

*Future Land Use Amendment*

*Traffic Analysis*

**Town Place**  
**City of Port St. Lucie, FL**

*Prepared for:*  
HJA Design Studio  
Stuart, Florida 34994

*Prepared by:*

The logo for MacKenzie Engineering & Planning, Inc. features a stylized red 'M' with a white outline, followed by the word 'MacKenzie' in a red serif font.

**Engineering & Planning, Inc.**

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## ***EXECUTIVE SUMMARY***

MacKenzie Engineering and Planning, Inc. (MEP) was retained to evaluate the changes in the Future Land Use (FLU) for the development located at 18.51 acres located at 998 SE Town Place Boulevard, Port St. Lucie, FL (PCN: 3426-341-0001-000-2). The applicant proposes to change 6.60 acres of Medium Density Residential (RM) and 11.91 acres of Commercial (CG) to 18.51 acres of RH and CG.

### ***Future Land Use – Maximum Net Increase in External Trips***

The future land use amendment trip generation resulting change is -2,843 daily, 13 AM peak hour (-12 in/25 out), and -297 PM peak hour (-136 in/-161 out) trips.

The proposed FLU amendment has no impact upon transportation infrastructure. The project satisfies the Public Facilities Transportation Impacts of a FLU Amendment within the City of Port St. Lucie Comprehensive Plan.

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## ***INTRODUCTION***

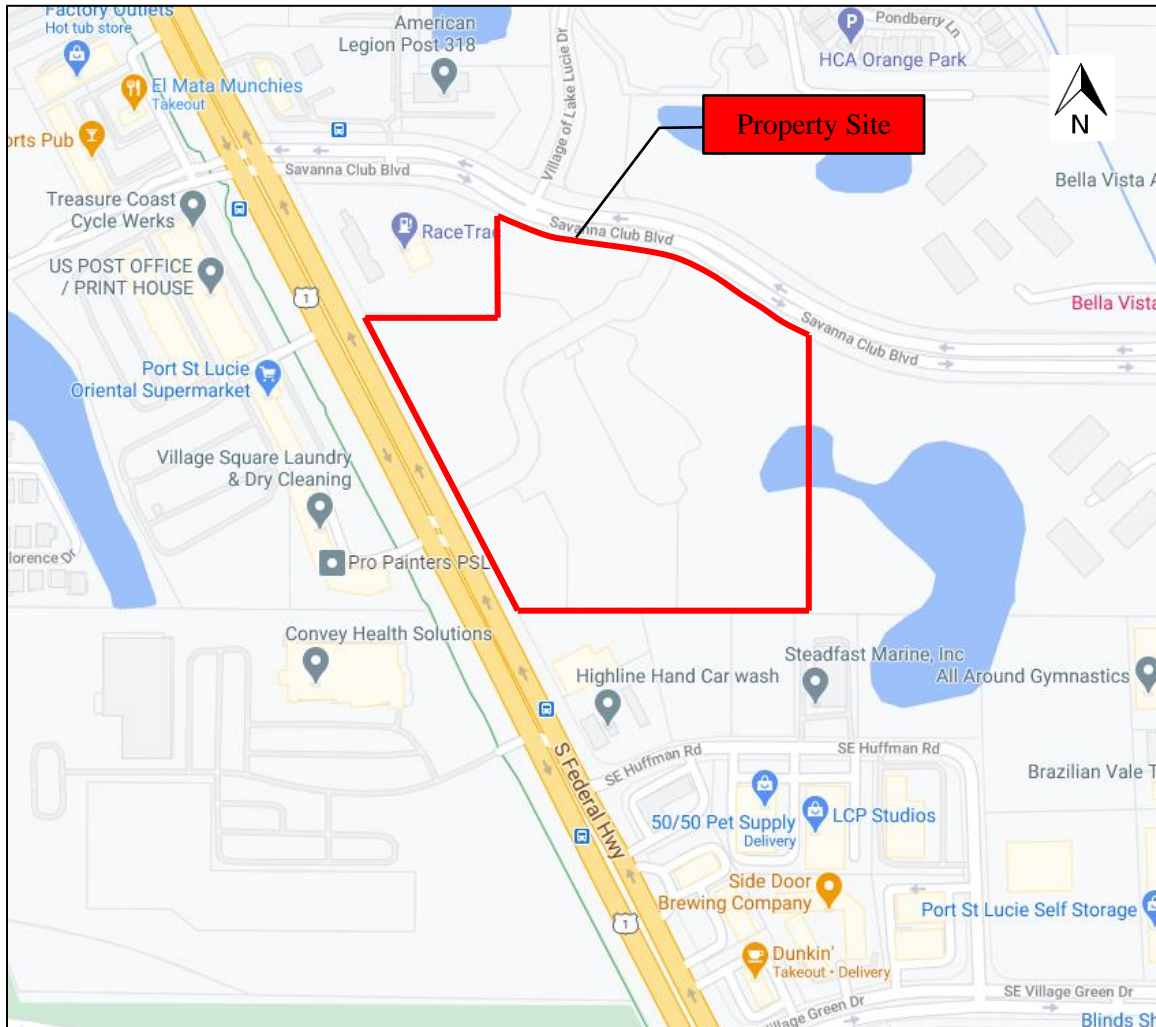
A future land use amendment is proposed on 18.51 acres located at 998 SE Town Place Boulevard, Port St. Lucie, FL (PCN: 3426-341-0001-000-2). The future land use (FLU) amendment traffic analysis will examine the impacts of changing 6.60 acres of Medium Density Residential (RM) and 11.91 acres of Commercial (CG) to 18.51 acres of High Density Residential (RH) and Commercial (CG).

The proceeding analysis will examine the ability of the existing roadway network to accommodate the increased demand and the future roadway network to accommodate the increased demand.

Table 1. Future Land Use Change

Parcel ID	Existing FLU Land Use	Size (Acres)	Proposed FLU Land Use	Size (Acres)
3426-341-0001-000-2	Medium Density Residential	6.60 (11 DU/Acres)	High Density Residential	18.51 (15 DU/Acres)
	Commercial General	11.91	Commercial General	4.50

**Figure 1. Site Location Map**



## ***CURRENT DATA***

The information contained below was used to develop the foregoing future land use traffic analysis.

- *Trip Generation, 10<sup>th</sup> Edition* (ITE report)
- Comprehensive Plan

## ***FUTURE LAND USE CHANGE ANALYSIS***

### ***Trip Generation***

The study uses trip generation rates for Medium Density Residential & High Density Residential (ITE Land Use 221 – Multifamily Housing (Mid-Rise)) and Commercial (ITE Land Use 820 - Shopping Center) published in the Institute of Transportation Engineers' (ITE) report, *Trip Generation (10th Edition)*. The proposed development plan consists of the following:

#### ***Existing Future Land Use***

The existing future land use uses the most intense reasonable maximum development scenario based on the existing land development regulations. The 11.91 acres CG property uses Shopping Center use with the maximum coverage ratio (40%). The 6.60 acres Medium Density Residential FLU uses Multi-Family (Mid-Rise) with a maximum density of 11 units per acre. Therefore, the maximum expected intensity with respect to traffic is 207,520 square feet of commercial use 73 DUs.

- 207,520 SF Commercial General (ITE Land Use 820) (11.91 x 43,560 x 40%)
- 73 DUs Medium Density Residential (ITE Land Use 220) (6.60 x 11 DU/Acre)

The existing FLU is expected to generate the following net external trips:

- 6,663 daily, 204 AM peak hour (113 in/91 out), and 628 PM peak hour (306 in/322 out) trips.

***Proposed Future Land Use***

The proposed FLU uses the most intense reasonable maximum development scenario. The 18.51 acres property is proposed to allow 4.5 acres of CG and 18.51 acres of RH across the property. The CG FLU has a maximum coverage area of 40 percent and the High Density Residential FLU has a maximum density of 15 homes per acre. Based on the area and intensity, the maximum buildable intensity is 78,408 SF of commercial use and 277 DUs.

- 78,408 SF Commercial General (ITE Land Use 820) (4.5 x 43,560 x 40%)
- 277 DUs High Density Residential (ITE Land Use 221) (18.51 x 15 DU/Acre)

The proposed FLU is expected to generate the following net external trips:

- 3,820 daily, 217 AM peak hour (101 in/116 out), and 331 PM peak hour (170 in/161 out) trips.

***Net Impact***

The difference between the maximum trip generation potential of the existing future land use and the proposed future land use was examined to determine the maximum (worst case/conservative) impact to the existing and future roadway network. Table 2 displays the resulting trip generation.

