



## Memorandum

**Date:** June 3, 2025 (*Revised June 5, 2025*)

**To:** Ms. Jacki Byerley, Town Planner  
Town of Andover  
36 Bartlet Street  
Andover, MA 01810

**From:** Steve Shekari, E.I.T.  
Ryan Kloiber, E.I.T.

**CC:** Jane R. Davis, P.E.

**Subject:** Traffic Peer Review – 140 Haverhill Street Development  
Review of Response to Comments (RTC), Proposed Development, 140 Haverhill Street

Apex Companies, LLC (Apex) has reviewed the responses prepared by Fuss & O'Neill (dated May 27, 2025), to the comments/questions raised in the Traffic Peer Review (dated May 6, 2025), regarding the proposed medical office building and childcare center redevelopment ("the Project") located at 140 Haverhill Street in the Town of Andover, Massachusetts ("the Town").

Fuss & O'Neill submitted an Updated Traffic Impact and Access Study (UTIAS) and an updated Appendix along with their Response to Comments (RTC). Apex notes that the UTIAS and associated appendix were only reviewed with regard to the comments from the Traffic Peer Review. We expect that the only changes made to the UTIAS were related to our comments and that other items remain unchanged; therefore, a full review of the UTIAS was not performed.

Ranger Engineering Group, Inc. also submitted an updated site plan dated May 27, 2025, with additional minor updates dated June 2, 2025, which Apex reviewed with respect to the transportation/traffic-related comments from our first review.

Apex provided comments from our first review in the Traffic Peer Review memorandum ("Apex Comment 5/6/2025") regarding the original Traffic Impact and Access Study (TIAS) dated February 25, 2025, as well as site plans dated December 18, 2024. We have provided responses during our second review below ("Apex Response 6/3/2025") to all subsequent Fuss & O'Neill responses ("Fuss & O'Neill Response 5/27/2025").

### Existing Traffic Conditions

#### Comment 1

##### **Apex Comment 5/6/2025:**

Apex notes discrepancies on the jurisdictions and classifications of the study roadways compared to the Massachusetts Department of Transportation (MassDOT) Roadway Inventory database. First, the TIAS states that Haverhill Street is owned by MassDOT. However, the MassDOT database lists the roadway as being owned by the Town. Second, the TIAS states that High Street is a Rural Major Collector, whereas the MassDOT database states that it is an Urban Minor Arterial. Apex requests confirmation on the jurisdiction and classification of both roadways.

**Fuss & O'Neill Response 5/27/2025:**

*Haverhill Street is a state numbered, locally maintained roadway. High Street, based on MassDOT data can be classified as an Urban Minor Arterial or a Rural Major Collector. The description for the roads has been updated in the Updated Traffic Impact and Access Study (UTIAS).*

**Apex Response 6/3/2025:**

Description updated; **Comment 1 closed.**

[Comment 2](#)**Apex Comment 5/6/2025:**

The TIAS states that the traffic signal at the Haverhill Street at High Street study intersection has pedestrian activation. While Apex has not performed a recent field visit to verify conditions per the scope of our review, we referenced available Google street view imagery from September 2023 and did not find any pedestrian signal equipment at the intersection. Apex requests confirmation on whether the traffic signal at this intersection includes pedestrian accommodations.

**Fuss & O'Neill Response 5/27/2025:**

*There is no pedestrian actuation at the intersection. A crosswalk exists across the High Street northbound approach to the intersection. The description for the intersection is included in the UTIAS.*

**Apex Response 6/3/2025:**

Description updated; **Comment 2 closed.**

[Comment 3](#)**Apex Comment 5/6/2025:**

The High Street and Existing Site Driveway study intersection description appears to be the same description provided for the Haverhill Street and Existing Site Driveway study intersection. Apex requests an updated description for the High Street and Existing Site Driveway study intersection.

