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MEMORANDUM

DATE: October 21, 2020

TO: Ms. Karen Sherman
Holliston Town Planner

CC: file

FROM: John P. Shevlin, P.E.

RE: **Traffic Engineering Review Services**
Adesa Car Auction – 194 Lowland Street
Review of Response to Comments
Holliston, Massachusetts
(Pare Project No. 20157.00)

PROJECT DESCRIPTION

Pare Corporation (Pare) provided our initial review comments for the above-referenced project on September 28, 2020. Since that time, Howard Stein Hudson (HSH) has provided responses to Pare's review and also comments sent to the Holliston Planning Board by members of the public. The information provided as part of original review included:

- *Traffic Impact Assessment Technical Memorandum* prepared by HSH dated August 31, 2020
- Site Plans entitled "*Site Development Plan for Adesa Holliston, 194 Lowland Street, Holliston, MA*". Plan date May 12, 2020. Plans prepared by Kimley Horn.
- *Abutters comments* dated July 6 (1), August 6 (1), September 4(3) and September 9(1).

In addition to our review of the above-described documents, Pare also performed a site visit to review the existing conditions.

The additional information provided by HSH includes the following:
- *Responses to Peer Review Traffic Comments* prepared by HSH dated October 14, 2020
- *Responses to Public Traffic Comments* prepared by HSH dated October 14, 2020

Pare offers the following pertaining to the response to comments. Our latest responses are in bold.

Transportation Impact Assessment provided by Howard Stein Hudson, dated August 31, 2020 with responses dated October 14, 2020:

1. *Overview* –Applicant describes the proposed site use and the proposed components of the study including the evaluation of the future trip generation, truck analysis and route analysis, and any impacts to the Complete Streets initiatives that the Town of Holliston has adopted.

Information/descriptions should be provided regarding the existing roads and intersections in the project area and along the truck routes regarding travel lanes and widths, shoulder widths, posted speed limits, traffic controls, etc. Information should also be provided regarding the facility operations including number of employees, hours and days of operations, anticipated trucks leaving/entering site and when does this occur-morning, evenly throughout the day, afternoon etc.

HSH has provided tables describing the study area roadway and intersections. Information pertaining to Functional Classification, Lane Widths, Shoulder Widths, Posted Speed Limits, Traffic Controls, Approach Lanes and Crosswalks have been provided. Information appears to be accurate.

Information pertaining to the operations has been provided. It is anticipated that the weekday hours will be 8:00 a.m. to 5:00 p.m. while on Saturdays the operations will be 8:00 a.m. until noon.

Generated trip information has been provided. It is projected that 75 cars will be delivered to Framingham from Lowland Street. Based on the revised information it is anticipated that there will be 8 to 10 large nine-car carrier trucks that will deliver vehicles to the site (20 total trips). Two-car carriers going back and forth from the site to Framingham are anticipated to result in 18 deliveries per day (these carriers are anticipated to carry 36 of the 75 cars) resulting in 36 trips and the remaining cars delivered to Framingham are 39 cars. Adesa employees arriving on-site in vans are anticipated to come with 4 employees resulting in 10 vans going to site and 10 leaving. Based on information provided which was from Adesa, Table 2 is correct.

In the original Assessment (dated August 31, 2020), the applicant stated, for comparison, that the proposed site by-right use could be 130,000 square feet and 80,000 square feet. No site plan was provided. Please verify if this accurate. If the by-right is less, the peak hour trips certainly would be less but the capacity analysis is not anticipated to show a significant decrease.

2. *Project Trip Generation*- Trip generations were calculated for a by-right industrial development on the site and compared with the proposed car storage facility.

   - Please clarify in Table 1 how the truck trips were calculated for Land Use Code 110.

     Trip generations were provided by applicant. Assuming information provided is accurate, the response and information is acceptable.

   - Please clarify the trip generation for the proposed car storage facility. Paragraph in the Trip Generation Methodology section states "8-10 large vehicles" taking cars to be stored. This will result in 16-20 truck trips per day (entering and exiting) for large vehicles. Also, there will be "up to 75 vehicles being moved from the site on an average day". It appears vehicles are driven off site by ADESA personnel. Also, it appears that ADESA uses vans to drive personnel to the site. How many personnel are in each van? How many trips total? How many employees can be anticipated on-site? It appears that 95+ trips between large vehicles and cars leaving site are proposed (20 trucks, 75 vehicles + van drop-offs+employees). Verify the number of vans/drop-offs. Justify the 66 cars proposed exiting the site as stated. Provide further clarification on how trips were generated for the car storage facility for the proposed site for the daily trips, a.m. peak hour and p.m. peak hour. Are the projected trips provided from a study/count taken from a similar site, if so where?

     Further clarification was provided for the trips being generated from the site. I believe this data was provided by the Owner based on his experience. No information was provided for a similar site for

comparison purposes. The trips provided in the response memo vary slightly from the original study. If the projections provided by the Owner are correct, the revised numbers result in less daily trips (132 vs. 115 vehicle trips per day), and more peak hour vehicles (1 each hour). The difference in volumes between original study and updated assessment should have no significant impact on traffic.

Applicant was unaware of any similar sites for comparison.

- Also, is there any information as to where trucks may be coming/going from/to? How many trucks can be anticipated to traverse Washington Street through the downtown area?

  Anticipated truck routes have been provided in the updated assessment (Figure 1.) Applicant states the trip distribution was not provided in the original memo because it was not requested by the Town of Holliston Planning Board. The revised memo states where truck trips will be coming from. The split they anticipate is 25% from Route 16 east of the Project Site and 75% of the truck trips will come from either I-495 east on Route 16 or I-90 south on Route 126 to the site. The projections provided call for 2 (1 in/1 out) 9-car carriers in the peak hours. With the assumptions made, it can be anticipated that 2 truck trips may occur every 3 hours on Washington Street. If indeed the projected trips from the Owner are accurate and are distributed throughout the operation hours, this traffic would have no significant impact on the roadway system.

- The applicant compares the trips from this site to the by-right industrial uses. Using this analogy does appear to result in less traffic generated with the proposed development.

  As previously stated, in the original Assessment (dated August 31, 2020), the applicant stated, for comparison, that the proposed site by-right use could be 130,000 square feet and 80,000 square feet. No site plan was provided to indicate how big the by-right use could be. Please provided information to support the by-right sizes indicated. It should be noted that if the by-right is less, the peak hour trips certainly would be less but the capacity analysis is not anticipated to show a significant decrease.

3. *Truck Access and Route Analysis:* It doesn't appear that all new vehicles to Lowland Street are coming from the Framingham site. If delivery/carrier trucks are coming from I-495 describe what roads they would use to access the site and the suitability of that route. If trucks are coming from I-95 South what roads do they use to access the site?

   Figure 1 Truck Routes- shows the regional routes to be used by large trucks delivering cars to the site. This Figure also shows the route that ADESA employees and small two-car carrier trucks would take. The routes to/from I-495 for large trucks will use Washington Street or Milford Street to Summer Street to Washington Street. Also, Concord Street (Route 126), Whitney Street, Jeffrey Avenue and Lowland Street will also be used for the bigger delivery trucks. As projected, during the peak hour the site is anticipated to generate 2 peak hour trips (1 in/1 out). The local truck trips will use Western Avenue, Washington Street, Whitney Street, Jeffrey Avenue and Lowland Street. This will result in 4 trips (2 in/2 out) during the peak hours. These roadways appear to be able to handle the projected trips if they are correct.

   The applicant states that all drivers will be given route maps to follow that show the regional roadway access. If approved, the owner should continue to monitor that this is being adhered to.

Is traffic(drivers) to/from site going to be directed to use only routes identified. Can verification be provided that no traffic is anticipated to come from the south, i.e Fiske Street area. Please note there are postings for "Weight Limit-2 ½ Tons 7PM-7AM" south of the site approaching Fiske Street.

Truck Route map has been revised now indicating Regional Truck Route Access and Local Truck Route Access. The applicant states that all drivers will be given route maps to follow that show the regional roadway access. Also the applicant has stated that all trucks will be directed not to use Fiske Street south of the Project Site at all times. During the hours of operation, the weight limit posting is not enforced. If approved, the owner should continue to monitor that Fiske Street south of the site is not to be used during all hours. It Is not anticipated that due to hours of operations of the site, traffic to/from the site will be generated during the 7PM-7AM restriction period.

4. *Truck Turning Movements* – This section describes preferred and alternative truck routes. Is it possible to have trucks use one dedicated route between the proposed site and the Framingham site.

The revised assessment indicates one route to/from the Lowland Street site and the Main Facility site in Framingham. The roads include Western Avenue, Washington Street, Whitney Street, Jeffrey Avenue and Lowland Street. These vehicles will be cars and vans (6 total during the peak hour) and two-car carriers, approximately 40-feet long (4 during the peak hours). The roadways should be able to handle the additional traffic and the low traffic volumes, if correct.

Figure 3 shows the truck movement at the Concord Street/Washington Street intersection. The movements should be further studied as you head west, in particular in the downtown area at the Washington Street/Central Street intersection, where there are parking and turn lanes.

Applicant has indicated that turning movements are not anticipated at the Washington Street near Central Street intersection and that the lane widths are similar in that area as to the rest of Washington Street. Truck traffic is not restricted on this road and the potential truck traffic trip generations and distributions are correct this intersection should be able to handle the additional traffic.

Several of the figures (Figures 8-12) indicate trucks traversing into opposing lanes of traffic at intersections. The applicant states that the encroachments described and shown in the figures are allowed on collector and local roads, as described in the American Association of State Highway Transportation Officials (AASHTO) A Policy on Geometric Design of Highway and Streets, most recently updated in 2018. Although this is allowable, the applicant should describe if the existing truck movements are encroaching onto opposing travel lanes, what impacts does this have on capacity/delays and safety?

Additional AutoTurn movement diagrams have been provided. Based on the roadway classifications and Autoturn diagrams, two intersections (Washington Street/Summer Street and Washington Street/Whitney Street) do not meet the MassDOT standards as indicated in Table 5. Applicant has stated that travel across travel lanes at intersections is a usual condition in Massachusetts. Pare would agree with that statement. Applicant states that large trucks currently use this intersection and make similar movements. During Pare's site visit and review of these intersections, there was no truck traffic observed during the time at the above locations.

The crash data provided does not indicate a crash rate (2 total) over 3 years at the Washington Street/Whitney Street intersection with one vehicle being an angle crash. The other was a single car crash.

With the projected traffic being added to this intersection, we do not anticipate that the safety at this intersection will be significantly decreased.

At the Summer Street/Washington Street intersection, 21 crashes occurred over the 3-year period. Almost half (10) were rear-end crashes and almost half (9) were angle. The applicant states that the number of trips should not significantly impair this condition. An assessment of the angle crashes to better understand if the lane encroachments were the reason for the crashes is recommended. At a minimum, a more detailed review of the area to better understand how the encroachments impact the intersection pertaining to traffic flow and safety should be provided to see if any improvements can be made to improve this condition.

Please provide Autoturn movement diagrams in and out of the proposed site.

Autoturn diagrams have been provided (Figure 2 and 3) for access to/from site. One-way traffic, counterclockwise, appears to be proposed. Turning movements provided are acceptable.

5. *Complete Street Assessments* – Similar to comment above, what safety impacts can be anticipated from the turning movement encroachments.

See response to comment 4 above. Also, the applicant states that the number of trucks related to the development will not negatively further impact the Town's Complete Street Policy.

6. *Additional comments:*

- It is recommended that crash data be collected to know if there are any safety deficiencies within the project area or along the travel routes identified.

  Crash data has been provided as requested. See response in Comment No. 4 above.

- No information was provided regarding traffic capacity at any of the adjacent intersections. The applicant is stating that the low number of peak hour trips should have no impact on delays. Although this may be true based on peak hour volumes anticipated, it would be good to know if any of the intersections currently have a low level of service, and if so can any mitigation be performed to help traffic flow.

