

April 8, 2019

via email

Councilors Gregory Schwartz, Richard Lipof, Maria Greenberg, Jacob Auchincloss, Andrea Kelly, Christopher Markiewicz, Deborah Crossley, and Marc Laredo

Land Use Committee
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Re: Petitions #425-18 & 426-18

TRAFFIC IMPACT

Dear Councilors Schwartz, Lipof, Greenberg, Auchincloss, Kelly, Markiewicz, Crossley, and Laredo,

Northland's consultants have presented a deeply flawed and incomplete traffic study as the basis of their entire transportation plan. Due to deficiencies with the tools, methodology and coverage area, the study is incomplete and, most importantly, does not reflect the true impact of Northland's proposed development on traffic on Needham Street and the surrounding area.

Some of the material deficiencies with Northland's Transportation Impact and Access Study, leading to flawed projections, are:

1. It is based on a methodology that is unable to model traffic along the entire Needham Street corridor, instead evaluating each intersection individually, rather than using a corridor-wide traffic simulation analysis which would "accurately represent the actual traffic delays and lack of vehicular progression through the Needham Street corridor."¹
2. Many of Northland's traffic projections are based on the number of vehicles under its "Robust Shuttle Model" mode-split². However, Northland admits, in its response to BETA's peer review,³

¹ BETA's full quote is: "The proposed project will have significant impacts on study intersection operations as identified above with degradations in LOS and increases in delay, even after the completion of the planned MassDOT improvements along the Needham Street and Winchester Street corridors. **It is important to note that the LOS and delay analysis results do not accurately represent the actual traffic delays and lack of vehicular progression through the Needham Street corridor.** This difference is because the Traffic Impact and Access Study evaluated the study intersections individually, rather than using a corridor-wide traffic simulation analysis. A corridor traffic simulation would more realistically represent traffic delays and long vehicle queues between intersections along the Needham Street corridor that results in congested conditions and slower travel speeds." (emphasis in the original). BETA's Transportation Engineering Peer Review of Northland's Transportation Impact and Access Study, January, 2019 (available at <http://www.newtonma.gov/civicax/filebank/documents/94582>), at p. 5, hereinafter "BETA's Transportation Review."

² Available at: <http://www.newtonma.gov/civicax/filebank/documents/92313>

“there is not good data that we are aware of that fully support the percentages outlined” and that even under best conditions, “the reality is that the actual is likely to be something in-between the existing and that represented under the Robust Shuttle scenario.”⁴ Further, Northland makes it clear that “no data exists regarding projected percentage [public transportation] ridership gain.”⁵

3. Northland’s review of affected intersections⁶ does not include key neighborhood intersections that serve as traffic-avoidance conduits when Needham Street is, in Northland’s own words “saturated” with traffic.⁷ Please see the attached Figures 1 - 4 for additional detail.
4. Northland’s adjustments to the projected vehicle trip generation are unfounded and not logical
 - a. The “internal capture” adjustments⁸ are unsupported by evidence.
 - b. Northland’s assertion that 25-34% of the retail traffic will come from existing drivers along Needham Street⁹ does not take into account local conditions¹⁰.
5. Northland’s previous presentation before this committee on January 15, 2019 focused on the degradation of service only at signalized intersections. However, traffic at unsignalized intersections is often more likely to be affected by development, because it is more prone to gridlock.
6. The analysis of alternatives to an Oak Street exit¹¹ fails to distribute anticipated traffic to/from this exit among all other entrances/exits to the site (it omits the Tower Road entrance) and is

³ VHB Memorandum, dated February 12, 2019, available at:

<http://www.newtonma.gov/civicax/filebank/documents/95502>

⁴ VHB Memo February 12, 2019, Response to comment #2.21

⁵ VHB Memo February 12, 2019, Response to comment #7.18

⁶ See page 12 of Northland’s Transportation Impact and Access Study, dated October 2018, available at:

<http://www.newtonma.gov/civicax/filebank/documents/92313>

⁷ See VHB’s Memorandum to Jennifer Caira, dated January 4, 2019, excerpted in relevant part in response to comment #2.24, available at: <http://www.newtonma.gov/civicax/filebank/documents/95502>

⁸ See page 5 of VHB’s Memorandum, dated March 28, 2019, available at:

<http://www.newtonma.gov/civicax/filebank/documents/96175> which uses industry-average data instead of modeling the specific scenario for the proposed project where the major tenant of the new office space will be Northland itself (and Northland should be able to accurately project how many of its employees will live in the development).

