

City of Newton



## DEPARTMENT OF PUBLIC WORKS

TRANSPORTATION DIVISION

110 Crafts Street  
Newton, MA 02460

Setti D. Warren  
Mayor

**DATE:** March 25, 2015  
**To:** James Freas, Acting Director of Planning & Development  
**From:** William G. Paille, P.E., Director of Transportation  
**RE:** Newton Technology Park Driveway Access to Needham Street

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Transportation Division staff has reviewed the proposed redevelopment of the Newton Technology Park, located at 131-181 Needham Street. In addition to reviewing site plans and traffic impact materials provided by the petitioner, staff has performed independent and on-site research/evaluation including discussions with representatives of adjacent businesses as well as observation of existing traffic conditions.

In addition, staff is aware of and has been reviewing the 25% Design for the Needham Street reconstruction project being developed by the Massachusetts Department of Transportation (MassDOT). The 25% Design Public Hearing was held on January 8, 2015 and the design identifies significant modifications to the roadway system in the area of 131-181 Needham Street. During the review process, staff became concerned that these two projects may impact traffic flow as well as pedestrian/vehicle safety along this section of Needham Street, currently experiencing heavy congestion with pedestrian and cyclists expected to increase over the next several years. This memo serves to clarify the concerns of Transportation Division staff and coordinate with both Stantec and MassDOT in order to implement a viable solution.

This section of Needham Street currently operates as two lanes, with one northbound (NB) travel lane, and one wide southbound (SB) travel lane. Based upon the latest 25% Design, MassDOT proposes to implement a three-lane configuration along most of Needham Street, including within the area in front of Jaconnet Street and 131-181 Needham Street. The State is proposing a three lane configuration consisting of one travel lane in each direction, one shared center lane and an exclusive bicycle lane in each direction.

The Newton Technology Park site is located on the west side of Needham Street, opposite Jaconnet Street. The petitioner is proposing to demolish and expand portions of two buildings on the existing site in order to provide more distance between the structures yet still maintain close proximity to Needham Street. The petitioner is also planning to convert the buildings from office use to a mix of retail, restaurant and service uses.

Based on traffic counts recently performed by Stantec, this section of Needham Street accommodates nearly 1300 vehicles during both the AM and PM peak hour respectively. The paved width of Needham Street at the general location of the site driveway and Jaconnet Street is approximately 35 feet with 22 feet in the SB direction and 13 feet in the NB direction. Currently, vehicles traveling NB on Needham Street

and wanting to turn left into the Crosspoint site must do so from the NB travel lane, possibly causing delay to NB thru traffic. Vehicles traveling SB along Needham Street and wanting to turn left onto Jaconnet Street currently have a full lane width to do so, such that SB thru traffic is allowed to continue uninhibited (refer to Figure 1).

However, under MassDOT's proposed three-lane scenario, the petitioner's consultant, Stantec, projected that approximately 40-56 NB vehicles will be expected to turn left from the shared center lane into the main entrance driveway to the site during the peak hour, while approximately 8-17 SB vehicles will be expected to turn left from the shared center lane onto Jaconnet Street during the peak hour (refer to Figure 2). The City is concerned that the misalignment of the site center access drive with Jaconnet Street will introduce vehicle conflicts as both NB & SB left turn movements will require the same space to make their respective maneuver. More specifically, NB or SB vehicles wanting to turn left at this location could be blocked or encouraged to maneuver around vehicles in order to turn left from the NB or SB travel lane, with many other vehicles attempting to continue their thru movements. The City is concerned this may create a dangerous situation for both vehicles and pedestrians. As future development expands along Jaconnet Street and within the Newton Technology Park site, the number of left turning movements from the shared center lane or from the thru lanes is expected to increase resulting in more congestion, driver frustration and the potential for accidents and unnecessary vehicle queuing and delays.

The City has presented and discussed this with both the MassDOT Project Manager for the Needham Street Project as well as District 6 and both understand the City's concerns. In addition, MassDOT has made it clear, the Needham Street design is still preliminary and like the City is open to exploring other options at this location that will resolve the issues of concern to the satisfaction of all stakeholders. As a result, the City is requesting that Crosspoint and their design consultant, Stantec, consider one of the following options or any other possible alternative and coordinate with the City and MassDOT to successfully resolve these concerns :

- Realign the middle site driveway so that it aligns with Jaconnet Street as a four-way intersection. This will allow NB and SB vehicles wanting to turn left to do so without conflict. In addition, this will allow better sight distance for drivers wanting to exit left from the site as well as Jaconnet Street. Aligning the center driveway with Jaconnet Street would also facilitate future traffic signals and/or provide for safer pedestrian crossings should it be necessary to implement.
- There is insufficient width at this section of Needham Street to provide for two exclusive left turn lanes and two travel lanes. However, it may be possible to realign the centerline striping along Needham Street to maximize or offset the width of either the NB or SB travel lane in order to accommodate thru vehicles and allow them to maneuver past turning vehicles, similar to how this section operates currently.
- As part of (or prior to) the Newton Technology Park project, implement a "trial" of the shared center lane markings using temporary paint or tape in order to evaluate traffic operations. If deemed successful, the pavement configuration could be made permanent. If unsuccessful, the section of Needham Street could be repainted as two wide lanes described herein.