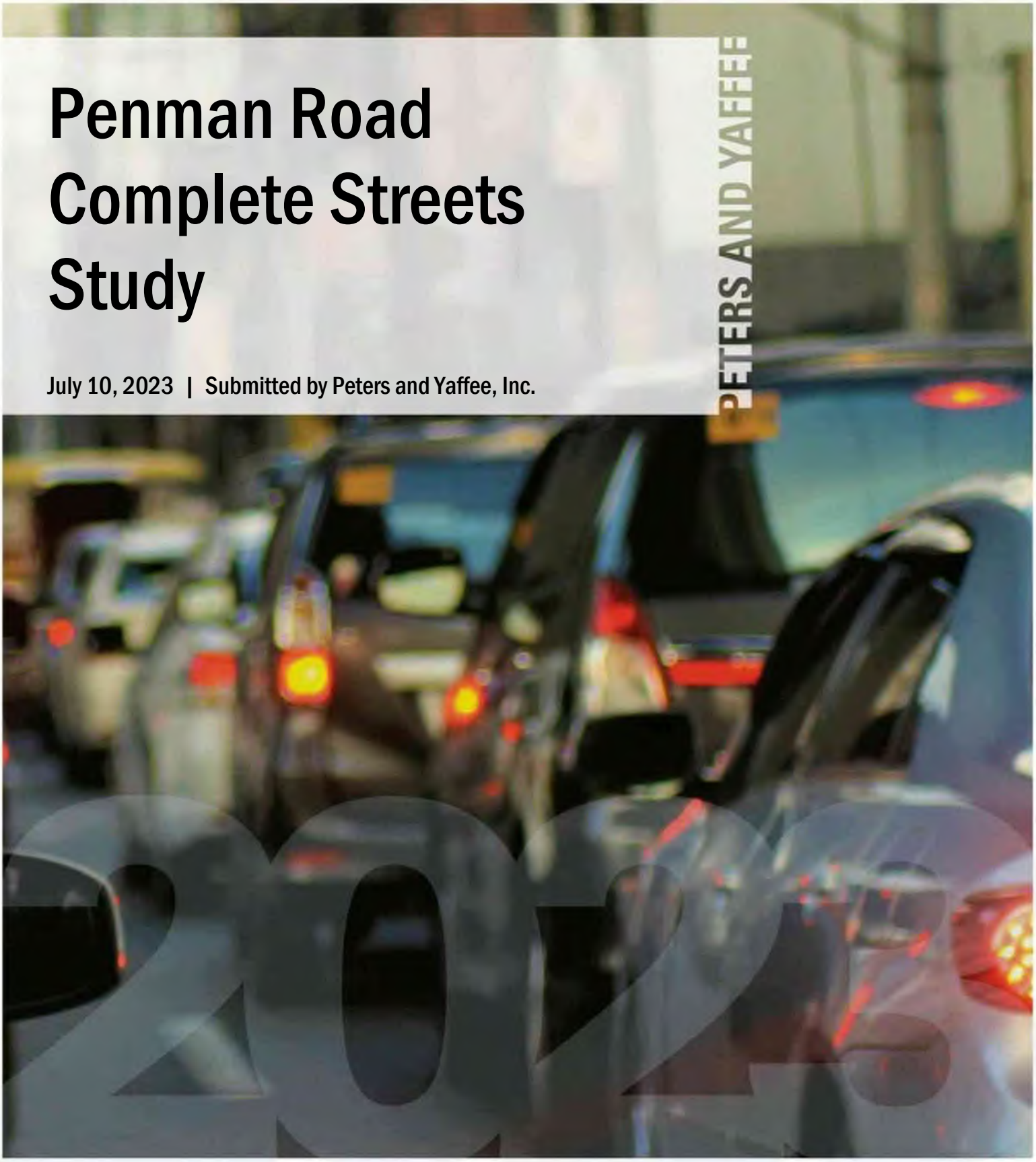
Penman Road Complete Streets Study

July 10, 2023 | Submitted by Peters and Yaffee, Inc.



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TRANSPORTATION & TRAFFIC ENGINEERING

Professional Engineer Certificate

I, Austin Chapman, PE 72474, certify that I currently hold an active license in the State of Florida and am competent through education or experience to provide engineering services in the civil discipline contained in this plan, print, specification, or report.

Project

Penman Road Complete Streets Study

Location

Duval County, Florida

Client

City of Jacksonville

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ON THE DATE ADJACENT TO THE SEAL

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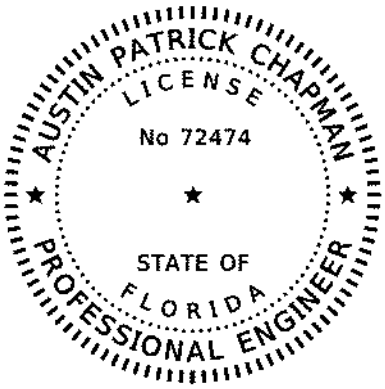

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Introduction

A complete street study has been prepared to determine the projected operations of Penman Road from Beach Boulevard to Atlantic Boulevard in Duval County, Florida. The goal of the complete streets project is to allow comfortable use of the corridor by all modes of travel. The particular goals of this project are to increase safety for all users, slow vehicle traffic, add additional locations for pedestrians to cross Penman Road, and provide better facilities for non-motorized users alongside Penman Road. The site location is shown in Figure 1.

Figure 1 – Location of Study

The roadway and 12 intersections along Penman Road were analyzed as part of this study and include:

1. Penman Road at Beach Boulevard
2. Penman Road at 2nd Avenue North
3. Penman Road at 4th Avenue North
4. Penman Road at 6th Avenue North
5. Penman Road at 8th Avenue North
6. Penman Road at 15th Avenue North
7. Penman Road at 18th Avenue North
8. Penman Road at Arden Way
9. Penman Road at Seagate Avenue
10. Penman Road at Florida Boulevard/Forest Avenue
11. Penman Road at Cedar Street
12. Penman Road at Atlantic Boulevard

Existing Roadway Conditions

Penman Road is a two-lane undivided road that runs in a north/south alignment with a posted speed limit of 35 mph. Land use along Penman Road consists primarily of residential, with commercial developments located near Beach Boulevard. 12th Avenue North to 18th Avenue North, and Atlantic Boulevard.

There are numerous minor streets and driveways that intersect Penman Road, but for the purpose of this study, the 12 intersections with the highest vehicle volumes have been selected for analysis and will be discussed in detail below.

Penman Road at Beach Boulevard

The Penman Road/Beach Boulevard intersection operates as a four-leg signalized intersection and the geometry is as follows:

- Eastbound (Beach Boulevard): One left-turn lane, two through lanes, and one shared through/right-turn lane.
- Westbound (Beach Boulevard): One left-turn lane, two through lanes, and one shared through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane, one through lane, and one right-turn lane.

Penman Road at 2nd Avenue North

The Penman Road/2nd Avenue North intersection operates as a four-leg stop-controlled intersection and the geometry is as follows:

- Eastbound (2nd Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Westbound (2nd Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Penman Road at 4th Avenue North

The Penman Road/4th Avenue North intersection operates as a four-leg stop-controlled intersection and the geometry is as follows:

- Eastbound (4th Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Westbound (4th Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Penman Road at 6th Avenue North

The Penman Road/6th Avenue North intersection operates as a four-leg stop-controlled intersection and the geometry is as follows:

- Eastbound (6th Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Westbound (6th Avenue North): This road is stop-sign controlled with one shared left/through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Penman Road at 8th Avenue North

The Penman Road/8th Avenue North intersection operates as a three-leg stop-controlled intersection and the geometry is as follows:

- Westbound (8th Avenue North): This road is stop-sign controlled with one shared left/right-turn lane.
- Northbound (Penman Road): One shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one through lane.

Penman Road at 15th Avenue North

The Penman Road/15th Avenue North intersection operates as a three-leg stop-controlled intersection and the geometry is as follows:

- Westbound (15th Avenue North): This road is stop-sign controlled with one left-turn lane and one right-turn lane.
- Northbound (Penman Road): One shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one through lane.

Penman Road at 18th Avenue North

The Penman Road/18th Avenue North intersection operates as a three-leg stop-controlled intersection and the geometry is as follows:

- Westbound (18th Avenue North): This road is stop-sign controlled with one shared left/right-turn lane.
- Northbound (Penman Road): One shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one through lane.

Penman Road at Arden Way

The Penman Road/Arden Way intersection operates as a four-leg signalized intersection and the geometry is as follows:

- Eastbound (Arden Way): One shared left/through/right-turn lane.
- Westbound (Arden Way): One shared left/through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Penman Road at Seagate Avenue

The Penman Road/Seagate Avenue intersection operates as a four-leg signalized intersection and the geometry is as follows:

- Eastbound (Seagate Avenue): One shared left/through/right-turn lane.
- Westbound (Seagate Avenue): One shared left/through lane and one right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Penman Road at Florida Boulevard/Forest Avenue

The Penman Road/Florida Boulevard/Forest Avenue operates as a five-leg signalized intersection and the geometry is as follows:

- Eastbound (Florida Boulevard): One shared left-turn/through lane and one right-turn lane.
- Westbound (Florida Boulevard): One left-turn lane and one shared through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- North-eastbound (Forest Avenue): One shared left/through/right-turn lane.

Penman Road at Cedar Street

The Penman Road/Cedar Street intersection operates as a three-leg stop-controlled intersection and the geometry is as follows:

- Westbound (Cedar Street): This road is stop-sign controlled with one shared left/right-turn lane.
- Northbound (Penman Road): One shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one through lane.