⁹ See page 7 of VHB’s Memorandum, dated March 28, 2019, available at:

<http://www.newtonma.gov/civicax/filebank/documents/96175>

¹⁰ See the Metropolitan Area Planning Council’s Additional Development and Associated Traffic Impacts Study, available at <http://www.mapc.org/wp-content/uploads/2017/10/Needham-Street-Market-Analysis-December-2013.pdf>, which found that 70% of current Needham Street traffic is pass-by/pass-through traffic (that does not stop along Needham street) and comment #2.16 of BETA’s Transportation Review, which found that traffic along Needham Street moves at 4-5 miles per hour during peak periods (a speed not conducive to enticing drivers to stop at local retail establishments).

¹¹ See BETA Memorandum, dated March 13, 2019, available at:

www.newtonma.gov/civicax/filebank/documents/96178

therefore incomplete and fails to take into account a likely potential traffic-avoidance maneuver. Please see attached Figure 5.

7. Northland's traffic growth data does not include any additional anticipated developments along Needham Street / Highland Avenue or additional traffic from existing, but currently unleased properties.¹²
8. Northland wholly fails to consider additional traffic congestion that would be caused by insufficient parking spaces at peak periods. At such times, as vehicles entering the site are unable to find parking spaces, the site will suffer from immediate and severe spillover onto Needham Street.

An example of Northland's illogical reductions to the raw projected vehicle trip generation data is its projection that there will be 219 residential net person trips exiting the site on weekdays during the AM Peak Hour¹³. However, Northland estimates the project will house 1,776¹⁴ residents and, according to Newton's demographics¹⁵, 852 of these residents can be expected to work. Thus, in order for its "internal capture" estimates to be correct, Northland would need 633 of the residents to work on-site, which constitutes an astonishing 74% of the working population of the development's residents and almost 50% of the entire estimated workforce of 1,346 people¹⁶. There is no data provided by Northland that suggests these ratios are achievable.

A transportation plan based on flawed data cannot succeed. Before review of this project continues, Northland should be required to correct the errors in its traffic study and provide an accurate estimate of the traffic impact from its proposed development. Specifically, the Committee should require Northland to:

1. Perform a traffic study using SimTraffic, which is a program recommended by BETA to model how individual vehicles travel through a roadway network.¹⁷

¹² See <http://www.newtonma.gov/civicax/filebank/documents/94582>

¹³ See page 160 of VHB's Memorandum dated February 22, 2019, available at:

www.newtonma.gov/civicax/filebank/documents/95502. This projection covers all modes of transportation.

¹⁴ See page 21 of Northland's Fiscal Impact Analysis, dated August 31, 2018, available at:

<http://www.newtonma.gov/civicax/filebank/documents/92240><http://www.newtonma.gov/civicax/filebank/documents/92240>; please note that the U.S. Census formula of 2.22 persons per renter-occupied apartment was used to adjust the number provided by Northland (1,824) for 822 apartments to reflect the latest proposal's 800 units.

¹⁵ The American Community Survey, results of which are available at:

<http://www.newtonma.gov/gov/planning/demog/workforce.aspx><http://www.newtonma.gov/gov/planning/demog/workforce.aspx>, estimates that 40,924 Newton residents worked in 2010 when Newton's population was 85,334 residents, which means that 48% of residents can be expected to work.

¹⁶ Northland's latest Summary of Economic Impact Analysis, dated February 8, 2019¹⁶, available at

<http://www.newtonma.gov/civicax/filebank/documents/95496>, anticipates 1,346 employees: 977 office employees, 345 retail employees, 24 residential-related employees. Due to expected "market" rents, it is unlikely that many retail employees will be able to afford to live at the development, but we have conservatively included those employees in the percentage above.

¹⁷ See comment #2.16 in BETA's Transportation Review, which states: "The average vehicle travel speed through much of the corridor during the Weekday Midday and Weekday PM peak period was found to be approximately 4-5 miles per hour. The travel times confirm that the Needham Street corridor experiences significant congestion

