TOWN OF ARLINGTON
Department of Public Works
51 Grove Street
Arlington, Massachusetts 02476
Telephone (781) 316-3320 Fax (781) 316-3281
Engineering Division

Date: December 4, 2020
To: Jenny Raitt; Director of Planning and Community Development
From: Wayne Chouinard, Town Engineer
RE: Plan review for Thorndike Place – Nov 2020

The Town of Arlington Engineering Division is in receipt of the information related to the Comprehensive Permit Application for Thorndike Place provided by the DPCD on Monday Nov. 23, 2020. This plan set was developed for permitting purposes only. It is expected that a final review will be required for final construction level documentation.

Comments pertaining to the review of the site plan "Thorndike Place Comprehensive Permit", dated March 13, 2020 and revised November 3, 2020 are as follows:

Utilities: Water

- Calculations should be provided to ensure the distribution system for the area has capacity for increased demand for fire flow and domestic water supply without impacting the existing system or abutter's water volume and pressure.
- Utility Plans indicate connection to the existing water main located in Dorothy Road. The existing water mains were installed in 1931, 1946 and 1948 and are beyond the recommended service life. Any connection to the Town System should replace the water main, hydrants and gate valves as indicated on the Water System Schematic Sketch – Dorothy Road (attached).
- Connections to the Town water main require a triple gated connection to provide maximum shut-off and distribution control.
- Connections to the Town water main requires a tee connection .
- Consideration should be given for the the proposed water line connecting to the fire hydrant located in the southwest corner to be extended from the Littlejohn water main to provide and opportunity for the main connection to the building to be located outside of Dorothy Road and reduce bends and fittings to the hydrant.

Utilities: Sewer

- Up-gradient sewer flow, with peaking factor shall be determined and provided to document suitable capacity for proposed additional flow into the sewer system. Evaluation shall include the downstream sewer main to determine whether it will provide sufficient capacity for the intended increase in flow and address any added I/I potential.
- It is recommended that an Inflow/Infiltration (I/I) mitigation fee be assessed to be used to reduce I/I of the Town sewer system in the amount equal to four(4) times the design flow of the project.
- Due to the anticipated flow leaving the proposed building, sewer services should utilize 8" service lines and are required to discharge into a sewer manhole when entering the Town sewer collection system. (see attached Sewer System Schematic – Dorothy Road)
- Details of the oil/gas separators and proposed pump system should be provided.
- The underground infiltration system proposed in the parking lot located at the western edge of the project is not recommended in the vicinity of the existing sewer line/easement without requiring and upgrade or renewal of the existing sewer main.
- Prior to construction a pipe line evaluation shall be performed along the 14/18" sewer main. Upon completion of construction, a post- construction evaluation of the sewer main shall be performed. Any damaged and/or disturbed pipe shall be repaired/replaced.

Stormwater/Resource Areas:

- See previous comments pertaining to status of Isolated Vegetated Wetlands sent by email on December 3, 2020.
- Based on review of the Grading & Drainage Plan it is not clear how the proposed drainage system relates to the post-development routing diagram included in the Stormwater Report, particularly connection of subcatchment 3S and 7S to the drainage collection system.
- There are no details provided to review the stormwater runoff system on the building roof which is indicated to detain roof runoff.
- Plan should indicate all drainage and stormwater collection pipes or infrastructure, including downspouts or perimeter drains.
- Suitable documentation of groundwater conditions have not been provided. Deep observation test holes should be performed to identify soil conditions and observable groundwater indicators. Additionally, and due to the disturbed nature of the site, full depth monitor wells should be installed to a depth of 10 feet to document the probable seasonal high groundwater level. The Frimpter Method shall be utilized with the observed ground water readings and in conjunction with the USGS Groundwater Well Network. At a minimum these test pits should be installed in the proposed foot print of the building and in the areas of the proposed stormwater infiltration systems.
- Stormwater infiltration is not recommended over the existing sewer line/easement without upgrading or renewing the existing 14"/18" sewer main. Groundwater mounding calculations shall be provided and the infiltration system shall be placed a minimum of 2ft above the calculated ground water mound elevation as well as in a location such that the infiltrated water does not impact the sewer main.

Utilities: Other

- What are the off-site upgrade requirements necessary for the CATV requirements for proposed development? Will current utility pole and cable configurations accommodate the required cable, electric and telephone wires without the need for additional utility poles or improvements outside of the project locus? Any installation of new utility poles or underground conduit in the public right of way will require a Grant of Location from the Board of Selectmen. This information should be provided as part of the application process to evaluate the entirety of impacts and effects.

Pavement, parking and sidewalks:

- Please clarify the access/egress and parking configuration proposed at the front drop off/pick up entrance of the building including dimensions and turning radius. The parking space orientation does not conform to the expected traffic flow direction.
- Sidewalk widths proposed within the public right of way should be 5 feet in width.
- The proposed fire lane located in the rear of the building is very close to the building. It is recommended the fire lane provide a suitable buffer distance from the building to protect fire personell and apparatus in the event of building/wall collapse.
- Concrete sidewalks and driveway aprons should be installed along the frontage of the property.
- Current curb stones along the project frontage consists of small length cobbles. During the installation of new granite curbing, these small cobbles shall be removed and stacked and/or delivered to the DPW Yard.
- The main access driveway into the property appears to be an extension of Littlejohn Street. This may result in unintended entry into the property by the traveling public.
- Due to the location and alignment of the main driveway, egress of vehicles from theproject site during darkness will result in repetitive light intrusion on #24 Littlejohn Street from the headlights. Consider an alternative access location or prevention method for the abutter.
- Was consideration given to providing pedestrian access through the property to the pedestrian bridge located over Rte. 2 or to Margaret Street at the entrance to Thorndike Field?

Landscaping:

- Project should provide screening of parking areas and buildings from the immediate abutters. Large, mixed evergreens should be provided suitable to grow into a visual screen for the 3-4 story building. Parking areas should be shielded from abutters with suitably selected mixed Evergreen species.

- It is unclear if there are any existing public shade trees along the frontage of the proposed project. A public shade tree under MGL Chapter 87 is defined as "any tree 1-inch and larger dbh growing within the public right of way. Removal of public shade trees is not allowed without a Tree Hearing arranged and coordinated by the Arlington Tree Warden.
- Limits of disturbance, tree clearing and excavation for the project should be indicated on the plan.

Lighting:

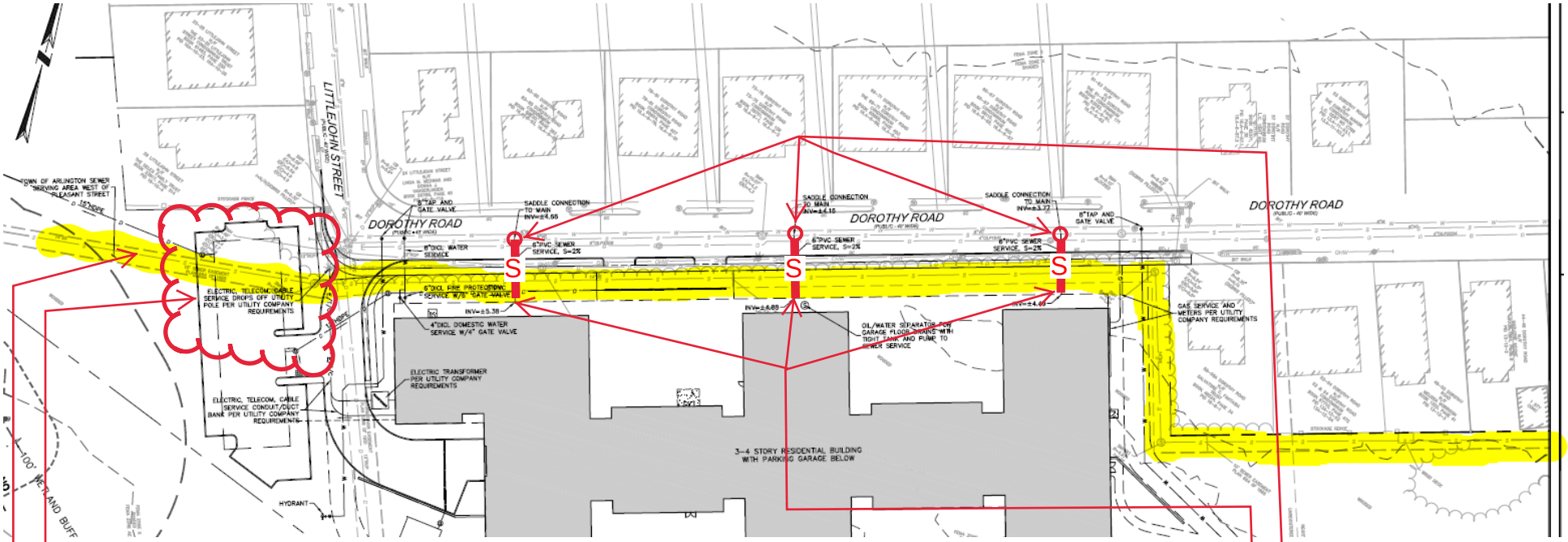
- A photometric plan should be provided to evaluate site lighting and light spillage at property lines. Night sky reduction, light pollution, cut off fixtures and glare should be addressed and carefully evaluated and documented.

