AGENDA
Workshop City Council Meeting
Monday, April 15, 2019, 6:00 P.M.
Council Chambers, 116 First Street, Neptune Beach, Florida

1. CALL TO ORDER / ROLL CALL / PLEDGE OF ALLEGIANCE

2. AWARDS / PRESENTATIONS / RECOGNITION OF GUESTS

   A. City of Jacksonville Traffic Engineering Division-Roundabout Analysis-Penman Road and Florida Boulevard

3. CITY MANAGER REPORT

4. COMMITTEE REPORTS

   A. Land Use and Parks
   B. Strategic Planning and Visioning
   C. Transportation and Public Safety
   D. Finance, Charter and Boards

5. PUBLIC COMMENTS

6. PROPOSED ORDINANCES

   A. PROPOSED ORDINANCE NO. 2019-05, An Ordinance of the City of Neptune Beach Amending Chapter 6, Article I, Section 6-1, Definitions, and Article II, Section 6-31(b)(1), Dogs on the Beach

7. CONTRACTS / AGREEMENTS / NONE

8. ISSUE DEVELOPMENT

   A. Parking Program Update

   B. Comprehensive Plan and Land Development Code Revision RFQ

   C. City Attorney / City Manager Search Process

   D. RESOLUTION NO. 2019-05, A Resolution of the City of Neptune Beach Reappointing Members to the Police Officers' Retirement Board

   E. RESOLUTION NO. 2019-06, A Resolution of the City of Neptune Beach Joining the American Flood Coalition

9. PUBLIC COMMENTS

10. COUNCIL COMMENTS

11. ADJOURN

Respectfully submitted:

Andrew E. Hyatt, City Manager

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	2A-City of Jacksonville-Roundabout Analysis
SUBMITTED BY:	City of Jacksonville Engineering Division
DATE:	April 10, 2019
BACKGROUND:	Metric Engineering, Inc. has been retained by the City of Jacksonville to perform a roundabout analysis for the intersection of Penman Road and Florida Boulevard in the City of Neptune Beach, Duval County, Florida. The feasibility of a roundabout to replace the signalized intersection at Penman Road with Florida Boulevard and Forest Avenue was analyzed.
BUDGET:	To be determined
RECOMMENDATION:	To be determined
ATTACHMENT:	Roundabout Analysis-Penman Road and Florida Boulevard
CITY MANAGER:	

ROUNDABOUT ANALYSIS

Penman Road and Florida Boulevard

Duval County

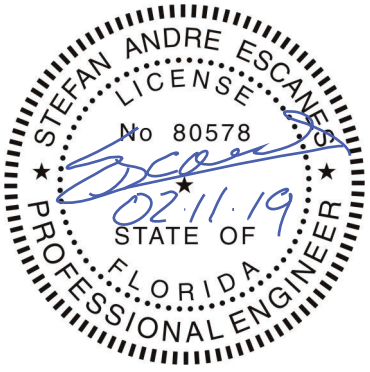
Prepared for:

THE CITY OF JACKSONVILLE
TRAFFIC ENGINEERING DIVISION
1007 Superior Street
Jacksonville, Florida 32254

Traffic Engineering Services Contract
Contract Number: P-25-16
Consultant No. 4.2320
Work Order No. 04

Prepared by:
Metric Engineering, Inc.
11760 Marco Beach Drive, Suite 1
Jacksonville, Florida 32224

February 11, 2019



FINAL

Engineer of Record: Stefan Escanes
P.E. No. 80578

1. INTRODUCTION

Metric Engineering, Inc. has been retained by the City of Jacksonville to perform a roundabout analysis for the intersection of Penman Road and Florida Boulevard in the City of Neptune Beach, Duval County, Florida. Roundabouts are a form of circular intersection where entering traffic yields to the traffic already within the roundabout. Their intent is to make intersections more efficient by allowing motorists the opportunity to enter the intersection whenever there is an acceptable gap in traffic, and to make them safer by reducing the opportunities for vehicles to come in contact with each other or pedestrians and reducing entering speeds of motorists. Roundabouts are one of the Federal Highway Administration's (FHWA's) 9 Proven Safety Countermeasures and have been found to be safer than signalized or stop controlled intersections with a 35% reduction in all crashes and 76% reduction in injury crashes. They can also assist in reducing delay, improving traffic flow and may reduce need for widening a road or adding turn lanes at an intersection. Other safety benefits include reduced driver decisions, reduced conflict points, reduced severity of conflicts and provide a calming effect within a community by physically slowing speeds.

Roundabouts also assist in alleviating common issues at intersections by creating a rolling queue for instances with heavy turning volumes from the major and minor routes as well as cases where there is congestion on the minor street caused by a demand that exceeds capacity and stopped queues that form on the major street because of inadequate capacity for left turning vehicles yielding to opposing traffic.

Although there are clear benefits of utilizing roundabouts, there are also potential drawbacks which should be analyzed, such as unbalanced traffic flow between approaches which can lead to yield confusion upon entry into the roundabout, the amount of right-of-way space needed, and conflict with pedestrians crossing, especially vision impaired pedestrians [1][2]. It may be difficult for individuals with these disabilities to determine when traffic is yielding, allowing them to cross. Roundabouts also need more right-of-way at intersections as the center diameter of a roundabout can be anywhere from 140 – 160 feet for a single-lane and even more for a dual-lane roundabout per the FDOT Design Manual (FDM). Typical right-of-way at an intersection ranges from as low as a 60-foot by 60-foot square for a local road and up to a 120-foot by 120-foot square for an expressway.

[1] Apardian, R., & Alam, B. M. (2016, November 23). Methods of Crossing at Roundabouts for Visually Impaired Pedestrians: Review of Literature. Retrieved January 28, 2019, from https://www.sciencedirect.com/science/article/pii/S2046043016301307

[2] Christofa, E., PhD, & Ganz, A., PhD. (2017, November). Visually Impaired Pedestrian Safety at Roundabout Crossings. Retrieved January 28, 2019, from http://safersim.nads-sc.uiowa.edu/final_reports/UM 3 Y2_report.pdf

The feasibility of a roundabout to replace the signalized intersection at Penman Road with Florida Boulevard and Forest Avenue was analyzed as discussed in the following sections. It has been determined that a roundabout is feasible at this intersection and is predicted to provide greater efficiency and safety than the current traffic signal.

FIGURE 1 *SR A1A at Beach Lagoon Road, Amelia Island, FL. From Google Maps.*

2. DATA COLLECTION

The following data was collected on April 28, 2018 and May 1, 2018 in order to perform the roundabout analysis:

1) 24-hour Counts (weekday and weekend)
2) Turning Movement Counts (weekday and weekend)
3) Historical Traffic Volumes from the Florida Traffic Information DVD – **Attachment B**
4) Peak Season Weekly Average Daily Traffic (PSWADT) from the Northeast Regional Planning Model (NERPM) – **Attachment B**
5) Existing Signal Timing
6) Crash Data extending approximately 250 feet of the study intersection in all directions (from 1/1/2013 to 12/31/2017)

Data collection is provided in **Attachment A**.

2.1. Field Review

A field review of the study intersection was conducted on May 1, 2018 during the AM and

PM peak hours. The following describes the qualitative field review observations:

- During the morning peak period southbound and northbound Penman Road, and southeastbound Florida Boulevard experience signal cycle failures typically requiring two or three cycles for vehicles to clear the intersection. Queues on the approaches average approximately 700 feet with maximum queues of up to 1,200 feet. During the afternoon peak period most intersection approaches clear the intersection within a cycle with the exception of northbound Penman Road which typically requires two cycles. Average queues for Florida Boulevard ranged from 400 to 500 feet. Penman Road queues extended approximately 800 feet with a maximum observed queue in the northbound direction of 1,100 feet.
- Since the intersection has five approaches, the signal phasing consists of mostly protected only phases and No Right Turn on Red restrictions. Although northbound and southbound through movements operate concurrently, limited green time is provided to the southbound movements due to the high northbound left turn demand. Overall, due to the number of conflicting movements and geometric requirements for protected-only movements, moderate to heavy delay with extended queuing of up to 1,200 feet was observed on all approaches.
- It was observed that pedestrians cross the intersection both during the pedestrian interval and outside of the pedestrian interval if a gap is available. The signal phasing provides for an exclusive pedestrian phase, however, the clearance "Flash Don't Walk" interval provides time to only clear one intersection leg. Therefore, pedestrians require multiple signal cycles to safely cross the intersection, although they were noted crossing multiple legs during a single pedestrian phase.
- The walk phases run concurrent with all-red phases for the entire intersection, which is both inefficient for the operations of the intersection and also does not protect the pedestrians from right turn on red movements. The pedestrians also have to press their respective ped pushbuttons for each crossing and wait for their pedestrian phase to occur (this creates the all-red scenario multiple times when pedestrians are required to cross multiple approaches).
- Distances to the nearest signalized intersections are noted below:
    - Northwestbound Florida Boulevard – approximately 5,250 feet to Atlantic Boulevard
    - Eastbound Florida Boulevard – approximately 3,461 feet to 3rd Street
    - Forest Avenue leads into Neptune Beach Public Works; there are no signalized intersections
    - Northbound Penman Road – approximately 3,431 feet to Atlantic Boulevard
    - Southbound Penman Road – approximately 2,978 feet to Arden Way
    -

3. ROUNDABOUT SCREENING ANALYSIS

The recommended three-step procedure from the 2019 Florida Intersection Design Guide in accordance with FDOT policy as stated in Section 213.1.1 of the FDM for the roundabout screening analysis was performed including 1) a physical examination of geometric, total intersection traffic, and historical characteristics; 2) a benefit/cost (B/C) analysis; and 3) an operational analysis.

A benefit cost analysis is a methodical approach to estimate the strengths and weaknesses of an alternative and is used to determine options that provide the best approach to achieve benefits while preserving savings. It is used to estimate the value against costs of a decision, project, or policy. This analysis verifies whether a project's benefits outweigh the costs, and by how much by comparing the total expected cost against the total expected benefits over the course of a duration of time. The duration of time is often taken as the design life of the proposed improvement. The benefits are the monetized value of any expected reduced crashes and operational efficiencies accomplished through the proposed improvement.

An operational analysis is necessary to determine the ability of the facility to serve various types of users, such as pedestrians, bicyclists, vehicular traffic, etc. at a maximum hourly rate. It also determines the level of performance and efficiency of a system which will be determined by two different types of analyses, Synchro and SIDRA. These analyses not only take into account geometric conditions but also measure constraints which can occur within the system.

3.1. Synchro Analysis

Trafficware's Synchro 10 software and application of the Highway Capacity Manual 6th Edition (HCM 6th Ed.) methodology was used to provide the traffic analyses of the roundabout option for comparison purposes with the signalized scenario for the B/C analysis. SimTraffic reports were used for the analysis of the intersection under signalized conditions; the results obtained from the Synchro Timing Reports and HCM Reports were not consistent with observed field conditions. Two specific years were modeled, 2025 (opening year), and 2045 (design year); opening and design year traffic volumes were obtained using a growth rate from the latest base year (2010) and cost-feasible (2040) NERPM. Traffic forecasting summary is provided in **Attachment B**. Roundabout Screening Analysis worksheets are provided in **Attachment C.** The HCM 6th Ed. uses the quantitative measure of delay (seconds per vehicle) to define the Level of Service (LOS), a qualitative measure, for an intersection. The LOS delay criteria differ for signalized and unsignalized (roundabouts) intersections. **Table 1** compares the HCM 6th Ed. LOS criteria (in terms of delay in seconds/vehicle) for signalized and unsignalized intersections. As can be seen in Table 1, signalized intersections have higher delay thresholds than unsignalized intersections.

Table 1 – LOS Criteria

LOS	Delay (sec)	
	Unsignalized (Roundabout)	Signalized
A	0-10	0-10
B	>10-15	>10-20
C	>15-25	>20-35
D	>25-35	>35-55
E	>35-50	>55-80
F*	>50	>80

**LOS F if volume to capacity ratio is greater than 1.00*

Table 2: Weekday Summary

Traffic Control Type	Roadway	App	Existing						2025						2045					
			AM		Midday		PM		AM		Midday		PM		AM		Midday		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Signal	Penman Rd	NB	79.5	E	35.0	D	52.5	D	110.8	F	36.0	D	50.9	D	133.3	F	50.0	D	73.7	E
	Florida Blvd	NWB	52.6	D	32.4	C	40.6	D	54.1	D	30.5	C	36.4	D	60.9	E	31.6	C	34.0	C
	Penman Rd	SB	73.2	E	33.7	C	48.1	D	74.5	E	42.5	D	53.7	D	85.8	F	51.7	D	49.1	D
	Florida Blvd	SEB	105.2	F	41.8	D	52.0	D	177.1	F	41.9	D	56.1	E	223.3	F	47.3	D	98.6	F
	Forest Ave	EB	59.9	E	29.9	C	143.2	F	63.4	E	57.7	E	219.3	F	66.4	E	69.0	E	201.2	F
Overall			**80.8**	**F**	**36.3**	**D**	**52.9**	**D**	**111.5**	**F**	**39.3**	**D**	**56.1**	**E**	**134.2**	**F**	**48.3**	**D**	**76.9**	**E**
Roundabout*	Penman Rd	NB	20.2	C	12.1	B	83.6	F	14.0	B	11.3	B	36.0	E	20.1	C	14.3	B	80.2	F
	Florida Blvd	NWB	14.1	B	9.9	A	38.1	E	11.9	B	9.2	A	20.6	C	15.6	C	11.0	B	34.8	D
	Penman Rd	SB	19.0	C	10.3	B	21.4	C	13.8	B	9.4	A	12.8	B	16.6	C	10.4	B	15.5	C
	Florida Blvd	SEB	56.2	F	14.7	B	11.3	B	34.2	D	13.1	B	39.5	E	96.7	F	20.0	C	118.9	F
	Forest Ave	EB	21.1	C	9.0	A	14.6	B	15.8	C	8.1	A	11.8	B	22.4	C	9.7	A	15.8	C
Overall			**28.9**	**D**	**12.0**	**B**	**44.5**	**E**	**19.6**	**C**	**11.1**	**B**	**30.6**	**D**	**43.0**	**E**	**14.8**	**B**	**75.8**	**F**

**LOS & Delay based on one-lane roundabout configuration*

Table 3: Weekend Summary

Traffic Control Type	Roadway	App	Existing						2025						2045					
			AM		Midday		PM		AM		Midday		PM		AM		Midday		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Signal	Penman Rd	NB	34.8	C	36.3	D	34.3	C	66.2	E	31.1	C	37.0	D	98.8	F	51.2	D	51.4	D
	Florida Blvd	NWB	27.6	C	31.7	C	28.8	C	42.6	D	28.7	C	29.7	C	45.9	D	34.0	C	28.9	C
	Penman Rd	SB	40.5	D	35.3	D	37.5	D	61.5	E	41.0	D	36.0	D	66.0	E	40.5	D	44.3	D
	Florida Blvd	SEB	37.2	D	35.6	D	35.5	D	58.1	E	36.7	D	40.3	D	159.8	F	39.2	D	45.3	D
	Forest Ave	EB	76.5	E	31.8	C	27.3	C	56.4	E	42.8	D	36.0	D	61.2	E	81.0	F	60.8	E
Overall			**37.7**	**D**	**35.3**	**D**	**34.2**	**C**	**60.2**	**E**	**34.5**	**C**	**36.7**	**D**	**106.3**	**F**	**45.4**	**D**	**45.8**	**D**
Roundabout*	Penman Rd	NB	14.2	B	14.7	B	14.0	B	12.1	B	12.6	B	11.5	B	16.6	C	16.8	C	14.9	B
	Florida Blvd	NWB	10.9	B	11.4	B	13.9	B	8.5	A	10.4	B	10.4	B	10.2	B	12.9	B	12.9	B
	Penman Rd	SB	11.5	B	10.8	B	11.2	B	9.5	A	10.4	B	9.2	A	10.7	B	11.9	B	10.4	B
	Florida Blvd	SEB	20.4	C	11.3	B	14.5	B	18.3	C	11.2	B	12.9	B	38.9	E	15.6	C	19.7	C
	Forest Ave	EB	10.6	B	8.1	A	8.5	A	9.9	A	7.5	A	7.9	A	12.4	B	8.8	A	9.4	A
Overall			**14.9**	**B**	**12.5**	**B**	**13.4**	**B**	**13.0**	**B**	**11.4**	**B**	**11.2**	**B**	**22.1**	**C**	**14.9**	**B**	**15.2**	**C**

**LOS & Delay based on one-lane roundabout configuration*

Tables 2 and **3** summarize the results obtained from the Synchro Analysis comparing the existing signalized configuration to a one-lane roundabout configuration. As shown in the summary, **Table 2**, for weekdays, the roundabout configuration improves the AM Peak 2045 intersection operations from all approaches operating at LOS E or F to LOS D or better, except for southeastbound Florida Boulevard. During the 2045 PM peak, the roundabout improves the operations from three approaches operating at LOS E or F to two approaches operating at LOS F. This corresponds to an overall per-vehicle delay reduction from 134 seconds to 43 seconds in the AM and 76.9 seconds to 75.8 seconds in the PM in 2045. Again, it should be noted per Table 1 that the HCM establishes different LOS thresholds for signalized and unsignalized intersections, which is why the roundabout is graded as an "F" in the 2045 PM peak even though it actually reduces motorist delay over the signalized alternative. The weekend summary table shows that the roundabout operations result in only one approach operating at LOS E during the 2045 AM Peak; a substantial improvement in terms of delay compared to the signal. The roundabout is particularly more efficient during off-peak times, when the biggest value is achieved from allowing motorists to enter the intersection whenever there are not vehicles already circulating, instead of requiring them to wait their turn at the signal. Peak hour factor (PHF) is higher which in turns yields a more uniform flow and, in this case, a negligible decrease in delay. As volume increases PHF gets higher. This is constant with manuals and procedures. Synchro outputs are provided in **Attachment D**.

The results of this analysis indicate a one-lane roundabout at the intersection of Penman Road and Florida Boulevard is feasible and may result in significant benefits from an operational and capacity standpoint. However, the one-lane roundabout is anticipated to operate at LOS F during the 2045 weekday PM peak, although the overall delay is similar to what is expected with the signal.

3.2. SIDRA Analysis

Based on the results obtained from the screening analysis showing favorable results for a roundabout compared to a signal, a one-lane roundabout and a one-lane roundabout with a transition lane was analyzed for the AM and PM peak hours using the SIDRA software, which allows for the analysis of more modern roundabout configurations. Although Synchro is the best software used to compare a traditional roundabout to a signal, it does not have the capability to model specific roundabout configurations (such as transition lanes) or more exact geometric characteristics. SIDRA was utilized due to its ability to better compare varying roundabout designs as well as its efficiency in modeling geometry. A SIDRA analysis was conducted to further evaluate the roundabout alternative and determine if there were any specific configurations that optimized the efficiency of this alternative due to the aforementioned Synchro software limitations in lane assignments for roundabouts. The SIDRA analysis focused on existing and design year analyses for the AM and PM peak periods to determine how a roundabout would operate today and during the design year. The intermediate 2025 year and mid-day scenarios were not modeled as the Synchro analysis had already determined them to not be the critical times that needed to be looked at. SIDRA inputs and drawings of the roundabout layouts are shown in **Attachment E**. The purpose of the transition lane and partial second circulating lane is to serve the high northbound movement from Penman Road to Florida Boulevard. **Tables 4** and **5** summarize the results from the SIDRA analysis.

Table-4: One-Lane Roundabout – Sidra Analysis Summary

Roadway	App	2018						2045					
		AM			PM			AM			PM		
		Delay	LOS	95% Queue	Delay	LOS	95% Queue	Delay	LOS	95% Queue	Delay	LOS	95% Queue
Penman Rd	NB	8.8	A	121.1	14.8	B	272.5	8.3	A	129.1	14.0	B	287.5
Florida Blvd	NWB	14.4	B	89.1	41.1	E	229.8	16.3	C	126.2	80.6	F	514.1
Penman Rd	SB	14.2	B	152.8	13.5	B	124.8	12.8	B	147.9	12.3	B	124.0
Florida Blvd	SEB	47.8	E	517.2	54.0	F	685.4	93.7	F	1277.6	108.4	F	1672.0
Forest Ave	EB	17.8	C	74.5	13.9	B	39.7	22.7	C	109.6	15.4	C	50.3
Overall		**21.9**	**C**		**29.2**	**D**		**37.8**	**E**		**53.5**	**F**	

Table-5: One-Lane Roundabout with Transition Lane– Sidra Analysis Summary

Roadway	App	2018						2045					
		AM			PM			AM			PM		
		Delay	LOS	95% Queue	Delay	LOS	95% Queue	Delay	LOS	95% Queue	Delay	LOS	95% Queue
Penman Rd	NB	5.8	A	61.0	7.8	A	107.3	5.5	A	65.7	7.3	A	114.2
Florida Blvd	NWB	11.9	B	53.7	18.4	C	87.3	11.9	B	65.4	20.2	C	113.4
Penman Rd	SB	17.7	C	165.7	15.8	C	127.2	15.5	C	156.8	14.6	B	128.5
Florida Blvd	SEB	47.2	E	512.0	52.7	F	669.8	91.5	F	1253.0	106.3	F	1645.8
Forest Ave	EB	17.8	C	74.5	13.9	B	39.7	23.1	C	111.1	15.6	C	50.8
Overall		**21.4**	**C**		**23.8**	**C**		**36.2**	**E**		**43.1**	**E**	

As shown in **Tables 4** and **5,** the one-lane roundabout with transition lane not only improves the northbound approach from Penman Road but also the northwestbound approach from Florida Boulevard. However, the transition lane roundabout will require greater right-of-way impacts, can be more complicated for motorists to comprehend, and may not be as pedestrian and bike friendly as the single lane roundabout.

4. SAFETY ANALYSIS

Crash data was collected for the intersection of Penman Road with Florida Boulevard and Forest Avenue for the 5-year time period from January 1, 2013 through December 31, 2017. The total entering traffic for the intersection was 26,247 vehicles per day according to the 24-hour traffic counts. Both the FDOT Crash Analysis Reporting System (CARS) and Signal 4 Analytics were used to retrieve crashes within approximately 250 feet of the study intersection in all directions. The associated crash reports for each retrieved crash were reviewed to ensure that no errant data was included in the analysis. During the studied time period, there were 56 total crashes,

averaging to just over 11 crashes per year. This equates to an intersection crash rate of 1.15 crashes per million entering vehicles. The crashes accounted for 14 injuries. Nighttime crashes accounted for 20% of the total number of crashes. The majority of crashes were rear ends (35) which accounted for 62.5% of the crashes. There were also seven (7) sideswipe crashes, two (2) head-on crashes, two (2) left turn crashes and one (1) angle crash which are the primary types of crashes that roundabouts combat by reducing conflict points over signalized intersections. Rear ends can also be targeted, as sudden stops due to changing signal cycles are eliminated. There were three (3) bike and no pedestrian crashes at the intersection. A big reason for the predicted reduction in crashes is the elimination of conflict points achieved through a roundabout, as shown in **Figure 2** below. This reduced the opportunities for crashes to occur.

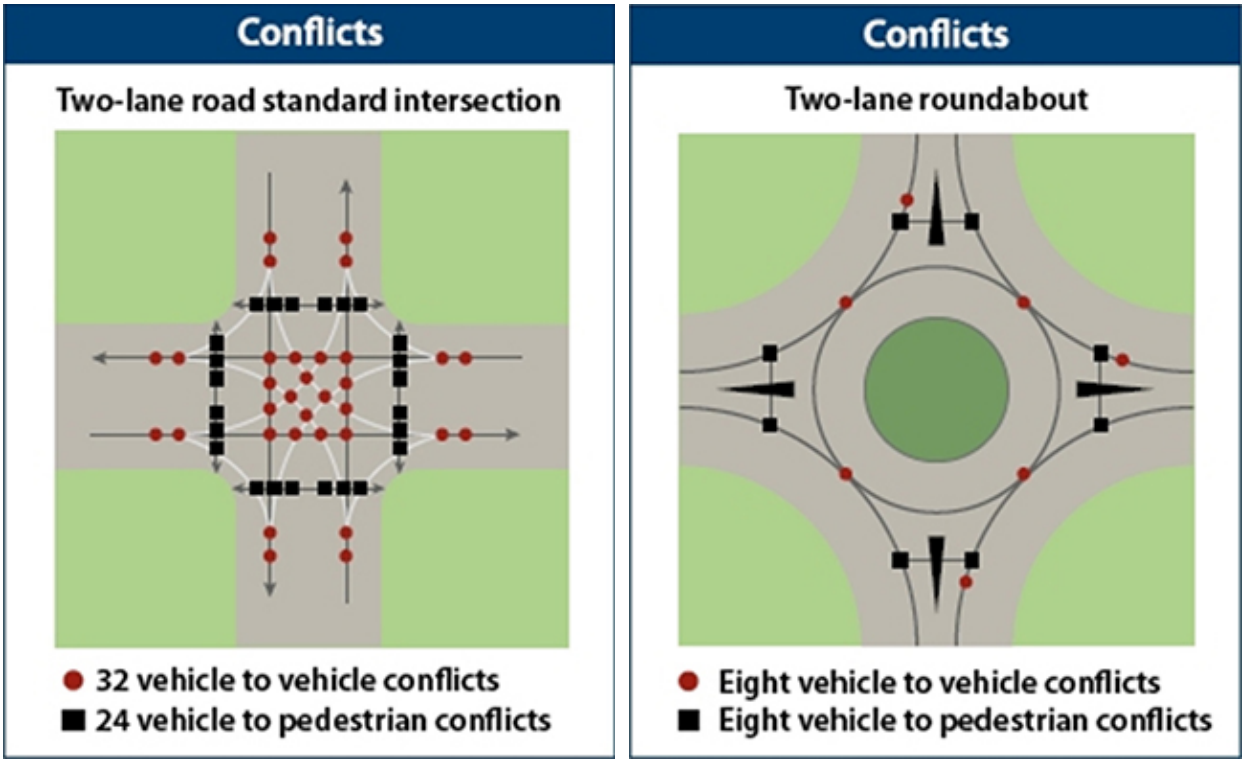


FIGURE 2 *Illustrations showing the reduction in vehicle-vehicle and vehicle-pedestrian conflicts that a roundabout offers over a traditional intersection, from FHWA: https://rspcb.safety.fhwa.dot.gov/noteworthy/html/intersection4.aspx*

The Federal Highway Association's (FHWA's) Crash Modification Factors (CMF) Clearinghouse is a website that contains proven statistics that are used to predict the expected number of crashes after implementing a countermeasure on a road. The CMF for converting a signalized intersection into a single lane roundabout for suburban areas is 0.81, meaning that crash totals are expected to be reduced by 19% with the construction of a roundabout. This means that at the intersection of Penman Road, Florida Boulevard and Forest Avenue, more than two (2) out of the eleven (11) average crashes per year can be expected to be eliminated through a roundabout conversion, and the expected total theoretical crashes for a future five-year period would reduce from 56, which was the original observed amount over that time, to 45 crashes which is a modest crash reduction.

5. ROUNDABOUT CONCEPT DEVELOPMENT

Based on the traffic analysis performed, two preliminary roundabout concept designs were developed in order to gauge potential impacts to existing intersection features, right-of-way, etc. The two concept designs are provided on Pages 11 and 12 and reflect the one-lane roundabout and one-lane roundabout with transition lanes. It should be noted that as-built plans were not available and right-of-way lines were drawn based on the property appraiser map, therefore are approximate. AutoTurn was utilized to assess any constraints by using a WB-FL-62 truck to ensure trucks could navigate through the roundabout. Due to right-of-way constraints and in order to serve the WB-FL-62, the roundabout is currently designed with a mountable apron for those WB-FL-62.

In addition, there will be a special emphasis on pedestrian and bicycle safety as the roundabout design is further developed to ensure the safety and accessibility for all modes of travel; especially given the proximity to Neptune Beach Elementary School which is approximately 1,850 feet away from this intersection.

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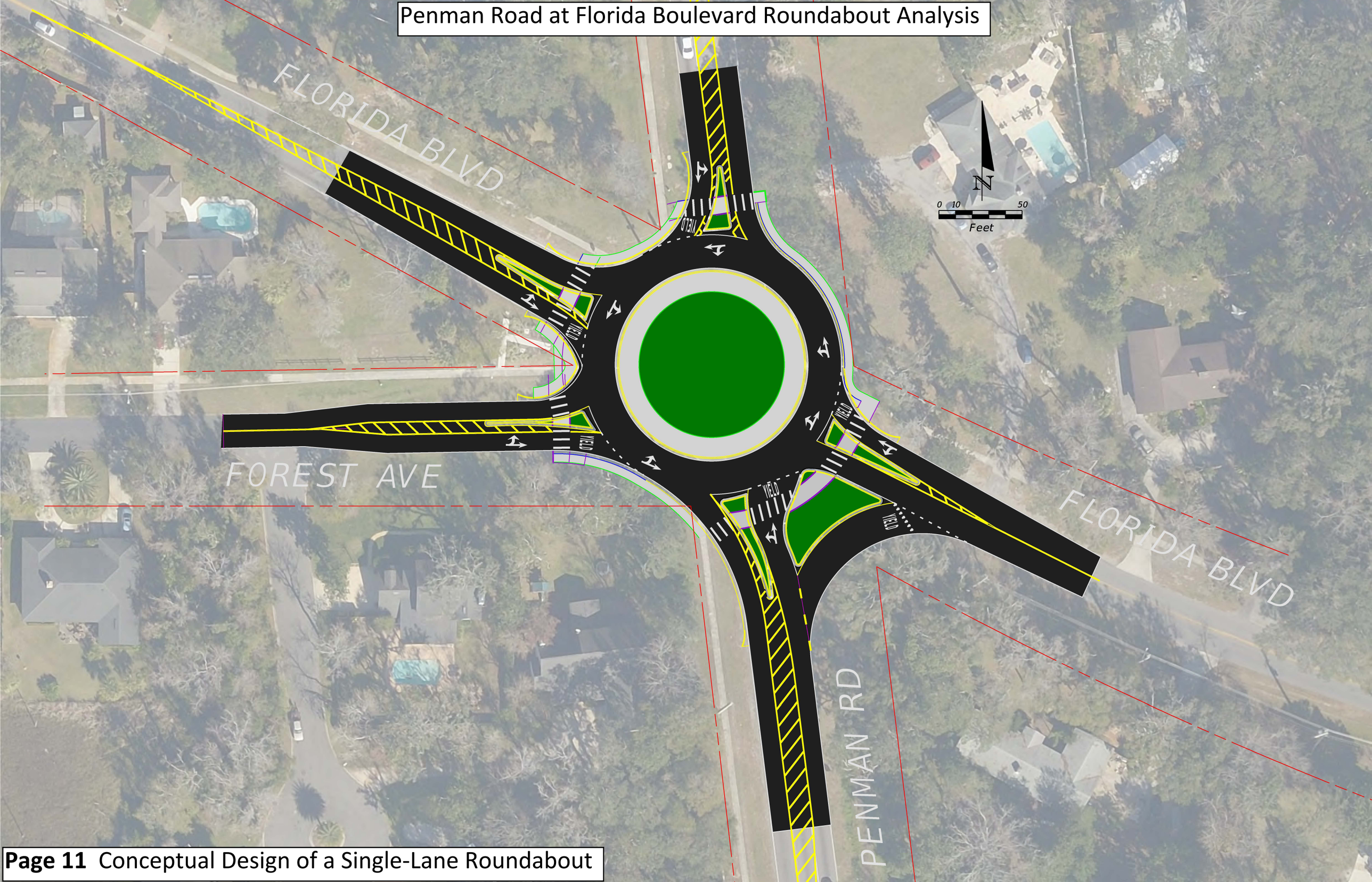
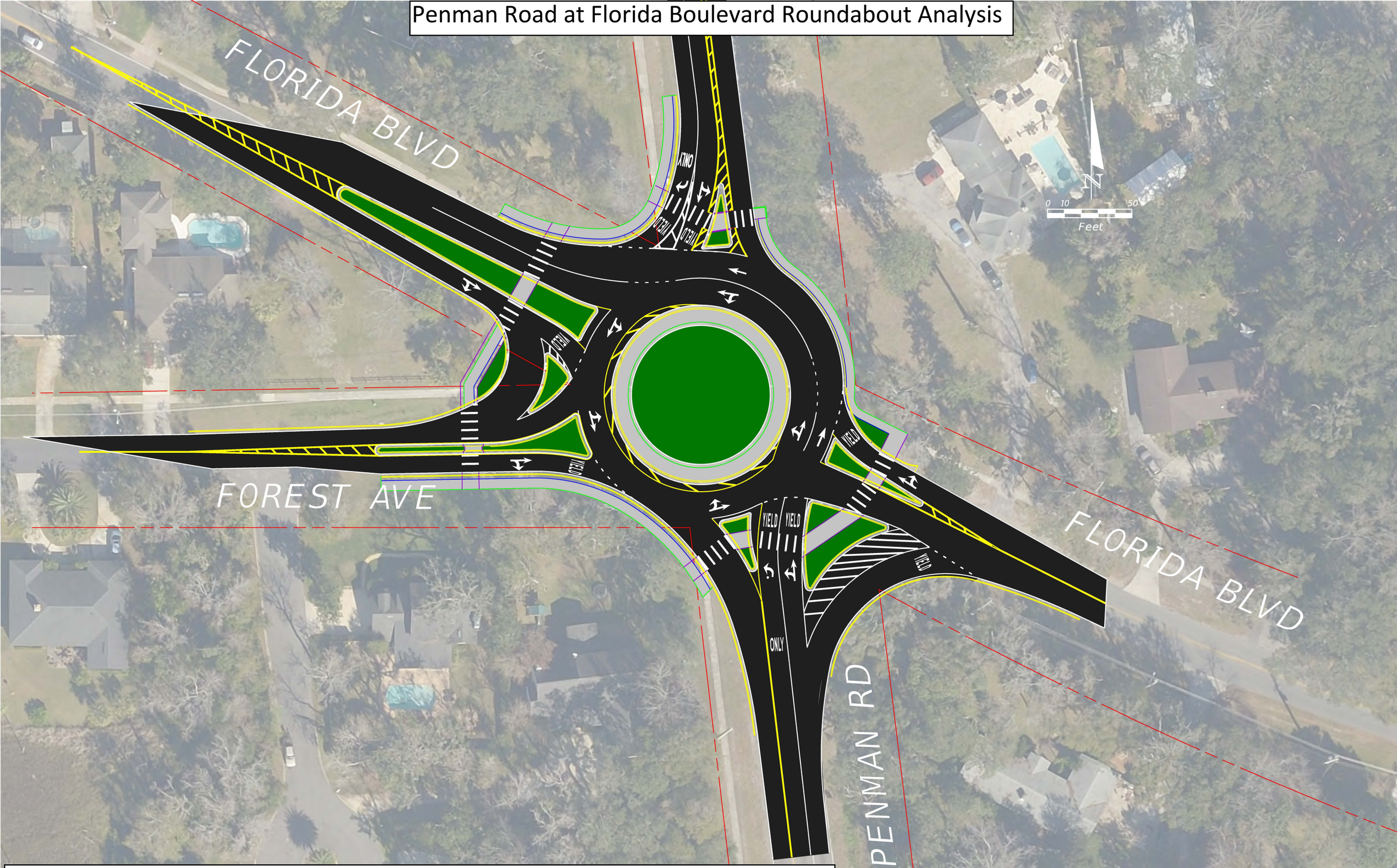
Penman Road at Florida Boulevard Roundabout Analysis



Penman Road at Florida Boulevard Roundabout Analysis



5.1. Pedestrian and Bicyclist Accommodations

The study intersection lies along the path of the future East Coast Greenway, a system of bicycle and pedestrian facilities that connects from Florida to Maine (https://www.greenway.org/), and within an active beach community.

FIGURE 3 *East Coast Greenway Map. Courtesy of East Coast Greenway, https://www.greenway.org/route-map*

This intersection also lies near Neptune Beach Elementary (0.35 miles), Beaches Chapel (0.40 miles), Duncan Fletcher High and Middle (0.52 miles), and San Pablo Elementary (0.73 miles) and carries schoolchildren on their way to and from school. As such, it is important that a roundabout design for this intersection have a focus on bicyclist and pedestrian mobility and safety. Roundabouts inherently hold some safety benefits to these road users for a few reasons. First, motorized vehicle entry speeds are typically much lower than those at a typical signalized intersection; estimated vehicle entry speeds for single-lane roundabouts are approximately 20 MPH, whereas the entry speeds for the signal are expected to be at or above the speed limits of the roadway approaches. In this case, those speed limits are up to 35 MPH. The lower speeds

provided by the roundabout increase the likelihood that a person riding a bike or walking will survive a crash with a motor vehicle. Per the National Highway Traffic Safety Administration's Office of Behavioral Safety Research, in a crash at 20 mph, the likelihood of a pedestrian sustaining a serious or fatal injury is 18% when compared to a crash at 30 mph which will result in a 50% chance of the pedestrian sustaining a serious or fatal injury. Similarly, this likelihood also increases to 77% at speeds of 40 mph. Also, the pedestrian crossings within a roundabout are split up by the splitter island as explained below. This decreases the crossing distance and the time a pedestrian is in the path of a vehicle and allows the pedestrian or cyclist to cross one movement at a time, instead of trying to contend with traffic approaching from both directions. Finally, as mentioned previously, the number of total pedestrian-vehicle conflict points for a roundabout is eight, which is an improvement over the 24 pedestrian-vehicle conflicts at a signalized intersection.

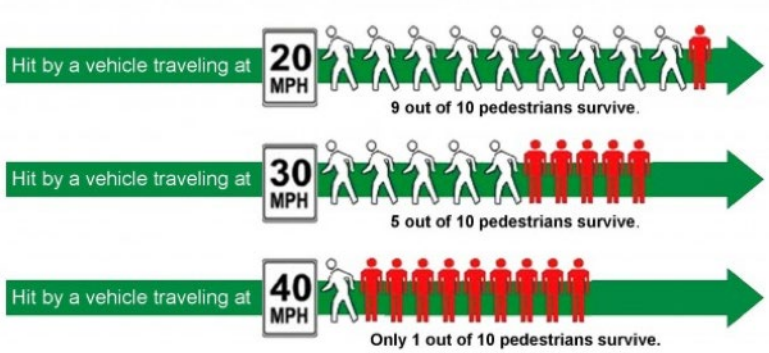


FIGURE 4 *Inverse correlation of vehicle speed with likelihood of pedestrian survival in a pedestrian-vehicle crash.*

The splitter island, shown in **Figures 6** and **7**, physically separates the entering and exiting lanes of traffic at a roundabout and offers a refuge so that both directions of traffic do not need to be crossed in one crossing maneuver, such as with a signalized intersection. The tradeoff is that pedestrians lose their "protected" movement created by the pedestrian walk phase at a traditional signal.

A pedestrian-focused design will ensure that the roundabout is as safe as possible for vulnerable road users. Design elements that need to be addressed are setback crosswalks (one to two car lengths before the roundabout entry), splitter island geometry, enhanced pedestrian signing, lighting and more. The setback crosswalks establish the pedestrian or cyclist at the crossing before the motorist begins turning their focus towards the circulating traffic within the roundabout. This can be seen in **Figure 6**, where the crosswalk is set back from the yield point by approximately a car length. It was noted during a Neptune Beach City Council workshop that many pedestrians and cyclists cross in groups (such as families) and often have luggage with them, such as beach carts, surfboards, and more. Therefore, it is important to ensure that the width of the splitter islands can comfortably accommodate these groups and their belongings. Enhanced pedestrian signing is recommended and can be supplemented by an educational

campaign for the beaches area. This signing should include some from of the "State Law Stop for Pedestrians" signing (series R1-5 or R1-6 in the MUTCD) shown in **Figure 5**. Lighting will also ensure that crossings at night are safer.

