# MEMORANDUM

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| **To:** | Michael Wrinn, Director of Planning & Land Use Mgmt, Town of Wilton | **Date:** | March 21, 2024 |
| **From:** | Alyssa Kantor, PE, Senior Transportation Engineer, NV5 | | |
| **Project:** | 131 Danbury Road – Multi-Family Residential | | |
| **Subject:** | Peer Review of Traffic and Pedestrian Operations and Access | | |

The purpose of this memorandum is to summarize the review of and provide comments related to traffic and pedestrian operations and access for the 131 Danbury Road project (the "proposed project") located in Wilton, CT. The proposed project includes a 208-dwelling unit (DU) multi-family, residential development with approximately 321 parking spaces. A review of the proposed project was conducted to support the Town of Wilton in ensuring that the methodologies, analyses, and conclusions included in the traffic impact statement (TIS), and design included in the plan set, are consistent with standard traffic engineering principles and practices. The following memorandum summarizes this review and provides comments on the proposed project application materials accordingly.

The following documents were reviewed for traffic and pedestrian circulation, operation, and access:

- Traffic Impact Study (TIS) prepared by SLR International Corporation (SLR) dated November 27, 2023
- Plan Set prepared by Blew & Associates, P.A. dated June 19, 2023, Beinfield Architecture PC dated November 28, 2023, SLR dated October 23, 2023, and Apex Lighting Solutions dated November 2, 2023
- Application Package prepared by 131 Danbury Wilton Dev AMS LLC (an affiliate of AMS Acquisitions, LLC) dated December 7, 2023

## Traffic Impact Study Review

Study Area

1) The study area selected for this project seems reasonable and includes the nearest signalized intersections along Danbury Road north of the project site and south of the project site. **Figure 1** Site Location Map should be updated to show correct street names. (Street names currently shown as random characters).

Existing Traffic Conditions

2) The traffic analysis locations and peak periods selected for data collection appear to be appropriate for the site's location and proposed residential use. Turning movement counts (TMCs) were conducted at the following two signalized intersections during the AM peak period (7-9 AM) and PM peak period (4-6 PM) on Wednesday, September 13, 2023:
    a. Danbury Road (US Route 7) & Westport Road (Route 33)
    b. Danbury Road (US Route 7) &Grumman Hill Road/ ASML Driveway

3) The turning movement count volumes conducted for this project should be compared to pre-2020 data that coincides with the two study area locations, to determine the change in magnitude of traffic volumes during the respective peak hours due to the COVID-19 pandemic. The traffic data set comparison will determine the adjustment factor to apply to the existing traffic network to compensate for reduced traffic activity caused by the COVID-19 pandemic.
4) Roadway Characteristics **Table 1** –
    c. The ADT for Danbury Road (US Route 7) should be updated from '22,200 vehicles' to '22,400 vehicles', to match the ADT provided by CTDOT Traffic Monitoring Station database.
    d. The note included under the table should reference "south of Route 33", not "south of Route 34".
5) Based on the crash history provided in the TIS, a total of 13 crashes occurred within an approximately 200-foot radius of the site frontage along Danbury Road over a period of five years. Most crashes appear to be associated with the neighboring 129 Danbury Road driveway south of the site, and five crashes occurring as rear-end type crashes, and four crashes occurring as sideswipe type crashes. All crashes which occurred resulted in property damage only or minor injury. There do not appear to be significant concerns regarding existing crash frequency or crash type at this location.
6) Existing Level-of-Service (LOS) Analysis is not included in the TIS. It is recommended to include the existing LOS analysis results at the existing site driveway and the two (2) signalized study area intersections along Danbury Road.

Proposed Development

7) Site Access – The proposed site includes two (2) curb-cuts along the Danbury Rd frontage; An ingress-only driveway at the northern end of the site, and an egress-only driveway at the southern end containing dedicated left- and right-turn lanes. The proposed site will include a pick-up/drop-off/turn-around lane along the building frontage that will link the two driveway aisles. The site plans provided include the necessary pavement markings and signage to guide vehicles entering and exiting the site.
8) Sight distance –The site egress driveway sight lines included in the TIS meet the *2023 CTDOT Highway Design Manual* guidelines. The TIS noted vegetation along the site frontage within the Danbury Road ROW near the site should be regularly pruned to maintain sufficient intersection sight distance.
9) Trip Generation and Distribution - Based on the description of the proposed project, the ITE Land Use Code 221, Multi-Family Housing (Mid Rise), appears to be the most applicable trip generation available in the ITE Trip Generation Handbook.
    a. **Table 3** Trip Generation Summary includes trip generation based on the average rate and direction distribution percentages from *ITE Trip Generation Manual, 11th Edition*. However, it is recommended to calculate trip generation based on the ITE fitted curve equation, not the average rate, and update trip generation volumes in **Table 3** and the traffic analysis accordingly.
    b. The TIS includes the following language: "It is estimated that the proposed conversion of the site into multifamily housing will produce similar, or slightly less, traffic than the existing office building according to the ITE data." However, daily and peak hour traffic of a multifamily housing site is more than a general office building. TIS language should be updated accordingly.

c. The traffic assignment of the site-generated traffic volumes was based on a review of previous studies done for the nearby properties of 50 Danbury Road and 141 Danbury Road, and existing traffic volumes and patterns. The traffic assignment appears to be appropriate for the scope of this traffic study to determine those who would travel north or south to/from the site during each peak hour.

