

Memorandum

To: Larry J. Tomaso, Village Building Inspector
David B. Smith, Village Planning Consultant

From: Brian Dempsey, P.E., PTOE, RSP1
Danny Cuya, EIT

Subject: Second Traffic Review
Gas Station Development
657 Saw Mill River Road
Village of Ardsley, NY

Date: December 9, 2021

Project No.: 20-082

Introduction

Provident Design Engineering (PDE), [now DTS Provident Design Engineering (DTS Provident)] on behalf of the Village of Ardsley, previously reviewed the “Gas Station Development” proposed for 657 Saw Mill River Road (NY Route 9A) from a Traffic Engineering standpoint. To perform our initial review (dated April 7, 2021) PDE reviewed various documents, including the updated JMC (the Applicant’s Traffic Consultant) Traffic information (Traffic Study dated 3/22/21) and the submitted Site Plans (Revised 3/30/21).

DTS Provident has now reviewed the December 2021 Submission and has held discussions with the Applicant’s Traffic Consultants and the New York State Department of Transportation (NYSDOT) as well as reviewed correspondence from the NYSDOT. The Applicant has responded to our previous comments. The following are our latest Traffic Comments including a review of the responses from the Applicant on our initial comments as contained in the December 1, 2021 JMC Letter and the changes to the Site Plan from a Traffic and Parking standpoint. The *greyed out text* below is from our initial review while the standard text where questions/comments from the initial review that required responses. The latest responses are shown in *italics*.

Project Size/Description

The Site previously consisted of a gas station with 4 fueling positions on two gasoline pump islands along with a 2,370 square foot building (repair shop with four garage service bays). The access was provided by three full-movement unsignalized driveways, two along Saw Mill River Road and one along Ridge Road. The facility closed in late 2015 or early 2016 based

upon photos of the Site.

In October/November 2020, the proposed Project was to consist of 8 new fueling positions (four pump islands) and an approximate 1,800 square foot convenience store, with twenty parking spaces.

Saw Mill River Road (NY Route 9A) is under the jurisdiction of the NYSDOT. A December 18, 2020 letter from the NYSDOT stated that the NYSDOT was not in favor of the previously proposed relocation of the northern driveway 15 feet to the north because of its close proximity to the Ashford Avenue intersection. The NYSDOT has asked that the driveway be located as far south as possible. As a result of this request, the latest Site Plans show a relocation of the driveway as well as a reduction from 8 fueling positions on four gasoline pump islands to 6 fueling positions on three gasoline pump islands enabling the existing Site Driveway locations to be re-utilized. The fueling area will be under a canopy. The 1,800 square foot convenience store will still be provided but the number of parking spaces will be reduced to 12 parking spaces (not including the fueling spaces as parking spaces. It is noted that the Site Plans list 18 parking spaces, but that is counting the 6 fueling positions as parking spaces. The Site will be repaved with new signage and striping added along with a sidewalk adjacent to the new building.

Ashford Avenue is County Road 134 but is considered a “Former County Road with Referral Jurisdiction” west of Saw Mill River Road and under local jurisdiction east of Saw Mill River Road.

There is an existing sidewalk along the Site frontage on Saw Mill River Road. However, the ADA ramps do not meet current standards. In addition, there is an existing utility pole and a large overhead sign pole that narrows the usable area on a portion of the sidewalk. There is no sidewalk on Ridge Road. There are no ADA ramps or crosswalk across Ridge Road and there are catch basins impacting the potential locations of future ramps.

Traffic Study

The Traffic Study generally followed standard Traffic Engineering Methodologies and Procedures. Traffic Counts were conducted on Thursday, January 28, 2021 from 7:00 AM – 9:00 AM and from 4:00 PM - 6:00 PM. Due to COVID-19 and with schools not being fully-opened, older traffic data provided by the NYSDOT and from the Rivertown Square DEIS, dated June 2011 were utilized as a base and grown to a future Design Year. The Growth Rate utilized in the Traffic Study was 1% per year. The volumes utilized appear appropriate. JMC confirmed with the Village of Ardsley that there are no adjacent developments that needed to be included in the Traffic Study.

