

TECHNICAL MEMORANDUM

To: South Orange Planning Board
From: Gerard Giosa, Level G Associates
Re: Fourth & Valley Redevelopment Proposal in South Orange, NJ
Date: July 18, 2017

Level G Associates has completed an assessment of the projected parking impacts of the above captioned project that consists of 106 dwelling units, 10,000 square feet of retail / restaurant space and 134 new parking spaces -- 123 in a one level on-site podium parking deck plus 11 adjacent to the project on the south side of Fourth Street.

Project Parking Demand

106 Dwelling Units

The most significant parking generator for this project will be the residential piece. In order to estimate the number of cars that will be generated by this use we conducted evaluations of very similar Transit Oriented Development (TOD) projects in the New Jersey communities of Bound Brook¹ and Morristown². Level G conducted parking space occupancy counts at both properties on a midweek day at 3AM (the peak parking hour for residential uses) to ascertain the peak number of cars generated by each residential project. The results were as follows:

| | Number of Cars Parked – 3AM | Number of Dwelling Units | Peak Parking Per Unit |
|-------------|--------------------------------|-----------------------------|--------------------------|
| Bound Brook | 219 | 172 | 1.27 |
| Morristown | 272 | 217 | 1.25 |

For the purposes of this report we will assume that the Fourth & Valley project will exhibit the measured parking patterns of the Bound Brook project because they are both Capodagli TOD projects that will likely attract residents with similar demographic and automobile usage tendencies.

10,000 SF Retail / Restaurant Use

For the purposes of this report we will assume that this 10,000 SF project element will consist of 5,000 SF of retail space and 5,000 SF of restaurant space. In order to estimate the parking volumes and patterns associated with these land uses we utilized two widely referenced publications used for estimating parking demand on a peak point and hour-by-hour basis. They are:

¹ A Capodagli / Meridia multi-family redevelopment project with 172 dwelling units

² A Rosewood multi-family redevelopment project with 217 dwelling units

- Parking Generation. 4th Edition. Institute of Transportation Engineers
- Shared Parking. Second Edition. Urban Land Institute

Attachment No. 1 is a shared parking model indicating the estimated ebb and flow of parked cars associated with each of the project land uses. The models were developed for both a weekday and Saturday condition.

As indicated in Attachment No. 1 peak parking conditions are expected to occur on a Saturday between 7PM and 8PM when the project is expected to draw approximately 154 parked cars. Approximately 112 of these cars will be resident vehicles and 27 will be the vehicles of restaurant customers. The remaining cars will those of restaurant employees, retail customers, and retail employees.

The weekday peak is projected to occur at approximately 7PM when the project is expected to draw approximately 147 parked cars. Approximately 108 of these cars will be resident vehicles and 22 will be the vehicles of restaurant customers. The remaining cars will those of restaurant employees, retail customers, and retail employees.

Parking Supply

As described earlier the total number of new parking spaces to be provided by the project is 134. This means that approximately 20 and 13 project generated vehicles will be required to park off-site or on the local streets during Saturday and weekday peak conditions, respectively.

| | Saturday Peak (7PM-8PM) | Weekday Peak (7PM) |
|---------------------------|-------------------------|--------------------|
| Project Parking Demand | 154 | 147 |
| Project Parking Supply | 134 | 134 |
| Off-Site Parking Required | 20 | 13 |

Local On-Street Parking

As indicated in Attachment No. 2 there are 57 on-street parking spaces located within a short walking distance (one block) of the project and many of these parking spaces remain vacant for long periods of time.

The number of cars parked in these spaces were counted by Level G personnel on Wednesday November 9 and Saturday November 12, 2016. The results of these counts indicate that there is abundant on-street parking typically available within one block of the project that can accommodate the anticipated off-site parking demand generated by the project.

| | Saturday Peak (7PM-8PM) | Weekday Peak (7PM) |
|--|-------------------------|--------------------|
| Vacant On-Street Spaces Within One Block | 44 | 42 |
| Off-Site Parking Required By Project | 20 | 13 |
| Vacant Spaces To Remain | 24 | 29 |

As indicated above, it is estimated that there will still be ample vacant parking spaces available on the local streets after accommodating the off-site parking requirements of the project. These vacancies are projected to be 24 spaces at the Saturday peak and 29 spaces at the weekday peak.