Future Traffic Analysis

10) Background Growth Rate – The background growth rate utilized in the study appears to be a reasonable assumption (0.7 percent per year) and was developed in consultation with CTDOT.
11) CTDOT Bureau of Policy and Planning and the Town of Wilton were contacted for traffic information in the site vicinity for use in the TIS. Based on the information provided, the future traffic network (without and with the proposed site) include site generated trips from the following two (2) no-build developments: 50 Danbury Road and 141 Danbury Road. The future 2025 no-build (background) traffic volumes and 2025 build (combined) traffic volumes appear reasonable.
12) Capacity Analysis –
    d. In the Build (combined) condition, the proposed project intends to construct an ingress only driveway at the north end of the site and construct an egress only driveway at the southern end of the site that contains dedicated left- and right-turn lanes. While the right turn lane is expected to operate with better LOS D and C in the weekday AM and PM peak hours, respectively, the left turn lane is expected to operate at LOS F with high delay in the weekday AM and PM peak hours. The existing driveway is expected to operate at LOS F and LOS E during the weekday AM and PM peak hours, respectively.
    e. Based on the Build (combined) conditions traffic analysis results, it is recommended to provide an independent ingress and egress driveway for site traffic as described in the TIS and shown on the site plans. Constructing a shared driveway with an adjacent site such as 141 Danbury Road is not recommended. The neighboring site development at 141 Danbury Road is anticipated to have similar traffic peak hours, therefore vehicles exiting the proposed site would experience increase delay and worse LOS if vehicles were to exit via a shared driveaway with the neighboring site.
    f. Traffic operations along Danbury Road (SR 7) are not anticipated to be impacted by the poor LOS experienced at the driveway exit and are expected to operate at LOS B.
    g. As noted in the report, the weekday AM and PM peak hour traffic volumes along Danbury Road (SR 7) are the primary cause for delays at the existing driveway exit and is likely not an uncommon condition for other existing stop-controlled driveway approaches along this stretch of roadway.
    h. The study area signalized intersections are projected to operate at LOS F in the future with or without the proposed project.
    i. The Build Conditions (combined) Synchro analysis provided in the TIS Appendix includes one site driveway (for ingress and egress site traffic). The future Build Conditions (combined) Synchro analysis should be updated to match the proposed site plans, to include one ingress site driveway and one egress site driveway.
    j. It is recommended that **Table 4** Capacity Analysis Summary be updated to include queue length, to determine if vehicle queuing will occur along Danbury Road or at the proposed egress site driveway due to the proposed site.

Parking

13) The proposed project includes a total of 321 parking spaces on-site, or 1.543 parking spaces per dwelling unit (DU). The average peak parking demand for residential uses is typically during the overnight period, when most residents have returned to their dwelling units. Based on the 2015-2019 5-year estimate American Community Survey data (US Census) for the site's census tract (tract 454), the average vehicles available per household (DU) was calculated to be 2.31. *The Zoning Regulations of the Town of Wilton, Connecticut*, revised July 10, 2023, states that the parking requirements are 1 space for a one-bedroom dwelling unit and 2 spaces for 2+ bedrooms, which would result in 321 spaces. (The proposed unit mix consists of 95 one-bedroom units, 105 two-bedroom units, and 8 three-bedroom units.) The total 321 parking spaces does not include the additional 22 tandem parking spaces proposed at the site. It appears that sufficient parking is provided on-site.

