



## MEMORANDUM

TO: David Fields, Planner

FROM: Michael Sprague, Senior Civil Engineer

DATE: February 21, 2018

SUBJECT: 1106 Massachusetts Ave Preliminary Subdivision Plan

CC: John Livsey, Town Engineer  
Aaron Henry, Senior Planner

---

The engineering division has reviewed the Preliminary Subdivision Plans titled "1106 Massachusetts Ave" dated January 10, 2017. We submit the following;

### Comment to Planning: (Revised 2/15/2017)

Please be advised that the engineering division is aware of the submission process involved with the proposed subdivision approval. And with that we expect that our comments will be addressed as this process moves forward toward the definitive subdivision design. The nature of some of our comments will be best addressed as the design progresses further along.

### Existing and Proposed Roadway:

- A calculation or note should be provided to address fire equipment turning radius in the cul-de-sac.
- The roadway base detail should show 8 inches of gravel below 4 inches of dense grade crushed stone.
- A profile of the roadway and underground utilities should be provided to adequately review design.

### Utilities:

- There should be three gates at a tee for isolation purposes on the proposed water connection.
- Hydrants shall be American-Darling 5 ¼ inch B-84-B-5. Hydrant color shall follow Lexington Fire Dept standards for private hydrants. We require this information be clearly noted on the plans.

- All hydrants, valves and valve boxes shall be American made only. Valves shall open **right (clockwise), hydrants shall open right (clockwise)**. We require this information be clearly noted on the plans.
- All proposed vertical and horizontal bends for the proposed water main shall be on plans with adequate restraining glands, rods and thrust restraints.
- Please identify locations of any bends in the water main, bends will require thrust blocks in accordance with town standards.
- The minimum depth of sewer service connections is 4' below grade. Please provide invert and grading information to show that requirements will be met for each proposed service. And show stubs onto property on definitive plan.
- Maintain separation of utilities in particular the drain and sewer mains.
- A two course brick detail shall be shown on all sewer manhole details.
- All manhole frame and covers should be consistent with Town of Lexington Standards.
- Silt sacks should have emergency overflow and should be shown on plans.
- All sewer and drain pipes should conform to Town of Lexington Standards, including SDR 35 sewer pipe. Sewer Trench detail calls out schedule 40, which is not consistent with plans.

Drainage for roadway, sidewalk, driveway aprons, and site grading:

- Drainage analysis appears to show that the proposed system can handle the 100 year design storm. A more complete analysis will be required for a definitive plan submission review.
- A structural design analysis will be required, by the Building Dept., for the proposed retaining walls greater than 4 feet.
- Please provide calculation for disturbed area for the entire site. Any areas that will have earth disturbance should be included in the calculation.
- Any trees that may be cut should be reviewed with the Tree Warden, Chris Filadoro at the DPW.
- Please provide detail on inlets for roadway drainage.

Additional reviews and comments will be done after response to these comments.