

Ref: 10429

November 4, 2025

Ms. Jasmin Farinacci
Director of Planning and Economic Development
Town of Ashland
101 Main Street
Ashland, MA 01721

Re: Traffic Engineering Peer Review
Proposed YMCA and Early Learning Center – 30 Memorial Drive
Ashland, Massachusetts

Dear Jasmin:

Vanasse & Associates, Inc. (VAI) has completed a review of the materials that have been submitted on behalf of the MetroWest Young Men's Christian Association, Inc. (the "Applicant") in support of the Planning Board's review of the proposed YMCA membership facility and Early Learning Center to be located at 30 Memorial Drive in Ashland, Massachusetts (hereafter referred to as the "Project"). The Applicant is requesting Site Plan Review, Design Plan Review and a various Special Permits to allow for the construction of the Project. Our review focused on the following specific areas as they relate to the Project: i) vehicle and pedestrian access and circulation; ii) Massachusetts Department of Transportation (MassDOT) design standards; iii) Town Zoning requirements as they relate to access, parking and circulation; and iv) accepted Traffic Engineering and Transportation Planning practices.

The Applicant has submitted the following materials which are the subject of this review:

1. Planning Board Applications for Special Permits, Site Plan Review, Design Plan Review and Site Alteration Special Permit with supporting narratives prepared by Fletcher Tilton, PC on behalf of the Applicant and dated June 4, 2025;
2. *Proposed Site Plan Documents for cbt, Team Hoyt Community YMCA, 30 Memorial Drive, Town of Ashland, Middlesex County, Massachusetts, Map 13 Lot 178; Bohler; April 25, 2025, no revisions (the "Site Plan"); and*
3. *Transportation Impact Assessment, Proposed YMCA Facility, 30 Memorial Drive, Ashland, Massachusetts; MDM Transportation Consultants, Inc. (MDM); May 23, 2025 (the "May 2025 TIA").*

In addition, VAI reviewed the site locus in order to validate the existing conditions context of the Project and to observe factors related to the design and location of the access to the Project site, internal circulation and potential off-site improvements.

Based on our review of the aforementioned materials that have been submitted in support of the Project, we have determined that the materials were prepared in a professional manner and following the applicable standards of care. That being said, the Applicant should address the following comments that were identified as a part of our review, a detailed summary of which is attached:

May 2025 TIA

- Comment T1: Given the proximity of the Project site to the Ashland Middle School, a review of traffic volumes between 2:00 and 4:00 PM should be undertaken to verify that the weekday evening peak-hour has been captured in the 4:00 to 6:00 PM data collection period. The ATR data can be used to complete this review.
- Comment T2: A traffic study was prepared for the multifamily residential development at 61 Waverly Street in February 2025 and the associated peak-hour traffic volumes should be included in the future condition traffic volumes.¹ In addition, traffic volumes associated with following specific development projects by others should also be included in the future condition traffic volumes:
- Arbella at Ashland Age-Restricted Residential Development, Memorial Drive (180-unit, age-restricted, multifamily residential development to be located off of Memorial Drive and generally south of the Cirrus Apartments);²
 - Ashland Dog Park, Memorial Drive (dog park to be situated on 1.47± acres of land located off of Memorial Drive west of the Trolley Bike Trail);
 - 55 West Union Street (116 multifamily residential units to be accessed from (2) full-access driveways that will intersect the south side of Memorial Drive approximately 300 feet and 650 feet west of Route 135, respectively).³

The traffic study for the 55 West Union Street was filed with the Town after the preparation of the May 2025 TIA; however, the relationship of this project and its associated driveways to those of the Project should be considered for both developments.

- Comment T3: The Build condition traffic volumes should be updated to include the traffic volumes associated with the identified specific development project by others.
- Comment T4: The traffic operations analysis should be revised to reflect the updated No-Build and Build condition traffic volumes. In addition, the traffic operations analysis for the Route 135/Memorial Drive intersection should include pedestrian actuations during the peak hours.
- Comment T5: In order to validate the sight distance study, the following information should be reviewed and the sight distance study revised as necessary, including the sight distance study that was provided for the proposed crossing of Memorial Drive:

¹*Traffic Impact Assessment*, Residential Development – 61 Waverly Street; Langan; February 2025.

²*Traffic Memorandum*, Arbella at Ashland – Age-Restricted Residential Development, Memorial Drive; MDM; March 11, 2021.

³*Transportation Impact Assessment*, Proposed Multifamily Residential Development, 55 West Union Street (Route 135), Ashland, Massachusetts; VAI; June 2025.



