

# TECHNICAL MEMORANDUM

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

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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 Brook<sup>1</sup> and Morristown<sup>2</sup>. 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:

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

<sup>2</sup> A Rosewood multi-family redevelopment project with 217 dwelling units

- Parking Generation. 4<sup>th</sup> 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
<b>Parking Demand Estimate</b>				<b>132</b>	<b>130</b>	<b>127</b>	<b>94</b>	<b>114</b>	<b>111</b>	<b>115</b>	<b>118</b>	<b>121</b>	<b>124</b>	<b>125</b>	<b>139</b>	<b>147</b>	<b>154</b>	<b>154</b>	<b>150</b>	<b>140</b>	<b>139</b>	<b>136</b>

↑ 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	1	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	5	2	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
<b>Parking Demand Estimate</b>				<b>126</b>	<b>109</b>	<b>87</b>	<b>75</b>	<b>67</b>	<b>70</b>	<b>73</b>	<b>72</b>	<b>72</b>	<b>68</b>	<b>71</b>	<b>114</b>	<b>132</b>	<b>136</b>	<b>147</b>	<b>146</b>	<b>140</b>	<b>136</b>	<b>135</b>

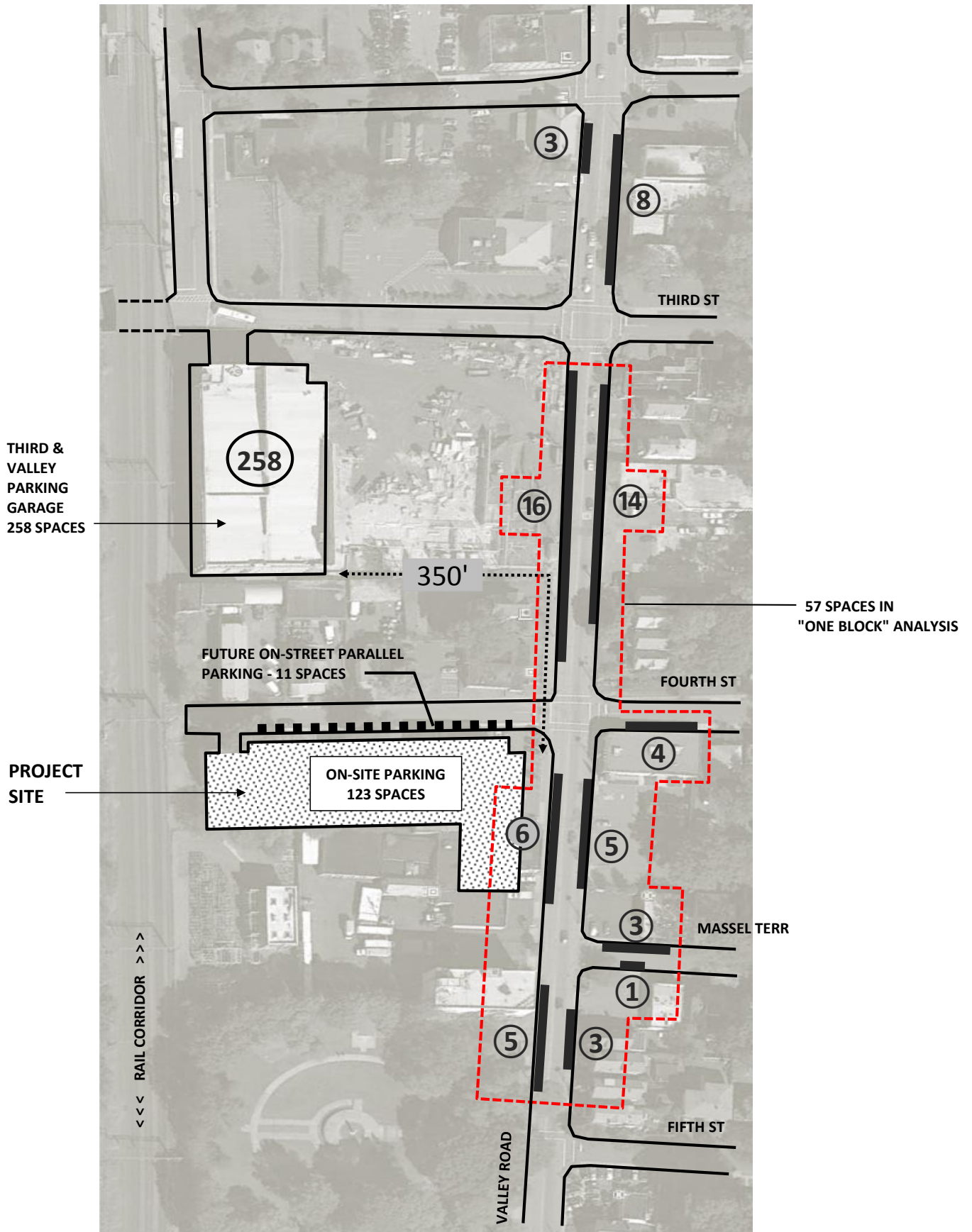
↑ PEAK

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