The Trip Generation conforms to this type of use in conjunction with the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition. There could be some

fluctuation in trip generation from these types of facilities due to the location of other gas stations in the area (there are some others with convenience stores nearby on Saw Mill River Road), the price of the gasoline, and the price/type of coffee (there is a Starbuck's nearby) and other items at the convenience store. Most of the traffic at these types of facilities are pass-by trips (vehicles already driving by the Site anyhow), but only a 25 % credit was utilized in the Traffic Study as per NYSDOT standards. A further discussion on trip generation is contained below.

The Site Driveways are projected to operate at an unsignalized Level of Service "c" or better. However, this Level of Service could be affected by the queuing of vehicles on northbound Saw Mill River Road.

The intersection of Ashford Avenue and Saw Mill River Road currently operates at a signalized Level of Service "E" with Levels of Service "F" for some movements during the Peak Hours due to the traffic volumes, geometry and the fifth leg of the intersection. Some additional movements will operate at Level of Service F under the No Build Condition and then slightly further increased under the Build Condition. There are long pedestrian crossings at this intersection.

The Bridge Street eastbound movement also currently and will operate at an unsignalized Level of Service "e" during the Peak AM Hour and Level of Service "f" during the Peak PM Hour with the Project, similar to the No Build Condition. Ridge Street is projected to operate at Level of Service "c" during the Peak AM Hour and Level of Service "d", under both the No Build and Build conditions.

Thus, the Project will have some impact on the adjacent intersections due to an increase in traffic in the area but the impact will not be significant from a Level of Service standpoint, especially if the previous gas station was still operating.

Trip Generation

The trip generation was properly calculated by JMC utilizing the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. As per the Traffic Study, the total number of trips to be generated by the Project are 62 vehicle trips (total in and out) in the Peak AM Hour and 84 total vehicle trips in the Peak PM Hour. Due to the nature of the facilities, the same vehicle will result in one entering trip and one exiting trip, thus two of the "trips" during the same hour. A portion of these trips would be "Pass-by" trips, which are trips that result from traffic that would be traveling on Saw Mill River Road anyway and would pull into the Site and then continue on their way. As per NYSDOT Standards, the pass-by rate utilized was 25%. Thus, 46 trips in the Peak AM Hour (23 in and 23 out) and 62 trips in the Peak PM Hour (31 in and 31 out) are considered "Primary Trips", which are vehicles that would not have been driving by the

Site Location if the Project did not exist.

The Applicant's Traffic Consultant prepared a comparison to what the previous Gas Station would have generated which were 41 total trips in the Peak AM Hour and 56 total trips in the Peak PM Hour. Thus 21 additional total trips in the Peak AM Hour and 28 total trips in the Peak PM Hour. In terms of Primary Trips, the increase would be 15 trips in the Peak AM Hour and 20 trips in the Peak PM Hour.

Sight Distance

Sight Distance parameters were not provided for the Site Driveways. Sight Distance looking south (looking left) along Saw Mill River Road is generally appropriate for vehicles exiting the driveway. However, for vehicles desiring to turn left coming out of the Site Driveways and thus are looking to the north (looking right) for oncoming traffic, the Sight Distance is limited by the queues of vehicles stopped at the traffic signal as well as the geometry and topography of the intersection of Saw Mill River Road and Ashford Avenue.

Accident Data

We have had discussions with the Applicant's Traffic Engineer and have asked them to obtain accident data including from when the previous gas station was open, if the data is available. From previous photos, it appears that the gas station closed in late 2015 or early 2016.

Response/Follow-up – The Applicant reviewed accident data from November 2012 through October 2015 (when the Site was previously being operated as a gas station) during which time there was only one reported accident which involved a vehicle exiting the Site.

