



**O'ROURKE**  
ENGINEERING & PLANNING

January 22, 2021

Mr. Alejandro Zurita  
Land America, LLC  
Pugliese Corporate Center  
101 Pugliese's Way, Suite 200  
Delray Beach, Florida 33444

**Re: River Place LUPA**

Dear Mr. Zurita:

O'Rourke Engineering & Planning has completed the analysis of the proposed 15.4 acre land use plan amendment. The land use amendment affects a parcel east of St James Drive and south of Lazy River Parkway in St Lucie County.

The steps in the analysis and the ensuing results are presented herein.

## **INTRODUCTION**

The proposed land use amendment involves 15.4 acres of land located east of St James Drive and south of Lazy River Parkway in St Lucie County. The total acreage of the property, "Parcel N", is 19.75. However, a portion of 4.35 acres currently exists under a Low-Density Residential land use. Therefore, only the remaining 15.4 acres which carries a General Commercial land use is subject to this land use plan amendment. **Attachment A** shows the project's location.

The proposed amendment is to change the land use on 15.4 acres with an existing land use of General Commercial to Low-Density Residential allowing 5 units per acre or 77 dwelling units.

Under the existing General Commercial land use, many different uses could be built on the site. General commercial allows office and medical office as well as retail. The land use allows a maximum coverage of 40% and a height of 35'. The retail and medical office would be the higher trip generators. For retail only one floor is typical and medical office could be built on multiple floors.

## TRIP GENERATION

**Attachment B** includes the trip generation for 268,330 square feet of retail and 804,988 square feet of medical office. As shown the medical office would have a higher trip generation. Therefore, medical office is used for the worst- case scenario for the Existing Future Land Use. The proposed future land use of low density residential allowing 5 dwelling units per acres will result in 77 single family dwelling units.

**Attachment C** summarizes the net change in traffic for the existing and proposed future land use. As shown, there is a net reduction of 26,932 daily trips, 2,429 AM Peak hour trips and 3,011 PM peak hour trips.

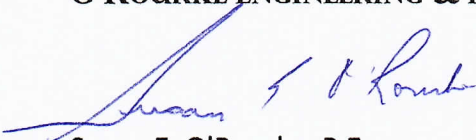
Since the proposed land use plan amendment from General Commercial to Low Density Residential results in a net decrease in traffic, additional analysis is not required.

## CONCLUSION

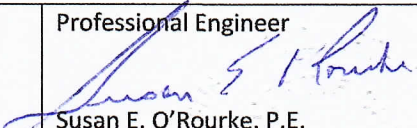
As shown, the project will have a decrease in traffic on the roadway network. Therefore, the proposed LUPA will cause no changes to the circulation element of the Port St. Lucie Comprehensive Plan.