Penman Road at Atlantic Boulevard

The Penman Road/Atlantic Boulevard intersection operates as a four-leg signalized intersection and the geometry is as follows:

- Eastbound (Atlantic Boulevard): One left-turn lane, one through lane, and one shared through/right-turn lane.
- Westbound (Atlantic Boulevard): One left-turn lane, one through lane, and one shared through/right-turn lane.
- Northbound (Penman Road): One left-turn lane and one shared through/right-turn lane.
- Southbound (Penman Road): One left-turn lane and one shared through/right-turn lane.

Field Review

On Wednesday, February 9, 2022, and Thursday, September 1, 2022, Peters and Yaffee conducted a field review along Penman Road in order to observe traffic flow. Penman Road is generally straight and flat with 36 feet of pavement and a clear area for errant vehicles to recover without striking roadside features. This roadway design would allow high-speed motorists when traffic volumes are low. There is direct access to Penman Road for many homeowners and businesses along the corridor. There are several locations in which vehicles were observed to park within the Penman Road right of way. There are several mid-block crosswalks and crosswalks at each signalized intersection to cross Penman Road. There were several bicyclists and pedestrians observed along the corridor. An overview of the traffic conditions during the AM and PM peak periods is summarized below:

Penman Road at Florida Boulevard/Forest Avenue

The Penman Road/Florida Boulevard/Forest Avenue intersection operated with severe delays in the PM peak period. Northbound Penman Road vehicles were observed to have an approximately 10-minute delay to get through the intersection. Queues extended through the Seagate Avenue and Arden Way intersections. There is a 45-second all-red pedestrian phase which was observed to be implemented about every other cycle (about 10 times in one hour). There was only one time (of 10) in which the pedestrian waited for the all-red phase to cross the intersection and the pedestrian crossed the intersection in seven seconds. Pedestrian observations were made during the AM and PM school operations as well. Observations and discussion with the crossing guard resulted in the understanding that approximately three children cross Penman Road to attend Neptune Beach Elementary in the 2022/2023 school year during each AM and PM school operations. The children were able to cross Penman Road in seven seconds, though the crossing guard would take a few more seconds to exit Penman Road. Usually, these crossings occur with a parent, who also makes a trip across Penman Road without a child for each period as well. It appeared that the signal was operated as designed, with all detection working correctly.

Penman Road at Seagate Avenue and Penman Road at Arden Way

Observations were made on Thursday, September 1, 2022, during the afternoon Fletcher High School operations. Long queues formed for westbound Seagate Avenue traffic, possibly all the way to Fletcher High School, for about 10 minutes. Some vehicles appeared to bypass Seagate Avenue and use Arden Way to access Penman Road. There were students observed to cross Penman Road at Seagate Avenue and Arden Way.

Traffic Data Collection

From November 13, 2021 to November 19, 2021, traffic data was collected on Penman Road between Beach Boulevard and Atlantic Boulevard. For all 12 study intersections, the following traffic data was collected:

- Seven-day machine counts (north of Beach Boulevard, north of 8th Avenue North, north of Seagate Avenue, and north of Florida Boulevard)
- Weekday Peak Hour Turning Movements, including AM (7:00 AM – 9:00 AM), midday (11:30 AM – 1:30 PM), and PM (4:00 PM – 6:00 PM)
- Weekend Peak Hour Turning Movements, including midday (11:00 AM – 2:00 pm)

For all 12 study intersections, weekday AM, midday, and PM peak periods and weekend midday peak periods intersection turning movement counts were collected. Since the counts were collected outside of the peak season, all counts were adjusted to account for seasonal variability in traffic. The 2019 FDOT seasonal factor of 1.03 was applied to the traffic count data. Given that Florida Boulevard was under construction during the traffic data collection time period, previous turning movement counts collected on May 1, 2018 at Penman Road/Florida Boulevard/Forest Avenue intersection and the 2017 FDOT seasonal factor of 0.97 were applied for this intersection. The FDOT seasonal factors are also contained in Appendix A.

Vehicle Classification Counts

Machine classification counts for a period of 7-day were collected at the following two locations which are provided in Appendix B:

- Penman Road north of Beach Boulevard
- Penman Road north of Florida Boulevard

The observed vehicles were classified according to the FHWA Vehicle and Truck Classification which is provided in Appendix B. Classifications 1-3 are considered Passenger (P) vehicles; classifications 4-7 are considered Single Unit (SU) vehicles; and classifications 8-13 are considered heavy Trucks (T). The 13 classification types include:

- Class 1 – Motorcycles
- Class 2 – Passenger Cars (includes all cars, cars with one or two-axle trailers)
- Class 3 – Other Two-Axle Four-Tire Single-Unit Vehicles (includes pick-ups and vans with or without one or two-axle trailers)
- Class 4 – Buses (includes two and three-axle buses)
- Class 5 – Two-Axle, Six-Tire, Single-Unit Trucks (includes two-axle trucks)
- Class 6 – Three-Axle Single-Unit Trucks (includes three-axle trucks, three-axle tractors without trailers)
- Class 7 – Four or More Axle Single-Unit Trucks (includes four, five, six and seven-axle single-unit trucks)
- Class 8 – Four or Fewer Axle Single-Trailer Trucks (includes two-axle trucks pulling one and two-axle trailers, two-axle tractors pulling one or two-axle trailers, three-axle tractors pulling one-axle trailers)
- Class 9 – Five-Axle Single-Trailer Trucks (includes two-axle tractors pulling three-axle trailers, three axle tractors pulling two-axle trailers, three-axle trucks pulling two-axle trailers)
- Class 10 – Six or More Axle Single-Trailer Trucks (multiple configurations)
- Class 11 – Five or Fewer Axle Multi-Trailer Trucks (multiple configurations)
- Class 12 – Six-Axle Multi-Trailer Trucks (multiple configurations)
- Class 13 – Seven or More Axle Multi-Trailer Trucks (multiple configurations)

The seven-day counts revealed 99.1% of the vehicles are passenger vehicles, 0.8% are Single-Unit trucks, and 0.2% were heavy Trucks north of Beach Boulevard. The seven-day counts revealed 99.2% of the vehicles are passenger vehicles, 0.6% are Single-Unit trucks, and 0.2% were heavy Trucks north of Florida Boulevard.

Turning Movement Counts

Turning movement counts were collected at all 12 study intersections. The existing peak hour volumes at each of the 12 intersections were determined and the counts were summarized for each intersection. The collected turning movement counts of weekday AM, midday, PM, and weekend midday peak hour volumes are provided in Appendix C.

Speed Study

Speed data was collected on Wednesday, December 8, 2021, at two locations along Penman Road: north of 8th Avenue North and north of Florida Boulevard. The speed data summaries are presented in Table 1 with the full speed data provided in Appendix D.

Table 1: Penman Road Speed Data Summary

Penman Road, North of 8th Avenue North	Northbound	Southbound	Combined
Posted Speed	35 mph	35 mph	35 mph
Total Vehicles	105	112	217
85th Percentile Speed	41 mph	39 mph	41 mph
10 mph Pace	34 – 44 mph	30 – 40 mph	32 – 42 mph
Lesser of 85th Percentile Speed/Upper Limit of 10 mph Pace	41 mph	39 mph	41 mph
Differential from Posted Speed	6 mph	4 mph	6 mph
Penman Road, North of Florida Boulevard	**Northbound**	**Southbound**	**Combined**
Posted Speed	35 mph	35 mph	35 mph
Total Vehicles	110	116	226
85th Percentile Speed	39 mph	41 mph	39 mph
10 mph Pace	32 – 42 mph	30 – 40 mph	30 – 40 mph
Lesser of 85th Percentile Speed/Upper Limit of 10 mph Pace	39 mph	40 mph	39 mph
Differential from Posted Speed	4 mph	5 mph	4 mph

Crash History

Crash data was obtained from Signal Four Analytics for the period of January 1, 2016 through November 4, 2021. Each crash report was reviewed to ensure the crash location and crash types were identified correctly. Crash summaries and collision diagrams are provided in Appendix E. For analysis purposes, the study area was broken into 14 individual sections and the crash data is summarized in Appendix E. There have been a total of 307 crashes along the Penman Road from Beach Boulevard to Atlantic Boulevard with 155 injuries reported (in 117 injury crashes) and no fatalities. 224 crashes (73%) occurred during the day and 82 crashes (27%) occurred at night. Two hundred and sixty-nine crashes (88%) occurred with dry pavement conditions and 38 crashes (12%) with wet conditions. There were 125 rear-end crashes which is the most common crash type accounting for 41% of the total crashes. There were 24 pedestrian/bicyclist crashes which resulted in 16 injuries. Five crash hot spots along the corridor are presented in Table 2 and summarized as follows:

Table 2: Penman Road Crash Hot Spots Summary

Site	Total Crashes	Rear-End	Angle	Left-Turn	Off-Road	Ped/Bike
Penman Road from Beach Boulevard to 2nd Avenue North	44	8	17	5	6	4
Penman Road from Arden Way to Seagate Avenue	59	37	4	2	4	7
Penman Road from North of Seagate Avenue to South of Florida Boulevard	35	23	4	1	3	1
Penman Road at Florida Boulevard	32	17	4	2	2	1
Penman Road at Atlantic Boulevard	45	8	6	14	2	7

Penman Road from Beach Boulevard to 2nd Avenue North

There have been a total of 44 crashes along this segment of Penman Road with 27 injuries reported (21 injury crashes) and no fatalities. Twenty-eight crashes occurred during the day and 16 occurred at night. Thirty-eight crashes occurred with dry pavement conditions and six occurred with wet conditions. The majority of crashes were angle collisions (39%), rear-end collisions (18%), and off-road collisions (14%). There were four pedestrian/bicyclist crashes with three injuries along this segment which accounts for 9% of the 44 total crashes.