The resulting net external trips change is:

- -2,843 daily, 13 AM peak hour (-12 in/25 out), and -297 PM peak hour (-136 in/-161 out) trips.

The net daily and PM peak hour impact of the change is less than 0 peak hour trips as a result of the proposed land use amendment from CG/RM to CG/RH. The proposed FLU amendment has no impact upon transportation infrastructure.

Table 2. Future Land Use Trip Generation

Land Use	Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
<b>Existing FLU Traffic</b>									
Shopping Center	207.520	1000 SF	9,877	256	159	97	933	448	485
Multifamily Housing(Low-Rise)	73	DU	511	35	8	27	45	28	17
Subtotal			10,388	291	167	124	978	476	502
<b>Internal Capture</b>									
	AM	PM/DAILY							
Shopping Center	0.0%	2.1%	212	0	0	0	20	7	13
Multifamily Housing(Low-Rise)	0.0%	44.4%	227	0	0	0	20	13	7
Subtotal	0.0%	4.1%	439	0	0	0	40	20	20
<b>Pass-By Traffic</b>									
Shopping Center	34.0%		3,286	87	54	33	310	150	160
Multifamily Housing(Low-Rise)	0.0%		0	0	0	0	0	0	0
Subtotal			3,286	87	54	33	310	150	160
<b>NET EXISTING TRIPS</b>			<b>6,663</b>	<b>204</b>	<b>113</b>	<b>91</b>	<b>628</b>	<b>306</b>	<b>322</b>
<b>Total Existing Driveway Volumes</b>			<b>9,949</b>	<b>291</b>	<b>167</b>	<b>124</b>	<b>938</b>	<b>456</b>	<b>482</b>
<b>Proposed FLU Traffic</b>									
Shopping Center	78.408	1000 SF	5,095	191	118	73	454	218	236
Multifamily Housing(Mid-Rise)	277	DU	1,508	93	24	69	118	72	46
Subtotal			6,603	284	142	142	572	290	282
<b>Internal Capture</b>									
	AM	PM/DAILY							
Shopping Center	0.5%	11.5%	584	1	1	0	52	19	33
Multifamily Housing(Mid-Rise)	1.1%	44.1%	665	1	0	1	52	33	19
Subtotal	0.7%	18.2%	1,249	2	1	1	104	52	52
<b>Pass-By Traffic</b>									
Shopping Center	34.0%		1,534	65	40	25	137	68	69
Multifamily Housing(Mid-Rise)	0.0%		0	0	0	0	0	0	0
Subtotal			1,534	65	40	25	137	68	69
<b>NET PROPOSED TRIPS</b>			<b>3,820</b>	<b>217</b>	<b>101</b>	<b>116</b>	<b>331</b>	<b>170</b>	<b>161</b>
<b>Total Proposed Driveway Volumes</b>			<b>5,354</b>	<b>282</b>	<b>141</b>	<b>141</b>	<b>468</b>	<b>238</b>	<b>230</b>
<b>NET CHANGE IN TRIPS (FOR THE PURPOSES OF CONCURRENCY)</b>			<b>(2,843)</b>	<b>13</b>	<b>(12)</b>	<b>25</b>	<b>(297)</b>	<b>(136)</b>	<b>(161)</b>
<b>NET CHANGE IN DRIVEWAY VOLUMES</b>			<b>(4,595)</b>	<b>(9)</b>	<b>(26)</b>	<b>17</b>	<b>(470)</b>	<b>(218)</b>	<b>(252)</b>
Note: Trip generation was calculated using the following data:									
Land Use	IT E Code	Unit	Daily Rate	Pass-by Rate	AM Peak Hour		PM Peak Hour		
					in/out	Rate	in/out	Equation	
Shopping Center	820	1000 SF	$\ln(T) = 0.68 \ln(X) + 5.57$	34%	62/38	$T = 0.5 (X) + 151.78$	48/52	$\ln(T) = 0.74 \ln(X) + 2.89$	
Multifamily Housing(Mid-Rise)	221	DU	$T = 5.45 (X) + -1.75$	0%	26/74	$\ln(T) = 0.98 \ln(X) + -0.98$	61/39	$\ln(T) = 0.96 \ln(X) + -0.63$	

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### *Internal Capture*

The internal capture is summarized in Exhibit 1A and detailed in Exhibits 1B - 1E for existing and proposed conditions. Internal capture rates are provided in the Trip Generation Handbook, 3rd Edition, Table 7.1.

### *Pass-by Trip Capture*

Pass-by rate is based on ITE's report, *Trip Generation Handbook (3<sup>rd</sup> Edition)*.

## **CONCLUSION**

MacKenzie Engineering and Planning, Inc. (MEP) was retained to evaluate the changes in the Future Land Use (FLU) for the development located at 18.51 acres located at 998 SE Town Place Boulevard, Port St. Lucie, FL (PCN: 3426-341-0001-000-2). The applicant proposes to change 6.60 acres of Medium Density Residential (RM) and 11.91 acres of Commercial (CG) to 18.51 acres of RH and CG.

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The future land use amendment trip generation resulting change is -2,843 daily, 13 AM peak hour (-12 in/25 out), and -297 PM peak hour (-136 in/-161 out) trips.

The proposed FLU amendment has no impact upon transportation infrastructure. The project satisfies the Public Facilities Transportation Impacts of a FLU Amendment within the City of Port St. Lucie Comprehensive Plan.

**APPENDICES**

**EXHIBIT 1A  
TOWN PLACE  
Future Land Use Trip Generation**

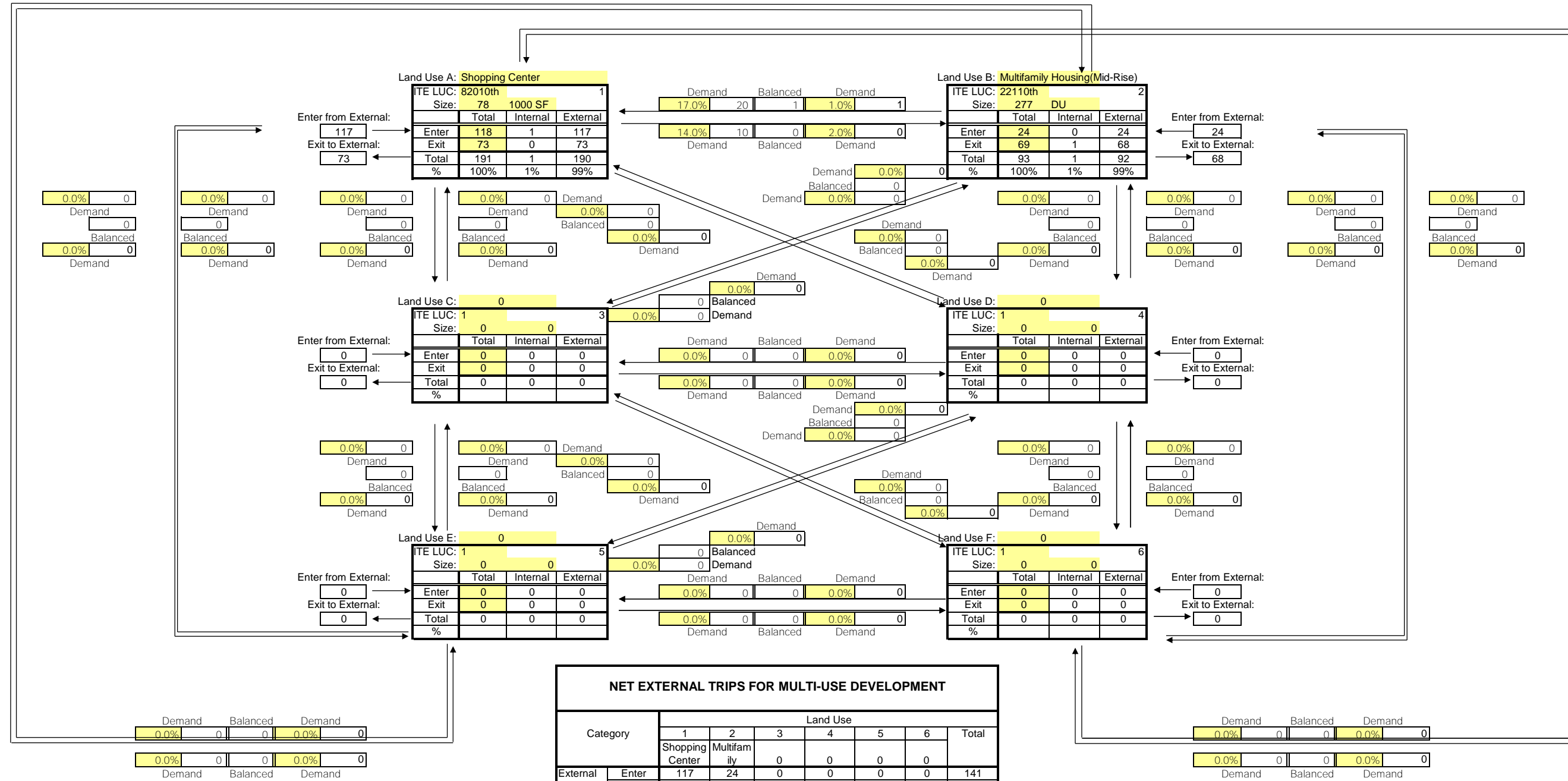
Land Use	Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
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EXHIBIT 1B