FIGURE 5 *In-Street "State Law Stop for Pedestrian within Crosswalk" (R1-5 and R1-6 series – MUTCD). Courtesy of FHWA, https://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/ch3.cfm*

There are other design elements that should also be considered. Rectangular Rapid Flashing Beacons (RRFBs) accompany the traditional W11-2 pedestrian warning signs and flash in a wig-wag manner once the associated pedestrian button is pushed. These can create safer crosswalks by turning a motorist's attention towards the pedestrian crosswalk. They can also increase yielding adherence, especially when used in conjunction with "State Law Stop for Pedestrians" signing. An RRFB assembly at a roundabout crossing is shown in **Figure 6.**

FIGURE 6 *RRFBs at a single lane roundabout in Edmonds, Washington. Courtesy of Carmanah Traffic, https://carmanahtraffic.com/*

Raised crosswalks (also known as speed tables) have been shown to increase motorist compliance to yielding to pedestrians. They also further help to reduce entering speeds of the motorists and can guide visually impaired pedestrians across the road. These raised, or "tabletop", crosswalks can be beneficial, but care must be taken to ensure they are the right solution for the roundabout, and any adverse impacts to roadway drainage also need to be investigated. A context-sensitive design will determine if raised crosswalks are the correct approach. If used, raised crosswalks can also be implemented with stamped pavement to further direct motorists' attention towards the crosswalk, provide a tactile surface for visually impaired pedestrians, and create an opportunity for intersection beautification.

Drainage impacts should also be mentioned. With the circulatory roadway sloping away from the center, inlets are usually placed on the outer curb line of the roundabout. By installing the raised crosswalks there might be some potential for pooling along the sides of the crosswalk, however, due to the slope this issue may be negligible. Adding inlets along the center for a constant grade throughout the roundabout should also be considered as a preventative method.

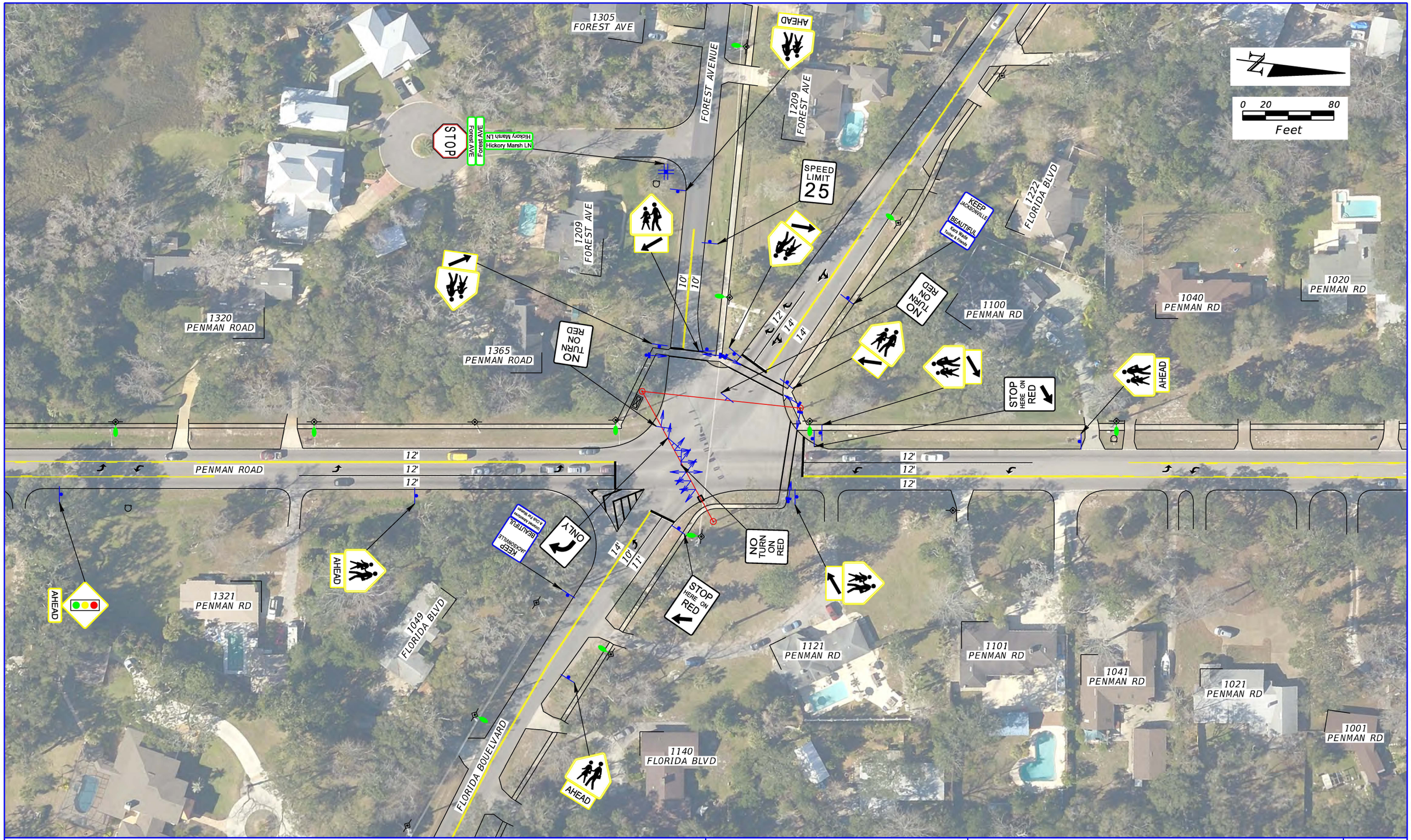
FIGURE 7 *Raised crosswalk in approach to a roundabout in Golden, Colorado. From Google Maps.*

6. CONCLUSIONS AND RECOMMENDATIONS

This roundabout analysis was conducted in order to determine (1) feasibility of roundabout based on the FDOT Roundabout Screening procedures, (2) operational performance of potential roundabout configurations, and (3) potential impacts based on preliminary design concepts.

Based on the favorable B/C ratio, operational results equal to/or better than the signal, and low impacts associated with the design, it is recommended to coordinate with the City of Neptune Beach on the selection of a roundabout design concept for further development. If designed appropriately, a roundabout can improve the safety and efficiency of the intersection of Penman Road with Florida Boulevard and Forest Avenue for all road users while providing an opportunity for the City of Neptune Beach to enhance the character of the intersection to complement the surrounding neighborhoods.

ATTACHMENT A
Data Collection



LEGEND:

- CONTROLLER CABINET
- TRAFFIC SIGNAL POLE
- SIGNAL HEAD
- PEDESTRIAN SIGNAL
- SIGN
- DELINEATOR
- POWER POLE
- LIGHT POLE
- RAILROAD GATE
- TRAFFIC ENFRACTION DETECTOR
- FIRE HYDRANT
- DITCH BOTTOM INLET
- MITERED END SECTION
- DRAINAGE INLET
- BUILDING

METRIC ENGINEERING, INC.
615 CRESCENT EXECUTIVE COURT
SUITE 524
LAKE MARY, FL 32746

CONDITION DIAGRAM
TRAFFIC ENGINEERING SERVICES
FLORIDA BOULEVARD @ PENMAN ROAD/FOREST AVE

PAGE NO.

COND

24-Hour Counts

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Site Code:
Station ID:
Florida Boulevard @ Penman Road & Forest Avenue
Latitude: 0' 0.0000 Undefined

Start Time	01-May-18 Tue	NB Penman	SB Penman	SEB Florida	NWB Florida	EB Forest				Total
12:00 AM		13	2	6	3	0				24
12:15		11	7	5	1	0				24
12:30		8	3	4	2	0				17
12:45		4	3	5	4	0				16
01:00		3	1	6	2	0				12
01:15		3	1	6	0	0				10
01:30		4	3	2	1	2				12
01:45		7	6	4	2	0				19
02:00		6	1	2	1	0				10
02:15		3	3	1	2	1				10
02:30		4	0	4	2	0				10
02:45		5	1	1	2	0				9
03:00		5	0	2	0	0				7
03:15		4	0	1	1	0				6
03:30		6	0	3	1	2				12
03:45		2	3	5	0	0				10
04:00		3	3	1	1	0				8
04:15		3	1	2	1	0				7
04:30		6	3	3	3	5				20
04:45		13	2	8	2	1				26
05:00		11	3	12	4	1				31
05:15		14	7	11	5	0				37
05:30		28	13	19	8	12				80
05:45		30	21	26	12	10				99
06:00		45	17	35	7	3				107
06:15		55	28	59	13	10				165
06:30		67	45	92	20	21				245
06:45		102	96	**151**	29	29				407
07:00		135	77	**177**	74	27				490
07:15		128	84	**137**	40	14				403
07:30		127	**93**	**158**	50	**32**				460
07:45		161	**123**	132	**58**	**37**				**511**
08:00		**189**	**101**	126	**53**	**32**				**501**
08:15		**160**	**140**	138	**59**	**38**				**535**
08:30		**134**	91	157	**64**	21				**467**
08:45		**178**	90	112	43	26				449
09:00		142	77	165	34	20				438
09:15		143	80	89	35	9				356
09:30		138	49	98	44	20				349
09:45		121	85	89	25	17				337
10:00		132	47	99	36	12				326
10:15		141	74	91	37	6				349
10:30		129	78	76	34	7				324
10:45		138	70	86	39	13				346
11:00		146	69	78	35	17				345
11:15		141	67	98	40	13				359
11:30		168	65	101	36	15				385
11:45		168	84	89	48	16				405
Total		3384	1917	2772	1013	489				9575
Percent		35.3%	20.0%	29.0%	10.6%	5.1%				
Peak	-	08:00	07:30	06:45	07:45	07:30	-	-	-	07:45
Vol.	-	661	457	623	234	139	-	-	-	2014
P.H.F.		0.874	0.816	0.880	0.914	0.914				0.941

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Site Code:
Station ID:
Florida Boulevard @ Penman Road & Forest Avenue
Latitude: 0' 0.0000 Undefined

Start Time	01-May-18 Tue	NB Penman	SB Penman	SEB Florida	NWB Florida	EB Forest				Total
12:00 PM		143	78	109	39	7				376
12:15		163	95	115	45	15				433
12:30		148	83	113	38	20				402
12:45		166	80	94	42	10				392
01:00		126	79	85	36	16				342
01:15		148	88	99	46	11				392
01:30		135	93	110	44	21				403
01:45		135	80	118	31	18				382
02:00		208	84	97	**100**	21				510
02:15		201	100	112	**90**	15				518
02:30		180	73	95	**68**	20				436
02:45		186	**119**	101	**69**	**25**				500
03:00		167	**98**	140	75	**26**				506
03:15		238	**121**	101	46	**16**				522
03:30		176	**79**	130	57	**24**				466
03:45		167	106	150	63	25				511
04:00		**217**	94	125	54	21				511
04:15		**213**	88	116	75	12				504
04:30		**209**	91	**166**	78	14				**558**
04:45		**271**	97	**135**	52	18				**573**
05:00		177	120	**150**	77	19				**543**
05:15		186	67	**193**	59	21				**526**
05:30		232	108	121	56	21				538
05:45		229	89	165	66	20				569
06:00		187	120	135	63	14				519
06:15		204	75	116	44	17				456
06:30		201	92	108	50	10				461
06:45		163	76	91	35	15				380
07:00		135	65	93	41	9				343
07:15		136	68	66	41	9				320
07:30		138	66	61	35	8				308
07:45		130	53	68	34	6				291
08:00		109	42	78	52	10				291
08:15		121	55	47	66	5				294
08:30		122	38	51	52	7				270
08:45		97	35	38	33	5				208
09:00		63	35	32	26	4				160
09:15		73	32	35	24	2				166
09:30		67	32	26	18	10				153
09:45		56	25	35	11	1				128
10:00		41	19	26	15	1				102
10:15		32	9	21	10	2				74
10:30		38	12	19	10	3				82
10:45		22	24	16	5	1				68
11:00		21	10	19	5	0				55
11:15		24	7	12	6	1				50
11:30		19	8	9	7	0				43
11:45		12	7	11	6	1				37
Total		6632	3215	4153	2095	577				16672
Percent		39.8%	19.3%	24.9%	12.6%	3.5%				
Peak	-	16:00	14:45	16:30	14:00	14:45	-	-	-	16:30
Vol.	-	910	417	644	327	91	-	-	-	2200
P.H.F.		0.839	0.862	0.834	0.818	0.875				0.960
Grand Total		10016	5132	6925	3108	1066				26247
Percent		38.2%	19.6%	26.4%	11.8%	4.1%				

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
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Site Code:
Station ID:
Florida Boulevard @ Penman Road & Forest Avenue
Latitude: 0' 0.0000 Undefined

Start Time	28-Apr-18 Sat	NB Penman	SB Penman	SEB Florida	NWB Florida	EB Forest				Total
12:00 AM		30	9	32	9	1				81
12:15		18	12	19	9	1				59
12:30		25	10	16	9	0				60
12:45		31	11	18	14	0				74
01:00		16	8	20	9	1				54
01:15		22	7	8	5	2				44
01:30		15	11	9	10	0				45
01:45		23	14	10	11	1				59
02:00		19	5	10	12	1				47
02:15		8	9	12	7	0				36
02:30		9	3	3	2	0				17
02:45		12	7	5	9	0				33
03:00		12	2	5	1	0				20
03:15		3	2	4	2	2				13
03:30		7	5	5	3	1				21
03:45		5	4	11	0	1				21
04:00		4	2	5	3	1				15
04:15		5	1	6	2	0				14
04:30		9	3	6	0	0				18
04:45		7	6	6	6	1				26
05:00		12	0	7	3	2				24
05:15		7	3	6	2	0				18
05:30		12	4	19	5	3				43
05:45		30	3	10	4	1				48
06:00		9	6	12	7	1				35
06:15		15	13	18	11	2				59
06:30		28	8	32	4	7				79
06:45		40	10	40	9	9				108
07:00		51	17	34	9	6				117
07:15		52	22	31	8	7				120
07:30		52	23	55	11	14				155
07:45		69	41	67	18	8				203
08:00		76	35	71	17	4				203
08:15		77	40	67	17	8				209
08:30		89	43	96	26	7				261
08:45		116	52	103	27	13				311
09:00		113	60	94	35	11				313
09:15		156	62	96	42	16				372
09:30		137	80	110	39	17				383
09:45		138	76	109	40	17				380
10:00		159	94	102	34	**18**				407
10:15		161	92	**119**	31	**14**				**417**
10:30		143	91	**148**	**53**	**24**				**459**
10:45		**178**	80	**135**	**41**	**18**				**452**
11:00		**173**	**96**	**114**	**47**	14				**444**
11:15		**145**	**92**	115	**41**	13				406
11:30		**167**	**98**	137	39	13				454
11:45		171	**116**	110	46	11				454
Total		2856	1488	2267	789	291				7691
Percent		37.1%	19.3%	29.5%	10.3%	3.8%				
Peak	-	10:45	11:00	10:15	10:30	10:00	-	-	-	10:15
Vol.	-	663	402	516	182	74	-	-	-	1772
P.H.F.		0.931	0.866	0.872	0.858	0.771				0.965

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Site Code:
Station ID:
Florida Boulevard @ Penman Road & Forest Avenue
Latitude: 0' 0.0000 Undefined

Start Time	28-Apr-18 Sat	NB Penman	SB Penman	SEB Florida	NWB Florida	EB Forest				Total
12:00 PM		194	**91**	89	40	25				**439**
12:15		165	**94**	90	35	11				**395**
12:30		169	**90**	137	45	13				**454**
12:45		165	**92**	118	79	16				**470**
01:00		**176**	89	86	41	14				406
01:15		**183**	89	92	53	10				427
01:30		**189**	90	108	46	20				453
01:45		**178**	87	80	51	11				407
02:00		156	82	97	55	7				397
02:15		162	84	106	58	15				425
02:30		139	70	92	49	10				360
02:45		130	105	**110**	**55**	**21**				421
03:00		158	85	**121**	**58**	**14**				436
03:15		130	73	**104**	**47**	**16**				370
03:30		190	71	**113**	**66**	**17**				457
03:45		143	65	107	40	10				365
04:00		178	78	78	54	19				407
04:15		142	86	94	46	10				378
04:30		127	83	83	52	12				357
04:45		179	67	111	46	9				412
05:00		141	86	109	57	11				404
05:15		132	87	98	42	10				369
05:30		139	70	109	41	19				378
05:45		134	77	78	38	11				338
06:00		134	73	91	40	20				358
06:15		122	60	93	40	15				330
06:30		132	60	80	33	17				322
06:45		114	68	73	28	12				295
07:00		132	62	60	26	5				285
07:15		97	59	87	33	12				288
07:30		101	59	75	31	11				277
07:45		98	62	72	29	11				272
08:00		101	55	69	27	5				257
08:15		98	55	71	27	7				258
08:30		88	41	47	25	8				209
08:45		76	47	48	23	10				204
09:00		95	28	48	14	5				190
09:15		77	21	40	22	7				167
09:30		68	31	30	18	6				153
09:45		56	37	40	22	1				156
10:00		51	26	64	22	4				167
10:15		63	24	41	22	1				151
10:30		54	15	48	15	1				133
10:45		55	17	37	15	4				128
11:00		48	23	32	18	8				129
11:15		47	23	29	8	4				111
11:30		26	15	29	15	1				86
11:45		33	19	29	9	1				91
Total		5765	2971	3743	1756	507				14742
Percent		39.1%	20.2%	25.4%	11.9%	3.4%				
Peak	-	13:00	12:00	14:45	14:45	14:45	-	-	-	12:00
Vol.	-	726	367	448	226	68	-	-	-	1758
P.H.F.		0.960	0.976	0.818	0.856	0.810				0.935
Grand Total		8621	4459	6010	2545	798				22433
Percent		38.4%	19.9%	26.8%	11.3%	3.6%				

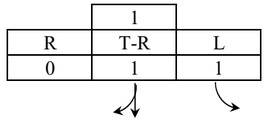
Turning Movement Counts

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

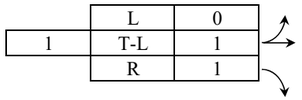
SUMMARY OF WEEKDAY VEHICLE MOVEMENTS

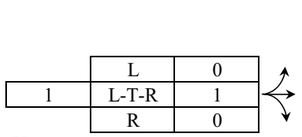
Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good
Road Condition: Good
City: Neptune Beach
County: Duval
Date: May 1, 2018
Remarks:

SB Street Name: Penman Road

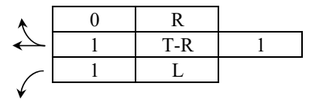


SEB Street Name:
Florida Boulevard

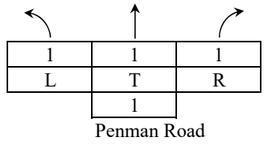




EB Street Name:
Forest Avenue



NWB Street Name:
Florida Boulevard



NB Street Name: Penman Road

Time	Northbound Penman Road					Southbound Penman Road					Total	Southeastbound Florida Boulevard					Northwestbound Florida Boulevard					Total	Eastbound Forest Avenue				Total
Begin/End	Hard Left	Left	Thru	Right	Total	Left	Thru	Bear Right	Right	Total	N/S	Left	Thru	Right	Hard Right	Total	Left	Bear Left	Thru	Right	Total	SEB/NWB	Hard Left	Left	Thru	Right	EB
7-8	8	218	281	44	**551**	47	309	8	13	**377**	**928**	8	177	419	0	**604**	38	10	141	33	**222**	**826**	3	19	19	69	**110**
8-9	34	211	381	35	**661**	38	364	7	13	**422**	**1083**	34	145	354	0	**533**	45	11	113	50	**219**	**752**	0	22	27	68	**117**
11-12	19	189	378	37	**623**	25	235	16	9	**285**	**908**	13	101	251	1	**366**	32	14	83	30	**159**	**525**	1	19	12	29	**61**
12-1	26	218	346	30	**620**	33	268	24	11	**336**	**956**	8	124	297	2	**431**	37	12	86	29	**164**	**595**	1	6	16	29	**52**
2-3	28	251	440	56	**775**	53	293	21	9	**376**	**1151**	11	105	289	0	**405**	37	35	186	69	**327**	**732**	4	17	27	33	**81**
3-4	32	216	455	45	**748**	40	331	19	14	**404**	**1152**	18	147	353	3	**521**	31	23	140	47	**241**	**762**	0	20	34	37	**91**
4-5	43	291	550	26	**910**	26	319	12	13	**370**	**1280**	24	161	357	0	**542**	21	27	158	53	**259**	**801**	0	8	22	35	**65**
5-6	54	212	504	54	**824**	41	299	16	28	**384**	**1208**	14	188	427	0	**629**	21	22	170	45	**258**	**887**	3	16	20	42	**81**
Total	**244**	**1806**	**3335**	**327**	**5712**	**303**	**2418**	**123**	**110**	**2954**	**8666**	**130**	**1148**	**2747**	**6**	**4031**	**262**	**154**	**1077**	**356**	**1849**	**5880**	**12**	**127**	**177**	**342**	**658**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

WEEKDAY PEDESTRIAN VOLUME SHEET

Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good

City: Neptune Beach
County: Duval
Date: May 1, 2018

Remarks: _____

SB Street Name: Penman Road

7-8	0	0	**0**
8-9	2	4	**6**
11-12	2	4	**6**
12-1	2	2	**4**
2-3	0	0	**0**
3-4	0	0	**0**
4-5	1	2	**3**
5-6	2	3	**5**
Total	**9**	**12**	**21**

7-8	1	1	**2**
8-9	2	5	**7**
11-12	0	4	**4**
12-1	2	0	**2**
2-3	0	0	**0**
3-4	1	1	**2**
4-5	0	4	**4**
5-6	3	2	**5**
Total	**9**	**15**	**24**

7-8	8-9	11-12	12-1	2-3	3-4	4-5	5-6	Total
1	0	3	1	0	2	1	1	**9**
0	2	2	0	0	4	1	1	**10**
1	**2**	**5**	**1**	**0**	**6**	**2**	**2**	**19**

SEB Street Name:
Florida Boulevard

NWB Street Name:
Florida Boulevard

EB Street Name:
Forest Avenue

7-8	0	0	**0**
8-9	0	0	**0**
11-12	0	0	**0**
12-1	0	0	**0**
2-3	0	0	**0**
3-4	0	0	**0**
4-5	0	0	**0**
5-6	0	0	**0**
Total	**0**	**0**	**0**

7-8	8-9	11-12	12-1	2-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

NB Street Name: Penman Road

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

WEEKDAY BICYCLE VOLUME SHEET

Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good

City: Neptune Beach
County: Duval
Date: May 1, 2018

Remarks: _____

SB Street Name: Penman Road

7-8	8-9	11-12	12-1	2-3	3-4	4-5	5-6	Total
1	2	1	0	8	3	5	2	**22**
7	4	0	1	2	4	1	5	**24**
8	**6**	**1**	**1**	**10**	**7**	**6**	**7**	**46**

N

7-8	3	4	**7**
8-9	4	3	**7**
11-12	0	2	**2**
12-1	1	2	**3**
2-3	3	7	**10**
3-4	4	3	**7**
4-5	3	4	**7**
5-6	1	9	**10**
Total	**19**	**34**	**53**

SEB Street Name:
Florida Boulevard

NWB Street Name:
Florida Boulevard

7-8	0	0	**0**
8-9	0	0	**0**
11-12	0	0	**0**
12-1	1	0	**1**
2-3	0	0	**0**
3-4	0	0	**0**
4-5	0	0	**0**
5-6	0	0	**0**
Total	**1**	**0**	**1**

7-8	1	4	**5**
8-9	4	1	**5**
11-12	0	2	**2**
12-1	2	2	**4**
2-3	2	7	**9**
3-4	3	1	**4**
4-5	2	3	**5**
5-6	0	5	**5**
Total	**14**	**25**	**39**

EB Street Name:
Forest Avenue

7-8	8-9	11-12	12-1	2-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

NB Street Name: Penman Road

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Location:
Florida Boulevard @ Penman Road/
Forest Avenue

File Name : Florida Blvd @ Penman Rd_Forest Ave
Site Code :
Start Date : 5/1/2018
Page No : 1

Groups Printed- Autos - Trucks

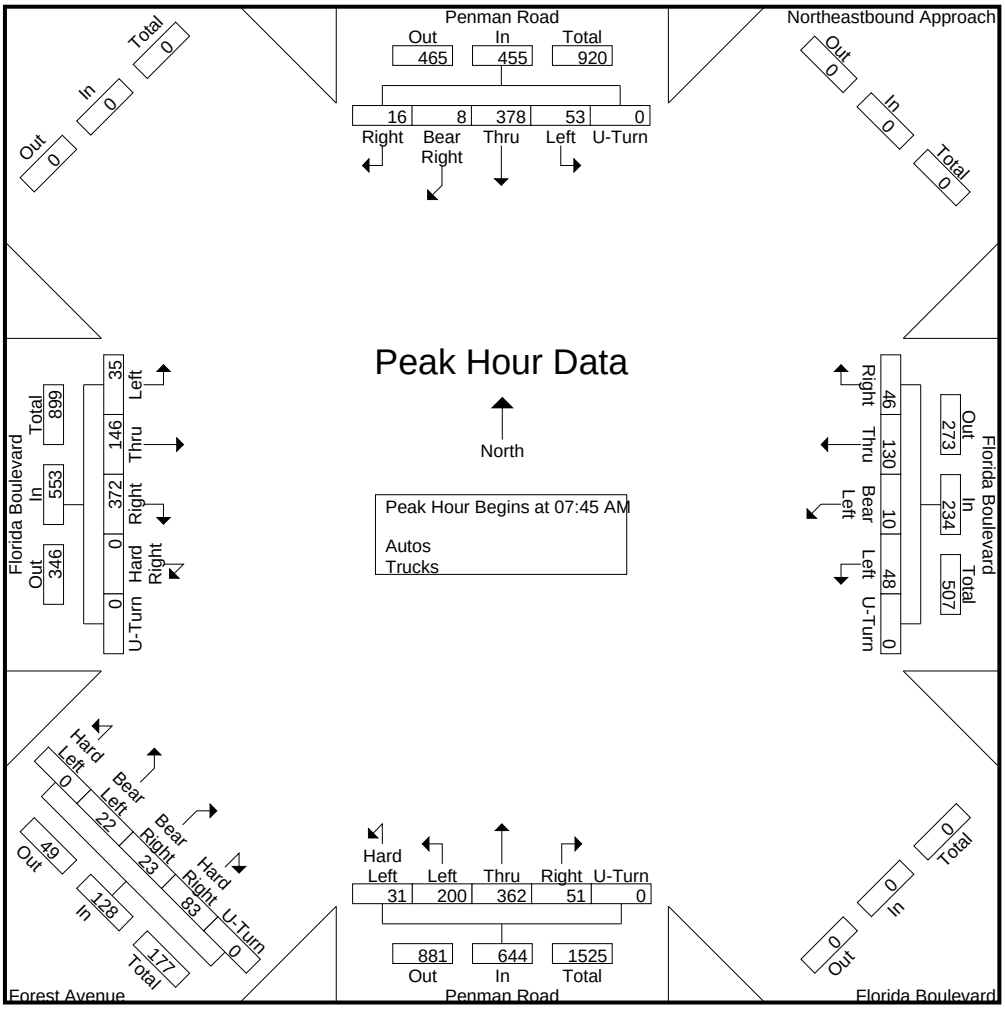
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
07:00 AM	8	65	3	1	0	77	7	2	58	7	0	74	1	61	66	7	0	135	3	6	6	12	0	27	1	75	101	0	0	177	490
07:15 AM	7	74	0	3	0	84	11	3	17	9	0	40	1	61	63	3	0	128	0	1	4	9	0	14	2	33	102	0	0	137	403
07:30 AM	13	75	2	3	0	93	10	3	32	5	0	50	4	44	72	7	0	127	0	4	5	23	0	32	2	37	119	0	0	158	460
07:45 AM	19	95	3	6	0	123	10	2	34	12	0	58	2	52	80	27	0	161	0	8	4	25	0	37	3	32	97	0	0	132	511
Total	47	309	8	13	0	377	38	10	141	33	0	222	8	218	281	44	0	551	3	19	19	69	0	110	8	177	419	0	0	604	1864
08:00 AM	6	90	0	5	0	101	15	1	28	9	0	53	13	63	105	8	0	189	0	4	3	25	0	32	6	35	85	0	0	126	501
08:15 AM	18	114	3	5	0	140	11	3	33	12	0	59	8	48	90	14	0	160	0	8	11	19	0	38	18	36	84	0	0	138	535
08:30 AM	10	79	2	0	0	91	12	4	35	13	0	64	8	37	87	2	0	134	0	2	5	14	0	21	8	43	106	0	0	157	467
08:45 AM	4	81	2	3	0	90	7	3	17	16	0	43	5	63	99	11	0	178	0	8	8	10	0	26	2	31	79	0	0	112	449
Total	38	364	7	13	0	422	45	11	113	50	0	219	34	211	381	35	0	661	0	22	27	68	0	117	34	145	354	0	0	533	1952
11:00 AM	7	56	5	1	0	69	8	4	16	7	0	35	8	43	83	12	0	146	0	4	5	8	0	17	3	21	54	0	0	78	345
11:15 AM	5	53	7	2	0	67	6	1	23	10	0	40	3	37	95	6	0	141	0	3	2	8	0	13	7	24	67	0	0	98	359
11:30 AM	6	54	2	3	0	65	6	6	18	6	0	36	4	56	99	9	0	168	1	7	2	5	0	15	1	31	69	0	0	101	385
11:45 AM	7	72	2	3	0	84	12	3	26	7	0	48	4	53	101	10	0	168	0	5	3	8	0	16	2	25	61	1	0	89	405
Total	25	235	16	9	0	285	32	14	83	30	0	159	19	189	378	37	0	623	1	19	12	29	0	61	13	101	251	1	0	366	1494
12:00 PM	9	60	5	4	0	78	12	6	15	6	0	39	5	55	77	6	0	143	0	1	3	3	0	7	4	38	66	1	0	109	376
12:15 PM	10	78	4	3	0	95	11	1	23	10	0	45	11	49	93	10	0	163	0	3	4	8	0	15	2	34	79	0	0	115	433
12:30 PM	6	64	9	4	0	83	9	2	19	8	0	38	5	55	83	5	0	148	1	1	5	13	0	20	2	28	82	1	0	113	402
12:45 PM	8	66	6	0	0	80	5	3	29	5	0	42	5	59	93	9	0	166	0	1	4	5	0	10	0	24	70	0	0	94	392
Total	33	268	24	11	0	336	37	12	86	29	0	164	26	218	346	30	0	620	1	6	16	29	0	52	8	124	297	2	0	431	1603
02:00 PM	11	67	5	1	0	84	7	11	65	17	0	100	8	70	120	10	0	208	2	5	9	5	0	21	2	28	67	0	0	97	510
02:15 PM	13	77	5	5	0	100	13	10	50	17	0	90	6	67	111	17	0	201	0	4	3	8	0	15	5	36	71	0	0	112	518
02:30 PM	10	55	6	2	0	73	4	6	38	20	0	68	4	55	104	17	0	180	2	3	7	8	0	20	1	18	76	0	0	95	436
02:45 PM	19	94	5	1	0	119	13	8	33	15	0	69	10	59	105	12	0	186	0	5	8	12	0	25	3	23	75	0	0	101	500
Total	53	293	21	9	0	376	37	35	186	69	0	327	28	251	440	56	0	775	4	17	27	33	0	81	11	105	289	0	0	405	1964
03:00 PM	11	79	4	4	0	98	14	4	36	21	0	75	4	46	107	10	0	167	0	5	8	13	0	26	10	36	92	2	0	140	506
03:15 PM	9	104	4	4	0	121	4	2	30	10	0	46	11	70	144	13	0	238	0	4	7	5	0	16	3	29	69	0	0	101	522
03:30 PM	9	65	2	3	0	79	9	7	34	7	0	57	6	58	102	10	0	176	0	7	7	10	0	24	4	37	89	0	0	130	466
03:45 PM	11	83	9	3	0	106	4	10	40	9	0	63	11	42	102	12	0	167	0	4	12	9	0	25	1	45	103	1	0	150	511
Total	40	331	19	14	0	404	31	23	140	47	0	241	32	216	455	45	0	748	0	20	34	37	0	91	18	147	353	3	0	521	2005
04:00 PM	0	90	3	1	0	94	5	4	34	11	0	54	15	70	129	3	0	217	0	2	11	8	0	21	2	32	91	0	0	125	511
04:15 PM	8	73	3	4	0	88	3	8	51	13	0	75	6	76	121	10	0	213	0	0	4	8	0	12	4	34	78	0	0	116	504
04:30 PM	11	74	2	4	0	91	8	6	48	16	0	78	7	62	135	5	0	209	0	2	3	9	0	14	9	54	103	0	0	166	558
04:45 PM	7	82	4	4	0	97	5	9	25	13	0	52	15	83	165	8	0	271	0	4	4	10	0	18	9	41	85	0	0	135	573
Total	26	319	12	13	0	370	21	27	158	53	0	259	43	291	550	26	0	910	0	8	22	35	0	65	24	161	357	0	0	542	2146
05:00 PM	12	94	8	6	0	120	4	6	51	16	0	77	8	46	111	12	0	177	2	3	6	8	0	19	4	46	100	0	0	150	543
05:15 PM	3	56	3	5	0	67	7	2	44	6	0	59	11	41	123	11	0	186	0	5	4	12	0	21	3	54	136	0	0	193	526
05:30 PM	12	81	3	12	0	108	6	6	32	12	0	56	14	58	146	14	0	232	1	2	5	13	0	21	4	27	90	0	0	121	538
05:45 PM	14	68	2	5	0	89	4	8	43	11	0	66	21	67	124	17	0	229	0	6	5	9	0	20	3	61	101	0	0	165	569
Total	41	299	16	28	0	384	21	22	170	45	0	258	54	212	504	54	0	824	3	16	20	42	0	81	14	188	427	0	0	629	2176
Grand Total	303	2418	123	110	0	2954	262	154	1077	356	0	1849	244	1806	3335	327	0	5712	12	127	177	342	0	658	130	1148	2747	6	0	4031	15204
Apprch %	10.3	81.9	4.2	3.7	0		14.2	8.3	58.2	19.3	0		4.3	31.6	58.4	5.7	0		1.8	19.3	26.9	52	0		3.2	28.5	68.1	0.1	0		
Total %	2	15.9	0.8	0.7	0	19.4	1.7	1	7.1	2.3	0	12.2	1.6	11.9	21.9	2.2	0	37.6	0.1	0.8	1.2	2.2	0	4.3	0.9	7.6	18.1	0	0	26.5	
Autos	299	2385	120	107	0	2911	256	148	1044	343	0	1791	240	1764	3285	323	0	5612	11	126	169	337	0	643	127	1119	2674	6	0	3926	14883
% Autos	98.7	98.6	97.6	97.3	0	98.5	97.7	96.1	96.9	96.3	0	96.9	98.4	97.7	98.5	98.8	0	98.2	91.7	99.2	95.5	98.5	0	97.7	97.7	97.5	97.3	100	0	97.4	97.9
Trucks	4	33	3	3	0	43	6	6	33	13	0	58	4	42	50	4	0	100	1	1	8	5	0	15	3	29	73	0	0	105	321
% Trucks	1.3	1.4	2.4	2.7	0	1.5	2.3	3.9	3.1	3.7	0	3.1	1.6	2.3	1.5	1.2	0	1.8	8.3	0.8	4.5	1.5	0	2.3	2.3	2.5	2.7	0	0	2.6	2.1

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : Florida Blvd @ Penman Rd_Forest Ave
Site Code :
Start Date : 5/1/2018
Page No : 2

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 07:45 AM																															
07:45 AM	19	95	3	6	0	123	10	2	34	12	0	58	2	52	80	27	0	161	0	8	4	25	0	37	3	32	97	0	0	132	511
08:00 AM	6	90	0	5	0	101	15	1	28	9	0	53	13	63	105	8	0	189	0	4	3	25	0	32	6	35	85	0	0	126	501
08:15 AM	18	114	3	5	0	140	11	3	33	12	0	59	8	48	90	14	0	160	0	8	11	19	0	38	18	36	84	0	0	138	535
08:30 AM	10	79	2	0	0	91	12	4	35	13	0	64	8	37	87	2	0	134	0	2	5	14	0	21	8	43	106	0	0	157	467
Total Volume	53	378	8	16	0	455	48	10	130	46	0	234	31	200	362	51	0	644	0	22	23	83	0	128	35	146	372	0	0	553	2014
% App. Total	11.6	83.1	1.8	3.5	0		20.5	4.3	55.6	19.7	0		4.8	31.1	56.2	7.9	0		0	17.2	18	64.8	0		6.3	26.4	67.3	0	0		
PHF	.697	.829	.667	.667	.000	.813	.800	.625	.929	.885	.000	.914	.596	.794	.862	.472	.000	.852	.000	.688	.523	.830	.000	.842	.486	.849	.877	.000	.000	.881	.941

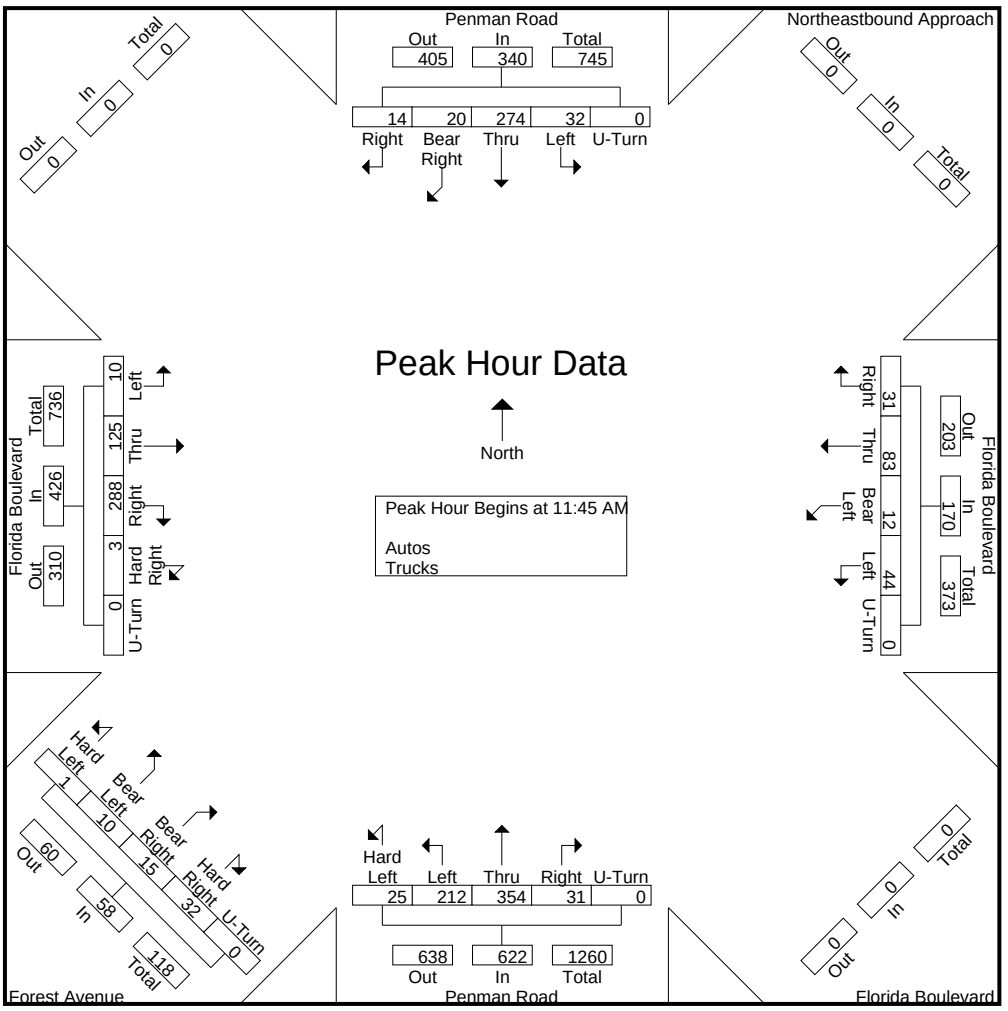


Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : Florida Blvd @ Penman Rd_Forest Ave
Site Code :
Start Date : 5/1/2018
Page No : 3

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 11:45 AM																															
11:45 AM	7	72	2	3	0	84	12	3	26	7	0	48	4	53	101	10	0	168	0	5	3	8	0	16	2	25	61	1	0	89	405
12:00 PM	9	60	5	4	0	78	12	6	15	6	0	39	5	55	77	6	0	143	0	1	3	3	0	7	4	38	66	1	0	109	376
12:15 PM	10	78	4	3	0	95	11	1	23	10	0	45	11	49	93	10	0	163	0	3	4	8	0	15	2	34	79	0	0	115	433
12:30 PM	6	64	9	4	0	83	9	2	19	8	0	38	5	55	83	5	0	148	1	1	5	13	0	20	2	28	82	1	0	113	402
Total Volume	32	274	20	14	0	340	44	12	83	31	0	170	25	212	354	31	0	622	1	10	15	32	0	58	10	125	288	3	0	426	1616
% App. Total	9.4	80.6	5.9	4.1	0		25.9	7.1	48.8	18.2	0		4	34.1	56.9	5	0		1.7	17.2	25.9	55.2	0		2.3	29.3	67.6	0.7	0		
PHF	.800	.878	.556	.875	.000	.895	.917	.500	.798	.775	.000	.885	.568	.964	.876	.775	.000	.926	.250	.500	.750	.615	.000	.725	.625	.822	.878	.750	.000	.926	.933