1. The object for the stopping sight distance study should be located within Memorial Drive and aligned opposite the center of the driveway or positioned opposite the nearside curbline extension that is closest to the approaching driver;
2. The intersection sight distance profile should be taken from a point along the driveways 14.5 feet from the edge of the traveled-way along Memorial Drive. This will require that separate sight line profiles be provided for each driveway;
3. The sight triangles should be added to the intersection sight distance plans for both driveways;
4. The approach grades along Memorial Drive should be shown on the roadway profiles;
5. If the approach grade exceeds 3%, the required minimum stopping sight distance should be adjusted and the supporting calculations provided; and
6. The south (east) Project site driveway is located approximately 340 feet west of Route 135 which would allow a vehicle approaching the driveway from the south (east) to achieve a speed that would approximate the posted speed limit of 30 mph vs. 15 mph which was the assumed approach speed that was used in the study.

Comment T6: A student drop-off/pick-up management plan should be provided as a part of the Planning Board review of the Early Learning Center component of the Project. The plan may take the form of a narrative describing: i) the hours of operation; ii) student arrival and departure times; iii) number of staff that will be on-site during the arrival/departure times; iv) number of students accommodated and if drop-off/pick-up times will be staggered; and v) circulation patterns during drop-off/pick-up or if parking spaces will be utilized.

Comment T7: We agree with the recommendations that have been provided as a part of the May 2025 TIA and would suggest that the following additional measures be considered as a part of the Project:

- Route 135/Memorial Drive – Pending the outcome of the revised analysis that has been requested as a part of this review, design and implement an optimal timing and phasing plan for the intersection within 6-months of the issuance of a Certificate of Occupancy for the Membership Building or the Early Learning Center, whichever is issued first.
- Transportation Demand Management – A Transportation Coordinator, who may have other responsibilities and duties as a part of the Project, should be assigned to manage the TDM program. The elements of the TDM program should be expanded to include the following measures:
 - A “welcome packet” should be provided to new employees that includes the contact information for the TC and detailing available public transportation services, bicycle and walking alternatives, and other commuter options;
 - Providing information in a central location within both the Membership Building and in the Early Learning Center and on the website for the Project that includes information regarding the MWRTA bus service; and
 - Coordinating with the MWRTA to locate a bus stop within the Project site.



- Parking Monitoring – Parking occupancy should be monitored as the Project is constructed with the following frequency: 1) within 6-months of the issuance of a Certificate of Occupancy for the Membership Building; 2) within 6-months of the issuance of a Certificate of Occupancy for the Early Learning Center; and 3) 12-months after Project completion. The monitoring program should identify the number of parking spaces constructed at the time that the monitoring occurs and the number of parking spaces occupied during the observation period. The observations should occur on an average weekday and on a Saturday under normal operating conditions for the components of the Project. The monitoring should occur between 7:00 AM and 7:00 PM on a weekday and on a Saturday, and should be performed in May/June or September/October to reflect months of the year when the playing fields would also be in use. To the extent that the observed parking occupancy exceeds 90% of the available parking spaces, specific measures to reduce or manage parking should be identified.
- Special Events – A traffic and parking management plan should be developed for special events to the extent that the Project will host events where the traffic volumes and parking demands would exceed the trip estimates that are presented in the May 2025 TIA. Such a plan is not intended to result in modifications to the Site Plan or other features of the Project, but to establish protocols on scheduling to avoid impacts during school hours and peak travel periods, consideration of the use of buses and carpooling, and other such measures as may be deemed appropriate for the specific event.

Site Plan

- Comment S1: The fire truck turning analysis should include an evaluation of vehicle turning movements entering and exiting from both directions for both driveways.
- Comment S2: Additional detail of the fire truck maneuvering in the area to the rear of the Membership Building should be provided to demonstrate the number of backing maneuvers that are required. To simplify review, separate drawings for entering and exiting should be prepared.
- Comment S3: The exiting maneuver for the fire truck from the north (west) Project site driveway indicates that the aerial portion of the vehicle will swing beyond the curblineline. Verify that no objects are located in the swing area that would exceed 7-feet in height.
- Comment S4: Double-yellow centerline pavement markings should be provided along both driveways between the STOP-line at Memorial Drive and the first intersection within the Project site.
- Comment S5: The sight triangle areas for the Project site driveway intersections with Memorial Drive should be shown on the Site Plan and should include the following note: “Signs, landscaping and other features located within sight triangle areas shall be designed, installed, and maintained so as not to exceed 2.0-feet in height. Snow accumulation (windrows) located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed.”
- Comment S6: Consideration should be given to striping the snow storage area for parking or otherwise delineating this area so as to define the drive aisle.



