
MEMORANDUM

To: South Orange Planning Board

From: Craig W. Peregoy, PE

Date: February 21, 2019

Re: Application #266
184 Valley Street
Block 2003, Lot 1
Proposed Mixed Use Development
DT # 2904-99-001TE

As requested, Dynamic Traffic, LLC has reviewed the traffic engineering aspects of the above referenced project. The following is a summary of our findings:

Existing Site Conditions

The site is located in the northeast corner of the intersection of Valley Street & 4th Street. The subject property is occupied by a paved area utilized as a parking lot able to store approximately 13 to 14 vehicles in a stacked parking arrangement. Access is provided via one approximately 30' wide curb cut along 4th Street. It is noted that a small retaining wall exists around the paved parking area with no guiderail present to keep vehicles from falling to the surrounding sidewalk below. Approval was recently granted for the Meridia Village Commons project in the southwest corner of the adjacent intersection which will include 106 residential units above ground floor retail space.

Existing Roadway Conditions

Valley Street (CR 638) is an urban minor arterial roadway under the jurisdiction of Essex County. In the vicinity of the site the posted speed limit is 30 miles per hour and the roadway provides one travel lane in each direction with a general north/south orientation. On-street parking is permitted along both sides of the roadway with curb and sidewalk provided along both sides of the roadway. Valley Street provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along Valley Street in the vicinity of The Project are a mix of commercial and residential.

Fourth Street is a local roadway under the jurisdiction of the Township of South Orange Village. In the vicinity of the site the speed limit is not posted and the roadway provides one travel lane for each direction of travel with a general east/west orientation. Fourth Street to the east of Academy Street provides one travel lane for one-way travel in the westbound direction. On-street parking is permitted along the south side of the roadway with curb and sidewalk provided along both sides of the roadway. Fourth Street provides a straight horizontal alignment and an uphill vertical alignment from west to east. On school days during the hours of 7:30 AM to 5:00 PM Fourth Street is closed from Academy

Street to Prospect Street in front of Our Lady of Sorrows School/Church. The land uses along Fourth Street in the vicinity of The Project are primarily commercial to the west of and along Valley Street and primarily residential to the east of Valley Street.

Existing Traffic Volumes

Pursuant to traffic and pedestrian count data contained in the Meridia Village Commons Traffic Impact Study prepared by our office, traffic volumes along 4th Street are very light at approximately 50-60 vehicles per hour during the critical weekday morning and weekday evening peak hours. Comparatively Valley Street carries approximate 1,100 vehicles per hour during the same peak time periods. Pedestrian volumes crossing 4th Street along Valley Street were found to be 34 per hour during the weekday morning peak hour and 12 per hour during the weekday evening peak hour in June of 2017.

Proposed Site Development

The proposed development consists of a 441 square foot ground floor commercial space beneath two (2) three-bedroom apartments. Access is proposed to remain in a similar configuration as exists today with a curb cut along 4th Street. However this curb cut will now only serve six (6) parking spaces. Four (4) parking spaces will be located in a garage beneath the building in a tandem arrangement similar to a driveway to a single family home. Two (2) additional surface spaces are proposed including one (1) ADA accessible space.

Traffic Generation

Projections of future traffic volumes were developed utilizing data as published in the Institute of Transportation Engineers (ITE) publication *Trip Generation, 10th Edition* for Land Use Code (LUC) 220 – Multi-Family Housing, LUC 820 – Shopping Center. Table I summarizes the projected trips generated by the proposed development utilizing the ITE data.

Table I
Trip Generation

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
2 Residential Units	0	1	1	1	0	1
441 SF Commercial	1	1	2	1	1	2
Total	1	2	3	2	1	3

Assessment of Traffic Impacts

The magnitude of trip generation shown in Table I will not create a perceptible impact to the adjacent roadway network as it approximates an average of one (1) vehicle every 20 minutes and conservatively does not account for any existing trip generation associated with the existing parking on the site. In fact, both ITE and NJDOT define a “significant” increase in traffic as an increase of 100 or more peak

hour trips. Therefore, based on the combination of low traffic volumes along 4th Street, removal of existing site activity and the low trip generation of the site, there will be no detrimental traffic impacts. A queue length of four (4) vehicles can be stored between the stop bar at Valley Street and the site driveway. Pursuant to the future “build” analysis in the Meridia Traffic Impact Study, the 95th percentile queue length along this approach is calculated to be a maximum of 0.5 vehicles. Therefore, the site driveway operation will not be impacted by queuing from the adjacent intersection.

Parking Assessment

Pursuant to the Township Ordinance requirements, two (2) parking spaces are required for each residential unit for a total of four (4) required spaces. It is noted that similarly, the Residential Site Improvement Standards would also require four (4) parking spaces for the residential component of the development. The potential uses within the commercial space would likely be geared to the local community and to the existing passing pedestrian traffic stream. However, based on Ordinance Requirements, the likely worst case scenario based on various land uses would likely be 1 space per 300 square feet resulting in a requirement for two (2) parking spaces bringing the total to six (6) required spaces. Therefore, the six (6) spaces provided is compliant with Township requirements. However, it is important to note that pursuant to the October 6, 2017 Parking Management Plan prepared by Level G Associates in connection with the adjacent Meridia project, a minimum of 27 vacant on-street metered spaces will be available within a one-block walk with consideration of a “stress test” for maximum parking demand of the Meridia building.

Conclusions

Based on the information contained herein, the following can be concluded:

- The proposed development represents a safer parking condition on site.
- The traffic impacts will be minimal and likely imperceptible even without consideration of the removal of existing site activity.
- The driveway is located a sufficient distance from the adjacent intersection to operate without impediment from queuing.
- The parking supply is in compliance with ordinance requirements and is expected to be more than adequate to handle the maximum anticipated demands. Additionally, a substantial supply of on-street parking exists within a one block walk of the property.