Site Layout

The Site is located just southeast of the intersection of Saw Mill River Road and Ashford Avenue, in the northeast corner of Saw Mill River Road and Ridge Road. The proposed development will consist of 6 fueling stations and a 1,800 SF convenience store that will be accessed from two driveways on Saw Mill River Road and one driveway on Ridge Road. All three driveways are proposed to be full movement intersections that will have the Site Driveways under Stop Control. Twelve standard parking spaces are proposed, one of which is an ADA space.

Will the location of the Air/Vacuum machine still provide enough sidewalk for someone

to walk to/from the back of the building?

Response/Follow-up - The proposed air/vacuum machine has been relocated so this comment no longer applies.

Parking

The parking spaces shown are 9'x18' which meets the Village Code requirements (Section 200-2). The Table of Land Use on the Cover Sheet of the Site Plans lists 12 parking spaces are required as per Section 200-71 of the Village Code based upon one space per 150 square feet for the convenience store. There are no separate spaces calculated for the gas station but if there are no additional employees for the gas station and there is no service area, the twelve spaces should be sufficient. It also lists that 18 parking spaces are provided. However, 6 of the 18 parking spaces are the fueling positions which are not standard parking spaces and if they are occupied, someone else desiring to use that fueling position would be blocked. The 12 parking spaces, thus not counting the 6 fueling position space, do meet the Code requirement. Two of the parking spaces are to be assigned to employees. No official loading area is required for the convenience store due to its size, as per the Village Code.

Response/Follow-up – The revised Site Plans now show 17 parking spaces, exclusive of the areas adjacent to the pumps. These 17 parking spaces meet the 17 spaces required by the Village Code. The Parking Numbers on the Cover Sheet of the Site Plans should be revised.

Also, the eastern most parking spots in the back of the Gas Station could be temporarily blocked if the Site is receiving a gasoline delivery. However, this would only occur infrequently and for a limited amount of time. Delivery of gasoline should be scheduled to happen outside of the peak periods.

However, there are some issues regarding the parking and its layout that will need to be clarified (Previous Comments):

1. Are the gas pumps all self-service or are any full-service? Would there be any extra employees for the gas pumps who would require a parking space?

Response/Follow-up – The gas pumps will all be self-service and thus there will not be an additional employee.

2. What are the proposed hours of the gasoline service as well as for the convenience market? How often are deliveries for fuel and for the convenience market? What times and where will they park for deliveries and where will the

loading be brought into store? What size trucks will be utilized. The Village can restrict deliveries via time restrictions or turn restrictions if determined necessary.

Response/Follow-up – The store and station are proposed to operate 24/7. Fuel is proposed to be delivered between 8:00 PM and 11:00 PM by a tanker truck similar in size to a WB-50. There are some issues with the truck circulation as described further below. Store deliveries will be by a single unit truck generally on Thursdays between 3:00 AM and 6:00 AM. These trucks will park in the one-way north of the building (they will not travel behind the store) and thus will block some parking spaces for vehicles to exit but those spaces are mainly for employees so there will not be significant impact. However, since the truck will not travel behind the building, it will need to back up which will result in the back-up warning beeper activating at 3:00 AM.

3. How often are sanitation pickups and at what times? There are four angled parking spaces blocking the trash enclosure. How will this be accessed? There is a diagram discussed later which requires the truck to travel the wrong way on a one-way section. The dumpster can also potentially lead to some conflicts with vehicles potentially blocking access to the area if an employee is bringing out trash during operating hours.

Response/Follow-up - The sanitation pick up will be once a week and there will also be a separate pick up once a week, both occurring between 5:00 and 7:00 AM. A turning maneuver diagram was provided which indicates that these trucks will enter from either the southern Route 9A Driveway or the Ridge Road Driveway and will need to cross over three public parking spaces (the letter says two) on the northern portion of the Site as well as two employee spaces in the rear of the building. Thus, some vehicles may need to be moved but there would be limited use at those times and the employees could use the other two spaces in the rear of the building if necessary. The Turning Maneuver Plan for the sanitation pick-up illustrates a truck pulling head on into the pick-up area and then backing out. It would be preferable if the truck could back into the area and then pull out straight, if possible depending upon the service/truck utilized. The Applicant also states that employees will be able to bring trash out to the trash enclosure even when a vehicle is parked in the space adjacent to the enclosure.

