

SPEATH ENGINEERING

Civil Engineers

September 19, 2025

Nicholas DeFilippo, Planner
Lee County Department of Community Development
1500 Monroe St
Fort Myers, FL 33901

RE: Port Pheonix Water Way Marina – DCI2023-00054 – Major PD

Dear Mr. DeFilippo,

Please find below responses and commentary to the provided comments from staff in your September 16th, 2025 email regarding the Commercial Planned Development Application for Port Pheonix Water Way Marina (DCI2023-00054).

Documents Included in this Submittal:

- This response letter
- Traffic Impact Statement

TIS

1. *Please provide supporting documentation in regards to where and when the existing data provided was taken to determine if the peak season needs to be applied.*

Please refer to the second paragraph in the Level of Service Analysis which includes a description on the existing traffic and consideration of a peak season factor.

2. *Please provide details showing the existing collected trips and a detail including the proposed project trips.*

Please see Figure 1 and Figure 2 included in the Level of Service Analysis section which outlines the existing collected trips as well as the proposed project trips. A description of these figures has been included as well in the Level of Service Analysis Section.

Please do not hesitate to contact me at 239-365-1005 or at mspeath@speathengineering.com if you require any further information or if there are any questions related to this submittal.

Sincerely,



Matthew S. Speath, P.E.

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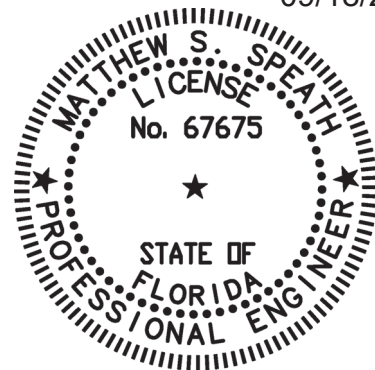
Traffic Impact Statement

Prepared For:

**Port Phoenix
(Waterway Marina)**

**1687 Inlet Drive
Fort Myers, FL**

09/18/2025



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MATTHEW S. SPEATH, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

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Issued: September 18th, 2025

SPEATH
ENGINEERING

Project #F22-56

INTRODUCTION

Speath Engineering has conducted a traffic impact assessment of a proposed development to fulfill requirements of the Lee County Department of Community Development and the Lee County Land Development Code. This report has been completed in accordance with current guidelines as established in the Lee County Traffic Impact Assessment Guidelines and provided by the Division of Development Review.

The following analysis has been prepared for a Development Order submittal for a Commercial development of a marina which consists of 44 wet slips and a 49,000 square foot boat barn with 239 dry slips, a 15,260 square foot member and maintenance building, a 3,200 square foot ships store, a 2,150 SF outdoor COP, and a 10,000 square foot restaurant (7,500 SF building area and 2,500 SF of outdoor seating space). The site has a total land area of 252,658 SF. This analysis reviews the potential impact of the new development on the surrounding roadways.

PROPOSED/EXISTING DEVELOPMENT

The developer proposes to improve the property located at 1687 Inlet Drive, Fort Myers, FL 33903. The improvements to the commercial parcel include site development from two vacant parcels and the construction of a marina, a maintenance and member building, a ships store, and a 10,000 SF restaurant (7,500 SF building area and 2,500 SF of outdoor seating space). The proposed marina consists of 283 total berths and includes a dry storage boat barn. The maintenance and member building includes a 4,525 SF member lounge, 700 SF of office space, 4,635 SF of storage space, and 5,400 SF for boat and repair services. A 3,200 SF area for COP is included as part of the members lounge and is fully contained within the total 4,525 SF of total private member lounge area. The proposed ships store building contains 1,400 SF of office space and 1,800 SF of retail space. A 2,150 SF area of outdoor COP is also proposed adjacent to the ships store. A single access point is located on the north side of the subject property onto Inlet Drive, classified as local road maintained by the County.