**Fuss & O'Neill Response 5/27/2025:**

*The updated description for the High Street and Site Driveway intersection is included in the UTIAS.*

**Apex Response 6/3/2025:**

Description updated; **Comment 3 closed.**

[Comment 4](#)**Apex Comment 5/6/2025:**

A seasonal adjustment factor of seven (7) percent was chosen based on a review of data provided in the 2023 Weekday Seasonal Factors table provided by MassDOT and data from a continuous MassDOT count station (Station No. 502) on Turnpike Street (Route 114) near Merrimack College. While we take no exception to the MassDOT count station being reviewed as a secondary reference, we note that MassDOT's Weekday Seasonal Factors Report is their preferred source for seasonal adjustment. Based on this report, Haverhill Street, which is an Urban Principal Arterial under group 'U3', should have an adjustment factor of two (2) percent for the month of February, and High Street, which is an Urban Minor Arterial under group 'U4', requires no adjustment for the month of February, both of which are less than the applied seven (7) percent. Providing greater adjustments to existing volumes can underestimate the impact of the trips generated by the proposed project over the background traffic. While this item alone may not have a significant impact on the overall outcome of the study, cumulative alterations identified within this document may have an impact. As such, Apex recommends the seasonal adjustment factors be reviewed and updated as necessary for both Haverhill Street and High Street, along with the other items identified in this document to determine the overall impacts.

**Fuss & O'Neill Response 5/27/2025:**

*Fuss & O'Neill has reviewed APEX's assessment of the seasonal adjustment factors and concur. The proper changes have been made in the UTIAS.*

**Apex Response 6/3/2025:**

The seasonal adjustment factor appears to have been updated appropriately; **Comment 4 closed.**

**Comment 5****Apex Comment 5/6/2025:**

Apex performed a high-level review of the existing traffic volumes against the counts provided in the Appendix. It appears that volumes at the two site driveways have been adjusted based on the volumes at the intersection of Haverhill Street and High Street. Apex requests verification.

**Fuss & O'Neill Response 5/27/2025:**

*A review of the traffic count data shows that during the weekday morning peak hour, two of the three intersections peaked at 7:30 to 8:30 AM and the third (High Street and the site driveway) peaked at 8:00 to 9:00 AM. With the adjustment to the seasonal factors, the 7:30 to 8:30 AM hour was used in the UTIAS for the weekday morning peak hour.*

*Similarly, during the weekday evening peak hour, two of the three intersections peaked at 4:45 to 5:45 PM and the third (High Street and the site driveway) peaked at 4:30 to 5:30 PM. With the adjustment to the seasonal factors, the 4:45 to 5:45 PM hour was used in the UTIAS for the weekday evening peak hour.*

**Apex Response 6/3/2025:**

The existing volumes in the UTIAS appear to be consistent with this methodology; **Comment 5 closed.**

**Comment 6****Apex Comment 5/6/2025:**

Apex notes discrepancies in the existing traffic volumes presented in Figure 3 of the TIAS. After performing backup calculations to increase the traffic counts from the Appendix by the seasonal adjustment factor of seven (7) percent, we found discrepancies greater than 15 vehicles. Additionally, as noted above, we recommend revisiting the seasonal adjustment factors, which would impact the traffic volumes. While the volume discrepancies alone may not have a significant impact on the overall outcome of the study, cumulative alterations identified within this document may have an impact. As such, Apex recommends a review of the traffic volumes and an updated analysis if necessary.

**Fuss & O'Neill Response 5/27/2025:**

*The volumes at the study area intersections from Comment No. 5 above were used as the new baseline existing volumes. The discrepancies from the raw count data to the baseline existing network volumes was associated with the different peak hours for the traffic volume data.*

**Apex Response 6/3/2025:**

The updated volumes appear to be consistent with the methodology described; **Comment 6 closed.**

**Comment 7****Apex Comment 5/6/2025:**

The TIAS states that the motor vehicle crash data for the study area intersections were obtained from the Andover Police Department for 2015 through 2024. However, the information provided in the Appendix appears to show that the MassDOT crash database was utilized for 2015-2021 crashes, and the Town's Police Department reports were utilized for 2022-2024 crashes. While Apex takes no exception to the crash information provided, we note that for the three most recent years of data (typical of a crash analysis), which also coincides with the data available directly from the Police reports (typically more exhaustive than the MassDOT database alone), the crash rate at the intersection of Haverhill Street at High Street appears to be slightly higher than the Statewide and District 4 averages. The higher crash rate indicates there may be some safety concerns at the intersection that could possibly be mitigated with minor improvements.

**Fuss & O'Neill Response 5/27/2025:**

*The MassDOT crash database was utilized for 2015-2021 crashes, and the Town's Police Department reports were utilized for 2022-2024 crashes. For the three most recent years of data, which MassDOT requires at a minimum for a typical crash analysis, the crash rate at the intersection of Haverhill Street and High Street would be slightly higher*

than the Statewide and District 4 averages. However, looking at the reported crash data from 2015 to 2024 as a whole, there were no more than six (6) crashes a year (average of 3.9 crashes per year), except for 2022 when ten (10) crashes were reported.