## Plan Set Review

Vehicular Access

1) On drawing LA "Site Plan - Layout", in the on-grade parking area below the building (shown in gray), the access lane on the west side is one-way southbound at the north end and two-way at the south end. It is recommended to add signage on the access lane to show where the segment changes from one-way to two-way.
2) On drawing LA "Site Plan - Layout", the sidewalk near the site frontage is proposed to be five feet wide. The *CTDOT Highway Design Manual* states for new construction, the minimum sidewalk width proposed should be five feet, therefore the proposed sidewalk width appears to be sufficient.
3) On drawing LA "Site Plan - Layout", there are two delivery spaces proposed in front of the building. Are deliveries including e-commerce parcel delivery intended to use this space? If so, it is recommended that a turning path for a delivery vehicle show the vehicle accessing the delivery spaces and existing the site. If e-commerce parcel delivery is intended to occur at a different location, identify this location on the site plan.
4) On drawing LA "Site Plan - Layout", a 36" high fieldstone wall is proposed in the vicinity of the egress driveway. Considerations should be made to shorten the length of the wall to ensure adequate sight lines for vehicles exiting onto Danbury Road.
5) On drawing "Vehicle Turning Movement - SU-30 and 15' Box Truck", the SU-30 and box truck vehicle turning path appears to extend beyond the move-in truck parking stall slightly. In addition, it is recommended to continue the vehicle turning path to exit the site, to ensure the vehicles would not encounter obstructions.
6) On drawing VH "Vehicle Turning Movement - Fire Truck", the emergency vehicle turning path appears to extend beyond the access driveway provided on north side of the site, which would cause emergency vehicles being at risk to encountering obstructions. In addition, the emergency vehicle turning path appears to extend beyond the fire lane entry point and exit point. On drawing LA "Site Plan - Layout", the fire lane located on the western side of the site is proposed to be 15 feet. Per the 2018 Connecticut State Fire Safety Code (section 503.2.1 of the International Fire Code 2015), the minimum width of a fire apparatus access road is 20 feet. It is recommended to widen the proposed driveway to a minimum of 20 feet to ensure the turning path of an emergency vehicle would not encounter obstructions. Additionally, it is recommended to run an emergency vehicle path clockwise around the site in addition to the already provided counter-clockwise

route, to ensure an emergency design vehicle could drive through the site in either direction without encountering obstructions.

7) It should be noted that although the emergency fire access driveway proposed behind the building is located within the current flood plain, the driveway and approximately one-third of the proposed building are within the 30-year flood plain of the Norwalk River. Further evaluation from the Town's Drainage Reviewer is required to determine the need for any stormwater/flood plain resiliency measures. Also, note on drawing A1.01 "Basement Plan", floodplain is misspelled throughout the drawing and should be corrected.

## Conclusions & Summary of Comments

The following bullets summarize comments made on the proposed project as discussed previously in this memorandum:

A. **Figure 1** Site Location Map should be updated to show correct street names.
B. The turning movement count volumes conducted for this project should be compared to pre-2020 data that coincides with the two study area locations, to determine the change in magnitude of traffic volumes during the respective peak hours due to the COVID-19 pandemic. The traffic data set comparison will determine the adjustment factor to apply to the existing traffic network to compensate for reduced traffic activity caused by the COVID-19 pandemic.
C. **Table 1** Roadway Characteristics should be revised to include the latest ADT according to CTDOT Traffic Monitoring Station database and revised to update note to state "south of Route 33".
D. Update TIS to include the existing LOS analysis results at the existing site driveway and the two (2) signalized study area intersections along Danbury Road.
E. Update **Table 3** Trip Generation Summary and traffic analysis accordingly to include trip generation based on the fitted curve equation from *ITE Trip Generation Manual, 11th Edition*.
F. The future Build Conditions (combined) Synchro analysis should be updated to match the proposed site plans, to include one ingress site driveway and one egress site driveway.
G. It is recommended that **Table 4** Capacity Analysis Summary be updated to include queue length, to determine if vehicle queuing will occur along Danbury Road or at the proposed egress site driveway due to the proposed site.
H. It is recommended to add signage on the western access lane within the at-grade parking area to show where the segment changes from one-way to two-way.
I. The project team should confirm where e-commerce deliveries are intended to occur, and a turning path for a delivery vehicle accessing the delivery spaces in front of the building and exiting the site should be provided for review for the Town.
J. The project team should consider shortening the length of the proposed fieldstone wall with site signage to ensure adequate sight lines for vehicles exiting onto Danbury Road.
K. Update the SU-30 and box truck vehicle turning paths so that there is not obstruction with the move-in truck parking stall curbs and continue the vehicle turning path to exit the site, to ensure the vehicles would not encounter obstructions.
L. The project team should widen the proposed emergency vehicle driveway (west of the proposed building) to a minimum of 20 feet to ensure the turning path of an emergency vehicle would not encounter obstructions. Additionally, it is recommended to show an emergency vehicle path travelling clockwise around the building complex, to ensure an emergency design vehicle could drive through the site in either direction without encountering obstructions.

M. Based on the Build (combined) conditions traffic analysis results, it is recommended to provide an independent ingress and egress driveway for site traffic as described in the TIS and shown on the site plans. Constructing a shared driveway with an adjacent site such as 141 Danbury Road is not recommended. The neighboring site development at 141 Danbury Road is anticipated to have similar traffic peak hours, therefore vehicles exiting the proposed site would experience increase delay and worse LOS if vehicles were to exit via a shared driveaway with the neighboring site.
N. Further evaluation from the Town's Drainage Reviewer is required to determine the need for any stormwater/flood plain resiliency measures to ensure continuous access/use of the emergency fire access route during major storm events.