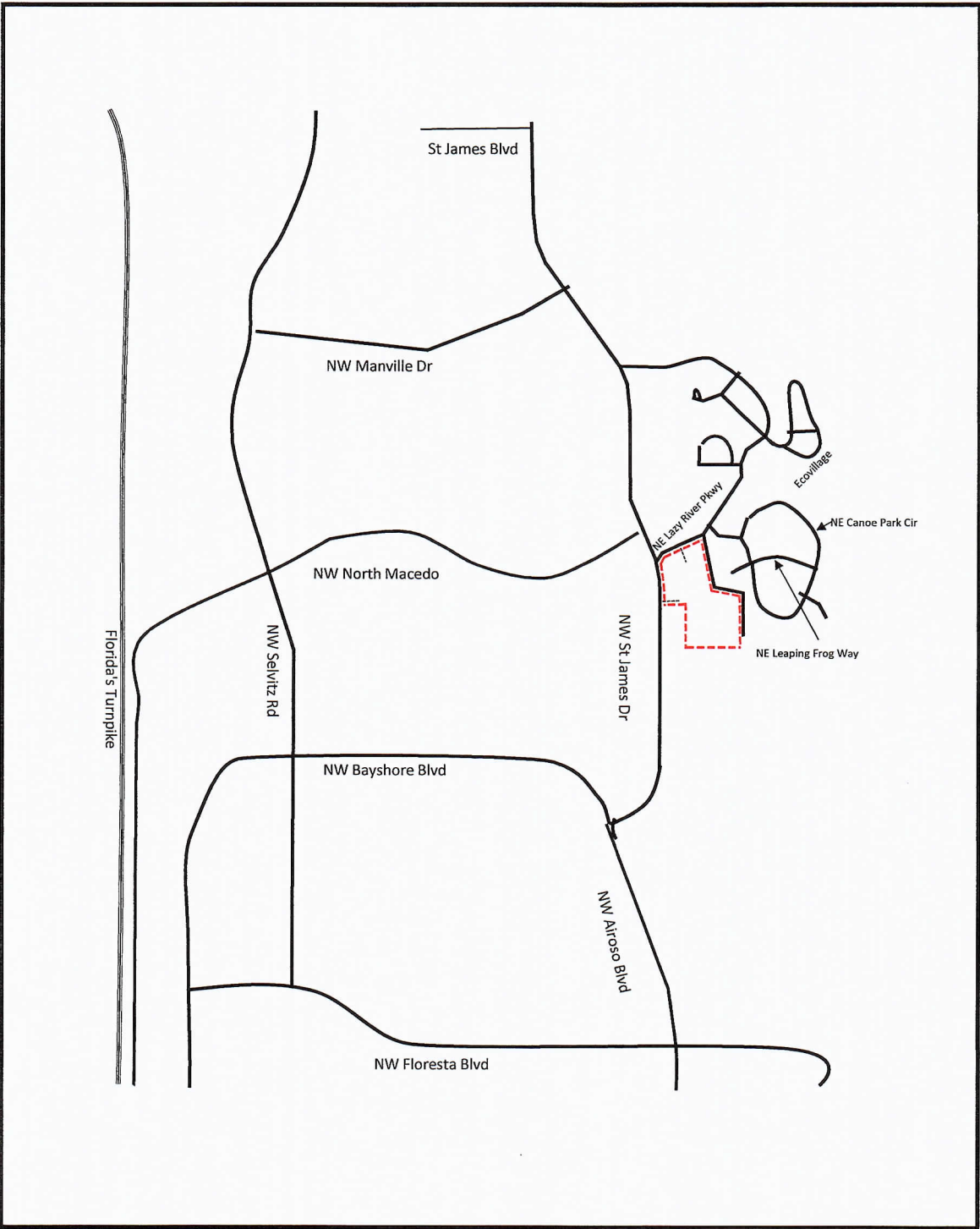
It has been a pleasure working with you. If you have any questions or comments please contact our office.

Respectfully submitted,  
**O'ROURKE ENGINEERING & PLANNING**




Susan E. O'Rourke, P.E.  
Registered Civil Engineer – Traffic

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer  Susan E. O'Rourke, P.E. Date signed and sealed: 01/22/21 License #: 42684
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 NTS 22 SE Seminole Street  
 Stuart, FL, 34994  
 Job #: SR20112.0      Date: 1-22-21

**Legend**  
 = Project Location

Attachment A  
 Project Location  
 River Place

**ATTACHMENT B**  
**GENERAL COMMERCIAL**  
**LAND USE OPTIONS**  
**Trip Generation**



Attachment B.1 Trip Generation (Existing Future Land Use - Retail Shopping Center- One Floor)

Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	820	268,330	Sf	$\text{Ln}(T) = 0.68\text{Ln}(X) + 5.57$	50%	50%	5,882	5,881	11,763	1,741	1,741	3,482	29.6%	4,141	8,281
<b>TOTALS</b>							5,882	5,881	11,763	1,741	1,741	3,482	29.6%	4,141	8,281

Source: ITE 10th Edition Trip Generation Rates

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	820	268,330	Sf	$T = 0.50(X) + 151.78$	62%	38%	177	109	286	43	42	85	29.6%	134	201
<b>TOTALS</b>							177	109	286	43	42	85	29.7%	134	201

