the pipe is within the easement and the construction of the proposed retaining wall and/or foundation of the proposed units do not interfere with the pipe. Post construction inspection of the 30" drainpipe via a closed-circuit television (CCTV) will also be required and should be part of any Board Order. Both CCTV inspections must be witnessed by a representative from Engineering.



The engineer of record has designed a drainage collection system consistent with the DPW Stormwater Management Policy that collects and infiltrates the 100-year storm event on site. The design includes four infiltration systems for infiltration of roof and driveway runoff. Test pit #2 indicates standing water at 28-inches (elevation 146.4) the bottom of drain system #3 is at 148.4 which provides the required 2-foot of separation; however, the test pit was conducted on January 28, 2019 it is likely that the seasonal high ground water (SHGW) during the spring season maybe higher. No dewater plan was provided, and a Construction Management plan is needed for evaluation.

System #3 is located in the rear yard, my concern with the siting of this system is the proposed location and long-term maintenance requirement. The Operations and Maintenance [O&M] plan indicates that the system needs to be inspected and cleaned, however; access to this system is difficult at best as it is placed behind the dwelling units, there is no easy access to clean the system. I recommend that this proposed infiltration system be located within the proposed auto-court for easier access. Additionally, system #4 has an overflow that will discharge to the wetlands along the MBTA, this overflow should be eliminated if this system is adjusted. The O&M plan does not include any provisions for bi-annual sweeping of the driveway and auto court, this is needed as it impacts the long-term performance of the infiltration systems.

Portions of the site are under the Conservation Commission jurisdiction in regard to wetlands and 100-foot buffer zone, the applicant has applied to the Conservation Commission for an Order of Conditions, minor adjustments to the drainage system was indicated in Frank Nichols Feb 3rd memo to the Conservation Commission.

Municipal utilities will be provided for the three units, additionally the sanitary sewer services will require individual pump systems. The design should incorporate a standby generator for these systems in the event of prolonged power outages since these systems do not have a large storage capacity.

The turning template plan indicates a 2010 BMW 5 Series making maneuvers into and out of various parking stalls, my issue is will the development have a restriction on the type of vehicle that can be accommodated? Different types of vehicles should be study such as a minivan, or SUV. Additionally, on sheets 2 and 3 the BMW is shown making the turns, however; it encroaches into the neighboring stalls that are empty. The plan should be updated to show the other stalls occupied and with various size vehicles then show updated turning movements for various size vehicles.

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 will be required to have siltation control installed for the duration of the project and must be identified on the site plan.

Drainage:

1. The Operations and Maintenance (O&M) plan for the long-term maintenance of the proposed stormwater management facilities needs to include the required sweeping of the driveway and the frequency of this maintenance. Once updated 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).

Environmental:

- 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.

Sanitary Sewer & Domestic Water Service(s):

1. Existing water and sewer services to building(s) shall cut and capped at the respective mains and completely removed from the main(s) and its entire length and properly backfilled. The Engineering Division must inspect and approve this work, failure to

having this work inspected will result in delay of issuance of the new Utility Connection or issuance of a Certificate of Occupancy.

2. 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.
3. 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.
4. 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".
5. 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.
6. 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.
7. 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. 5 Year Moratorium – if at time of construction the roadway is under a 5-year moratorium, the roadway must be milled and paved gutter-to-gutter for a distance of 25 feet in each direction from the outermost trenches.
2. 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.*
3. All tree removal shall comply with the City’s Tree Ordinance.
4. 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.*
5. The applicant shall apply for a Building Permit with the Inspectional Services Department prior to ANY construction.
6. 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.*
7. 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.*

8. 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.
9. 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.
10. *The engineer of record shall add the following attestation to the plans when applying for a building permit:*

I certify that the construction so shown was inspected prior to backfill and that all work conforms with the Approved Plan and meets or exceeds the City of Newton Construction Standards.

Signature

11. Clarification is needed as to how trash & recycling will be provided for the development.

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.