4. The seven parking spaces, if occupied, in the front side of the building will interfere with gasoline deliveries. Based on the truck turning analysis, a truck delivering gas will require that the seven spaces be empty in order to exit the Site.

Response/Follow-up – This comment still applies. In addition, based upon the new Site layout and as illustrated on Drawing C 110, not only will the seven spaces in front of the store need to be empty, four of the five spaces on the north

side of the property will also need to be empty. Thus, the only parking spaces available would be in the rear or the north of the building and these will not be able to be access when the fuel truck is loading. The gas pumps will be able to be accessed. An employee will need to be outside and restrict vehicles from parking at the time the fuel truck would be exiting the Site, which would be at night twice a week. Consideration should be given about placing traffic cones at the Ridge Road Driveway when the fuel truck is unloading and leaving the cones in place until after the truck exits as it will need to back up in this area. An Operational Plan for the fuel truck deliveries should eventually be developed. It is projected that the fuel truck deliveries would be between 8:00 PM and 10:00 PM. The later the deliveries (or overnight) the better as there will be less activity at the facility.

5. Was any consideration given to rotating the pump area to be perpendicular to Saw Mill River Road or does it limit traffic flow? Was there any consideration of switching the pump area and the convenience store as commented on by others previously?

Response/Follow-up – The Applicant consider these two alternative layouts and states that rotating the pumps to be perpendicular would push the building back which could impact the layout within the project limits. However, the realignment of the pumps is not as important now that the NYS DOT has requested that the southern driveway be enter only and northern driveway be exit only. The Applicant states that a concern with moving the store to the front and the placing the pumps in the back is the security/visibility.

6. In addition to the two employee parking spaces in the back of the convenience store, there are also two patron parking spaces. How will patrons know these spaces are there? Will there be a back entrance to the store?

Response/Follow-up – The Applicant feels that the twelve spaces in front of or on the northern side of the building (in addition to drivers leaving their car at the pumps to go into the store) will be sufficient to serve the store and that the spaces in the rear of the store are to meet Village Code. There is only an entrance in the back for employees, not for patrons. However, a small sign could be added stating “Additional Parking” as well as for the “Vehicle Vacuum” location/space. Also, if propane is proposed to be sold, that should also be indicated on the sign.

7. There is one parking space provided on the northern end of the store. As the roadway there is one-way, how will that space be accessed? Can the space be shifted to the west?

Response/Follow-up – The parking space has since been relocated. A driver will

need to drive around the rear of the building to access this space.

8. With the northern driveway now shifted, can additional parking spaces be provided along the northern curb line?

Response/Follow-up – Five additional parking spaces have now been located there.

9. If all access was to be from Ridge Road, as commented on by others previously, the Ridge Road Driveway would need to be relocated and the entire Site layout/circulation configuration would need to be modified. This would result in delays and queues on Ridge Road.

Response/Follow-up – Comment noted.

Vehicle Turning Maneuvers/Internal Circulation

The Applicant should describe the number of deliveries and times of the deliveries for the proposed gas station as well as the size of the trucks to be utilized in addition to the operating hours of the gas station and the convenience store. This would also include the fuel deliveries and where they would stop, and whether that would block vehicles entering the site. It is noted that the new fuel tanks have already been installed.

Circulation diagrams were prepared by the Applicant's Traffic Consultant. PDE also prepared some circulation diagrams. The truck circulation diagrams provided demonstrate that fuel deliveries will temporarily block the Ridge Road Driveway. While parked, no vehicles can reach the parking spaces in the rear of the store. Also, where will the hose to fill the tanks go and will it block traffic?