Penman Road from Arden Way to Seagate Avenue

There have been a total of 59 crashes along this segment of Penman Road with 37 injuries reported (27 injury crashes) and no fatalities. Fourty-nine crashes occurred during the day and 10 occurred at night. Fifty-three crashes occurred with dry pavement conditions and six occurred with dry conditions. The majority of crashes were rear-end collisions (63%). There were seven pedestrian/bicyclist crashes with five injuries along this segment which accounts for 12% of the 59 total crashes.

Penman Road from North of Seagate Avenue to South of Florida Boulevard

There have been a total of 35 crashes along this segment of Penman Road with 14 injuries reported (nine injury crashes) and no fatalities. Twenty-nine crashes occurred during the day and six occurred at night. Twenty-nine crashes occurred with dry pavement conditions and six occurred with dry conditions. The majority of crashes were rear-end collisions (66%) and angle collisions (11%).

Penman Road at Florida Boulevard

There have been a total of 32 crashes along this segment of Penman Road with 15 injuries reported (nine injury crashes) and no fatalities. Twenty-one crashes occurred during the day and 11 occurred at night. Twenty-five crashes occurred with dry pavement conditions and seven occurred with dry conditions. The majority of crashes were rear-end collisions (53%) and angle collisions (13%).

Penman Road at Atlantic Boulevard

There have been a total of 45 crashes along this segment of Penman Road with 25 injuries reported (16 injury crashes) and no fatalities. Thirty-three crashes occurred during the day and 12 occurred at night. Forty-two crashes occurred with dry pavement conditions and three occurred with dry conditions. The majority of crashes were left-turn collisions (31%) and rear-end collisions (18%). There were seven pedestrian/bicyclist crashes with five injuries along this segment which accounts for 16% of total crashes.

Planned Developments

The City of Jacksonville (COJ) was contacted to determine if there are any approved or planned developments in the vicinity of the study corridor. There were no significant projects identified.

Historical Traffic Volumes and Annual Growth Rates

Daily traffic volumes along Penman Road between Beach Boulevard and Atlantic Boulevard were obtained from the North Florida Transportation Planning Organization. Traffic data was provided for the years 2008 through 2020. A review of the traffic counts indicates that between 2008 and 2020, traffic decreased at an annual growth rate of -0.10%. For analysis purposes, a 0% annual growth rate was applied. The historical AADT data and the traffic TRENDS analysis (FDOT program used to calculate annual growth rate) are provided in Appendix F.

NERPM-AB Model Traffic Volumes and Design Traffic Volumes

The Northeast Regional Planning Model Activity Based (NERPM-AB) travel demand forecasting model, provided by the North Florida Transportation Planning Organization (NFTPO), was run to determine the 2015 existing, 2030 opening year, and 2045 design year annual average daily traffic (AADT) on Penman Road North of Seagate Avenue. The NERPM-AB model analysis was conducted by England-Thims & Miller. These volumes were used to establish the growth trends in the area to facilitate the expansion of the existing traffic data. The NERPM-AB model indicates a 1% annual growth rate between 2015 and 2030, and a 1.67% annual growth rate between 2030 and 2045. The travel demand forecasting model plots are provided in Appendix G.

A comparison of the NERPM-AB model annual growth rates and the historical annual growth rates indicates that the NERPM-AB model method anticipates more traffic on Penman Road than the historical method. The historical annual growth rate was utilized to estimate 2030 opening year traffic and the NERPM-AB model annual growth rate was utilized to estimate 2045 design year traffic. The above methods that provide annual growth rates do not include minor streets, so the same growth rates were applied to the turning movement counts at each intersection to obtain 2030 and 2045 intersection turning movement counts.

Roadway Link Analysis

Penman Road was analyzed based on the 2021 Existing, 2030 No-Build, and 2045 No-Build traffic volumes. The existing and design year volumes for the roadway link were compared to the capacity values provided in FDOT's 2020 Quality/Level of Service Handbook. This document is contained in Appendix H.

The roadway link analysis based on the AADT is provided in Table 3. The results indicate that Penman Road between Beach Boulevard and Florida Boulevard is currently operating at LOS F and will remain at LOS F through 2045. Penman Road between Florida Boulevard and Atlantic Boulevard is currently operating at LOS D and will generally remain at LOS D by the year 2045.

Table 3: Penman Road Roadway Link AADT Analysis

Roadway Segment	Analysis Year	AADT (a)		Existing Conditions			
		Weekday	Weekend	Geometry (b)	LOS E Capacity (c)	Weekday Los (b)	Weekend Los (b)
Penman Road from Beach Boulevard to 8th Avenue North	2021	19,927	14,088	2LU	14,040	F	F
	2030 No-Build	19,927	14,088			F	F
	2045 No-Build	24,919	17,617			F	F
Penman Road from 8th Avenue North to Seagate Avenue	2021	20,583	14,291	2LU	14,040	F	F
	2030 No-Build	20,583	14,291			F	F
	2045 No-Build	25,739	17,871			F	F
Penman Road from Seagate Avenue to Florida Boulevard	2021	20,686	14,244	2LU	14,040	F	F
	2030 No-Build	20,686	14,244			F	F
	2045 No-Build	25,868	17,812			F	F
Penman Road from Florida Boulevard to Atlantic Boulevard	2021	11,005	7,793	2LU	14,040	D	D
	2030 No-Build	11,005	7,793			D	D
	2045 No-Build	13,762	9,745			E	D

(a) 2021 weekly average volume from 7-day machine counts multiplied by a seasonal factor of 1.03 and an axle correction factor of 1.

(b) 2LU = Two-Lane Undivided Roadway.

(c) 2020 Quality/Level of Service Handbook LOS E capacity multiplied by a Non-State Signalized Roadway Adjustment of 0.9.

Level of Service

The methodology outlined in the HCM was used in the capacity and level of service analysis for the study intersections. Traffic operations were analyzed using the Synchro/SimTraffic 11 software package, which used the data and methodology contained in the HCM.

The operating conditions of transportation facilities such as traffic signals and stop-controlled intersections are evaluated based on the relationship of the theoretical capacity of a facility to the actual traffic volumes in that facility. Various factors affect capacity, including travel speed, roadway geometry, grade, number and width of travel lanes, and intersection control. The current standards for evaluating capacity and operating conditions are contained in the HCM. The procedures describe operating conditions in terms of a Level of Service (LOS). Facilities are given letter designations from "A", representing the best operating conditions, to "F", representing the worst. In the City of Jacksonville, Level of Service "E" represents the threshold for acceptable overall intersection operating conditions during a peak hour. For signalized and non-signalized (stop-controlled) intersections, the LOS is based on the seconds of delay a vehicle experiences in attempting to maneuver through the intersection and is summarized in Table 4.

Table 4: LOS Criteria

LOS	Control Delay Per Vehicle (sec./veh.)	
	Signalized Intersections	Non-Signalized Intersections
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Source: 2010 Highway Capacity Manual, Transportation Research Board, 2010.

Intersection Capacity Analyses

The Synchro/SimTraffic 11 software package was utilized to conduct the intersection capacity analyses. The existing signal timing data for the five signalized intersections: Penman Road/Beach Boulevard intersection, the Penman Road/Arden Way intersection, the Penman Road/Seagate Avenue intersection, the Penman Road/Florida Boulevard/Forest Avenue intersection, and the Penman Road/Atlantic Boulevard intersection, are provided in Appendix I. The results of all 12 intersections are summarized in Tables 5 through 7 and are described in the following sections. The capacity analysis summary worksheets are contained in Appendix J, K, L, and M. The analyses were conducted for the following conditions:

- 2021 weekday AM, PM, and weekend midday Peak Hour Conditions (Appendix J)
- 2030 No-Build weekday AM, PM, and weekend midday Peak Hour Conditions (Appendix K)
- 2045 No-Build weekday AM, PM, and weekend midday Peak Hour Conditions (Appendix L)
- 2045 Build-Out weekday AM, PM, and weekend midday Peak Hour Conditions (Appendix M)

As a 0% annual growth rate was applied between 2021 and 2030, 2030 No-Build conditions share the same results as 2021 existing conditions. For both the 2030 No-Build and 2045 No-Build conditions, the signal timings were kept the same as the existing conditions for the five existing signalized intersections. For the 2045 Build-Out conditions, different build conditions were applied to signalized intersections and unsignalized intersections. For signalized intersections, lane configuration modifications and roundabouts were considered. For unsignalized intersections, right-in-right-out and roundabouts were considered.

2021 Existing Intersection Capacity

The LOS and delay results of 2021 Existing conditions are summarized in Table 5. All studied Penman Road intersections are currently operating at LOS E or better with the exception of the following intersections:

- Beach Boulevard
  - The northbound traffic operates at LOS F during weekday PM and weekend midday peak hours.
- 2nd Avenue North
  - The eastbound traffic operates at LOS F during the weekday PM peak hour.
- 6th Avenue North
  - The eastbound traffic operates at LOS F during the weekday PM peak hour.
- Florida Boulevard/Forest Avenue
  - The eastbound, northbound, southbound, and the whole intersection operate at LOS F during weekday AM, PM, and weekend midday peak hours.
- Atlantic Boulevard
  - The northbound traffic operates at LOS F during the weekday PM peak hour.

