

## MEMORANDUM



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**TO:** Enrico C. Cecchi, IDI Group Companies  
Patrick Rhodes, IDI Group Companies

**FROM:** John J. Andrus  
Christopher Turnbull

**COPY:** David Houston, Blank Rome LLP

**RE:** Paul VI – Shared Parking Analysis  
Retail, Restaurant, and Community/Office Uses

**DATE:** March 23, 2018

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### INTRODUCTION

This memorandum presents the results of a shared parking analysis to modify the parking requirement for the commercial uses associated with the redevelopment of the Paul VI Catholic High School (Paul VI) in the City of Fairfax, Virginia.

IDI Group Companies proposes to develop the site with 164 residential condominium units, 137 town homes, and a mix of retail, restaurant, and community/office uses totaling 44,000 square feet. Because parking for residential uses will not be shared, this shared parking analysis considers only the commercial uses although walking trips (internal) are anticipated.

Two alternative land use scenarios for the retail, restaurant, and community/office uses are examined. Those scenarios are as follows:

Scenario A	-	14,000 SF Retail space
	-	6,000 SF Restaurant space
	-	<u>24,000 SF Community/Office space</u>
		44,000 SF Total
Scenario B	-	26,000 SF Retail space
	-	6,000 SF Restaurant space
	-	<u>12,000 SF Community/Office space</u>
		44,000 SF Total

Shared parking analyses are based on data published by the Urban Land Institute (ULI), the Institute of Transportation Engineers (ITE), The City of Fairfax, and the Paul VI Master

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Development Plan by christopher consultants. The shared parking analysis prepared reviews peak weekday/weekend parking demands, taking into account seasonal, monthly, daily, and hourly variations in parking demands for each of the planned land uses.

### CITY OF FAIRFAX ZONING ORDINANCE REQUIREMENTS

The City of Fairfax Zoning Ordinance establishes parking requirements for various land uses by providing parking rates per unit of land use (i.e., per residential dwelling unit, per 1,000 GSF of retail uses, etc.).

The parking requirements for each use are:

- *Retail General - One space for every 200 square feet of floor area (5 spaces/1,000 sf)*
- *Restaurant - One space for every 200 square feet of floor area (5 spaces/1,000 sf)*
- *Community Services/Office General - One space for every 300 square feet of floor area (3.3 spaces/1,000 sf)*

As reflected on Tables 1A and 1B, the Zoning Ordinance parking requirements for Scenario A land uses would require 180 parking spaces and Scenario B land uses would require 200 parking spaces.

### SHARED PARKING CONCEPT

The Urban Land Institute (ULI) publication Shared Parking, 2nd edition has established a model and methodology for determining parking demands for various types and mixes of developments. This methodology is especially useful in cases such as the Paul VI redevelopment, where a single parking space may be used for retail, office, and/or restaurant uses. Because each land use within the development may experience a peak parking demand at different times of day, or different months of the year relative to the other land uses on-site, the actual peak parking demand of the entire development is typically less than if the peak parking demand of each land use was considered separately. For example, office uses tend to experience peak parking demand during late morning and early afternoon hours while restaurant uses tend to experience peak parking demand during evening hours, while retail uses experience peak demand just after the noon hour.

Based on the monthly and weekday/weekend adjustment calculations, the shared parking model establishes a peak demand hour and month during which project uses parking requirements would be at their highest.

In addition to the hourly, monthly, and weekday/weekend adjustment factors, the ULI model also considers parking rate modifications for alternate modes of transportation and captive market considerations, also known as internal capture.

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### ALTERNATE MODES

In addition to the multiple use nature of the proposed development and different peak parking demands, the site is served by the City of Fairfax's City-University Energysaver (CUE) Bus "Gold Route" and Metro's "Green Route", both providing access to GMU campus, Old Town Fairfax, and the Vienna/Fairfax-GMU Metrorail station.

US Census Bureau 2012-2016 American Community Survey indicates that approximately 15% of nearby residents currently use public transit. The mode share is noted as follows:



The project is anticipated to have a similar mode split when completed. A summary of this data is provided in Attachment I.

### CAPTIVE MARKET

Certain land use relationships produce additional reductions in parking demand. According to ULI, "market synergy" or internal capture is typical in mixed-use developments (i.e. on-site/nearby residential users would support community-office, retail, and restaurant uses, on-site retail or community/office users would patronize restaurant uses, etc.)

To quantify the reductions related to on-site synergy, the percentage of internal trips that could be expected for each land use scenario was determined based on methodologies for multi-use trip generation calculations developed by the Institute of Transportation Engineers. The multi-use trip generation analyses and the associated internal trip percentages for each land use scenario are provided in Attachments 2 and 3.

Attachment 2 indicates an on-site synergy of approximately 17% for land use Scenario A and Attachment 3 indicates an on-site synergy of approximately 21% for land use Scenario B. The difference in on-site synergy is attributed to the land use differences.

### ULI SHARED PARKING ANALYSIS

Shared parking analyses for land use Scenario A and Scenario B was conducted based on parking ratios identified in the City of Fairfax Zoning Code. ULI hourly, monthly and weekday/weekend adjustment factors to the parking demands of each of the individual land uses; a Mode Adjustment

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factor of 14%; and a Captive ratio of 17% for land use Scenario A and 20% for land use Scenario B. Refer to Tables 2A and 2B.

The Mode Adjustment factor used is consistent with U.S. Census data and the Captive (on-site synergy) ratio is based on multi-use trip generation calculations for each land use scenario as detailed above.

The results of these analyses indicate a peak weekday parking demand of 120 vehicles and a peak weekend parking demand of 69 vehicles for land use Scenario A. Similarly, the analyses indicate a peak weekday parking demand of 127 vehicles and a peak weekend parking demand of 104 vehicles for land use Scenario B. Tables 3A and 3B show the base parking ratio for each land use, the Mode Adjustment factor, the Captive Ratio, and the peak month weekday and weekend parking demand for each land use scenario.

Figures 1A and 2A show the peak month weekday and weekend parking accumulation by hour between 6 AM and 12 Mid for Scenario A land uses. Figures 1B and 2B show the peak month weekday and weekend parking accumulation by hour between 6 AM and 12 Mid for Scenario B land uses.