Response/Follow-up - The Applicant states that the fuel truck will park above the storage tanks and the hose will be adjacent to the truck. This will temporarily block access to the rear of the Site but will not block public access to the pumps or the store.

In addition, the truck providing the fuel delivery will also require that no vehicles be parked in front of the convenience store in order for the truck to exit the Site. Thus, the time of deliveries is key. These conflicts should be further addressed. Also, the minimum clearance under the overhang that has a driving area underneath should be provided.

Response/Follow-up - The clearance will be 14 feet 6 inches.

The direction that the fuel trucks will be coming from and going to will also be key.

There is no diagram showing whether the truck can turn right out of the Site onto Saw Mill River Road. Right turns in are shown cutting across Ridge Road to enter that driveway.

Response/Follow-up - The Applicant states that the fuel trucks will be traveling from the south and returning to the south as they would be coming from I-87. This would require the truck to turn left out of the station, which is discussed further below.

The sanitation truck can enter and exit but would need to do so with minimal or no traffic at the Site. It will also be traveling the wrong way on a one-way section to reach the dumpster. Also, there can be no vehicles parked in the employee spaces. The truck will need to back up which will activate the truck's beepers.

The passenger vehicle turning analysis does not show any vehicles turning left or right into the northern driveway from Saw Mill River Road or turning right from Ridge Road but the Traffic Study has vehicles making these movements. It also shows all cars exiting turning right out onto Saw Mill River Road northbound but none turning left or exiting onto Ridge Road. These other movements should be shown.

Response/Follow-up - At the request of the NYSDOT, the Applicant has revised the Site access so that the southern driveway is an entrance only and the northern driveway is an exit only. The additional requested turning movements are shown on Drawing C 110.

Will cars be able to enter the fueling positions from both directions? This could be an issue for vehicles trying to exiting the southern driveway if they came in from the northern driveway. If a car is waiting to enter a fueling position near the southern driveway, it could block a vehicle traveling through the site to the store and some striping or signage may be beneficial. It could also block a vehicle trying to reach one of the other fueling stations or exit the fueling stations.

Response/Follow-up - As the driveways along 9A have been modified to an entrance only in the southern end and an exit only in the northern end, this will promote a one-way flow. Drawing C 110 does illustrate that a car exiting the northern-most pump can turn to exit out the driveway without backing up.

A diagram should also be provided showing a vehicle making the turn at the southeast corner of the store and being able to enter and exit the parking spaces in the back with the bollards being added. If the store deliveries are to be made in the back, this should also be demonstrated.

Response/Follow-up -: A diagram showing this maneuver has been provided. Delivery vehicles are not projected to travel behind the building.

The Ridge Road driveway is located in a non-standard location due to its close proximity to Saw Mill River Road. There is also the potential that vehicles could try to enter the gas station from Ridge Road and use the gas station as a cut-thru to avoid a vehicle waiting at the Stop sign to turn left from Ridge Road.

Response/Follow-up - The “Do Not Block The Box” assists left turning vehicles from Ridge Road.

NYSDOT

As Saw Mill River Road is under the jurisdiction of the NYSDOT, the Traffic Study and Site Plans have just recently (April 6, 2021) been submitted to the NYSDOT by the Applicant’s Traffic Consultant for NYSDOT’s review in conjunction with a Highway Work Permit Application.

A December 18, 2020 letter from the NYSDOT stated that the NYSDOT was not in favor of the previously proposed relocation of the northern driveway 15 foot to the north because of its proximity to the Ashford Avenue intersection. The NYSDOT has asked that the driveway be located as far south as possible. As a result of this request, the latest Site Plans show a reduction from 8 fueling positions on four gasoline pump islands to 6 fueling positions on three gasoline pump islands enabling the existing Site Driveway locations to be re-utilized. The Applicant’s Traffic Consultant has copied the Village on the latest correspondence with the NYSDOT. The Village should continue to be copied on all Project-related correspondence involving the NYSDOT.