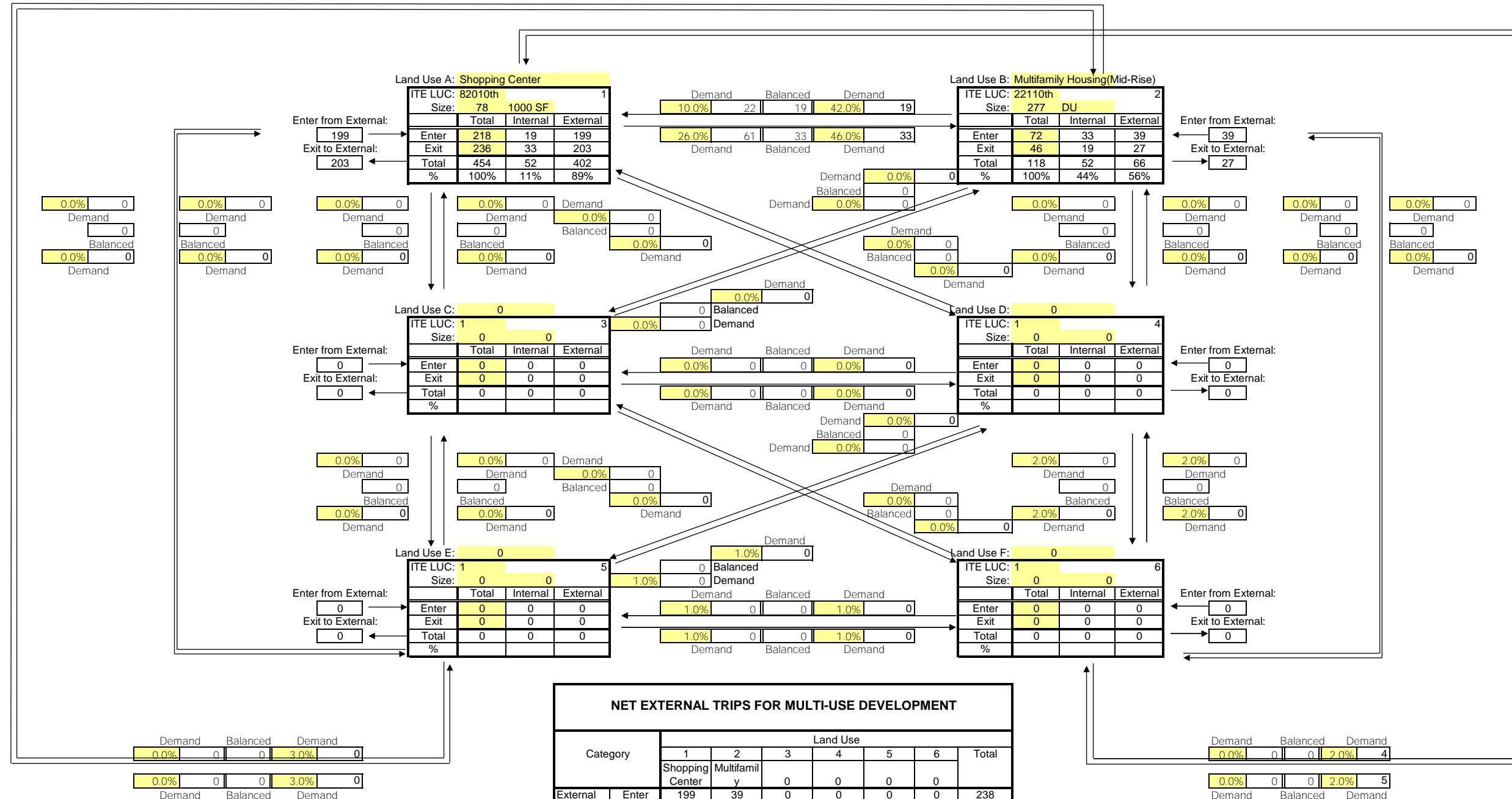
Analysis Period: PM, Midday, AM X  
 Analyst: MEP  
 Date: 4/15/2021  
 Project Number: 193003  
 Task Number:  
 Project Name: TOWN PLACE  
 Scenario: AM Peak Hour



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT							
Category	Land Use						Total
	1 Shopping Center	2 Multifam ily	3	4	5	6	
External Trips	Enter	117	24	0	0	0	141
	Exit	73	68	0	0	0	141
	Total	190	92	0	0	0	282
Internal Trips	Enter	1	0	0	0	0	1
	Exit	0	1	0	0	0	1
	Total	1	1	0	0	0	2
0	0	0	0	0	0	0	
Trip Gen Estimate	191	93	0	0	0	0	284

EXHIBIT 1C

Analysis Period: PM\_X, AM  
 Project Number: 193003 Task Number:  
 Analyst: MEP Project Name: TOWN PLACE  
 Date: 4/15/2021 Scenario: PM Peak Hour



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT							
Category	Land Use						Total
	1 Shopping Center	2 Multifamil y	3	4	5	6	
External Trips	Enter	199	39	0	0	0	238
	Exit	203	27	0	0	0	230
	Total	402	66	0	0	0	468
Internal Trips	Enter	19	33	0	0	0	52
	Exit	33	19	0	0	0	52
	Total	52	52	0	0	0	104
Trip Gen Estimate	454	118	0	0	0	0	572

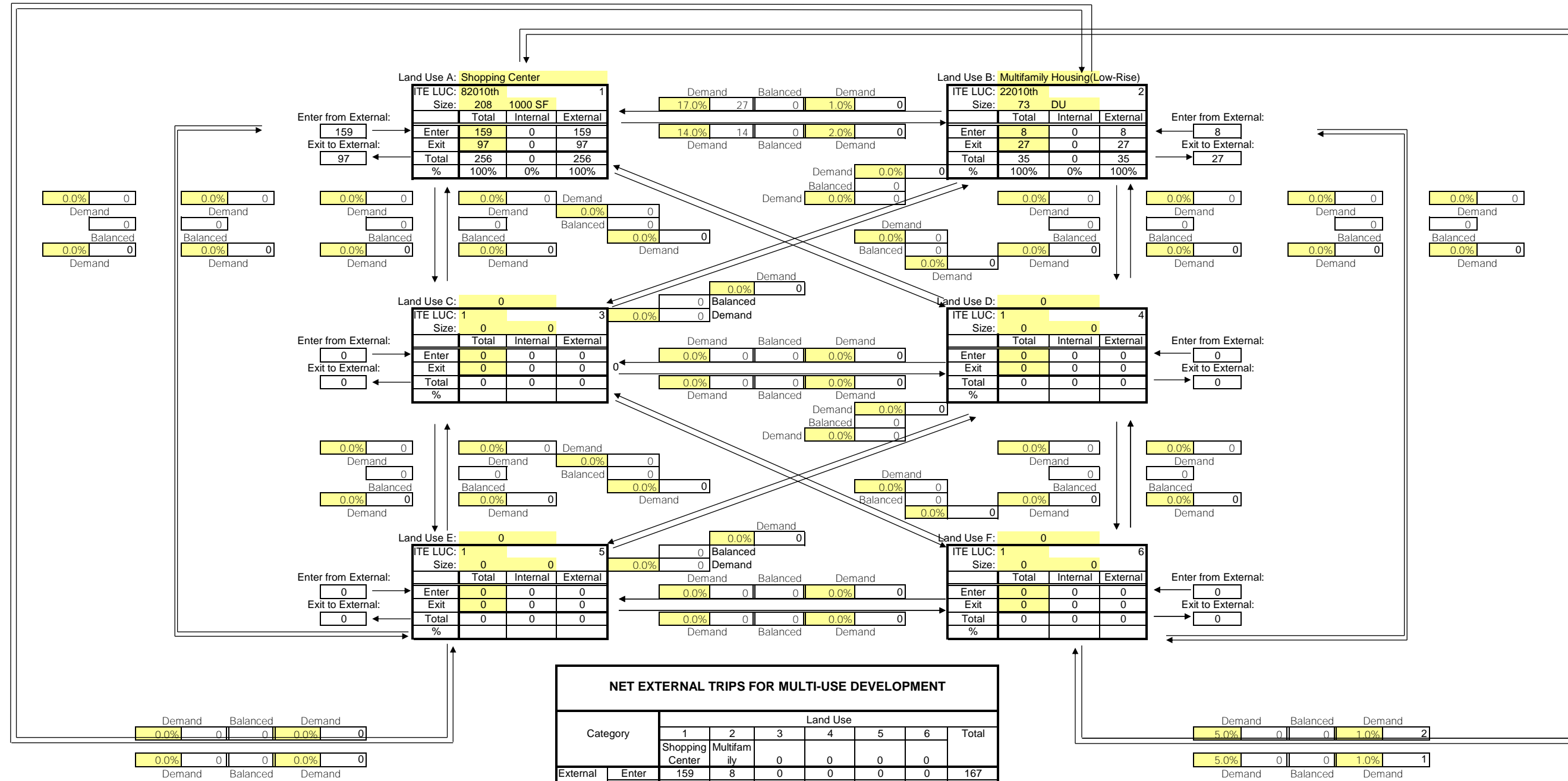
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File Name =

