



Memorandum

To: Ms. Jennifer Hager
Planning & Economic Development Director
Planning Department
Sutton Town Hall
4 Uxbridge Road
Sutton, Massachusetts 01590

Date: August 30, 2022

Project #: 15076.01

From: Vinod Kalikiri, PE, PTOE
Michael Santos, PE, PTOE

Re: Lackey Dam Road Logistics Center
Responses to Transportation Peer Review
Comments dated June 30, 2022

VHB has prepared this memorandum to summarize the response to the peer review comments prepared by Ron Müller & Associates (RMA) in their June 30, 2022 letter on the May 18, 2022 Traffic Impact and Access Study (TIAS) for a proposed warehouse distribution center on Lackey Dam Road in Sutton, Massachusetts. Concurrent with preparing this response memorandum, VHB also prepared an updated Traffic Impact and Access Study (TIAS) (revision dated August 30, 2022) to analyze a revised development plan for the Site that has been developed in response to comments from the Sutton Conservation Commission. Specifically, a majority of the changes in the updated TIAS deals the reduced development program consisting of 179,122 square feet (sf) of building space in comparison to the previously analyzed building size of 220,000 sf. The updated TIAS also incorporates many of the recommendations and comments from the RMA peer review letter. Therefore, where appropriate,, several of the responses in this memorandum refer to the updated TIAS dated August 30, 2022 rather than repeat the same content in this memorandum.

The order of the responses below follows the format and structure of the comments outlined in the RMA letter.

Traffic Study Review

Existing Conditions

Comment 1: The traffic study focused on the following intersections:

- Gilboa Street at North Street
- Lackey Dam Road at Gas Station South Driveway
- Lackey Dam Road at Gas Station North Driveway / Pyne Driveway
- Lackey Dam Road at Route 146 Southbound Ramps
- Lackey Dam Road at Route 146 Northbound Ramps
- Lackey Dam Road at Blackstone Logistics Center Driveway
- Lackey Dam Road at proposed site driveway
- Lackey Dam Road at Oakhurst Road
- Lackey Dam Road at Prescott Road

It should also be noted that analysis at the intersection of Main Street and Lasell Road is underway. A supplemental analysis will be submitted in June 2022. **Furthermore, given the distribution of traffic expected to utilize Oakhurst Road it is recommended that the Route 146 and Main Street interchange be included in the analysis. This is further discussed in Comment 9.**

Response: *The intersections of Main Street at the Route 146 northbound and southbound ramps are included in the updated TIAS to address vehicular traffic that will access the site via Oakhurst Road. In addition, the updated TIAS also includes an analysis of the Main Street at Lasell Road, as requested by the Town of Sutton.*

Comment 2: The study provided a description of the area roadway network. Traffic volume data for the study area intersections was obtained from another traffic study completed for Blackstone Logistics Center, just south of the site. This study was completed in January of 2021. Turning movement counts (TMCs) from that study were conducted in October 2020 during the weekday AM (7:00 AM to 9:00 AM) peak period and the weekday PM (4:00 PM to 6:00 PM) peak period for all study area intersections except North Street at Gilboa Street. TMCs at that intersection were conducted in March of 2021. The counts showed that the weekday AM peak hour generally occurred from 7:00 AM to 8:00 AM and the weekday PM peak hour generally occurred from 4:45 PM to 5:45 PM. **RMA concurs with the selected time periods used for analysis.**

Response: *No further response needed.*

Comment 3: Given the current traffic conditions associated with the coronavirus pandemic, the study reviewed data to determine if the counts needed to be adjusted to represent normal, pre-COVID traffic conditions. Nearby traffic data showed that the traffic volumes collected were about 10 percent lower than they were pre-COVID. Therefore, the counts were upwardly adjusted by 10 percent. **RMA concurs with these COVID adjustments.**

Response: *No further response needed.*

Comment 4: Seasonal adjustments were made to the data based on historic MassDOT data. The data indicated that October counts were higher than annual month conditions. It wasn't noted if adjustments were made to the March 2021 data. **It is recommended that the applicant confirm if a seasonal adjustment was applied to the March 2021 data. Furthermore, it is recommended that the applicant review MassDOT permanent count station data near the site to confirm the seasonal adjustments.**