2030 No-Build Intersection Capacity

The LOS and delay results of 2030 No-Build conditions are summarized in Table 5. All studied Penman Road intersections are expected to operate at LOS E or better under 2030 No-Build conditions with the exception of the following intersections:

- Beach Boulevard
  - The northbound traffic is expected to operate at LOS F during weekday PM and weekend midday peak hours.
- 2nd Avenue North
  - The eastbound traffic is expected to operate at LOS F during the weekday PM peak hour.
- 6th Avenue North
  - The eastbound traffic is expected to operate at LOS F during the weekday PM peak hour.
- Florida Boulevard/Forest Avenue
  - The eastbound, northbound, southbound, and the whole intersection are expected to operate at LOS F during weekday AM, PM, and weekend midday peak hours.
- Atlantic Boulevard
  - The northbound traffic is expected to operate at LOS F during the weekday PM peak hour.

2045 No-Build Intersection Capacity

The LOS and delay results of 2045 No-Build conditions are summarized in Table 5. All studied Penman Road intersections are expected to operate at LOS E or better under 2045 No-Build conditions with the exception of the following intersections:

- Beach Boulevard
  - The westbound and southbound traffic is expected to operate at LOS F during the weekday PM peak hour.
  - The northbound traffic is expected to operate at LOS F during weekday PM and weekend midday peak hours.
- 2nd Avenue North
  - The westbound traffic is expected to operate at LOS F during weekday PM and weekend midday peak hours.
  - The eastbound traffic is expected to operate at LOS F during weekday AM, PM, and weekend midday peak hours.
- 4th Avenue North
  - The westbound traffic is expected to operate at LOS F during the weekday PM peak hour.
  - The eastbound traffic is expected to operate at LOS F during weekday PM and weekend midday peak hours.
- 6th Avenue North
  - The eastbound traffic operates at LOS F during the weekday PM peak hour.
- Florida Boulevard/Forest Avenue
  - The westbound traffic is expected to operate at LOS F during the weekday AM peak hour.
  - The eastbound, southbound, and the whole intersection are expected to operate at LOS F during weekday AM and PM peak hours.
  - The northbound traffic is expected to operate at LOS F during weekday AM, PM, and weekend midday peak hours.
- Atlantic Boulevard
  - The northbound traffic is expected to operate at LOS F during the weekday PM peak hour.

2045 Build-Out Intersection Capacity

As a complete street, Penman Road is supposed to accommodate all road users, including vehicles, bicycles, and pedestrians. The proposed modifications should increase safety for all users, slow vehicle traffic, add additional locations for pedestrians to cross Penman Road, and provide better facilities for non-motorized traffic alongside Penman Road. As such, several modifications are proposed:

- A raised median along Penman Road is expected to reduce the number of conflict points along the corridor, reduce vehicle speeds, and pedestrian crossing width.
- Several roundabout locations provide access for pedestrians to cross Penman Road and slow traffic, as modern roundabouts are designed to slow entering vehicles to 15 – 20 mph to traverse, thereby reducing the quantity and severity of crashes that may occur.
- A 12-foot multiuse path along the west side of Penman Road, a 6-foot sidewalk along the east side of Penman Road, and several mid-block crossings are proposed to provide better access for non-motorist users travel alongside or cross Penman Road.

In addition, proposed changes at each study intersection on Penman Road are summarized as follows:

- Penman Road at Beach Boulevard – The southbound through lane is modified to also allow left-turning from that lane
- Penman Road at 2nd Avenue North – The median is closed, only rights in and rights out will be allowed
- Penman Road at 4th Avenue North – A roundabout is proposed
- Penman Road at 6th Avenue North – The median is closed, only rights in and rights out will be allowed
- Penman Road at 8th Avenue North – A roundabout is proposed
- Penman Road at 12th Avenue North – A roundabout is proposed
- Penman Road at 15th Avenue North – A roundabout is proposed
- Penman Road at 18th Avenue North – The median is closed, only rights in and rights out will be allowed
- Penman Road at Arden Way and Penman Road at Seagate Avenue – A one-lane peanut roundabout is proposed
- Penman Road at Florida Boulevard/Forest Avenue – A one-lane roundabout with a northbound right-turn bypass lane is proposed
- Penman Road at Cedar Street – The median is closed, only rights in and rights out will be allowed
- Penman Road at Oceanwood Drive South – A roundabout is proposed
- Penman Road at Atlantic Boulevard – A northbound right-turn lane is proposed

The LOS and delay results of 2045 Build-Out conditions are summarized in Table 6. As PM peak hour presented the scenario with the worst delay, only PM peak results are listed. In other words, the LOS and delays during weekday AM peak and weekend midday peak hours are generally better than what is summarized in Table 6. All studied Penman Road intersections are expected to operate at LOS E or better under 2045 Build-Out conditions with the exception of the following intersections:

- Beach Boulevard
    - The westbound, northbound, and southbound traffic is expected to operate at LOS F during the weekday PM peak hour.
- Florida Boulevard/Forest Avenue
    - The eastbound and northbound traffic is expected to operate at LOS F during the weekday PM peak hour.
- Atlantic Boulevard
    - The northbound traffic is expected to operate at LOS F during the weekday PM peak hour.

Table 5: Intersection Capacity Analyses Summary – 2021 Existing, 2030 No-Build, and 2045 No-Build Conditions

Study Intersection	Intersection Control Type	Approach/ Critical Movement	2021 Existing Conditions						2030 No-Build Conditions						2045 No-Build Conditions					
			AM Peak		PM Peak		Saturday MD Peak		AM Peak		PM Peak		Saturday MD Peak		AM Peak		PM Peak		Saturday MD Peak	
			LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)
Penman Road at Beach Boulevard	Signalized	Eastbound	D	37	D	40	D	38	D	37	D	40	D	38	D	45	E	60	D	51
		Westbound	D	42	E	57	D	39	D	42	E	57	D	39	D	52	F	89	D	45
		Northbound	E	75	F	88	F	92	E	75	F	88	F	92	E	77	F	113	F	120
		Southbound	D	42	E	62	D	51	D	42	E	62	D	51	E	60	F	88	E	58
		Intersection	***D***	***43***	***D***	***54***	***D***	***46***	***D***	***43***	***D***	***54***	***D***	***46***	***D***	***53***	***E***	***79***	***E***	***57***
Penman Road at 2nd Avenue North	Unsignalized	Eastbound Left/Through/Right	E	38	F	59	E	35	E	38	F	59	E	35	F	95	F	271	F	90
		Westbound Left/Through/Right	C	21	E	44	D	34	C	21	E	44	D	34	E	36	F	130	F	122
		Northbound Left	B	10	A	10	-	-	B	10	A	10	-	-	B	11	B	10	-	-
		Southbound Left	-	-	A	9	A	9	-	-	A	9	A	9	-	-	B	11	A	10
Penman Road at 4th Avenue North	Unsignalized	Eastbound Left/Through/Right	D	32	D	35	D	27	D	32	D	35	D	27	F	86	F	78	E	47
		Westbound Left/Through/Right	C	22	D	31	C	24	C	22	D	31	C	24	E	44	F	71	E	45
		Northbound Left	A	10	-	-	A	9	A	10	-	-	A	9	B	12	-	-	A	10
		Southbound Left	A	9	A	10	A	9	A	9	A	10	A	9	A	9	B	11	A	10
Penman Road at 6th Avenue North	Unsignalized	Eastbound Left/Through/Right	C	23	F	57	D	29	C	23	F	57	D	29	D	31	F	124	E	47
		Westbound Left/Through/Right	C	22	D	27	C	24	C	22	D	27	C	24	E	37	E	48	E	41
		Northbound Left	A	10	A	0	A	9	A	10	A	0	A	9	B	11	A	0	A	10
		Southbound Left	A	9	A	10	A	9	A	9	A	10	A	9	A	9	B	11	A	10
Penman Road at 8th Avenue North	Unsignalized	Westbound Left/Right	C	18	C	22	C	17	C	18	C	22	C	17	D	25	D	35	C	22
		Southbound Left	A	9	B	10	A	9	A	9	B	10	A	9	A	9	B	11	A	10
Penman Road at 15th Avenue North	Unsignalized	Westbound Left	C	19	C	21	C	18	C	19	C	21	C	18	D	26	D	28	C	23
		Westbound Right	B	12	C	15	B	13	B	12	C	15	B	13	B	14	C	19	B	15
		Southbound Left	A	9	A	10	A	9	A	9	A	10	A	9	A	9	B	11	A	10
Penman Road at 18th Avenue North	Unsignalized	Westbound Left/Right	C	16	C	19	C	16	C	16	C	19	C	16	C	21	C	25	C	20
		Southbound Left	A	9	A	9	A	9	A	9	A	9	A	9	A	9	B	10	A	9
Penman Road at Arden Way	Signalized	Eastbound	D	48	D	42	C	21	D	48	D	42	C	21	D	49	D	45	C	22
		Westbound	C	31	D	44	B	20	C	31	D	44	B	20	C	29	D	43	B	19
		Northbound	A	6	A	7	A	9	A	6	A	7	A	9	A	9	A	10	B	12
		Southbound	A	5	A	5	A	7	A	5	A	5	A	7	B	12	A	7	A	10
		Intersection	***A***	***9***	***A***	***8***	***A***	***8***	***A***	***9***	***A***	***8***	***A***	***8***	***B***	***14***	***B***	***11***	***B***	***11***
Penman Road at Seagate Avenue	Signalized	Eastbound	C	29	C	35	A	0	C	29	C	35	A	0	C	27	D	35	A	0
		Westbound	C	27	C	23	B	11	C	27	C	23	B	11	C	26	C	24	B	13
		Northbound	A	9	A	9	B	10	A	9	A	9	B	10	B	15	B	17	B	19
		Southbound	A	7	A	7	A	8	A	7	A	7	A	8	B	11	A	9	B	12
		Intersection	***B***	***11***	***B***	***11***	***A***	***10***	***B***	***11***	***B***	***11***	***A***	***10***	***B***	***14***	***B***	***15***	***B***	***15***