Looking at the last three (3) years alone yields a higher crash rate. A review of the crashes for 2022 through 2024 is summarized in Table 1.

Using the three (3) years of data from 2022 through 2024 indicates the crash rate would be slightly higher than the Statewide and District 4 averages. Most of the crashes were either angle (9 crashes) or rearend (7 crashes).

At signalized intersections, angle crashes often result from failure to yield the right-of-way, including running red lights, or misinterpreting right-of-way rules. Rear-end collisions at signalized intersections are often caused by a combination of factors, including inattention, tailgating, and sudden stops. Both could be indirectly related to the clearance interval afforded at the intersection.

**Apex Response 6/3/2025:**

It appears that Apex and Fuss & O'Neill are in concurrence regarding the potential safety concerns given the most recent crash data. Potential mitigation to improve safety at the intersection has been discussed under Comment 16 and the Applicant has offered contribution towards such mitigation. **Comment 7 closed.**

## No-Build and Build Traffic Conditions

**Comment 8**

**Apex Comment 5/6/2025:**

The TIAS states that background information is provided on the traffic generation of the nearby project at 7 Tantalon Road. However, no information is provided in the Appendix. Apex requests this information to verify the volumes that were added from this project to the no-build condition.

**Fuss & O'Neill Response 5/27/2025:**

*The 7 Tantalon Road traffic flow networks are included in the UTIAS appendix.*

**Apex Response 6/3/2025:**

Apex performed a backcheck of the background volumes from the project at 7 Tantalon Road. The future no-build volumes in the UTIAS appear to be consistent with the information provided; **Comment 8 closed.**

**Comment 9**

**Apex Comment 5/6/2025:**

No backups are provided on how the trip distribution shown in Table 5 and Figure 5 of the TIA was calculated. The TIAS states that the existing driveway distributions were used to develop the expected trip generation patterns for the proposed facilities. Apex requests backups to verify the calculated trip distribution.

**Fuss & O'Neill Response 5/27/2025:**

*The existing flows into and out of the study area were utilized. The worksheets are included in the UTIAS appendix.*

**Apex Response 6/3/2025:**

Backups are provided and the trip distribution methodology was further clarified by the Applicant's team for Apex in a meeting on May 30, 2025. **Comment 9 closed.**

## Analysis

**Comment 10**

**Apex Comment 5/6/2025:**

The Synchro capacity analysis reports appear to show some of the peak hour factors (PHF) being changed for the morning and evening build conditions, whereas the majority of these values remain the same as existing and no-build conditions. It is assumed that the adjusted PHF values may have been applied to movements that have minimal traffic in the absence of site-generated traffic with anomalously low PHF. Typical methodology may

follow MassDOT requirements to allow for a direct comparison of the future conditions, which is to provide a consistent PHF of 0.92 for no-build and build conditions. Apex recommends updating all PHF values to 0.92 for the no-build and build conditions. While this item alone may not have a significant impact on the overall outcome of the study, cumulative alterations identified within this document may have an impact.

**Fuss & O'Neill Response 5/27/2025:**

*The updated capacity analyses in the UTIAS provides a consistent PHF of 0.92 for No-Build and Build conditions.*

**Apex Response 6/3/2025:**

Parameter appears to have been updated appropriately; **Comment 10 closed.**

**Comment 11**

**Apex Comment 5/6/2025:**

Table 9 of the TIAS lists the Haverhill Street eastbound approach as having an undesirable level of service (LOS) E under the no-build conditions. Apex notes that due to the volume-to-capacity (v/c) ratio of this movement exceeding 1.0, this movement should be listed as operating under an unacceptable LOS F.

**Fuss & O'Neill Response 5/27/2025:**

*The associated level of service designation for movements with a v/c ratio greater than 1.0 are designated as LOS F in the UTIAS. It is noted that this occurs in the No-Build condition (without the project).*

**Apex Response 6/3/2025:**

Information updated; **Comment 11 closed.**

**Comment 12**

**Apex Comment 5/6/2025:**

The TIAS states that at the intersection of Haverhill Street and High Street, the Project has minimal impact on the intersection with small increases in the volume to capacity (v/c) ratio and projected delays compared to future No-Build conditions. However, based on the analysis as presented, several lane groups degrade in level of service as a result of the Project, and some lane groups show noteworthy increases in delay of up to 19 seconds; additionally, the overall operation of the intersection is shown to degrade from an acceptable LOS D to an undesirable LOS E with approximately 11 seconds of increase in delay during the evening peak hour. We note that with the recommended revisions identified herein, the traffic operations and impacts due to the Project may differ.