Parking

- Comment P1: Section 5.1.2, *Schedule of Parking Area Requirements*, of the Ashland Zoning Bylaw provides parking requirements for “Day care and nursery schools”, which specifies that 1.0 parking spaces per employee and 1.0 parking spaces per 5 children be provided. These requirements should be compared to the observed parking demand from the Goddard School that were used in the parking demand calculations.
- Comment P2: The source of the parking distribution by time of day for the day care should be provided as the distribution is different than the data published by the ITE⁴ for a day care center. If the data was developed from the observations conducted at the Goddard School, the hours of operation and program at the Goddard School should be provided and compared to the program that will be offered at the Early Learning Center.
- Comment P3: Details of the amenities offered and sizes of the YMCA facilities that were used to develop the parking demand data for the Membership Building should be provided along with the dates that the observations were performed. In addition, the source of the parking distribution by time of day should also be provided.
- Comment P4: The source of the parking demand data and parking distribution by time of day for the playing fields should be provided.
- Comment P5: Explanation for the 85% adjustment factor that was applied to the parking demand calculations should be provided. The observed data should be representative of typical conditions and an adjustment factor should not be applied to the base parking demand unless there are specific trip reduction or parking demand measures that will be implemented as a part of the Project that would justify a reduction in the base demand.

This concludes our review of the materials that have been submitted to date in support of the Project. Written responses to our comments should be provided so that we may continue our review on behalf of the Town. If you should have any questions regarding our review, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI and VA

JSD/jsd

Attachment

⁴*Parking Generation*, 6th Edition; Institute of Transportation Engineers; Washington, D.C.; October 2023.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

The following details Vanasse & Associates, Inc.'s (VAI's) review of the May 23, 2025 *Transportation Impact Assessment* (the "May 2025 TIA") prepared by MDM Transportation Consultants, Inc. (MDM) and the April 25, 2025 *Proposed Site Plan Document* (the "Site Plan") prepared by Bohler, that were submitted in support of the proposed YMCA membership facility and Early Learning Center to be located at 30 Memorial Drive in Ashland, Massachusetts (hereafter referred to as the "Project"). Our comments are indicated in *italicized* text, with those requiring responses or additional information **bolded**.

PROJECT DESCRIPTION

The Project will entail the construction of a YMCA membership facility and Early Learning Center to be located at 30 Memorial Drive in Ashland, Massachusetts. The development program will include the construction of 61,812± square foot (sf) Membership Building that will include an aquatic center, gymnasium, wellness center, teaching kitchen, and meeting space, and a 9,520± sf Early Learning Center that is expected to have an enrollment of approximately 98 preschoolers and toddlers. Future plans may include the addition of outdoor recreation fields and trails and an expansion of the Membership Building (3,888± sf).

The Project site contains 12.55± acres of undeveloped land that is situated along the north side of Memorial Drive and is bounded by areas of open and wooded space and low-lying wetlands to the north and west; Memorial Drive to the south; and commercial properties, areas of open and wooded space and low-lying wetlands to the east.

Access to the Project will be provided by way of a two (2) new driveways that will intersect the north side of Memorial Drive and will be situated approximately 340 feet and 940 feet west of West Union Street, respectively. On-site parking will be provided for 262 vehicles, including eight (8) handicapped parking spaces, in two (2) surface parking lots, with the south parking lot situated south of the Membership Building and will contain 201 parking spaces and the west parking lot situated west of the Early Learning Center and will contain 61 parking spaces. The paved "snow storage area" along the west side of the west parking lot can accommodate parking for an additional 30 vehicles during non-winter months when the area is not being used for snow storage; however, the area will not include marked parking spaces.

MAY 2025 TIA

General

Comment: *The May 2025 TIA was prepared in a professional manner and following the applicable standards of care, and was prepared under the responsible charge of Robert J. Michaud, P.E. (MA P.E. No. 38101, Civil) and Daniel A. Dumais, P.E. (MA P.E. No. 51611, Civil).*



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

Existing Conditions

Study Area

The study area that was assessed in the May 2025 TIA consisted of Memorial Drive and the following specific intersections:

- West Union Street (Route 135) at Memorial Drive;
- Memorial Drive at the Dunkin' Restaurant Driveway; and
- Memorial Drive at the Project site driveways (2 future intersections).

Comment: This study area includes all intersections where the Project is predicted to result in an increase in peak hour traffic volumes by: a) five (5) percent or more, or b) by more than 100 vehicles per hour.

Traffic Volumes and Data Collection

Traffic volume data was collected by means of: i) automatic traffic recorder counts (ATRs); and ii) turning movement counts (TMCs) and vehicle classification counts; that were conducted in October 2024. The ATRs were conducted on Memorial Drive, north of the Dunkin' Restaurant driveway, over a continuous 72-hour period from Wednesday, October 23, 2024 through Saturday, October 26, 2024, inclusive, and included the collection of vehicle travel speed data. The TMCs were conducted at the study area intersections on Wednesday, October 23, 2024 during the weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods and on Saturday, October 26, 2024 during the midday period (11:00 AM to 2:00 PM). The data collection time periods were selected for analysis as they were determined to be representative of the peak traffic volume periods for both the Project and the adjacent roadway network.