Study Intersection	Intersection Control Type	Approach/ Critical Movement	2021 Existing Conditions						2030 No-Build Conditions						2045 No-Build Conditions					
			AM Peak		PM Peak		Saturday MD Peak		AM Peak		PM Peak		Saturday MD Peak		AM Peak		PM Peak		Saturday MD Peak	
			LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)
Penman Road at Florida Boulevard and Forest Avenue	Signalized	Eastbound	F	97	F	108	E	60	F	97	F	108	E	60	F	133	F	162	E	75
		Westbound	E	79	E	72	E	62	E	79	E	72	E	62	F	88	E	78	E	71
		Northbound	F	102	F	119	E	58	F	102	F	119	E	58	F	135	F	189	F	89
		Southbound	F	100	F	92	E	63	F	100	F	92	E	63	F	120	F	99	E	79
		North-Eastbound	B	13	A	4	A	4	B	13	A	4	A	4	C	27	A	7	A	6
		Intersection	***F***	***92***	***F***	***102***	***E***	***58***	***F***	***92***	***F***	***102***	***E***	***58***	***F***	***118***	***F***	***146***	***E***	***78***
Penman Road at Cedar Street	Unsignalized	Eastbound Left/Right	B	13	B	14	B	12	B	13	B	14	B	12	B	15	C	17	B	13
		Southbound Left	A	8	A	9	A	8	A	8	A	9	A	8	A	9	A	10	A	9
Penman Road at Atlantic Boulevard	Signalized	Eastbound	C	32	C	30	C	30	C	32	C	30	C	30	E	73	D	44	D	47
		Westbound	C	22	C	33	C	27	C	22	C	33	C	27	C	33	E	57	D	45
		Northbound	E	57	F	97	D	54	E	57	F	97	D	54	E	63	F	195	E	61
		Southbound	D	53	E	60	D	42	D	53	E	60	D	42	D	49	E	68	D	44
		Intersection	***C***	***35***	***D***	***44***	***C***	***34***	***C***	***35***	***D***	***44***	***C***	***34***	***E***	***56***	***E***	***76***	***D***	***48***

Table 6: Intersection Capacity Analyses Summary – 2045 Build-Out PM Peak Conditions

Study Intersection	Intersection Control Type	Proposed Build Options	Approach/Critical Movement	2045 Build-Out Conditions	
				PM Peak	
				LOS	Delay (sec.)
Penman Road at Beach Boulevard	Signalized	Southbound Through Lane →Southbound Shared Left/Through Lane	Eastbound	E	60
			Westbound	F	89
			Northbound	F	113
			Southbound	F	102
			Intersection	***F***	***82***
Penman Road at 2nd Avenue North	Unsignalized	Median Closed, RIRO	Eastbound Right	C	20
			Westbound Right	C	22
Penman Road at 4th Avenue North	Unsignalized	One Lane Roundabout	Eastbound	A	8
			Westbound	B	11
			Northbound	C	25
			Southbound	C	15
			Intersection	***C***	***20***
Penman Road at 6th Avenue North	Unsignalized	Median Closed, RIRO	Eastbound Right	C	17
			Westbound Right	C	21

Study Intersection	Intersection Control Type	Proposed Build Options	Approach/Critical Movement	2045 Build-Out Conditions PM Peak LOS	2045 Build-Out Conditions PM Peak Delay (sec.)
Penman Road at 8th Avenue North	Unsignalized	One Lane Roundabout	Westbound	B	12
			Northbound	C	23
			Southbound	B	14
			Intersection	***C***	***19***
Penman Road at 15th Avenue North	Unsignalized	One Lane Roundabout	Westbound	B	11
			Northbound	C	23
			Southbound	B	15
			Intersection	C	18
Penman Road at 18th Avenue North	Unsignalized	Median Closed, RIRO	Westbound Right	C	21
Penman Road at Arden Way	Unsignalized	One Lane Peanut Roundabout with Penman Road/Seagate Avenue Intersection	Eastbound	B	11
			Westbound	B	11
			Northbound	E	40
			Southbound	D	26
			Intersection	***D***	***31***
Penman Road at Seagate Avenue	Unsignalized	One Lane Peanut Roundabout with Penman Road/Arden Way Intersection	Eastbound	A	9
			Westbound	D	31
			Northbound	C	20
			Southbound	D	29
			Intersection	***D***	***25***
Penman Road at Florida Boulevard and Forest Avenue	Unsignalized	One Lane Roundabout with a Northbound Right-Turn Bypass Lane	Eastbound	F	96
			Westbound	E	36
			Northbound	F	103
			Southbound	C	23
			North-Eastbound	C	16
			Intersection	***F***	***74***
Penman Road at Cedar Street	Unsignalized	Median Closed, RIRO	Westbound Right	C	16
Penman Road at Atlantic Boulevard	Signalized	Add a Northbound Right-Turn Lane	Eastbound	D	44
			Westbound	D	47
			Northbound	F	132
			Southbound	E	76
			Intersection	***E***	***62***

Recommendations and Conclusions

Based on the findings of the report, the recommended roadway concept plan and typical section for the 2045 proposed conditions are provided in Appendix N and described as follows:

- The average 85th percentile speed on Penman Road was observed to be 40 mph.
- The seven-day counts revealed 99.1% of the vehicles are passenger vehicles, 0.8% are Single-Unit trucks, and 0.2% were heavy Trucks north of Beach Boulevard. The seven-day counts revealed 99.2% of the vehicles are passenger vehicles, 0.6% are Single-Unit trucks, and 0.2% were heavy Trucks north of Florida Boulevard.
- The following modifications are proposed:
    - A raised median along Penman Road is expected to reduce vehicle speeds and pedestrian crossing width.
    - Several roundabout locations provide access for pedestrians to cross Penman Road and slow traffic, as modern roundabouts are designed to slow entering vehicles to 15 – 20 mph to traverse, thereby reducing the quantity and severity of crashes that may occur.
    - A 12-foot multiuse path along the west side of Penman Road, a 6-foot sidewalk along the east side of Penman Road, and several mid-block crossings are proposed to provide better access for non-motorist users travel alongside or cross Penman Road.
- Maintain traffic signals at the following intersections:
    - Penman Road at Beach Boulevard (modify the southbound through lane to a shared left/through lane)
    - Penman Road at Atlantic Boulevard (add a northbound right-turn lane)
- Modify stop control to right-in-right-out with a closed median at the following intersections:
    - Penman Road at 2nd Avenue North
    - Penman Road at 6th Avenue North
    - Penman Road at 18th Avenue North
    - Penman Road at Cedar Street
- Modify stop control to one lane roundabout at the following intersections:
    - Penman Road at 4th Avenue North
    - Penman Road at 8th Avenue North
    - Penman Road at 12th Avenue North
    - Penman Road at 15th Avenue North
    - Penman Road at Oceanwood Drive South
- Modify traffic signals to one lane roundabout at the following intersections:
    - Penman Road at Arden Way and Penman Road at Seagate Avenue (peanut roundabout)
    - Penman Road at Florida Boulevard/Forest Avenue with a northbound slip right-turn lane
- The proposed modifications should increase safety for all users, slow vehicle traffic, add additional locations for pedestrians to cross Penman Road, reduce pedestrian crossing distances, and provide better facilities for non-motorized traffic alongside Penman Road.