Safety Factors

There are two safety factors available to mitigate potential parking shortages if local on-street parking space vacancies begin to wane over time. The first is the use of the Third & Valley parking garage by employees or customers of the project. As indicated on Attachment No. 2, the walking distance from the southeast corner of the parking garage to the southwest corner of Fourth and Valley is just 350' via the walkway connecting the parking garage to the Valley Road sidewalk. A walking distance of 350' is considered very convenient from a parking planning perspective. Special counts conducted concurrently with the 57-space on-street parking vacancy counts indicate that there are over 100 vacant spaces in this public parking garage during the (7PM) project peak periods. This is likely due to the fact that the garage parks many train commuters during the day who have vacated the garage before the 7PM project peak periods.

The second safety factor is the potential use of a valet parking service to either increase the on-site parking capacity via stacking of cars or to shuttle project vehicles to an off-site location such as the Third & Valley parking garage or some other parking facility. A valet parking service can work very well with both restaurant and residential uses.

ATTACHMENT NO. 1 PARKING DEMAND MODEL 4TH & VALLEY REDEVELOPMENT PROGRAM

Run Date: June 21, 2017

SATURDAY CONDITION

| Land Use | Peak Factor | Unit | Source | 6am | 7am | 8am | 9am | 10am | 11am | 12n | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm | 9pm | 10pm | 11pm | 12m |
|--|-------------|----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Add: 5,000 SF Retail Customers | 2.30 | /1000 SF | Note 1 | 0 | 1 | 3 | 7 | 9 | 10 | 12 | 12 | 11 | 10 | 9 | 8 | 8 | 6 | 6 | 5 | 3 | 2 | 0 |
| Add: 5,000 SF Restaurant Customers | 5.44 | /1000 SF | Note 2 | 0 | 0 | 0 | 1 | 1 | 2 | 5 | 11 | 14 | 13 | 10 | 17 | 22 | 27 | 25 | 19 | 9 | 2 | 1 |
| Add: 5,000 SF Retail Employees | 0.57 | /1000 SF | ULI | 0 | 0 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 0 | 0 |
| Add: 5,000 SF Restaurant Employees | 1.36 | /1000 SF | ULI | 0 | 1 | 3 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 2 |
| Add: 106 Dwelling Units (Non-Reserved) | 1.27 | per Unit | Comp Study | 132 | 127 | 120 | 79 | 96 | 90 | 89 | 86 | 86 | 93 | 98 | 105 | 108 | 112 | 113 | 117 | 120 | 128 | 132 |
| Parking Demand Estimate | | | | 132 | 130 | 127 | 94 | 114 | 111 | 115 | 118 | 121 | 124 | 125 | 139 | 147 | 154 | 154 | 150 | 140 | 139 | 136 |