**Fuss & O'Neill Response 5/27/2025:**

*As a result of changes in the seasonal adjustment factors and the restriction of left turns out of the Haverhill Street driveway, the UTIAS analyses show small increases in overall delay during the peak hours. During the weekday morning peak hour, there is a 1.6 second increase in overall delay and during the weekday evening peak hour, there is a 7.9 second increase in overall delay. Overall, the intersection will be at LOS D or better during the peak hours.*

*The one approach that shows the largest delay is the Haverhill Street eastbound shared left, through and right turn movement approach. However, it should be noted that as v/c ratios exceed one, the delay algorithm is a parabolic function. Hence, as the v/c ratio exceeds 1.0, the calculated delay is significantly higher and may not be representative of the actual delay. Further, for this approach, it has been observed that through movements and right turn movements have the ability to go around a vehicle waiting to make a left turn, and do not necessarily experience the long delays the SYNCHRO model projects.*

**Apex Response 6/3/2025:**

Apex concurs with Fuss & O'Neill's explanation of the relationship between v/c ratio and delay. We also understand that the actual driving behavior at some intersections may be different than the intended design, as appears to be the case on the Haverhill Street eastbound approach. Though we have not performed our independent site visit to confirm such driving behavior, we assume that Fuss & O'Neill's observations are consistent with typical operations at this intersection. We also understand that the Applicant has offered contribution to potential mitigation to address impacts from the Project on the operations at this location, as further discussed under Comment 15. **Comment 12 closed.**

### Comment 13

#### **Apex Comment 5/6/2025:**

Apex notes that the background information on the parking analysis with empirical data at the Gardner School in Northbrook, Illinois, while comparable in terms of the size of the development, reflects information in a different geographic region prior to the COVID-19 pandemic. Understanding that the Gardner School has multiple locations in Massachusetts, Apex recommends considering collecting updated and local empirical data to validate findings of the study at the Northbrook, Illinois location and confirm appropriateness of such data to be used for the proposed Project.

#### **Fuss & O'Neill Response 5/27/2025:**

*The Gardner School operates under a standardized national model as well as local childcare regulations which govern enrollment structure, staffing ratios, hours of operation, and parent drop-off/pick-up protocols. These consistencies ensure that parking demand is primarily a function of the facility's program size, operational model, and the target user group, working families with young children. Parking demand observed at our Northbrook location is reflective of the same user-driven behaviors we anticipate at the proposed Massachusetts facility.*

*Regarding the timing of the study, while it was conducted prior to the COVID-19 pandemic, this in fact supports a conservative approach. The pre-pandemic conditions reflect a worst-case scenario in terms of parking demand, as parent work schedules were more consistently office-based, resulting in higher volumes of simultaneous drop-offs and pick-ups. During the height of the pandemic, The Gardner School experienced temporary operational changes, including modified hours and staggered scheduling. Since 2021, their operations have fully returned to the original, in-person model across all locations and market trends are now reinforcing a return to office-based work. A growing number of employers have adopted hybrid or full-time in-office policies, and attendance at our schools has seen a move toward to pre-pandemic levels — further validating that the baseline conditions reflected in the Northbrook data remain relevant to today's context.*

*All our current Massachusetts facilities have been open & operating for six months or less and are still in the early stages of ramping up enrollment. While we recognize the value of localized data collection, attempting to collect parking demand data during this early operational phase would result in artificially low demand observations that do not reflect the long-term conditions anticipated for the proposed project. In contrast, the data collected at The Gardner School of Northbrook, Illinois reflects a stabilized and established facility operating under the same standardized model, serving the same target user group, and offering a nearly identical program size.*

*Table 2 summarizes existing parking space counts for 13 recently opened and operating Gardner School locations across multiple states. Based on the absence of any ongoing operational challenges related to parking at these schools, The Gardner School is confident that the proposed number of parking spaces for the new facility will adequately support its needs.*

#### **Apex Response 6/3/2025:**

Adequate background information on the Gardner School provided; **Comment 13 closed.**

## Recommendations and Conclusions

### Comment 14

#### **Apex Comment 5/6/2025:**

The TIAS recommends providing sight distance triangles at the site driveways to identify areas where existing obstructions should be removed and vegetation maintained at a low height. Apex concurs with this recommendation and requests sight distances for review.