A review of seasonal adjustment data available from MassDOT indicated that traffic volumes within the study area during the month of October are representative of traffic volumes that are higher than those that occur under "average-month" conditions. In order to provide an "above average" analysis condition, the October traffic volumes were not adjusted downward to average-month conditions.

For the purpose of the analyses that are presented in the May 2025 TIA, the October 2024 traffic volumes were considered to be representative of 2025 traffic volume conditions given that traffic volumes in the month of October are approximately 4% above traffic volumes under average-month conditions and that the historic traffic growth rate on an annualized basis is less than 1%.

Comment: The data collection effort and seasonal adjustment (none required) was completed following accepted standards. We also agree with the suggestion that the 2024 traffic count data be considered to be a reasonable representation of average-month traffic volume conditions in 2025.

We note that MassDOT no longer requires pandemic-related adjustment of traffic counts performed after March 2022 except in locations where the predominant land use consists



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

of offices or similar uses.⁵ Given that the predominant land use within the study area consists primarily of residential, commercial and institutional properties, a pandemic-related adjustment is not required to the existing condition traffic volumes.

Comment T1: Given the proximity of the Project site to the Ashland Middle School, a review of traffic volumes between 2:00 and 4:00 PM should be undertaken to verify that the weekday evening peak-hour has been captured in the 4:00 to 6:00 PM data collection period. The ATR data can be used to complete this review.

Pedestrian and Bicycle Facilities

A description of pedestrian facilities within the study area was included as a part of the roadway and intersection descriptions in the May 2025 TIA. A sidewalk is provided along the north (west) side of Route 135 within the study area and a multi-use path is provided along the west (south) side of Memorial Drive. Crosswalks are provided across Memorial Drive and the Route 135 east (north) leg of the Route 135/Memorial Drive intersection that are included as a part of the traffic signal system (i.e., pedestrian pushbuttons, signal indications and phasing are provided). In addition, a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) is provided for crossing Memorial Drive at the Trolley Bike Trail which is located immediately west of the Project site. The shared-use path extends from Route 135 to Ashland Station on the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail system (Framingham/Worcester Line) which is located at the north end of Memorial Drive and includes a connection to the Trolley Bike Trail as described previously.

Public Transportation

A description of public transportation services that are available within the study area was provided as a part of the May 2025 TIA. As described therein, Ashland Station on the MBTA Commuter Rail system (Framingham/Worcester Line) is located at the north end of Memorial Drive and is accessible to the Project site by way of the shared-use path along Memorial Drive. In addition, the MetroWest Regional Transit Authority (MWRTA) operates the Route 5 bus, which provides fixed-route bus services along Route 135 and Memorial Drive, with stops at the Ashland Commuter Rail station/Cirrus Apartments and at the Ashland Middle School.

Comment: Fixed-route bus services are provided along Memorial Drive and would be accessible at the Project site.

Motor Vehicle Crash Summary

Motor vehicle crash information for the study area intersections was obtained from MassDOT for the period 2019 through 2023, inclusive, in order to examine motor vehicle crash trends occurring within the study area and a summary table was provided in the May 2025 TIA.

⁵25% Design Submission Guidelines; MassDOT Highway Division, Traffic and Safety Engineering; Revised May 31, 2022.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

Based on a review of the MassDOT crash data, no (0) motor vehicle crashes were reported at the Memorial Drive/Dunkin's Restaurant driveway over the 5-year review period. The Route 135/Memorial Drive intersection was identified to have experienced four (4) crashes over the 5-year review period, or an average of 0.8 crashes per year, all of which were reported as rear-end type crashes, majority of which resulted in property damage only. The calculated motor vehicle crash rate (i.e., number of motor vehicle crashes occurring per million entering vehicles (MEV)) was found to be below the MassDOT statewide and District average crash rates for a signalized intersection.

A review of the MassDOT High Crash Location (HSIP) database indicates that there are no (0) designated high crash locations within the study area.

Comment: The motor vehicle crash analysis was completed following accepted standards and we agree with the results.

Future Conditions

No-Build Conditions

Traffic volumes within the study area were projected to 2032, which represents a 7-year planning horizon from the date of the filing of the May 2025 TIA consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. The future condition traffic volume projections were developed by: i) applying a background traffic growth rate to the 2025 Existing traffic volumes; and ii) adding traffic associated with specific development projects by others that may increase traffic volumes within the study area beyond that accounted for by the background traffic growth rate.

Based on a review of historic traffic volume data obtained from MassDOT permanent count stations, a 0.5% per year compounded annual background traffic growth rate was identified as being consistent with or slightly above the historic background traffic growth rate that has been experienced within the study area. The Town of Ashland was contacted in order to ascertain if there were any specific development projects by others that would result in an increase in traffic volumes within the study area that would exceed the background traffic growth rate. Based on this consultation, the following specific development projects by others were identified for inclusion in the future condition traffic volume projections:

- *100-300 Chestnut Street Redevelopment* (200 multifamily residential units and 4,200± sf of commercial space)
- *Sanctuary at Ashland Mills at 10-60 Main Street* (250 multifamily residential units and 15,565± sf of commercial space)

The following projects were also identified for review in conjunction with the development of the future traffic volume projections and were determined to result in traffic volume increases within the study area that would be included in the general background traffic growth rate (0.5% per year):

- *61 Waverly Street* (226 multifamily residential units)
- *501 Pond Street* (120 multifamily residential units and 6,800± sf of office space)
- *750 Concord Street*



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

- 9-49 Homer Avenue (29 multifamily residential units and 8,550± sf of retail/commercial space)

Comment: We agree with the methodology that was used to develop the future No-Build condition traffic volume projections, including the background traffic growth rate (0.5%) and inclusion of the identified specific development projects by others.

Comment T2: A traffic study was prepared for the multifamily residential development at 61 Waverly Street in February 2025 and the associated peak-hour traffic volumes should be included in the future condition traffic volumes.⁶ In addition, traffic volumes associated with following specific development projects by others should also be included in the future condition traffic volumes:

- **Arbella at Ashland Age-Restricted Residential Development, Memorial Drive (180-unit, age-restricted, multifamily residential development to be located off of Memorial Drive and generally south of the Cirrus Apartments);⁷**
- **Ashland Dog Park, Memorial Drive (dog park to be situated on 1.47± acres of land located off of Memorial Drive west of the Trolley Bike Trail);**
- **55 West Union Street (116 multifamily residential units to be accessed from (2) full-access driveways that will intersect the south side of Memorial Drive approximately 300 feet and 650 feet west of Route 135, respectively).⁸**

The traffic study for the 55 West Union Street was filed with the Town after the preparation of the May 2025 TIA; however, the relationship of this project and its associated driveways to those of the Project should be considered for both developments.

Build Conditions

The traffic characteristics of the Project were developed by the Applicant's engineer using trip-generation statistics published by the Institute of Transportation Engineers (ITE)⁹ for similar land uses as that proposed. ITE Land Use Codes (LUCs) 495, *Recreational Community Center*, 565, *Day Care Center*, and 488, *Soccer Complex*, were used to develop the trip characteristics for the Project. A reduction in the base trip-generation calculations in order to account for the potential interaction (i.e., common trips) between these uses was not applied.

For the Early Learning Center component of the Project, it was assumed that a portion of the trips would be derived from existing traffic on Route 135 that would divert from this roadway to drop-off/pick-up a student at the Early Learning Center before continuing in the original direction of travel. Based on data published by the ITE, up to 44% of the trips associated with a day care center may consist of pass-by or

⁶*Traffic Impact Assessment*, Residential Development – 61 Waverly Street; Langan; February 2025.

⁷*Traffic Memorandum*, Arbellla at Ashland – Age-Restricted Residential Development, Memorial Drive; MDM; March 11, 2021.

⁸*Transportation Impact Assessment*, Proposed Multifamily Residential Development, 55 West Union Street (Route 135), Ashland, Massachusetts; VAI; June 2025.

⁹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.



**TRAFFIC ENGINEERING PEER REVIEW
 PROPOSED YMCA AND EARLY LEARNING CENTER
 30 MEMORIAL DRIVE
 ASHLAND, MASSACHUSETTS
 NOVEMBER 4, 2025**

diverted trips. A diverted trip is a new trip to Memorial Drive. The table below summarizes the trip characteristics of the Project as presented in Tables 6 and 7 of the May 2025 TIA.

TRIP GENERATION SUMMARY

Time Period	Vehicle Trips		
	(A) Total	(B) Diverted ^a	(A - B) New
<i>Average Weekday:</i>			
Entering	1,223	90	1,133
<u>Exiting</u>	<u>1,223</u>	<u>90</u>	<u>1,133</u>
Total	2,446	180	2,266
<i>Weekday Morning Peak-Hour:</i>			
Entering	125	17	108
<u>Exiting</u>	<u>80</u>	<u>17</u>	<u>63</u>
Total	205	34	171
<i>Weekday Evening Peak-Hour:</i>			
Entering	137	17	120
<u>Exiting</u>	<u>140</u>	<u>17</u>	<u>123</u>
Total	277	34	243
<i>Saturday:</i>			
Entering	704	0	704
<u>Exiting</u>	<u>704</u>	<u>0</u>	<u>704</u>
Total	1,408	0	1,408
<i>Saturday Midday Peak-Hour:</i>			
Entering	76	0	76
<u>Exiting</u>	<u>74</u>	<u>0</u>	<u>74</u>
Total	150	0	150

^a44% of trips associated with the Early Learning Center.

Project-related traffic was assigned to the roadway network based on a population based gravity model and then refined based on a review of existing traffic patterns within the study area. Using this methodology, Project-related traffic was assigned as follows:

TRIP DISTRIBUTION

Roadway	Trip Assignment (%)
Route 135 to/from North	80
Route 135 to/from South	20
TOTAL:	100

Diverted trips were assigned from and to Route 135 in relation to the prevailing traffic volume during the weekday peak hours.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

Comment: We agree with the methodology that was used to develop the traffic characteristics of the Project and the resulting values, as well as the trip distribution pattern that was used to assign Project-related traffic to the study area roadways and intersections.

Comment T3: The Build condition traffic volumes should be updated to include the traffic volumes associated with the identified specific development project by others.

Traffic Operations Analysis

In order to assess the potential impact of the Project on the transportation infrastructure, a detailed traffic operations analysis was performed for the study intersections under 2025 Existing, 2032 No-Build (without the Project) and 2032 Build conditions (with the Project). In brief, traffic operations are described by six “levels of service” which are defined by letter grades from “A” through “F”, with a level-of-service (LOS) “A” representing the best operating conditions (average motorist delay of less than 10 seconds and little or no apparent vehicle queuing) and a LOS “F” representing constrained operating conditions (average motorist delay of 50 to 80 seconds or more and often with apparent vehicle queuing). A LOS of “E” is representative of an intersection or traffic movement that is operating at its design capacity, with a LOS of “D” typically representing the limit of acceptable traffic operations.

The addition of Project-related traffic was identified to result in the following impacts:

- **Route 135/Memorial Drive:** All movements at this signalized intersection were identified to continue to operate at LOS C or better during the peak hours with the addition of Project-related traffic, with impacts associated with the Project defined as a predicted increase in average motorist delay of up to 6 seconds and in vehicle queuing of up to 5 vehicles (left-turn/through movements from Memorial Drive during the weekday evening peak-hour).
- **Memorial Drive/Dunkin’ Restaurant Driveway:** All movements exiting the Dunkin’ Restaurant driveway to Memorial Drive were identified to operate at LOS B/C with the addition of Project-related traffic, with impacts associated with the Project defined as a predicted increase in average motorist delay of up to 3 seconds and in vehicle queuing of up to 1 vehicle.
- **Memorial Drive/North Project Site Driveway:** All movements exiting the Project site driveway to Memorial Drive were identified to operate with minimal delay (10-11 seconds) and vehicle queuing (generally less and one (1) vehicle). All movements along Memorial Drive approaching the driveway were also identified to operate with minimal delay (less than 5 seconds) and vehicle queuing (also less than one (1) vehicle).
- **Memorial Drive/South Project Site Driveway:** All movements exiting the Project site driveway to Memorial Drive were identified to operate with minimal delay (11-13 seconds) and vehicle queuing (generally less and one (1) vehicle). All movements along Memorial Drive approaching the driveway were also identified to operate with minimal delay (less than 5 seconds) and vehicle queuing (also less than one (1) vehicle).

Comment: We agree with the methodology that was used to complete the traffic operations analysis.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

Comment T4: The traffic operations analysis should be revised to reflect the updated No-Build and Build condition traffic volumes. In addition, the traffic operations analysis for the Route 135/Memorial Drive intersection should include pedestrian actuations during the peak hours.

Sight Distance

An evaluation of sight lines at the Project site driveway intersections with Memorial Drive was performed following American Association of State Highway and Transportation Officials (AASHTO)¹⁰ standards and using both the posted speed limit of 30 miles per hour (mph) and the measured 85th percentile vehicle travel speeds (37 mph northbound and 38 mph southbound) as reported in the May 2025 TIA. Sight line profiles were prepared for a motorist approaching the driveways along Memorial Drive (stopping sight distance) and for a motorist exiting the driveways (intersection sight distance). Based on this evaluation, it was determined that the available sight lines at the Project site driveway intersection exceed the recommended minimum sight distance for safe operation of the driveways.

Comment T5: In order to validate the sight distance study, the following information should be reviewed and the sight distance study revised as necessary, including the sight distance study that was provided for the proposed crossing of Memorial Drive:

- 1. The object for the stopping sight distance study should be located within Memorial Drive and aligned opposite the center of the driveway or positioned opposite the nearside curbline extension that is closest to the approaching driver;**
- 2. The intersection sight distance profile should be taken from a point along the driveways 14.5 feet from the edge of the traveled-way along Memorial Drive. This will require that separate sight line profiles be provided for each driveway;**
- 3. The sight triangles should be added to the intersection sight distance plan for both driveways;**
- 4. The approach grades along Memorial Drive should be shown on the roadway profiles;**
- 5. If the approach grade exceeds 3%, the required minimum stopping sight distance should be adjusted and the supporting calculations provided; and**
- 6. The south (east) Project site driveway is located approximately 340 feet west of Route 135 which would allow a vehicle approaching the driveway from the south (east) to achieve a speed that would approximate the posted speed limit of 30 mph vs. 15 mph which was the assumed approach speed that was used in the study.**

¹⁰*A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

Recommendations

The following recommendations were offered as a part of the May 2025 TIA:

Access/Egress Improvements

- *Driveway Design* – Align the driveways perpendicular to Memorial Drive; provide corner radii to accommodate fire truck maneuvers; design the driveways and locate signs and landscaping so as to not obstruct sight lines.
- *Signs and Pavement Markings* - Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line that conform to the standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).¹¹
- *Sight Line Maintenance* – New plantings and landscaping located within the sight triangle areas of the Project site driveways should be maintained at a height that does not exceed 2 feet.

Pedestrian and Bicycle Accommodations

- *Pedestrian Accommodation* – Sidewalks should be provided to connect the uses within the Project site to parking areas and include connections to Memorial Drive and the Trolley Bike Trail. A crosswalk with Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided for crossing Memorial Drive that should include a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB). The recommended crosswalk location has been established to provide the required sight lines for safe operation.
- *Bicycle Amenities* – Bicycle racks should be located near the building entrance and at the recreation fields and should include weather protected bicycle parking where feasible.

Parking Management Plan

A parking management plan should be developed and the parking supply should be monitored as the Project is constructed and the elements are open to the public.

Transportation Demand Management (TDM)

A Transportation Demand Management Program will be implemented as a part of the Project this will include the following measures:

- Electric vehicle charging outlets will be provided;
- Secure bicycle parking will be available;
- An area for short-term pick-up/drop-off will be defined near the main building entrance;

¹¹*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

- Sidewalks should be provided to connect the proposed building and parking areas and should provide access to the existing shared-use path along Memorial Drive and to the Trolley Bike Trail.

Comment T6: A student drop-off/pick-up management plan should be provided as a part of the Planning Board review of the Early Learning Center component of the Project. The plan may take the form of a narrative describing: i) the hours of operation; ii) student arrival and departure times; iii) number of staff that will be on-site during the arrival/departure times; iv) number of students accommodated and if drop-off/pick-up times will be staggered; and v) circulation patterns during drop-off/pick-up or if parking spaces will be utilized.

Comment T7: We agree with the recommendations that have been provided as a part of the May 2025 TIA and would suggest that the following additional measures be considered as a part of the Project:

- **Route 135/Memorial Drive** – Pending the outcome of the revised analysis that has been requested as a part of this review, design and implement an optimal timing and phasing plan for the intersection within 6-months of the issuance of a Certificate of Occupancy for the Membership Building or the Early Learning Center, whichever is issued first.
- **Transportation Demand Management** – A Transportation Coordinator, who may have other responsibilities and duties as a part of the Project, should be assigned to manage the TDM program. The elements of the TDM program should be expanded to include the following measures:
 - A “welcome packet” should be provided to new employees that includes the contact information for the TC and detailing available public transportation services, bicycle and walking alternatives, and other commuter options;
 - Providing information in a central location within both the Membership Building and in the Early Learning Center and on the website for the Project that includes information regarding the MWRTA bus service; and
 - Coordinating with the MWRTA to locate a bus stop within the Project site.
- **Parking Monitoring** – Parking occupancy should be monitored as the Project is constructed with the following frequency: 1) within 6-months of the issuance of a Certificate of Occupancy for the Membership Building; 2) within 6-months of the issuance of a Certificate of Occupancy for the Early Learning Center; and 3) 12-months after Project completion. The monitoring program should identify the number of parking spaces constructed at the time that the monitoring occurs and the number of parking spaces occupied during the observation period. The observations should occur on an average weekday and on a Saturday under normal operating conditions for the components of the Project. The monitoring should occur between 7:00 AM and 7:00 PM on a weekday and on a Saturday,



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

and should be performed in May/June or September/October to reflect months of the year when the playing fields would also be in use. To the extent that the observed parking occupancy exceeds 90% of the available parking spaces, specific measures to reduce or manage parking should be identified.

- **Special Events** – A traffic and parking management plan should be developed for special events to the extent that the Project will host events where the traffic volumes and parking demands would exceed the trip estimates that are presented in the May 2025 TIA. Such a plan is not intended to result in modifications to the Site Plan or other features of the Project, but to establish protocols on scheduling to avoid impacts during school hours and peak travel periods, consideration of the use of buses and carpooling, and other such measures as may be deemed appropriate for the specific event.