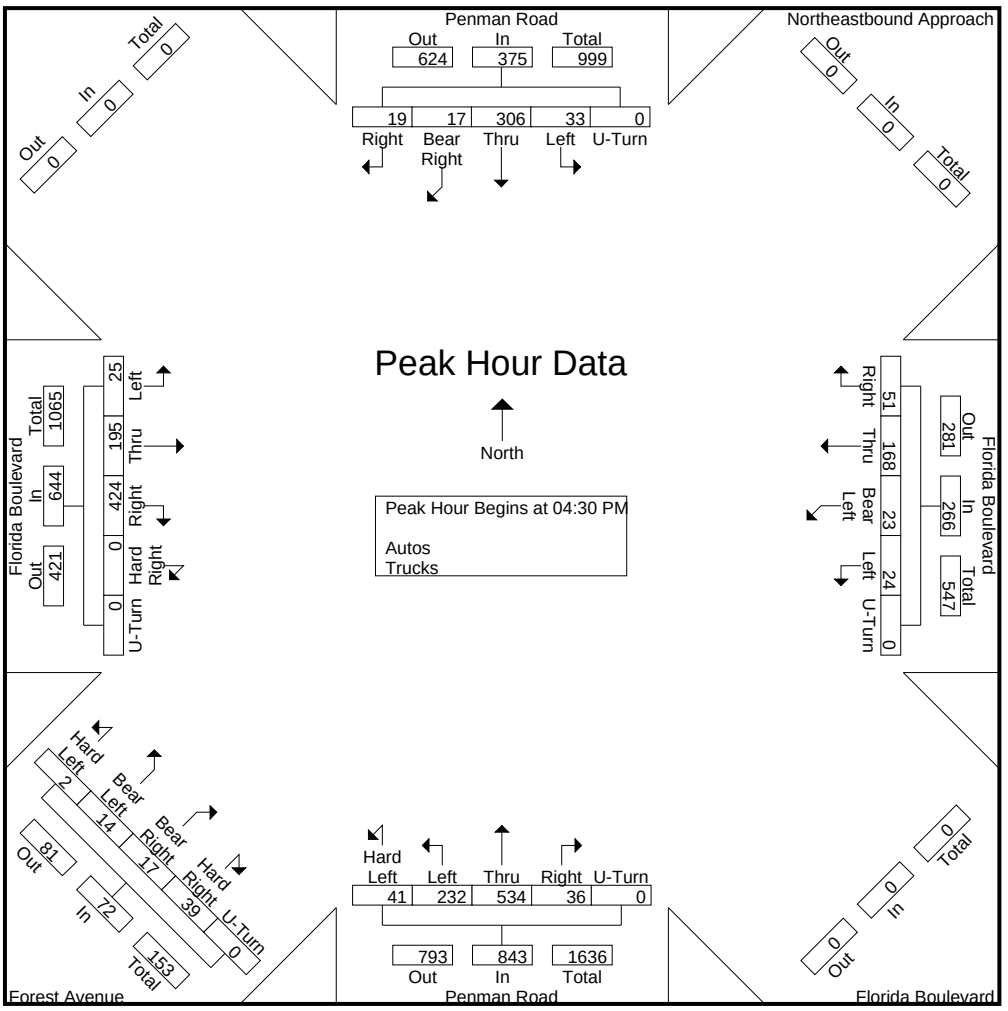


Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : Florida Blvd @ Penman Rd_Forest Ave
Site Code :
Start Date : 5/1/2018
Page No : 4

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 04:30 PM																															
04:30 PM	11	74	2	4	0	91	8	6	48	16	0	78	7	62	135	5	0	209	0	2	3	9	0	14	9	54	103	0	0	166	558
04:45 PM	7	82	4	4	0	97	5	9	25	13	0	52	15	83	165	8	0	271	0	4	4	10	0	18	9	41	85	0	0	135	573
05:00 PM	12	94	8	6	0	120	4	6	51	16	0	77	8	46	111	12	0	177	2	3	6	8	0	19	4	46	100	0	0	150	543
05:15 PM	3	56	3	5	0	67	7	2	44	6	0	59	11	41	123	11	0	186	0	5	4	12	0	21	3	54	136	0	0	193	526
Total Volume	33	306	17	19	0	375	24	23	168	51	0	266	41	232	534	36	0	843	2	14	17	39	0	72	25	195	424	0	0	644	2200
% App. Total	8.8	81.6	4.5	5.1	0		9	8.6	63.2	19.2	0		4.9	27.5	63.3	4.3	0		2.8	19.4	23.6	54.2	0		3.9	30.3	65.8	0	0		
PHF	.688	.814	.531	.792	.000	.781	.750	.639	.824	.797	.000	.853	.683	.699	.809	.750	.000	.778	.250	.700	.708	.813	.000	.857	.694	.903	.779	.000	.000	.834	.960



Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Location:
Florida Boulevard @ Penman Road/
Forest Avenue

File Name : Florida Blvd @ Penman Rd_Forest Ave
Site Code :
Start Date : 5/1/2018
Page No : 1

Groups Printed- Trucks

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	1	1	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	6
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0	2	1	0	0	3	8
07:30 AM	0	3	0	0	0	3	0	0	1	0	0	1	1	2	1	0	0	4	0	1	1	0	0	2	0	0	3	0	0	3	13
07:45 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	1	0	1	0	1	1	0	0	2	11
Total	1	4	0	0	0	5	0	0	2	1	0	3	1	11	5	0	0	17	0	1	1	1	0	3	0	3	7	0	0	10	38
08:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	0	1	0	0	1	0	1	3	0	0	4	10
08:15 AM	1	3	0	1	0	5	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	0	0	1	0	0	3	0	0	3	12
08:30 AM	0	0	0	0	0	0	1	1	1	0	0	3	0	1	0	0	0	1	0	0	1	0	0	1	0	0	3	0	0	3	8
08:45 AM	0	1	1	0	0	2	0	0	0	1	0	1	0	2	3	1	0	6	0	0	1	1	0	2	0	1	0	0	0	1	12
Total	1	5	1	1	0	8	1	1	1	1	0	4	0	3	10	1	0	14	0	0	4	1	0	5	0	2	9	0	0	11	42
11:00 AM	0	0	1	0	0	1	0	0	2	0	0	2	1	0	4	1	0	6	0	0	0	0	0	0	0	0	1	0	0	1	10
11:15 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	1	3	0	0	4	0	0	0	1	0	1	1	1	3	0	0	5	14
11:30 AM	0	1	0	0	0	1	1	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	8
11:45 AM	0	2	0	0	0	2	1	0	1	1	0	3	0	1	2	1	0	4	0	0	0	0	0	0	0	1	2	0	0	3	12
Total	0	5	1	0	0	6	2	1	6	1	0	10	1	2	9	2	0	14	0	0	0	1	0	1	1	4	8	0	0	13	44
12:00 PM	0	1	1	0	0	2	0	1	0	0	0	1	1	1	1	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	9
12:15 PM	0	0	0	0	0	0	1	0	0	2	0	3	1	2	1	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	8
12:30 PM	2	2	0	1	0	5	0	0	0	1	0	1	0	2	1	0	0	3	0	0	0	1	0	1	0	1	3	0	0	4	14
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	1	0	8	0	0	0	0	0	0	0	0	5	0	0	5	13
Total	2	3	1	1	0	7	1	1	0	3	0	5	2	9	6	1	0	18	0	0	0	1	0	1	0	2	11	0	0	13	44
02:00 PM	0	0	0	0	0	0	0	1	9	1	0	11	0	2	0	0	0	2	0	0	1	0	0	1	0	1	3	0	0	4	18
02:15 PM	0	2	0	0	0	2	1	0	1	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	2	3	0	0	5	10
02:30 PM	0	2	0	0	0	2	0	1	0	2	0	3	0	2	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	10
02:45 PM	0	4	0	0	0	4	0	0	2	0	0	2	0	1	5	0	0	6	0	0	0	0	0	0	1	0	4	0	0	5	17
Total	0	8	0	0	0	8	1	2	12	3	0	18	0	6	5	0	0	11	0	0	1	0	0	1	1	3	13	0	0	17	55
03:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	2	1	0	0	3	6
03:15 PM	0	0	0	1	0	1	1	0	2	0	0	3	0	0	1	0	0	1	0	0	1	0	0	1	0	1	5	0	0	6	12
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	1	0	0	1	0	2	3	0	0	5	9
03:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	4	0	0	5	0	0	0	0	0	0	0	2	4	0	0	6	12
Total	0	0	0	1	0	1	1	0	3	1	0	5	0	3	8	0	0	11	0	0	2	0	0	2	0	7	13	0	0	20	39
04:00 PM	0	2	0	0	0	2	0	0	1	1	0	2	0	1	2	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	9
04:15 PM	0	4	0	0	0	4	0	1	3	2	0	6	0	2	1	0	0	3	0	0	0	0	0	0	0	0	4	0	0	4	17
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3	0	0	5	0	0	0	0	0	0	0	1	1	0	0	2	8
04:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	4
Total	0	7	0	0	0	7	0	1	5	3	0	9	0	6	6	0	0	12	0	0	0	0	0	0	0	5	5	0	0	10	38
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	2	0	0	5	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:30 PM	0	1	0	0	0	1	0	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	7
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	2	5
Total	0	1	0	0	0	1	0	0	4	0	0	4	0	2	1	0	0	3	1	0	0	1	0	2	1	3	7	0	0	11	21
Grand Total	4	33	3	3	0	43	6	6	33	13	0	58	4	42	50	4	0	100	1	1	8	5	0	15	3	29	73	0	0	105	321
Apprch %	9.3	76.7	7	7	0		10.3	10.3	56.9	22.4	0		4	42	50	4	0		6.7	6.7	53.3	33.3	0		2.9	27.6	69.5	0	0		
Total %	1.2	10.3	0.9	0.9	0	13.4	1.9	1.9	10.3	4	0	18.1	1.2	13.1	15.6	1.2	0	31.2	0.3	0.3	2.5	1.6	0	4.7	0.9	9	22.7	0	0	32.7	

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

SUMMARY OF WEEKEND VEHICLE MOVEMENTS

Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good
Road Condition: Good
City: Neptune Beach
County: Duval
Date: April 28, 2018

Remarks:

SB Street Name: Penman Road

	1	
R	T-R	L
0	1	1

N

SEB Street Name:
Florida Boulevard

	L	0
1	T-L	1
	R	1

0	R	
1	T-R	1
1	L	

NWB Street Name:
Florida Boulevard

	L	0
1	L-T-R	1
	R	0

EB Street Name:
Forest Avenue

1	1	1
L	T	R
	1	

NB Street Name: Penman Road

Time	Northbound Penman Road					Southbound Penman Road					Total	Southeastbound Florida Boulevard					Northwestbound Florida Boulevard					Total	Eastbound Forest Avenue				Total
Begin/End	Hard Left	Left	Thru	Right	Total	Left	Thru	Bear Right	Right	Total	N/S	Left	Thru	Right	Hard Right	Total	Left	Bear Left	Thru	Right	Total	SEB/NWB	Hard Left	Left	Thru	Right	EB
10-11	24	188	317	112	**641**	38	289	18	12	**357**	**998**	8	197	294	5	**504**	30	5	89	35	**159**	**663**	0	8	28	38	**74**
11-12	30	218	368	40	**656**	48	327	17	10	**402**	**1058**	4	146	324	2	**476**	37	12	78	46	**173**	**649**	3	13	6	29	**51**
12-1	26	211	413	43	**693**	30	306	17	14	**367**	**1060**	14	144	276	0	**434**	45	12	90	52	**199**	**633**	0	18	14	33	**65**
1-2	35	243	398	50	**726**	29	294	14	18	**355**	**1081**	5	110	249	2	**366**	52	8	88	43	**191**	**557**	1	9	11	34	**55**
2-3	26	172	350	39	**587**	30	283	20	8	**341**	**928**	4	112	289	0	**405**	52	11	108	46	**217**	**622**	1	13	12	27	**53**
3-4	37	211	335	38	**621**	27	246	15	6	**294**	**915**	13	144	286	2	**445**	39	12	127	33	**211**	**656**	0	15	13	29	**57**
4-5	25	235	321	45	**626**	23	265	16	10	**314**	**940**	11	92	263	0	**366**	41	27	95	35	**198**	**564**	3	12	13	22	**50**
5-6	20	175	318	33	**546**	23	261	24	12	**320**	**866**	17	107	270	0	**394**	22	12	106	38	**178**	**572**	1	17	16	17	**51**
Total	**223**	**1653**	**2820**	**400**	**5096**	**248**	**2271**	**141**	**90**	**2750**	**7846**	**76**	**1052**	**2251**	**11**	**3390**	**318**	**99**	**781**	**328**	**1526**	**4916**	**9**	**105**	**113**	**229**	**456**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

WEEKEND PEDESTRIAN VOLUME SHEET

Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good

City: Neptune Beach
County: Duval
Date: April 28, 2018

Remarks: _____

SB Street Name: Penman Road

10-11	0	2	**2**
11-12	1	2	**3**
12-1	0	0	**0**
1-2	2	1	**3**
2-3	1	1	**2**
3-4	1	1	**2**
4-5	0	1	**1**
5-6	1	2	**3**
Total	**6**	**8**	**14**

10-11	0	2	**2**
11-12	3	0	**3**
12-1	2	0	**2**
1-2	0	0	**0**
2-3	1	2	**3**
3-4	0	1	**1**
4-5	1	0	**1**
5-6	0	3	**3**
Total	**7**	**5**	**12**

10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	Total
1	0	0	3	0	0	0	0	**4**
1	2	0	1	0	0	0	1	**5**
2	**2**	**0**	**4**	**0**	**0**	**0**	**1**	**9**

SEB Street Name:
Florida Boulevard

EB Street Name:
Forest Avenue

NWB Street Name:
Florida Boulevard

10-11	0	0	**0**
11-12	0	0	**0**
12-1	0	0	**0**
1-2	0	0	**0**
2-3	0	0	**0**
3-4	0	0	**0**
4-5	0	0	**0**
5-6	0	0	**0**
Total	**0**	**0**	**0**

10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

NB Street Name: Penman Road

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

WEEKEND BICYCLE VOLUME SHEET

Location: Florida Boulevard @ Penman Road & Forest Avenue
North/ South Street: Penman Road
East/ West Street: Florida Boulevard & Forest Avenue
Observer(s): Miovision
Weather: Good

City: Neptune Beach
County: Duval
Date: April 28, 2018

Remarks: _____

SB Street Name: Penman Road

10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	Total
4	0	1	1	0	0	4	13	**23**
5	2	11	9	0	4	6	10	**47**
9	**2**	**12**	**10**	**0**	**4**	**10**	**23**	**70**

10-11	6	8	**14**
11-12	2	2	**4**
12-1	6	5	**11**
1-2	1	6	**7**
2-3	2	0	**2**
3-4	4	7	**11**
4-5	2	4	**6**
5-6	9	1	**10**
Total	**32**	**33**	**65**

SEB Street Name:
Florida Boulevard

NWB Street Name:
Florida Boulevard

10-11	0	0	**0**
11-12	0	0	**0**
12-1	0	0	**0**
1-2	0	0	**0**
2-3	0	0	**0**
3-4	0	0	**0**
4-5	0	0	**0**
5-6	0	0	**0**
Total	**0**	**0**	**0**

10-11	3	5	**8**
11-12	2	0	**2**
12-1	3	0	**3**
1-2	2	3	**5**
2-3	0	2	**2**
3-4	3	6	**9**
4-5	4	0	**4**
5-6	4	0	**4**
Total	**21**	**16**	**37**

EB Street Name:
Forest Avenue

10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

NB Street Name: Penman Road

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Location:
Florida Boulevard @ Penman Road &
Forest Avenue

File Name : florida blvd @ penman rd_forest ave (weekend)
Site Code :
Start Date : 4/28/2018
Page No : 1

Groups Printed- Autos - Trucks

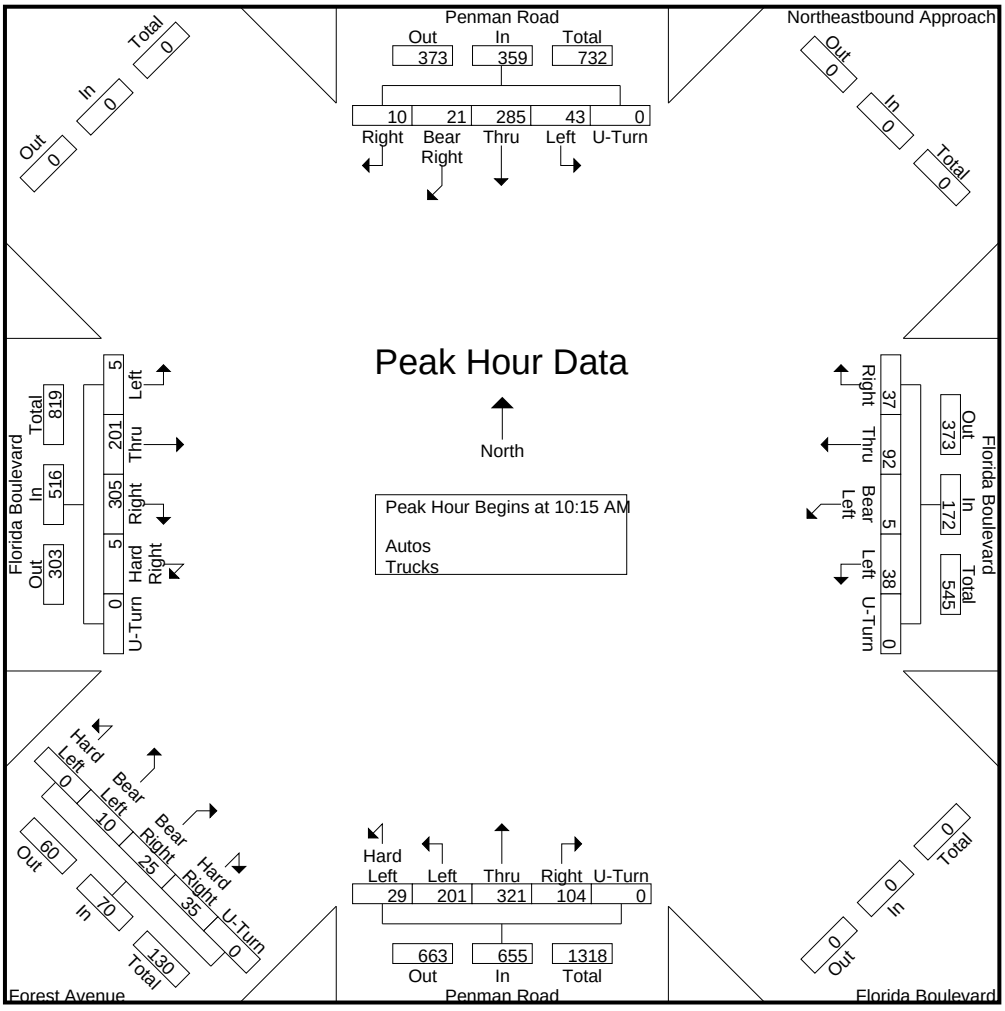
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
10:00 AM	8	80	4	2	0	94	4	1	17	12	0	34	3	49	87	20	0	159	0	0	5	13	0	18	3	36	63	0	0	102	407
10:15 AM	11	72	4	5	0	92	6	2	16	7	0	31	12	44	79	26	0	161	0	1	6	7	0	14	2	44	69	4	0	119	417
10:30 AM	10	69	7	5	0	91	7	2	37	7	0	53	6	41	61	35	0	143	0	4	8	12	0	24	1	61	86	0	0	148	459
10:45 AM	9	68	3	0	0	80	13	0	19	9	0	41	3	54	90	31	0	178	0	3	9	6	0	18	2	56	76	1	0	135	452
Total	38	289	18	12	0	357	30	5	89	35	0	159	24	188	317	112	0	641	0	8	28	38	0	74	8	197	294	5	0	504	1735
11:00 AM	13	76	7	0	0	96	12	1	20	14	0	47	8	62	91	12	0	173	0	2	2	10	0	14	0	40	74	0	0	114	444
11:15 AM	12	75	3	2	0	92	4	3	22	12	0	41	9	51	78	7	0	145	1	4	4	4	0	13	2	32	80	1	0	115	406
11:30 AM	10	81	4	3	0	98	13	4	14	8	0	39	7	54	96	10	0	167	2	3	0	8	0	13	2	38	96	1	0	137	454
11:45 AM	13	95	3	5	0	116	8	4	22	12	0	46	6	51	103	11	0	171	0	4	0	7	0	11	0	36	74	0	0	110	454
Total	48	327	17	10	0	402	37	12	78	46	0	173	30	218	368	40	0	656	3	13	6	29	0	51	4	146	324	2	0	476	1758
12:00 PM	8	72	5	6	0	91	7	1	18	14	0	40	5	56	122	11	0	194	0	5	4	16	0	25	4	30	55	0	0	89	439
12:15 PM	8	81	4	1	0	94	3	3	20	9	0	35	1	54	103	7	0	165	0	3	1	7	0	11	6	30	54	0	0	90	395
12:30 PM	9	73	5	3	0	90	8	3	20	14	0	45	6	56	98	9	0	169	0	5	4	4	0	13	3	41	93	0	0	137	454
12:45 PM	5	80	3	4	0	92	27	5	32	15	0	79	14	45	90	16	0	165	0	5	5	6	0	16	1	43	74	0	0	118	470
Total	30	306	17	14	0	367	45	12	90	52	0	199	26	211	413	43	0	693	0	18	14	33	0	65	14	144	276	0	0	434	1758
01:00 PM	6	74	3	6	0	89	14	2	15	10	0	41	9	46	112	9	0	176	1	4	3	6	0	14	2	26	57	1	0	86	406
01:15 PM	7	73	3	6	0	89	15	2	25	11	0	53	11	73	87	12	0	183	0	0	1	9	0	10	0	27	65	0	0	92	427
01:30 PM	11	72	4	3	0	90	12	3	24	7	0	46	8	60	104	17	0	189	0	5	3	12	0	20	2	33	72	1	0	108	453
01:45 PM	5	75	4	3	0	87	11	1	24	15	0	51	7	64	95	12	0	178	0	0	4	7	0	11	1	24	55	0	0	80	407
Total	29	294	14	18	0	355	52	8	88	43	0	191	35	243	398	50	0	726	1	9	11	34	0	55	5	110	249	2	0	366	1693
02:00 PM	10	66	5	1	0	82	14	3	28	10	0	55	1	51	94	10	0	156	0	3	2	2	0	7	2	28	67	0	0	97	397
02:15 PM	6	71	5	2	0	84	17	2	28	11	0	58	10	46	99	7	0	162	1	3	3	8	0	15	0	23	83	0	0	106	425
02:30 PM	6	57	4	3	0	70	8	3	29	9	0	49	9	38	84	8	0	139	0	2	2	6	0	10	1	27	64	0	0	92	360
02:45 PM	8	89	6	2	0	105	13	3	23	16	0	55	6	37	73	14	0	130	0	5	5	11	0	21	1	34	75	0	0	110	421
Total	30	283	20	8	0	341	52	11	108	46	0	217	26	172	350	39	0	587	1	13	12	27	0	53	4	112	289	0	0	405	1603
03:00 PM	9	70	4	2	0	85	18	2	32	6	0	58	10	55	81	12	0	158	0	4	4	6	0	14	5	41	73	2	0	121	436
03:15 PM	9	56	5	3	0	73	9	3	29	6	0	47	10	44	68	8	0	130	0	4	6	6	0	16	2	40	62	0	0	104	370
03:30 PM	5	62	3	1	0	71	8	5	41	12	0	66	16	61	104	9	0	190	0	4	3	10	0	17	4	30	79	0	0	113	457
03:45 PM	4	58	3	0	0	65	4	2	25	9	0	40	1	51	82	9	0	143	0	3	0	7	0	10	2	33	72	0	0	107	365
Total	27	246	15	6	0	294	39	12	127	33	0	211	37	211	335	38	0	621	0	15	13	29	0	57	13	144	286	2	0	445	1628
04:00 PM	3	65	3	7	0	78	10	10	21	13	0	54	3	67	91	17	0	178	1	5	2	11	0	19	4	16	58	0	0	78	407
04:15 PM	10	73	3	0	0	86	12	5	22	7	0	46	7	55	72	8	0	142	0	2	5	3	0	10	2	28	64	0	0	94	378
04:30 PM	7	67	7	2	0	83	11	5	30	6	0	52	7	47	66	7	0	127	2	3	3	4	0	12	3	17	63	0	0	83	357
04:45 PM	3	60	3	1	0	67	8	7	22	9	0	46	8	66	92	13	0	179	0	2	3	4	0	9	2	31	78	0	0	111	412
Total	23	265	16	10	0	314	41	27	95	35	0	198	25	235	321	45	0	626	3	12	13	22	0	50	11	92	263	0	0	366	1554
05:00 PM	7	70	4	5	0	86	4	5	35	13	0	57	6	48	78	9	0	141	0	6	3	2	0	11	9	31	69	0	0	109	404
05:15 PM	6	73	5	3	0	87	3	0	28	11	0	42	7	37	80	8	0	132	1	2	3	4	0	10	3	21	74	0	0	98	369
05:30 PM	5	54	8	3	0	70	5	1	25	10	0	41	4	47	79	9	0	139	0	7	5	7	0	19	4	32	73	0	0	109	378
05:45 PM	5	64	7	1	0	77	10	6	18	4	0	38	3	43	81	7	0	134	0	2	5	4	0	11	1	23	54	0	0	78	338
Total	23	261	24	12	0	320	22	12	106	38	0	178	20	175	318	33	0	546	1	17	16	17	0	51	17	107	270	0	0	394	1489
Grand Total	248	2271	141	90	0	2750	318	99	781	328	0	1526	223	1653	2820	400	0	5096	9	105	113	229	0	456	76	1052	2251	11	0	3390	13218
Apprch %	9	82.6	5.1	3.3	0		20.8	6.5	51.2	21.5	0		4.4	32.4	55.3	7.8	0		2	23	24.8	50.2	0		2.2	31	66.4	0.3	0		
Total %	1.9	17.2	1.1	0.7	0	20.8	2.4	0.7	5.9	2.5	0	11.5	1.7	12.5	21.3	3	0	38.6	0.1	0.8	0.9	1.7	0	3.4	0.6	8	17	0.1	0	25.6	
Autos	248	2255	140	89	0	2732	317	99	775	325	0	1516	221	1637	2802	399	0	5059	9	104	113	228	0	454	76	1046	2227	10	0	3359	13120
% Autos	100	99.3	99.3	98.9	0	99.3	99.7	100	99.2	99.1	0	99.3	99.1	99	99.4	99.8	0	99.3	100	99	100	99.6	0	99.6	100	99.4	98.9	90.9	0	99.1	99.3
Trucks	0	16	1	1	0	18	1	0	6	3	0	10	2	16	18	1	0	37	0	1	0	1	0	2	0	6	24	1	0	31	98
% Trucks	0	0.7	0.7	1.1	0	0.7	0.3	0	0.8	0.9	0	0.7	0.9	1	0.6	0.2	0	0.7	0	1	0	0.4	0	0.4	0	0.6	1.1	9.1	0	0.9	0.7

Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : florida blvd @ penman rd_forest ave (weekend)
Site Code :
Start Date : 4/28/2018
Page No : 2

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 12:45 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 10:15 AM																															
10:15 AM	11	72	4	5	0	92	6	2	16	7	0	31	12	44	79	26	0	161	0	1	6	7	0	14	2	44	69	4	0	119	417
10:30 AM	10	69	7	5	0	91	7	2	37	7	0	53	6	41	61	35	0	143	0	4	8	12	0	24	1	61	86	0	0	148	459
10:45 AM	9	68	3	0	0	80	13	0	19	9	0	41	3	54	90	31	0	178	0	3	9	6	0	18	2	56	76	1	0	135	452
11:00 AM	13	76	7	0	0	96	12	1	20	14	0	47	8	62	91	12	0	173	0	2	2	10	0	14	0	40	74	0	0	114	444
Total Volume	43	285	21	10	0	359	38	5	92	37	0	172	29	201	321	104	0	655	0	10	25	35	0	70	5	201	305	5	0	516	1772
% App. Total	12	79.4	5.8	2.8	0		22.1	2.9	53.5	21.5	0		4.4	30.7	49	15.9	0		0	14.3	35.7	50	0		1	39	59.1	1	0		
PHF	.827	.938	.750	.500	.000	.935	.731	.625	.622	.661	.000	.811	.604	.810	.882	.743	.000	.920	.000	.625	.694	.729	.000	.729	.625	.824	.887	.313	.000	.872	.965

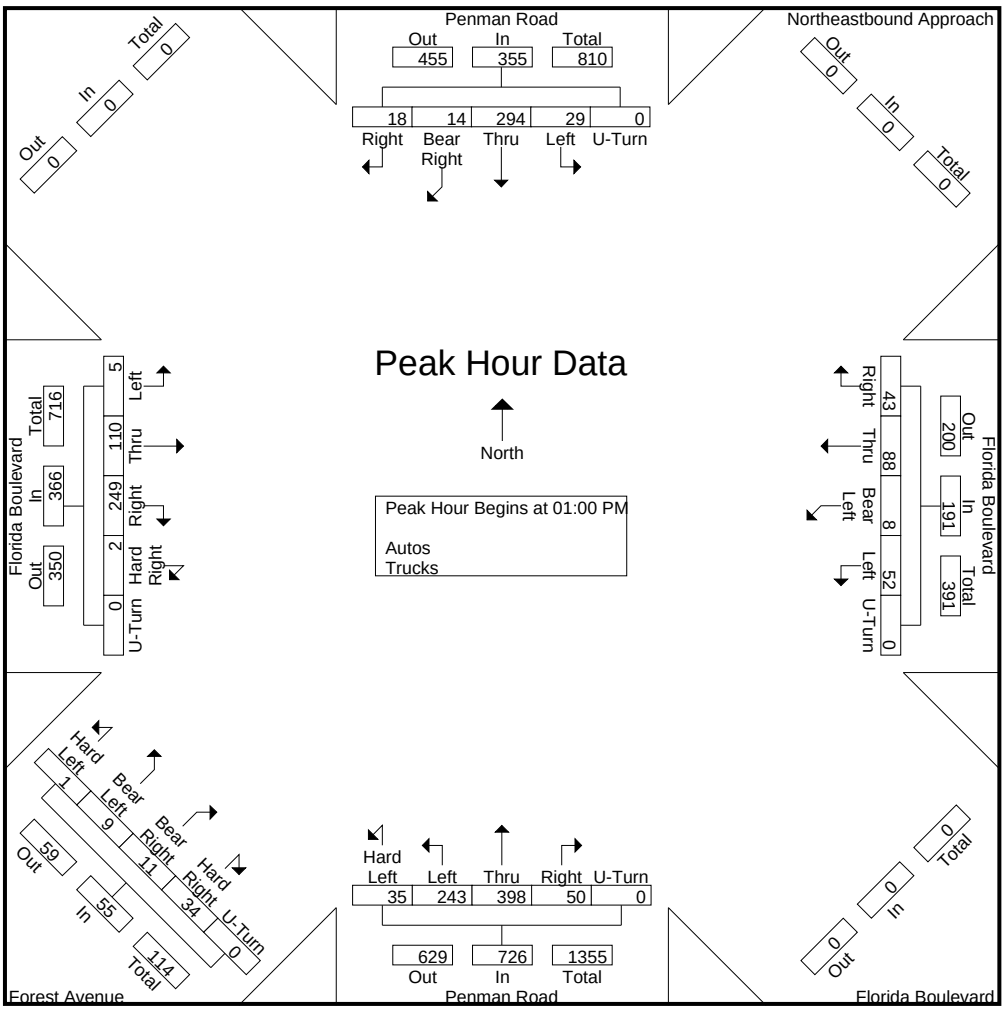


Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : florida blvd @ penman rd_forest ave (weekend)
Site Code :
Start Date : 4/28/2018
Page No : 3

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 02:45 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 01:00 PM																															
01:00 PM	6	74	3	6	0	89	14	2	15	10	0	41	9	46	112	9	0	176	1	4	3	6	0	14	2	26	57	1	0	86	406
01:15 PM	7	73	3	6	0	89	15	2	25	11	0	53	11	73	87	12	0	183	0	0	1	9	0	10	0	27	65	0	0	92	427
01:30 PM	11	72	4	3	0	90	12	3	24	7	0	46	8	60	104	17	0	189	0	5	3	12	0	20	2	33	72	1	0	108	453
01:45 PM	5	75	4	3	0	87	11	1	24	15	0	51	7	64	95	12	0	178	0	0	4	7	0	11	1	24	55	0	0	80	407
Total Volume	29	294	14	18	0	355	52	8	88	43	0	191	35	243	398	50	0	726	1	9	11	34	0	55	5	110	249	2	0	366	1693
% App. Total	8.2	82.8	3.9	5.1	0		27.2	4.2	46.1	22.5	0		4.8	33.5	54.8	6.9	0		1.8	16.4	20	61.8	0		1.4	30.1	68	0.5	0		
PHF	.659	.980	.875	.750	.000	.986	.867	.667	.880	.717	.000	.901	.795	.832	.888	.735	.000	.960	.250	.450	.688	.708	.000	.688	.625	.833	.865	.500	.000	.847	.934

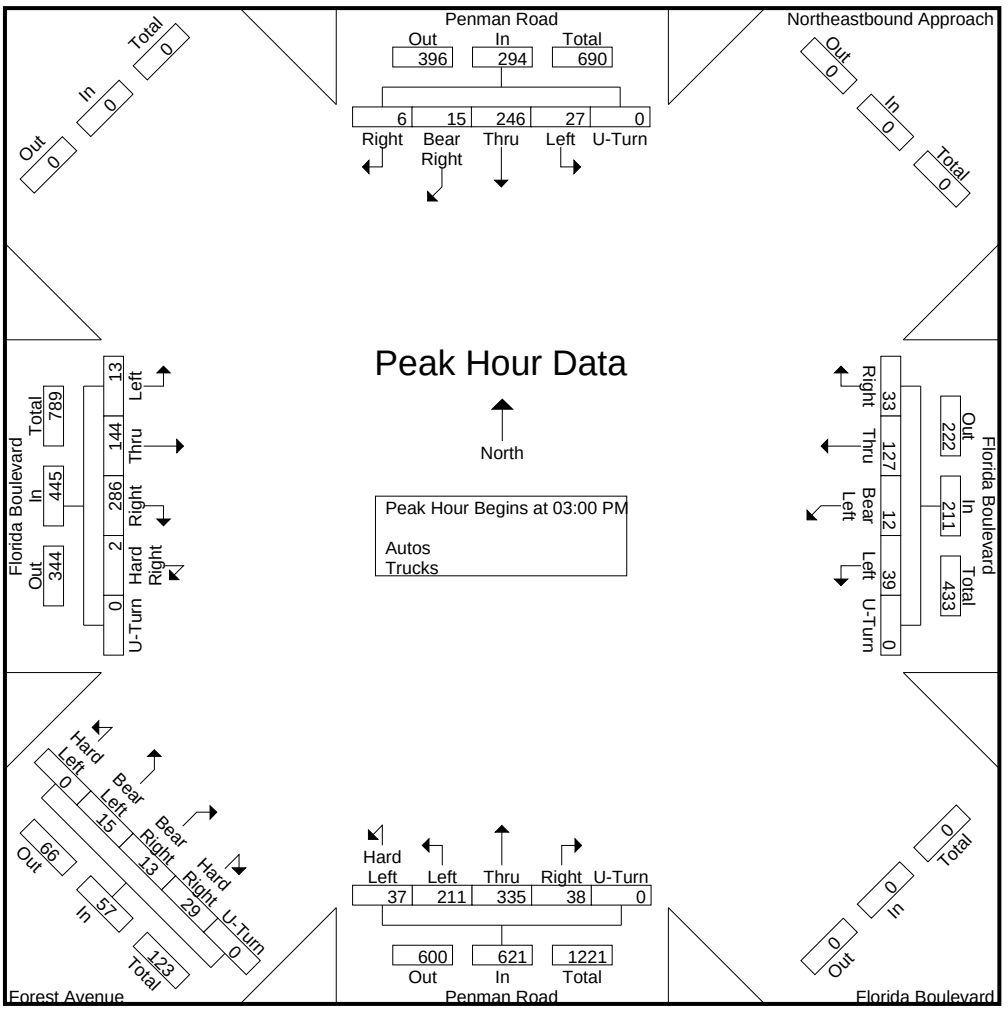


Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

File Name : florida blvd @ penman rd_forest ave (weekend)
Site Code :
Start Date : 4/28/2018
Page No : 4

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 03:00 PM																															
03:00 PM	9	70	4	2	0	85	18	2	32	6	0	58	10	55	81	12	0	158	0	4	4	6	0	14	5	41	73	2	0	121	436
03:15 PM	9	56	5	3	0	73	9	3	29	6	0	47	10	44	68	8	0	130	0	4	6	6	0	16	2	40	62	0	0	104	370
03:30 PM	5	62	3	1	0	71	8	5	41	12	0	66	16	61	104	9	0	190	0	4	3	10	0	17	4	30	79	0	0	113	457
03:45 PM	4	58	3	0	0	65	4	2	25	9	0	40	1	51	82	9	0	143	0	3	0	7	0	10	2	33	72	0	0	107	365
Total Volume	27	246	15	6	0	294	39	12	127	33	0	211	37	211	335	38	0	621	0	15	13	29	0	57	13	144	286	2	0	445	1628
% App. Total	9.2	83.7	5.1	2	0		18.5	5.7	60.2	15.6	0		6	34	53.9	6.1	0		0	26.3	22.8	50.9	0		2.9	32.4	64.3	0.4	0		
PHF	.750	.879	.750	.500	.000	.865	.542	.600	.774	.688	.000	.799	.578	.865	.805	.792	.000	.817	.000	.938	.542	.725	.000	.838	.650	.878	.905	.250	.000	.919	.891



Metric Engineering, Inc.