Appendix A

2019 Peak Season Factor Category Report
2017 Peak Season Factor Category Report

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7200 DUVAL COUNTYWIDE

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2019 - 01/05/2019	1.03	1.05
2	01/06/2019 - 01/12/2019	1.04	1.06
3	01/13/2019 - 01/19/2019	1.05	1.07
4	01/20/2019 - 01/26/2019	1.04	1.06
5	01/27/2019 - 02/02/2019	1.03	1.05
6	02/03/2019 - 02/09/2019	1.01	1.03
7	02/10/2019 - 02/16/2019	1.00	1.02
8	02/17/2019 - 02/23/2019	1.00	1.02
9	02/24/2019 - 03/02/2019	0.99	1.01
*10	03/03/2019 - 03/09/2019	0.98	1.00
*11	03/10/2019 - 03/16/2019	0.98	1.00
*12	03/17/2019 - 03/23/2019	0.97	0.99
*13	03/24/2019 - 03/30/2019	0.97	0.99
*14	03/31/2019 - 04/06/2019	0.97	0.99
*15	04/07/2019 - 04/13/2019	0.97	0.99
*16	04/14/2019 - 04/20/2019	0.97	0.99
*17	04/21/2019 - 04/27/2019	0.97	0.99
*18	04/28/2019 - 05/04/2019	0.98	1.00
*19	05/05/2019 - 05/11/2019	0.98	1.00
*20	05/12/2019 - 05/18/2019	0.99	1.01
*21	05/19/2019 - 05/25/2019	0.99	1.01
*22	05/26/2019 - 06/01/2019	0.99	1.01
23	06/02/2019 - 06/08/2019	0.99	1.01
24	06/09/2019 - 06/15/2019	0.99	1.01
25	06/16/2019 - 06/22/2019	0.99	1.01
26	06/23/2019 - 06/29/2019	1.00	1.02
27	06/30/2019 - 07/06/2019	1.00	1.02
28	07/07/2019 - 07/13/2019	1.01	1.03
29	07/14/2019 - 07/20/2019	1.01	1.03
30	07/21/2019 - 07/27/2019	1.01	1.03
31	07/28/2019 - 08/03/2019	1.00	1.02
32	08/04/2019 - 08/10/2019	0.99	1.01
33	08/11/2019 - 08/17/2019	0.99	1.01
34	08/18/2019 - 08/24/2019	1.00	1.02
35	08/25/2019 - 08/31/2019	1.02	1.04
36	09/01/2019 - 09/07/2019	1.03	1.05
37	09/08/2019 - 09/14/2019	1.05	1.07
38	09/15/2019 - 09/21/2019	1.06	1.08
39	09/22/2019 - 09/28/2019	1.04	1.06
40	09/29/2019 - 10/05/2019	1.02	1.04
41	10/06/2019 - 10/12/2019	1.00	1.02
42	10/13/2019 - 10/19/2019	0.98	1.00
43	10/20/2019 - 10/26/2019	0.99	1.01
44	10/27/2019 - 11/02/2019	1.00	1.02
45	11/03/2019 - 11/09/2019	1.01	1.03
46	11/10/2019 - 11/16/2019	1.03	1.05
47	11/17/2019 - 11/23/2019	1.03	1.05
48	11/24/2019 - 11/30/2019	1.03	1.05
49	12/01/2019 - 12/07/2019	1.03	1.05
50	12/08/2019 - 12/14/2019	1.03	1.05
51	12/15/2019 - 12/21/2019	1.03	1.05
52	12/22/2019 - 12/28/2019	1.04	1.06
53	12/29/2019 - 12/31/2019	1.05	1.07

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 7200 DUVAL COUNTYWIDE

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	1.02	1.05
2	01/08/2017 - 01/14/2017	1.04	1.07
3	01/15/2017 - 01/21/2017	1.06	1.09
4	01/22/2017 - 01/28/2017	1.04	1.07
5	01/29/2017 - 02/04/2017	1.03	1.06
6	02/05/2017 - 02/11/2017	1.01	1.04
7	02/12/2017 - 02/18/2017	1.00	1.03
8	02/19/2017 - 02/25/2017	0.99	1.02
9	02/26/2017 - 03/04/2017	0.99	1.02
*10	03/05/2017 - 03/11/2017	0.98	1.01
*11	03/12/2017 - 03/18/2017	0.98	1.01
*12	03/19/2017 - 03/25/2017	0.97	1.00
*13	03/26/2017 - 04/01/2017	0.97	1.00
*14	04/02/2017 - 04/08/2017	0.96	0.99
*15	04/09/2017 - 04/15/2017	0.96	0.99
*16	04/16/2017 - 04/22/2017	0.96	0.99
*17	04/23/2017 - 04/29/2017	0.97	1.00
*18	04/30/2017 - 05/06/2017	0.97	1.00
*19	05/07/2017 - 05/13/2017	0.98	1.01
*20	05/14/2017 - 05/20/2017	0.98	1.01
*21	05/21/2017 - 05/27/2017	0.99	1.02
*22	05/28/2017 - 06/03/2017	0.99	1.02
23	06/04/2017 - 06/10/2017	1.00	1.03
24	06/11/2017 - 06/17/2017	1.01	1.04
25	06/18/2017 - 06/24/2017	1.00	1.03
26	06/25/2017 - 07/01/2017	1.00	1.03
27	07/02/2017 - 07/08/2017	1.00	1.03
28	07/09/2017 - 07/15/2017	1.00	1.03
29	07/16/2017 - 07/22/2017	1.00	1.03
30	07/23/2017 - 07/29/2017	1.00	1.03
31	07/30/2017 - 08/05/2017	1.00	1.03
32	08/06/2017 - 08/12/2017	0.99	1.02
33	08/13/2017 - 08/19/2017	0.99	1.02
34	08/20/2017 - 08/26/2017	1.02	1.05
35	08/27/2017 - 09/02/2017	1.04	1.07
36	09/03/2017 - 09/09/2017	1.07	1.10
37	09/10/2017 - 09/16/2017	1.09	1.12
38	09/17/2017 - 09/23/2017	1.07	1.10
39	09/24/2017 - 09/30/2017	1.05	1.08
40	10/01/2017 - 10/07/2017	1.02	1.05
41	10/08/2017 - 10/14/2017	1.00	1.03
42	10/15/2017 - 10/21/2017	0.98	1.01
43	10/22/2017 - 10/28/2017	0.98	1.01
44	10/29/2017 - 11/04/2017	0.99	1.02
45	11/05/2017 - 11/11/2017	1.00	1.03
46	11/12/2017 - 11/18/2017	1.01	1.04
47	11/19/2017 - 11/25/2017	1.01	1.04
48	11/26/2017 - 12/02/2017	1.01	1.04
49	12/03/2017 - 12/09/2017	1.02	1.05
50	12/10/2017 - 12/16/2017	1.02	1.05
51	12/17/2017 - 12/23/2017	1.03	1.06
52	12/24/2017 - 12/30/2017	1.04	1.07
53	12/31/2017 - 12/31/2017	1.06	1.09

* PEAK SEASON

Appendix B

Seven-Day Machine Counts
FHWA Vehicle and Truck Classification

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/13/21	1	68	1	0	0	0	0	0	0	0	0	0	0	70
01:00	0	40	1	0	0	0	0	0	0	0	0	0	0	41
02:00	1	29	1	0	0	0	0	0	0	0	0	0	0	31
03:00	0	17	0	0	1	0	0	**2**	0	0	0	0	0	20
04:00	1	10	0	0	0	0	0	0	0	0	0	0	0	11
05:00	0	32	2	0	0	0	0	0	0	0	0	0	0	34
06:00	2	65	3	0	1	0	0	0	0	0	0	0	0	71
07:00	0	181	6	0	1	2	0	1	0	0	0	0	0	191
08:00	2	224	10	0	0	1	0	0	0	0	0	0	0	237
09:00	6	384	16	0	**4**	**3**	0	0	0	0	0	0	0	413
10:00	14	486	**24**	0	0	1	0	0	0	0	0	0	0	525
11:00	**15**	**569**	19	0	0	3	0	0	0	0	0	0	0	**606**
12 PM	**12**	**599**	16	0	1	0	0	**1**	0	0	0	0	0	**629**
13:00	6	582	20	0	1	0	0	0	0	0	0	0	0	609
14:00	7	517	**24**	0	0	0	0	0	0	0	0	0	0	548
15:00	8	499	16	**1**	**2**	**1**	0	0	0	0	0	0	0	527
16:00	4	481	15	0	1	0	0	0	**1**	0	0	0	0	502
17:00	3	490	11	0	0	0	0	0	0	0	0	0	0	504
18:00	4	444	13	0	0	1	0	1	0	0	0	0	0	463
19:00	7	305	9	0	0	0	0	0	0	0	0	0	0	321
20:00	3	251	9	0	0	0	0	0	0	0	0	0	0	263
21:00	4	233	7	0	0	1	0	0	0	0	0	0	0	245
22:00	1	159	7	0	0	0	0	0	0	0	0	0	0	167
23:00	0	142	1	0	0	0	0	0	0	0	0	0	0	143
Day Total	101	6807	231	1	12	13	0	5	1	0	0	0	0	7171
Percent	1.4%	94.9%	3.2%	0.0%	0.2%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00		09:00	09:00		03:00						11:00
Vol.	15	569	24		4	3		2						606
PM Peak	12:00	12:00	14:00	15:00	15:00	15:00		12:00	16:00					12:00
Vol.	12	599	24	1	2	1		1	1					629

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/14/21	2	70	1	0	0	0	0	0	0	0	0	0	0	73
01:00	0	56	1	0	0	0	0	0	0	0	0	0	0	57
02:00	0	35	0	0	0	0	0	0	0	0	0	0	0	35
03:00	0	21	1	0	0	0	0	0	0	0	0	0	0	22
04:00	0	13	1	0	0	0	0	0	0	0	0	0	0	14
05:00	0	17	1	0	**1**	0	0	0	0	0	0	0	0	19
06:00	1	45	4	0	0	0	0	0	0	0	0	0	0	50
07:00	1	121	3	0	0	0	0	**1**	0	0	0	0	0	126
08:00	4	174	5	0	0	0	0	0	0	0	0	0	0	183
09:00	2	329	6	0	0	0	0	1	0	0	0	0	0	338
10:00	1	398	**16**	0	1	0	0	0	0	0	0	0	0	416
11:00	**6**	**453**	11	0	1	0	0	0	0	0	**1**	0	0	**472**
12 PM	5	**503**	18	0	0	**1**	0	0	0	0	0	0	0	**527**
13:00	1	493	**20**	0	1	1	0	**1**	0	0	0	0	0	517
14:00	4	426	13	0	0	0	0	0	0	0	0	0	0	443
15:00	2	460	11	0	1	1	0	0	0	0	0	0	0	475
16:00	**10**	443	10	0	0	0	0	0	0	0	0	0	0	463
17:00	2	455	6	0	0	0	0	0	0	0	0	0	0	463
18:00	3	391	7	0	**2**	0	0	0	0	0	0	0	0	403
19:00	3	252	8	0	0	1	0	0	0	0	0	0	0	264
20:00	0	215	2	0	1	0	0	0	0	0	0	0	0	218
21:00	3	132	3	0	0	0	0	0	0	0	0	0	0	138
22:00	3	80	1	0	0	0	0	0	0	0	0	0	0	84
23:00	0	57	0	0	0	0	0	0	0	0	0	0	0	57
Day Total	53	5639	149	0	8	4	0	3	0	0	1	0	0	5857
Percent	0.9%	96.3%	2.5%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00		05:00			07:00			11:00			11:00
Vol.	6	453	16		1			1			1			472
PM Peak	16:00	12:00	13:00		18:00	12:00		13:00						12:00
Vol.	10	503	20		2	1		1						527