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EXHIBIT 1D

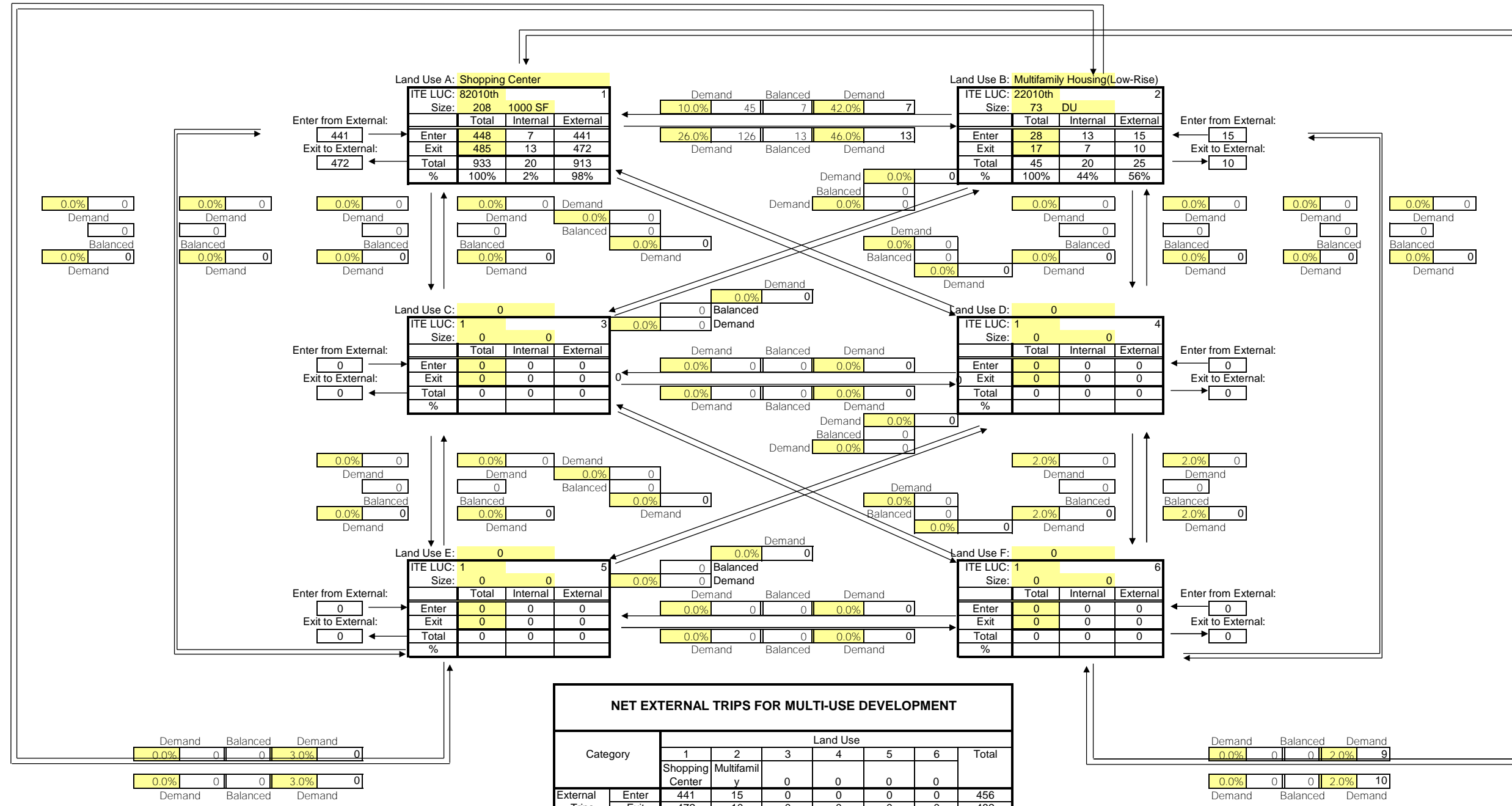
Analysis Period: PM, Midday, AM X  
 Analyst: MEP  
 Date: 4/15/2021  
 Project Number: 034038  
 Task Number:  
 Project Name: TOWN PLACE  
 Scenario: AM Peak Hour



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT							
Category	Land Use						Total
	1 Shopping Center	2 Multifam ily	3	4	5	6	
External Trips	Enter	159	8	0	0	0	167
	Exit	97	27	0	0	0	124
	Total	256	35	0	0	0	291
Internal Trips	Enter	0	0	0	0	0	0
	Exit	0	0	0	0	0	0
	Total	0	0	0	0	0	0
Single Use Trip Gen Estimate	256	35	0	0	0	0	291

### EXHIBIT 1E

**Analysis Period:** PM\_X, AM  
**Project Number:** 034038 **Task Number:**  
**Analyst:** MEP **Project Name:** TOWN PLACE  
**Date:** 4/15/2021 **Scenario:** PM Peak Hour



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT							
Category	Land Use						Total
	1	2	3	4	5	6	
External Trips	Enter	441	15	0	0	0	456
	Exit	472	10	0	0	0	482
	<b>Total</b>	<b>913</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>938</b>
Internal Trips	Enter	7	13	0	0	0	20
	Exit	13	7	0	0	0	20
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
Single Use Trip Gen Estimate	933	45	0	0	0	0	<b>978</b>