  Applicant has stated that a full traffic study had not been requested by the Holliston Planning Board. The applicant has performed additional counts and analysis at the Whiney Street/Washington Street intersection. It would be beneficial to know how these volumes compare to pre-COVID. This intersection should have the biggest volume increases due to the development and the routes proposed. The existing versus projected conditions with the development indicates no significant decrease in level of service and delays with all movements resulting in LOS D or better.

  The following table provides turning movement volumes comparing existing vs. proposed peak hour conditions. As can be seen, if trip generation and distribution occurs as proposed, the volume increase for movements are not significant. The truck traffic volume is low. Areas where the percentage of trucks increase significantly is due to existing and proposed low overall volumes.

PEAK HOUR VOLUMES

MOVEMENT	EXISTING A.M. VOLUMES (Combined/Trucks(% Trucks)	PROPOSED A.M. VOLUMES (Combined/Trucks)	EXISTING P.M. VOLUMES (Combined/Trucks)	PROPOSED P.M. VOLUMES (Combined/Trucks)
Whitney Street NB Left	11/1 (9%)	12/2 (17%)	26/3 (12%)	27/4 (15%)
Whitney Street NB Right	42/9 (21%)	49/11 (22%)	39/0 (0%)	42/2 (5%)
Washington Street EB Thru	525/32 (6%)	525/32 (6%)	303/8 (3%)	303/8 (3%)
Washington Street EB Right	26/4 (15%)	27/5 (19%)	42/5 (12%)	43/6 (14%)
Washington Street WB Left	26/7 (27%)	29/9 (31%)	108/5 (5%)	111/7 (6%)
Washington Street WB Thru	242/18 (7%)	242/18 (7%)	518/17 (3%)	518/17 (3%)
Washington Street WB Right	1/0 (0%)	1/0 (0%)	1/0 (0%)	1/0 (0%)

- Regarding safety, a safety analysis should be done along the truck routes and at the proposed site driveways. Part of the safety analysis should include a speed study on Lowland Street and sight distances should be checked based on the 85th percentile speeds and the future site design.

  See response in Comment No. 4 above regarding safety. Sight distance analysis has been provided and based on a 45 mph design speed, sight lines exiting the site are acceptable.

Responses to Public Traffic Comments dated October 14, 2020:

1. *Truck Turning Movements at Route 16/Route 126* –**See Response No. 4 above.**

2. *Truck Weights* – **Pare is in agreement with information regarding vehicle weights and Massachusetts allowable truck limits. No further action is necessary.**

3. *Trucks Encroaching During Turns* **– See Response No. 4 above.**

In summary, the applicant states that a full traffic study was not requested by the Town of Holliston Planning Board. The applicant did provide additional information requested from our first review (roadway/intersection descriptions, clarification to trip generations, traffic counts and analysis at Whitney Street/Washington Street intersection, crash data summary from MassDOT crash data base and Autoturn movements at significant intersection turning movements). The following summary comments are being provided that should be discussed:

- Trip generations are from the Owner. Pare and the applicants engineer are unaware of a similar site in the area for comparison. If projections are valid, the increase in peak hour volumes and truck volumes are relatively minor and are not anticipated to have any significant impacts to traffic capacity.
- If approved, truck routes provided should be monitored and enforced by the applicant.
- Please verify the by-right use and traffic volumes. It is felt that the difference between building sizes will not result in a significant difference in traffic volumes during the peak hours.
- Please compare pre-COVID counts (if available) versus existing counts. Assess the difference in counts and overall impact. LOS and delays may increase but Pare believes the difference with the proposed site trips will not have a significant impact.

- Crash data should be obtained to see if angle crashes at the Summer Street/Washington Street intersection were due to lane encroachments. Further review of intersection should be performed by applicant to observe truck encroachment impacts.
- Pare is unaware of any restrictions for trucks on Western Avenue. Trucks were observed on the roadway during our site visit. Applicant should verify any restrictions, if any.
- Please describe loading and unloading operations of the carriers on-site. Where will this occur?

We will be available for the October 21, 2020 Planning Board meeting to present our findings and respond to any comments by the Board.

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