#### **Fuss & O'Neill Response 5/27/2025:**

*Sight distance triangles have been added to the site plans.*

#### **Apex Response 6/3/2025:**

Sight distance triangles provided; **Comment 14 closed.**

## Comment 15

### **Apex Comment 5/6/2025:**

Apex understands that the Project proponent is committed to monitoring the intersection of Haverhill Street and High Street after substantial occupancy of the Project and considering mitigation if necessary. However, given the degradation in traffic operations already apparent in the presented analysis, we recommend implementing traffic signal retiming as part of the Project mitigation.

The traffic signal retiming included in the TIAS shows minimal timing changes compared to the existing/no-build conditions. During the morning peak hour, the signal retiming results appear to show relatively similar operations to the no-build conditions and minor improvements compared to the unmitigated build conditions. However, during the evening peak hour, the signal retiming results still show degraded operations compared to the no-build conditions, particularly along the High Street approaches. Apex recommends a further evaluation of the optimal signal timings to improve upon these operations.

Ultimately, if the Town and the Project proponent decide not to proceed with mitigation upfront, Apex recommends developing a formalized transportation monitoring program, outlining details, including but not limited to, timeframe and frequency of data collection as well as measurable thresholds with a commitment from the Project proponent to reevaluate mitigation measures should the thresholds be exceeded.

### **Fuss & O'Neill Response 5/27/2025:**

*The Applicant will provide a monitoring program, outlining details such as timeframe, frequency of data collection along with a reevaluation of operations at the Haverhill and High Street intersection. In addition, the Applicant offers to contribute \$10,000 to a Town transportation fund, or similar, for any future signal improvements the Town feels are necessary.*

### **Apex Response 6/3/2025:**

We note that with the updated traffic analysis, the Project impacts at the intersection of Haverhill Street at High Street are expected to be relatively minor to the overall traffic operations with a maximum additional delay of approximately eight (8) seconds. The Haverhill Street eastbound approach is still expected to operate at an unacceptable LOS F, which is anticipated with or without the project; however, the overall operations are expected to be an acceptable LOS D or better.

While it is between the Town and the Applicant to agree upon a dollar amount to be used towards mitigation, it is reasonable to assume that the offered contribution should cover the recommended traffic signal retiming to mitigate the Project impacts.

Regarding the monitoring program, similar to the TDM discussed in Comment 17, we recommend this be considered as a condition of approval to be formalized and mutually agreed upon between the Applicant and the Town. We will leave this comment open until resolved; however, no further action from the Applicant's team is required at this time.

## Comment 16

### **Apex Comment 5/6/2025:**

Crash history at the intersection of Haverhill Street and High Street shows that the predominant crash types consist of angle and rear-ends, which both may be susceptible to improvement by modifying signal timing clearances. As such, Apex recommends reviewing signal timing clearances and propose modifications as necessary along with the retiming evaluations outlined above.

### **Fuss & O'Neill Response 5/27/2025:**

*As indicated in the response to Comment No. 15, the Applicant offers to contribute \$10,000 to a Town transportation fund, or similar, for any future signal improvements the Town feels are necessary.*

### **Apex Response 6/3/2025:**

Provided that the traffic signal retiming referenced under Comment 15 addresses the potential deficiencies in vehicle clearance times, this mitigation can be expected to improve existing crash history; **Comment 16 closed.**

#### Comment 17

##### **Apex Comment 5/6/2025:**

Apex recommends that the Transportation Demand Management (TDM) plan be formalized and mutually agreed upon between the Applicant and the Town.

##### **Fuss & O'Neill Response 5/27/2025:**

*As a condition of approval, a Transportation Demand Management (TDM) plan will be formalized and mutually agreed upon between the Applicant and the Town.*

##### **Apex Response 6/3/2025:**

Adequate response provided. We will leave this comment open until resolved; however, no further action from the Applicant's team is required at this time.

#### Comment 18

##### **Apex Comment 5/6/2025:**

The TDM states a "welcome packet" will be provided to new employees detailing available public transportation services, bicycle and walking alternatives, and other commuter options. However, it appears that the pedestrian and bicycle accommodations in the vicinity of the Project site do not provide an adequate network for access to the site. Apex recommends a further evaluation of the feasibility of bicycle and walking alternatives and considering improvements to leverage these alternatives in line with the TDM.