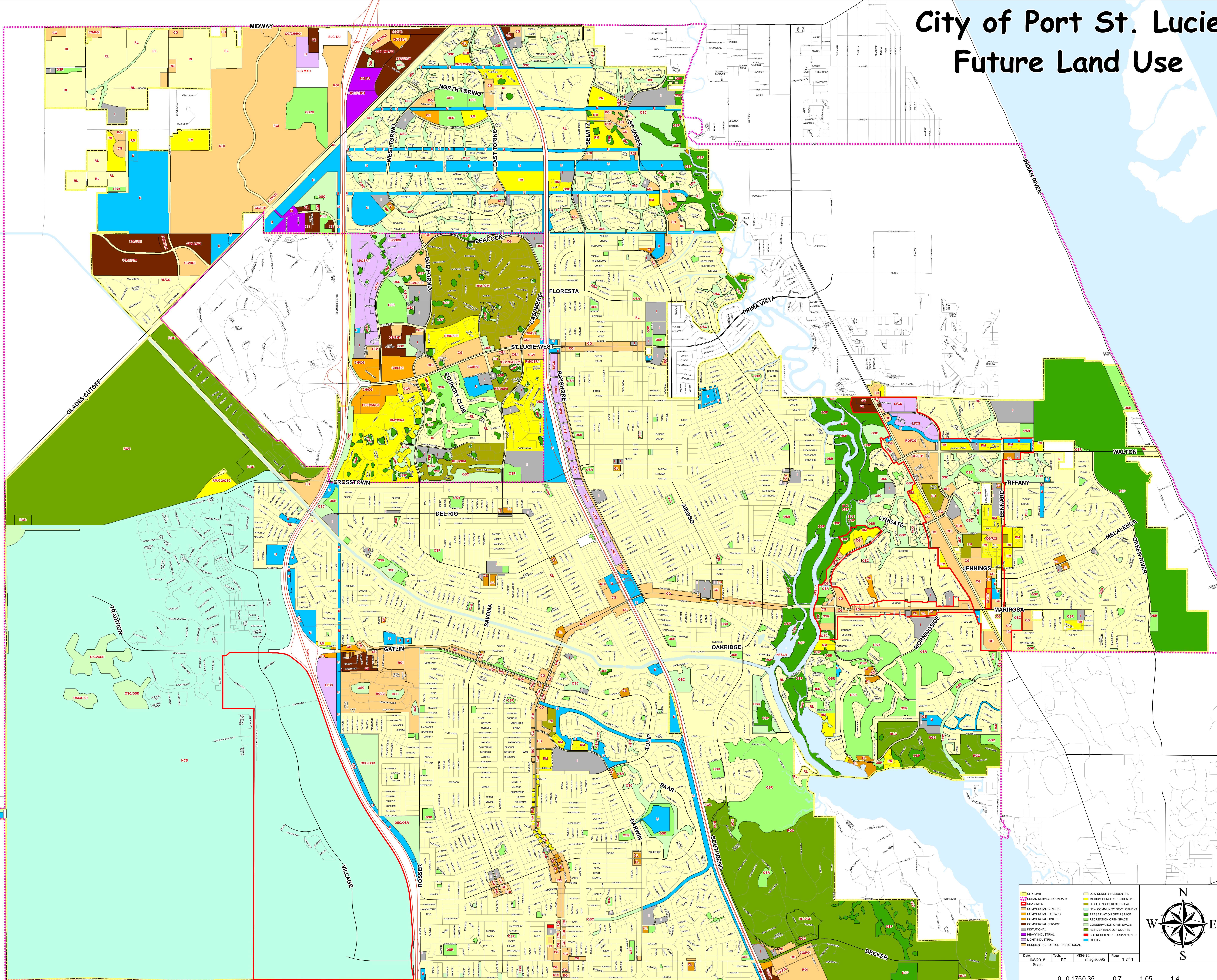
## Sec. 158.124. - General Commercial Zoning District (CG).

- (A) Purpose. The purpose of the general commercial zoning district (CG) shall be to locate and establish areas within the City which are deemed to be uniquely suited for the development and maintenance of general commercial facilities. Said areas to be primarily along established highways where a mixed pattern of commercial usage is substantially established; to designate those uses and services deemed appropriate and proper for location and development standards and provisions as are appropriate to ensure proper development and functioning of uses within the district. This district incorporates most of those uses formerly designated shopping center commercial (CSC) and resort commercial (CR).
- (B) Permitted Principal Uses and Structures. The following principal uses and structures are permitted.
- (1) Any retail, business, or personal service use (including repair of personal articles, furniture, and household appliances) conducted wholly within an enclosed building, where repair, processing, or fabrication of products is clearly incidental to and restricted to on-premises sales.
  - (2) Horticultural nursery, garden supply sales, or produce stand.
  - (3) Office for administrative, business, or professional use.
  - (4) Public facility or use.
  - (5) Restaurants with or without an alcoholic beverage license for on premises consumption of alcoholic beverages in accordance with Chapter 110.
  - (6) Retail sales of alcoholic beverages for incidental on and off premises consumption in accordance with Chapter 110.
  - (7) Park or playground or other public recreation.
  - (8) Motel, hotel, or motor lodge.
  - (9) Enclosed assembly area 3,000 square feet or less, with or without an alcoholic beverage license for on premises consumption of alcoholic beverages, in accordance with Chapter 110.
  - (10) Brewpub. provided no more than 10,000 kegs (5,000 barrels) of beer are made per year, in accordance with Chapter 110.
  - (11) One dwelling unit contained within the development which is incidental to and designed as an integral part of the principal structure.
  - (12) Kennel, enclosed.
  - (13) Medical Marijuana Dispensing Facilities as set forth in Chapter 120.
  - (14) Pharmacy.
- (C) Special Exception Uses. The following uses may be permitted only following the review and specific approval thereof by the City Council:
- (1) Enclosed assembly area over 3,000 square feet, with or without an alcoholic beverage license

- for on premises consumption of alcoholic beverages, in accordance with Chapter 110.
- (2) Public utility facility, including water pumping plant, reservoir, and electrical substation, and sewage treatment plant.
  - (3) Semi-public facility or use.
  - (4) Car wash (full or self-service).
  - (5) Kennel, enclosed with outdoor runs.
  - (6) Bars, lounges, and night clubs.
  - (7) Schools (public, private or parochial) or technical or vocational schools.
  - (8) Automobile, truck, boat and/or farm equipment sales. No storage or display of vehicles shall be permitted outside an enclosed building unless an area for such use is designated on the approved site plan and does not reduce the required number of parking spaces for the building.
  - (9) Automobile fuel sales.
  - (10) Repair and maintenance of vehicles. No storage of vehicles shall be permitted outside of an enclosed building unless an area designated for such use is on the approved site plan and does not reduce the required number of parking spaces for the building.
  - (11) Retail convenience stores with or without fuel service station.
  - (12) Hospitals, free standing emergency department, nursing, or convalescent homes.
  - (13) Any use set forth in Subsection B: "Permitted Principal Uses and Structures" that include drive-through service.
  - (14) Pain management clinic as set forth in Section 158.231.
- (D) Accessory Uses. As set forth within section 158.217.
- (E) Minimum Lot Requirements. Twenty thousand (20,000) square feet and a minimum width of one hundred (100) feet. More than one (1) permitted or special exception use may be located upon the lot as part of a totally-designed development. Properties located within conversion areas as defined by this chapter shall meet the requirements contained within the City of Port St. Lucie Land Use Conversion Manual.
- (F) **Maximum Building Coverage. Forty (40%) percent, provided that the combined area coverage of all impervious surfaces shall not exceed eighty (80%) percent.**
- (G) Maximum Building Height. Thirty-five (35) feet. (See subsection 158.174(E) for height variations allowed through PUD zoning.)
- (H) Minimum Building Size and Minimum Living Area. Commercial and office buildings shall have a minimum total gross floor area of one thousand two hundred (1,200) square feet. For automobile service stations and drive-through restaurants: nine hundred (900) square feet.
- (I) Setback Requirements and Landscaping.
- (1) Front Setback. Each lot shall have a front yard with a building setback line of twenty-five (25)



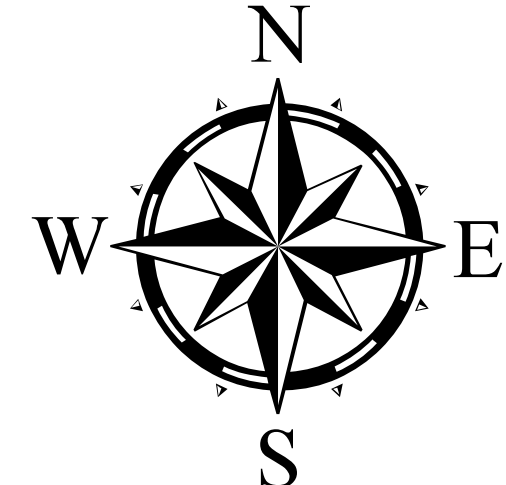
# City of Port St. Lucie Future Land Use



<ul style="list-style-type: none"> <li><span style="color: red;">■</span> CITY LIMIT</li> <li><span style="color: red;">■</span> URBAN SERVICE BOUNDARY</li> <li><span style="color: red;">■</span> CRA LIMITS</li> <li><span style="color: orange;">■</span> COMMERCIAL GENERAL</li> <li><span style="color: orange;">■</span> COMMERCIAL HIGHWAY</li> <li><span style="color: orange;">■</span> COMMERCIAL LIMITED</li> <li><span style="color: orange;">■</span> COMMERCIAL SERVICE</li> <li><span style="color: orange;">■</span> INSTITUTIONAL</li> <li><span style="color: purple;">■</span> HEAVY INDUSTRIAL</li> <li><span style="color: purple;">■</span> LIGHT INDUSTRIAL</li> <li><span style="color: purple;">■</span> RESIDENTIAL OFFICE - INSTITUTIONAL</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> LOW DENSITY RESIDENTIAL</li> <li><span style="color: lightgreen;">■</span> MEDIUM DENSITY RESIDENTIAL</li> <li><span style="color: lightgreen;">■</span> HIGH DENSITY RESIDENTIAL</li> <li><span style="color: lightgreen;">■</span> NEW COMMUNITY DEVELOPMENT</li> <li><span style="color: lightgreen;">■</span> PRESERVATION OPEN SPACE</li> <li><span style="color: lightgreen;">■</span> RECREATION OPEN SPACE</li> <li><span style="color: lightgreen;">■</span> CONSERVATION OPEN SPACE</li> <li><span style="color: lightgreen;">■</span> RESIDENTIAL GOLF COURSE</li> <li><span style="color: lightgreen;">■</span> RESIDENTIAL URBAN ZONED</li> <li><span style="color: lightgreen;">■</span> UTILITY</li> </ul>
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Date: 08/2016    Rev: RT    MISC: 095    Page: 1 of 1  
 Scale: 0.1750.35    0.7    1.05    1.4 Miles

Disclaimer: All data shown herein is given for informational purposes only. No warranties of any kind are made, implied or otherwise.