2. Recalculate and rely only on traffic studies that reflect the current mode-split between private vehicles and public transit or a mode-split for which Northland can provide concrete data evidencing the likelihood of achieving such a split.
3. Provide a traffic study for the following key intersections that serve as traffic-avoidance conduits:
 - a. Winchester Street at Goddard Street and Rachel Road
 - b. Winchester Street at Charlemont Street
 - c. Dedham Street at Walnut Street
 - d. Dedham Street at Rachel Road
 - e. Dedham Street at Parker Street
 - f. Parker Street at Route 9
 - g. Oak Street at Elliott Street
 - h. Elliott Street at Route 9
 - i. Chestnut Street at Ellis Street
 - j. Ellis Street at Route 9
4. Require Northland to provide accurate adjustments to its raw trip generation numbers or use the raw trip generation numbers as the basis for traffic calculations, without unfounded and illogical adjustments.
5. Provide results of increased delays at all relevant intersections, not just signalized intersections.
6. Provide an updated analysis of alternatives to the Oak Street exit that includes distributing traffic to all other proposed entrances and exits and takes into account the likely traffic-avoidance maneuver described in Figure 5.
7. Since Northland anticipates this project to drive interest along the entire corridor, it can be anticipated that many of the currently empty storefronts will become occupied once this development is completed. Additional development is also expected at the Northland site across Needham Street and at other locations along the corridor (e.g. Muzi site in Needham). Therefore, traffic studies should include estimates of traffic impacts from these developments, in order to provide accurate and complete projections.

during the Weekday Midday peak period. Due to these oversaturated conditions along the corridor, a software program (e.g., SimTraffic) should be used that evaluates operations along a corridor instead of at individual intersections (Synchro) as was presented in the traffic study (see Comment 2.24).”

The site involved in the Petitions provides a generational opportunity to build a development that will benefit the Needham Street corridor and the city as a whole. However, if the project is sized incorrectly, it will provide no benefit, will cause great harm, and will ultimately be doomed to fail.

We therefore urge the City Council to require Northland to provide accurate and complete traffic generation estimates so that the true impact of its current proposal can be determined and the project is sized appropriately for its environment.

Thank you,

A handwritten signature in blue ink, appearing to read 'Leon Schwartz', with a stylized flourish at the end.

Leon Schwartz
Carl Street
Newton Highlands
rightsizenewton.org

cc: Nadia Khan

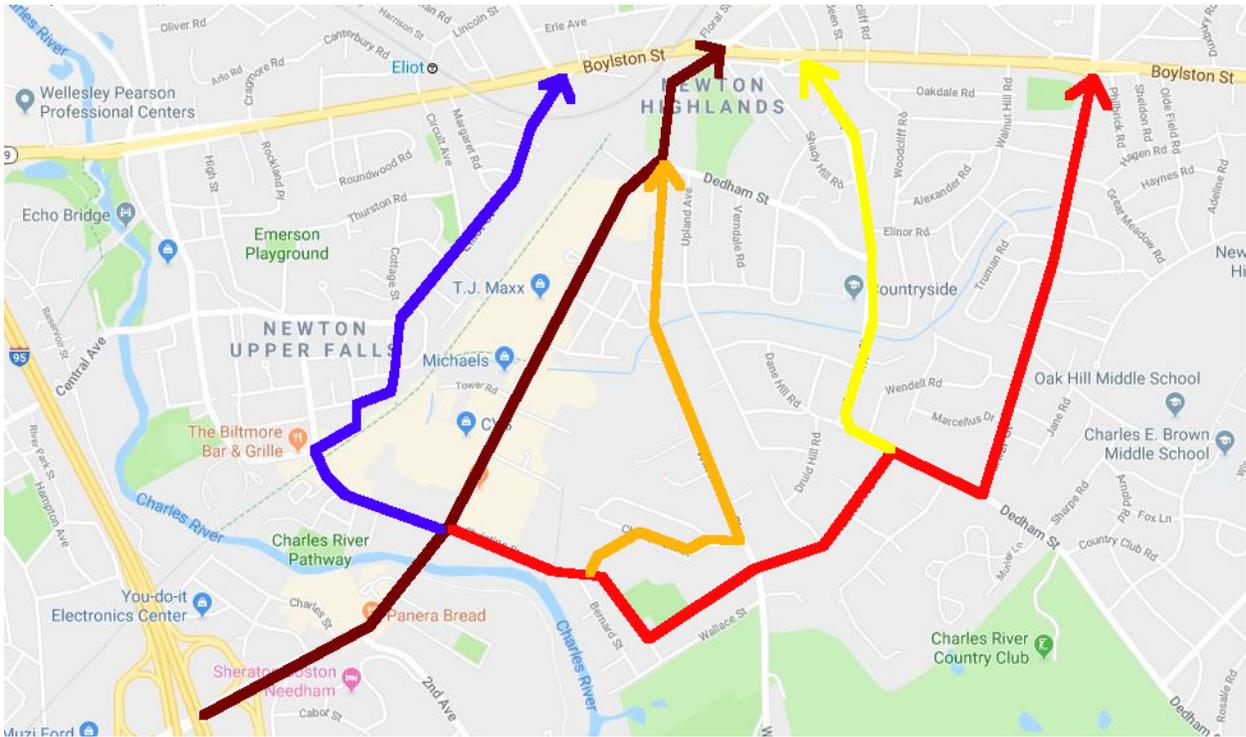


Figure 1: This map shows traffic-avoidance conduits for vehicles travelling from Route 95 to Route 9