TRIP GENERATION

Trip generation for the proposed development was determined using the Institute of Transportation Engineers Trip Generation Manual, 11th Edition. We have utilized the following Land Use Codes (LUC) for trip generation analysis:

- LUC 420 “Marina” was used for analysis of the boat barn, slips, and all marina ancillary uses. The ancillary uses of the marina cover 9,590 SF of the maintenance and member building and is comprised of:
 - 4,525 SF private member lounge, which includes 3,200 SF of interior COP area that is fully contained within the total 4,525 SF of total private member lounge area.
 - 700 SF office space
 - 4,365 SF storage space
- LUC 712 “Small Office Building” was used for analysis of the 1,400 SF office portion of the ships store building.
- LUC 851 “Convenience Store” was used for analysis of the 1,800 SF retail portion of the ship store building.
- LUC 932 “High-Turnover Restaurant” for analysis of the 10,000 SF restaurant, which consists of a 7,500 SF restaurant building and 2,500 SF of outdoor seating space. The 2,150 SF of outdoor COP has also been included in this land use as directed by staff.
- LUC 943 “Automobile Parts and Service Center” was used for analysis of the 5,400 SF boat and repair services portion of the member and maintenance building, which is the only portion of the building that will be accessible to the public. While the ITE does not have a land use for boat repair and services, this ITE land use was determined to most closely resemble the proposed use.

The following tables summarize the anticipated increase in number of AM and PM peak hour trips and total daily trip generation of the proposed buildings.

ITE Trip Generation (11th Ed)**Table 1A: Trip Rates**

Land Use	Weekday A.M. Peak Hour of adjacent street traffic	Weekday P.M. Peak Hour of adjacent street traffic	Total Daily
Marina (420)	Trips = 0.07 per berth 33% entering, 67% exiting	Trips = 0.21 per berth 60% entering, 40% exiting	Trips = 2.41 per berth
Small Office Building (712)	Trips = 1.67 per 1,000 square feet 82% entering, 18% exiting	Trips = 2.16 per 1,000 square feet 34% entering, 66% exiting	Trips = 14.39 per 1,000 sf
Convenience Store (851)	Trips = 62.54 per 1,000 square feet 50% entering, 50% exiting	Trips = 49.11 per 1,000 square feet 51% entering, 49% exiting	Trips = 762.28 per 1,000 sf
Restaurant (932)	Trips = 9.57 per 1,000 square feet 55% entering, 45% exiting	Trips = 9.05 per 1,000 square feet 61% entering, 39% exiting	Trips = 107.20 per 1,000 sf
Automobile Parts & Service Center (943)	Trips = 1.91 per 1,000 square feet 72% entering, 28% exiting	Trips = 2.06 per 1,000 square feet 39% entering, 61% exiting	Trips = 16.60 per 1,000 sf

Table 1B: Trip Generation

	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Total Daily (2 way)
	In	Out	Total	In	Out	Total	
Marina (420) 283 Berths	7	13	20	36	24	60	683
Small Office Building (712) 1,400 SF	2	1	3	1	3	4	21
Convenience Store (851) 1,800 SF	57	56	113	44	45	89	1,373
Restaurant (932) 12,150 SF	64	53	117	67	43	110	1,303
Automobile Parts & Service Center (943) 5,400 SF	8	3	11	5	7	12	90
Total	138	126	264	153	122	275	3,470

TRIP DISTRIBUTION

Based on the project's location, directions to shopping centers, residential locations, regional business locations, probable client service locations, and other existing uses in the area, a distribution of site traffic to the surrounding roadway system was formulated. This analysis was on the anticipated routes that drivers would utilize when approaching or leaving the site.

All project traffic is expected to utilize Inlet Drive to access the project site and Orange Grove Blvd, which is the nearest major collector road and only road that provides access to and from other areas within the County. The trip distribution has been anticipated as follows:

- 100% on Inlet Drive towards Orange Grove Blvd.
- 60% on Orange Grove Blvd, north of Inlet Drive, towards Hancock Bridge Pkwy.
- 40% on Orange Grove Blvd, south of Inlet Drive, towards Birkdale Avenue.

Based on the trip distribution above, project trips are distributed to the roadway as shown below:

Table 2: Trip Distribution

Direction	Distribution	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Inlet Drive	100%	138	126	264	153	122	275
Orange Grove Blvd N/o Inlet Drive	60%	83	76	158	92	73	165
Orange Grove Blvd S/o Inlet Driver	40%	55	50	106	61	49	110

ANNUAL GROWTH RATE

Historical Average Annual Daily Traffic (AADT) data was obtained from FDOT to produce a traffic growth rate over time to establish future roadway volumes. Data was obtained from FDOT Traffic Monitoring Site 1269, located on Orange Grove Blvd, between Tropic Terrace and Java Way, due to its proximity to the site and it being the only available count station on Orange Grove Blvd.

Table 3: Growth Rate

Roadway	Segment	Station	2015 AADT	2022 AADT	Years	Growth Rate
Orange Grove Blvd	Btwn. Tropic Terrace and Java Way	FDOT Site 1269	9,200	10,500	7	1.91%

LEVEL OF SERVICE ANALYSIS

A roadway link level of service analysis was conducted for Orange Grove Blvd utilizing data from the 2024 Lee County Level of Service and Concurrency Report. This data was used to determine the current peak hour volume and level of service performance standard. The growth rate determined using FDOT data was applied to the current 100th highest peak hour volume to determine the 100th highest peak hour volume under the future 2027 condition. The peak hour volumes were compared with the service volumes contained in the Lee County Service Volume Reports, provided in Table 4, to determine the operating LOS of the roadways.

Existing traffic for Orange Grove Blvd was determined based on the overall 2024 concurrency data. The existing traffic along Inlet Drive was determined based on the ITE trip Generation (further explained below) which is based on average trip data collected from traffic studies and surveys. The 2024 Lee County Concurrency data is based on raw traffic counts at different periods throughout the year obtained from portable traffic monitoring sites. These counts are adjusted with seasonal and peak factors to provide traffic counts included in the Lee County Traffic Count Report as well as in the 2024 Concurrency Report. Since the data utilized in the report already has peak season factors applied to the Concurrency Data, an additional peak season factor was not applied to traffic surrounding the development.

Table 4: Generalized Peak Hour Directional Service Volumes

Roadway Type	Functional Classification	LOS A Volume	LOS B Volume	LOS C Volume	LOS D Volume	LOS E Volume
2LN	Collector	*	*	550	860	860

Table 5: 100th Highest Hour LOS Analysis – Existing & Future without Project

Direction	Roadway Type	Performance Standard		2023 100 th Highest Peak Hour	2023 LOS	2027 Future Forecast	2027 LOS
		LOS	Capacity				
North	2LN	E	860	539	C	581	D
South	2LN	E	860	539	C	581	D

Table 6: 100th Highest Hour LOS Analysis – Future with Project

Direction	Roadway Type	Performance Standard		2027 100 th Highest Peak Hour	Project Traffic (Directional)		2027 Future Forecast + Project		LOS
		LOS	Capacity		AM	PM	AM	PM	
North	2LN	E	860	581	83	92	664	673	D
South	2LN	E	860	581	55	61	636	642	D

An LOS analysis was also performed for the intersection of Orange Grove Blvd and Inlet Drive, which is an unsignalized intersection. Lee County does not provide traffic data for Inlet Drive as it is classified as a local road and only provides access to the project location and the residences in the immediate vicinity of Inlet Drive. The existing volume on Inlet Drive was therefore estimated by the existing number of residences that utilize Inlet Drive for access (150 residences) and assigning the number of trips based on the ITE Trip Generation for Single-Family Detached Housing (LUC 210). A summary of the existing trips can be found in tables 7 & 8 below.

Table 7: Existing Land Use ITE

Land Use	Weekday A.M. Peak Hour of adjacent street traffic	Weekday P.M. Peak Hour of adjacent street traffic	Total Daily
Single-Family Detached Housing (210)	0.70 Trips per dwelling unit; 26% entering, 74% exiting	0.94 Trips per dwelling unit; 63% entering, 37% exiting	9.43 trips per dwelling unit

Table 8: Existing Trip Generation

Land Use Code	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Total Daily
	In	Out	Total	In	Out	Total	
Single-Family Housing (210) 150 Residences	27	78	105	89	52	141	1,415

Similarly, future volume on Inlet Drive without the project was estimated by considering all properties that utilize Inlet Drive for access (excluding the subject property) as fully developed with single-family residences (153 total residential properties). The estimated existing and future volumes were distributed following the same distribution described above for the project trips. The intersection LOS analysis was performed in Synchro utilizing the HCM method for unsignalized intersections. Table 9 below summarizes the results of this analysis showing the LOS of the intersection during the AM and PM peak hours under the existing condition and 2028 future condition both with and without the project. The complete Synchro reports are attached at the end of this report.

**Figure 1: Existing Condition Vehicle Trips**



Figure 2: Future (2028) + Proposed Vehicle Trips

Figure 1 displays the overall existing AM and PM trips along the intersection of Orange Grove Blvd and Inlet Dr. In order to determine existing turning movements at the intersection, the 2024 concurrency data for Orange Grove Blvd from Club Entr. to Hancock B. Pkwy was utilized as the total volume of the North approach for each direction. The portion of this volume that utilizes Inlet Dr was derived from the ITE trip generation land use code 210 for Single-Family Housing because there is no current traffic data available for Inlet Dr.

Figure 2 includes the existing traffic explained in the figure 1 description above plus the proposed trip generation of our development. Trips in and out of the subject property reflect the total in/out vehicle trips during the AM/PM peak hour. Figure 2 displays trips entering Inlet Dr. and the subject property. Some of the trips traveling along Inlet Dr are distributed to residences between the intersection and the subject property.

Table 9: Orange Grove Blvd & Inlet Dr – Intersection LOS Summary

	AM Peak Hour	PM Peak Hour
Existing LOS	A	C
2028 Future w/o Project LOS	A	D
2028 Future with Project LOS	E	E

The intersection LOS is expected to be the same for the existing and future conditions without the project during the AM peak period and decrease from LOS C to LOS D during the PM peak period. Under future conditions with the project the LOS is expected to decrease to LOS E for both the AM and PM peak periods. While the LOS for this intersection will decrease with the project, the intersection is still expected to operate within its LOS performance standard of E under this condition.

WARRANT ANALYSIS

A warrant analysis was conducted to determine whether exclusive turn lanes are required at the intersection of Orange Grove Blvd and Inlet Drive. The warrant analysis follows the “Turn Lane Policy” as set forth in Lee County Administrative Code AC-11-4. In each analysis, a separate turn lane is required when two (2) or more of the following warrants are satisfied:

Right Turn Lane Warrant Analysis for Inlet Drive:

Intersecting Street/Connection to Collector Street:

1. No (Posted Speed $\geq$ 35 mph)
2. Yes (Number of right turning vehicles is equal to or greater than 90 during any peak hour)
3. No (Signalized intersection)
4. N/A

Right Turn Lane Warranted: No

Left Turn Lane Warrant Analysis for Inlet Drive:

Intersecting Street/Connection to Collector Street:

1. No (Posted Speed $\geq$ 35 mph)
2. Yes (Number of left turning vehicles is equal to or greater than 60 during any peak hour)
3. No (Signalized intersection)
4. N/A

Left Turn Lane Warranted: No

Right Turn Lane Warrant Analysis for Orange Grove Blvd:

Collector Street:

1. No (Posted Speed $\geq$ 35 mph)
2. Yes (Right turn volume is equal to or greater than 30 during any peak hour)
3. No (Sight Distance < 200 ft)
4. No (Signalized intersection)
5. N/A

Right Turn Lane Warranted: NoLeft Turn Lane Warrant Analysis for Orange Grove Blvd:

Collector Street:

1. No (Posted Speed $\geq$ 35 mph)
2. Yes (Left turn volume is equal to or greater than 30 during any peak hour)
3. No (Sight Distance < 200 ft)
4. No (Signalized intersection)
5. No (Intersects arterial or collector street)
6. N/A
7. N/A

Left Turn Lane Warranted: NoCONCLUSION

Traffic as depicted in this report will generate 3,470 daily trips with a maximum of 275 trips occurring during the peak hour. These trips will affect Inlet Drive and distribute to the nearby major collector road, Orange Grove Blvd, which is located approximately 0.5 miles west of the subject property and provides access to all other areas within the county. All other roads connecting to Inlet Drive only provide access to residential properties within the immediate vicinity of the subject property. The roadway link analysis shows that northbound Orange Grove Blvd will decrease from LOS C, under the existing and future conditions without the project, to LOS D under the future condition with the project. The intersection LOS analysis shows that the intersection of Orange Grove Blvd and Inlet Drive will decrease to LOS E under the future condition with the project. While the LOS of the roadways expected to decrease with the project, the roadways are still expected to operate within their performance standard of LOS E.

LEE COUNTY ROAD LINK VOLUMES (County- and State-Maintained Roadways)

Link No.	ROAD NAME	LOCATION		ROAD TYPE	PERFORMANCE STANDARD		2023-100TH HIGHEST HOUR			2028 FUTURE FORECAST*			Notes
		FROM	TO		LOS ⁽¹⁾	CAPACITY ⁽²⁾	LOS ⁽¹⁾	VOLUME ⁽²⁾	V/C ⁽³⁾	LOS ⁽¹⁾	VOLUME ⁽²⁾	V/C ⁽³⁾	
13900	JOEL BLVD	18TH ST	SR 80	2LN	E	1,010	D	547	0.54	D	575	0.57	
14000	JOHN MORRIS RD	BUNCHE BEACH	SUMMERLIN RD	2LN	E	860	C	65	0.08	C	68	0.08	(4)
14100	JOHN MORRIS RD	SUMMERLIN RD	IONA RD	2LN	E	860	C	210	0.24	C	221	0.26	
14200	KELLY RD	MCGREGOR BLVD	SAN CARLOS BLVD	2LN	E	860	C	230	0.27	C	242	0.28	
14300	KELLY RD	SAN CARLOS BLVD	PINE RIDGE RD	2LN	E	860	C	230	0.27	C	242	0.28	
14500	LAUREL DR	BUS 41	BREEZE DR	2LN	E	860	C	338	0.39	C	355	0.41	
14600	LEE BLVD	SR 82	ALVIN AVE	6LD	E	2,840	E	2,440	0.86	E	2,564	0.90	
14700	LEE BLVD	ALVIN AVE	GUNNERY RD	6LD	E	2,840	E	2,182	0.77	E	2,293	0.81	
14800	LEE BLVD	GUNNERY RD	HOMESTEAD RD	6LD	E	2,840	E	1,944	0.68	E	2,091	0.74	pre-development order res development
14900	LEE BLVD	HOMESTEAD RD	WILLIAMS AVE	4LD	E	1,980	B	913	0.46	B	960	0.48	
14930	LEE BLVD	WILLIAMS AVE	LEELAND HEIGHTS	2LN	E	1,020	B	913	0.90	E	960	0.94	
15000	LEE RD	SAN CARLOS BLVD	ALICO RD	2LN	E	860	C	407	0.47	C	428	0.50	
15100	LEELAND HEIGHTS	HOMESTEAD RD	JOEL BLVD	4LN	E	1,800	B	764	0.42	B	803	0.45	
15200	LEONARD BLVD	GUNNERY RD	WESTGATE BLVD	2LN	E	860	D	714	0.83	F	895	1.04	Fairway Villages/pre-dev order res dev
15300	LITTLETON RD	CORBETT RD	US 41	2LN	E	860	D	587	0.68	D	617	0.72	
15400	LITTLETON RD	US 41	BUS 41	2LN	E	860	D	570	0.66	D	599	0.70	
15500	LUCKETT RD	ORTIZ AVE	I-75	2LN	E	880	C	364	0.41	C	416	0.47	Luckett Landing Hotel/Luckett Road C-Store
15600	LUCKETT RD	I-75	COUNTRY LAKES DR	2LN	E	860	C	320	0.37	C	336	0.39	
15700	MAPLE DR*	SUMMERLIN RD	2ND AVE	2LN	E	860	C	79	0.09	C	83	0.10	(4)
15800	MCGREGOR BLVD	SANIBEL T PLAZA	HARBOR DR	4LD	E	1,960	A	980	0.50	B	1,030	0.53	
15900	MCGREGOR BLVD	HARBOR DR	SUMMERLIN RD	4LD	E	1,960	B	1,396	0.71	B	1,467	0.75	
16000	MCGREGOR BLVD	SUMMERLIN RD	KELLY RD	4LD	E	1,960	A	815	0.42	A	857	0.44	
16100	MCGREGOR BLVD	KELLY RD	GLADIOLUS DR	4LD	E	1,960	A	815	0.42	A	857	0.44	
16200	MCGREGOR BLVD (SR 867)	OLD MCGREGOR /GLADIOLUS DR	IONA LOOP RD	4LD	D	1,942	C	1,542	0.79	C	1,658	0.85	
16300	MCGREGOR BLVD (SR 867)	IONA LOOP RD	PINE RIDGE RD	4LD	D	1,942	C	1,542	0.79	C	1,658	0.85	
16400	MCGREGOR BLVD (SR 867)	PINE RIDGE RD	CYPRESS LAKE DR	4LD	D	1,900	D	1,810	0.95	F	1,961	1.03	
16500	MCGREGOR BLVD (SR 867)	CYPRESS LAKE DR	COLLEGE PKWY	4LD	D	1,900	D	1,810	0.95	F	1,961	1.03	
16600	MCGREGOR BLVD (SR 867)	COLLEGE PKWY	WINKLER RD	2LN	D	1,124	C	775	0.69	D	842	0.75	constrained
16700	MCGREGOR BLVD (SR 867)	WINKLER RD	TANGLEWOOD BLVD	2LN	D	1,224	D	1,114	0.91	D	1,208	0.99	constrained
16800	MCGREGOR BLVD (SR 867)	TANGLEWOOD BLVD	COLONIAL BLVD	2LN	D	1,224	D	1,114	0.91	D	1,208	0.99	constrained
16900	METRO PKWY (SR 739)	SIX MILE PKWY	DANIELS PKWY	6LD	D	2,866	C	1,373	0.48	C	1,618	0.56	
17000	METRO PKWY (SR 739)	DANIELS PKWY	CRYSTAL DR	4LD	D	1,900	C	1,275	0.67	C	1,440	0.76	
17100	METRO PKWY (SR 739)	CRYSTAL DR	DANLEY DR	4LD	D	1,900	D	1,786	0.94	F	2,118	1.11	
17200	METRO PKWY (SR 739)	DANLEY DR	COLONIAL BLVD	4LD	D	1,900	D	1,786	0.94	F	2,118	1.11	
	MICHAEL RIPPE PKWY	US41	SIX MILES PKWY	6LD	D	2,866	C	1,766	0.62	C	2,252	0.79	
17600	MILWAUKEE BLVD	ALABAMA BLVD	BELL BLVD	2LN	E	860	C	171	0.20	C	180	0.21	(4)
17700	MILWAUKEE BLVD	BELL BLVD	COLUMBUS BLVD	2LN	E	860	C	171	0.20	C	213	0.25	(4)
17800	MOODY RD	HANCOCK B. PKWY	PONDELLA RD	2LN	E	860	C	184	0.21	C	193	0.22	(4)
17900	NALLE GRADE RD	SLATER RD	NALLE RD	2LN	E	860	C	82	0.10	C	86	0.10	
18000	NALLE RD	SR 78	NALLE GRADE RD	2LN	E	860	C	136	0.16	C	143	0.17	
18100	NEAL RD	ORANGE RIVER BLVD	BUCKINGHAM RD	2LN	E	860	C	155	0.18	C	163	0.19	
18200	NORTH RIVER RD	SR 31	FRANKLIN LOCK RD	2LN	E	1,140	B	224	0.20	B	344	0.30	The Broadlands
18300	NORTH RIVER RD	FRANKLIN LOCK RD	BROADWAY RD	2LN	E	1,140	B	224	0.20	B	358	0.31	River Run Estates
18400	NORTH RIVER RD	BROADWAY RD	COUNTY LINE	2LN	E	1,140	A	100	0.09	A	135	0.12	
18900	OLGA RD*	SR 80 W	SR 80 E	2LN	E	860	C	84	0.10	C	88	0.10	(4)
19100	ORANGE GROVE BLVD	CLUB ENTR.	HANCOCK B. PKWY	2LN	E	860	C	539	0.63	D	566	0.66	
19200	ORANGE GROVE BLVD	HANCOCK B. PKWY	PONDELLA RD	4LN	E	1,790	C	539	0.30	D	566	0.32	
19300	ORANGE RIVER BLVD	SR 80	STALEY RD	2LN	E	1,000	C	368	0.37	C	387	0.39	

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	31	47	492	11	16	523
Future Volume (Veh/h)	31	47	492	11	16	523
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	51	535	12	17	568
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1143	541			547	
vC1, stage 1 conf vol	541					
vC2, stage 2 conf vol	602					
vCu, unblocked vol	1143	541			547	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	91			98	
cM capacity (veh/h)	354	541			1022	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	85	547	585			
Volume Left	34	0	17			
Volume Right	51	12	0			
cSH	447	1700	1022			
Volume to Capacity	0.19	0.32	0.02			
Queue Length 95th (ft)	12	0	1			
Control Delay (s/veh)	14.9	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s/veh)	14.9	0.0	0.5			
Approach LOS	B					
Intersection Summary						
Average Delay		1.3				
Intersection Capacity Utilization		51.7%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	31	508	36	53	486
Future Volume (Veh/h)	21	31	508	36	53	486
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	34	552	39	58	528
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1216	572			591	
vC1, stage 1 conf vol	572					
vC2, stage 2 conf vol	644					
vCu, unblocked vol	1216	572			591	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	93			94	
cM capacity (veh/h)	325	520			985	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	57	591	586			
Volume Left	23	0	58			
Volume Right	34	39	0			
cSH	419	1700	985			
Volume to Capacity	0.14	0.35	0.06			
Queue Length 95th (ft)	8	0	3			
Control Delay (s/veh)	14.9	0.0	1.6			
Lane LOS	B		A			
Approach Delay (s/veh)	14.9	0.0	1.6			
Approach LOS	B					
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utilization			70.8%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	32	48	533	11	17	564
Future Volume (Veh/h)	32	48	533	11	17	564
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	52	579	12	18	613
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1234	585			591	
vC1, stage 1 conf vol	585					
vC2, stage 2 conf vol	649					
vCu, unblocked vol	1234	585			591	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	90			98	
cM capacity (veh/h)	330	511			985	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	87	591	631			
Volume Left	35	0	18			
Volume Right	52	12	0			
cSH	419	1700	985			
Volume to Capacity	0.21	0.35	0.02			
Queue Length 95th (ft)	14	0	1			
Control Delay (s/veh)	15.8	0.0	0.5			
Lane LOS	C		A			
Approach Delay (s/veh)	15.8	0.0	0.5			
Approach LOS	C					
Intersection Summary						
Average Delay		1.3				
Intersection Capacity Utilization		54.8%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	32	549	36	55	526
Future Volume (Veh/h)	21	32	549	36	55	526
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	35	597	39	60	572
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1309	617			636	
vC1, stage 1 conf vol	617					
vC2, stage 2 conf vol	692					
vCu, unblocked vol	1309	617			636	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	93			94	
cM capacity (veh/h)	302	490			947	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	58	636	632			
Volume Left	23	0	60			
Volume Right	35	39	0			
cSH	393	1700	947			
Volume to Capacity	0.15	0.37	0.06			
Queue Length 95th (ft)	9	0	4			
Control Delay (s/veh)	15.7	0.0	1.6			
Lane LOS	C		A			
Approach Delay (s/veh)	15.7	0.0	1.6			
Approach LOS	C					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			75.1%	ICU Level of Service		D
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	82	124	533	66	100	564
Future Volume (Veh/h)	82	124	533	66	100	564
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	89	135	579	72	109	613
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh)						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1446	615			651	
vC1, stage 1 conf vol	615					
vC2, stage 2 conf vol	831					
vCu, unblocked vol	1446	615			651	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	66	73			88	
cM capacity (veh/h)	259	491			935	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	224	651	722			
Volume Left	89	0	109			
Volume Right	135	72	0			
cSH	362	1700	935			
Volume to Capacity	0.62	0.38	0.12			
Queue Length 95th (ft)	71	0	7			
Control Delay (s/veh)	29.8	0.0	2.9			
Lane LOS	D		A			
Approach Delay (s/veh)	29.8	0.0	2.9			
Approach LOS	D					
Intersection Summary						
Average Delay		5.5				
Intersection Capacity Utilization		89.4%		ICU Level of Service		E
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Orange Grove Blvd & Inlet Dr

08/07/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	105	549	97	147	526
Future Volume (Veh/h)	70	105	549	97	147	526
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	114	597	105	160	572
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			Raised
Median storage veh						1
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1542	650			702	
vC1, stage 1 conf vol	650					
vC2, stage 2 conf vol	892					
vCu, unblocked vol	1542	650			702	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	67	76			82	
cM capacity (veh/h)	228	469			895	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	190	702	732			
Volume Left	76	0	160			
Volume Right	114	105	0			
cSH	330	1700	895			
Volume to Capacity	0.58	0.41	0.18			
Queue Length 95th (ft)	61	0	12			
Control Delay (s/veh)	29.7	0.0	4.2			
Lane LOS	D		A			
Approach Delay (s/veh)	29.7	0.0	4.2			
Approach LOS	D					
Intersection Summary						
Average Delay		5.4				
Intersection Capacity Utilization		90.9%		ICU Level of Service		E
Analysis Period (min)		15				