## **Land Use: 221**

### **Multifamily Housing (Mid-Rise)**

#### **Description**

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

#### **Additional Data**

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.59 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

### **Source Numbers**

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970

## Multifamily Housing (Mid-Rise) (221)

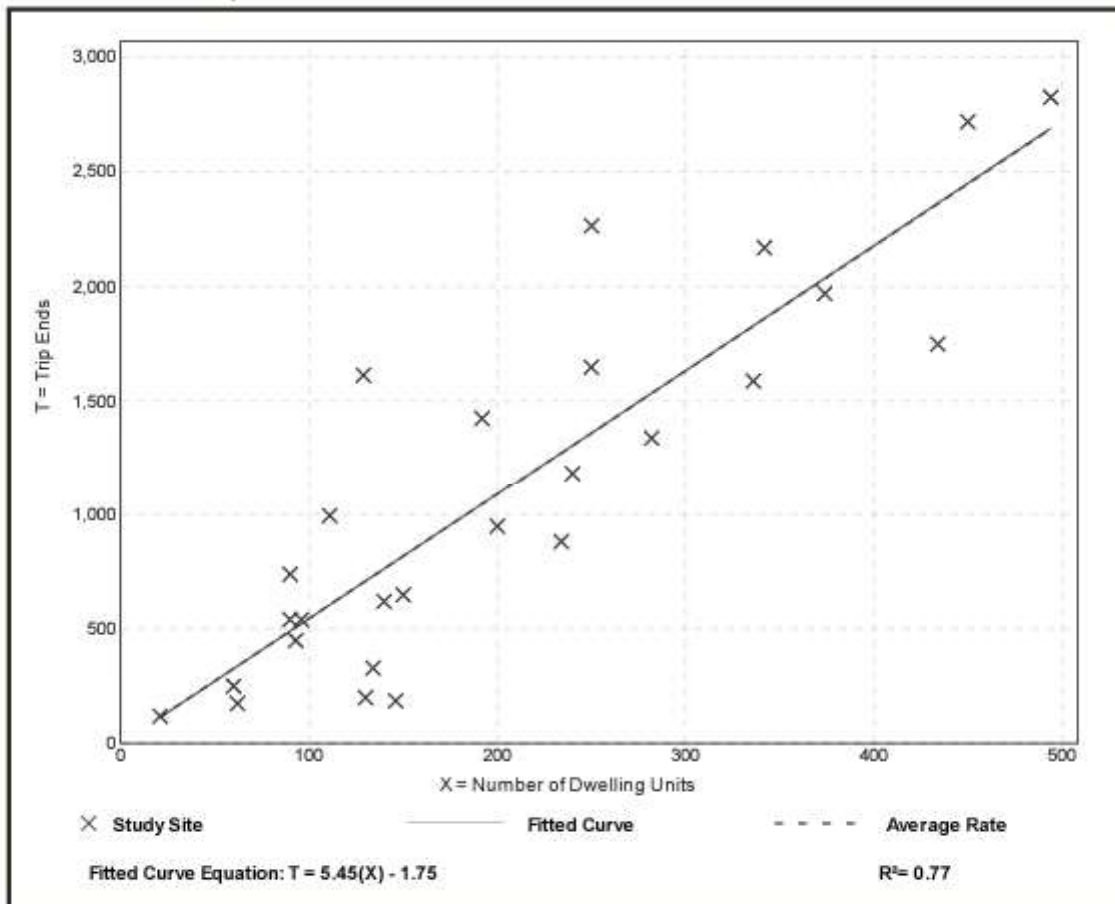
**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday**

**Setting/Location: General Urban/Suburban**  
Number of Studies: 27  
Avg. Num. of Dwelling Units: 205  
Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

### Data Plot and Equation



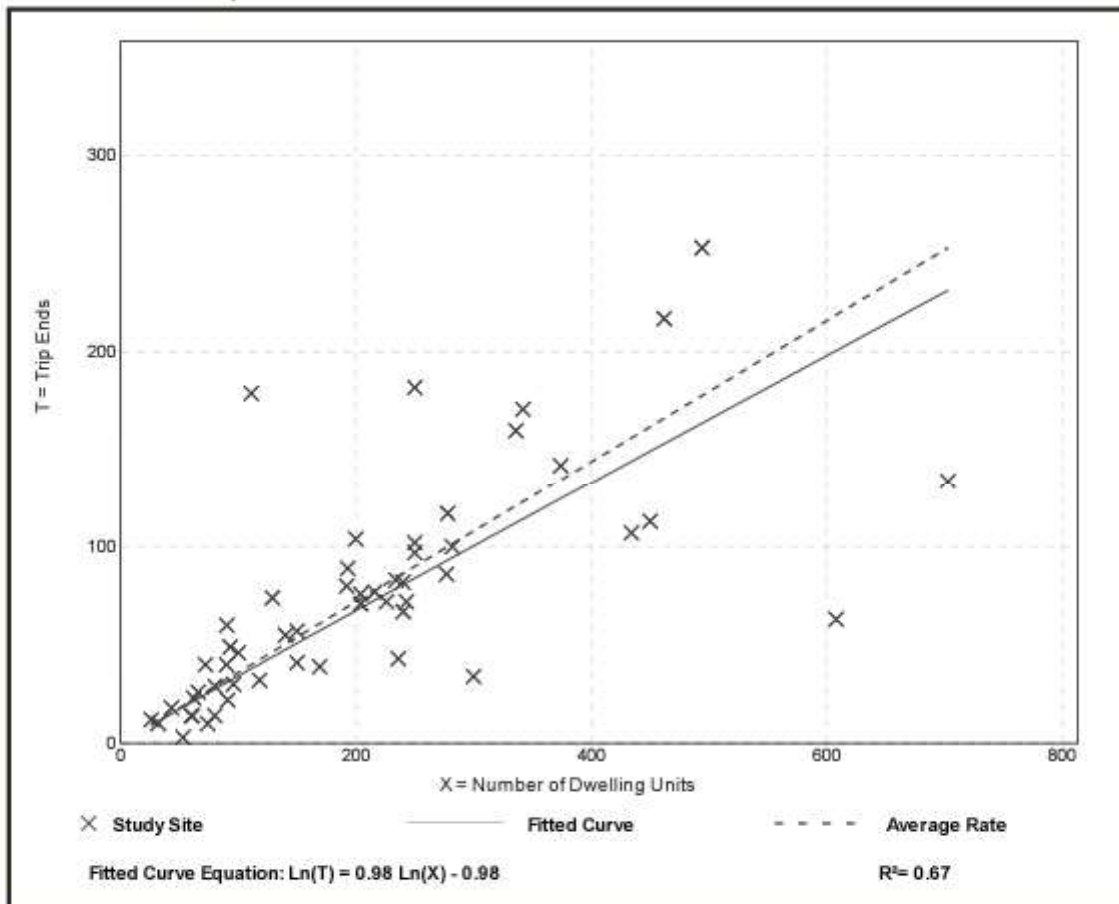
## Multifamily Housing (Mid-Rise) (221)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 53  
 Avg. Num. of Dwelling Units: 207  
 Directional Distribution: 26% entering, 74% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