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/15/21	0	19	0	0	0	0	0	0	0	0	0	0	0	19
01:00	0	20	1	0	0	0	0	0	0	0	0	0	0	21
02:00	0	10	0	0	0	0	0	1	0	0	0	0	0	11
03:00	0	12	0	0	0	0	0	1	0	0	0	0	0	13
04:00	0	19	2	0	1	0	0	0	0	0	0	0	0	22
05:00	0	35	3	0	2	0	0	1	0	0	0	0	0	41
06:00	6	223	7	0	3	0	0	1	0	0	0	0	0	240
07:00	9	369	16	0	1	2	0	**2**	0	0	0	0	0	399
08:00	**13**	499	**29**	0	**5**	2	0	0	**1**	0	0	0	0	549
09:00	8	444	17	0	2	1	0	0	0	0	0	0	0	472
10:00	7	418	26	0	5	3	0	0	0	0	0	0	0	459
11:00	8	**541**	28	0	4	**4**	0	0	0	0	0	0	0	**585**
12 PM	4	530	**27**	0	4	**6**	0	0	0	0	0	0	0	571
13:00	4	546	24	0	6	0	0	**3**	0	0	0	0	0	583
14:00	9	587	25	0	3	1	0	0	0	0	0	0	0	625
15:00	8	649	27	**1**	7	1	0	0	0	0	0	0	0	693
16:00	12	617	21	0	**9**	3	0	0	0	0	0	0	0	662
17:00	**18**	**763**	19	0	4	1	0	1	0	0	0	0	0	**806**
18:00	16	648	17	0	2	1	0	0	0	0	0	0	0	684
19:00	7	470	8	0	1	0	0	0	0	0	0	0	0	486
20:00	2	295	11	0	0	0	0	0	0	0	0	0	0	308
21:00	1	161	5	0	0	0	0	0	0	0	0	0	0	167
22:00	0	78	2	0	0	0	0	0	0	0	0	0	0	80
23:00	1	48	0	0	0	0	0	0	**1**	0	0	0	0	50
Day Total	133	8001	315	1	59	25	0	10	2	0	0	0	0	8546
Percent	1.6%	93.6%	3.7%	0.0%	0.7%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	08:00		08:00	11:00		07:00	08:00					11:00
Vol.	13	541	29		5	4		2	1					585
PM Peak	17:00	17:00	12:00	15:00	16:00	12:00		13:00	23:00					17:00
Vol.	18	763	27	1	9	6		3	1					806

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/16/21	0	32	2	0	0	0	0	0	0	0	0	0	0	34
01:00	0	20	0	0	0	0	0	0	0	0	0	0	0	20
02:00	0	10	0	0	1	0	0	1	0	0	0	0	0	12
03:00	1	7	2	0	0	0	0	1	0	0	0	0	0	11
04:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18
05:00	0	38	0	0	0	0	0	0	0	0	0	0	0	38
06:00	2	239	6	0	4	1	0	0	0	0	0	0	0	252
07:00	8	403	12	0	1	3	0	0	0	0	0	0	0	427
08:00	11	469	**35**	0	**12**	2	0	**2**	**1**	0	0	0	0	532
09:00	**13**	439	18	**1**	6	**5**	0	0	0	0	0	0	0	482
10:00	10	470	19	0	2	2	0	1	0	0	0	0	0	504
11:00	13	**536**	31	0	3	4	**1**	0	1	0	0	0	0	**589**
12 PM	5	608	27	0	5	**3**	0	0	0	0	0	0	0	648
13:00	4	592	**28**	0	**8**	2	0	1	0	0	0	0	0	635
14:00	10	584	24	0	5	3	0	1	**1**	0	0	0	0	628
15:00	9	684	28	0	6	1	0	1	1	0	0	0	0	730
16:00	**16**	715	28	0	4	2	0	**2**	0	0	**1**	0	0	768
17:00	13	**799**	21	0	1	2	0	0	1	0	0	0	0	**837**
18:00	10	629	12	**1**	1	2	0	1	0	0	0	0	0	656
19:00	6	471	11	0	0	1	0	0	0	0	0	0	0	489
20:00	7	321	14	0	0	1	0	0	0	0	0	0	0	343
21:00	3	195	3	0	2	0	0	1	0	0	0	0	0	204
22:00	2	116	2	0	1	0	0	0	0	0	0	0	0	121
23:00	3	71	0	0	0	0	0	0	0	0	0	0	0	74
Day Total	146	8463	325	2	63	34	1	12	5	0	1	0	0	9052
Percent	1.6%	93.5%	3.6%	0.0%	0.7%	0.4%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	08:00	09:00	08:00	09:00	11:00	08:00	08:00					11:00
Vol.	13	536	35	1	12	5	1	2	1					589
PM Peak	16:00	17:00	13:00	18:00	13:00	12:00		16:00	14:00		16:00			17:00
Vol.	16	799	28	1	8	3		2	1		1			837

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/17/21	0	28	1	0	0	0	0	0	0	0	0	0	0	29
01:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
02:00	0	8	0	0	0	0	0	1	1	0	0	0	0	10
03:00	0	13	0	0	0	0	0	1	0	0	0	0	0	14
04:00	0	21	1	0	1	0	0	0	0	0	0	0	0	23
05:00	0	43	4	0	2	0	0	1	0	0	0	0	0	50
06:00	3	239	6	0	2	0	0	1	1	0	0	0	0	252
07:00	8	387	14	0	2	**5**	0	0	0	0	0	0	0	416
08:00	**12**	458	**35**	0	**6**	3	0	**2**	**2**	0	0	0	0	518
09:00	8	480	11	0	4	3	0	1	1	0	0	0	0	508
10:00	8	501	28	0	1	3	0	2	2	0	0	0	0	545
11:00	12	**563**	26	0	5	2	0	1	1	0	0	0	0	**610**
12 PM	8	661	24	0	2	1	0	0	**1**	0	0	0	0	697
13:00	8	582	28	0	3	1	0	**1**	0	0	0	0	0	623
14:00	3	586	29	0	**7**	**5**	0	1	0	0	0	0	0	631
15:00	8	654	21	0	5	3	0	1	0	0	0	0	0	692
16:00	12	704	**35**	**1**	0	1	0	0	0	0	0	0	0	753
17:00	**14**	**747**	22	0	1	2	0	0	0	0	0	0	0	**786**
18:00	12	676	10	0	0	1	0	1	0	0	0	0	0	700
19:00	10	461	9	0	2	0	0	1	0	0	0	0	0	483
20:00	5	354	12	0	0	0	0	0	0	0	0	0	0	371
21:00	2	238	6	0	0	0	0	0	0	0	0	0	0	246
22:00	2	95	3	0	1	0	0	0	0	0	0	0	0	101
23:00	0	73	2	0	0	0	0	0	0	0	0	0	0	75
Day Total	135	8590	328	1	44	30	0	15	9	0	0	0	0	9152
Percent	1.5%	93.9%	3.6%	0.0%	0.5%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	08:00		08:00	07:00		08:00	08:00					11:00
Vol.	12	563	35		6	5		2	2					610
PM Peak	17:00	17:00	16:00	16:00	14:00	14:00		13:00	12:00					17:00
Vol.	14	747	35	1	7	5		1	1					786

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/18/21	1	37	1	0	0	0	0	0	0	0	0	0	0	39
01:00	0	20	0	0	0	0	0	0	0	0	0	0	0	20
02:00	0	13	2	0	1	0	0	0	0	0	0	0	0	16
03:00	0	11	1	0	0	0	0	**2**	0	0	0	0	0	14
04:00	0	13	3	0	1	0	0	0	0	0	0	0	0	17
05:00	0	51	2	0	1	0	0	2	0	0	0	0	0	56
06:00	5	227	8	0	5	0	0	0	0	0	0	0	0	245
07:00	9	363	17	0	2	**5**	0	1	**1**	0	0	0	0	398
08:00	**13**	**499**	**30**	0	**9**	5	**1**	0	0	0	0	0	0	**557**
09:00	8	465	21	0	4	3	0	1	0	0	0	0	0	502
10:00	6	484	26	0	8	2	0	1	0	0	0	0	0	527
11:00	8	494	26	0	3	1	0	1	0	0	0	0	0	533
12 PM	11	616	26	0	2	3	0	0	0	0	0	0	0	658
13:00	7	559	31	0	1	1	0	1	**1**	0	0	0	0	601
14:00	11	601	35	0	5	2	0	1	0	0	0	0	0	655
15:00	14	697	29	0	**6**	**4**	0	**2**	1	0	0	0	0	753
16:00	12	720	**36**	**1**	3	2	0	1	0	0	0	0	0	775
17:00	**21**	**777**	25	0	1	2	0	0	0	0	0	0	0	**826**
18:00	11	660	14	0	3	2	0	1	0	0	0	0	0	691
19:00	8	446	14	0	0	1	0	0	0	0	0	0	0	469
20:00	5	356	11	0	0	0	0	0	0	0	0	0	0	372
21:00	6	231	9	0	2	0	0	0	0	0	0	0	0	248
22:00	2	136	3	0	0	0	0	0	0	0	0	0	0	141
23:00	1	73	0	0	0	0	0	0	0	0	0	0	0	74
Day Total	159	8549	370	1	57	33	1	14	3	0	0	0	0	9187
Percent	1.7%	93.1%	4.0%	0.0%	0.6%	0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00		08:00	07:00	08:00	03:00	07:00					08:00
Vol.	13	499	30		9	5	1	2	1					557
PM Peak	17:00	17:00	16:00	16:00	15:00	15:00		15:00	13:00					17:00
Vol.	21	777	36	1	6	4		2	1					826