615 Crescent Executive Court
Suite 524
Lake Mary, FL 32746

Location:
Florida Boulevard @ Penman Road &
Forest Avenue

File Name : florida blvd @ penman rd_forest ave (weekend)
Site Code :
Start Date : 4/28/2018
Page No : 1

Groups Printed- Trucks

	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	U-Turn	App. Total	Left	Thru	Right	Hard Right	U-Turn	App. Total	Int. Total
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
10:15 AM	0	3	0	1	0	4	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	2	7
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
10:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	5
Total	0	4	0	1	0	5	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	1	7	0	0	8	15
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	5
11:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3
11:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
Total	0	1	0	0	0	1	0	0	0	2	0	2	0	4	4	0	0	8	0	0	0	0	0	0	0	1	5	0	0	6	17
12:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	1	2	0	0	3	6
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	1	0	1	0	2	0	2	4	0	0	6	14
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
01:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	4
01:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	5
Total	0	3	0	0	0	3	0	0	2	0	0	2	0	0	4	1	0	5	0	0	0	0	0	0	0	2	0	1	0	3	13
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	2	1	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	6
02:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	1	0	0	0	1	0	0	1	0	0	1	1	4	3	0	0	8	0	0	0	0	0	0	0	0	3	0	0	3	13
03:00 PM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	1	0	0	0	1	0	0	1	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	7
04:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	3	0	0	0	3	1	0	1	1	0	3	0	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	1	0	0	3	0	0	1	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	9
Grand Total	0	16	1	1	0	18	1	0	6	3	0	10	2	16	18	1	0	37	0	1	0	1	0	2	0	6	24	1	0	31	98
Apprch %	0	88.9	5.6	5.6	0		10	0	60	30	0		5.4	43.2	48.6	2.7	0		0	50	0	50	0		0	19.4	77.4	3.2	0		
Total %	0	16.3	1	1	0	18.4	1	0	6.1	3.1	0	10.2	2	16.3	18.4	1	0	37.8	0	1	0	1	0	2	0	6.1	24.5	1	0	31.6	

Existing Signal Timing

Traffic Signal Controller Parameters
Duval County, City of Jacksonville, Florida

Intersection: Penman & Florida/Forest

Controller Type: 3000

Time of Day Events

Day	Time	Cycle	Offset	Split	Lag LT
M-F	12:00 AM	Free			
SAT	12:00 AM	Free			
SUN	12:00 AM	Free			

Phase Allocations

Plan								
Cycle	1	2	3	4	5	6	7	10
Length								
Offset 1								
Offset 2								
Offset 3								
Hold								
Seconds Per Cycle								
1								
2								
3								
4								
5								
6								
7								
8								
Max Rcl								

Preemption

Trk C	Grn	Amb	Red	Cycle		Exit

Phase Times

		INT	EXT	AMB	RED	MX1	WLK	DW
SLT	PHASE 1	3	4	3	1	30		
N&S	PHASE 2	12	3	4	1	40		
NLT	PHASE 3	6	3	3	1	15		
ELT	PHASE 4	6	3	3	1	12		
E&W	PHASE 5	4	3	4	1	60		
N/U	PHASE 6	0	0	0	0	0		
Forest	PHASE 7	3	3	3	1	25		
Ped	PHASE 8	3	3	3	0	20	7	13

Overlaps

A	B	C	D
1+2	4+5	2+3	5

Sequence

1	2	3	4	5	7	8

Note: 1) Phase 8 is Exclusive Ped.
2) Ph 2+5 are Dummy Phases
3) Sequencial operation
4) Ph. 2 Min. recall

Historical Traffic Volumes

Florida Department of Transportation
Transportation Statistics Office
2016 Historical AADT Report

County: 72 - DUVAL

Site: 9046 - PENMAN RD. S. OF 12TH AVE. N. (HPMS)

Year	AADT	Direction 1	Direction 2	*K Factor	D Factor	T Factor
2016	18000 C	N 0	S 0	9.00	56.20	1.50
2015	17500 C	N 0	S 0	9.00	56.30	1.30
2014	17500 C	N	S	9.00	56.40	1.30
2013	17600 C	N 8900	S 8700	9.00	57.10	1.30
2012	18000 C	N 0	S 0	9.00	57.80	2.10
2011	17500 C	N 0	S 0	9.00	56.60	1.40
2010	20000 C	N 0	S 0	9.75	56.38	1.50
2009	17500 C	N 0	S 0	9.48	57.48	0.90
2008	17000 C	N 0	S 0	9.68	57.27	1.50

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; R = Fourth Year Estimate
V = Fifth Year Estimate; 6 = Sixth Year Estimate; X = Unknown
*K Factor: Starting with Year 2011 is StandardK, Prior years are K30 values

Florida Department of Transportation
Transportation Statistics Office
2016 Historical AADT Report

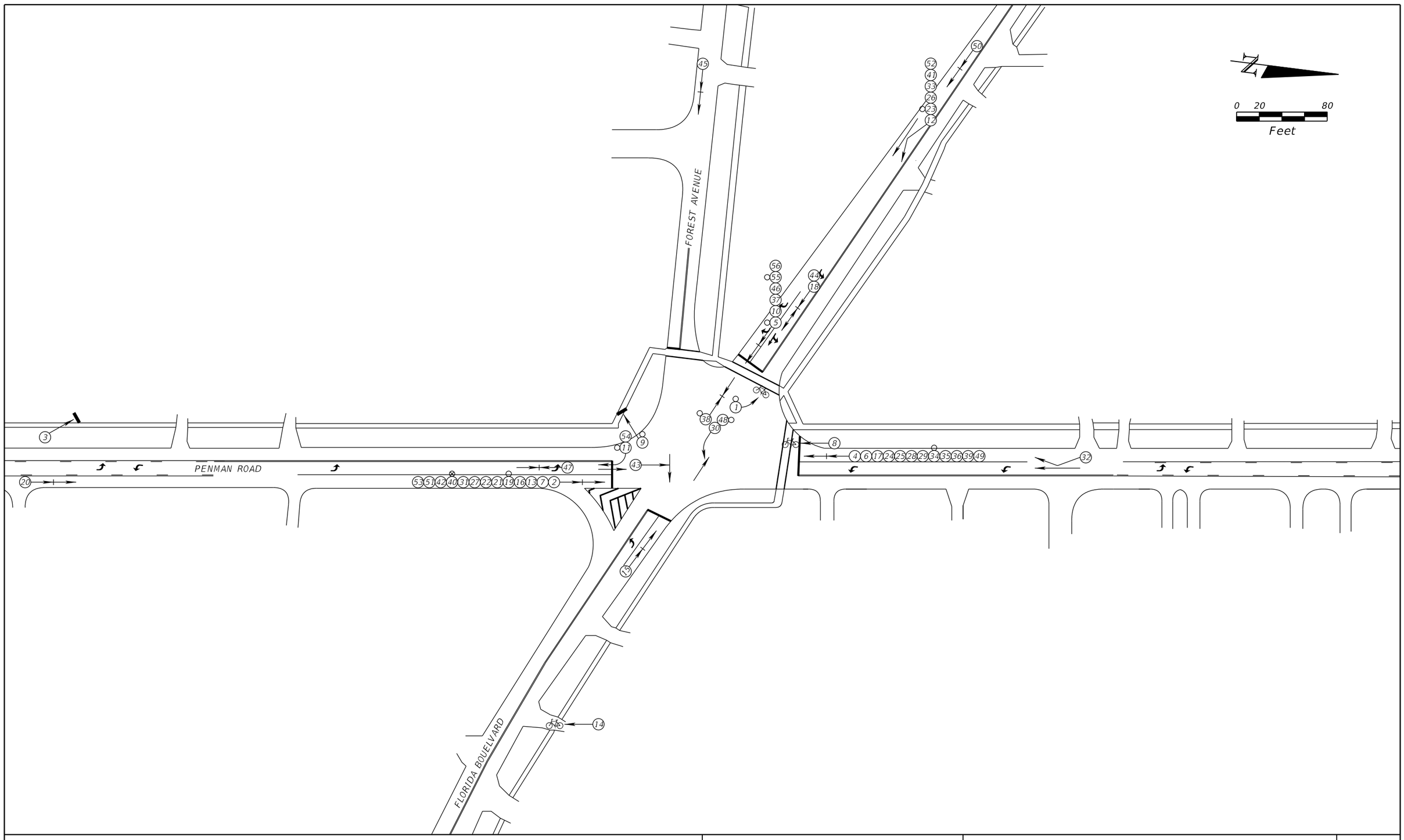
County: 72 - DUVAL

Site: 9144 - FLORIDA BLVD. .1 MI. E. OF PENMAN RD.

Year	AADT	Direction 1	Direction 2	*K Factor	D Factor	T Factor
2016	5100 S	0	0	9.00	56.20	1.50
2015	5000 F	0	0	9.00	56.30	1.10
2014	4900 C	E	W	9.00	56.40	1.00
2013	5900 S	0	0	9.00	57.10	1.00
2012	5900 F	0	0	9.00	57.80	2.10
2011	5800 C	E 0	W 0	9.00	56.60	1.40

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; R = Fourth Year Estimate
V = Fifth Year Estimate; 6 = Sixth Year Estimate; X = Unknown
*K Factor: Starting with Year 2011 is StandardK, Prior years are K30 values

Crash Data



LEGEND:

⊗ FATAL
○ INJURY
ⓧ COLLISION NUMBER

REAR END
SIDESWIPE
OUT OF CONTROL
BACKED INTO
RIGHT TURN
HIT PEDESTRIAN
U-TURN
ANGLE
LEFT TURN
OVERTURNED
HEAD ON
HIT FIXED OBJECT
HIT BICYCLE
HIT SIGN
HIT UTILITY POLE
RAN INTO DITCH/CULVERT

METRIC ENGINEERING, INC.
615 CRESCENT EXECUTIVE COURT
SUITE 524
LAKE MARY, FL 32746

COLLISION DIAGRAM
TRAFFIC ENGINEERING SERVICES
FLORIDA BOULEVARD @ PENMAN ROAD/FOREST AVE

PAGE NO.

COLL

COLLISION DATA

Road: Florida Boulevard
Intersecting Roadway: Penman Road & Forest Avenue
Source Data: CARS and Signal Four Analytics

County: Duval
City: Neptune Beach

Study Period From 1/1/2013 to 12/31/2017 60 Months

No.	HSMV No.	Date	Day	Time	Driver 1 Age	Alcohol/Drugs Involved	Lighting Condition	Roadway Surface	Weather	Number of Fatalities	Number of Injuries	Most Severe Injury	Harmful Event	Property Damage	Contributing Cause
1	83982011	4/9/13	Tue	7:52	41	None	Daylight	Dry	Clear	0	1	2	Bike	$2,050	FTYRW
2	83982014	4/11/13	Thu	16:35	52	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
3	83982030	5/10/13	Fri	2:17	23	None	Dark (SL)	Dry	Clear	0	0	1	Hit Tree	$3,000	Careless Driving
4	83982036	5/17/13	Fri	21:01	42	Alcohol	Dark (SL)	Dry	Clear	0	0	1	Rear End	$7,000	DUI
5	83982060	6/23/13	Sun	16:10	19	None	Daylight	Dry	Clear	0	1	3	Rear End	$0	Careless Driving
6	83982122	9/9/13	Mon	13:40	33	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
7	83982148	10/22/13	Tue	19:47	Hit & Run	None	Dark (SL)	Wet	Cloudy	0	0	1	Rear End	$800	Careless Driving
8	83982177	12/2/13	Mon	19:21	33	None	Dark (No SL)	Dry	Clear	0	0	1	Bike	$0	Disregarded Traffic Signal
9	83982183	12/12/13	Thu	8:50	23	None	Daylight	Dry	Clear	0	1	2	Hit Tree	$5,000	Unknown
10	83982185	12/16/13	Mon	15:25	73	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
11	83982190	12/22/13	Sun	12:30	26	None	Daylight	Dry	Clear	0	1	4	Right Turn	$2,500	Improper Turn
12	83982203	1/23/14	Thu	15:00	24	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$1,200	Improper Passing
13	83982250	3/26/14	Wed	18:13	19	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
14	83982258	3/31/14	Mon	14:30	53	None	Daylight	Dry	Clear	0	0	1	Bike	$200	Careless Driving
15	83982395	10/4/14	Sat	14:30	62	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
16	83982403	10/15/14	Wed	16:15	39	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
17	83982404	10/17/14	Fri	7:10	Hit & Run	None	Dawn	Dry	Clear	0	0	1	Rear End	$5,000	Careless Driving
18	83982409	10/22/14	Wed	10:20	83	None	Daylight	Dry	Clear	0	0	1	Backed Into	$0	Improper Backing
19	83982412	10/27/14	Mon	16:45	57	None	Daylight	Dry	Clear	0	1	2	Rear End	$1,000	Careless Driving
20	83982419	11/19/14	Wed	7:50	32	None	Daylight	Dry	Cloudy	0	0	1	Rear End	$2,000	Followed Too Closely
21	83982521	5/6/15	Wed	2:15	Hit & Run	None	Dark (No SL)	Dry	Clear	0	0	1	Rear End	$500	Careless Driving
22	83982522	5/6/15	Wed	14:30	52	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
23	83982550	6/22/15	Mon	8:50	24	None	Daylight	Dry	Cloudy	0	1	2	Sideswipe	$20,000	Improper Passing
24	83982555	6/29/15	Mon	8:30	66	None	Daylight	Dry	Cloudy	0	0	1	Rear End	$0	Careless Driving
25	83982572	7/16/15	Thu	13:55	23	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
26	83982621	9/30/15	Wed	8:04	62	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$0	Improper Passing
27	83982622	10/1/15	Thu	7:25	60	None	Daylight	Dry	Cloudy	0	1	2	Rear End	$1,000	Followed Too Closely
28	83982627	10/2/15	Fri	12:10	53	None	Daylight	Dry	Cloudy	0	0	1	Rear End	$0	Careless Driving
29	83982670	11/21/15	Sat	18:22	35	None	Dark (SL)	Wet	Cloudy	0	0	1	Rear End	$1,500	Careless Driving
30	83982685	12/20/15	Sun	19:52	19	None	Dark (SL)	Dry	Cloudy	0	0	1	Left Turn	$6,000	FTYRW
31	83982733	3/8/16	Tue	19:59	Hit & Run	None	Dark (SL)	Dry	Clear	0	0	1	Rear End	$100	Careless Driving
32	83982736	3/15/16	Tue	8:08	40	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$3,000	Improper Lane Change
33	83982738	3/15/16	Tue	18:27	20	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$0	Improper Lane Change
34	83982761	4/25/16	Mon	10:57	82	None	Daylight	Dry	Clear	0	1	2	Rear End	$0	Careless Driving
35	83982834	8/15/16	Mon	7:16	41	None	Daylight	Dry	Clear	0	0	1	Rear End	$6,000	Followed Too Closely
36	83982857	9/13/16	Tue	17:15	25	None	Daylight	Wet	Cloudy	0	0	1	Rear End	$0	Careless Driving
37	83982867	9/28/16	Wed	14:15	37	None	Daylight	Dry	Clear	0	0	1	Rear End	$2,000	Careless Driving
38	83982880	10/20/16	Thu	15:09	31	None	Daylight	Dry	Clear	0	2	3	Head On	$37,000	Unknown
39	83982881	10/21/16	Fri	15:09	Hit & Run	None	Daylight	Dry	Clear	0	0	1	Rear End	$250	Careless Driving

40	83982887	11/4/16	Fri	7:15	Hit & Run	None	Dusk	Dry	Clear	0	1	6	Rear End	$2,000	Unknown
41	83982888	11/4/16	Fri	10:30	19	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$2,500	Careless Driving
42	83982900	12/6/16	Tue	11:05	25	None	Daylight	Wet	Cloudy	0	0	1	Rear End	$0	Followed Too Closely
43	83982907	12/10/16	Sat	9:14	50	None	Daylight	Dry	Clear	0	0	1	Angle	$5,000	Disregarded Traffic Signal
44	83982963	3/18/17	Sat	14:35	Hit & Run	None	Daylight	Dry	Clear	0	0	1	Backed Into	$7,500	Improper Backing
45	85074456	3/29/17	Wed	13:30	26	None	Daylight	Dry	Clear	0	0	1	Rear End	$1,000	Followed Too Closely
46	83983003	4/29/17	Sat	18:47	20	None	Daylight	Dry	Clear	0	0	1	Rear End	$6,000	Careless Driving
47	83983017	6/4/17	Sun	10:30	19	None	Daylight	Dry	Clear	0	0	1	Head On	$10,000	Careless Driving
48	83983027	6/23/17	Fri	17:25	16	None	Daylight	Dry	Clear	0	2	3	Left Turn	$20,000	FTYRW
49	83983029	7/1/17	Sat	18:15	24	Alcohol	Daylight	Dry	Clear	0	0	1	Rear End	$20,000	DUI
50	83983034	7/11/17	Tue	16:53	17	None	Daylight	Dry	Clear	0	0	1	Rear End	$28,000	Careless Driving
51	83983059	8/10/17	Thu	13:30	54	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
52	83983063	8/16/17	Wed	8:05	25	None	Daylight	Dry	Clear	0	0	1	Sideswipe	$0	Careless Driving
53	83983071	8/27/17	Sun	17:20	19	None	Daylight	Dry	Clear	0	0	1	Rear End	$0	Careless Driving
54	83983115	11/19/17	Sun	22:40	69	None	Dark (SL)	Dry	Clear	0	0	1	Right Turn	$0	Improper Turn
55	83983130	12/11/17	Mon	14:25	79	None	Daylight	Dry	Clear	0	1	3	Rear End	$1,000	Careless Driving
56	83983136	12/19/17	Tue	12:30	43	None	Daylight	Dry	Clear	0	0	1	Rear End	$500	Followed Too Closely

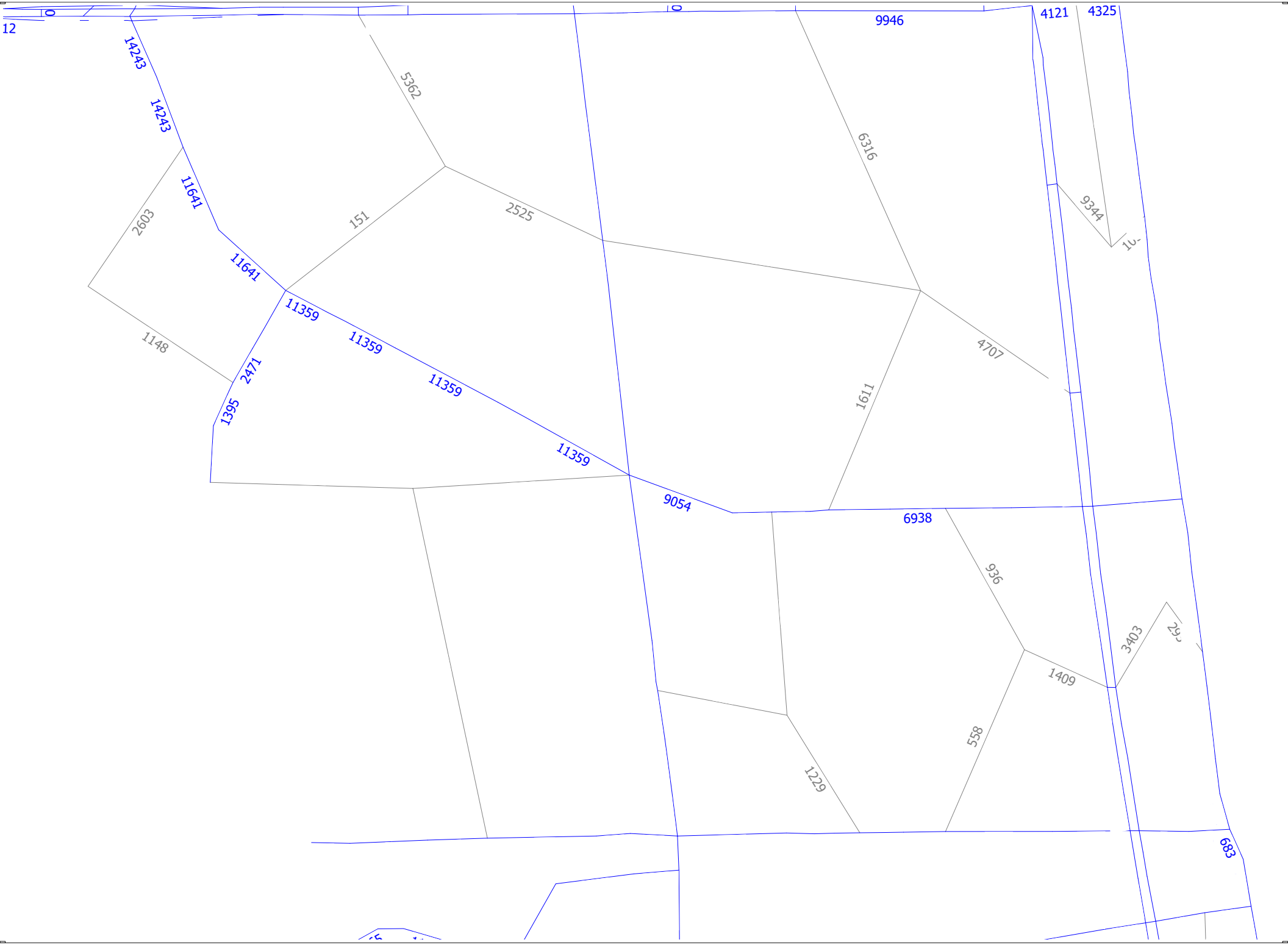
CRASH STATISTICS						INJURY SEVERITY					LIGHTING				
Total Number of Crashes	Total Number of Fatalities	Total Number of Injuries	Number of Fatal Crashes	Number of Injury Crashes	Total Property Damage	None	Possible	Non-Incapacitating	Incapacitating	Fatal	Daylight	Dark (SL)	Dark (No SL)	Dusk	Dawn
56	0	14	0	12	$210,600	44	6	4	1	0	45	7	2	1	1
100%	N/A	N/A	0%	21%	N/A	79%	11%	7%	2%	0%	80%	13%	4%	2%	2%

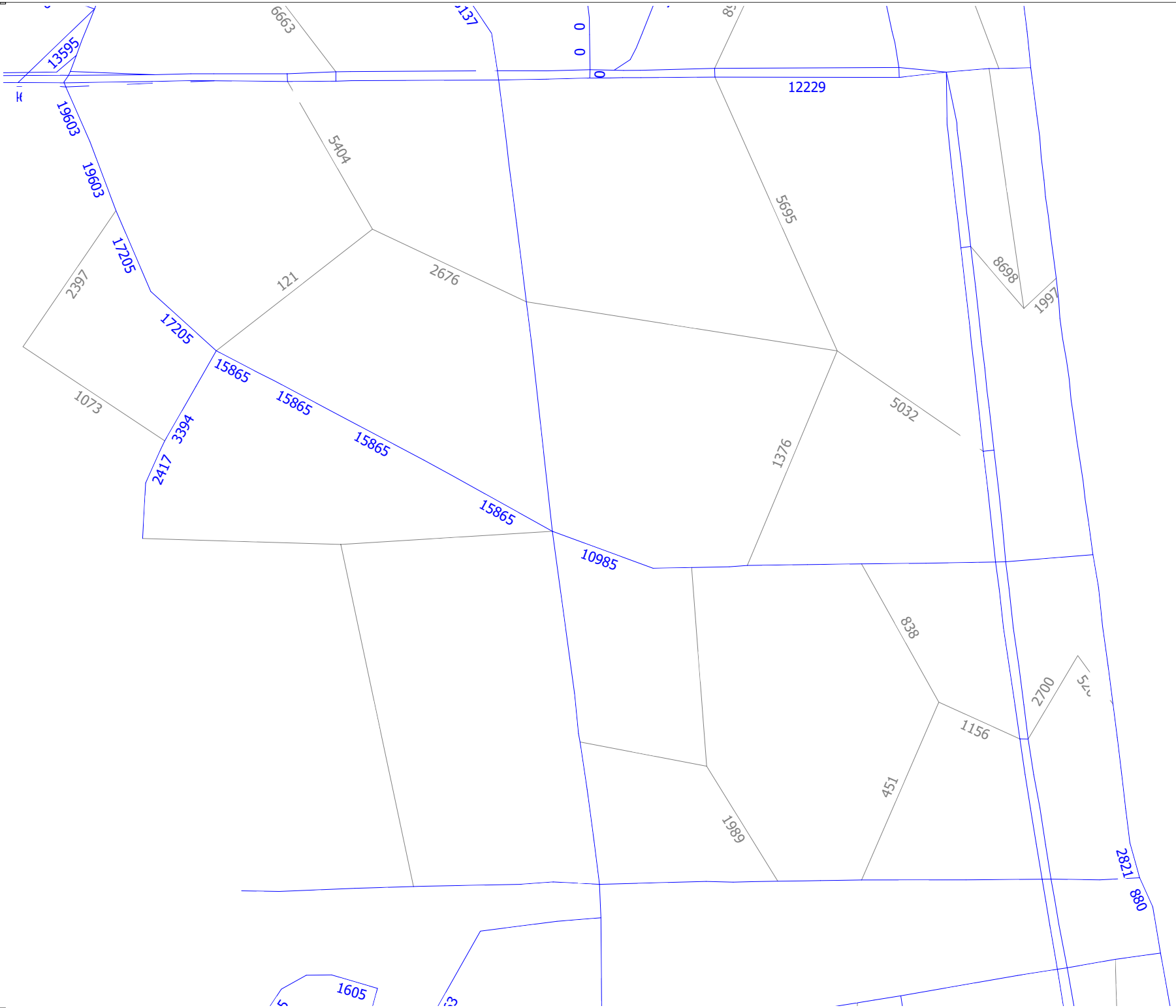
ROADWAY CONDITION			HARMFUL EVENT												
Wet	Dry	Unknown	Rear End	Head-On	Angle	Left Turn	Right Turn	Sideswipe	Backed Into	Parked Car	Coll W/MV on Roadway	Pedestrian	Bike	Bike (Bike Lane)	Moped
4	52	0	35	2	1	2	2	7	2	0	0	0	3	0	0
7%	93%	0%	63%	4%	2%	4%	4%	13%	4%	0%	0%	0%	5%	0%	0%
			Train	Animal	Hit Sign/ Sign Post	Hit Utility Pole	Hit Guardrail	Hit Fence	Hit Concrete Barrier Wall	Hit Br/Pier/ Abutt	Hit Const Barric/Sign/ Br/Pier/Abutt	Traffic Gate	Crash Attenuator	Fixed Object Above Road	Other Fixed Object
			0	0	0	0	0	0	0	0	0	0	0	0	0
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Moveable Object	Ran Into Ditch/Culvert	Ran Off Rd Into Water	Overturned	Occupant Fell From Vehicle	Trac/Trail Jackknifed	Fire	Explosion	Median Crossover	Lost Control	Hit Tree		
			0	0	0	0	0	0	0	0	0	0	2		
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%		

CONTRIBUTING CAUSE															
Alcohol/Drugs Under Influence	Careless Driving	FTYRW	Improper Backing	Improper Lane Change	Improper Turn	Followed Too Closely	Disregarded Traffic Signal	Exceeded Safe Speed Limit	Disregarded Stop Sign	Failed to Maintain Equipment	Improper Passing	Drove Left of Center	Exceeded Stated Safe Speed Limit	Obstructing Traffic	Improper Load
2	31	3	2	2	2	6	2	0	0	0	3	0	0	0	0
4%	55%	5%	4%	4%	4%	11%	4%	0%	0%	0%	5%	0%	0%	0%	0%
Disregarded Other Traffic Control	Driving Wrong Side/Way	Fleeing Police	Vehicle Modified	Driver Distraction	No Improper Driving	Unknown	All Other								
0	0	0	0	0	0	3	0								
0%	0%	0%	0%	0%	0%	5%	0%								

ATTACHMENT B
Traffic Forecasting

Northeast Regional Planning Model





Growth Rate Calculations

Location	PSWADT		AADT		% Growth	2018 Count	2018 NERPM Interpolated	Vol-Count (A)	Vol/Count (B)	Adjusted 2040	Resultant Growth	AADT	
	2010	2040	2010	2040								2025	2045
North Leg	8,953	9,445	8,595	9,067	0.18%	11,812	8,719	-3,093	0.74	12,207	0.15%	11,900	12,300
Southeast Leg	9,054	10,985	8,692	10,546	0.64%	6,380	9,147	2,767	1.43	7,577	0.78%	6,700	7,900
South Leg	14,129	16,418	13,564	15,761	0.50%	20,064	14,116	-5,948	0.70	22,113	0.45%	20,700	22,600
Northwest Leg	11,359	15,865	10,905	15,230	1.13%	12,079	11,930	-149	0.99	15,382	1.10%	13,000	16,200
West Leg	1,275	1,424	1,224	1,367	0.40%	1,811	1,264	-547	0.70	1,933	0.30%	1,800	2,000

Notes: MOCF = 0.96; Adjusted 2040 NERPM = (2040 NERPM - A + 2040 NERPM/B)/2

SUMMARY OF TURNING MOVEMENT VOLUMES

Time		Year	Turning Movement Volumes																			
			Northbound				Southbound				Southeastbound				Northwestbound				EastBound			
			NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NEL2	NEL	NER	NER2
Weekday	AM	2018	31	200	362	51	53	378	8	16	35	146	372	0	48	10	130	46	0	22	23	83
		2025	32	206	374	53	54	382	8	16	38	158	402	0	51	11	137	49	0	22	23	85
		2045	35	226	409	58	55	394	8	17	47	196	500	0	59	12	160	57	0	24	25	90
	Midday	2018	25	212	354	31	32	274	20	14	10	125	288	3	44	12	83	31	1	10	15	32
		2025	26	219	365	32	32	277	20	14	11	135	311	3	46	13	88	33	1	10	15	33
		2045	28	239	400	35	33	285	21	15	13	168	387	4	54	15	102	38	1	11	16	35
	PM	2018	41	232	534	36	33	306	17	19	25	195	424	0	24	23	168	51	2	14	17	39
		2025	42	239	551	37	33	309	17	19	27	211	458	0	25	24	177	54	2	14	17	40
		2045	46	262	603	41	34	319	18	20	34	262	570	0	30	28	207	63	2	15	18	42
Weekend	AM	2018	29	201	321	104	43	285	21	10	5	201	305	5	38	5	92	37	0	10	25	35
		2025	30	207	331	107	43	288	21	10	5	217	329	5	40	5	97	39	0	10	26	36
		2045	33	227	362	117	45	297	22	10	7	270	410	7	47	6	113	46	0	11	27	38
	Midday	2018	35	243	398	50	29	294	14	18	5	110	249	2	38	5	92	37	1	9	11	34
		2025	36	251	411	52	29	297	14	18	5	119	269	2	40	5	97	39	1	9	11	35
		2045	40	274	449	56	30	306	15	19	7	148	335	3	47	6	113	46	1	10	12	37
	PM	2018	37	211	335	38	27	246	15	6	13	144	286	2	39	12	127	33	0	15	13	29
		2025	38	218	346	39	27	249	15	6	14	155	309	2	41	13	134	35	0	15	13	30
		2045	42	238	378	43	28	256	16	6	17	193	384	3	48	15	157	41	0	16	14	31

ATTACHMENT C
Roundabout Screening Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 1 - ROUNDABOUT SCREENING

Prepared by:	*Metric Engineering*	**Date Prepared:**	*02/19/2018*
Financial Project ID:		**Project Name:**	*Orange Camp Rd at MLK Beltway Imp.*
FAP No.:	*N/A*	**State Road:**	*Off-System*
County:	*Duval*	**Intersecting Road:**	*MLK Orange Camp Rd at MLK Beltway*

EXISTING CONTROL/PROJECT CLASSIFICATION

Control: ■ Signal ☐ All Way Stop ☐ 2 Way Stop ☐ Yield ☐ None

Classification: ■ Design. ☐ Traffic Operations ☐ Other

SCREENING CRITERIA

1. Does the intersection have physical or geometric constraints that would limit visibility or complicate construction? *(comment below if "yes")*	■ yes	☐ no
5-Leg Intersection with a skew, detailed review of existing geometry will be required.		
2. Does the major roadway AADT exceed 90% of the total intersection AADT? *(comment below if "yes")*	☐ yes	■ no
3. Does the intersection have pedestrians with special needs that would have difficulty crossing the road? *(comment below if "yes")*	■ yes	☐ no
Yes, possible pedestrians with accessible needs such as visually impaired		
4. Is the intersection located within a coordinated signal network? *(comment below if "yes")*	☐ yes	■ no
5. Is there downstream traffic control or conditions that could cause queues to back up into the intersection? *(comment below if "yes")*	☐ yes	■ no
6. Would the installation of a roundabout create impacts to historical, 4(f), or environmentally sensitive sites? Would the relocation of residences or businesses be required? *(comment below if "yes")*	☐ yes	■ no

Step 2 evaluation is required if no is checked for all criteria. Level 2 is optional if yes is checked for one or more of the criteria.

Advance Roundabout Alternative to step 2 Roundabout b/c Evaluation ■ yes ☐ no

Approved by: ☐ DDE or ☐ DTOE

Signature: _____ Date: _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 2 - b/c EVALUATION

Prepared by:	*Metric Engineering*	**Date Prepared:**	***7/9/2018***
Financial Project ID:		**Project Name:**	***Neptune Beach Rdbt***
FAP No.:		**State Road:**	***N/A***
County:	*Duval*	**Intersecting Rd:**	***Penman @ Florida***

ANNUAL COSTS		
	Roundabout	Traffic Signal
Safety Cost (Crashes)	$ 528,527	$ 1,131,214
Delay Cost	$ 363,899	$ 915,562
O & M Cost	$ 2,750	$ 5,517

Initial Capital Cost		
Preliminary Engineering	$ 60,000	$ -
Right-of-way and Utilities	$ 200,000	$ -
Construction	$ 1,000,000	$ -

TOTAL DISCOUNTED LIFE CYCLE COSTS (OPENING YEAR)		
	Roundabout	Traffic Signal
Safety Cost (Crashes)	$ 7,863,154	$ 16,829,603
Delay Cost	$ 7,641,876	$ 19,226,794
O & M Cost	$ 40,913	$ 82,074
Initial Capital Cost	$ 1,260,000	$ -
Total Life Cycle Costs	$ 16,805,943	$ 36,138,471

LIFECYCLE BENEFIT/COST RATIO	
Safety Benefit of a Roundabout	$ 8,966,449
Delay Reduction Benefit of a Roundabout	$ 11,584,918
Total Benefit	$ 20,551,367
Added O & M Costs of a Roundabout	$ (41,161)
Added Capital Costs of a Roundabout	$ 1,260,000
Total Cost	$ 1,218,839
Life Cycle Benefit/Cost Ratio	**16.9**

Advance to Level 3 Geometric and Operational Analysis: ☑ YES ☐ NO

Approved by: ☐ DDE or ☐ DTOE

Signature:_____ Date:_____

FDOT Level 2 Roundabout b/c Evaluation

Annual Costs	Roundabout		Traffic Signal	
Safety	**Predicted Annual Crashes**	**Safety Cost**	**Predicted Annual Crashes**	**Safety Cost**
Predicted Fatal/Injury Crashes	1.35	$ 489,042	2.99	$ 1,086,760
Predicted PDO Crashes	5.20	$ 39,485	5.85	$ 44,453
	Annual Costs of Predicted Crashes	**$ 528,527**	***Annual Costs of Predicted Crashes***	**$ 1,131,214**
Delay	**Annual Intersection Delay (person-hrs)**	**Delay Cost**	**Annual Intersection Delay (person-hrs)**	**Delay Cost**
Average Annual Person (in Vehicle) Delay	30016	**$ 363,899**	73735	**$ 915,562**
Operation and Maintenance	**Operation and Maintenance**	**O&M Cost**	**Operation and Maintenance**	**O&M Cost**
Annualized Cost of Signal Retiming		$ -	Signal Retiming Every 3 Years	$ 1,667
Annual Cost of Illumination	Intersection Illumination	$ 750	Intersection Illumination	$ 750
Annual Cost of Maintenance	Landscaping Costs	$ 2,000	Signal Maintenance Costs (power outage, detection, etc.)	$ 3,100
	Total Annual Operation and Maintenance Costs	**$ 2,750**	***Total Annual Operation and Maintenance Costs***	**$ 5,517**
Initial Capital Costs	**Total Capital Costs**	**Cost**	**Total Capital Costs**	**Cost**
Preliminary Engineering		$ 60,000		$ -
Right-of-way and Utilities		$ 200,000		$ -
Construction		$ 1,000,000		$ -

*Delay cost is based upon a 3 hour analysis period.

Total Discounted Life Cycle Costs (2025 - 2045)	Roundabout		Traffic Signal	
Safety	**Total Predicted Crashes**	**Safety Cost**	**Total Predicted Crashes**	**Safety Cost**
Predicted Fatal/Injury Crashes	26.91	$ 7,275,713	59.80	$ 16,168,251
Predicted PDO Crashes	103.91	$ 587,441	116.98	$ 661,351
	Total Costs of Predicted Crashes	**$ 7,863,154**	***Total Costs of Predicted Crashes***	**$ 16,829,603**
Delay	**Total Intersection Delay (person-hrs)**	**Delay Cost**	**Total Intersection Delay (person-hrs)**	**Delay Cost**
Total Person (in Vehicle) Delay	630326	**$ 7,641,876**	1548427	**$ 19,226,794**
Operation and Maintenance	**Operation and Maintenance**	**O&M Cost**	**Operation and Maintenance**	**O&M Cost**
Annualized Cost of Signal Retiming		$ -	Signal Retiming Every 3 Years	$ 24,796
Annual Cost of Illumination	Intersection Illumination	$ 11,158	Intersection Illumination	$ 11,158
Annual Cost of Maintenance	Landscaping Costs	$ 29,755	Signal Maintenance Costs (power outage, detection, etc.)	$ 46,120
	Total Annual Operation and Maintenance Costs	**$ 40,913**	***Total Annual Operation and Maintenance Costs***	**$ 82,074**
Initial Capital Costs	**Total Capital Costs**	**Cost**	**Total Capital Costs**	**Cost**
Preliminary Engineering		$ 60,000		$ -
Right-of-way and Utilities		$ 200,000		$ -
Construction		$ 1,000,000		$ -
	Total Initial Capital Costs	**$ 1,260,000**	***Total Initial Capital Costs***	**$ -**
Total Life Cycle Costs (Opening Year $)	**Net Present Value**	**$ 16,805,943**	**Net Present Value**	**$ 36,138,471**
	Roundabout		Traffic Signal	

*Delay cost is based upon a 3 hour analysis period.

Life Cycle Benefit/Cost Ratio		
Safety Benefit of a Roundabout	$	8,966,449
Delay Reduction Benefit of a Roundabout	$	11,584,918
Total Benefits	**$**	**20,551,367**
Added Operations&Maintenance Costs of a Roundabout	$	(41,161)
Added Capital Costs of a Roundabout	$	1,260,000
Total Costs	**$**	**1,218,839**
Life Cycle Benefit/Cost Ratio	**16.9**	**Roundabout Compared to Traffic Signal**
	Roundabout Preferred	

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2025 AM Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*15.8*	*C*
NWB	*Florida Blvd*	*1*	*11.9*	*B*
SEB	*Florida Blvd*	*1*	*34.2*	*D*
SB	*Penman Rd*	*1*	*13.8*	*B*
NB	*Penman Rd*	*1*	*14.0*	*B*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer District Design Engineer

Date: _____ Date _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2025 Midday Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*8.1*	*A*
NWB	*Florida Blvd*	*1*	*9.2*	*A*
SEB	*Florida Blvd*	*1*	*13.1*	*A*
SB	*Penman Rd*	*1*	*9.4*	*A*
NB	*Penman Rd*	*1*	*11.3*	*B*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer — District Design Engineer

Date: _____ Date _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2025 PM Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*11.8*	*B*
NWB	*Florida Blvd*	*1*	*20.6*	*C*
SEB	*Florida Blvd*	*1*	*39.5*	*E*
SB	*Penman Rd*	*1*	*12.8*	*B*
NB	*Penman Rd*	*1*	*36.0*	*E*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer District Design Engineer

Date: _____ Date _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2045 AM Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*22.4*	*C*
NWB	*Florida Blvd*	*1*	*15.6*	*C*
SEB	*Florida Blvd*	*1*	*96.7*	*F*
SB	*Penman Rd*	*1*	*16.6*	*C*
NB	*Penman Rd*	*1*	*20.1*	*C*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer and District Design Engineer

Date: _____ Date _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2045 Midday Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*9.7*	*A*
NWB	*Florida Blvd*	*1*	*11.0*	*B*
SEB	*Florida Blvd*	*1*	*20.0*	*C*
SB	*Penman Rd*	*1*	*10.4*	*B*
NB	*Penman Rd*	*1*	*14.3*	*B*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer — District Design Engineer

Date: _____ Date _____

FLORIDA DEPARTMENT OF TRANSPORTATION

STEP 3 ROUNDABOUT SUMMARY REPORT

Prepared by:	*Metric Engineering*	**Date Prepared:**	*5/20/18*
Financial Project No:		**Project Name:**	*Neptune Beach Rdbt*
FAP No.:	*N/A*	**State Road:**	*N/A*
County:	*Duval*	**Intersecting Road:**	*Penman Rd at Florida Blvd*

PURPOSE AND NEED

Evaluation of a roundabout for Penman Rd and Florida Blvd. 2045 PM Peak Hour.