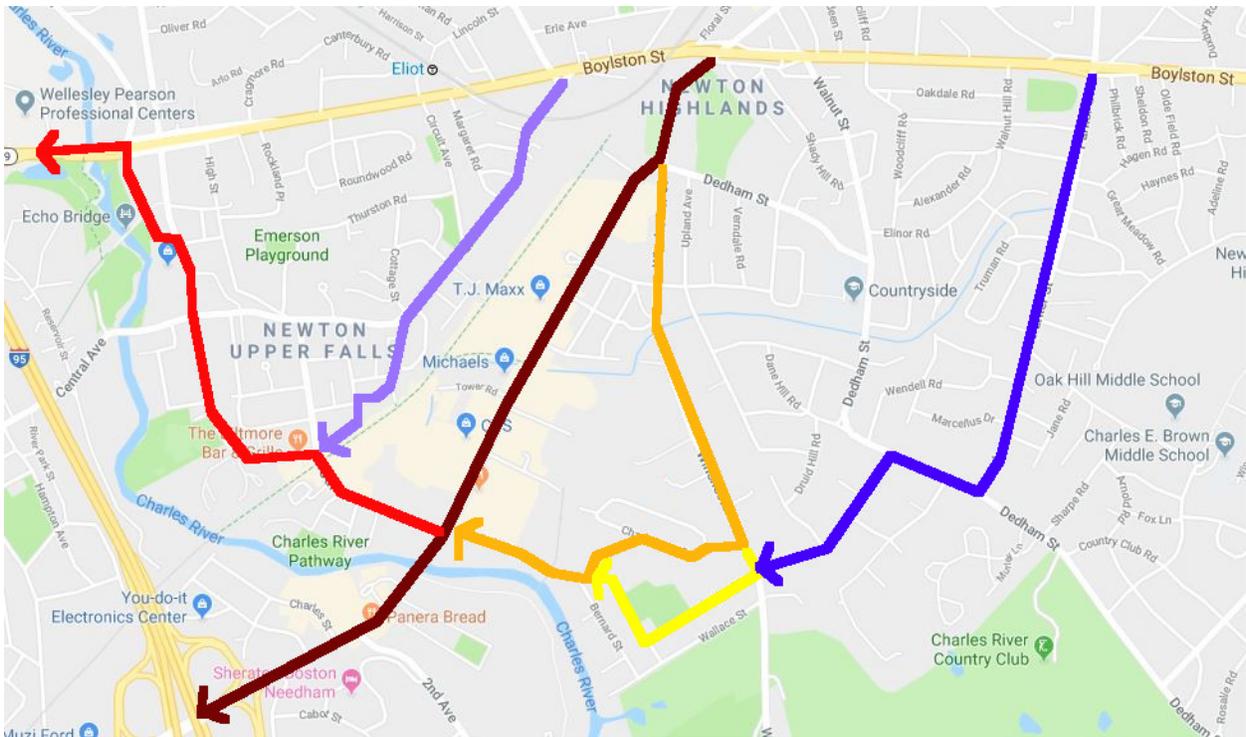


Figure 2: This map shows traffic-avoidance routes for vehicles travelling from Route 9 to Route 95