It is noted that the weekday and weekend parking accumulations discussed above are accumulations anticipated for the peak month during the year. Lower parking demand is anticipated during all other months of the year. Specifically, the maximum parking demand during the 2<sup>nd</sup> highest month is anticipated to be only 112 vehicles for land use Scenario A and 109 vehicles for land use Scenario B. See Tables 4A and 4B.

### CONCLUSIONS

Based on the documentation provided herein, the following can be concluded:

1. The Zoning Ordinance parking requirements would require the provision of 180 to 200 parking spaces to accommodate land use scenarios considered in this analysis.
2. US Census Bureau 2012-2016 American Community Survey indicates that approximately 15% of near-by residents currently use public transit and the project is anticipated to have a similar mode split when completed.
3. Methodologies for multi-use trip generation calculations developed by the Institute of Transportation Engineers were used to determine the level of on-site synergy that could be expected for each land use scenario. The results indicate an on-site synergy of approximately 17% for land use Scenario A, 21% for land use Scenario B.
4. Considering hourly, monthly and weekday/weekend adjustment factors, mode adjustment factor and on-site synergy adjustments, a maximum weekday parking demand of 120 vehicles and a peak weekend parking demand of 69 vehicles is anticipated for land use Scenario A.
5. Considering hourly, monthly and weekday/weekend adjustment factors, a mode adjustment factor and on-site synergy adjustments, a maximum weekday parking demand of 127 vehicles and a peak weekend parking demand of 104 vehicles is anticipated for land use Scenario B.
6. The maximum parking accumulations discussed above relate to peak month conditions. Lower parking demand is anticipated during all other months of the year. Specifically, the maximum parking demand during the other months will range from 103 to 112 vehicles for land use Scenario A and from 95 to 109 vehicles for land use Scenario B

# **PAUL VI SHARED PARKING ANALYSIS**

## **LAND USE SCENARIO A**

14,000 SF Retail

6,000 SF Restaurant

24,000 SF Community/Office

44,000 SF Total

**Table IA**  
**Shared Parking Analysis Summary**  
**Paul VI - Commercial/Community Uses <sup>(1)</sup>**

<u>Land Use</u>	<u>Amount</u>	<u>Units</u>	<u>Parking Spaces</u>
<u>Demand (No Shared Parking)</u>			
Retail <sup>(1)</sup>	14,000	S.F.	70
Restaurant (Fine/Casual Dining)	6,000	S.F.	30
Community Use/Office	<u>24,000</u>	S.F.	<u>80</u>
<b>Total</b>	<b>44,000</b>	<b>S.F.</b>	<b>180</b>
<u>Shared Parking Demand (Peak Month - Late Dec)</u>			<u>Weekday</u> <u>Weekend</u>
Retail			47      50
Restaurant (Fine/Casual Dining)			15      12
Community Use/Office			<u>58</u> <u>7</u>
<b>Total Shared Spaces</b>			<b>120</b> <b>69</b>
Savings Due to Sharing			(60)      (111)
Percent Saved			-33%      -62%
<b>Parking Supply</b>			<b>140</b> <b>140</b>
Extra Spaces (Supply - Demand)			20      71

Notes:

(1) City of Fairfax Base Rates Used With a 14% Mode Split Adjustment and a 17% On-Site Synergy Adjustment based on ITE Internal Trip Analysis (See Attachment 2).

**Table 2A**

**Parking Required Without Sharing**

**Paul VI - Commercial/Community Uses**

Land Use	Quantity	Demand		Mode Adjustment				Noncaptive Ratio			
		Weekday	Weekend	Weekday		Weekend		Weekday		Weekend	
				Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Retail	14,000 sf GLA	60	59	86%	86%	86%	86%	83.0%	83.0%	83.0%	83.0%
Employee		10	11	86%	86%	86%	86%	83.0%	83.0%	83.0%	83.0%
Fine/Casual Dining Restaurant	6,000 sf GLA	26	25	86%	86%	86%	86%	83.0%	83.0%	83.0%	83.0%
Employee		4	5	86%	86%	86%	86%	83.0%	83.0%	83.0%	83.0%
Community Use/Office	24,000 sf GLA	5	1	86%	86%	86%	86%	100.0%	100.0%	100.0%	100.0%
Employee		75	8	86%	86%	86%	86%	100.0%	100.0%	100.0%	100.0%
Subtotal Customer/Guest Spaces		91	85								
Subtotal Employee/Resident Spaces		89	24								
Total Parking Spaces		180	109								