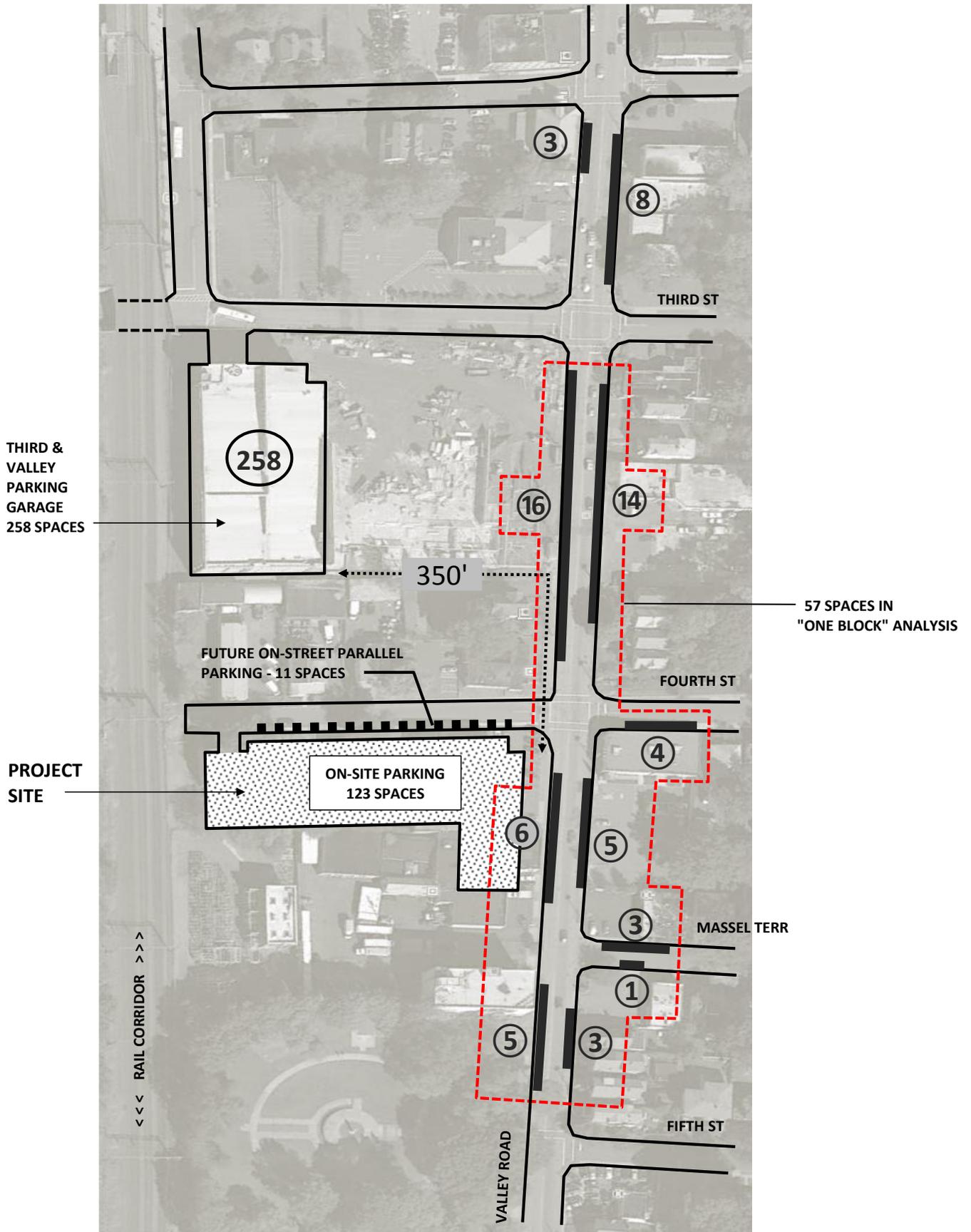
↑ PEAK
↑ PEAK

WEEKDAY CONDITION

| Land Use | Peak Factor | Unit | Source | 6am | 7am | 8am | 9am | 10am | 11am | 12n | 1pm | 2pm | 3pm | 4pm | 5pm | 6pm | 7pm | 8pm | 9pm | 10pm | 11pm | 12m |
|--|-------------|----------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|
| Add: 5,000 SF Retail Customers | 2.04 | /1000 SF | Note 1 | 0 | 1 | 4 | 6 | 8 | 9 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 7 | 4 | 2 | 0 |
| Add: 5,000 SF Restaurant Customers | 4.44 | /1000 SF | Note 2 | 0 | 0 | 0 | 0 | 1 | 4 | 8 | 10 | 9 | 8 | 12 | 15 | 22 | 22 | 22 | 11 | 6 | 3 | 1 |
| Add: 5,000 SF Retail Employees | 0.51 | /1000 SF | ULI | 0 | 0 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 |
| Add: 5,000 SF Restaurant Employees | 1.11 | /1000 SF | ULI | 0 | 1 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 2 |
| Add: 106 Dwelling Units (Non-Reserved) | 1.27 | per Unit | Comp Study | 125 | 106 | 79 | 63 | 51 | 50 | 47 | 44 | 46 | 44 | 43 | 82 | 93 | 97 | 108 | 120 | 124 | 127 | 132 |
| Parking Demand Estimate | | | | 126 | 109 | 87 | 75 | 67 | 70 | 73 | 72 | 72 | 68 | 71 | 114 | 132 | 136 | 147 | 146 | 140 | 136 | 135 |

↑ PEAK

Note 1 - ITE Land Use 820 less 20% employees.
 Note 2 - Weekday factor plus 22.5% to account for Saturday condition (typical Saturday increase based on published ITE factors for Land Use 932) less 20% employees.
 Note 3 - ITE Land Use 932 less 20% employees.
 Note 4 - Figures may appear incorrect by a factor of 1.0 due to rounding.



ATTACHMENT NO. 2

PARKING INVENTORY / ONE BLOCK ANALYSIS
FOURTH & VALLEY REDEVELOPMENT
SOUTH ORANGE, NJ