Since our last review, the NYSDOT submitted a letter dated June 30, 2021. The NYSDOT has some concerns about the Ridge Road driveway. The Applicant responded that it is needed for the fuel truck deliveries that will happen off-peak twice a week. The NYSDOT has requested that the southerly driveway be entrance only and the northerly driveway be an exit only. Based upon discussions between the NYSDOT and DTS Provident, the NYSDOT has not commented on left turns out but is still considering whether left turns out of the northerly driveway will be permitted due to the existing queueing and sight distance. This will be determined during the Highway Work Permit process. The NYSDOT could monitor the driveway and decide at a later date after opening. The NYSDOT did agree with the Trip Generation Analyses in the Traffic Study. The NYSDOT has requested that due to the increase in delays at the intersection of Route 9 A at Abbyman Square, the Applicant should provide an updated signal cabinet with a modem and disconnect switch along with switching the detection at the traffic signal from loop detection to video detection to help mitigate the reduction in level of service. The Applicant has agreed to this.

LEFT TURNS INTO AND OUT OF THE SITE

The previous Gas Station at the Site permitted full movements at both of the Site Driveways along Saw Mill River Road. The NYSDOT has stated that the previously proposed northern driveway should be shifted south because of its proximity to the Saw Mill River Road intersection with Ashford Avenue. The Applicant has complied with this request and placed the northern driveway back to the original location when the former gas station was there. The NYSDOT or Village may have concerns with left turns into the Site, particularly at the northern driveway, as the queue of vehicles along Saw Mill River Road may block a vehicle on southbound Saw Mill River Road from turning left into the Site, especially as there is only one lane in the southbound direction. There is currently a “Do Not Block” painted box in the northbound lane at Ridge Road.

The NYSDOT or Village may also have concerns with left turns exiting the Site, particularly at the northern driveway, as the queue of vehicles along Saw Mill River Road may limit the sight distance for vehicles turning left out of the Site. However, as stated above, there were no restrictions on these movements previously.

Thus, the Applicant’s Traffic Engineer should provide additional information on the queuing in the vicinity of the Site Driveway as well as the sight distance implications. This is also the reason why the accident data for the time the former gas station was previously open has been requested. The NYSDOT will discuss whether they have any concerns about the left turns, including the possibility of time restrictions for left turns.

Response/Follow-up - The NYSDOT requested the southern driveway be an entrance only and the northern driveway be an entrance only. The accident data only showed one accident at the driveways during the last three years the previous station was open. The queueing analyses that the queues sometimes extend past both site driveways during the peak hours thus limiting sight distance. The NYSDOT is still considering whether left turns should be restricted at the northern driveway.

Previous Additional Comments/Summary

Based upon the previous volume projections and the analyses contained in the Traffic Study, the Project will not have a significant traffic impact on the adjacent roadway network from a Level of Service standpoint.

Response/Follow-up – Comment noted.

Consideration could be given to providing right turns only at some access points instead of having them all full movement intersections.

Response/Follow-up – The NYSDOT has requested that the southern driveway be an entrance only and the northern driveway be an exit only. The NYSDOT is still considering whether left turns will be permitted from the northern driveway.

The parking, striping and ADA space illustrated on the colored Building Rendering submitted with the Application does not match the Site Plans.

Response/Follow-up – Revised renderings have been submitted.

Additional information is being requested from the Applicant regarding parking, accident data and vehicle circulation, among other items.

Response/Follow-up – This information has now been provided.

The Village should also consider whether the vehicles at the gas pumps should be considered in the parking calculations.

Response/Follow-up – While some patrons may visit the store when their vehicle at the pumps, the Applicant is now providing enough parking spaces to meet the Village Code requirement of 17 parking spaces without including any spaces at the pumps.

This memo reflects DTS Provident's Professional Review and Comments but may not reflect those of the Village.