**Table 3A**

**Parking Required With Sharing**

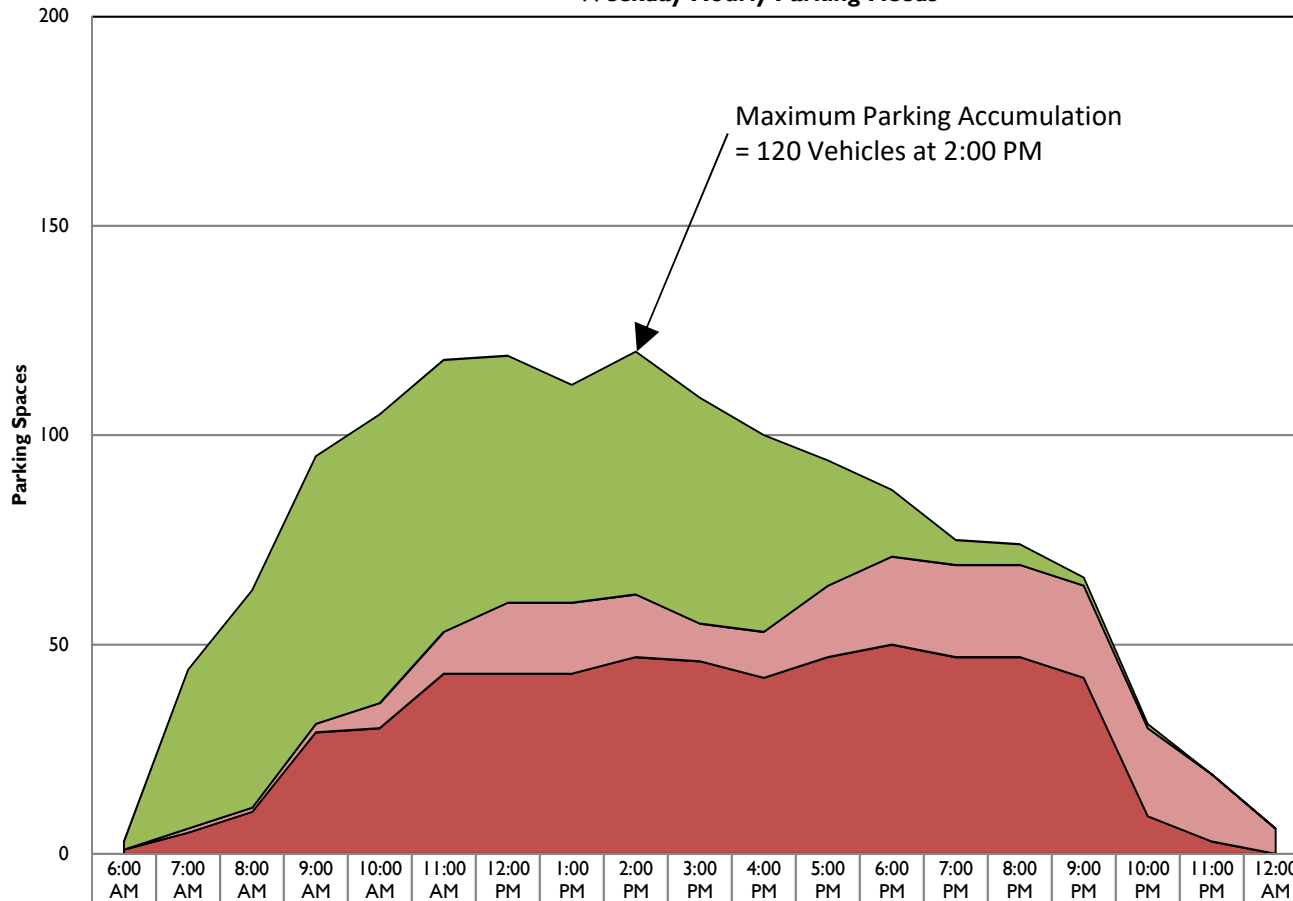
**Paul VI - Commercial/Community Uses**

Land Use	Project Data Quantity Unit		Weekday					Weekend				Weekday			Weekend		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
												2 PM	December		12 PM	December	
Retail Employee	14,000	sf GLA	4.30 0.70	0.86 0.86	0.83 0.83	3.07 0.50	/ksf GLA /ksf GLA	4.20 0.80	0.86 0.86	0.83 0.83	3.00 0.57	0.94 1.00	1.00 1.00	40 7	1.00 1.00	1.00 1.00	42 8
Fine/Casual Dining Restaurant Employee	6,000	sf GLA	4.30 0.70	0.86 0.86	0.83 0.83	3.07 0.50	/ksf GLA /ksf GLA	4.20 0.80	0.86 0.86	0.83 0.83	3.00 0.57	0.65 0.90	1.00 1.00	12 3	0.50 0.75	1.00 1.00	9 3
Community Use/Office Employee	24,000	sf GLA	0.20 3.13	0.86 0.86	1.00 1.00	0.17 2.69	/ksf GLA /ksf GLA	0.03 0.35	0.86 0.86	1.00 1.00	0.03 0.30	1.00 0.84	1.00 1.00	4 54	0.90 0.90	1.00 1.00	1 6
												Customer Employee	56 64	Customer Employee	52 17		
												<b>Total</b>	<b>120</b>	<b>Total</b>	<b>69</b>		

**Table 4A**  
**Shared Parking Demand By Month**  
**Paul VI - Commercial/Community Uses**

<u>Month</u>	<u>Weekday</u>	<u>Weekend</u>
January	103	48
February	103	48
March	108	52
April	108	52
May	109	53
June	110	53
July	107	52
August	109	54
September	108	52
October	109	53
November	112	56
December	120	69