OPERATIONAL ANALYSIS RESULTS

Direction	Street Name	No. Entry Lanes	Control Delay (s)	LOS
EB	*Forest Ave*	*1*	*15.8*	*C*
NWB	*Florida Blvd*	*1*	*34.8*	*D*
SEB	*Florida Blvd*	*1*	*118.9*	*F*
SB	*Penman Rd*	*1*	*15.5*	*C*
NB	*Penman Rd*	*1*	*80.2*	*F*

GEOMETRIC PERFORMANCE CHECK RESULTS

Swept Path of Design Vehicle Accommodated	■ yes	☐ no
Intersection Sight Distance Satisfied	■ yes	☐ no
Fastest Path Operating Speed between 20 and 25 mph	■ yes	☐ no

Advance Roundabout to Final Design ■ yes ☐ no

_____ and _____

District Traffic Operations Engineer District Design Engineer

Date: _____ Date _____

ATTACHMENT D
Synchro Outputs

Existing

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:40	7:40	7:40	7:40	7:40	7:40
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2014	2066	1959	1979	1970	1997
Vehs Exited	1988	2034	1943	1939	1958	1972
Starting Vehs	67	53	47	56	60	56
Ending Vehs	93	85	63	96	72	81
Travel Distance (mi)	763	778	744	745	748	756
Travel Time (hr)	80.3	85.9	66.2	70.0	67.1	73.9
Total Delay (hr)	54.3	59.4	40.9	44.6	41.8	48.2
Total Stops	2052	2111	1773	1843	1761	1908
Fuel Used (gal)	39.7	41.7	36.0	36.9	36.2	38.1

Interval #0 Information Seeding

Start Time	7:40
End Time	7:45
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2014	2066	1959	1979	1970	1997
Vehs Exited	1988	2034	1943	1939	1958	1972
Starting Vehs	67	53	47	56	60	56
Ending Vehs	93	85	63	96	72	81
Travel Distance (mi)	763	778	744	745	748	756
Travel Time (hr)	80.3	85.9	66.2	70.0	67.1	73.9
Total Delay (hr)	54.3	59.4	40.9	44.6	41.8	48.2
Total Stops	2052	2111	1773	1843	1761	1908
Fuel Used (gal)	39.7	41.7	36.0	36.9	36.2	38.1

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.3	0.0	0.4	0.1	0.0	0.9
Denied Del/Veh (s)	2.2	0.0	2.4	0.9	0.2	1.6
Total Delay (hr)	16.5	3.4	14.4	9.3	2.2	45.8
Total Del/Veh (s)	105.2	52.6	79.5	73.2	59.9	80.8
Total Stops	659	171	564	394	116	1904
Stop/Veh	1.17	0.73	0.86	0.86	0.88	0.93

Total Network Performance

Denied Delay (hr)	0.9
Denied Del/Veh (s)	1.6
Total Delay (hr)	47.3
Total Del/Veh (s)	83.0
Total Stops	1908
Stop/Veh	0.93

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	11:40	11:40	11:40	11:40	11:40	11:40
End Time	11:53	11:53	11:53	11:53	11:53	11:53
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	269	254	265	253	239	258
Vehs Exited	251	247	266	248	257	253
Starting Vehs	39	37	41	42	49	40
Ending Vehs	57	44	40	47	31	41
Travel Distance (mi)	99	93	100	95	95	97
Travel Time (hr)	6.7	6.0	6.7	5.8	6.7	6.4
Total Delay (hr)	3.4	2.8	3.3	2.6	3.4	3.1
Total Stops	199	197	210	181	187	196
Fuel Used (gal)	4.2	3.9	4.3	4.0	4.2	4.1

Interval #0 Information Seeding

Start Time	11:40
End Time	11:43
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:43
End Time	11:53
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	269	254	265	253	239	258
Vehs Exited	251	247	266	248	257	253
Starting Vehs	39	37	41	42	49	40
Ending Vehs	57	44	40	47	31	41
Travel Distance (mi)	99	93	100	95	95	97
Travel Time (hr)	6.7	6.0	6.7	5.8	6.7	6.4
Total Delay (hr)	3.4	2.8	3.3	2.6	3.4	3.1
Total Stops	199	197	210	181	187	196
Fuel Used (gal)	4.2	3.9	4.3	4.0	4.2	4.1

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	1.4	0.0	1.9	0.7	0.2	1.2
Total Delay (hr)	1.0	0.3	1.0	0.5	0.1	2.9
Total Del/Veh (s)	41.8	32.4	35.0	33.7	29.9	36.3
Total Stops	61	18	69	38	8	194
Stop/Veh	0.74	0.60	0.67	0.66	0.80	0.69

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.2
Total Delay (hr)	3.0
Total Del/Veh (s)	36.9
Total Stops	196
Stop/Veh	0.67

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	373	359	319	346	338	345
Vehs Exited	360	361	315	354	344	347
Starting Vehs	63	58	57	64	62	60
Ending Vehs	76	56	61	56	56	62
Travel Distance (mi)	140	136	120	135	130	132
Travel Time (hr)	12.4	10.3	9.5	11.1	9.7	10.6
Total Delay (hr)	7.6	5.7	5.4	6.6	5.4	6.2
Total Stops	351	304	257	289	258	289
Fuel Used (gal)	6.8	6.1	5.5	6.3	5.9	6.1

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	373	359	319	346	338	345
Vehs Exited	360	361	315	354	344	347
Starting Vehs	63	58	57	64	62	60
Ending Vehs	76	56	61	56	56	62
Travel Distance (mi)	140	136	120	135	130	132
Travel Time (hr)	12.4	10.3	9.5	11.1	9.7	10.6
Total Delay (hr)	7.6	5.7	5.4	6.6	5.4	6.2
Total Stops	351	304	257	289	258	289
Fuel Used (gal)	6.8	6.1	5.5	6.3	5.9	6.1

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.7	0.0	1.9	0.7	0.1	1.3
Total Delay (hr)	1.6	0.5	2.2	1.0	0.5	5.7
Total Del/Veh (s)	52.0	40.6	52.5	48.1	143.2	52.9
Total Stops	91	32	107	49	9	288
Stop/Veh	0.84	0.70	0.70	0.67	0.75	0.74

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	6.0
Total Del/Veh (s)	53.0
Total Stops	289
Stop/Veh	0.71

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	311	296	256	265	271	281
Vehs Exited	309	276	257	270	294	281
Starting Vehs	43	29	45	44	53	41
Ending Vehs	45	49	44	39	30	41
Travel Distance (mi)	118	109	99	101	108	107
Travel Time (hr)	7.9	7.6	6.5	6.8	7.2	7.2
Total Delay (hr)	3.9	3.9	3.2	3.4	3.5	3.6
Total Stops	237	215	193	200	194	209
Fuel Used (gal)	5.1	4.7	4.3	4.4	4.6	4.6

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	311	296	256	265	271	281
Vehs Exited	309	276	257	270	294	281
Starting Vehs	43	29	45	44	53	41
Ending Vehs	45	49	44	39	30	41
Travel Distance (mi)	118	109	99	101	108	107
Travel Time (hr)	7.9	7.6	6.5	6.8	7.2	7.2
Total Delay (hr)	3.9	3.9	3.2	3.4	3.5	3.6
Total Stops	237	215	193	200	194	209
Fuel Used (gal)	5.1	4.7	4.3	4.4	4.6	4.6

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.8	0.0	1.7	0.7	0.1	1.3
Total Delay (hr)	0.9	0.2	1.1	0.7	0.3	3.3
Total Del/Veh (s)	37.2	27.6	34.8	40.5	76.5	37.7
Total Stops	62	18	69	45	11	205
Stop/Veh	0.70	0.60	0.61	0.68	0.85	0.66

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.5
Total Del/Veh (s)	39.0
Total Stops	209
Stop/Veh	0.65

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	290	293	270	251	270	276
Vehs Exited	287	263	271	250	263	267
Starting Vehs	41	22	42	31	43	34
Ending Vehs	44	52	41	32	50	42
Travel Distance (mi)	111	104	103	94	101	103
Travel Time (hr)	7.4	7.0	6.4	5.7	6.6	6.6
Total Delay (hr)	3.7	3.6	3.0	2.6	3.2	3.2
Total Stops	216	213	188	168	199	197
Fuel Used (gal)	4.7	4.4	4.4	4.0	4.3	4.4

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	290	293	270	251	270	276
Vehs Exited	287	263	271	250	263	267
Starting Vehs	41	22	42	31	43	34
Ending Vehs	44	52	41	32	50	42
Travel Distance (mi)	111	104	103	94	101	103
Travel Time (hr)	7.4	7.0	6.4	5.7	6.6	6.6
Total Delay (hr)	3.7	3.6	3.0	2.6	3.2	3.2
Total Stops	216	213	188	168	199	197
Fuel Used (gal)	4.7	4.4	4.4	4.0	4.3	4.4

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.4	0.0	1.9	0.6	0.2	1.3
Total Delay (hr)	0.7	0.3	1.3	0.6	0.1	2.9
Total Del/Veh (s)	35.6	31.7	36.3	35.3	31.8	35.3
Total Stops	45	22	80	43	6	196
Stop/Veh	0.67	0.71	0.63	0.67	0.67	0.66

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.1
Total Del/Veh (s)	36.3
Total Stops	197
Stop/Veh	0.64

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	280	253	237	265	251	257
Vehs Exited	279	242	248	270	263	259
Starting Vehs	45	29	44	43	45	42
Ending Vehs	46	40	33	38	33	37
Travel Distance (mi)	105	95	93	102	100	99
Travel Time (hr)	6.8	5.9	5.8	6.5	6.7	6.3
Total Delay (hr)	3.2	2.7	2.6	3.0	3.3	3.0
Total Stops	202	170	179	187	198	187
Fuel Used (gal)	4.4	3.9	3.9	4.3	4.3	4.2

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	280	253	237	265	251	257
Vehs Exited	279	242	248	270	263	259
Starting Vehs	45	29	44	43	45	42
Ending Vehs	46	40	33	38	33	37
Travel Distance (mi)	105	95	93	102	100	99
Travel Time (hr)	6.8	5.9	5.8	6.5	6.7	6.3
Total Delay (hr)	3.2	2.7	2.6	3.0	3.3	3.0
Total Stops	202	170	179	187	198	187
Fuel Used (gal)	4.4	3.9	3.9	4.3	4.3	4.2

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.6	0.0	2.0	0.7	0.1	1.3
Total Delay (hr)	0.8	0.3	1.0	0.5	0.1	2.7
Total Del/Veh (s)	35.5	28.8	34.3	37.5	27.3	34.2
Total Stops	54	24	65	35	8	186
Stop/Veh	0.67	0.63	0.61	0.70	0.80	0.65

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	2.9
Total Del/Veh (s)	35.1
Total Stops	187
Stop/Veh	0.63

Intersection	
Intersection Delay, s/veh	28.9
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	666	268	835	567
Demand Flow Rate, veh/h	678	273	851	578
Vehicles Circulating, veh/h	684	845	403	531
Vehicles Exiting, veh/h	425	298	1058	587
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	56.2	14.1	20.2	19.0
Approach LOS	F	B	C	C

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	111	4.976
Entry Flow, veh/h	678	273	740	1018	578
Cap Entry Lane, veh/h	687	583	915	0.980	803
Entry HV Adj Factor	0.982	0.982	0.980	109	0.981
Flow Entry, veh/h	666	268	726	998	567
Cap Entry, veh/h	674	572	897	0.109	787
V/C Ratio	0.987	0.468	0.809	4.6	0.720
Control Delay, s/veh	56.2	14.1	22.6	A	19.0
LOS	F	B	C	0	C
95th %tile Queue, veh	15	2	9		6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	176
Demand Flow Rate, veh/h	180
Vehicles Circulating, veh/h	1281
Vehicles Exiting, veh/h	81
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	21.1
Approach LOS	C

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	180
Cap Entry Lane, veh/h	374
Entry HV Adj Factor	0.978
Flow Entry, veh/h	176
Cap Entry, veh/h	365
V/C Ratio	0.482
Control Delay, s/veh	21.1
LOS	C
95th %tile Queue, veh	3

Intersection	
Intersection Delay, s/veh	12.0
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	499	216	707	403
Demand Flow Rate, veh/h	509	220	721	411
Vehicles Circulating, veh/h	513	720	256	453
Vehicles Exiting, veh/h	351	216	753	487
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	14.7	9.9	12.1	10.3
Approach LOS	B	A	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	41	4.976
Entry Flow, veh/h	509	220	680	1107	411
Cap Entry Lane, veh/h	818	662	1063	0.980	869
Entry HV Adj Factor	0.980	0.982	0.981	40	0.980
Flow Entry, veh/h	499	216	667	1085	403
Cap Entry, veh/h	802	650	1043	0.037	852
V/C Ratio	0.622	0.332	0.640	3.6	0.473
Control Delay, s/veh	14.7	9.9	12.6	A	10.3
LOS	B	A	B	0	B
95th %tile Queue, veh	4	1	5		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	96
Demand Flow Rate, veh/h	97
Vehicles Circulating, veh/h	912
Vehicles Exiting, veh/h	110
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	9.0
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	97
Cap Entry Lane, veh/h	544
Entry HV Adj Factor	0.990
Flow Entry, veh/h	96
Cap Entry, veh/h	539
V/C Ratio	0.178
Control Delay, s/veh	9.0
LOS	A
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	44.5
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	2	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	797	337	1098	482
Demand Flow Rate, veh/h	813	344	1120	492
Vehicles Circulating, veh/h	599	1136	359	686
Vehicles Exiting, veh/h	579	294	1023	794
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.3	38.1	83.6	21.4
Approach LOS	B	E	F	C

Lane	Left	Right	Left	Left	Bypass	Left
Designated Moves	LTR	R	LTR	LT	R	LTR
Assumed Moves	LTR	R	LTR	LT	R	LTR
RT Channelized					Yield	
Lane Util	0.470	0.530	1.000	1.000		1.000
Follow-Up Headway, s	2.535	2.535	2.609	2.609		2.609
Critical Headway, s	4.544	4.544	4.976	4.976	49	4.976
Entry Flow, veh/h	382	431	344	1071	1022	492
Cap Entry Lane, veh/h	823	823	433	957	0.980	685
Entry HV Adj Factor	0.980	0.980	0.980	0.980	48	0.981
Flow Entry, veh/h	374	422	337	1050	1002	482
Cap Entry, veh/h	807	807	425	938	0.048	672
V/C Ratio	0.464	0.524	0.794	1.119	4.0	0.718
Control Delay, s/veh	10.6	11.9	38.1	87.2	A	21.4
LOS	B	B	E	F	0	C
95th %tile Queue, veh	2	3	7	28		6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	100
Demand Flow Rate, veh/h	101
Vehicles Circulating, veh/h	1281
Vehicles Exiting, veh/h	131
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	14.6
Approach LOS	B

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	101
Cap Entry Lane, veh/h	374
Entry HV Adj Factor	0.990
Flow Entry, veh/h	100
Cap Entry, veh/h	370
V/C Ratio	0.270
Control Delay, s/veh	14.6
LOS	B
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	612	264	802	403
Demand Flow Rate, veh/h	624	269	818	411
Vehicles Circulating, veh/h	501	698	364	514
Vehicles Exiting, veh/h	424	340	761	453
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	20.4	10.9	14.2	11.5
Approach LOS	C	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	144	4.976
Entry Flow, veh/h	624	269	674	976	411
Cap Entry Lane, veh/h	828	677	952	0.980	817
Entry HV Adj Factor	0.981	0.981	0.980	141	0.980
Flow Entry, veh/h	612	264	661	956	403
Cap Entry, veh/h	812	665	933	0.147	801
V/C Ratio	0.754	0.397	0.708	5.2	0.503
Control Delay, s/veh	20.4	10.9	16.2	A	11.5
LOS	C	B	C	1	B
95th %tile Queue, veh	7	2	6		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	100
Demand Flow Rate, veh/h	102
Vehicles Circulating, veh/h	1023
Vehicles Exiting, veh/h	102
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	10.6
Approach LOS	B

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	102
Cap Entry Lane, veh/h	486
Entry HV Adj Factor	0.980
Flow Entry, veh/h	100
Cap Entry, veh/h	477
V/C Ratio	0.210
Control Delay, s/veh	10.6
LOS	B
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	435	207	852	384
Demand Flow Rate, veh/h	444	211	869	391
Vehicles Circulating, veh/h	464	832	229	507
Vehicles Exiting, veh/h	434	197	696	536
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.3	11.4	14.7	10.8
Approach LOS	B	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	69	4.976
Entry Flow, veh/h	444	211	800	1129	391
Cap Entry Lane, veh/h	860	591	1092	0.980	823
Entry HV Adj Factor	0.980	0.981	0.980	68	0.982
Flow Entry, veh/h	435	207	784	1107	384
Cap Entry, veh/h	843	579	1071	0.061	808
V/C Ratio	0.516	0.357	0.732	3.8	0.475
Control Delay, s/veh	11.3	11.4	15.6	A	10.8
LOS	B	B	C	0	B
95th %tile Queue, veh	3	2	7		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	88
Demand Flow Rate, veh/h	89
Vehicles Circulating, veh/h	836
Vehicles Exiting, veh/h	72
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	8.1
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	89
Cap Entry Lane, veh/h	588
Entry HV Adj Factor	0.988
Flow Entry, veh/h	88
Cap Entry, veh/h	581
V/C Ratio	0.151
Control Delay, s/veh	8.1
LOS	A
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	506	305	771	348
Demand Flow Rate, veh/h	515	310	786	355
Vehicles Circulating, veh/h	501	773	264	576
Vehicles Exiting, veh/h	430	228	720	507
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	14.5	13.9	14.0	11.2
Approach LOS	B	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	49	4.976
Entry Flow, veh/h	515	310	737	1094	355
Cap Entry Lane, veh/h	828	627	1054	0.980	767
Entry HV Adj Factor	0.982	0.982	0.980	48	0.981
Flow Entry, veh/h	506	304	722	1072	348
Cap Entry, veh/h	813	616	1033	0.045	753
V/C Ratio	0.622	0.494	0.699	3.7	0.463
Control Delay, s/veh	14.5	13.9	14.6	A	11.2
LOS	B	B	B	0	B
95th %tile Queue, veh	4	3	6		2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	80
Demand Flow Rate, veh/h	81
Vehicles Circulating, veh/h	903
Vehicles Exiting, veh/h	113
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	8.5
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	81
Cap Entry Lane, veh/h	549
Entry HV Adj Factor	0.988
Flow Entry, veh/h	80
Cap Entry, veh/h	543
V/C Ratio	0.147
Control Delay, s/veh	8.5
LOS	A
95th %tile Queue, veh	1

2025

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:40	7:40	7:40	7:40	7:40	7:40
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2067	2116	2031	2093	2045	2070
Vehs Exited	2027	2069	2011	2051	2009	2034
Starting Vehs	71	57	53	60	63	59
Ending Vehs	111	104	73	102	99	96
Travel Distance (mi)	781	797	769	788	770	781
Travel Time (hr)	128.2	132.2	94.4	89.2	98.6	108.5
Total Delay (hr)	101.7	105.1	68.2	62.6	72.6	82.1
Total Stops	2285	2340	2045	2153	2142	2194
Fuel Used (gal)	51.6	53.1	43.3	42.8	44.4	47.1

Interval #0 Information Seeding

Start Time	7:40
End Time	7:45
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2067	2116	2031	2093	2045	2070
Vehs Exited	2027	2069	2011	2051	2009	2034
Starting Vehs	71	57	53	60	63	59
Ending Vehs	111	104	73	102	99	96
Travel Distance (mi)	781	797	769	788	770	781
Travel Time (hr)	128.2	132.2	94.4	89.2	98.6	108.5
Total Delay (hr)	101.7	105.1	68.2	62.6	72.6	82.1
Total Stops	2285	2340	2045	2153	2142	2194
Fuel Used (gal)	51.6	53.1	43.3	42.8	44.4	47.1

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	7.5	0.0	7.4	0.1	0.0	15.0
Denied Del/Veh (s)	45.4	0.0	39.4	0.9	0.2	25.7
Total Delay (hr)	28.8	3.7	20.9	9.7	2.3	65.4
Total Del/Veh (s)	177.1	54.1	110.8	74.5	63.4	111.5
Total Stops	817	179	670	404	119	2189
Stop/Veh	1.40	0.72	0.99	0.86	0.89	1.04

Total Network Performance

Denied Delay (hr)	15.0
Denied Del/Veh (s)	25.7
Total Delay (hr)	67.0
Total Del/Veh (s)	113.3
Total Stops	2194
Stop/Veh	1.03

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	11:40	11:40	11:40	11:40	11:40	11:40
End Time	11:53	11:53	11:53	11:53	11:53	11:53
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	286	286	257	247	250	264
Vehs Exited	275	275	262	253	271	267
Starting Vehs	42	37	41	50	55	44
Ending Vehs	53	48	36	44	34	44
Travel Distance (mi)	106	106	99	94	99	101
Travel Time (hr)	7.3	7.1	6.8	6.0	7.2	6.9
Total Delay (hr)	3.7	3.6	3.4	2.9	3.9	3.5
Total Stops	211	213	200	189	187	200
Fuel Used (gal)	4.5	4.6	4.3	4.1	4.5	4.4

Interval #0 Information Seeding

Start Time	11:40
End Time	11:43
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:43
End Time	11:53
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	286	286	257	247	250	264
Vehs Exited	275	275	262	253	271	267
Starting Vehs	42	37	41	50	55	44
Ending Vehs	53	48	36	44	34	44
Travel Distance (mi)	106	106	99	94	99	101
Travel Time (hr)	7.3	7.1	6.8	6.0	7.2	6.9
Total Delay (hr)	3.7	3.6	3.4	2.9	3.9	3.5
Total Stops	211	213	200	189	187	200
Fuel Used (gal)	4.5	4.6	4.3	4.1	4.5	4.4

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	1.4	0.0	1.8	0.7	0.2	1.2
Total Delay (hr)	1.0	0.3	1.0	0.7	0.2	3.2
Total Del/Veh (s)	41.9	30.5	36.0	42.5	57.7	39.3
Total Stops	61	21	65	43	9	199
Stop/Veh	0.73	0.64	0.62	0.70	0.75	0.68

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.2
Total Delay (hr)	3.4
Total Del/Veh (s)	39.3
Total Stops	200
Stop/Veh	0.64

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	382	385	334	352	370	364
Vehs Exited	372	355	332	339	355	350
Starting Vehs	66	52	61	52	70	60
Ending Vehs	76	82	63	65	85	72
Travel Distance (mi)	145	140	128	131	138	136
Travel Time (hr)	12.0	12.1	10.2	10.4	12.0	11.4
Total Delay (hr)	7.1	7.4	5.9	6.1	7.4	6.8
Total Stops	330	351	270	306	300	311
Fuel Used (gal)	6.8	6.5	5.8	6.0	6.5	6.3

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	382	385	334	352	370	364
Vehs Exited	372	355	332	339	355	350
Starting Vehs	66	52	61	52	70	60
Ending Vehs	76	82	63	65	85	72
Travel Distance (mi)	145	140	128	131	138	136
Travel Time (hr)	12.0	12.1	10.2	10.4	12.0	11.4
Total Delay (hr)	7.1	7.4	5.9	6.1	7.4	6.8
Total Stops	330	351	270	306	300	311
Fuel Used (gal)	6.8	6.5	5.8	6.0	6.5	6.3

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.1	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.9	0.0	1.8	0.7	0.1	1.3
Total Delay (hr)	1.9	0.5	2.2	1.0	0.7	6.4
Total Del/Veh (s)	56.1	36.4	50.9	53.7	219.3	56.1
Total Stops	105	31	112	51	11	310
Stop/Veh	0.88	0.65	0.70	0.73	0.92	0.76

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.4
Total Delay (hr)	6.6
Total Del/Veh (s)	56.7
Total Stops	311
Stop/Veh	0.74

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:40	7:40	7:40	7:40	7:40	7:40
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1820	1845	1765	1833	1827	1819
Vehs Exited	1821	1838	1777	1832	1811	1816
Starting Vehs	51	39	54	63	47	51
Ending Vehs	50	46	42	64	63	53
Travel Distance (mi)	696	706	674	699	695	694
Travel Time (hr)	54.9	56.3	58.9	56.6	57.4	56.8
Total Delay (hr)	31.3	32.4	35.9	32.7	33.8	33.2
Total Stops	1499	1529	1561	1532	1525	1529
Fuel Used (gal)	31.9	32.4	32.2	32.3	32.3	32.2

Interval #0 Information Seeding

Start Time	7:40
End Time	7:45
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1820	1845	1765	1833	1827	1819
Vehs Exited	1821	1838	1777	1832	1811	1816
Starting Vehs	51	39	54	63	47	51
Ending Vehs	50	46	42	64	63	53
Travel Distance (mi)	696	706	674	699	695	694
Travel Time (hr)	54.9	56.3	58.9	56.6	57.4	56.8
Total Delay (hr)	31.3	32.4	35.9	32.7	33.8	33.2
Total Stops	1499	1529	1561	1532	1525	1529
Fuel Used (gal)	31.9	32.4	32.2	32.3	32.3	32.2

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.3	0.0	0.4	0.1	0.0	0.7
Denied Del/Veh (s)	1.8	0.0	1.9	0.8	0.1	1.4
Total Delay (hr)	8.8	2.1	12.7	6.3	1.1	31.0
Total Del/Veh (s)	58.1	42.6	66.2	61.5	56.4	60.2
Total Stops	483	126	550	294	65	1518
Stop/Veh	0.89	0.70	0.80	0.80	0.89	0.82

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.4
Total Delay (hr)	32.5
Total Del/Veh (s)	62.6
Total Stops	1529
Stop/Veh	0.82

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	11:40	11:40	11:40	11:40	11:40	11:40
End Time	11:53	11:53	11:53	11:53	11:53	11:53
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	309	308	283	258	271	284
Vehs Exited	298	283	284	263	266	278
Starting Vehs	42	28	48	47	41	40
Ending Vehs	53	53	47	42	46	49
Travel Distance (mi)	117	112	108	100	104	108
Travel Time (hr)	7.7	7.1	6.7	6.4	6.7	6.9
Total Delay (hr)	3.8	3.4	3.1	3.1	3.2	3.3
Total Stops	229	214	210	190	193	206
Fuel Used (gal)	4.9	4.7	4.5	4.3	4.4	4.6

Interval #0 Information Seeding

Start Time	11:40
End Time	11:43
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:43
End Time	11:53
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	309	308	283	258	271	284
Vehs Exited	298	283	284	263	266	278
Starting Vehs	42	28	48	47	41	40
Ending Vehs	53	53	47	42	46	49
Travel Distance (mi)	117	112	108	100	104	108
Travel Time (hr)	7.7	7.1	6.7	6.4	6.7	6.9
Total Delay (hr)	3.8	3.4	3.1	3.1	3.2	3.3
Total Stops	229	214	210	190	193	206
Fuel Used (gal)	4.9	4.7	4.5	4.3	4.4	4.6

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.4	0.0	2.0	0.6	0.2	1.3
Total Delay (hr)	0.7	0.3	1.2	0.8	0.1	3.0
Total Del/Veh (s)	36.7	28.7	31.1	41.0	42.8	34.5
Total Stops	50	22	77	47	7	203
Stop/Veh	0.70	0.63	0.58	0.71	0.78	0.65

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.2
Total Del/Veh (s)	35.4
Total Stops	206
Stop/Veh	0.63

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	302	283	244	282	268	275
Vehs Exited	293	275	257	301	274	281
Starting Vehs	50	39	46	57	43	45
Ending Vehs	59	47	33	38	37	43
Travel Distance (mi)	112	104	96	111	104	105
Travel Time (hr)	8.0	6.7	6.0	7.2	7.0	7.0
Total Delay (hr)	4.3	3.1	2.7	3.5	3.5	3.4
Total Stops	213	207	181	199	195	198
Fuel Used (gal)	4.8	4.3	4.0	4.8	4.5	4.5

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	302	283	244	282	268	275
Vehs Exited	293	275	257	301	274	281
Starting Vehs	50	39	46	57	43	45
Ending Vehs	59	47	33	38	37	43
Travel Distance (mi)	112	104	96	111	104	105
Travel Time (hr)	8.0	6.7	6.0	7.2	7.0	7.0
Total Delay (hr)	4.3	3.1	2.7	3.5	3.5	3.4
Total Stops	213	207	181	199	195	198
Fuel Used (gal)	4.8	4.3	4.0	4.8	4.5	4.5

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.6	0.0	1.9	0.6	0.1	1.3
Total Delay (hr)	1.0	0.3	1.2	0.5	0.1	3.1
Total Del/Veh (s)	40.3	29.7	37.0	36.0	36.0	36.7
Total Stops	59	22	74	33	9	197
Stop/Veh	0.69	0.55	0.64	0.61	0.75	0.64

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	3.3
Total Del/Veh (s)	36.9
Total Stops	198
Stop/Veh	0.61

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	650	269	724	500
Demand Flow Rate, veh/h	663	274	738	509
Vehicles Circulating, veh/h	596	745	326	484
Vehicles Exiting, veh/h	397	260	1019	535
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	34.2	11.9	14.0	13.8
Approach LOS	D	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	59	4.976
Entry Flow, veh/h	663	274	679	1058	509
Cap Entry Lane, veh/h	751	645	990	0.980	842
Entry HV Adj Factor	0.980	0.981	0.981	58	0.982
Flow Entry, veh/h	650	269	666	1038	500
Cap Entry, veh/h	736	633	971	0.056	827
V/C Ratio	0.882	0.425	0.686	4.0	0.604
Control Delay, s/veh	34.2	11.9	14.8	A	13.8
LOS	D	B	B	0	B
95th %tile Queue, veh	11	2	6		4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	141
Demand Flow Rate, veh/h	144
Vehicles Circulating, veh/h	1202
Vehicles Exiting, veh/h	57
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	15.8
Approach LOS	C

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	144
Cap Entry Lane, veh/h	405
Entry HV Adj Factor	0.979
Flow Entry, veh/h	141
Cap Entry, veh/h	397
V/C Ratio	0.356
Control Delay, s/veh	15.8
LOS	C
95th %tile Queue, veh	2

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	500	196	698	373
Demand Flow Rate, veh/h	510	200	713	380
Vehicles Circulating, veh/h	459	701	226	436
Vehicles Exiting, veh/h	357	202	740	465
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.1	9.2	11.3	9.4
Approach LOS	B	A	B	A

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	36	4.976
Entry Flow, veh/h	510	200	677	1123	380
Cap Entry Lane, veh/h	864	675	1096	0.980	885
Entry HV Adj Factor	0.981	0.980	0.980	35	0.982
Flow Entry, veh/h	500	196	663	1101	373
Cap Entry, veh/h	847	662	1074	0.032	868
V/C Ratio	0.590	0.296	0.618	3.5	0.430
Control Delay, s/veh	13.1	9.2	11.7	A	9.4
LOS	B	A	B	0	A
95th %tile Queue, veh	4	1	4		2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	64
Demand Flow Rate, veh/h	65
Vehicles Circulating, veh/h	901
Vehicles Exiting, veh/h	68
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	8.1
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	65
Cap Entry Lane, veh/h	551
Entry HV Adj Factor	0.984
Flow Entry, veh/h	64
Cap Entry, veh/h	542
V/C Ratio	0.118
Control Delay, s/veh	8.1
LOS	A
95th %tile Queue, veh	0

Intersection	
Intersection Delay, s/veh	30.6
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	756	304	945	411
Demand Flow Rate, veh/h	772	311	964	419
Vehicles Circulating, veh/h	500	970	336	565
Vehicles Exiting, veh/h	484	289	923	716
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	39.5	20.6	36.0	12.8
Approach LOS	E	C	E	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	41	4.976
Entry Flow, veh/h	772	311	923	1028	419
Cap Entry Lane, veh/h	829	513	980	0.980	775
Entry HV Adj Factor	0.980	0.979	0.981	40	0.982
Flow Entry, veh/h	756	305	905	1007	411
Cap Entry, veh/h	812	503	961	0.040	761
V/C Ratio	0.932	0.606	0.942	3.9	0.540
Control Delay, s/veh	39.5	20.6	37.4	A	12.8
LOS	E	C	E	0	B
95th %tile Queue, veh	14	4	15		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	78
Demand Flow Rate, veh/h	79
Vehicles Circulating, veh/h	1180
Vehicles Exiting, veh/h	92
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	11.8
Approach LOS	B

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	79
Cap Entry Lane, veh/h	414
Entry HV Adj Factor	0.987
Flow Entry, veh/h	78
Cap Entry, veh/h	409
V/C Ratio	0.191
Control Delay, s/veh	11.8
LOS	B
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	13.0
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	604	195	734	394
Demand Flow Rate, veh/h	616	199	749	401
Vehicles Circulating, veh/h	473	646	334	419
Vehicles Exiting, veh/h	347	318	768	426
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	18.3	8.5	12.1	9.5
Approach LOS	C	A	B	A

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	118	4.976
Entry Flow, veh/h	616	199	631	998	401
Cap Entry Lane, veh/h	852	714	982	0.980	900
Entry HV Adj Factor	0.981	0.980	0.980	116	0.982
Flow Entry, veh/h	604	195	618	978	394
Cap Entry, veh/h	836	700	961	0.119	884
V/C Ratio	0.723	0.279	0.643	4.8	0.446
Control Delay, s/veh	18.3	8.5	13.4	A	9.5
LOS	C	A	B	0	A
95th %tile Queue, veh	6	1	5		2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	78
Demand Flow Rate, veh/h	80
Vehicles Circulating, veh/h	1022
Vehicles Exiting, veh/h	67
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	9.9
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	80
Cap Entry Lane, veh/h	487
Entry HV Adj Factor	0.975
Flow Entry, veh/h	78
Cap Entry, veh/h	474
V/C Ratio	0.164
Control Delay, s/veh	9.9
LOS	A
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	428	195	816	390
Demand Flow Rate, veh/h	437	199	832	397
Vehicles Circulating, veh/h	466	790	193	475
Vehicles Exiting, veh/h	406	177	710	514
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.2	10.4	12.6	10.4
Approach LOS	B	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	58	4.976
Entry Flow, veh/h	437	199	774	1152	397
Cap Entry Lane, veh/h	858	616	1133	0.980	850
Entry HV Adj Factor	0.980	0.980	0.981	57	0.981
Flow Entry, veh/h	428	195	759	1129	390
Cap Entry, veh/h	841	604	1112	0.050	834
V/C Ratio	0.509	0.323	0.683	3.6	0.467
Control Delay, s/veh	11.2	10.4	13.3	A	10.4
LOS	B	B	B	0	B
95th %tile Queue, veh	3	1	6		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	61
Demand Flow Rate, veh/h	62
Vehicles Circulating, veh/h	841
Vehicles Exiting, veh/h	62
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	7.5
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	62
Cap Entry Lane, veh/h	585
Entry HV Adj Factor	0.984
Flow Entry, veh/h	61
Cap Entry, veh/h	576
V/C Ratio	0.106
Control Delay, s/veh	7.5
LOS	A
95th %tile Queue, veh	0

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	521	243	696	323
Demand Flow Rate, veh/h	531	248	711	329
Vehicles Circulating, veh/h	424	699	246	493
Vehicles Exiting, veh/h	398	215	699	454
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.9	10.4	11.5	9.2
Approach LOS	B	B	B	A

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	43	4.976
Entry Flow, veh/h	531	248	668	1108	329
Cap Entry Lane, veh/h	895	676	1074	0.980	835
Entry HV Adj Factor	0.981	0.981	0.980	42	0.981
Flow Entry, veh/h	521	243	655	1086	323
Cap Entry, veh/h	878	663	1052	0.039	818
V/C Ratio	0.593	0.367	0.622	3.6	0.394
Control Delay, s/veh	12.9	10.4	12.0	A	9.2
LOS	B	B	B	0	A
95th %tile Queue, veh	4	2	5		2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	63
Demand Flow Rate, veh/h	64
Vehicles Circulating, veh/h	881
Vehicles Exiting, veh/h	74
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	7.9
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	64
Cap Entry Lane, veh/h	562
Entry HV Adj Factor	0.984
Flow Entry, veh/h	63
Cap Entry, veh/h	553
V/C Ratio	0.114
Control Delay, s/veh	7.9
LOS	A
95th %tile Queue, veh	0

2045

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:40	7:40	7:40	7:40	7:40	7:40
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2132	2215	2140	2133	2187	2161
Vehs Exited	2100	2174	2104	2096	2131	2121
Starting Vehs	87	79	69	88	85	80
Ending Vehs	119	120	105	125	141	121
Travel Distance (mi)	803	836	807	808	824	815
Travel Time (hr)	239.6	210.8	172.8	223.9	176.6	204.8
Total Delay (hr)	212.4	182.4	145.5	196.5	148.8	177.1
Total Stops	2545	2595	2387	2505	2431	2492
Fuel Used (gal)	77.9	72.2	62.4	74.6	63.7	70.2

Interval #0 Information Seeding

Start Time	7:40
End Time	7:45
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2132	2215	2140	2133	2187	2161
Vehs Exited	2100	2174	2104	2096	2131	2121
Starting Vehs	87	79	69	88	85	80
Ending Vehs	119	120	105	125	141	121
Travel Distance (mi)	803	836	807	808	824	815
Travel Time (hr)	239.6	210.8	172.8	223.9	176.6	204.8
Total Delay (hr)	212.4	182.4	145.5	196.5	148.8	177.1
Total Stops	2545	2595	2387	2505	2431	2492
Fuel Used (gal)	77.9	72.2	62.4	74.6	63.7	70.2

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	81.1	0.0	11.3	0.1	0.0	92.5
Denied Del/Veh (s)	388.9	0.0	55.9	0.8	0.2	140.6
Total Delay (hr)	37.9	4.8	26.1	11.6	2.5	82.9
Total Del/Veh (s)	223.3	60.9	133.3	85.8	66.4	134.2
Total Stops	945	216	752	457	117	2487
Stop/Veh	1.55	0.76	1.07	0.93	0.87	1.12

Total Network Performance

Denied Delay (hr)	92.5
Denied Del/Veh (s)	140.7
Total Delay (hr)	84.6
Total Del/Veh (s)	135.8
Total Stops	2492
Stop/Veh	1.11

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	11:40	11:40	11:40	11:40	11:40	11:40
End Time	11:53	11:53	11:53	11:53	11:53	11:53
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	337	332	293	287	294	309
Vehs Exited	318	306	292	282	301	301
Starting Vehs	48	37	50	48	53	50
Ending Vehs	67	63	51	53	46	56
Travel Distance (mi)	122	120	113	107	115	115
Travel Time (hr)	10.2	9.0	8.8	7.5	8.7	8.8
Total Delay (hr)	6.0	5.0	4.9	3.9	4.8	4.9
Total Stops	301	270	269	221	224	257
Fuel Used (gal)	5.7	5.4	5.3	4.8	5.2	5.3

Interval #0 Information Seeding

Start Time	11:40
End Time	11:43
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:43
End Time	11:53
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	337	332	293	287	294	309
Vehs Exited	318	306	292	282	301	301
Starting Vehs	48	37	50	48	53	50
Ending Vehs	67	63	51	53	46	56
Travel Distance (mi)	122	120	113	107	115	115
Travel Time (hr)	10.2	9.0	8.8	7.5	8.7	8.8
Total Delay (hr)	6.0	5.0	4.9	3.9	4.8	4.9
Total Stops	301	270	269	221	224	257
Fuel Used (gal)	5.7	5.4	5.3	4.8	5.2	5.3

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.5	0.0	2.0	0.6	0.1	1.3
Total Delay (hr)	1.3	0.3	1.8	0.9	0.2	4.6
Total Del/Veh (s)	47.3	31.6	50.0	51.7	69.0	48.3
Total Stops	78	21	101	45	11	256
Stop/Veh	0.77	0.60	0.77	0.73	0.92	0.75

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	4.8
Total Del/Veh (s)	48.5
Total Stops	257
Stop/Veh	0.72

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	431	413	394	401	399	408
Vehs Exited	388	371	379	368	384	379
Starting Vehs	56	75	74	74	80	73
Ending Vehs	99	117	89	107	95	100
Travel Distance (mi)	154	149	147	145	147	149
Travel Time (hr)	15.5	18.3	14.2	15.8	14.7	15.7
Total Delay (hr)	10.3	13.2	9.3	10.9	9.8	10.7
Total Stops	460	482	397	414	382	427
Fuel Used (gal)	7.9	8.3	7.3	7.7	7.4	7.7

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	431	413	394	401	399	408
Vehs Exited	388	371	379	368	384	379
Starting Vehs	56	75	74	74	80	73
Ending Vehs	99	117	89	107	95	100
Travel Distance (mi)	154	149	147	145	147	149
Travel Time (hr)	15.5	18.3	14.2	15.8	14.7	15.7
Total Delay (hr)	10.3	13.2	9.3	10.9	9.8	10.7
Total Stops	460	482	397	414	382	427
Fuel Used (gal)	7.9	8.3	7.3	7.7	7.4	7.7

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.4	0.0	0.1	0.0	0.0	0.5
Denied Del/Veh (s)	9.5	0.0	2.1	0.7	0.2	4.0
Total Delay (hr)	4.2	0.6	3.5	0.9	0.7	9.9
Total Del/Veh (s)	98.6	34.0	73.7	49.1	201.2	76.9
Total Stops	178	33	156	47	12	426
Stop/Veh	1.16	0.56	0.91	0.70	0.92	0.92

Total Network Performance

Denied Delay (hr)	0.5
Denied Del/Veh (s)	4.0
Total Delay (hr)	10.2
Total Del/Veh (s)	76.9
Total Stops	427
Stop/Veh	0.89

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:40	7:40	7:40	7:40	7:40	7:40
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2052	2113	1971	2022	2033	2038
Vehs Exited	2039	2090	1911	2002	2010	2010
Starting Vehs	71	59	51	67	69	62
Ending Vehs	84	82	111	87	92	89
Travel Distance (mi)	781	807	738	768	770	773
Travel Time (hr)	105.8	86.4	105.0	101.2	103.3	100.4
Total Delay (hr)	79.2	58.8	79.8	75.0	77.1	74.0
Total Stops	2142	2230	2212	2138	2232	2190
Fuel Used (gal)	46.0	42.4	45.0	44.8	45.6	44.8

Interval #0 Information Seeding

Start Time	7:40
End Time	7:45
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2052	2113	1971	2022	2033	2038
Vehs Exited	2039	2090	1911	2002	2010	2010
Starting Vehs	71	59	51	67	69	62
Ending Vehs	84	82	111	87	92	89
Travel Distance (mi)	781	807	738	768	770	773
Travel Time (hr)	105.8	86.4	105.0	101.2	103.3	100.4
Total Delay (hr)	79.2	58.8	79.8	75.0	77.1	74.0
Total Stops	2142	2230	2212	2138	2232	2190
Fuel Used (gal)	46.0	42.4	45.0	44.8	45.6	44.8

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	8.2	0.0	2.5	0.1	0.0	10.8
Denied Del/Veh (s)	43.1	0.0	12.3	0.8	0.1	18.8
Total Delay (hr)	30.5	2.7	20.3	6.9	1.2	61.6
Total Del/Veh (s)	159.8	45.9	98.8	66.0	61.2	106.3
Total Stops	947	141	716	308	67	2179
Stop/Veh	1.38	0.67	0.97	0.82	0.92	1.04

Total Network Performance

Denied Delay (hr)	10.8
Denied Del/Veh (s)	18.8
Total Delay (hr)	63.2
Total Del/Veh (s)	108.4
Total Stops	2190
Stop/Veh	1.04

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	11:40	11:40	11:40	11:40	11:40	11:40
End Time	11:53	11:53	11:53	11:53	11:53	11:53
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	342	342	289	322	297	320
Vehs Exited	332	312	275	318	283	304
Starting Vehs	61	34	38	57	43	45
Ending Vehs	71	64	52	61	57	63
Travel Distance (mi)	127	126	108	122	110	119
Travel Time (hr)	11.2	8.8	7.1	9.0	8.0	8.8
Total Delay (hr)	6.9	4.6	3.4	4.9	4.3	4.8
Total Stops	301	244	220	254	225	249
Fuel Used (gal)	6.1	5.4	4.6	5.5	4.9	5.3

Interval #0 Information Seeding

Start Time	11:40
End Time	11:43
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	11:43
End Time	11:53
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	342	342	289	322	297	320
Vehs Exited	332	312	275	318	283	304
Starting Vehs	61	34	38	57	43	45
Ending Vehs	71	64	52	61	57	63
Travel Distance (mi)	127	126	108	122	110	119
Travel Time (hr)	11.2	8.8	7.1	9.0	8.0	8.8
Total Delay (hr)	6.9	4.6	3.4	4.9	4.3	4.8
Total Stops	301	244	220	254	225	249
Fuel Used (gal)	6.1	5.4	4.6	5.5	4.9	5.3

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.2
Denied Del/Veh (s)	1.6	0.0	2.9	0.5	0.1	1.7
Total Delay (hr)	1.0	0.4	2.2	0.7	0.3	4.5
Total Del/Veh (s)	39.2	34.0	51.2	40.5	81.0	45.4
Total Stops	61	24	113	41	9	248
Stop/Veh	0.69	0.62	0.74	0.66	0.75	0.70

Total Network Performance

Denied Delay (hr)	0.2
Denied Del/Veh (s)	1.8
Total Delay (hr)	4.7
Total Del/Veh (s)	45.8
Total Stops	249
Stop/Veh	0.68

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	4:38	4:38	4:38	4:38	4:38	4:38
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	333	316	292	305	313	312
Vehs Exited	321	301	291	308	307	305
Starting Vehs	53	34	52	60	59	51
Ending Vehs	65	49	53	57	65	59
Travel Distance (mi)	123	116	114	118	117	118
Travel Time (hr)	10.8	8.1	7.8	8.2	8.7	8.7
Total Delay (hr)	6.6	4.1	3.9	4.3	4.8	4.7
Total Stops	305	242	219	234	237	248
Fuel Used (gal)	5.9	5.0	4.9	5.2	5.3	5.3

Interval #0 Information Seeding

Start Time	4:25
End Time	4:28
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:28
End Time	4:38
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	333	316	292	305	313	312
Vehs Exited	321	301	291	308	307	305
Starting Vehs	53	34	52	60	59	51
Ending Vehs	65	49	53	57	65	59
Travel Distance (mi)	123	116	114	118	117	118
Travel Time (hr)	10.8	8.1	7.8	8.2	8.7	8.7
Total Delay (hr)	6.6	4.1	3.9	4.3	4.8	4.7
Total Stops	305	242	219	234	237	248
Fuel Used (gal)	5.9	5.0	4.9	5.2	5.3	5.3

3: Forest Ave & Penman Rd & Florida Blvd Performance by approach

Approach	EB	WB	NB	SB	NE	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	1.6	0.0	1.9	0.5	0.1	1.3
Total Delay (hr)	1.3	0.4	1.9	0.6	0.2	4.4
Total Del/Veh (s)	45.3	28.9	51.4	44.3	60.8	45.8
Total Stops	78	26	102	33	8	247
Stop/Veh	0.74	0.55	0.78	0.65	0.67	0.71

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	4.6
Total Del/Veh (s)	45.6
Total Stops	248
Stop/Veh	0.68

Intersection	
Intersection Delay, s/veh	43.0
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	807	313	792	515
Demand Flow Rate, veh/h	823	318	808	525
Vehicles Circulating, veh/h	624	823	385	545
Vehicles Exiting, veh/h	446	306	1156	596
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	96.7	15.6	20.1	16.6
Approach LOS	F	C	C	C

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	64	4.976
Entry Flow, veh/h	823	318	744	1010	525
Cap Entry Lane, veh/h	730	596	932	0.980	791
Entry HV Adj Factor	0.980	0.982	0.980	63	0.982
Flow Entry, veh/h	807	312	729	990	515
Cap Entry, veh/h	716	585	913	0.064	777
V/C Ratio	1.127	0.533	0.798	4.2	0.663
Control Delay, s/veh	96.7	15.6	21.5	A	16.6
LOS	F	C	C	0	C
95th %tile Queue, veh	24	3	9		5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	151
Demand Flow Rate, veh/h	155
Vehicles Circulating, veh/h	1386
Vehicles Exiting, veh/h	61
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	22.4
Approach LOS	C

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	155
Cap Entry Lane, veh/h	336
Entry HV Adj Factor	0.974
Flow Entry, veh/h	151
Cap Entry, veh/h	327
V/C Ratio	0.462
Control Delay, s/veh	22.4
LOS	C
95th %tile Queue, veh	2

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	622	227	763	385
Demand Flow Rate, veh/h	634	231	779	392
Vehicles Circulating, veh/h	483	767	268	486
Vehicles Exiting, veh/h	395	241	844	512
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	20.0	11.0	14.3	10.4
Approach LOS	C	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	39	4.976
Entry Flow, veh/h	634	231	740	1079	392
Cap Entry Lane, veh/h	843	631	1050	0.980	841
Entry HV Adj Factor	0.982	0.981	0.981	38	0.982
Flow Entry, veh/h	622	227	726	1058	385
Cap Entry, veh/h	828	619	1030	0.036	825
V/C Ratio	0.752	0.366	0.705	3.7	0.466
Control Delay, s/veh	20.0	11.0	14.9	A	10.4
LOS	C	B	B	0	B
95th %tile Queue, veh	7	2	6		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	68
Demand Flow Rate, veh/h	69
Vehicles Circulating, veh/h	1043
Vehicles Exiting, veh/h	74
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	9.7
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	69
Cap Entry Lane, veh/h	476
Entry HV Adj Factor	0.985
Flow Entry, veh/h	68
Cap Entry, veh/h	469
V/C Ratio	0.145
Control Delay, s/veh	9.7
LOS	A
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	75.8
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	942	356	1035	426
Demand Flow Rate, veh/h	961	364	1056	434
Vehicles Circulating, veh/h	528	1066	405	638
Vehicles Exiting, veh/h	544	349	1067	791
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	118.9	34.8	80.2	15.5
Approach LOS	F	D	F	C

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	46	4.976
Entry Flow, veh/h	961	364	1010	967	434
Cap Entry Lane, veh/h	805	465	913	0.980	720
Entry HV Adj Factor	0.981	0.980	0.980	45	0.982
Flow Entry, veh/h	942	357	990	948	426
Cap Entry, veh/h	790	456	895	0.047	707
V/C Ratio	1.193	0.782	1.106	4.2	0.603
Control Delay, s/veh	118.9	34.8	83.7	A	15.5
LOS	F	D	F	0	C
95th %tile Queue, veh	31	7	26		4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	84
Demand Flow Rate, veh/h	85
Vehicles Circulating, veh/h	1387
Vehicles Exiting, veh/h	102
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	15.8
Approach LOS	C

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	85
Cap Entry Lane, veh/h	335
Entry HV Adj Factor	0.988
Flow Entry, veh/h	84
Cap Entry, veh/h	331
V/C Ratio	0.253
Control Delay, s/veh	15.8
LOS	C
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	755	231	803	407
Demand Flow Rate, veh/h	770	235	820	414
Vehicles Circulating, veh/h	499	710	399	473
Vehicles Exiting, veh/h	388	379	878	472
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	38.9	10.2	16.6	10.7
Approach LOS	E	B	C	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	130	4.976
Entry Flow, veh/h	770	235	690	937	414
Cap Entry Lane, veh/h	829	669	919	0.980	852
Entry HV Adj Factor	0.981	0.981	0.980	127	0.982
Flow Entry, veh/h	755	231	676	919	407
Cap Entry, veh/h	813	656	900	0.138	836
V/C Ratio	0.928	0.351	0.751	5.2	0.486
Control Delay, s/veh	38.9	10.2	18.7	A	10.7
LOS	E	B	C	0	B
95th %tile Queue, veh	14	2	7		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	82
Demand Flow Rate, veh/h	84
Vehicles Circulating, veh/h	1193
Vehicles Exiting, veh/h	76
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	12.4
Approach LOS	B

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	84
Cap Entry Lane, veh/h	409
Entry HV Adj Factor	0.976
Flow Entry, veh/h	82
Cap Entry, veh/h	399
V/C Ratio	0.206
Control Delay, s/veh	12.4
LOS	B
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	536	231	890	403
Demand Flow Rate, veh/h	546	235	908	411
Vehicles Circulating, veh/h	493	866	231	533
Vehicles Exiting, veh/h	451	211	804	568
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.6	12.9	16.8	11.9
Approach LOS	C	B	C	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	62	4.976
Entry Flow, veh/h	546	235	846	1113	411
Cap Entry Lane, veh/h	835	571	1090	0.980	801
Entry HV Adj Factor	0.981	0.981	0.980	61	0.981
Flow Entry, veh/h	536	231	829	1091	403
Cap Entry, veh/h	819	560	1069	0.056	786
V/C Ratio	0.654	0.412	0.776	3.8	0.513
Control Delay, s/veh	15.6	12.9	17.8	A	11.9
LOS	C	B	C	0	B
95th %tile Queue, veh	5	2	8		3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	65
Demand Flow Rate, veh/h	66
Vehicles Circulating, veh/h	969
Vehicles Exiting, veh/h	70
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	8.8
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	66
Cap Entry Lane, veh/h	514
Entry HV Adj Factor	0.985
Flow Entry, veh/h	65
Cap Entry, veh/h	506
V/C Ratio	0.129
Control Delay, s/veh	8.8
LOS	A
95th %tile Queue, veh	0

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	648	284	763	332
Demand Flow Rate, veh/h	660	289	778	339
Vehicles Circulating, veh/h	448	765	295	554
Vehicles Exiting, veh/h	445	260	797	500
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	19.7	12.9	14.9	10.4
Approach LOS	C	B	B	B

Lane	Left	Left	Left	Bypass	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized				Yield	
Lane Util	1.000	1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	48	4.976
Entry Flow, veh/h	660	289	730	1058	339
Cap Entry Lane, veh/h	874	632	1021	0.980	784
Entry HV Adj Factor	0.982	0.981	0.981	47	0.981
Flow Entry, veh/h	648	284	716	1038	332
Cap Entry, veh/h	858	620	1002	0.045	769
V/C Ratio	0.755	0.457	0.715	3.9	0.432
Control Delay, s/veh	19.7	12.9	15.6	A	10.4
LOS	C	B	C	0	B
95th %tile Queue, veh	7	2	6		2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	66
Demand Flow Rate, veh/h	67
Vehicles Circulating, veh/h	1025
Vehicles Exiting, veh/h	83
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	9.4
Approach LOS	A

Lane	Left
Designated Moves	LR
Assumed Moves	LR
RT Channelized	
Lane Util	1.000
Follow-Up Headway, s	2.609
Critical Headway, s	4.976
Entry Flow, veh/h	67
Cap Entry Lane, veh/h	485
Entry HV Adj Factor	0.985
Flow Entry, veh/h	66
Cap Entry, veh/h	478
V/C Ratio	0.138
Control Delay, s/veh	9.4
LOS	A
95th %tile Queue, veh	0

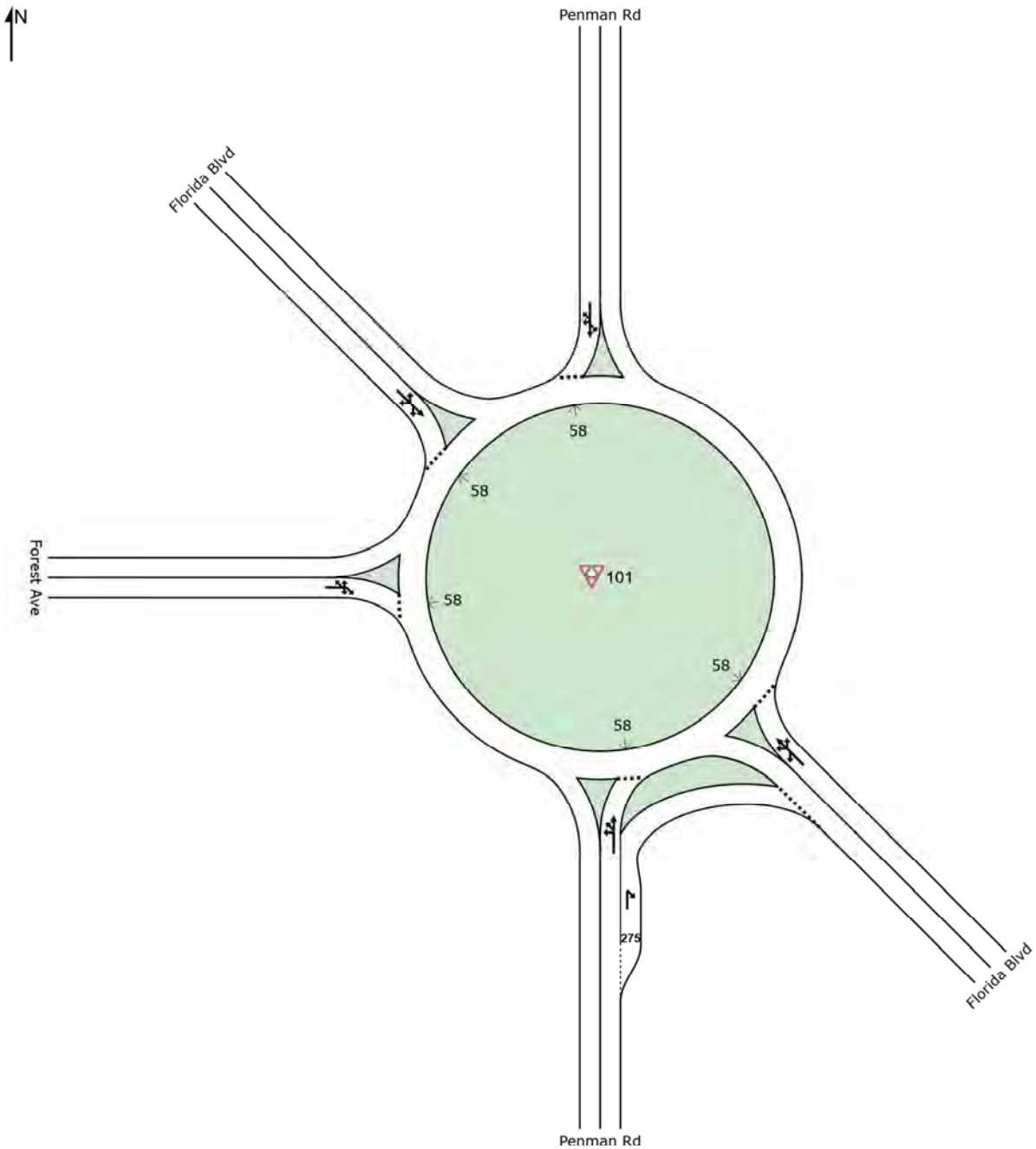
Attachment E

Sidra Outputs

SITE LAYOUT - One-Lane Roundabout

Site: 101 [2018 AM]

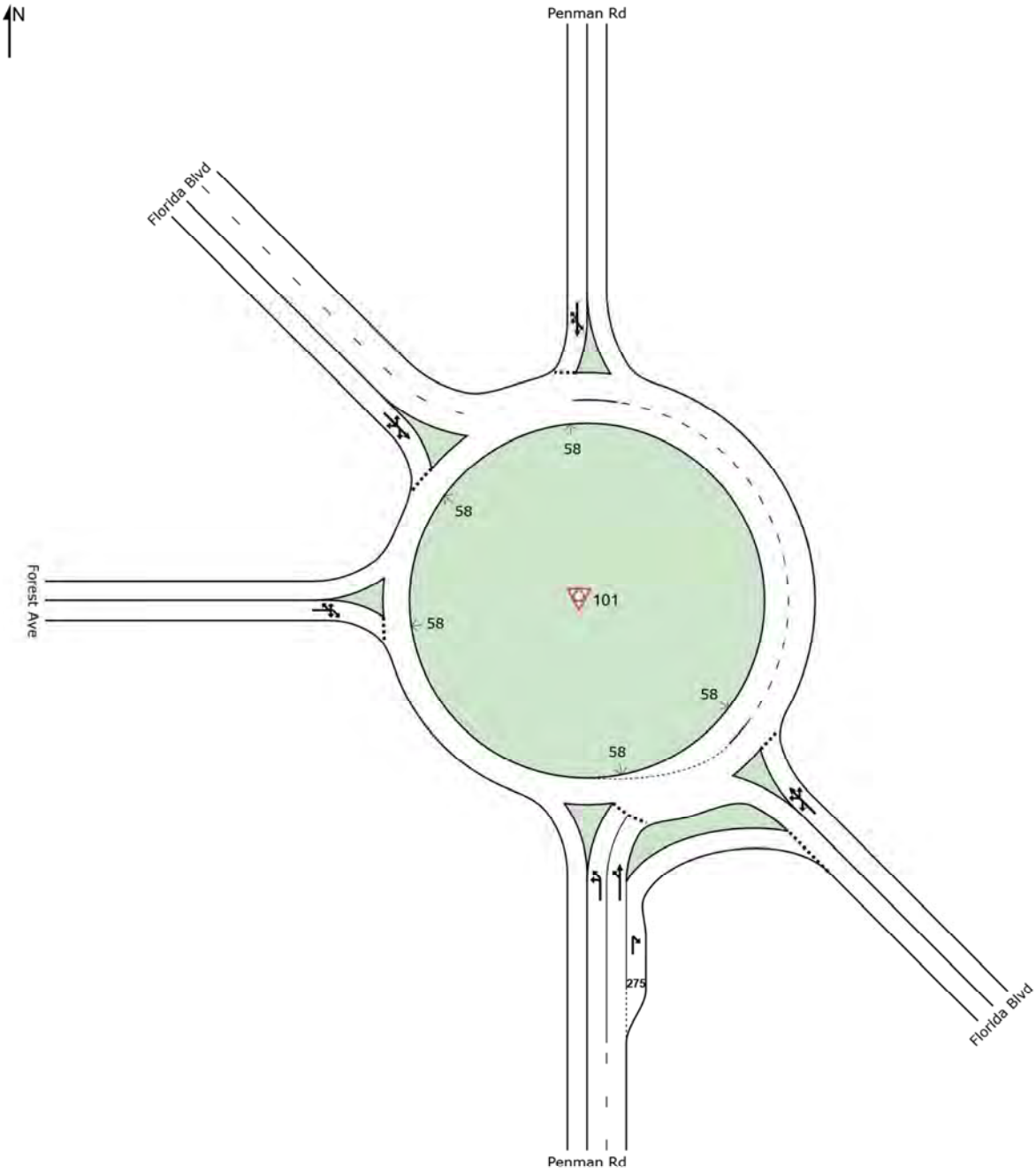
Florida Blvd at Penman Rd
Roundabout



SITE LAYOUT - One-Lane Roundabout with Transition Lane

Site: 101 [2018 AM]

Florida Blvd at Penman Rd
Roundabout



Organisation: METRIC ENGINEERING, INC. | Created: Thursday, July 19, 2018 2:46:00 PM
Project: N:\JOB\TRAFFIC\04.2320.04 City of Jacksonville - Neptune Beach Roundabout\05 Sidra\Florida Blvd at Penman Rd - Transition Lane Rdbt.sip7

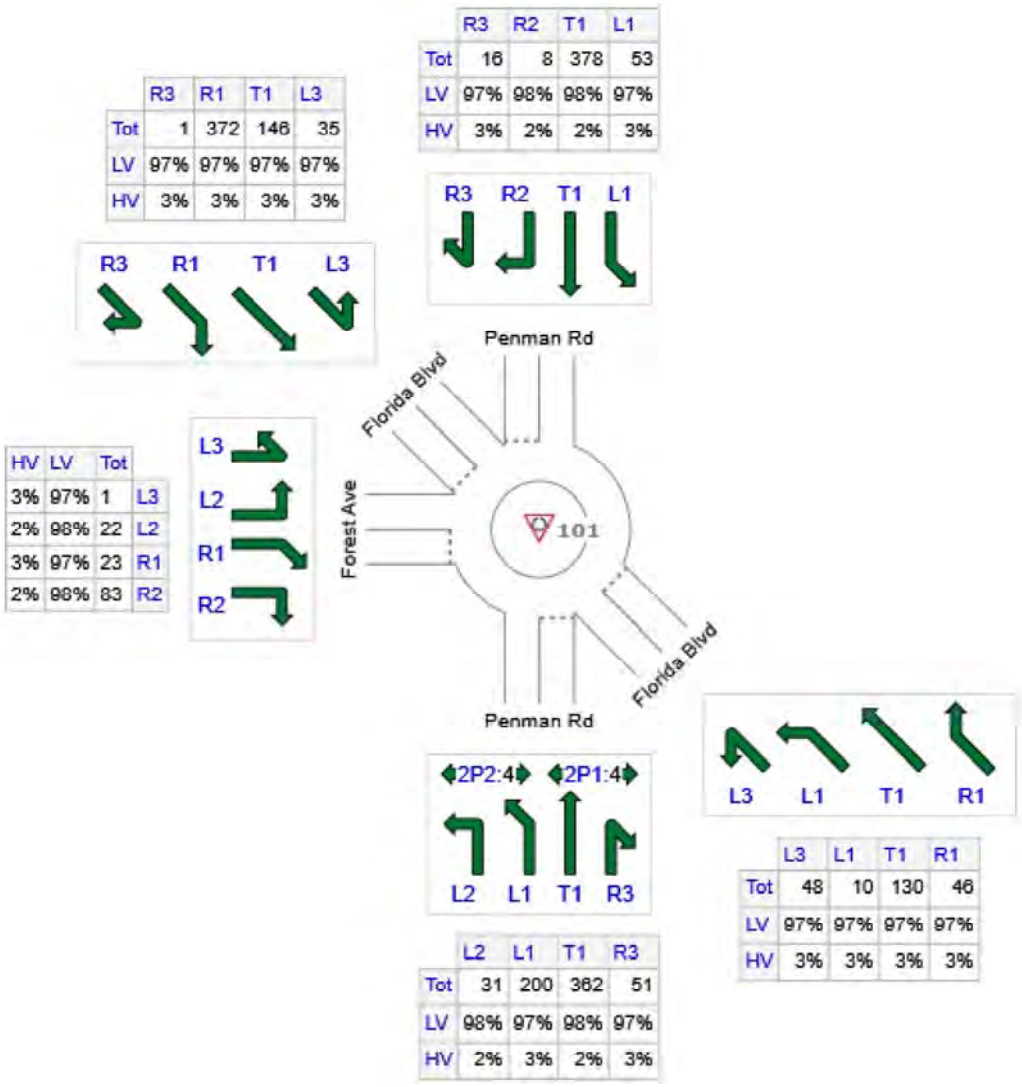
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2018 AM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	644	629	15
SE: Florida Blvd	234	227	7
N: Penman Rd	455	445	10
NW: Florida Blvd	554	537	17
W: Forest Ave	129	126	3
Total	2016	1964	52

LANE SUMMARY

Site: 101 [2018 AM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 90.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1[d]	645	2.3	1192	0.541	100	9.2	LOS A	4.8	121.1	Full	1600	0.0	0.0
Lane 2	55	3.0	1247	0.044	100	3.2	LOS A	0.3	6.7	Short	275	0.0	NA
Approach	700	2.4		0.541		8.8	LOS A	4.8	121.1				
SouthEast: Florida Blvd													
Lane 1[d]	254	3.0	549	0.463	100	14.4	LOS B	3.5	89.1	Full	1600	0.0	0.0
Approach	254	3.0		0.463		14.4	LOS B	3.5	89.1				
North: Penman Rd													
Lane 1[d]	495	2.2	810	0.610	100	14.2	LOS B	6.0	152.8	Full	1600	0.0	0.0
Approach	495	2.2		0.610		14.2	LOS B	6.0	152.8				
NorthWest: Florida Blvd													
Lane 1[d]	602	3.0	639	0.942	100	47.8	LOS E	20.2	517.2	Full	1600	0.0	0.0
Approach	602	3.0		0.942		47.8	LOS E	20.2	517.2				
West: Forest Ave													
Lane 1[d]	140	2.2	365	0.384	100	17.8	LOS C	2.9	74.5	Full	1600	0.0	0.0
Approach	140	2.2		0.384		17.8	LOS C	2.9	74.5				
Intersection	2191	2.6		0.942		21.9	LOS C	20.2	517.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

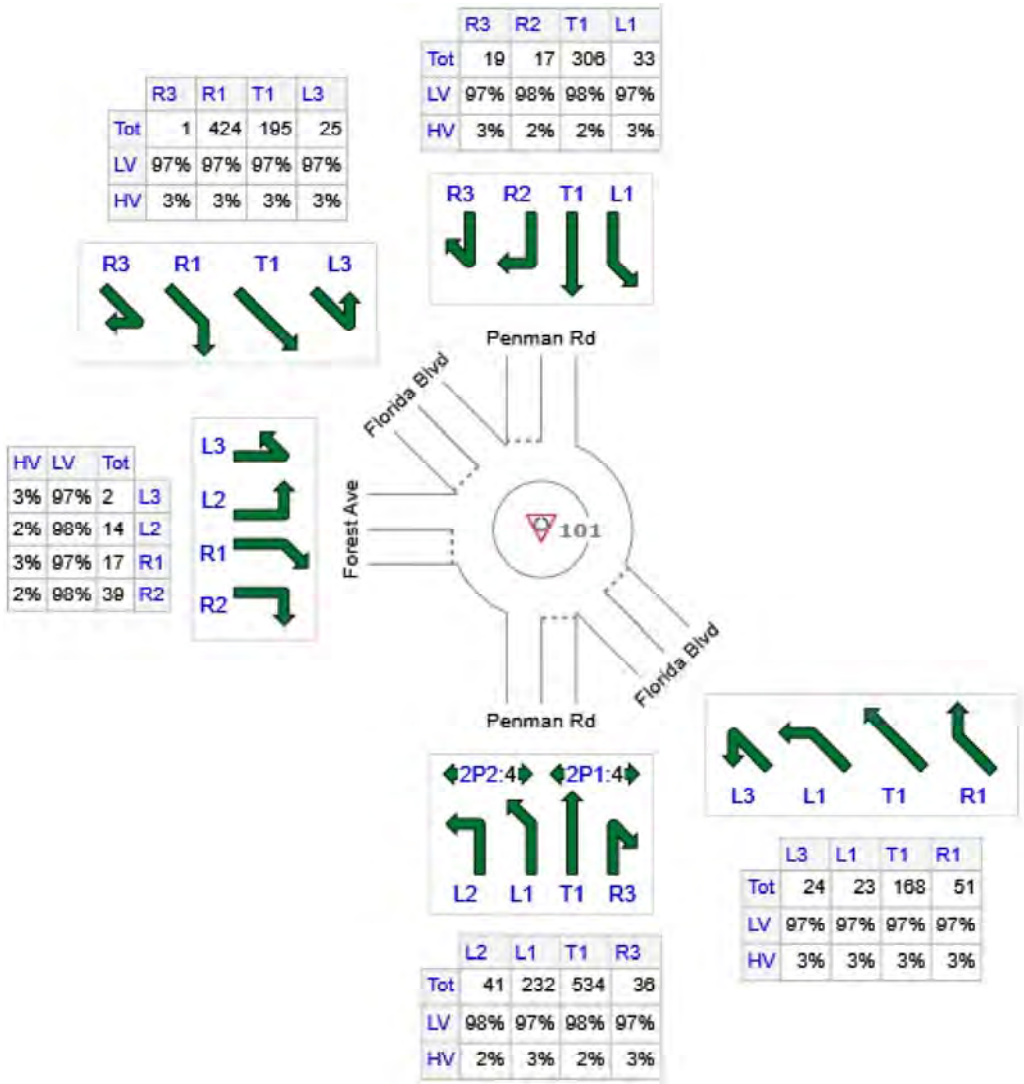
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2018 PM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	843	823	20
SE: Florida Blvd	266	258	8
N: Penman Rd	375	367	8
NW: Florida Blvd	645	626	19
W: Forest Ave	72	70	2
Total	2201	2144	57

LANE SUMMARY

Site: 101 [2018 PM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 90.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1[d]	877	2.3	1173	0.748	100	15.3	LOS C	10.7	272.5	Full	1600	0.0	0.0
Lane 2	39	3.0	1208	0.032	100	3.2	LOS A	0.2	5.0	Short	275	0.0	NA
Approach	916	2.3		0.748		14.8	LOS B	10.7	272.5				
SouthEast: Florida Blvd													
Lane 1[d]	289	3.0	369	0.783	100	41.1	LOS E	9.0	229.8	Full	1600	0.0	0.0
Approach	289	3.0		0.783		41.1	LOS E	9.0	229.8				
North: Penman Rd													
Lane 1[d]	408	2.1	739	0.552	100	13.5	LOS B	4.9	124.8	Full	1600	0.0	0.0
Approach	408	2.1		0.552		13.5	LOS B	4.9	124.8				
NorthWest: Florida Blvd													
Lane 1[d]	701	3.0	712	0.985	100	54.0	LOS F	26.8	685.4	Full	1600	0.0	0.0
Approach	701	3.0		0.985		54.0	LOS F	26.8	685.4				
West: Forest Ave													
Lane 1[d]	78	2.3	358	0.219	100	13.9	LOS B	1.6	39.7	Full	1600	0.0	0.0
Approach	78	2.3		0.219		13.9	LOS B	1.6	39.7				
Intersection	2392	2.6		0.985		29.2	LOS D	26.8	685.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

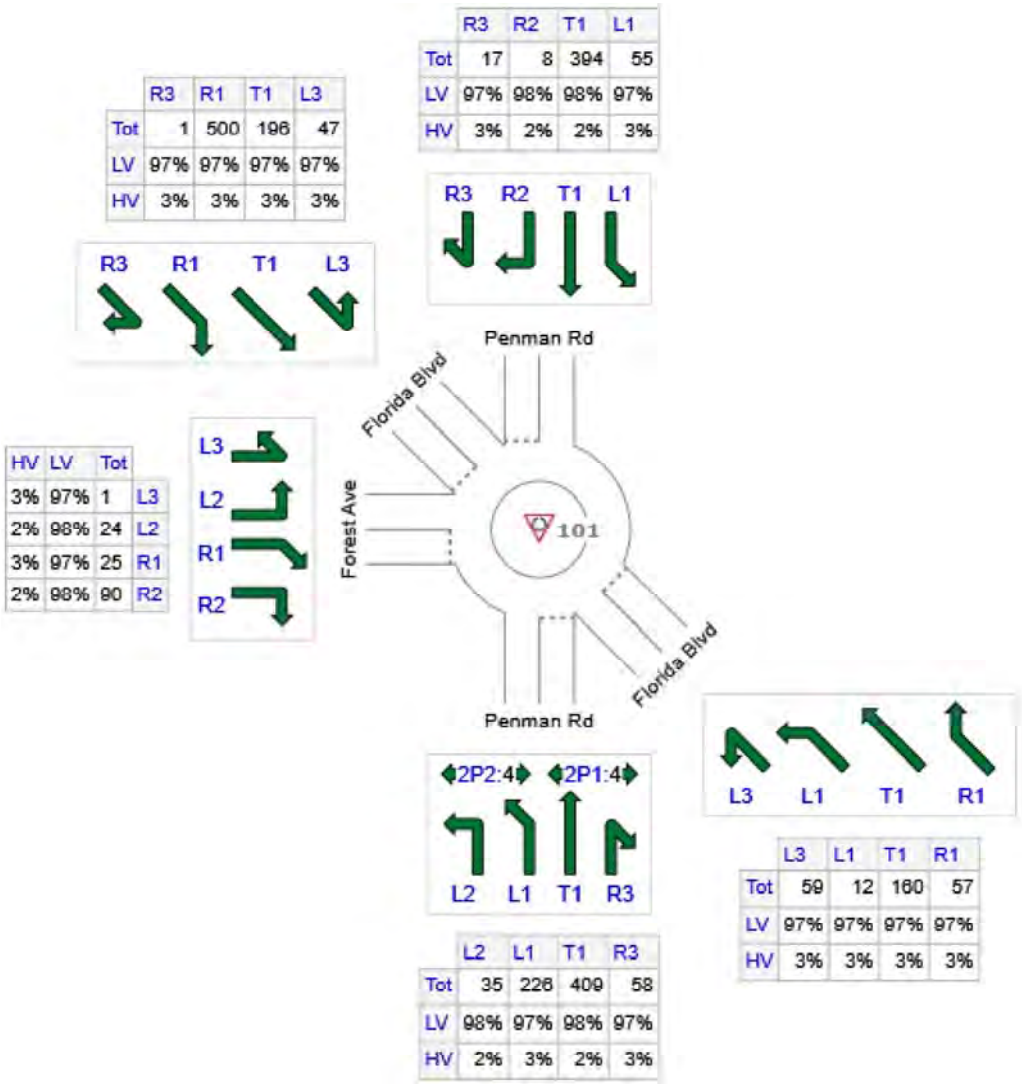
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2045 AM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	728	711	17
SE: Florida Blvd	288	279	9
N: Penman Rd	474	464	10
NW: Florida Blvd	744	722	22
W: Forest Ave	140	137	3
Total	2374	2312	62

LANE SUMMARY

Site: 101 [2045 AM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1[d]	728	2.3	1323	0.551	100	8.8	LOS A	5.1	129.1	Full	1600	0.0	0.0
Lane 2	63	3.0	1390	0.045	100	2.9	LOS A	0.3	7.2	Short	275	0.0	NA
Approach	791	2.4		0.551		8.3	LOS A	5.1	129.1				
SouthEast: Florida Blvd													
Lane 1[d]	313	3.0	573	0.546	100	16.3	LOS C	4.9	126.2	Full	1600	0.0	0.0
Approach	313	3.0		0.546		16.3	LOS C	4.9	126.2				
North: Penman Rd													
Lane 1[d]	515	2.2	875	0.589	100	12.8	LOS B	5.8	147.9	Full	1600	0.0	0.0
Approach	515	2.2		0.589		12.8	LOS B	5.8	147.9				
NorthWest: Florida Blvd													
Lane 1[d]	809	3.0	723	1.119	100	93.7	LOS F	49.9	1277.6	Full	1600	0.0	0.0
Approach	809	3.0		1.119		93.7	LOS F	49.9	1277.6				
West: Forest Ave													
Lane 1[d]	152	2.2	325	0.468	100	22.7	LOS C	4.3	109.6	Full	1600	0.0	0.0
Approach	152	2.2		0.468		22.7	LOS C	4.3	109.6				
Intersection	2580	2.6		1.119		37.8	LOS E	49.9	1277.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

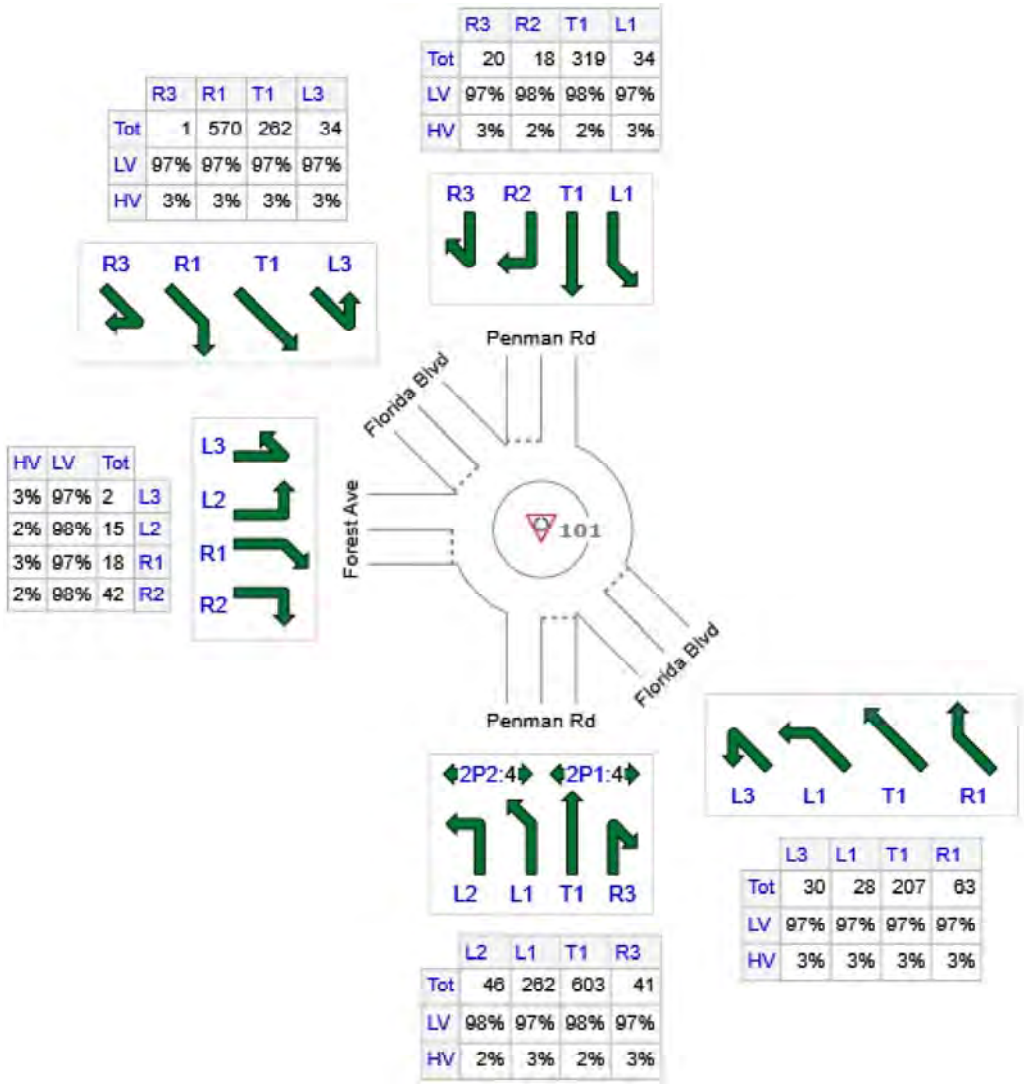
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2045 PM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	952	930	22
SE: Florida Blvd	328	318	10
N: Penman Rd	391	383	8
NW: Florida Blvd	867	841	26
W: Forest Ave	77	75	2
Total	2615	2547	68

LANE SUMMARY

Site: 101 [2045 PM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1[d]	990	2.3	1308	0.757	100	14.5	LOS B	11.3	287.5	Full	1600	0.0	0.0
Lane 2	45	3.0	1351	0.033	100	2.9	LOS A	0.2	5.4	Short	275	0.0	NA
Approach	1035	2.3		0.757		14.0	LOS B	11.3	287.5				
SouthEast: Florida Blvd													
Lane 1[d]	357	3.0	359	0.994	100	80.6	LOS F	20.1	514.1	Full	1600	0.0	0.0
Approach	357	3.0		0.994		80.6	LOS F	20.1	514.1				
North: Penman Rd													
Lane 1[d]	425	2.1	794	0.535	100	12.3	LOS B	4.9	124.0	Full	1600	0.0	0.0
Approach	425	2.1		0.535		12.3	LOS B	4.9	124.0				
NorthWest: Florida Blvd													
Lane 1[d]	942	3.0	807	1.167	100	108.4	LOS F	65.3	1672.0	Full	1600	0.0	6.3
Approach	942	3.0		1.167		108.4	LOS F	65.3	1672.0				
West: Forest Ave													
Lane 1[d]	84	2.3	337	0.248	100	15.4	LOS C	2.0	50.3	Full	1600	0.0	0.0
Approach	84	2.3		0.248		15.4	LOS C	2.0	50.3				
Intersection	2842	2.6		1.167		53.5	LOS F	65.3	1672.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

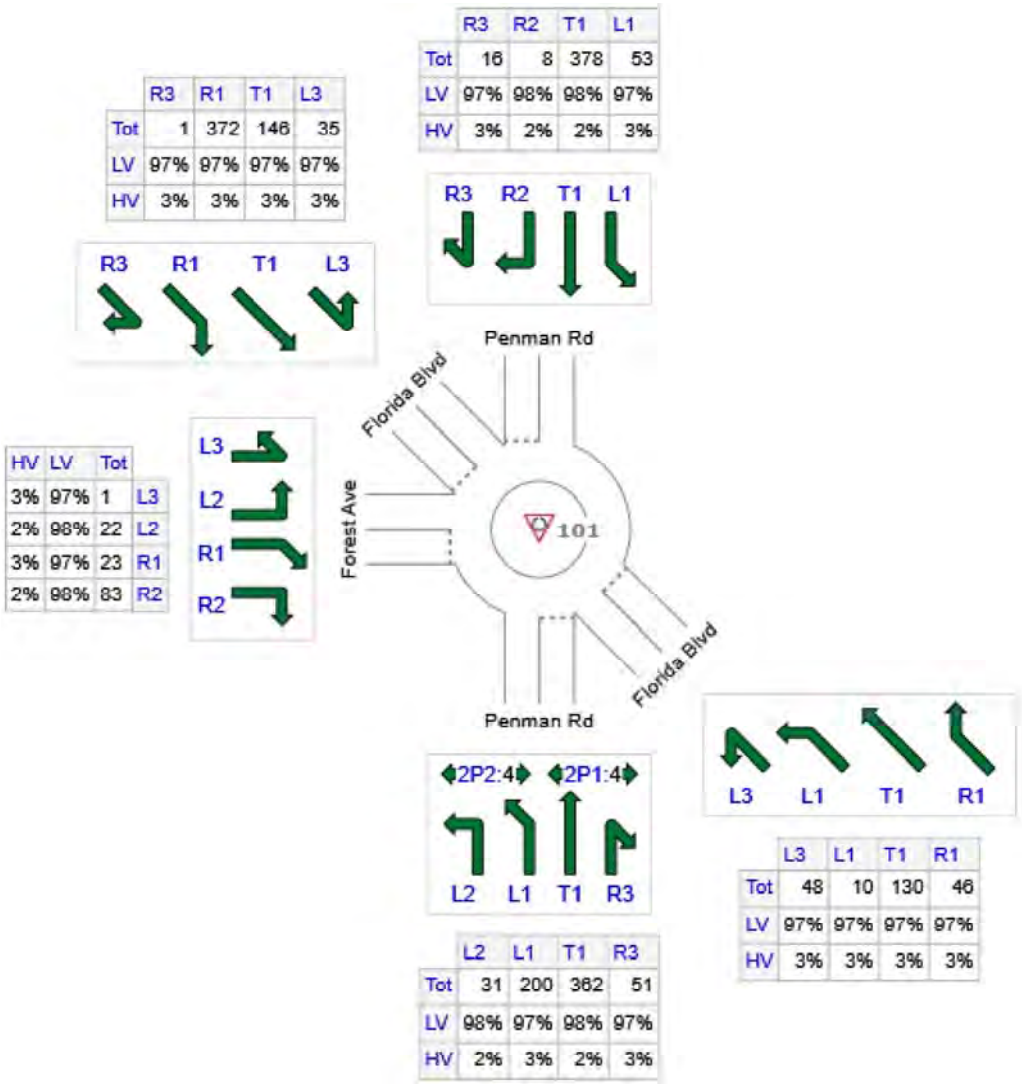
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2018 AM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	644	629	15
SE: Florida Blvd	234	227	7
N: Penman Rd	455	445	10
NW: Florida Blvd	554	537	17
W: Forest Ave	129	126	3
Total	2016	1964	52

LANE SUMMARY

Site: 101 [2018 AM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 90.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1	251	2.9	1008	0.249	76[5]	6.0	LOS A	1.6	41.8	Full	1600	0.0	0.0
Lane 2[d]	393	2.0	1196	0.329	100	6.1	LOS A	2.4	61.0	Full	1600	0.0	0.0
Lane 3	55	3.0	1247	0.044	100	3.2	LOS A	0.3	6.7	Short	275	0.0	NA
Approach	700	2.4		0.329		5.8	LOS A	2.4	61.0				
SouthEast: Florida Blvd													
Lane 1[d]	254	3.0	617	0.412	100	11.9	LOS B	2.1	53.7	Full	1600	0.0	0.0
Approach	254	3.0		0.412		11.9	LOS B	2.1	53.7				
North: Penman Rd													
Lane 1[d]	495	2.2	735	0.673	100	17.7	LOS C	6.5	165.7	Full	1600	0.0	0.0
Approach	495	2.2		0.673		17.7	LOS C	6.5	165.7				
NorthWest: Florida Blvd													
Lane 1[d]	602	3.0	641	0.939	100	47.2	LOS E	20.0	512.0	Full	1600	0.0	0.0
Approach	602	3.0		0.939		47.2	LOS E	20.0	512.0				
West: Forest Ave													
Lane 1[d]	140	2.2	365	0.384	100	17.8	LOS C	2.9	74.5	Full	1600	0.0	0.0
Approach	140	2.2		0.384		17.8	LOS C	2.9	74.5				
Intersection	2191	2.6		0.939		21.4	LOS C	20.0	512.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
d Dominant lane on roundabout approach

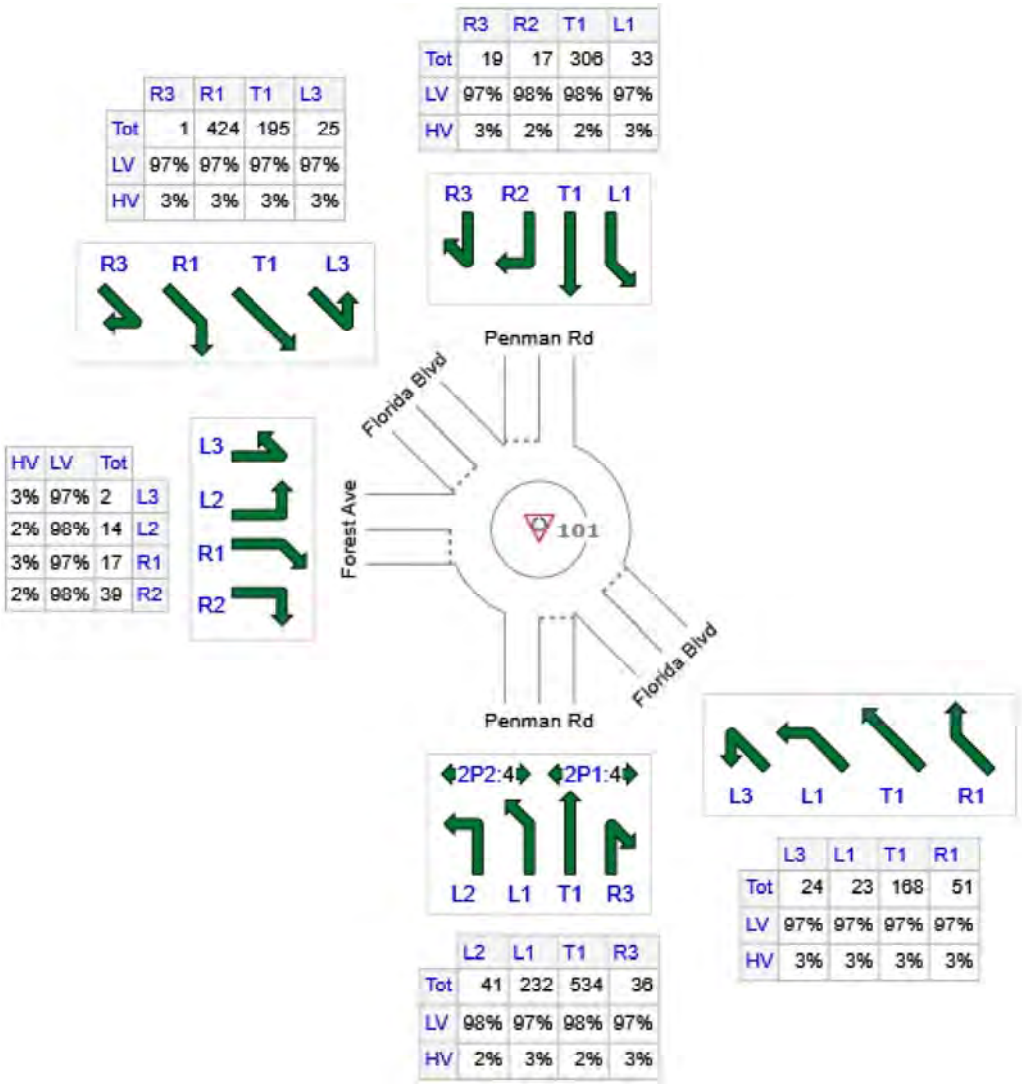
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2018 PM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	843	823	20
SE: Florida Blvd	266	258	8
N: Penman Rd	375	367	8
NW: Florida Blvd	645	626	19
W: Forest Ave	72	70	2
Total	2201	2144	57

LANE SUMMARY

Site: 101 [2018 PM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 90.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1	297	2.8	934	0.318	64[5]	7.2	LOS A	2.2	56.3	Full	1600	0.0	0.0
Lane 2[d]	580	2.0	1177	0.493	100	8.5	LOS A	4.2	107.3	Full	1600	0.0	0.0
Lane 3	39	3.0	1208	0.032	100	3.2	LOS A	0.2	5.0	Short	275	0.0	NA
Approach	916	2.3		0.493		7.8	LOS A	4.2	107.3				
SouthEast: Florida Blvd													
Lane 1[d]	289	3.0	514	0.562	100	18.4	LOS C	3.4	87.3	Full	1600	0.0	0.0
Approach	289	3.0		0.562		18.4	LOS C	3.4	87.3				
North: Penman Rd													
Lane 1[d]	408	2.1	681	0.598	100	15.8	LOS C	5.0	127.2	Full	1600	0.0	0.0
Approach	408	2.1		0.598		15.8	LOS C	5.0	127.2				
NorthWest: Florida Blvd													
Lane 1[d]	701	3.0	716	0.980	100	52.7	LOS F	26.2	669.8	Full	1600	0.0	0.0
Approach	701	3.0		0.980		52.7	LOS F	26.2	669.8				
West: Forest Ave													
Lane 1[d]	78	2.3	358	0.219	100	13.9	LOS B	1.6	39.7	Full	1600	0.0	0.0
Approach	78	2.3		0.219		13.9	LOS B	1.6	39.7				
Intersection	2392	2.6		0.980		23.8	LOS C	26.2	669.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
d Dominant lane on roundabout approach

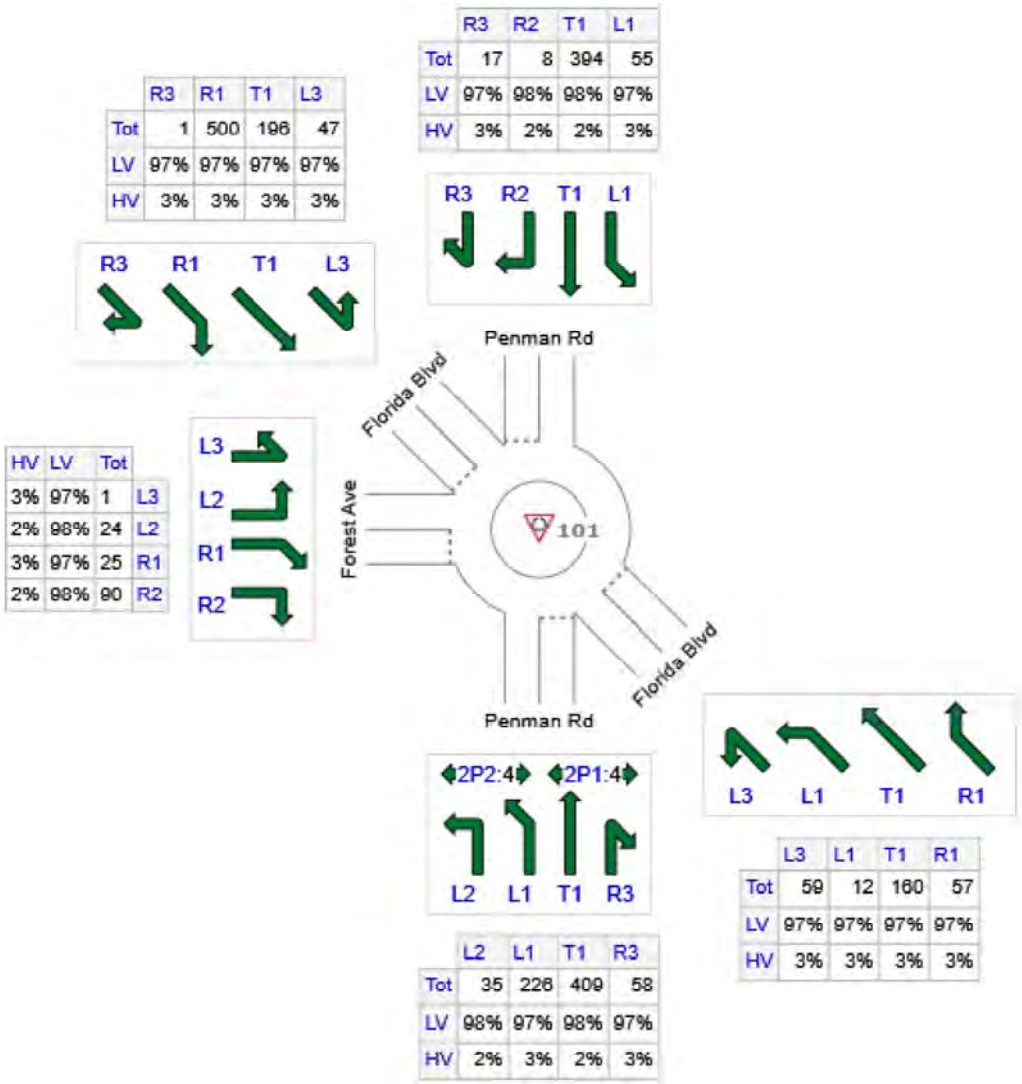
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2045 AM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	728	711	17
SE: Florida Blvd	288	279	9
N: Penman Rd	474	464	10
NW: Florida Blvd	744	722	22
W: Forest Ave	140	137	3
Total	2374	2312	62

LANE SUMMARY

Site: 101 [2045 AM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1	284	2.9	1115	0.254	76[5]	5.6	LOS A	1.8	44.9	Full	1600	0.0	0.0
Lane 2[d]	445	2.0	1327	0.335	100	5.8	LOS A	2.6	65.7	Full	1600	0.0	0.0
Lane 3	63	3.0	1389	0.045	100	2.9	LOS A	0.3	7.2	Short	275	0.0	NA
Approach	791	2.4		0.335		5.5	LOS A	2.6	65.7				
SouthEast: Florida Blvd													
Lane 1[d]	313	3.0	685	0.457	100	11.9	LOS B	2.6	65.4	Full	1600	0.0	0.0
Approach	313	3.0		0.457		11.9	LOS B	2.6	65.4				
North: Penman Rd													
Lane 1[d]	515	2.2	800	0.644	100	15.5	LOS C	6.2	156.8	Full	1600	0.0	0.0
Approach	515	2.2		0.644		15.5	LOS C	6.2	156.8				
NorthWest: Florida Blvd													
Lane 1[d]	809	3.0	726	1.113	100	91.5	LOS F	48.9	1253.0	Full	1600	0.0	0.0
Approach	809	3.0		1.113		91.5	LOS F	48.9	1253.0				
West: Forest Ave													
Lane 1[d]	152	2.2	323	0.472	100	23.1	LOS C	4.4	111.1	Full	1600	0.0	0.0
Approach	152	2.2		0.472		23.1	LOS C	4.4	111.1				
Intersection	2580	2.6		1.113		36.2	LOS E	48.9	1253.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
d Dominant lane on roundabout approach

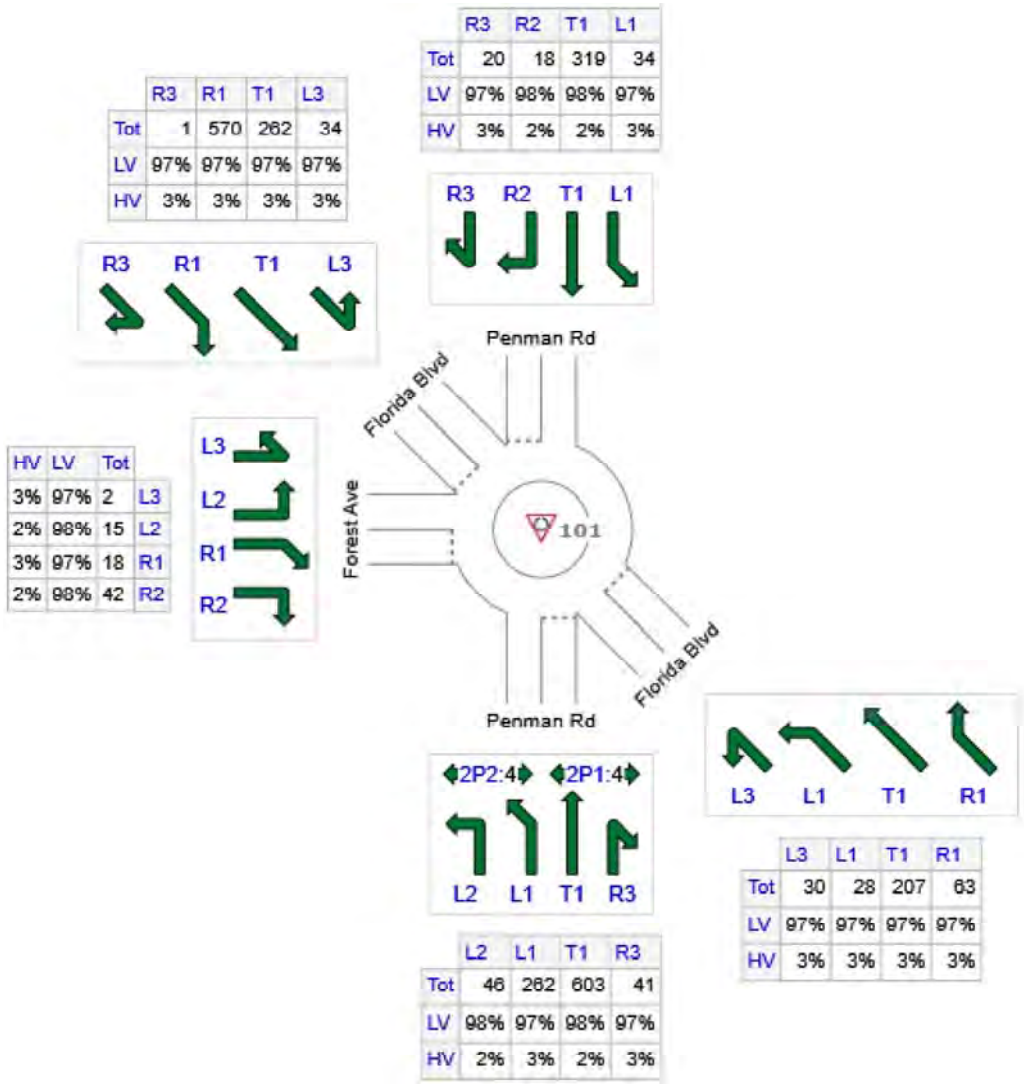
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 101 [2045 PM]

Florida Blvd at Penman Rd
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Penman Rd	952	930	22
SE: Florida Blvd	328	318	10
N: Penman Rd	391	383	8
NW: Florida Blvd	867	841	26
W: Forest Ave	77	75	2
Total	2615	2547	68

LANE SUMMARY

Site: 101 [2045 PM]

Florida Blvd at Penman Rd
Roundabout
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Penman Rd													
Lane 1	335	2.9	1040	0.322	64[5]	6.7	LOS A	2.3	59.8	Full	1600	0.0	0.0
Lane 2[d]	655	2.0	1311	0.500	100	8.0	LOS A	4.5	114.2	Full	1600	0.0	0.0
Lane 3	45	3.0	1349	0.033	100	2.9	LOS A	0.2	5.4	Short	275	0.0	NA
Approach	1035	2.3		0.500		7.3	LOS A	4.5	114.2				
SouthEast: Florida Blvd													
Lane 1[d]	357	3.0	560	0.637	100	20.2	LOS C	4.4	113.4	Full	1600	0.0	0.0
Approach	357	3.0		0.637		20.2	LOS C	4.4	113.4				
North: Penman Rd													
Lane 1[d]	425	2.1	727	0.584	100	14.6	LOS B	5.1	128.5	Full	1600	0.0	0.0
Approach	425	2.1		0.584		14.6	LOS B	5.1	128.5				
NorthWest: Florida Blvd													
Lane 1[d]	942	3.0	811	1.162	100	106.3	LOS F	64.3	1645.8	Full	1600	0.0	5.8
Approach	942	3.0		1.162		106.3	LOS F	64.3	1645.8				
West: Forest Ave													
Lane 1[d]	84	2.3	334	0.250	100	15.6	LOS C	2.0	50.8	Full	1600	0.0	0.0
Approach	84	2.3		0.250		15.6	LOS C	2.0	50.8				
Intersection	2842	2.6		1.162		43.1	LOS E	64.3	1645.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
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Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
d Dominant lane on roundabout approach

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	6A-Proposed Ordinance No. 2019-05
SUBMITTED BY:	Animal Control Officer Denine Zagari
DATE:	April 10, 2019
BACKGROUND:	Due to conflicting language regarding leash lengths, Sections 6-1 and 6-31 of the Code of Ordinances should be amended to reflect a 12-foot leash length per the recommendation of Animal Control Officer Denine Zagari
BUDGET:	N/A
RECOMMENDATION:	Approval
ATTACHMENT:	Proposed Ordinance 2019-05
CITY MANAGER:	

SPONSORED BY: **ORDINANCE NO. 2019-05**

A BILL TO BE ENTITLED

AN ORDINANCE OF THE CITY OF NEPTUNE BEACH, FLORIDA, AMENDING CHAPTER 6, ANIMALS; ARTICLE I, SECTION 6-1, DEFINITIONS; AND ARTICLE II, SECTION 6-31(b)(1), DOGS ON THE BEACH AND PROVIDING AN EFFECTIVE DATE.

Whereas, the City Council of the City of Neptune Beach, Florida has determined that it is necessary to amend Chapter 6 as set forth below.

Now, therefore, be it ordained by the City Council of Neptune Beach, Florida:

Section 1. Chapter 6 Animals, Section 6-1, Definitions, and Section 6-31(b)(1), Dogs on the Beach, be amended as follows:

Sec. 6-1. Definitions.

....

At Large means that an animal is off of the property of the owner and: (1) without restraint or confinement; (2) wandering, roving, or rambling unrestrained; or (3) in the absence of control of a person in charge. An animal on a retractable or other trolley leash system shall be considered "at-large" if the leash is extended beyond ~~sixteen (16)~~ twelve (12) feet in length

Sec. 6-31. Dogs on the Beach.

....

(b) In addition to the above provisions, all owners, custodians and/or persons responsible for and in control of any dog(s) on the beach must comply with following:

(1) Each such dog must be fastened to a suitable leash of dependable strength not to exceed ~~sixteen (16)~~ twelve (12) feet in length and the leash must be held or controlled by that person at all times.

Section 2. This Ordinance shall become effective after passage by the City Council.

VOTE RESULTS OF FIRST READING:

Mayor Elaine Brown
Vice Mayor Fred Jones
Councilor Kerry Chin
Councilor Josh Messinger
Councilor Scott Wiley

Passed on First Reading this __ day of _____, 2019.

VOTE RESULTS OF SECOND AND FINAL READING:

Mayor Elaine Brown
Vice Mayor Fred Jones
Councilor Kerry Chin
Councilor Josh Messinger
Councilor Scott Wiley

Passed on Second and Final Reading this ____ day of_____, 2019.

_____
Elaine Brown, Mayor

ATTEST:

_____
Catherine Ponson, City Clerk

Approved as to form and contents

_____
Patrick Krechowski, City Attorney

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	8B-Comprehensive Plan and Land Development Code RFQ
SUBMITTED BY:	Deputy City Manager Amanda Askew
DATE:	4/10/2019
BACKGROUND:	The Comprehensive Plan and the Land Development Code are being updated. The City is seeking Requests for Qualifications (RFQ) to contract services for the completion of the project in accordance with the Scope of Services.
BUDGET:	N/A
RECOMMENDATION:	Approval
ATTACHMENT:	Draft RFQ
CITY MANAGER:	

CITY OF NEPTUNE BEACH, FLORIDA
FORMAL REQUEST FOR QUALIFICATIONS & PROPOSALS
"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01
Submittal Due Date: June 4, 2019at 10 AM

Introduction

The City of Neptune Beach, Florida ("CONB") through its chief executive officer (City Manager) hereby solicits sealed proposal responses to CONB's request (the "Request for Qualifications" or "RFQ"). All references in this Solicitation (the "Invitation for Proposals" or "Invitation to Bid") to CONB shall be a reference to the City Manager, or the manager's designee, for the City of Neptune Beach unless otherwise specifically defined.

CONB hereby requests sealed proposals in response to **RFQ 19-01** titled "**Comprehensive Plan and Land Development Code Revision."** The purpose of the RFQ is to contract for the services necessary for the completion of the project in accordance with the Scope of Services (attached hereto as, Exhibit 1,), described in this RFQ (the "Project").

Interested parties wishing to respond to the RFQ can obtain the complete RFQ package at the City Clerk's office Monday through Friday from 9:00 A.M. to 4:00 P.M. or by accessing the following webpage: http://www.ci.neptune-beach.fl.us / which is CONB's web address for solicitation information. Proposals are subject to the Standard Terms and Conditions contained in the complete RFQ Package, including all documents listed in the RFQ.

The Proposal Package shall consist of ***one (1) original unbound proposal, six(6) additional copies and one (1) digital (or comparable medium including Flash Drive, DVD or CD) copy*** all of which shall be delivered to the Office of the City Clerk located at Neptune Beach City Hall, 116 First Street, Neptune Beach, Florida 32266. The entire Proposal Package shall be enclosed in a sealed envelope or container and shall have the following Envelope Information clearly printed or written on the exterior of the envelope or container in which the sealed proposal is delivered: "**Comprehensive Plan and Land Development Code Revision" RFQ 19-01** and the official name of the responding party. Special envelopes such as those provided by UPS or Federal Express will not be opened unless they contain the required Envelope Information on the front or back of the envelope. Sealed Proposals must be received by Office of the City Clerk, either by mail or hand delivery, no later than **10 A.M. local time on June 4, 2019.** A public opening will take place at 10 A.M. on the same date in the City Council Chambers located at City Hall, 116 First Street, Neptune Beach 32266. Any Proposal received after 10 A.M. local time on said date will not be accepted or considered under any circumstances. Any uncertainty regarding the time a Proposal is received will be resolved against the person submitting the proposal and in favor of the Clerk's receipt stamp.

Supplemental changes will be distributed after the Land Use and Parks Committee and the Strategic Planning Committee meeting.

A Non-Mandatory Pre-Proposal Meeting will be conducted at City Hall in the City Council Chambers located at 116 First Street, Neptune Beach, Fl 32266 on May 20, 2019 at 10 AM. The conference shall be held regardless of weather conditions. Proposals are subject to the terms, conditions and provisions of this letter as well as to those provisions, terms, conditions, affidavits and documents contained in this RFQ Package. CONB reserves the right to award or decline to award the Project to the person with the lowest, most responsive, responsible Proposal, as determined by CONB, subject to the right of CONB, or the City Council, to reject any and all proposals, and the right of CONB to waive any irregularity in the Proposals or RFQ procedure and subject also to the right of CONB to award the Project, and execute a contract with a Respondent or Respondents, other than to one who provided the lowest Proposal Price or, if the Scope of the Work is divided into distinct subdivisions, to award each subdivision to a separate Respondent.

Catherine Ponson, CMC
City Clerk, City of Neptune Beach

SCOPE OF SERVICES and SCHEDULE OF VALUES

"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

The Scope of Services and the Schedule of Values, if any, are set forth in the attached **EXHIBIT 1.**

END OF SECTION

SCHEDULE OF EVENTS

"Comprehensive Plan and Land Development Code Revision"
RFQ #PL2016-04

No	Event	Date*	Time* (EST)
1	Advertisement/ Distribution of Solicitation & Cone of Silence begins	5/7/2019	10:00 AM
2	Non-Mandatory Pre-RFQ Meeting	5/20/2019	10:00 AM
3	Deadline to Submit Questions	5/23/2019	10:00 AM
4	Deadline to City Responses to Questions	5/28/2019	10:00 AM
5	Deadline to Submit RFQ-Response	6/4/2019	10:00 AM
6	Projected Announcement of selected Contractor/Cone of Silence ends	6/17/2019	6:00 PM

END OF SECTION

INSTRUCTIONS

"Comprehensive Plan and Land Development Code Revision" RFQ 19-01

IT IS THE RESPONSIBILITY OF THE RESPONDENT TO ENSURE TIMELY DELIVERY OF ITS RESPONSE PACKAGE IN COMPLIANCE WITH RFQ 19-01 AND THESE INSTRUCTIONS.

1. Purpose of RFQ. The City of Neptune Beach is requesting proposals for the lowest and most responsive price for the Project. The City reserves the right to award the contract to the Respondent whose proposal is found to be in the best interests of the City.
2. Qualification of Proposing Firm. Response submittals to this RFQ will be considered from firms normally engaged in providing the services requested. The proposing firm must demonstrate adequate experience, organization, offices, equipment and personnel to ensure prompt and efficient service to the City. The City reserves the right, before recommending any award, to inspect the offices and organization or to take any other action necessary to determine ability to perform in accordance with the specifications, terms and conditions. The City will determine whether the evidence of ability to perform is satisfactory and reserves the right to reject all response submittals to this RFQ where evidence submitted, or investigation and evaluation, indicates inability of a firm to perform.
3. Deviations from Specifications. The awarded firm shall clearly indicate, as applicable, all areas in which the services proposed do not fully comply with the requirements of this RFQ. The decision as to whether an item fully complies with the stated requirements rests solely with the City.
4. Designated Contact. Should the City choose to make an award pursuant to RFQ#??, the awarded firm shall appoint a person to act as a primary contact with the City. This person or back-up shall be readily available during normal work hours by phone, email, or in person, and shall be knowledgeable of the terms of the contract.
5. Precedence of Conditions. The proposing firm, by submitting a response, agrees that the City's General Provisions, Terms and Conditions herein will take precedence over any terms and conditions submitted with the response, either appearing separately as an attachment or included within the Proposal. The Contract Documents have been listed below in order of importance and relevance, with the one having the most importance and relevance being at the top of the list and the remaining documents in descending order of importance and relevance. This order shall apply, unless clearly contrary to the specific terms of the Contract or General Conditions to the Contract:
    a) Attachment/Exhibits to Supplementary Conditions
    b) Supplementary Conditions to Contract, if any
    c) Addenda to RFQ
    d) Attachments/Exhibits to RFQ
    e) RFQ
    f) Attachment/Exhibits to Contract
    g) Contract
    h) General Conditions to Contract, if any
    i) Respondent's Proposal

6. Response Withdrawal. After Proposals are opened, corrections or modifications to Proposals are not permitted, but the City may allow the proposing firm to withdraw an erroneous Proposal prior to the confirmation of the proposal award by City Council, if all of the following is established:
    a) The proposing firm acted in good faith in submitting the response;
    b) The error was not the result of gross negligence or willful inattention on the part of the firm;
    c) The error was discovered and communicated to the City within twenty-four hours (not including Saturday, Sunday or a legal holiday) of opening the proposals received, along with a request for permission to withdraw the firm's Proposal; and
    d) The firm submits an explanation in writing, signed under penalty of perjury, stating how the error was made and delivers adequate documentation to the City to support the explanation and to show that the error was not the result of gross negligence or willful inattention nor made in bad faith.
7. The terms, provisions, conditions and definitions contained in RFQ# 19-01 shall apply to these instructions and they are hereby adopted and made a part hereof. If there is a conflict between any sections or parts of RFQ#??, the City's interpretation shall apply.
8. Any questions concerning the Solicitation or any required need for clarification must be made in writing, by **10 AM on May 23, 2019** to the attention of **Catherine Ponson** clerk@nbfl.us**.**
9. The issuance of a written addendum by the City is the only official method whereby interpretation and/or clarification of information can be given. Interpretations or clarifications, considered necessary by the City in response to such questions, shall be issued by a written addendum to the RFQ Package (also known as "RFQ Specifications" or "RFQ") by U.S. mail, e-mail or other delivery method convenient to the City and the City will notify all prospective firms via the City's website.
10. Verbal interpretations or clarifications shall be without legal effect. No plea by a Respondent of ignorance or the need for additional information shall exempt a Respondent from submitting the Proposal on the required date and time as set forth in the public notice.

    1. Cone of Silence: RFQ 19-01 is subject to a "Cone of Silence" From the time of advertising until the City Manager issues his recommendation, there is a prohibition on verbal communication with the City's professional staff, including the City Manager and his staff. All written communication must comply with the requirements of the Cone of Silence. The Cone of Silence does not apply to verbal communications at pre-proposal conferences, verbal presentations before evaluation committees, contract discussions during any duly noticed public meeting, public presentations made to the City Council during any duly notice public meeting, contract negotiations with the staff following the City Manager's written recommendation for the award of the contract, or communications in writing at any time with any City employee, official or member of the City Council unless specifically prohibited. A copy of all written communications must be contemporaneously filed with the City Manager and City Clerk.

11. Violation of these provisions by any particular Respondent shall render any recommendation for the award of the contract or the contract awarded to said Respondent voidable, and, in such event, said Respondent shall not be considered for any Solicitation including but not limited to one that requests any of the following a proposal, qualifications, a letter of interest or a bid concerning any contract for the provision of goods or services for a period of one year. Contact shall only be made through regularly scheduled Council meetings, or meetings scheduled through the City Manager's office, which are for the purposes of obtaining additional or clarifying information.
12. Lobbying. All firms and their agents who intend to submit, or who submitted, bids or responses for this RFQ, are hereby placed on formal notice that neither City Councilors, candidates for City Councilor or any employee of the City are to be lobbied either individually or collectively concerning this RFQ. Contact shall only be made through regularly scheduled Council meetings, or meetings scheduled through the City Manager's office, which are for the purposes of obtaining additional or clarifying information.
13. Reservation of Right. The City anticipates awarding one contract for services as a result of this RFQ and the successful firm will be requested to enter into negotiations to produce a contract for the Project. The City, however, reserves the right, in its sole discretion, to do any of the following:

a) to reject any and all submitted Responses and to further define or limit the scope of the award;
b) to waive minor irregularities in the responses or in the procedure required by the RFQ documents;
c) to request additional information from firms as deemed necessary;
d) to make an award without discussion or after limited negotiations;
e) to negotiate modifications to the Proposal that it deems acceptable;
f) to terminate negotiations in the event the City deems progress towards a contract to be insufficient and to proceed to negotiate with the Respondent who made the next best Proposal;
g) to proceed in this manner until it has negotiated a contract that is satisfactory to the City;
h) to modify the Contract Documents;
i) to cancel, in whole or part, any invitation for Proposals when it is in the best interest of the City;
j) to award the Project to the person with the lowest, most responsive, responsible Proposal, as determined by the City;
k) to award the Project, and execute a contract with a Respondent or Respondents, other than to one who provided the lowest Proposal Price; and,
l) to award each subdivision of a response to a separate Respondent or Respondents, if applicable.

14. Contingent Fees Prohibited. The proposing firm, by submitting a proposal, warrants that it has not employed or retained a company or person, other than a bona fide employee, contractor or subcontractor, working in its employ, to solicit or secure a contract with the City, and that it has not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee, contractor or sub-consultant, working in its employ, any fee, Council, percentage, gift or other consideration contingent upon or resulting from the award or making of a contract with the City.
15. Public Entity Crimes. A person or affiliate of the Respondent who has been placed on the convicted vendor list pursuant to Chapter 287, Florida Statutes, following a conviction for a public entity crime may not submit a Proposal on a contract to provide any goods or services, or a contract for construction or repair of a public building, may not submit proposals on leases of real property to or with the City, may not be awarded a contract to perform work as a contractor, sub-contractor, supplier, sub-consultant, or consultant under a contract with the City, and may not transact business with the City for a period of 36 months from the date of being placed on the convicted vendor list.
16. Respondents shall use the Proposal Form(s) furnished by the City. All erasures and corrections must have the initials of the Respondent's authorized representative in blue ink at the location of each and every erasure and correction. Proposals shall be signed using blue ink; all quotations shall be typewritten, or printed with blue ink. All spaces shall be filled in with the requested information or the phrase "not applicable" or "NA". The proposal shall be delivered on or before the date and time, and at the place and in such manner as set forth in the

instructions. Failure to do so may cause the Proposal to be rejected. Failure to include any of the Proposal Forms may invalidate the Proposal. Respondent shall deliver to the City, as part of its Proposal, the following documents:

a) The Invitation for Proposal and Instructions to Respondents.
b) A copy of all issued addenda.
c) The completed Proposal Form fully executed.
d) Proposal/Bid Bond, (Bond or cashier's check), if required, attached to the Proposal Form.
e) Certificates of Competency as well as all applicable State, County and City Licenses held by Respondent
f) Certificate of Insurance and/or Letter of Insurability.