Traffic:

- Comments pertaining to the Traffic Report is deferred to the Transportation Advisory Committee

Administrative:

- Consideration should be given to designing and providing wider sewer easement beyond 10ft. These easement width were typical in past generations of design but are found as the utilities are aging do not provide suitable room to perform all necessary work within the easement.
- Site plan should identify areas where delivery, drop off and other larger vehicles may require suitable turning radius requirements.
- Time of use restrictions for deliveries, trash pickup etc. to reduce impacts on adjacent neighborhood should be included.
- Signage – none included



Sewer System Schematic

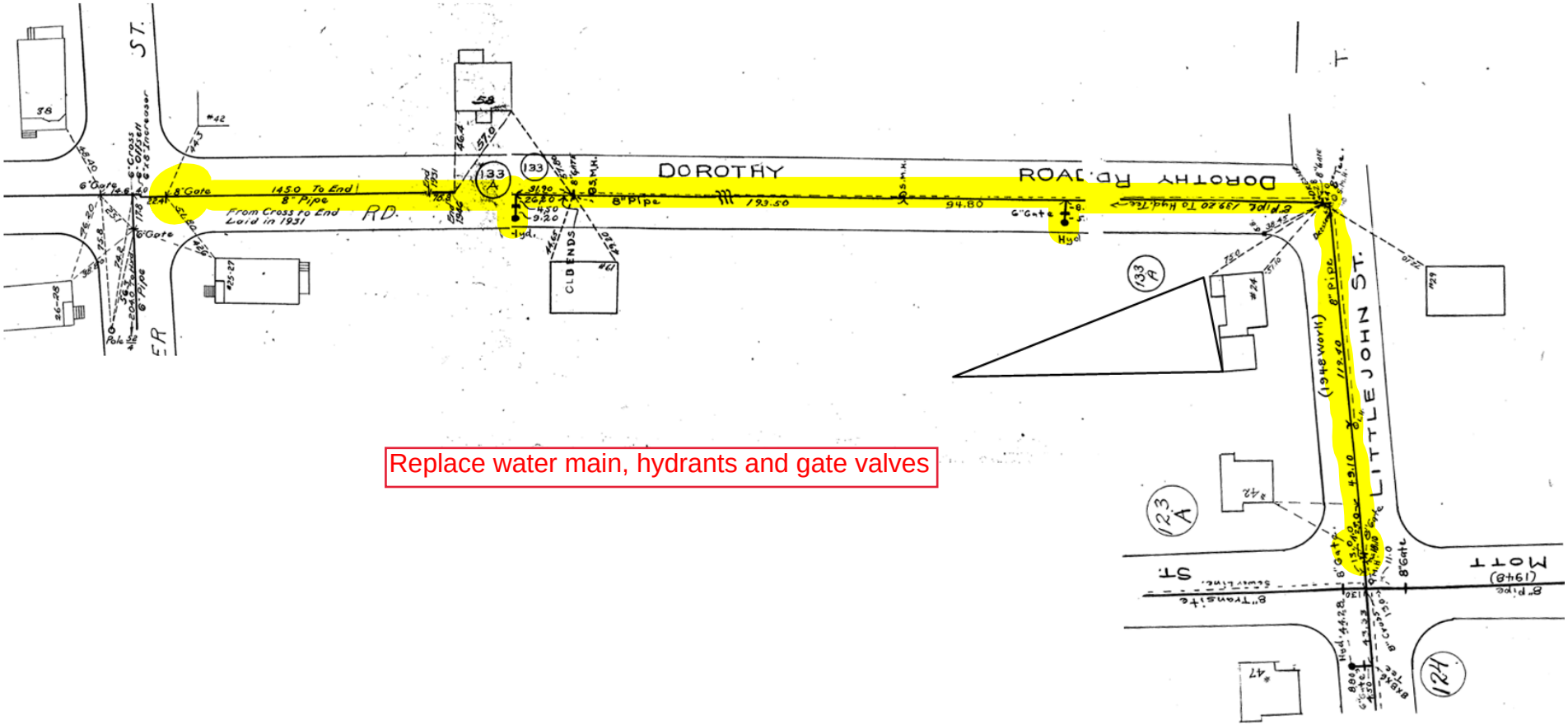
(Dorothy Road)

- Utility Plans indicate connection to the existing sewer line located in Dorothy Road. Any sewer service connection to the Sewer Collection System should use an 8" pvc service. Connections to the main >6" should be directed to a sewer manhole.

Cross Country Sewer Easement

(Dorothy Road)

- Stormwater Infiltration Areas shall not be sited above the sewer main/easement or such that the sewer main is within the infiltration zone and/or resulting effects of groundwater mounding.
- Prior to construction a pipe line evaluation shall be performed along the 14/18" sewer main. Upon completion of construction, a post- construction evaluation of the sewer main shall be performed. Any damaged and/or disturbed pipe shall be repaired/replaced.



Replace water main, hydrants and gate valves

Water System Schematic

(Dorothy Road & Littlejohn St.)

- Utility Plans indicate connection to the existing water line located in Dorothy Road. The existing water mains connected to this main were installed in 1931, 1946 and 1948 and are beyond the recommended service life. Any connection to the Town System should replace the segments of water mains up to and including the gate connections.