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	820	268,330	Sf	$\text{Ln}(T) = 0.74\text{Ln}(X) + 2.89$	48%	52%	541	587	1,128	166	168	334	29.6%	375	794
<b>TOTALS</b>							541	587	1,128	166	168	334	29.6%	375	794

Source: ITE 10th Edition Trip Generation Rates

Pass-by Calculation

Description	ITE Code	Intensity	Equation	Pass-by % <sup>(b)</sup>
General Commercial Pass-by	820	268,330 SF	$T = 94.49 + 11.61 \text{Ln}(A)$	29.6

Attachment B.2 Trip Generation Existing Future Land Use - Medical Office - 3 Floors

Daily

Land Use	ITE Cod	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips			
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total	
Medical Office	720	804,988	Sft	T = 38.42(X) - 87.62	50%	50%	15,420	15,420	30,840	1,542	1,542	3,084	10.0%	13,878	13,878	27,756
<b>TOTALS</b>							15,420	15,420	30,840	1,542	1,542	3,084	10.0%	13,878	13,878	27,756

Source: ITE 10th Edition Trip Generation Rates

AM Peak Hour

Land Use	ITE Cod	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips			
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total	
Medical Office	720	804,988	Sft	T = 3.43(X) + 2.57	62%	38%	1,714	1,050	2,764	138	138	276	10.0%	1,576	912	2,488
<b>TOTALS</b>							1,714	1,050	2,764	138	138	276	10.0%	1,576	912	2,488

Source: ITE 10th Edition Trip Generation Rates

PM Peak Hour

Land Use	ITE Cod	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips			
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total	
Medical Office	720	804,988	Sft	T = 4.27(X) - 4.63	39%	61%	1,339	2,094	3,433	171	172	343	10.0%	1,168	1,922	3,090
<b>TOTALS</b>							1,339	2,094	3,433	171	172	343	10.0%	1,168	1,922	3,090

Source: ITE 10th Edition Trip Generation Rates

Attachment C - Net Impact (Existing and Proposed Future Land Uses)

Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Single Family Detached Housing	210	77	DU	$\text{Ln}(T) = 0.92\text{Ln}(X) + 2.71$	50%	50%	409	409	818	-	-	-	409	409	818
Medical Office	720	804,988	Sf	$T = 38.42(X) - 87.62$	50%	50%	15,420	15,420	30,840	1,542	1,542	3,084	13,878	13,878	27,756
<b>NET</b>							<b>(15,011)</b>	<b>(15,011)</b>	<b>(30,022)</b>	<b>(1,542)</b>	<b>(1,542)</b>	<b>(3,084)</b>	<b>(13,469)</b>	<b>(13,469)</b>	<b>(26,938)</b>

Source: ITE 10th Edition Trip Generation Rates

AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Single Family Detached Housing	210	77	DU	$(T) = 0.71(X) + 4.80$	25%	75%	15	44	59	-	-	-	15	44	59
Medical Office	720	804,988	Sf	$T = 3.43(X) + 2.57$	62%	38%	1,714	1,050	2,764	138	138	276	1,576	912	2,488
<b>NET</b>							<b>(1,699)</b>	<b>(1,006)</b>	<b>(2,705)</b>	<b>(138)</b>	<b>(138)</b>	<b>(276)</b>	<b>(1,561)</b>	<b>(868)</b>	<b>(2,429)</b>

Source: ITE 10th Edition Trip Generation Rates

PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Pass-by Trips			Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Single Family Detached Housing	210	77	DU	$\text{Ln}(T) = 0.96\text{Ln}(X) + 0.20$	63%	37%	50	29	79	-	-	-	50	29	79
Medical Office	720	804,988	Sf	$T = 4.27(X) - 4.63$	39%	61%	1,339	2,094	3,433	171	172	343	1,168	1,922	3,090
<b>NET</b>							<b>(1,289)</b>	<b>(2,065)</b>	<b>(3,354)</b>	<b>(171)</b>	<b>(172)</b>	<b>(343)</b>	<b>(1,118)</b>	<b>(1,893)</b>	<b>(3,011)</b>

Source: ITE 10th Edition Trip Generation Rates