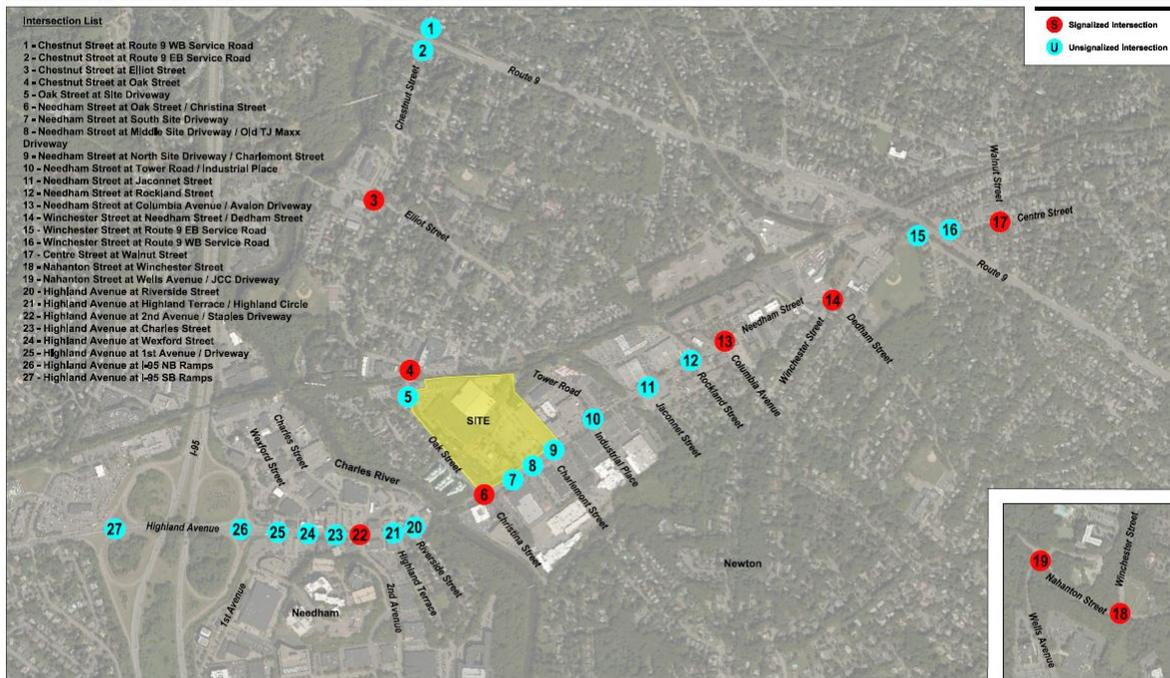


Figure 3: This map shows the intersections included in Northland's traffic study

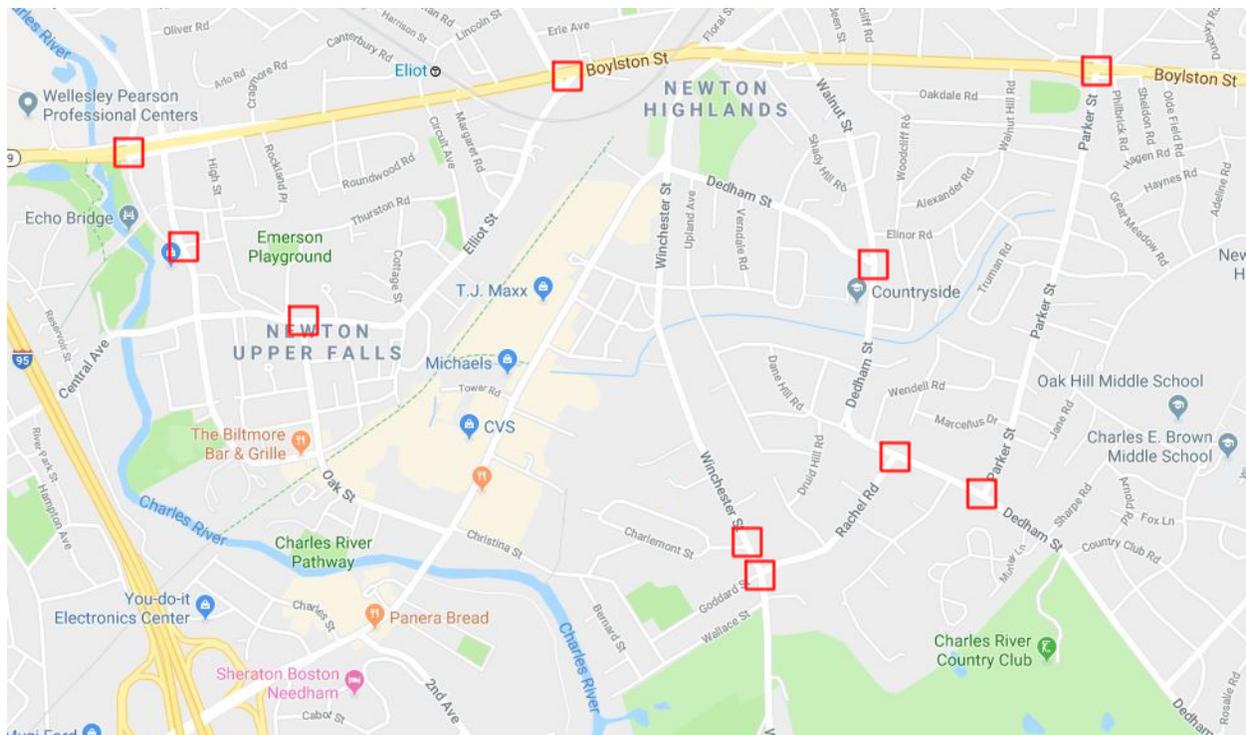


Figure 4: This map shows the key intersections missing from Northland's traffic study