17. Goods: If goods are to be provided pursuant to this RFQ the following applies:
    a) Brand Names: If a brand name, make, manufacturer's trade name, or vendor catalog number is mentioned in this RFQ, whether or not followed by the words "approved equal", it is for the purpose of establishing a grade or quality of material only. Respondent may offer goods that are equal to the goods described in the RFQ with appropriate identification, samples and/or specifications for such item(s). The City shall be the sole judge concerning the merits of items proposed as equals.
    b) Pricing: Prices should be stated in units of quantity specified in the Proposal Form. In case of a discrepancy, the City reserves the right to make the final determination at the lowest net cost to the City.
    c) Mistake: In the event that unit prices are part of the Proposal and if there is a discrepancy between the unit price(s) and the extended price(s), the unit price(s) shall prevail, and the extended price(s) shall be adjusted to coincide. Respondents are responsible for checking their calculations. Failure to do so shall be at the Respondent's risk, and errors shall not release the Respondent from his/her or its responsibility as noted herein.
    d) Samples: Samples of items, when required, must be furnished by the Respondent free of charge to the City. Each individual sample must be labeled with the Respondent's name and manufacturer's brand name and delivered by it within ten (10) calendar days of the Proposal opening unless schedule indicates a different time. If samples are requested subsequent to the Proposal opening, they shall be delivered within ten (10) calendar days of the request. The City shall not be responsible for the return of samples.
    e) Respondent warrants by signature on the Proposal Form that prices quoted therein are in conformity with the latest Federal Price Guidelines.
    f) Governmental Restrictions: In the event any governmental restrictions may be imposed which would necessitate alteration of the material quality, workmanship, or performance of the items offered on this Proposal prior to their delivery, it shall be the responsibility of the successful Respondent to notify the City at once, indicating in its letter the specific regulation which required an alteration. The City reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel all or any portion of the Contract, at the sole discretion of the City and at no further expense to the City with thirty (30) days advanced notice.
    g) Respondent warrants that the prices, terms and conditions quoted in the Proposal shall be firm for a period of one hundred eighty (180) calendar days from the date of the

Proposal opening unless otherwise stated in the Proposal Form. Incomplete, unresponsive, irresponsible, vague, or ambiguous responses to the Solicitation shall be cause for rejection, as determined by the City.

h) Safety Standards: The Respondent warrants that the product(s) to be supplied to the City conform in all respects to the standards set forth in the Occupational Safety and Health Act (OSHA) and its amendments. Proposals must be accompanied by a Materials Data Safety Sheet (M.S.D.S) when applicable.

18. Liability, Licenses & Permits: The successful Respondent shall assume the full duty, obligation, and expense of obtaining all necessary licenses, permits, and inspections required by this RFQ and as required by law. The Respondent shall be liable for any damages or loss to the City occasioned by the negligence of the Respondent (or its agent or employees) or any person acting for or through the Respondent. Respondents shall furnish a certified copy of all licenses, Certificates of Competency or other licensing requirement necessary to practice their profession and applicable to the work to be performed as required by Florida Statutes, the Florida Building Code, City of Neptune Beach Code of Ordinances. These documents shall be furnished to the City as part of the Proposal. Failure to have obtained the required licenses and certifications or to furnish these documents shall be grounds for rejecting the Proposal and forfeiture of the Proposal/Bid Bond, if required for this Project.
19. Respondent shall comply with the City's insurance requirements as set forth in the attached ***EXHIBIT 4*****,** prior to issuance of any Contract(s) or Award(s) If a recommendation for award of the contract, or an award of the contract is made before compliance with this provision, the failure to fully and satisfactorily comply with the City's bonding, if required for this project, and insurance requirements as set forth herein shall authorize the City to implement a rescission of the Proposal Award or rescission of the recommendation for award of contract without further City action. The Respondent, by submitting a Proposal, thereby agrees to hold the City harmless and agrees to indemnify the City and covenants not to sue the City by such rescission.
20. Copyrights and/or Patent Rights: Respondent warrants that as to the manufacturing, producing or selling of goods intended to be shipped or ordered by the Respondent pursuant to this Proposal, there has not been, nor will there be, any infringement of copyrights or patent rights. The Respondent agrees to indemnify City from any and all liability, loss or expense occasioned by any such violation or infringement.
21. Execution of Contract: A response to this RFQ shall not be responsive unless the Respondent signs the form of contract that is a part of the RFQ package. The Respondent to this RFQ acknowledges that by submitting a response or a proposal, Respondent agrees to the terms of the form contract and to the terms of the general conditions to the contract, both of which are part of this RFQ package and agrees that Respondent's signature on the Bid Form and/or the form of contract that is a part of the RFQ package and/or response to this RFQ, grants to the City the authority, on the Respondent's behalf, to inserted, into any blank spaces in the contract documents, information obtained from the proposal and at the City's sole and absolute discretion, the City may treat the Respondent's signature on any of those documents, for all purposes, including the enforcement of all of the terms and conditions of the contract, as the Respondent's signature on the contract, after the appropriate information has been inserted.
22. Evaluation of Proposals: The City, at its sole discretion, reserves the right to inspect the facilities of any or all Respondents to determine its capability to meet the requirements of the Contract. In addition, the price, responsibility and responsiveness of the Respondent, the

financial position, experience, staffing, equipment, materials, references, and history of service to the City and/or with other units of state, and/or local governments in Florida, or comparable private entities, will be taken into consideration in the Award of the Contract.

23. Drug Free Workplace: Failure to provide proof of compliance with Section 287.087, Florida Statutes, as amended, when requested shall be cause for rejection of the Proposal as determined by the City.
24. Public Entity Crimes: A person or affiliate who was placed on the Convicted Vendors List following a conviction for a public entity crime may not submit a response on a contract to provide any services to a public entity, may not submit RFQ on leases of real property to a public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for a period of 36 months from the date of being placed on the Convicted Vendors List.
25. Contingent Fees Prohibited: The proposing firm must warrant that it has not employed or retained a company or person, other than a bona fide employee, contractor or subcontractor, working in its employ, to solicit or secure a contract with the City, and that it has not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee, contractor or sub-consultant, working in its employ, any fee, Council, percentage, gift or other consideration contingent upon or resulting from the award or making of a contract with the City.
26. Hold Harmless: All Respondents shall hold the City, its officials and employees harmless and covenant not to sue the City, its officials and employees in reference to its decisions to reject, award, or not award a contract, as applicable, unless the claim is based solely on allegations of fraud and/or collusion. The submission of a proposal shall act as an agreement by the Respondent that the Proposal/Bid Bond, if required for this project, shall not be released until and unless the Respondent waives any and all claims that the Respondent may have against the City that arise out of this RFQ process or until a judgment is entered in the Respondent's favor in any suit filed which concerns this proposal process. In any such suit, the prevailing party shall recover its attorney's fees, court costs as well as expenses associated with the litigation. If fees, court costs and expenses associated with the litigation are awarded to the City, the Proposal/Bid Bond, if required for this project, shall be applied to the payment of those costs and any balance shall be paid by the Respondent.
27. Cancellation: Failure on the part of the Respondent to comply with the conditions, specifications, requirements, and terms as determined by the City, shall be just cause for cancellation of the Award or termination of the contract.
28. Bonding Requirements: The Respondent, when submitting the Proposal, shall include a Proposal/Bid Bond, if required for this project, in the amount of 5% of the total amount of the base Proposal on the Proposal/Bid Bond Form included herein. A company or personal check shall not be deemed a valid Proposal Security.
29. Performance and Payment Bond: The City may require the successful Respondent to furnish a Performance Bond and Payment Bond, each in the amount of 100% of the total Proposal Price, including Alternates if any, naming the City, and the entity that may be providing a source of funding for the Work, as the obligee, as security for the faithful performance of the Contract and for the payment of all persons or entities performing labor, services and/or furnishing materials in connection herewith. The bonds shall be with a surety company authorized to do business in the State of Florida.

30.1. Each Performance Bond shall be in the amount of one hundred percent (100%) of the Contract Price guaranteeing to City the completion and performance of the Work covered in the Contract Documents.

30.2. Each Performance Bond shall continue in effect for five year after final completion and acceptance of the Work with the liability equal to one hundred percent (100%) of the Contract Sum.

30.3. Each Payment bond shall guarantee the full payment of all suppliers, material man, laborers, or subcontractor employed pursuant to this Project.

30.4. Each Bond shall be with a Surety company whose qualifications meet the requirements of insurance companies as set forth in the insurance requirements of this solicitation.

30.5. Pursuant to the requirements of Section 255.05, Florida Statutes, Respondent shall ensure that the Bond(s) referenced above shall be recorded in the public records of Jacksonville and provide the City with evidence of such recording.

30.6. The surety company shall hold a current certificate of authority as acceptable surety on federal bonds in accordance with the United States Department of Treasury Circular 570, current revisions.

30. Proposal Guarantee: Notwithstanding the fact that the Respondent, in submitting a proposal, agrees to the terms contained in the form of contract that is part of this RFQ package, the successful Respondent, within ten (10) calendar days of Notice of Award by the City, shall deliver, to the City, the executed Contract and other Contract Documents that provide for the Respondent's signature, and deliver to the City the required insurance documentation as well as a Performance and Payment Bond if these bonds are required. The Respondent who has the Contract awarded to it and who fails to execute the Contract and furnish the required Bonds and Insurance Documents within the specified time shall, at the City's option, forfeit the Proposal/Bid Bond/Security that accompanied the Proposal, and the Proposal/Bid Bond/Security shall be retained as liquidated damages by the City. It is agreed that if the City accepts payment from the Proposal/Bid Bond, that this sum is a fair estimate of the amount of damages the City will sustain in case the Respondent fails to sign the Contract Documents or fails to furnish the required Bonds and Insurance documentation. If the City does not accept the Proposal/Bid Bond, the City may proceed to sue for breach of contract if the Respondent fails to perform in accordance with the Contract Documents. Proposal/Bid Bond/Security deposited in the form of a cashier's check drawn on a local bank in good standing shall be subject to the same requirements as a Proposal/Bid Bond.

31. Pre-proposal Conference Site Visits: If a Mandatory Pre-proposal conference is scheduled for this project, all Respondents shall attend the conference and tour all areas referenced in the RFQ. It shall be grounds for rejecting a Proposal from a Respondent who did not attend the mandatory pre-proposal conference. No pleas of ignorance by the Respondent of conditions that exist, or that may hereinafter exist, as a result of failure to make the necessary examinations or investigations, or failure to complete any part of the RFQ Package, will be accepted as basis for varying the requirements of the Contract with the City or the compensation of the Respondent. The Respondent, following receipt of a survey of the property, if applicable, is bound by knowledge that can be seen or surmised from the survey and will not be entitled to any change order due to any such condition. If the survey is provided before the proposal is submitted, the contract price shall include the Work necessitated by those conditions. If the survey is provided subsequent to the submission of the proposal, the Respondent shall have five calendar days to notify the City of any additional costs

required by such conditions and the City shall have the right to reject the proposal and award the contract to the second most responsive, responsible bidder with the lowest price or to reject all bids.

32. Time of Completion: The time is of the essence with regard to the completion of the Work to be performed under the Contract to be awarded. Delays and extensions of time may be allowed only in accordance with the provisions stated in the appropriate section of the Contract Documents, including the Proposal Form. No change orders shall be allowed for delays caused by the City, other than for extensions of time to complete the Work.
33. Submittal Requirements: All Proposals shall comply with the requirements set forth herein and shall be in accordance with ***EXHIBIT 1, "Scope of Services" and Exhibit #2 "Supplemental Instructions and Proposal Format for Respondents***" which is a part of this RFQ Package.
34. Cancellation of Bid Solicitation: The City reserves the right to cancel, in whole or part, any request for proposal when it is in the best interest of the City.
35. Respondent shall not discriminate with regard to its hiring of employees or subcontractors or in its purchase of materials or in any way in the performance of its contract, if one is awarded, based on race, color, religion, national origin, sex, age, sexual orientation, disability, or familial status.
36. All respondents, at the time of bid opening, must have fulfilled all prior obligations and commitments to the City in order to have their bid considered, including all financial obligations. Prior to the acceptance of any bid proposal or quotation, the City's Finance Department shall certify that there are no outstanding fines, monies, fees, taxes, liens or other charges owed to the City by the Respondent, any of the Respondent's principal, partners, members or stockholders (collectively referred to as "Respondent Debtors"). A bid, proposal or quotation will not be accepted until all outstanding debts of all Respondent Debtors owed to the city are paid in full. No bidder who is in default of any prior contract with the City may have their bid considered until the default is cured to the satisfaction of the City Manager.
37. Bid Protest Procedure. See attached ***EXHIBIT 7***
38. Evaluation Criteria: If this project is to be evaluated by an Evaluation Committee, the evaluation criteria is attached as ***EXHIBIT 5.***

END OF SECTION

PROPOSAL SUBMITTAL CHECKLIST FORM
"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

This checklist indicates the forms and documents required to be submitted for this solicitation and to be presented by the deadline set for within the solicitation. Fulfillment of all solicitation requirements listed is mandatory for consideration of response to the solicitation. Additional documents may be required and, if so, they will be identified in an addendum to this RFQ. The response shall include the following items:

	Attachments and Other Documents described below to be Completed IF MARKED WITH AN X :	Check Completed.
X	One (1) original unbound proposal, five (5) additional copies and one (1) digital (or comparable medium including Flash Drive, DVD or CD) copy	
X	Supplemental Instructions and Proposal Format for Respondents, ***EXHIBIT 2***	
X	Indemnification and Insurance Documents ***EXHIBIT 4***	
X	Signed Contract Documents, Professional Services Agreement, ***EXHIBIT 6***	
X	Respondents Qualification Statement	
X	List of Proposed Subcontractors and Principal Suppliers	
X	Non-Collusion Affidavit	
X	Public Entity Crimes and Conflicts of Interest	
X	Drug Free Workplace	
X	Acknowledgement of Conformance with OSHA Standards	
X	Affidavit Concerning Federal & State Vendor Listings	
X	Related Party Transaction Verification Form	
X	Presentation Team Declaration/Affidavit of Representation	

Submit this checklist along with your proposal indicating the completion and submission of each required forms and/or documents.

END OF SECTION

RESPONDENT QUALIFICATION STATEMENT
"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

The response to this questionnaire shall be utilized as part of the CITY'S overall Proposal Evaluation and RESPONDENT selection.

1. Number of similar Impact Study engagements completed,

    a) In the past 5 years _____

    b) In the past 10 years _____

2. List the last three (3) completed Impact Study engagements.

    a) **Zoning & Land Use Engagement:** _____

    Entity Name: _____

    Entity Address: _____

    Entity Telephone: _____

    b) **Zoning & Land Use Engagement:** _____

    Entity Name: _____

    Entity Address: _____

    Entity Telephone: _____

    c) **Zoning & Land Use Engagement**: _____

    Entity Name: _____

    Entity Address: _____

    Entity Telephone: _____

3. Current workload

Project Name	Owner Name	Telephone Number	Contract Price

4. The following information shall be attached to the proposal.
    a) RESPONDENT's home office organization chart.
    b) RESPONDENT's proposed project organizational chart.
    c) Resumes of proposed key project personnel, including on-site Superintendent.

5. List and describe any:

    a) Bankruptcy petitions filed by or against the Respondent or any predecessor organizations,

    b) Any arbitration or civil or criminal proceedings, or

    c) Suspension of contracts or debarring from Bidding or Responding by any public agency brought against the Respondent in the last five (5) years

6. Government References:

    List other Government Agencies or Quasi-government Agencies for which you have done business within the past five (5) years.

    Name of Agency: _____

    Address: _____

    _____

    Telephone No.: _____

Contact Person:

Type of Project:

Name of Agency:

Address:

Telephone No.:

Contact Person:

Type of Project:

Name of Agency:

Address:

Telephone No.:

Contact Person:

Type of Project:

LIST OF PROPOSED SUBCONTRACTORS AND PRINCIPAL SUPPLIERS

"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

Respondent shall list all proposed subcontractors, if subcontractors are allowed by the terms of this RFQ to be used on this project if they are awarded the Contract.

Classification of Work	Subcontractor Name	Address	Telephone, Fax & Email
Planning/Forecasting			
Land Use Regulations Analysis			
General Research			
Other:			

This list shall be provided to the City of Neptune Beach by the apparent lowest responsive and responsible Bidder within five (5) business days after Bid Opening.

END OF SECTION

NON-COLLUSION AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF DUVAL)

_____being first duly sworn, deposes and states that:

(1) He/She/They is/are the _____
(Owner, Partner, Officer, Representative or Agent) of

_____ the Respondent that has submitted the attached Proposal;

(2) He/She/They is/are fully informed concerning the preparation and contents of the attached Proposal and of all pertinent circumstances concerning such Proposal;

(3) Such Proposal is genuine and is not a collusive or sham Proposal;

(4) Neither the said Respondent nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Respondent, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or to refrain from Bidding or proposing in connection with such Work; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Respondent, firm, or person to fix any overhead, profit, or cost elements of the Proposal or of any other Respondent, or to fix any overhead, profit, or cost elements of the Proposal Price or the Proposal Price of any other Respondent, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Work;

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Respondent or any other of its agents, representatives, owners, employees or parties of interest, including this affiant.

Signed, sealed and delivered in the presence of:

_____ By: _____
Witness Signature

_____ _____
Witness Print Name and Title

_____
Date

ACKNOWLEDGEMENT

STATE OF FLORIDA)
)
COUNTY OF DUVAL)

On this the_____day of_____, 20_____, before me, the undersigned Notary Public of the State of Florida, personally appeared (Name(s) of individual(s) who appeared before notary)_____and whose name(s) is/are Subscribed to the within instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand and official seal.

_____
Notary Public, State of Florida

NOTARY PUBLIC:
SEAL OF
OFFICE:

__

_____

(Name of Notary Public: Print, Stamp or type as Counciled.)

_____ Personally known to me, or

_____ Personal identification:

_____
Type of Identification Produced

_____ Did take an oath, or

_____ Did Not take an oath.

PUBLIC ENTITY CRIMES AND CONFLICTS OF INTEREST

Pursuant to the provisions of Paragraph (2) (a) of Section 287.133, Florida State Statutes – "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Proposal or bid on a Contract to provide any goods or services to a public entity, may not submit a Bid or proposal for a Contract with a public entity for the construction of repair of a public building or public work, may not submit bids or proposals on leases or real property to a public entity, may not be awarded to perform Work as a RESPONDENT, Sub-contractor, supplier, Sub-consultant, or Consultant under a Contract with any public entity, and may not transact business with any public entity in excess of the threshold amount Category Two of Section 287.017, Florida Statutes, for thirty six (36) months from the date of being placed on the convicted vendor list".

The award of any contract hereunder is subject to the provisions of Chapter 112, Florida State Statutes. Respondents must disclose with their Proposals, the name of any officer, director, partner, associate or agent who is also an officer or employee of the City of Neptune Beach or its agencies.

SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to

_____
[print name of the public entity]

by

_____
[print individual's name and title]

for_____
[print name of entity submitting sworn statement]

whose business address is_____

_____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133 (1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency

or political subdivision of any other state or of the United States, including, but not limited to , any bid, proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133 (1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133 (1) (a), Florida Statutes, means:
   (a) A predecessor or successor of a person convicted of a public entity crime; or
   (b) An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in any person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133 (1) (e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or proposal or applies to bid or proposal on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

_____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent of July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [attach a copy of the final order.]

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY INDENTIFIED IN PARAGRAPH I (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY, AND THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____
[Signature]

Sworn to and subscribed before me this_____ day of_____, 20____.

Personally known

_____ _____

OR Produced identification_____ Notary Public – State of _____

_____

My Council expires_____

(Type of identification) _____
(Printed, typed or Stamped Counciled

Name of notary public_____

DRUG FREE WORKPLACE

Whenever two or more Bids or Proposals which are equal with respect to price, quality and service are received by the State or by any political subdivisions for the procurement of commodities or contractual services, a Bid or Proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie Bids or Proposals shall be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that shall be taken against employees for violations of such prohibition.
2) Inform employees about the dangers of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3) Give each employee engaged in providing the commodities or contractual services that are under Bid a copy of the statement specified in Subsection (1).
4) In the statement specified in Subsection (1), notify the employees, that, as a condition of working of the commodities or contractual services that are under Bid, he employee shall abide by the terms of the statement and shall notify the employee of any conviction of, or plea of guilty or *nolo contendere* to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) business days after such conviction.
5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

RESPONDENT's Signature: _____

Print Name: _____

Date: _____

ACKNOWLEDGEMENT OF CONFORMANCE WITH OSHA STANDARDS

TO THE CITY OF NEPTUNE BEACH

We, _____, (Name of CONTRACTOR), hereby acknowledge and agree that as CONTRACTOR for the **"Comprehensive Plan and Land Development Code Revision"** project as specified have the sole responsibility for compliance with all the requirements of the Federal Occupational Safety and Health Act of 1970, and all State and local safety and health regulations, and agree to indemnify and hold harmless the **City of Neptune Beach** and **N/A** (Consultant) against any and all liability, claims, damages, losses and expenses they may incur due to the failure of (Sub-contractor's names):

_____

_____

_____

_____

to comply with such act or regulation.

CONTRACTOR

_____ _____

Witness

BY: _____

Name

_____

Title

AFFIDAVIT CONCERNING
FEDERAL AND STATE VENDOR LISTINGS

The person, or entity, who is responding to the City's solicitation, hereinafter referred to as "Respondent", must certify that the Respondent's name Does Not appear on the State of Florida, Department of Management Services, "CONVICTED, SUSPENDED, DISCRIMINATORY FEDERAL EXCLUDED PARTIES and COMPLAINTS VENDOR LISTINGS".

If the Respondent's name Does appear on one or all the "Listings" summarized below, Respondents must "Check if Applies" next to the applicable "Listing." The "Listings" can be accessed through the following link to the Florida Department of Management Services website:

http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists

DECLARATION UNDER PENALTY OF PERJURY

I,_____(hereinafter referred to as the "Declarant") state, under penalty of perjury, that the following statements are true and correct:

(1) I represent the Respondent whose name is_____.

(2) I have the following relationship with the Respondent_____(Owner (if Respondent is a sole proprietor), President (if Respondent is a corporation) Partner (if Respondent is a partnership), General Partner (if Respondent is a Limited Partnership) or Managing Member (if Respondent is a Limited Liability Company).

(3) I have reviewed the Florida Department of Management Services website at the following URL address: http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists

(4) I have entered an "x" or a check mark beside each listing/category set forth below if the Respondent's name appears in the list found on the Florida Department of Management Services website for that category or listing. If I did not enter a mark beside a listing/category it means that I am attesting to the fact that the Respondent's name does not appear on the listing for that category in the Florida Department of Management Services website as of the date of this affidavit.

Check if Applicable

____ Convicted Vendor List
____ Suspended Vendor List
____ Discriminatory Vendor List
____ Federal Excluded Parties List
____ Vendor Complaint List

FURTHER DECLARANT SAYETH NOT.

_____
(Print name of Declarant)

By:_____
(Signature of Declarant)

ACKNOWLEDGEMENT

STATE OF FLORIDA)
COUNTY OF DUVAL)

On this the day of_____, 20 , before me, the undersigned authority, personally appeared_____who is personally know to me or who provided the following identification_____and who took an oath or affirmed that that he/she/they executed the foregoing Affidavit as the Declarant.

WITNESS my hand and official seal.

_____
Notary Public, State of Florida

NOTARY PUBLIC:
SEAL

_____
(Name of Notary Public: Print,
Stamp or type as Counciled

EXHIBIT #1

SCOPE OF SERVICES

"Comprehensive Plan and Land Development Code Revision" RFQ 19-01

I. BACKGROUND

The City of Neptune Beach, Florida is seeking qualified planning and zoning consultants, including firms or teams, to manage and perform a full and complete revision of its Comprehensive Plan, including its Future Land Use Map, and the Land Development Code and including its Zoning Map hereinafter referred to in this **RFQ** as the Land Use and Development Regulation Revision. The Planning and Zoning Department, working with the City Manager and City Attorney have identified some inconsistencies and sections where revisions, or more clarity is needed; as well as reorganization to improve the interpretation of these documents. ***Please refer to Exhibit #3 which includes links to the City's current Comp Plan and LDC. Future Land Use and Zoning Maps are attached as Exhibit #3.*** These preliminary suggested revisions are expected to be supplemented by additional revisions suggested by the selected vendor.

This project is intended to provide a full, complete and exhaustive revision to the City's Land Development Code ("LDC") and its Comprehensive Plan and will include an up-to- date, user-friendly, complete set of goals, objectives and policies. The City intends to select and hire a consultant who has specific experience with zoning, preparation of ordinances, preparation of zoning maps, illustrations for land development regulations and conducting meetings with the public to encourage their participation in the process of revising the Comprehensive Plan and the LDC. In addition, the selected consultant must demonstrate experience and knowledge of: innovative zoning techniques, architectural and urban design, land development regulations, land use law, comprehensive planning, and sustainable development.

All references to "City" in this **RFQ** shall be a reference to the City Manager of Neptune Beach unless otherwise specifically defined. All references to the City Manager shall also mean the City Manager's designee. This **RFQ** shall serve to provide interested parties with general information as to the procedures for a consultant for the City's revision of its Comprehensive Plan, Future Land Use Map, Land Development Code and Zoning Map.

The City will use a competitive negotiation process in selecting the consultant. Accepted proposals will be evaluated by the City utilizing ***Exhibit 5, "Evaluation and Selection Criteria."*** Respondents, deemed as best suited and qualified, shall be selected by a Selection Committee of at least three (3) City representatives for discussion and/or presentations, ranking and subsequent negotiations with the selected consultant.

II. SCOPE OF WORK

COMPREHENSIVE PLAN / LDC REVISION:

This project shall consist of a thorough analysis and revision of the City's current COMPREHENSIVE PLAN / LDC.

Specific tasks include:

Task 1: Review of Existing Planning Documents. Regulations and Initiatives

The consultant will complete a rigorous and objective evaluation of the City's existing COMPREHENSIVE PLAN / LDC. The consultant will also take into consideration regional needs and the official plans of other government units and agencies within the region, including the goals of the Federal, State, and City of Neptune Beach.

At the outset of the project, the consultants shall meet with City staff for a project orientation meeting to provide an understanding of City's goals, and the project schedule, timeline, specific issues, City policies, interagency interaction, opportunities and/or problems relating to growth and development within the City. The consultant shall be responsible for reviewing and understanding the City's Comprehensive Plan, and any other City plans, and policies as identified by the City, and all relevant and applicable local, state and federal laws.

Task 2: Public Participation

The consultant shall propose a substantial public participation process that specifies how and when the public (including homeowners associations, businesses, the development community and other interested parties) will be engaged throughout the Projects process. The consultant shall specify the methods they will use to achieve meaningful public participation. The consultant shall also provide a public participation timeline that identifies key points at which the public will be involved, and how that involvement will occur, how and when materials will be available and presented to the public.

The consultant shall consider multiple means of obtaining input both during and outside of identified public meetings. The consultant shall describe its approach for gathering broad-based input about the existing COMPREHENSIVE PLAN / LDC.

City staff, Community Development Board, City Council should be contacted in person for their input concerning the current requirements, administration procedures, deficiencies, suggested changes and implementation techniques. The consultant shall also inquire about the perceived strengths and weaknesses of the existing Comprehensive Plan as a guide to implement a new LDC and Zoning Map. The consultant shall prepare a draft and final memorandum that summarizes the input gathered during this identification process, which shall be submitted to the City Manager.

Task 3: Comprehensive Plan / LDC And Related Authorizations Review

The COMPREHENSIVE PLAN / LDC revision will include an analysis of the changes that have taken place in the Neptune Beach developed environment since the last revision to the Comprehensive Plan and the LDC. The COMPREHENSIVE PLAN / LDC revision will analyze existing land use and patterns necessary to provide sufficient understanding on which to reflect future growth management practices including the City's desire to encourage sustainability, environmental qualities, and adaption to potential sea level rise, as it relates to land uses, transportation, infrastructure, housing, including affordable housing and infill development, conservation, recreation and open space, capital improvement, and intergovernmental coordination. This analysis will guide the preparation of a new future land use map and the revision of the LDC and Zoning Map to ensure conformity to the Comprehensive Plan.

The COMPREHENSIVE PLAN / LDC will be analyzed and weighed against the provisions of the proposed Comprehensive Plan revisions; as will the update to the Zoning Map. The Comprehensive Plan revision will address, but is not limited to, all State requirement and the City's desire to encourage sustainability, environmental qualities, and adaption to potential sea level rise. The new LDC, is meant to supersede the present zoning ordinance and other local land development regulations that apply to the City. The City desires an innovative and highly-illustrated hybrid LDC with form-based and transect elements that takes an adaptive approach to achieve an attractive, competitive, and sustainable suburban/urban transitioning environment. As the City is quickly approaching 'build out', the new code should accomplish the following:

1. The preservation of neighborhood qualities in single family districts.

2. Encourage creative and efficient redevelopment of underutilized properties

3. Establish a development review process with predictable outcomes that is streamlined and efficient for the development community and the general public.

4. Address transportation constraints, capitalize on existing infrastructure, and incorporate forward-looking parking and complete street standards that recognize changes in market and generational trends.

5. Overhaul and simplify existing sign regulations to create a City identity that balances aesthetics and State/Federal laws.

6. Simplify zoning districts and standards.

7. "Paints a picture" (through text and illustrations/graphics) site design and architectural standards for non-residential and multi-family/townhome/condo uses that establish a unique identity for Neptune Beach residents and businesses.

8. Eliminate outdated, unclear or contradictory language.

9. Examine parking, sidewalk, landscaping, pervious and signage requirements within the LDC to determine if there are any shortcomings.

10. Update zoning to promote green infrastructure techniques, for example reduction of parking requirements, site plan review procedures incorporation the new tree protection ordinance, LEED buildings and the encouragement of using solar energy.

11. Review the intent of each existing district; revise each to reflect the Comprehensive Plan, and the promotion of sustainable development and eliminate unnecessary districts and propose new districts as warranted.

12. Include zoning requirements that will encourage pedestrian and bicycle friendly practices, complete streets, and the protection of critical environmental areas, waters, and natural resources.

Task 4: Annotated Outline

It is anticipated that most issues and items of concern will be identified after a thorough review of existing COMPREHENSIVE PLAN / LDC. The consultant will incorporate appropriate tools and policies in rewriting the COMPREHENSIVE PLAN / LDC, so they function easily and are simply understood. It is the City's intent to obtain a user-friendly COMPREHENSIVE PLAN / LDC that are comprehensive in nature.

The consultant shall identify and discuss new concepts and approaches for potential inclusion in the draft COMPREHENSIVE PLAN / LDC. The consultant shall prepare an annotated outline that includes a chapter by chapter detailed description of the proposed COMPREHENSIVE PLAN / LDC, and a commentary explaining the rationale for the recommended approach. The annotated outline shall include recommendations for potential revisions to the City's Zoning Map and Future Land Use Map.

The consultant shall present the annotated outline to City staff, and subsequently the Community Development Board and City Council, and others for review and comment. After obtaining general agreement on the contents of the initial draft of the annotated outline, the consultant shall provide the City with a final annotated outlined based on the comments received.

Task 5: Draft Regulations

The consultant will prepare a draft COMPREHENSIVE PLAN / LDC that is based on the final annotated outline. After initial review and comments by the City staff, Community Development Board, and City Council the consultant shall propose an approach for soliciting broad-based input from the public. The consultant will be responsible for arranging and facilitating all public meetings.

The consultant's proposal shall include the projected number of workshops that will be conducted to gather input and complete reviews and revisions of the draft document.

Task 6: Final Regulations

After City staff, Community Development Board, City Council, and public input, the consultant shall prepare an executive summary explaining the public hearing.

The executive summary will be distributed to the public prior to the public hearing. This material shall be available at least one (1) month in advance of the public hearing. The consultant shall present the final draft of the COMPREHENSIVE PLAN / LDC and maps at scheduled public hearings of the Community Development Board and City Council prior to final adoption. The consultant will explain its contents and respond to questions.

III. DELIVERABLES:

COMPREHENSIVE PLAN / LDC:

1. COMPREHENSIVE PLAN / LDC revision - one original unbound copy of final document, fifteen (15) copies in three ring binder, and a digital copy on thumb drive or other acceptable digital format.
2. Public meetings, the number of public meetings to be recommended by the consultant, and agreed to by the City.
3. Draft COMPREHENSIVE PLAN / LDC revision presentation to Community Development Board and Councilors.

END OF SECTION

EXHIBIT #2

SUPPLEMENTAL INSTRUCTIONS AND PROPOSAL FORMAT FOR RESPONDENT

"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

1. Format and Content of RFQ Response

Firms responding to the solicitation, shall disclose their qualifications to serve as a consultant for the City in the format set forth below. Failure to provide requested information may result in your proposal being deemed non-responsive and therefore eliminated from further consideration.

A. Title Page

Show the name of Respondent's agency/firm, address, telephone number, name of contact person, date and the subject: **REQUEST FOR QUALIFICATIONS For "Comprehensive Plan and Land Development Code Revisions," RFQ 19-01**

B. Table of Contents

Include a clear identification of the material by section and by page number.

C. Cover Letter and Executive Summary

This letter should be signed by the person in your firm who is authorized to negotiate terms, render binding decisions, and commit the firm's resources.

Summarize your firm's qualifications and experience to serve as a Consultant, and your firm's understanding of the work to be done and make a positive commitment to perform the work in accordance with the terms of the proposal being submitted. This response should emphasize the strength of the firm in any relevant areas which you feel the City should weigh in its selection, based on the criteria set forth above.

This section should summarize the key points of your submittal. ***Limit to one to four pages.*** Proposals must include the following.

1. Proposer's perception of the problem, based on this **RFQ**, site visits, review of existing planning documents, and other available information;

2. Detailed work plan/project approach and schedule designed to accomplish the objectives of the proposed project in a timely manner. The City anticipates that this project will be completed ***within 12 months*** of execution of a contract.

3. A list of the executive and professional personnel that will be employed in the completion of the project and their experience with similar projects, including the percentage of project time projected to be spent by each person;

4. Proposer's experience with projects of a similar scope including a summary of prior work experience and competence in undertaking projects of this type. Experience shown should be of the lead project personnel who will be assigned to the City's project and will routinely be interfacing with the City.

D. Firm Overview

State the full legal name and organizational structure of the firm. Describe the ownership structure of your firm. State the location of the office that will be serving the City including mailing address and telephone numbers.

a. Name of Firm submitting responding to the solicitation.

b. Name and title of individual responsible for the submittal.

c. Mailing and e-mail addresses.

d. Telephone and facsimile numbers.

E. Personnel and References

Identify the primary individuals who will provide services to the City with regard to the day-to-day relationship with the City and include a brief resume for each of the primary individuals including licenses and certifications held by those individuals. ***Provide a list of five clients the firm has worked with in the last 36 months.*** Indicate the firm's experience with clients within the State of Florida and provide a brief description of the type of services provided as well as the names, titles, addresses and telephone numbers of those primarily responsible for the account. In addition to the day-to-day relationship, please provide information regarding the firm's and individual's experience with engagements which are similar to the project contemplated by the City. Finally, provide specific services required to complete this project, that are provided by your firm, through subcontractors or sub consultants.

F. Other Relevant Experience

Provide a description of your proposed primary individuals' relevant experience over the last three years with other cities that you believe are relevant to this proposed engagement. Include three case studies, if available, that illustrate experience with relevant services where the proposed primary individuals have served as consultants for similar engagements as proposed by the City detailed in the Scope of Services in this RFQ. Please limit your response to two pages.

END OF SECTION

EXHIBIT #3

"Comprehensive Plan and Land Development Code Revision"
RFQ 19-01

Note: The City's Comprehensive Plan and Land Development Code can be accessed through the following links provided below

City of Neptune Beach's Current:

1. Comprehensive Plan – Please see link below: https://ci.neptune-beach.fl.us/zupload/user/2016-PDFs/2012-2022-ComprehensivePlan1.pdf
2. Land Development Code - Please see link below: https://library.municode.com/fl/neptune_beach/codes/code_of_ordinances

3. Future Land Use Map; attached as ***Exhibit #3***

4. Zoning Map; attached as ***Exhibit #3***

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	8C-City Attorney and City Manager Search Process
SUBMITTED BY:	Mayor Elaine Brown
DATE:	4/10/2019
BACKGROUND:	The City Attorney and City Manager have resigned and those positions need to be filled. The process for filling those positions should be determined.
BUDGET:	N/A
RECOMMENDATION:	N/A
ATTACHMENT:	Position Descriptions
CITY MANAGER:	

CITY OF NEPTUNE BEACH
JOB ANNOUNCEMENT
CITY ATTORNEY

The City Council of the City of Neptune Beach is seeking an experienced City Attorney for the City's legal service needs. Experience in municipal operations, land use and litigation preferred. Local government experience desired. Association with a Firm is preferable. Board Certification by The Florida Bar in City, County and Local Government Law preferred but not required.

Submit professional biographies along with salary requirements to:

City Clerk
116 First Street
Neptune Beach, Florida 32266

Information must be received by 12:00 p.m. on Friday, April 12, 2019.

Inquiries may be directed to:

Andy Hyatt
City Manager
116 First Street
Neptune Beach, Florida 32266
or
904-270-2400, extension 31

CITY MANAGER POSITION AVAILABLE
APPLY BY MAY 15, 2019

Neptune Beach is located on the Atlantic Ocean in Northeast Florida, approximately 15 miles east of downtown Jacksonville. Population is approximately 7,200, Neptune Beach is 2.5 square miles with a small-town residential atmosphere. The Central Business District is upscale with several unique restaurants and shops. The City prides itself on delivery of quality services, with a low property tax rate.

Neptune Beach operates under a Council/Manager form of government. The City Council is vested by Charter with policy making and legislative authority. The City Council is made up of the Mayor and four Council members, elected on a non-partisan basis with staggered 4-year terms. The City Manager serves at the pleasure of the Council and serves as the Chief Administrative Officer. The Manager has oversight of city departments: Police, Public Works/Utilities, Finance, Planning/Community Development and Senior Services. Fire/Rescue service is provided by the County.

The ideal candidate will be a seasoned manager with at least 5 years of municipal management experience and must have a bachelor's degree in management with special emphasis on actual experience, education in, or knowledge of administration and operations of local government management to include labor relations. The opportunity is a hands-on position. Traits looked for by the Council are a strong and ethical team-oriented leader, effective communicator, and a strong commitment to citizen service and a strong analytical ability to foresee and resolve problems.

The City Council will provide a competitive salary and benefits. Starting salary will be negotiable depending on qualifications. The City Manager is required to live in the City. All candidates are subject to a full background check to include a credit report.

To apply, submit a cover letter and resume with salary requirements by May 15, 2019 to:

City Clerk
116 First Street
Neptune Beach, FL 32266
OR
clerk@nbfl.us

Note: Under Florida Law all information and documents submitted are public records and will be provided to the press and/or others upon request.

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	8D-Resolution No. 2019-05, A Resolution Appointing Members to the PORF Board
SUBMITTED BY:	Police Officers' Retirement Board
DATE:	April 10, 2019
BACKGROUND:	The terms of Police Officers' Retirement Board members Jennifer Kowkabany and John Jolly expire in April. This will be Ms. Kowkabany's fourth regular two-year term and Mr. Jolly's first regular two-year term. Mr. Jolly was initially appointed to fill the unexpired term of Robert Nunes.
BUDGET:	N/A
RECOMMENDATION:	Approval
ATTACHMENT:	Resolution No. 2019-05
CITY MANAGER:	

RESOLUTION NO. 2019-05

A RESOLUTION OF THE CITY OF NEPTUNE BEACH APPOINTING MEMBERS TO THE POLICE OFFICERS' RETIREMENT BOARD

RESOLVED, the City Council of the City of Neptune Beach, Florida, hereby confirms the following board appointments:

POLICE OFFICERS' RETIREMENT BOARD

Member	Type	Term	Begins	Ends
Jennifer Kowkabany	Reappoint Regular	4th 2 Year	04/06/2019	04/05/2021
John Jolly	Appoint Regular	1st 2 Year	04/06/2019	04/05/2021

This Resolution adopted by the City Council of Neptune Beach, Florida, at the Regular Council Meeting held this ___ day of _____, 2019.

Elaine Brown, Mayor

ATTEST:

Catherine Ponson, City Clerk

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	8E-Resolution No. 2019-06, A Resolution Joining the American Flood Coalition
SUBMITTED BY:	Mayor Elaine Brown
DATE:	April 10, 2019
BACKGROUND:	The American Flood Coalition is a nonpartison group of elected officials, civic groups, military leaders, and businesses that have come together to advocate for national solutions to flooding and sea level rise in our coastal and riverfront communities
BUDGET:	N/A
RECOMMENDATION:	Approval
ATTACHMENT:	Resolution No. 2019-06
CITY MANAGER:	

CITY OF NEPTUNE BEACH
CITY COUNCIL MEETING
STAFF REPORT

AGENDA ITEM:	8E-Resolution No. 2019-06, A Resolution Joining the American Flood Coalition
SUBMITTED BY:	Mayor Elaine Brown
DATE:	April 10, 2019
BACKGROUND:	The American Flood Coalition is a nonpartison group of elected officials, civic groups, military leaders, and businesses that have come together to advocate for national solutions to flooding and sea level rise in our coastal and riverfront communities
BUDGET:	N/A
RECOMMENDATION:	Approval
ATTACHMENT:	Resolution No. 2019-06
CITY MANAGER:	