### Data Plot and Equation



## Multifamily Housing (Mid-Rise) (221)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

**Setting/Location: General Urban/Suburban**

Number of Studies: 60

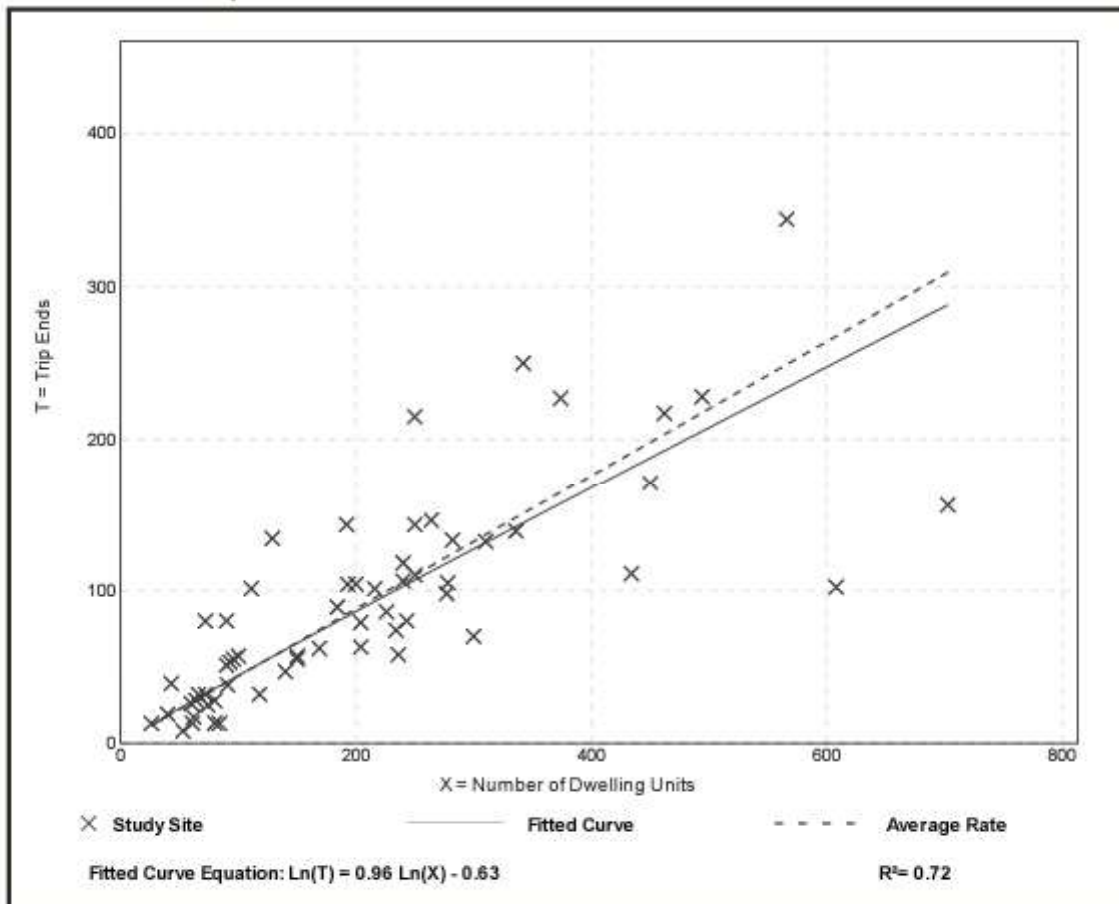
Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

### Data Plot and Equation





# Land Use: 820

## Shopping Center

### Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

### Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

**Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.**

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

### Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

## Shopping Center (820)

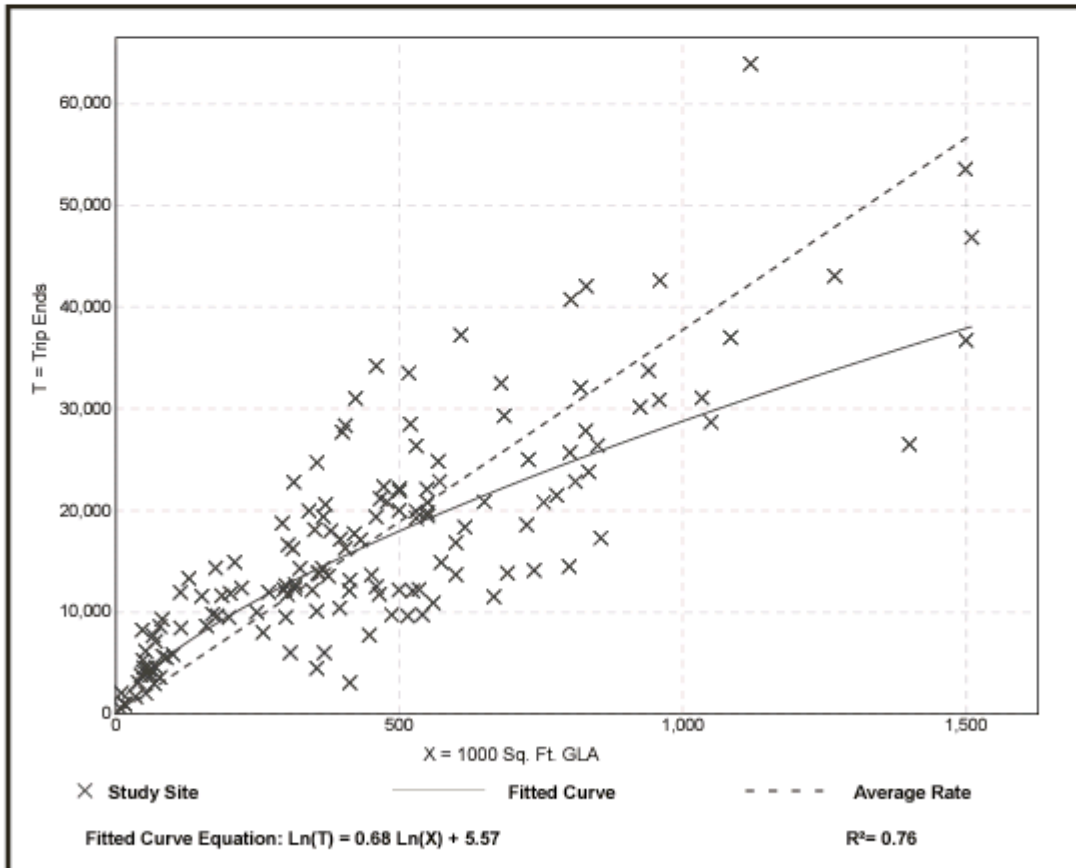
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 147  
1000 Sq. Ft. GLA: 453  
Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

### Data Plot and Equation



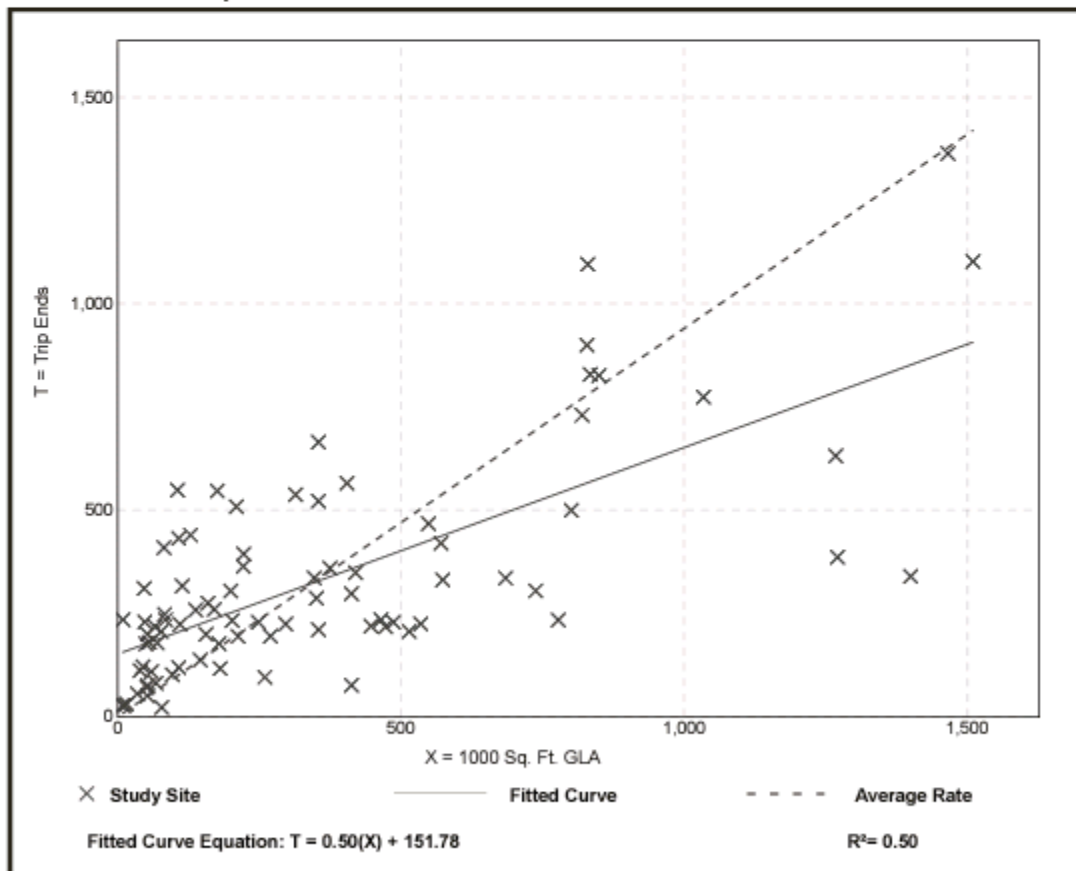
## Shopping Center (820)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GLA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 84  
 1000 Sq. Ft. GLA: 351  
 Directional Distribution: 62% entering, 38% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