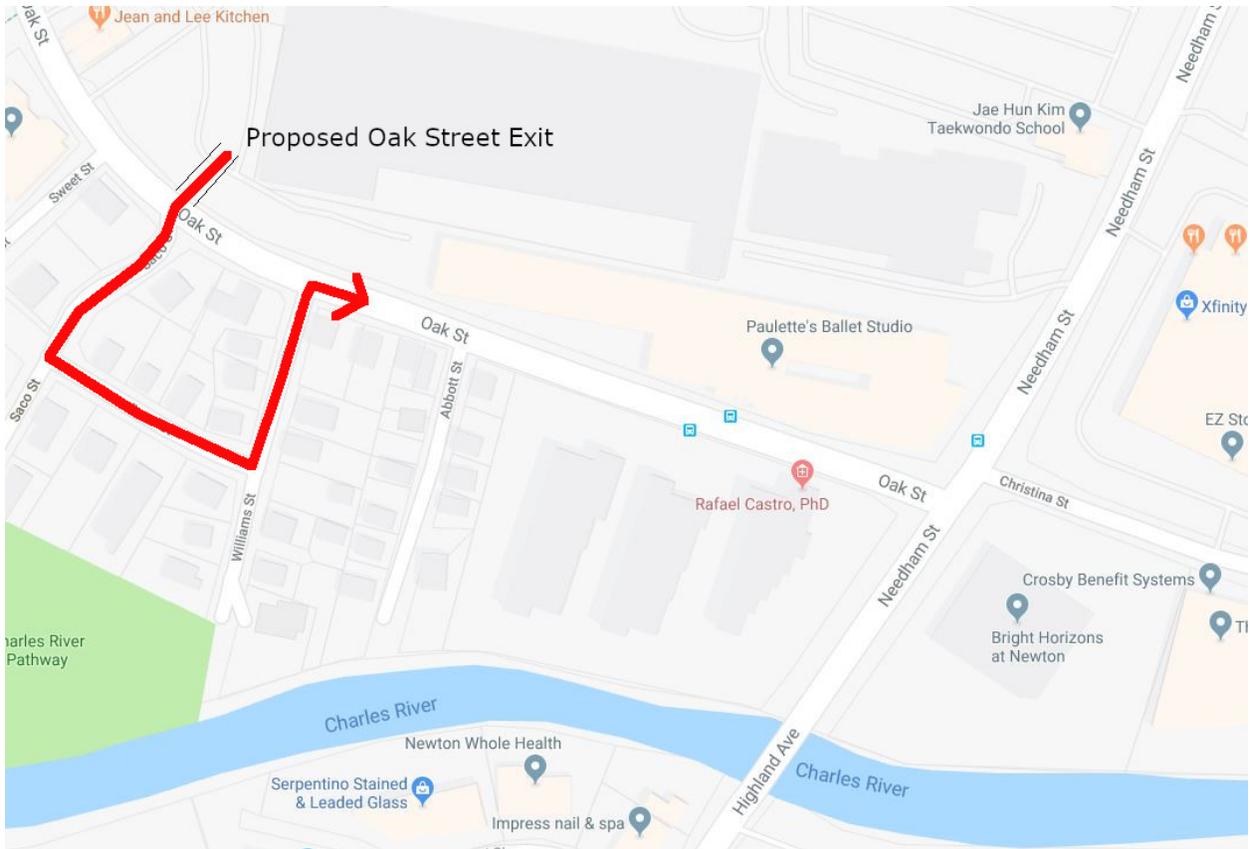


Figure 5: This map shows a likely traffic-avoidance maneuver for cars exiting via the Oak Street exit and heading toward Route 95 (avoiding at least a traffic light and traffic along Needham Street).