Response: *Traffic volumes from the nearest MassDOT permanent count station was reviewed to determine if the March 2021 should be seasonally adjusted. Data from count station 310 (Route 146 at Purgatory Road) is located north of the Project Site and indicates that traffic volumes in March 2021 are 92 percent of the average month. Based on this review, the March 2021 TMCs were adjusted upward to reflect average month conditions. The only traffic counts affected by this adjustment are the TMCs conducted at the intersection of Gilboa Street at North Street. All other traffic counts were conducted during months that were at or above average month conditions. The updated TIAS reflects the seasonal adjustment for the March 2021 traffic counts.*

Comment 5: Accident data were reviewed and summarized within the traffic study. The intersection of Gilboa Street at North Street has a crash rate above the district or statewide average, while the intersection of Lackey Dam Road at the Route 146 northbound ramps has a crash rate below the district average but above the statewide average. **The applicant should confirm if there are any crash trends at**

the intersections of Gilboa Street and North Street and Lackey Dam Road at the Route 146 northbound ramps and determine if any improvements to these intersections would result in fewer crashes.

Response: *An updated discussion of the crash data are provided in the updated TIAS. It is noted that the findings for several of the study locations, including the Route 146/Lackey Dam Road interchange ramps' intersections, are consistent with the review findings of the Blackstone Logistics project traffic study that has undergone extensive review by the towns of Sutton, Uxbridge, Douglas and MassDOT.*

Future Conditions

Comment 6: A 7-year design horizon was used for the No-Build and Build condition analyses consistent with MassDOT's Transportation Impact Assessment Guidelines. An annual growth rate of 1.0 percent per year was used to project the future No-Build volumes. The study used recent traffic studies in the area to determine an appropriate growth rate. Furthermore, MassDOT ATR count station in the area were reviewed to confirm this growth rate. Based on that data, traffic volumes have generally decreased. Therefore, a one percent annual growth rate provides a conservative assessment. **RMA concurs with these findings.**

Response: *No further response needed.*

Comment 7: The traffic study included the following planned developments within the towns of Sutton, Uxbridge, Douglas and Northbridge:

- Blackstone Logistics Center (Sutton, Douglas and Uxbridge) – approximately 650,000 square feet of warehouse distribution space.
- 85 Gilmore Drive (Sutton) – approximately 140,000 square feet of industrial manufacturing space and 40,000 square feet of ancillary office space.
- Stone Hill Senior Living (Northbridge) – 104 senior housing units.
- Northbridge Dispensary (Northbridge) – 4,290 square foot marijuana dispensary.
- Proposed Retail Marijuana Dispensary (Northbridge) – 5,000 square foot marijuana dispensary.
- 502 Douglas Street (Uxbridge) – mixed use development consisting of a 3,500 square foot convenience store, a 1,500 square foot coffee shop with drive-through, a 10-position fueling station and 2-position diesel facility.
- 515 Douglas Street (Uxbridge) – a sortation warehouse of up to 520,000 square feet.

Based on review of other studies in the area there are additional developments that could impact traffic within the study area and should be included within the background growth assumptions including:

- **30 Lackey Dam Road, Uxbridge – redevelopment of the existing gas station to include a 20-vehicle fueling position gas station with two additional truck fueling positions and a 7,398 square foot convenience store with drive-through window. The traffic study for this project was performed by RMA and will be forwarded to the applicant for information.**

- **Campanelli Business Park Phase 1, Uxbridge – 800,000 square feet of industrial space on Campanelli Drive.**
- **Campanelli Business Park Amazon Facility, Uxbridge – an Amazon sortation facility at 515 Douglas Street.**
- **Gilboa Street, Douglas – 1.1 million square feet of warehouse space on Gilboa Street.**

Response: *The No-Build analysis in the updated TIAS incorporates traffic from additional background development projects where appropriate.*

Comment 8: Based on the site plan, a 212,350-foot warehouse-distribution building is proposed on site. To be conservative a building size of 220,000 square feet was used for analysis. A particular tenant has not yet been identified for the site. The trip generation of the development was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual¹ for warehousing, Land Use Code (LUC) 150. A review of other land uses was made to determine what land use is most appropriate for the site. As shown in Table 1, both fulfillment center and parcel hub warehouse would generate far greater peak hour generation than LUC 150. **Since an end user has not been determined for the site, it is recommended that the highest possible trip generating land use be used, or the town should specifically exclude the higher trip generating land uses from any approvals.**

Table 1 ITE Trip Rate Comparison

Time Period	Warehousing LUC 150	Transload & Short-Term Warehouse LUC 154	Fulfillment Center Warehouse LUC 155	Parcel Hub Warehouse LUC 156
Weekday Daily	1.71	1.40	8.18	7.75
AM Peak	0.17	0.08	0.59	0.70
PM Peak	0.18	0.10	1.37	0.64

Response: *While the end user of the facility has not been determined for the Site, the building is not being designed to support the logistics of a fulfillment center or a parcel hub warehouse. The trip generation estimates used LUC 150 to provide the most realistic estimates for the future uses on the Project Site. The Project is expected to operate similarly to the adjacent Blackstone Logistics Center project that is currently under construction. The traffic study prepared for that project also used ITE LUC 150 for trip generation estimates. Please refer to the Trip Generation section of the updated TIAS regarding another LUC that was tested at the town's request, which indicated that LUC 150 would still be the appropriate LUC for traffic analysis purposes.*

The Proponent is also committed to developing a post-construction traffic monitoring program that will include a comparison of traffic counts at the Site driveways when the Project is in operation with the trip generation estimates presented in the updated TIAS.

Comment 9: The truck and vehicle trip generation were broken out separately for the proposed uses based on information obtained from the Blackstone Logistics Center traffic study. **It is recommended that the**

truck trip generation assumptions obtained from the Blackstone Logistics Center traffic study be included in the Appendix. It is also recommended that the applicant provide a trip generation comparison between the Blackstone Logistics Center and LUC 150.

Response: *The truck trip generation estimate assumptions are provided in the Appendix of the updated TIAS. The Blackstone Logistics Center is currently under construction.*

Comment 10: The traffic study describes that the trip distribution methodology for employees was based on Journey-to-Work data obtained from the U.S. Census Bureau for persons employed in the Town of Sutton. Based on these data, the study assumes 19 percent of the new site traffic will be to/from the west on Lackey Dam Road/Gilboa Street, 8 percent will be to/from the east on Lackey Dam Road/Douglas Road, 52 percent will be to/from the north on Route 146 via Oakhurst Road and 21 percent will be to/from the south on Route 146 via Lackey Dam Road. RMA concurs with these assumptions. **As mentioned in Comment 1, given that 52 percent of site traffic is expected to travel on Oakhurst Road north to the Route 146 interchange, it is recommended that the Route 146 and Main Street interchange be included in the analysis.**

Response: *Additional study locations are included in the updated TIAS.*

Comment 11: All truck traffic will be directed to utilize Route 146 by way of Lackey Dam Road. Therefore, all truck traffic was distributed on Lackey Dam Road with 65 percent of the truck traffic to/from the north on Route 146 and 35 percent of the truck traffic to/from the south on Route 146. **To ensure that all truck traffic utilizes these routes, it is recommended that signage be installed on the driveway exit ensuring that trucks do not turn left. This signage should be shown on the site plan.**

Response: *The Site Plans will include appropriate signage along the Site driveway to direct trailer trucks to only turn right while exiting the Site. The signage will also prohibit trailer trucks from turning right into the site (i.e., not travel via Oakhurst Road to arrive at the site).*

Comment 12: Figures 7 and 8 show site generated traffic volumes on the study area roadways. Upon review, the traffic volumes entering and exiting the site driveway are higher than the traffic volumes shown in Table 4. **It is recommended that the figures be updated to match the correct trip generation. Site generated volumes should balance between intersections. Furthermore, any changes to the site generated networks should be reflected in the Build networks.**

Response: *The figures in the updated TIAS have been updated to reflect the latest, reduced, development program.*

Comment 13: A total of 157 parking spaces are supplied on site. Of these 157 parking spaces 48 are tractor trailer spaces and 109 are automobile spaces. An additional 71 land banked automobile parking spaces are provided on site. The study mentions that this would result in 221 total automobile parking spaces, however 109 automobile spaces and 71 land banked automobile spaces would actually result in 180 automobile spaces. For LUC 150, the ITE suggests up to 431 parking spaces be provided on site. Sutton zoning requirements require 1 space per 2,000 square feet of warehouse/distribution space and 1 space per 250 square feet of office space. Assuming a building size of 220,000 square feet, of which 10,000 square feet will be dedicated to office, 145 parking spaces would be required based on

zoning requirements. **It is recommended that the Town confirm the number of parking spaces proposed are adequate to accommodate demand.**

Response: *As discussed in the updated TIAS, the proposed parking supply is consistent with the Proponent's experience with tenant needs for such facilities.*

Comment 14: Capacity analyses were performed at the study area intersections under Existing, No-Build and Build conditions. Based on field observations, it was noted that drivers likely accept smaller gaps in the traffic stream to make turning movements on Lackey Dam Road than what the Synchro capacity analysis program assumes as a default setting. Therefore, a vehicle gap study was performed on Lackey Dam Road near the Route 146 northbound off ramp on Thursday, March 11, 2021 during the weekday AM and PM peak periods. The gap study showed that drivers accepted an average gap of 5.3 seconds between vehicles on Lackey Dam Road during the weekday AM peak hour and 6.0 seconds during the weekday PM peak hour. These values were input to Synchro to more accurately model driver behavior in the area. **RMA concurs with these findings.**

Response: *No further response needed.*

Comment 15: The Lackey Dam Road intersection with the Shell Gas Station North Driveway/Pyne Driveway eastbound movement currently operates at a level of service (LOS) F during the weekday AM peak hour and is expected to continue to operate at LOS F under Build conditions with and without the development in place. At the intersection of Lackey Dam Road at the Route 146 northbound ramps, the westbound left turn movement is expected to degrade to a LOS F under future conditions, with and without the development in place. It should be noted however, that the development will result in nominal increases in delay to all study area intersections. Furthermore, all other intersection movements are expected to operate at acceptable levels.

Response: *No further response needed.*

Comment 16: **Based on the findings of Comment 11, analysis may need to be rerun under the Build condition if the resulting volumes at particular intersections are higher than currently analyzed.**

Response: *The updated TIAS includes revised traffic operations analyses for the expanded study area for all analysis scenarios.*

Comment 17: A left turn lane warrant analysis was completed at the intersection of Lackey Dam Road and the proposed site driveway to determine if a northbound Lackey Dam Road left turn lane would be needed entering the site. Based on review of warrant criteria, a left turn lane is not warranted. **RMA concurs with these findings.**

Response: *No further response needed.*

Comment 18: A Transportation Demand Management (TDM) plan is proposed for the site which aims to reduce individual dependency on personal vehicles. The TDM plan is aimed to increase the number of persons per vehicle as well as to encourage use of non-motorized travel, including bicycling and walking. The TDM plan will include an on-site transportation coordinator who would implement a number of TDM measures including:

- A guaranteed ride home program through a taxi voucher program or another similar measure.
- Provide ridesharing/ride matching services (promote carpooling).
- Depending on demand, designate parking spaces as preferred spaces for ridesharing services (van/carpools).
- Designate parking spaces as preferred parking for hybrid or zero/low emission vehicles.
- Provide charging stations for electric vehicles.
- Provide an employee shuttle to the nearest public transportation services, if demand is identified.
- Partner with local Transportation Management Organizations (TMO) to evaluate potential TDM measures, as well as offer employee incentives.
- Partner with MassRIDES and NuRide to develop and evaluate a comprehensive TDM program and encourage employees to make greener trips.

RMA agrees with these TDM measures.

Response: *No further response needed.*

Comment 19: A Transportation Monitoring Program (TMP) will be performed after full occupancy of the site. An automatic traffic recorder (ATR) count on the site driveway will be performed over a 24-hour period. Additionally, a travel survey of employees and visitors at the site will be performed. Weekday AM and PM turning movement counts (TMCs) will be collected at the study area intersections and analysis will be rerun. These analysis results will be compared to the Build analysis results included in this study. Lastly, a summary of the effectiveness of the TDM measures will be included in the TMP. **RMA concurs with this TMP. It is suggested that this TMP be included as a condition in the Decision.**

Response: *No further response needed.*

Comment 20: Available sight distances from the proposed site driveway intersection with Lackey Dam Road were not measured or compared with minimum requirements. **It is recommended that the applicant measure sight distances at the proposed site driveway intersection with Lackey Dam Road and compare the findings with the minimum requirements as established by the American Association of State Highway and Transportation Officials (AASHTO) based on observed 85th percentile speeds on Lackey Dam Road.**

Response: *The updated TIAS provides a sight distance evaluation at the proposed site driveway intersection with Lackey Dam Road as well as at the intersection of Lackey Dam Road/Oakhurst Road.*

Site Plan Review

Comment 21: The site plan proposes to construct a new site driveway connecting to Lackey Dam Road. An additional gated emergency access driveway is proposed on Oakhurst Road. Each driveway proposes one single lane exit from the site. **It is recommended that the STOP signs (R1-1) be placed adjacent to the stop lines on both exits. The stop line should extend the whole length of the**

lane from the double yellow centerline to the curb. Furthermore, the applicant should check the location of the stop line on the Lackey Dam Road driveway as it appears to be located too far from the road.

Response: *STOP signs and stop lines will be shown at the appropriate locations on the updated site plans.*

Comment 22: **It is recommended that tractor trailer truck (WB-67) turning movements be shown at the site driveway intersection with Lackey Dam Road to verify if the corner radii shown are adequate. As discussed in Comment 10, it is recommended that signage be installed on the driveway exit to ensure tractor trailers do not turn left out of the site driveway. This sign should be included in the sign summary.**

Response: *Turning templates and proposed signage will be included in the revised Site Plan submittal.*

Comment 23: The fire department's largest vehicle should be able to traverse the site. **It is recommended that AutoTurn (or a similar program) be used to show a swept-path analysis of the largest fire truck to be used around the site. It is also recommended that the proponent coordinate with the Sutton and Uxbridge Fire Departments regarding accessibility to all sides of the building.**

Response: *The Project team has been in contact with the town staff regarding emergency vehicle access. Emergency vehicle turning templates for the site will be included in the revised Site Plan submittal.*

Comment 24: Truck circulation should be shown on the site plans showing how trucks will access the loading bays or parking area. **It is recommended that AutoTurn (or a similar program) be used to show tractor trailer truck (WB-67) circulation through the site. The applicant should also consider including truck wayfinding signage through the site to ensure that the trucks do not access areas designated for passenger vehicles.**

Response: *Turning templates and proposed signage will be included in the revised Site Plan submittal.*

Comment 25: **It is recommended that sightlines at the proposed site driveway intersection with Lackey Dam Road be included on the site plans. It is further recommended that any proposed landscaping, fences, walls or signs in the vicinity of the site driveways be kept low (maximum 2 feet in height from street level) or set back outside of the sight triangles so as not to impede the available sight distances.**

Response: *Proposed sight lines will be plotted on the updated site plans, and areas of selective trimming/pruning of existing vegetation will be annotated.*

Comment 26: The site plan states that 180 parking spaces are provided on site while the traffic study states that 157 parking spaces are provided. **It is recommended that the applicant confirm the number of parking spaces provided on site. Furthermore, the town should determine if the number of parking spaces proposed is adequate for the site.**

Response: *The Project will provide a total of 135 automobile parking spaces and 44 trailer parking spaces, as shown on the updated Site plans. As discussed in the updated TIAS, the proposed parking supply is consistent with the Proponent's experience with tenant needs for such facilities.*