##### **Fuss & O'Neill Response 5/27/2025:**

*The applicant will provide bike racks on the site. A sidewalk to Haverhill Street had been considered but cannot be provided as there is a strip of land between land controlled by the Applicant and Haverhill Street that is controlled by a third party.*

##### **Apex Response 6/3/2025:**

We understand the limitations on providing pedestrian accommodations adjacent to the Project site along Haverhill Street. We anticipate that the bicycle and walking alternatives will be very limited considering the lack of access to the site through dedicated bicycle facilities or sidewalks. **Comment 18 closed.**

## Site Plans

#### Comment 19

##### **Apex Comment 5/6/2025:**

The site plans do not include or indicate many site features, including edge of pavement treatment and signs. Apex requests the plan be updated to include this pertinent information to allow for a thorough review of the site.

##### **Fuss & O'Neill Response 5/27/2025:**

*The existing conditions plans show the curbing with double lines. The curbing is presently bituminous and unless it is being removed for the construction it will remain. New curbing around the buildings where there are sidewalks will be precast concrete or if the owner chooses, he could use vertical granite. Curbing in outer areas of the parking lots will be bituminous cape cod berm. Additional labels can be added to further define the locations.*

##### **Apex Response 6/3/2025:**

Additional information has been added the plans as requested above; **Comment 19 closed.**

#### Comment 20

##### **Apex Comment 5/6/2025:**

The site plans do not show and/or call out the pedestrian curb ramp (PCR) locations. Apex requests indicating the PCR locations and calling out the applicable detail at each location.

##### **Fuss & O'Neill Response 5/27/2025:**

*The locations will be identified.*

**Apex Response 6/3/2025:**

PCR locations are now labeled on the plan; **Comment 20 closed.**

[Comment 21](#)

**Apex Comment 5/6/2025:**

All pedestrian curb ramp (PCR) details included in the plans should be updated to address the following:

- A detectable warning panel detail should be provided as referenced on the PCR details.
- The "level landing" area must be sloped at 1.5% or less in all directions.
- Guidance on transition lengths should be added to the details.
- It is recommended that all PCR openings be a minimum of five (5) feet wide.

**Fuss & O'Neill Response 5/27/2025:**

- *A detail will be added.*
- *The notes in the curb ramp details state this requirement.*
- *The transition length is noted in the details.*
- *The details can be changed to 5'.*

**Apex Response 6/3/2025:**

All details have been updated; **Comment 21 closed.**

[Comment 22](#)

**Apex Comment 5/6/2025:**

The precast concrete curb detail indicates a typical curb reveal of seven (7) inches. A curb reveal of six (6) inches is more typical. Apex requests explanation on why seven inches of curb reveal is required.

**Fuss & O'Neill Response 5/27/2025:**

*The detail will be changed to 6".*

**Apex Response 6/3/2025:**

Detail has been updated appropriately; **Comment 22 closed.**

[Comment 23](#)

**Apex Comment 5/6/2025:**

This site plan does not include a sign summary. We recommend a sign summary be added to the plans to show the proposed traffic sign sizes and sign layouts.

**Fuss & O'Neill Response 5/27/2025:**

*The only signs will be STOP signs. A detail will be provided.*

**Apex Response 6/3/2025:**

Signs detail has been added for all signs shown on plan; **Comment 23 closed.**

[Comment 24](#)

**Apex Comment 5/6/2025:**

Apex recommends adding stop lines and stop signs at both driveway access locations exiting the site.

**Fuss & O'Neill Response 5/27/2025:**

*STOP signs and lines will be added.*

**Apex Response 6/3/2025:**

Plan updated appropriately; **Comment 24 closed.**

#### Comment 25

**Apex Comment 5/6/2025:**

The site plan states that 150 parking spaces are provided at the site. However, we found only 147 parking spaces shown on the plan. Apex requests confirmation of the number of parking spaces.

**Fuss & O'Neill Response 5/27/2025:**

*The number of parking spaces is now 149. There was a mislabel by two (2) spaces in one area of the parking lot for the medical building, and one (1) was lost when the two (2) handicap spaces were added to the school building. The handicap spaces at the medical building have been reconfigured to gain two (2) spaces.*

**Apex Response 6/3/2025:**

Apex confirmed the number of parking spaces is accurate; **Comment 25 closed.**

#### Comment 26

**Apex Comment 5/6/2025:**

As indicated in the TIAS and shown on the site plans, Apex notes that the required number of parking spaces according to the Town by-laws is not met in the proposed site. We recommend coordination with the Town on any waiver that may be required for deficiencies in the number of proposed parking spaces.

**Fuss & O'Neill Response 5/27/2025:**

*The reduced number of parking spaces has been approved by the Zoning Board. The school does not need the number of spaces listed in the bylaw.*

**Apex Response 6/3/2025:**

Understanding the Zoning Board has approved the number of parking spaces, we request no further action; **Comment 26 closed.**

#### Comment 27

**Apex Comment 5/6/2025:**

The dimension of proposed accessible parking spaces do not meet the minimum requirements of Town zoning by-laws. However, we note that the dimensions comply with the Americans with Disabilities Act (ADA) standards.

**Fuss & O'Neill Response 5/27/2025:**

*We disagree with this comment. The town bylaw states that the space should be 12' in width. The spaces shown are 9' in width with a 9' unobstructed access adjacent to the spaces, which is effectively larger than the town requirement.*

**Apex Response 6/3/2025:**

Apex referenced Appendix A, Table 4 of the Town zoning by-laws, which indicates the minimum stall width for parking spaces dedicated to people with disabilities is 12 feet. We concur with the Applicant that in the proposed layout, when combining the stall width and accessible aisle space, adequate space is provided for ADA accessibility in conformance with the federal guidelines. As such, we take no exception to the proposed layout.

**Comment 27 closed.**

#### Comment 28

**Apex Comment 5/6/2025:**

The accessible parking space detail does not show a curb cut at the access aisle. Apex requests the detail be modified to indicate this curb cut.

**Fuss & O'Neill Response 5/27/2025:**

*The curb cuts can be shown on the detail.*

**Apex Response 6/3/2025:**

The detail has been updated. **Comment 28 closed.**

#### Comment 29

##### **Apex Comment 5/6/2025:**

The crosswalk pavement markings detail shows the width of the crosswalk to be six (6) feet wide. We recommend updating the detail to show at least eight (8) feet of width for improved visibility.

##### **Fuss & O'Neill Response 5/27/2025:**

*The lines can be lengthened to 8".*

##### **Apex Response 6/3/2025:**

Detail has been updated appropriately; **Comment 29 closed.**

#### Comment 30

##### **Apex Comment 5/6/2025:**

The pavement detail indicated on Sheet CS0002 of the site plans is inconsistent with the detail on sheet CS6001. Apex requests this inconsistency be reconciled.

##### **Fuss & O'Neill Response 5/27/2025:**

*The note on Sheet CS 0002 will be revised.*

##### **Apex Response 6/3/2025:**

The detail has been updated; **Comment 30 closed.**

#### Comment 31

##### **Apex Comment 5/6/2025:**

The Town by-laws defer to the Massachusetts Architectural Access Board (AAB) 521 CMR for accessible parking space requirements. This document requires that one in eight accessible parking spaces be van accessible, requiring specific accommodations for van access. The site plans do not indicate any van accessible spaces. Apex recommends the plans updated to show intended locations for van accessible spaces.

##### **Fuss & O'Neill Response 5/27/2025:**

*All of the accessible spaces show a 9' aisle on one side so they are all van accessible.*

##### **Apex Response 6/3/2025:**

A van accessible space has been added to the site plans. **Comment 31 closed.**

#### Comment 32

##### **Apex Comment 5/6/2025:**

Pedestrian access lacks connectivity between the buildings and existing sidewalk along Haverhill Street. As noted on Comment 18 above relevant to the TDM measures, Apex recommends evaluating continuous pedestrian access between the site and the nearby existing sidewalk, while also considering opportunities for improving off-site pedestrian accommodations in the vicinity of the site.

##### **Fuss & O'Neill Response 5/27/2025:**

*There is a parcel of land between this property and Haverhill Street where the driveway entrance is located. There is a driveway easement that is fully used for the driveway. The owner does not have a right to construct a sidewalk on this parcel of land out to Haverhill Street.*

##### **Apex Response 6/3/2025:**

We understand the limitations for constructing sidewalk. See response to Comment 18 regarding the bicycle and walking alternatives stated in the "welcome packet". **Comment 32 closed.**

#### Comment 33

##### **Apex Comment 5/6/2025:**

As shown on the site plans, access to the northeast of Building 2 would appear to require a ramp up with a handrail between the ramp and the adjacent sidewalk. Apex requests confirmation that the design intent is accurately interpreted. We recommend calling out the handrail location on the plans to clarify the intent and adding a handrail detail.

**Fuss & O’Neill Response 5/27/2025:**

*The enlarged view on CS1501 shows the handrail, a label can be added.*

**Apex Response 6/3/2025:**

Labels have been added, and detail has been provided; **Comment 33 closed.**

[Comment 34](#)

**Apex Comment 5/6/2025:**

The Town by-laws require that one off-street drop-off/pickup area per 25 children be provided for childcare centers. The site does not appear to provide this. Apex recommends updating the plans to accommodate the drop-off/pickup area in compliance with Town by-laws.

**Fuss & O’Neill Response 5/27/2025:**

*This has been discussed with the Planning Board and the existing configuration is acceptable.*

**Apex Response 6/3/2025:**

Understanding the Planning Board agrees with the existing configuration, we request no further action; **Comment 34 closed.**

[Comment 35](#)

**Apex Comment 5/6/2025:**

The site plans provided show fire truck maneuvers entering and exiting the driveway on Haverhill Street from west. Apex requests fire truck maneuvers be evaluated for access from Haverhill Street driveway from east, access from High Street driveway from north and south, and circulation throughout the site. We also request information and turning templates on other heavy vehicle types the site is intended to accommodate outside of emergency vehicles.

**Fuss & O’Neill Response 5/27/2025:**

*Additional turning movements can be added to demonstrate the obvious. The turning route chosen depicts the most likely turn movement based upon the location of the fire station. There will not be large trucks making deliveries to either building so additional vehicle turning templates are not required.*

**Apex Response 6/3/2025:**

Additional turning movements have been added; **Comment 35 closed.**

## Additional Comments

In addition to the documents reviewed herein, Apex received an email from the Town on behalf of their public safety officer (dated May 14, 2025) with two additional comments as discussed below.

[Comment 36](#)

**Town Comment 5/14/2025:**

They should look at replacing the timing at the signal with video detection. The Town has replaced some of the loop sensors with video detection (Miovision). I believe that traffic signal is on a timer and not a loop sensor. Unfortunately, the controller in the cabinet might need to be updated.

**Apex Response 6/5/2025:**

As an independent site visit was not included in the scope of this peer review, Apex followed up with Fuss & O’Neill regarding their site visit to observe traffic operations and obtain information regarding the existing signal equipment in the traffic cabinet. It seems the controller has been updated at some point and is likely capable of handling video detection.

However, based on Fuss & O’Neill’s observations, the intersection operates better than what the Synchro analysis shows. They did not observe delay that would equate to a LOS F on the Haverhill Street eastbound approach. As they discussed under Comment 12 and further observed during a site visit last week, left-turning vehicles pull into the intersection while waiting to turn left, and the through and right-turning vehicles are able to go around them. Although the analysis software was modeled as it is under existing conditions with one shared lane, based

on their observation, this is not how it operates in reality. Although Apex has not performed independent traffic observations at this intersection, this is a common occurrence in the software, which can either be explained verbally as Fuss & O'Neill has done, or the software can be calibrated to better represent the experienced delay.

Regardless of any potential traffic analysis that may take place, the site is located directly adjacent to a signalized intersection that is lacking actuation and would likely operate better with video detection. We note that based on the observations and the results of uncalibrated model, as well as the left-turn restriction from the site driveway resulting in no additional traffic to the Haverhill Street eastbound approach to the signalized intersection, it is unlikely that the delay increases along the approach will be significant as a result of the Project, and we would anticipate that the recommended signal timing adjustments would help to mitigate the impacts. However, in order to quantify the difference along the subject approach, further calibrated analysis would be required. Upon resolution of the above, an appropriate mitigation should be agreed upon between the Town and the Applicant.

#### Comment 37

##### **Town Comment 5/14/2025:**

There should be a turning restriction of no left turn from the parking lot onto Haverhill Street from 7am-10am and 3pm-6pm.

##### **Apex Response 6/5/2025:**

Fuss & O'Neill have stated that left turns will be prohibited from the site during peak hours. Apex requests clarification on how this will be achieved. Assuming it will be signage, the signs should be shown on the plans. We note that without physical alteration to the driveway layout, enforcement may necessary.

## Summary

Fuss & O'Neill and Ranger Engineering Group have provided additional information and adequately responded to or addressed Apex's comments from the original peer review. All items have been closed with the exception of the two items that require further coordination and agreement with the Town regarding the monitoring program and the Transportation Demand Management (TDM) plan. Apex recommends both be considered as a condition of approval.

We remain available for any further question or comment.