**Figure 1A**  
**Paul VI Commercial and Community Uses**  
**Weekday Hourly Parking Needs**

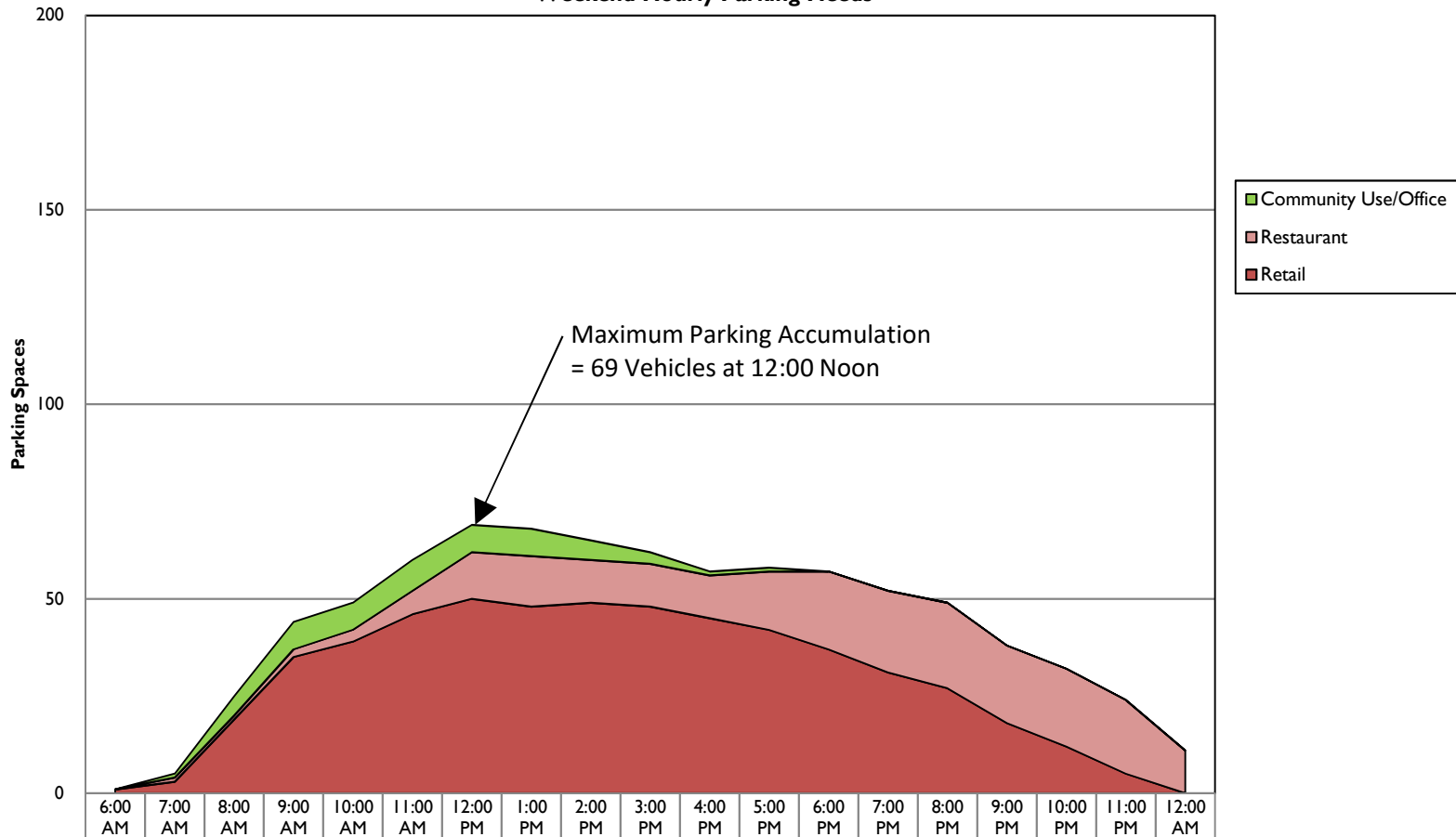


Community Use/Office
Restaurant
Retail

	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Community Use/Office	2	38	52	64	69	65	59	52	58	54	47	30	16	6	5	2	1	0	0
Restaurant	0	1	1	2	6	10	17	17	15	9	11	17	21	22	22	22	21	16	6
Retail	1	5	10	29	30	43	43	43	47	46	42	47	50	47	47	42	9	3	0

Total	3	44	63	95	105	117	119	112	120	109	100	94	87	75	74	66	31	19	6
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**Figure 2A**  
**Paul VI Commercial and Community Uses**  
**Weekend Hourly Parking Needs**



	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Community Use/Office	0	1	5	7	7	8	7	7	5	3	1	1	0	0	0	0	0	0	0
Restaurant	0	1	1	2	3	6	12	13	11	11	11	15	20	21	22	20	20	19	11
Retail	1	3	19	35	39	46	50	48	49	48	45	42	37	31	27	18	12	5	0

Total	1	5	25	44	49	60	69	68	65	62	57	58	57	52	49	38	32	24	11
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# **PAUL VI**

## **SHARED PARKING ANALYSIS**

### **LAND USE SCENARIO B**

26,000 SF Retail  
6,000 SF Restaurant  
12,000 SF Community/Office  
44,000 SF Total

**Table IB**  
**Shared Parking Analysis Summary**  
**Paul VI - Commercial/Community Uses <sup>(1)</sup>**

<u>Land Use</u>	<u>Amount</u>	<u>Units</u>	<u>Parking Spaces</u>
<u>Demand (No Shared Parking)</u>			
Retail <sup>(1)</sup>	26,000	S.F.	130
Restaurant (Fine/Casual Dining)	6,000	S.F.	30
Community Use/Office	<u>12,000</u>	S.F.	<u>40</u>
<b>Total</b>	<b>44,000</b>	<b>S.F.</b>	<b>200</b>
<u>Shared Parking Demand (Peak Month - Late Dec)</u>			<u>Weekday</u> <u>Weekend</u>
Retail			84      89
Restaurant (Fine/Casual Dining)			14      12
Community Use/Office			<u>29</u> <u>3</u>
<b>Total Shared Spaces</b>			<b>127</b> <b>104</b>
Savings Due to Sharing			(73)      (96)
Percent Saved			-37%      -48%
<b>Parking Supply</b>			<b>140</b> <b>140</b>
Extra Spaces (Supply - Demand)			13      36

Notes:

(1) City of Fairfax Base Rates Used With a 14% Mode Split Adjustment and a 20% On-Site Synergy Adjustment based on ITE Internal Trip Analysis (See Attachment 3).

**Table 2B**

**Parking Required Without Sharing**

**Paul VI - Commercial/Community Uses**

Land Use	Quantity	Demand		Mode Adjustment				Noncaptive Ratio			
		Weekday	Weekend	Weekday		Weekend		Weekday		Weekend	
				Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Retail	26,000 sf GLA	112	109	86%	86%	86%	86%	80.0%	80.0%	80.0%	80.0%
Employee		18	21	86%	86%	86%	86%	80.0%	80.0%	80.0%	80.0%
Fine/Casual Dining Restaurant	6,000 sf GLA	26	25	86%	86%	86%	86%	80.0%	80.0%	80.0%	80.0%
Employee		4	5	86%	86%	86%	86%	80.0%	80.0%	80.0%	80.0%
Community Use/Office	12,000 sf GLA	2	0	86%	86%	86%	86%	100.0%	100.0%	100.0%	100.0%
Employee		38	4	86%	86%	86%	86%	100.0%	100.0%	100.0%	100.0%
Subtotal Customer/Guest Spaces		140	134								
Subtotal Employee/Resident Spaces		60	30								
Total Parking Spaces		200	164								

**Table 3B**

**Parking Required With Sharing**

**Paul VI - Commercial/Community Uses**

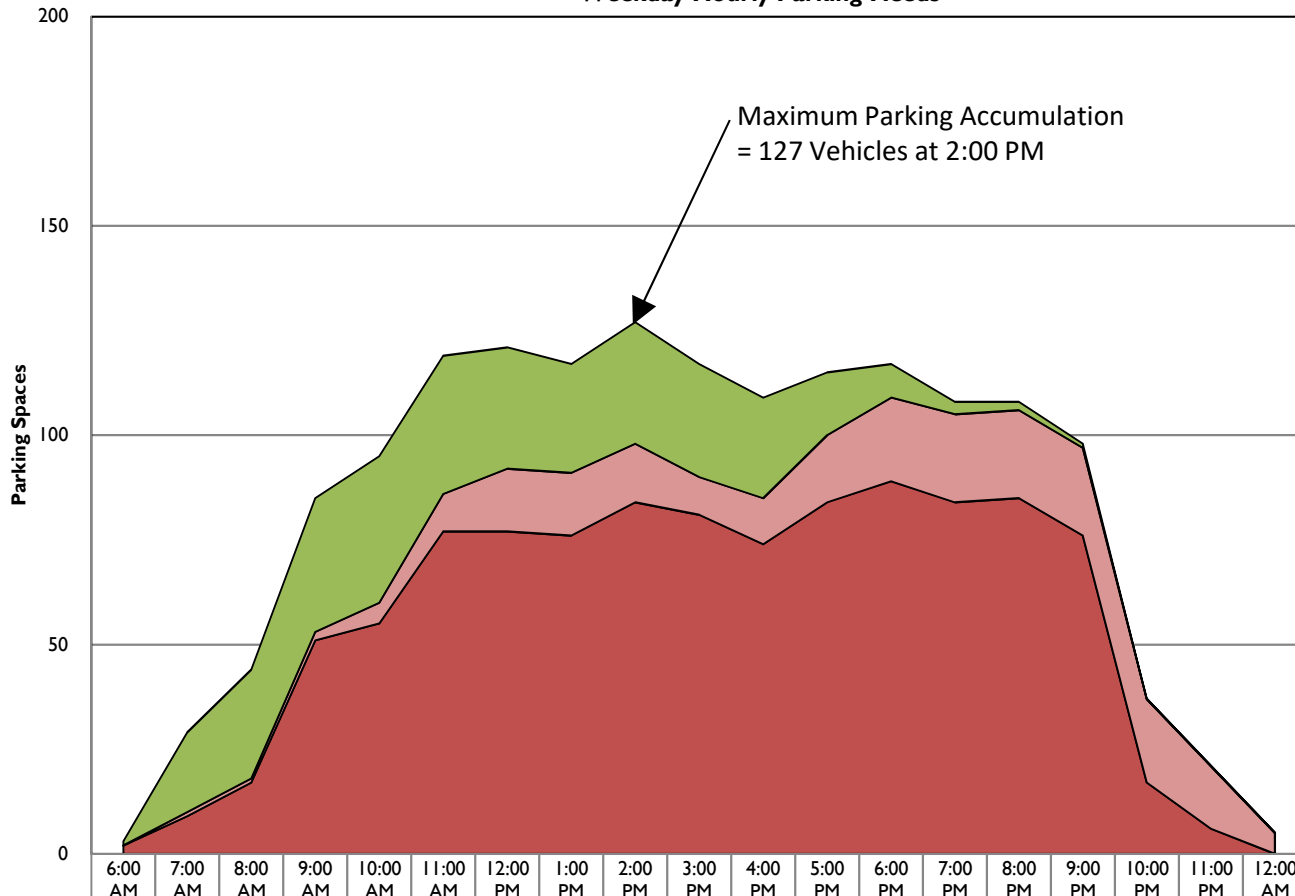
Land Use	Project Data Quantity Unit		Weekday					Weekend				Weekday			Weekend		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
												2 PM	December		12 PM	December	
Retail Employee	26,000	sf GLA	4.30 0.70	0.86 0.86	0.80 0.80	2.96 0.48	/ksf GLA /ksf GLA	4.20 0.80	0.86 0.86	0.80 0.80	2.89 0.55	0.94 1.00	1.00 1.00	72 12	1.00 1.00	1.00 1.00	75 14
Fine/Casual Dining Restaurant Employee	6,000	sf GLA	4.30 0.70	0.86 0.86	0.80 0.80	2.96 0.48	/ksf GLA /ksf GLA	4.20 0.80	0.86 0.86	0.80 0.80	2.89 0.55	0.65 0.90	1.00 1.00	12 2	0.50 0.75	1.00 1.00	9 3
Community Use/Office Employee	12,000	sf GLA	0.20 3.13	0.86 0.86	1.00 1.00	0.17 2.69	/ksf GLA /ksf GLA	0.03 0.35	0.86 0.86	1.00 1.00	0.03 0.30	1.00 0.84	1.00 1.00	2 27	0.90 0.90	1.00 1.00	0 3
												Customer	86	Customer	84		
												Employee	41	Employee	20		
												<b>Total</b>	<b>127</b>	<b>Total</b>	<b>104</b>		



**Table 4B**  
**Shared Parking Demand By Month**  
**Paul VI - Commercial/Community Uses**

<u>Month</u>	<u>Weekday</u>	<u>Weekend</u>
January	95	67
February	97	68
March	103	75
April	102	74
May	105	77
June	106	78
July	102	75
August	106	79
September	102	75
October	105	76
November	109	82
December	127	104

**Figure 1B**  
**Paul VI Commercial and Community Uses**  
**Weekday Hourly Parking Needs**

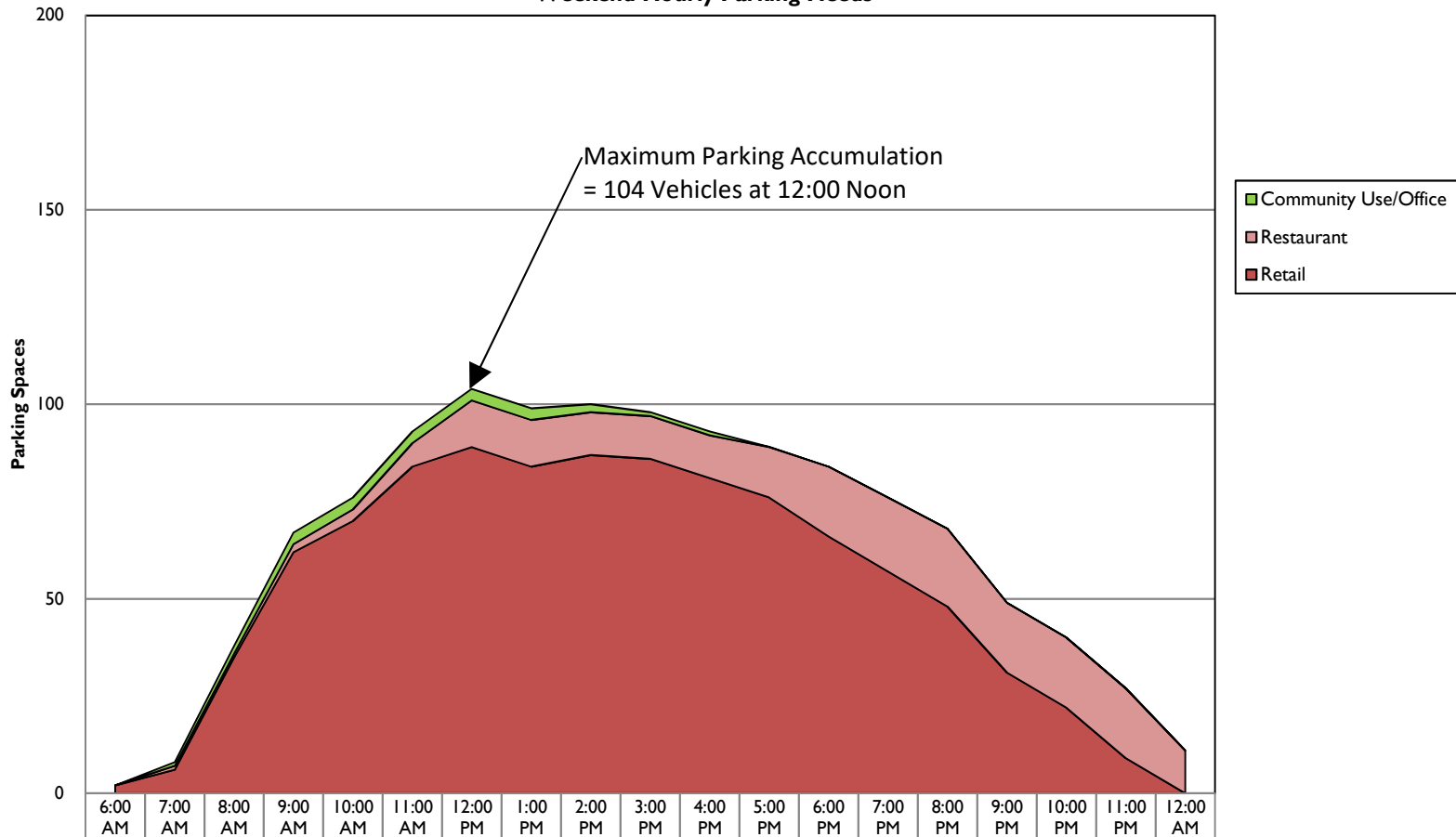


Community Use/Office
Restaurant
Retail

	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Community Use/Office	1	19	26	32	35	33	29	26	29	27	24	15	8	3	2	1	0	0	0
Restaurant	0	1	1	2	5	9	15	15	14	9	11	16	20	21	21	21	20	15	5
Retail	2	9	17	51	55	77	77	76	84	81	74	84	89	84	85	76	17	6	0

Total	3	29	44	84	95	119	121	117	127	117	109	115	117	108	108	98	37	21	5
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**Figure 2B**  
**Paul VI Commercial and Community Uses**  
**Weekend Hourly Parking Needs**



	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Community Use/Office	0	1	2	3	3	3	3	3	2	1	1	0	0	0	0	0	0	0	0
Restaurant	0	1	1	2	3	6	12	12	11	11	11	13	18	19	20	18	18	18	11
Retail	2	6	35	62	70	84	89	84	87	86	81	76	66	57	48	31	22	9	0

Total	2	8	38	67	76	93	104	99	100	98	93	89	84	76	68	49	30	27	11
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**ATTACHMENT I**  
**US Census Bureau Data**

Attachment 1  
Mode Adjustment Calculations

<b>US Census Data (2016 - 5-year estimates)</b>	<b>Number of Households</b>	<b>Percent</b>
<b><u>Census Tract 3001, Fairfax City, Virginia</u></b>		
Drive Alone	1,961	69.8%
Carpool	181	6.4%
Public Transit	413	14.7%
Other	<u>255</u>	<u>9.1%</u>
<b>TOTAL</b>	<b>2,810</b>	<b>100.0%</b>

Versions of this table are available for the following years:

2016 ▶  
 2015  
 2014  
 2013  
 2012  
 2011  
 2010  
 2009

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		Census Tract 3001, Fairfax city, Virginia	
		Estimate	Margin of Error
	Total:	2,810	+/-193
	Car, truck, or van:	2,128	+/-173
	Drove alone	1,947	+/-203
	Carpooled:	181	+/-90
	In 2-person carpool	154	+/-84
	In 3-person carpool	11	+/-16
	In 4-person carpool	11	+/-20
	In 5- or 6-person carpool	5	+/-10
	In 7-or-more-person carpool	0	+/-17
	Public transportation (excluding taxicab):	413	+/-138
	Bus or trolley bus	151	+/-87
	Streetcar or trolley car (carro publico in Puerto Rico)	0	+/-17
	Subway or elevated	243	+/-107
	Railroad	19	+/-29
	Ferryboat	0	+/-17
	Taxicab	0	+/-17
	Motorcycle	14	+/-21
	Bicycle	0	+/-17
	Walked	165	+/-73
	Other means	0	+/-17
	Worked at home	90	+/-63

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

## **ATTACHMENT 2**

### **Multi-Use Trip Generation Analysis Land Use Scenario A**

## Attachment 2

### Paul VI Redevelopment

#### Site Trip Generation Analysis (Program Change Comparison)

Development	ITE Land Use Code <sup>1</sup>	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Trips
				In	Out	Total	In	Out	Total	
Condominiums	232	164	DU	14	62	76	44	27	71	842
Townhomes	230	137	DU	11	55	66	52	26	78	846
Community Center	495	24,000	SF	32	17	49	32	34	66	812
Restaurant	931	6,000	SF	2	3	5	30	15	45	540
Local Serving Retail	820	14,000	SF	8	5	13	77	83	160	1,892
<b>Total Trips</b>				<b>67</b>	<b>142</b>	<b>209</b>	<b>235</b>	<b>185</b>	<b>420</b>	<b>4,932</b>
Total Residential Trips				25	117	142	96	53	149	1,688
Total Commercial Trips				10	8	18	107	98	205	2,432
Internal Trips				-3	-3	-6	-51	-51	-102	-740
Internal Percent <sup>2</sup>						2.9%			24.3%	17.2%
Total Community Center Trips				32	17	49	32	34	66	812
<b>Total External Trips</b>				<b>64</b>	<b>139</b>	<b>203</b>	<b>184</b>	<b>134</b>	<b>318</b>	<b>4,192</b>

Notes: 1. Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition

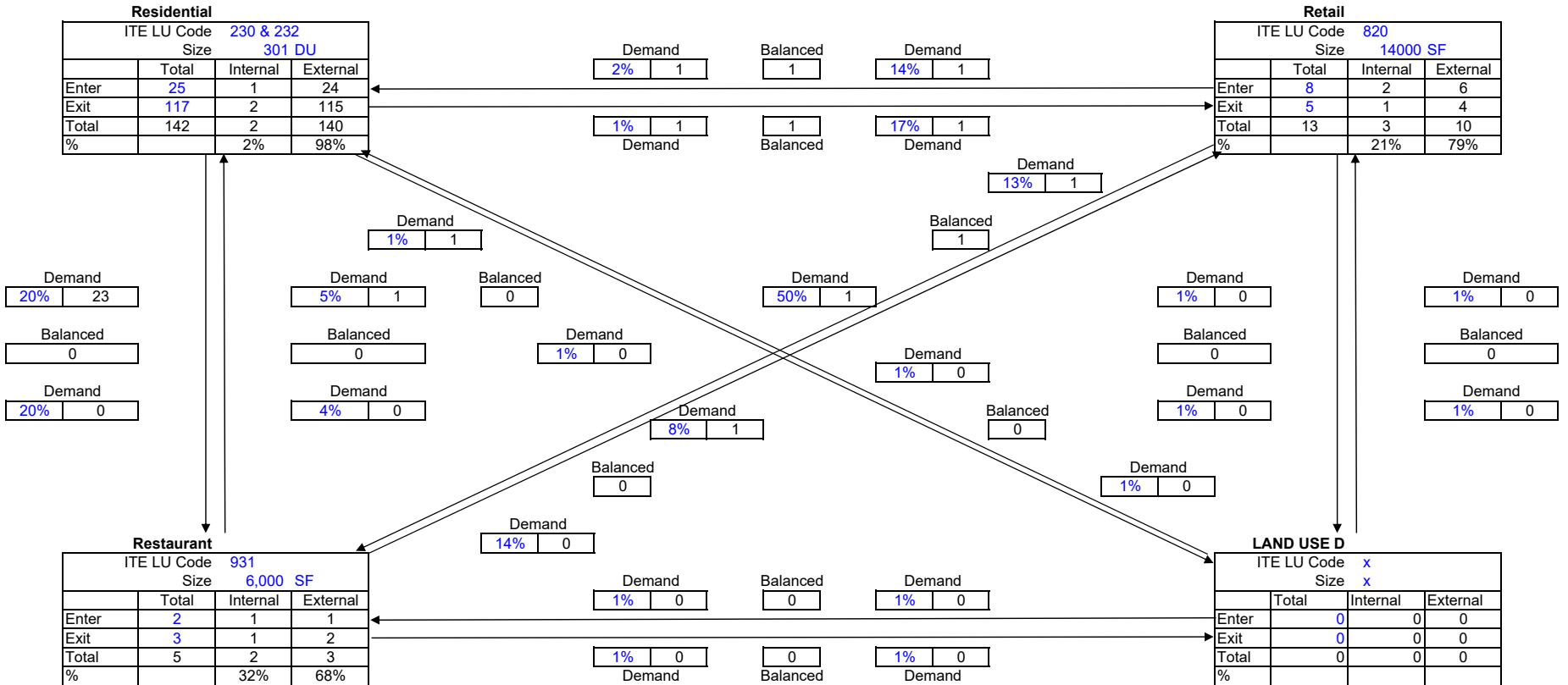
2. Daily Internal Percentage is Weighted Average and AM and PM Internal Percentages.



Analyst JJA  
 Date 14-Mar-18

## ATTACHMENT 2 MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

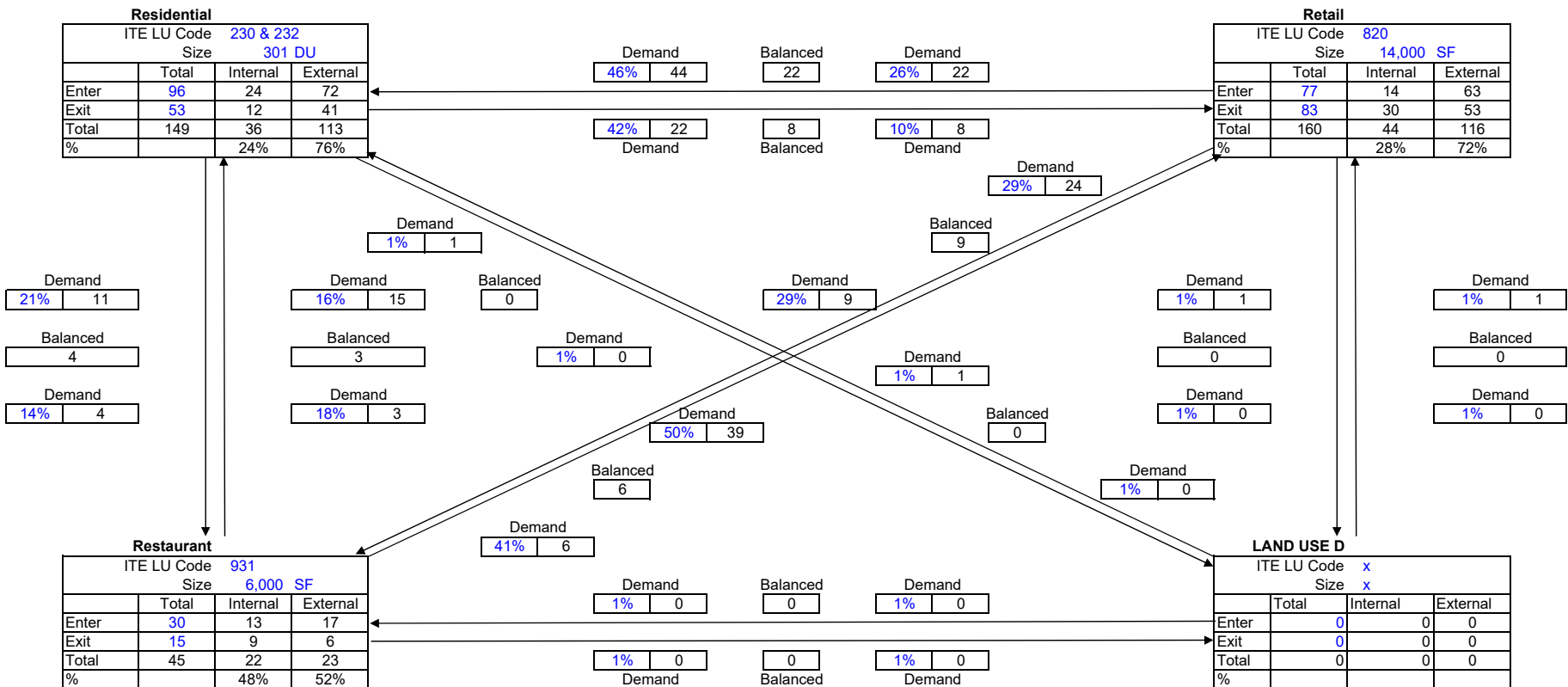
Job Number 6709  
 Time Period AM Peak



## ATTACHMENT 2 MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Analyst JJA  
Date 14-Mar-18

Job Number 6709  
Time Period PM PEAK



## **ATTACHMENT 3**

### **Multi-Use Trip Generation Analysis Land Use Scenario B**

### Attachment 3

#### Paul VI Redevelopment

#### Site Trip Generation Analysis (Program Change Comparison)

Development	ITE Land Use Code <sup>1</sup>	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Trips
				In	Out	Total	In	Out	Total	
Condominiums	232	164	DU	14	62	76	44	27	71	842
Townhomes	230	137	DU	11	55	66	52	26	78	846
Community Center	495	12,000	SF	17	8	25	16	17	33	406
Restaurant	931	6,000	SF	2	3	5	30	15	45	540
Local Serving Retail	820	26,000	SF	16	9	25	117	126	243	2,829
<b>Total Trips</b>				<b>60</b>	<b>137</b>	<b>197</b>	<b>259</b>	<b>211</b>	<b>470</b>	<b>5,463</b>
Total Residential Trips				25	117	142	96	53	149	1,688
Total Commercial Trips				18	12	30	147	141	288	3,369
Internal Trips				-4	-4	-8	-66	-66	-132	-819
Internal Percent <sup>2</sup>						4.1%			28.1%	21.0%
Total Community Center Trips				17	8	25	16	17	33	406
<b>Total External Trips</b>				<b>56</b>	<b>133</b>	<b>189</b>	<b>193</b>	<b>145</b>	<b>338</b>	<b>4,644</b>

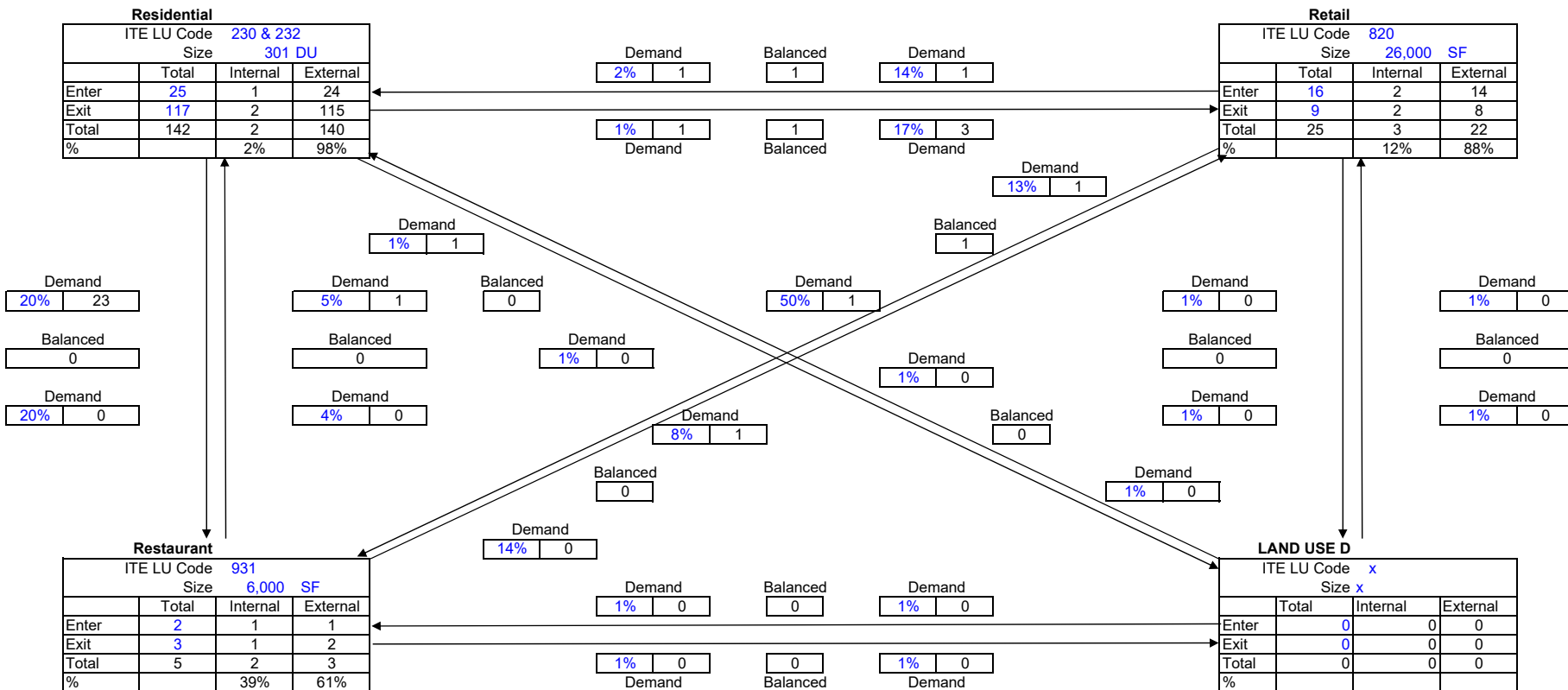
Notes: 1. Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition

2. Daily Internal Percentage is Weighted Average and AM and PM Internal Percentages.

### ATTACHMENT 3 MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Analyst JJA  
Date 14-Mar-18

Job Number 6709  
Time Period AM Peak



### ATTACHMENT 3 MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Analyst JJA  
Date 14-Mar-18

Job Number 6709  
Time Period PM PEAK