SITE PLAN

The following comments are offered with regard to our review of the April 25, 2025 *Site Plan* prepared by Bohler:

Comment S1: The fire truck turning analysis should include an evaluation of vehicle turning movements entering and exiting from both directions for both driveways.

Comment S2: Additional detail of the fire truck maneuvering in the area to the rear of the Membership Building should be provided to demonstrate the number of backing maneuvers that are required. To simplify review, separate drawings for entering and exiting should be prepared.

Comment S3: The exiting maneuver for the fire truck from the north (west) Project site driveway indicates that the aerial portion of the vehicle will swing beyond the curblin. Verify that no objects are located in the swing area that would exceed 7-feet in height.

Comment S4: Double-yellow centerline pavement markings should be provided along both driveways between the STOP-line at Memorial Drive and the first intersection within the Project site.

Comment S5: The sight triangle areas for the Project site driveway intersections with Memorial Drive should be shown on the Site Plan and should include the following note: “Signs, landscaping and other features located within sight triangle areas shall be designed, installed, and maintained so as not to exceed 2.0-feet in height. Snow accumulation (windrows) located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed.”

Comment S6: Consideration should be given to striping the snow storage area for parking or otherwise delineating this area so as to define the drive aisle.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

PARKING

On-site parking will be provided for 262 vehicles, including eight (8) handicapped parking spaces, in two (2) surface parking lots, with the south parking lot situated south of the Membership Building and will contain 201 parking spaces and the west parking lot situated west of the Early Learning Center and will contain 61 parking spaces. The paved “snow storage area” along the west side of the west parking lot can accommodate parking for an additional 30 vehicles during non-winter months when the area is not being used for snow storage; however, the area will not include marked parking spaces.

The Site Plan indicates that the Zoning Bylaws of the Town of Ashland do not specify the number of parking spaces that are required for the uses that will be located within the Project site and, as such, a parking demand analysis was included in the May 2025 TIA. The parking demand analysis was based on parking observations conducted at the Metrowest, Westborough and Woburn YMCA facilities and at the Goddard School in Lexington. Parking demand data was also provided for the playing fields; however, the source of the data was not provided. It was noted that Early Learning Centers are included in some YMCA facilities; however, for the purpose of the parking study, parking demands for the Early Learning Center were calculated separately. Using the parking rates obtained from the identified facilities, the base parking demands for each use were distributed over the operational day of the Project and the peak parking demand periods and number of parking spaces occupied was identified. Based on this analysis, the average peak parking demand was identified to be 226 parking spaces on a weekday and 268 parking spaces on a Saturday, with an 85th percentile peak parking demand of 259 parking spaces on a weekday and 301 parking spaces on a Saturday.¹² Given that the Project will provide 262 parking spaces and that an additional 30 parking spaces could be available through the use of the snow storage area for parking, it was concluded that the parking supply is sufficient to support the mix of uses that will be associated with the Project (YMCA Membership Building, Early Learning Center and playing fields).

Comment P1: Section 5.1.2, *Schedule of Parking Area Requirements*, of the Ashland Zoning Bylaw provides parking requirements for “Day care and nursery schools”, which specifies that 1.0 parking spaces per employee and 1.0 parking spaces per 5 children be provided. These requirements should be compared to the observed parking demand from the Goddard School that were used in the parking demand calculations.

Comment P2: The source of the parking distribution by time of day for the day care should be provided as the distribution is different than the data published by the ITE for a day care center. If the data was developed from the observations conducted at the Goddard School, the hours of operation and program at the Goddard School should be provided and compared to the program that will be offered at the Early Learning Center.

Comment P3: Details of the amenities offered and sizes of the YMCA facilities that were used to develop the parking demand data for the Membership Building should be provided

¹²The 85th percentile peak parking demand is defined as the parking demand at which 85 percent of the observed peak parking demands fall below and 15 percent are above.



**TRAFFIC ENGINEERING PEER REVIEW
PROPOSED YMCA AND EARLY LEARNING CENTER
30 MEMORIAL DRIVE
ASHLAND, MASSACHUSETTS
NOVEMBER 4, 2025**

along with the dates that the observations were performed. In addition, the source of the parking distribution by time of day should also be provided.

Comment P4: The source of the parking demand data and parking distribution by time of day for the playing fields should be provided.

Comment P5: Explanation for the 85% adjustment factor that was applied to the parking demand calculations should be provided. The observed data should be representative of typical conditions and an adjustment factor should not be applied to the base parking demand unless there are specific trip reduction or parking demand measures that will be implemented as a part of the Project that would justify a reduction in the base demand.