### Data Plot and Equation



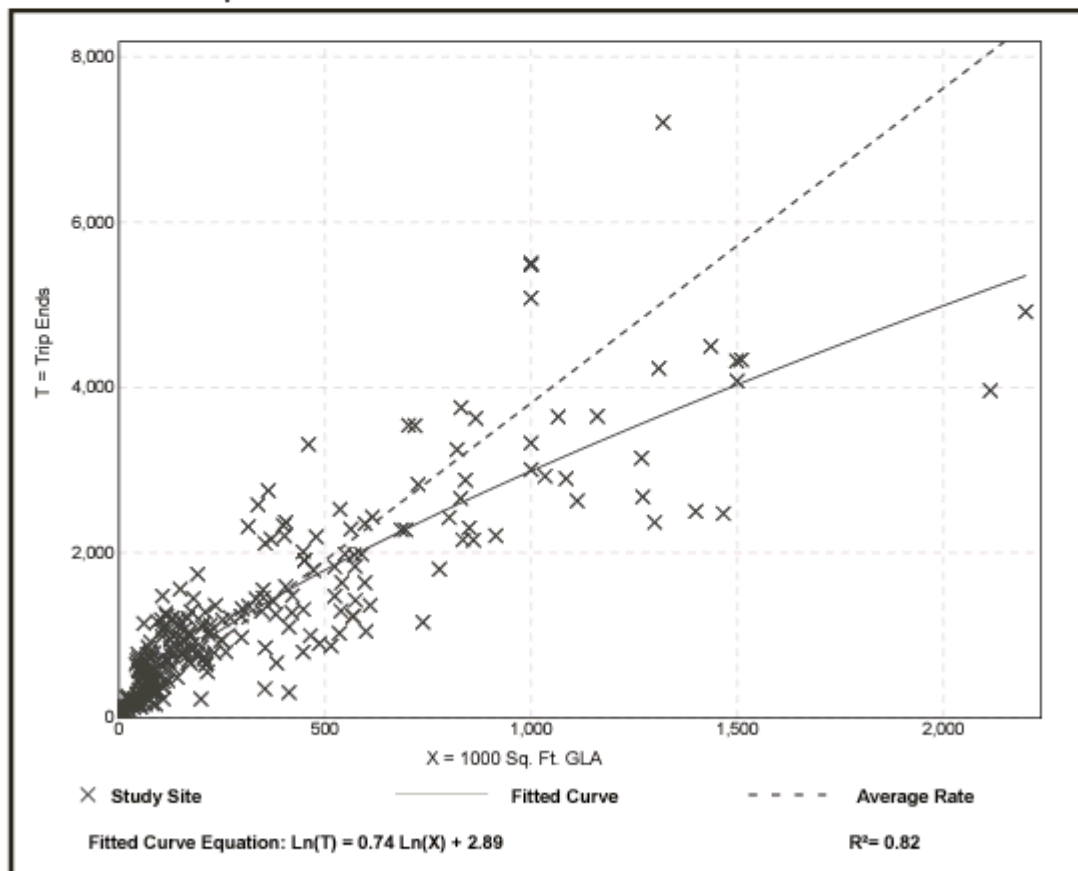
## Shopping Center (820)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GLA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 261  
 1000 Sq. Ft. GLA: 327  
 Directional Distribution: 48% entering, 52% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

### Data Plot and Equation



**Table 6.1 Unconstrained Internal Person Trip Capture Rates for Trip Origins within a Mixed-Use Development**

		WEEKDAY	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Retail	28%	20%
	To Restaurant	63%	4%
	To Cinema/Entertainment	0%	0%
	To Residential	1%	2%
	To Hotel	0%	0%
From RETAIL	To Office	29%	2%
	To Restaurant	13%	29%
	To Cinema/Entertainment	0%	4%
	To Residential	14%	26%
	To Hotel	0%	5%
From RESTAURANT	To Office	31%	3%
	To Retail	14%	41%
	To Cinema/Entertainment	0%	8%
	To Residential	4%	18%
	To Hotel	3%	7%
From CINEMA/ENTERTAINMENT	To Office	0%	2%
	To Retail	0%	21%
	To Restaurant	0%	31%
	To Residential	0%	8%
	To Hotel	0%	2%
From RESIDENTIAL	To Office	2%	4%
	To Retail	1%	42%
	To Restaurant	20%	21%
	To Cinema/Entertainment	0%	0%
	To Hotel	0%	3%
From HOTEL	To Office	75%	0%
	To Retail	14%	16%
	To Restaurant	9%	68%
	To Cinema/Entertainment	0%	0%
	To Residential	0%	2%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 99 and 100, 2011.

**Table 6.2 Unconstrained Internal Person Trip Capture Rates  
for Trip Destinations within a Mixed-Use Development**

		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Retail	4%	31%
	From Restaurant	14%	30%
	From Cinema/Entertainment	0%	6%
	From Residential	3%	57%
	From Hotel	3%	0%
To RETAIL	From Office	32%	8%
	From Restaurant	8%	50%
	From Cinema/Entertainment	0%	4%
	From Residential	17%	10%
	From Hotel	4%	2%
To RESTAURANT	From Office	23%	2%
	From Retail	50%	29%
	From Cinema/Entertainment	0%	3%
	From Residential	20%	14%
	From Hotel	6%	5%
To CINEMA/ENTERTAINMENT	From Office	0%	1%
	From Retail	0%	26%
	From Restaurant	0%	32%
	From Residential	0%	0%
To RESIDENTIAL	From Office	0%	4%
	From Retail	2%	46%
	From Restaurant	5%	16%
	From Cinema/Entertainment	0%	4%
	From Hotel	0%	0%
To HOTEL	From Office	0%	0%
	From Retail	0%	17%
	From Restaurant	4%	71%
	From Cinema/Entertainment	0%	1%
	From Residential	0%	12%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 101 and 102, 2011.

### Property Identification

Site Address: 998 SE Town Place BLVD  
Sec/Town/Range: 26/36S/40E  
Parcel ID: 3426-341-0001-000-2  
Jurisdiction: Port Saint Lucie

Use Type: 1000  
Account #: 180710  
Map ID: 34/26S  
Zoning: RM-5 PSL

### Ownership

Rich and Rubin Properties LLC  
2552 Peters RD Ste B  
Fort Pierce, FL 34945

### Legal Description

26 36 40 THAT PART OF S/1/2 OF SEC LYG E OF US1 AND LYG S OF SAVANNA CLUB BLVD AND LYG SELY OF BLK 3 LOT 15 AND WLY OF BLK 4 LOT 11 OF ST LUCIE GARDENS (PB 1-35) (18.512 AC - 806,383 SF)

### Current Values

Just/Market Value: \$2,434,000  
Assessed Value: \$2,411,019  
Exemptions: \$0  
Taxable Value: \$2,411,019

**Property taxes are subject to change upon change of ownership.**

- Past taxes are not a reliable projection of future taxes.
- The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.

Taxes for this parcel: [SLC Tax Collector's Office](#)  
Download TRIM for this parcel: [Download PDF](#)



### Total Areas

Finished/Under Air (SF): 0  
Gross Sketched Area (SF): 0  
Land Size (acres): 18.51  
Land Size (SF): 806,383

### Building Design Wind Speed

Occupancy Category	I	II	III & IV
Speed	140	160	170

Sources/links: