

STONEFIELD

July 11, 2024

Town of Newburgh
Zoning Board of Appeals
21 Hudson Valley Professional Plaza
Newburgh, NY 12550
Attn: Chairman Darrin Scalzo

**RE: Proposed QuickChek
Section 86, Block 1, Lot 39.3
2 Lakeside Road
Town of Newburgh, Orange County, New York
Town Application Number 24-01**

Chairman Scalzo and Board Members:

Stonefield Engineering and Design, LLC (“Stonefield”) prepared a Traffic Impact Study (“TIS”), dated March 20, 2024 and last revised June 20, 2024, to assess the possible traffic impacts of developing a 6,730-square-foot QuickChek market with 16 vehicle fueling positions on the presently vacant parcel at 2 Lakeside Road in the Town of Newburgh, Orange County, New York. Based on the site’s proximity to the Interstate 84 (“I-84”) ramps, the subject parcel has an access restriction in place along New York State (NYS) Route 17K that would be applicable to *any* development of the parcel. As such, site access for the proposed QuickChek development would be provided along the Lakeside Road frontage only. In addition to these proposed site driveways, the TIS also provides a traffic operations assessment for six (6) existing intersections in the study area. Per coordination with both the Town of Newburgh Planning Board and the New York State Department of Transportation (NYSDOT), nearby developments including the Matrix I-84 Distribution Center, the Sunbelt Rentals, and the Racquet Road Warehouse were considered as part of the assessment.

Based on the results of the intersection capacity analysis included in the TIS, a review of observed and calculated queue lengths, and requests by the Town’s consultant reviewer and the NYSDOT, the following off-site improvements are proposed in connection with the proposed QuickChek to enhance traffic operations at the intersection of NYS Route 17K and Lakeside Road:

- I. Construct an additional exclusive left-turn lane for the southbound Lakeside Road approach to provide dual left-turn lanes and increase the intersection’s capacity to process vehicles traveling from Lakeside Road toward I-84. The combined storage of these dual left-turn lanes would accommodate the expected future queues on the subject approach without impacting traffic circulation in the shared southbound through/right-turn lane or at the proposed QuickChek driveways along Lakeside Road. The additional lane will result in approximately 115% more queuing length for the southbound left turn movement.
 - a. To accommodate the dual southbound left-turn movement, modify the signal timing directive and phasing at NYS Route 17K/Lakeside Road to split the northbound Pilot Travel Center driveway and southbound Lakeside Road phases. Note that the requisite split phasing can be implemented without adjustments to the existing NYS Route 17K signal phases, and as such, additional signal timing modifications along the NYS Route 17K corridor are not required.
 - b. The additional left turn lane and the aforementioned timing adjustments are calculated to allow the signal to process approximately 2 times more vehicles each green light on Lakeside Road.
2. Modify the northbound Pilot Travel Center driveway lane assignment to provide an exclusive right-turn lane and a shared left-turn/through lane.

- a. Additionally, overlap a new northbound Pilot Travel Center driveway right-turn signal phase with the existing eastbound/westbound NYS Route 17K left-turn signal phase to increase the intersection's capacity to process vehicles exiting the Pilot Travel Center toward I-84. This would provide additional green time for the predominant movement exiting the driveway and would also provide the opportunity to allow Right-Turns on Red (RTOR) for the northbound approach, subject to NYSDOT approval. This modified lane assignment, signal phasing, and RTOR provision is expected to improve operations and reduce delays for the critical right-turn volume exiting the Pilot Travel Center under existing conditions.
3. Restripe eastbound NYS Route 17K to extend the existing left-turn bay and provide an additional 120 feet of storage space (200 feet total) for vehicles traveling to Lakeside Road and the proposed QuickChek. The extended turn bay would accommodate the expected future left-turn queues without impacting eastbound through and right-turn traffic circulation along NYS Route 17K.
4. Reconstruct northeast corner of Route 17K and Lakeside Road (as needed) to enlarge westbound right-turn radius which will eliminate the current condition where some vehicles make turns outside of the pavement area as evidenced by vehicle tracks in the stone and grass areas. This will allow for increased safety and improved right-turn speeds, helping reduce delays along Route 17K.
5. Upgrade the vehicle detection equipment within the existing signal controller at the intersection of NYS Route 17K and Lakeside Road. Modernized detection equipment will improve the signal's efficiency and optimize the traffic signal's field performance.
6. The proposed QuickChek driveways are located over 500' from the Ice Time Sports Complex and the proper sight distance of 390 feet from the QuickChek driveway is provided as designed. Based on the routing assumptions included in the TIS, over 97% of the QuickChek traffic is destined from Route 17K and returning to Route 17K, and only one (1) vehicle every 4 to 5 minutes will be added to Lakeside Road traveling past the Ice Time Sports Complex during peak times which would cause no noticeable impact to delays at the Ice Time Sport Complex even at peak times.

The Level of Service results presented in the TIS show no perceptible impacts to traffic operations at the intersections of NYS Route 17K and Governor Drive/Homewood Avenue, NYS Route 17K and Rock Cut Road, and Lakeside Road and Patton Road. Therefore, impacts to intersections further away from the site are not expected. Additionally, the TIS findings show that the site driveways along Lakeside Road would operate acceptably in the future per industry standard Level of Service criteria; and have been designed to provide effective access to and from the subject property.

In support of the above, please find the following documents enclosed:

1. Traffic Impact Study, last revised June 20, 2024
2. Off-site Improvement Concept Plan, dated July 9, 2024

Should you have any questions, or require any additional information, please do not hesitate to contact our office.

Best regards,



Amanda LaRosa, PE
Stonefield Engineering and Design, LLC



Matthew J. Seckler, PE, PTOE, PP
Stonefield Engineering and Design, LLC