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/19/21	1	36	0	0	0	0	0	0	0	0	0	0	0	37
01:00	0	22	0	0	0	0	0	0	0	0	0	0	0	22
02:00	0	20	3	0	0	0	0	1	0	0	0	0	0	24
03:00	0	14	0	0	0	0	0	1	0	0	0	0	0	15
04:00	0	20	4	0	1	0	0	0	0	0	0	0	0	25
05:00	0	39	2	0	1	0	0	0	0	0	0	0	0	42
06:00	2	238	9	0	4	1	0	1	**2**	0	0	0	0	257
07:00	12	372	17	0	3	3	0	0	2	0	0	0	0	409
08:00	13	506	**26**	0	**7**	**5**	0	**3**	1	0	0	0	0	561
09:00	**14**	483	25	0	2	1	0	0	1	0	0	0	0	526
10:00	8	528	18	0	1	1	0	0	0	0	0	0	0	556
11:00	13	**549**	14	0	3	4	0	2	0	0	0	0	0	**585**
12 PM	12	627	19	0	3	**6**	0	1	**2**	0	0	0	0	670
13:00	4	612	21	0	2	3	0	0	0	0	0	0	0	642
14:00	12	649	**29**	0	3	3	**1**	1	1	0	0	0	0	699
15:00	11	677	26	0	3	5	0	0	0	0	0	0	0	722
16:00	12	703	23	0	**9**	1	0	1	0	0	0	0	0	749
17:00	**13**	**788**	19	**1**	0	3	0	**2**	1	0	0	0	0	**827**
18:00	10	572	10	0	3	0	0	2	1	0	0	0	0	598
19:00	9	426	14	0	0	0	0	0	0	0	0	0	0	449
20:00	1	352	9	0	0	1	0	0	0	0	0	0	0	363
21:00	2	234	6	0	0	0	0	0	0	0	0	0	0	242
22:00	2	175	2	0	0	0	0	0	0	0	0	0	0	179
23:00	0	121	3	0	0	0	0	0	0	0	0	0	0	124
Day Total	151	8763	299	1	45	37	1	15	11	0	0	0	0	9323
Percent	1.6%	94.0%	3.2%	0.0%	0.5%	0.4%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	08:00		08:00	08:00		08:00	06:00					11:00
Vol.	14	549	26		7	5		3	2					585
PM Peak	17:00	17:00	14:00	17:00	16:00	12:00	14:00	17:00	12:00					17:00
Vol.	13	788	29	1	9	6	1	2	2					827
Grand Total	878	54812	2017	7	288	176	3	74	31	0	2	0	0	58288
Percent	1.5%	94.0%	3.5%	0.0%	0.5%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/13/21	0	58	2	0	0	0	0	0	0	0	0	0	0	60
01:00	0	35	0	0	0	0	0	0	0	0	0	0	0	35
02:00	0	27	0	0	0	0	0	0	0	0	0	0	0	27
03:00	0	20	0	0	0	0	0	**1**	0	0	0	0	0	21
04:00	0	35	1	0	0	0	0	0	0	0	0	0	0	36
05:00	0	60	1	0	0	0	0	0	0	0	0	0	0	61
06:00	6	152	8	0	1	0	0	0	0	0	0	0	0	167
07:00	4	276	3	0	1	1	0	0	0	0	0	0	0	285
08:00	10	325	10	0	0	1	0	0	**2**	0	0	0	0	348
09:00	**17**	583	14	0	2	**3**	0	0	0	0	0	0	0	619
10:00	15	665	**15**	0	**3**	2	0	0	0	0	0	0	0	700
11:00	11	**695**	14	0	0	0	0	0	0	0	0	0	0	**720**
12 PM	13	**653**	**16**	0	**1**	**1**	0	0	0	0	0	0	0	**684**
13:00	7	601	16	0	0	1	0	0	0	0	0	**1**	0	626
14:00	9	467	15	0	0	0	0	0	0	0	0	0	0	491
15:00	**16**	481	7	0	1	1	0	0	0	0	0	0	0	506
16:00	1	478	12	0	1	0	0	0	0	0	0	0	0	492
17:00	7	476	12	0	1	0	0	**1**	0	0	0	0	0	497
18:00	9	392	10	0	1	0	0	0	0	0	0	0	0	412
19:00	7	280	3	0	0	0	0	0	0	0	0	0	0	290
20:00	3	227	4	0	0	0	0	0	0	0	0	0	0	234
21:00	1	195	3	0	0	0	0	0	0	0	0	0	0	199
22:00	4	131	2	0	0	0	0	0	0	0	0	0	0	137
23:00	1	120	2	0	0	0	0	0	0	0	0	0	0	123
Day Total	141	7432	170	0	12	10	0	2	2	0	0	1	0	7770
Percent	1.8%	95.6%	2.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	10:00		10:00	09:00		03:00	08:00					11:00
Vol.	17	695	15		3	3		1	2					720
PM Peak	15:00	12:00	12:00		12:00	12:00		17:00				13:00		12:00
Vol.	16	653	16		1	1		1				1		684

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/14/21	2	56	0	0	0	0	0	0	0	0	0	0	0	58
01:00	0	45	0	0	0	0	0	0	0	0	0	0	0	45
02:00	0	40	0	0	0	0	0	0	0	0	0	0	0	40
03:00	2	25	2	0	0	0	0	0	0	0	0	0	0	29
04:00	0	23	1	0	**1**	0	0	0	0	0	0	0	0	25
05:00	1	49	3	0	1	0	0	0	0	0	0	0	0	54
06:00	7	112	3	0	0	0	0	0	0	0	0	0	0	122
07:00	5	192	3	0	0	0	0	0	0	0	0	0	0	200
08:00	**13**	346	8	0	1	0	0	0	0	0	0	0	0	368
09:00	6	400	8	0	1	0	0	0	0	0	0	0	0	415
10:00	10	571	**17**	0	1	0	0	0	0	0	0	0	0	599
11:00	9	**629**	6	0	1	0	0	0	0	0	0	0	0	**645**
12 PM	**15**	**619**	**12**	0	0	0	0	0	**1**	0	0	0	0	**647**
13:00	11	480	10	0	0	0	0	0	0	0	0	0	0	501
14:00	6	443	7	0	0	0	0	0	0	0	0	0	0	456
15:00	5	404	6	0	**1**	**1**	0	0	0	0	0	0	0	417
16:00	8	457	9	0	0	0	0	0	0	0	0	0	0	474
17:00	11	428	10	0	1	1	0	0	0	0	0	0	0	451
18:00	5	347	5	0	0	1	0	**1**	0	0	0	0	0	359
19:00	4	243	5	0	0	0	0	0	0	0	0	0	0	252
20:00	3	167	1	0	0	0	0	0	0	0	0	0	0	171
21:00	1	111	2	0	0	0	0	0	0	0	0	0	0	114
22:00	0	72	2	0	0	0	0	0	0	0	0	0	0	74
23:00	0	41	0	0	0	0	0	0	0	0	0	0	0	41
Day Total	124	6300	120	0	8	3	0	1	1	0	0	0	0	6557
Percent	1.9%	96.1%	1.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	10:00		04:00									11:00
Vol.	13	629	17		1									645
PM Peak	12:00	12:00	12:00		15:00	15:00		18:00	12:00					12:00
Vol.	15	619	12		1	1		1	1					647

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Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/15/21	0	20	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	25	0	0	0	0	0	0	0	0	0	0	0	25
02:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	12	1	0	0	0	0	0	0	0	0	0	0	13
04:00	0	46	0	0	0	0	0	0	0	0	0	0	0	46
05:00	0	134	7	0	1	0	0	0	0	0	0	0	0	142
06:00	14	410	12	0	8	0	0	0	0	0	0	0	0	444
07:00	12	**828**	32	0	3	2	0	0	**1**	0	0	0	0	**878**
08:00	10	759	29	0	**9**	**3**	0	**1**	0	0	0	0	0	811
09:00	8	626	23	0	2	1	0	0	0	0	0	0	0	660
10:00	**19**	598	25	0	4	2	0	0	1	0	0	0	0	649
11:00	19	610	**34**	0	7	2	0	1	0	0	0	0	0	673
12 PM	9	569	17	0	5	2	1	0	0	0	0	0	0	603
13:00	8	610	21	0	1	**3**	0	1	0	0	0	0	0	644
14:00	17	**748**	**25**	0	**8**	3	0	**3**	0	0	0	0	0	**804**
15:00	13	646	19	0	5	1	0	0	0	0	0	0	0	684
16:00	14	617	17	0	8	1	0	1	0	0	0	0	0	658
17:00	16	696	21	0	0	1	**2**	1	0	0	0	0	0	737
18:00	**21**	504	15	**1**	3	1	1	0	0	0	0	0	0	546
19:00	12	316	5	0	3	0	0	0	0	0	0	0	0	336
20:00	7	241	1	0	3	0	0	0	0	0	0	0	0	252
21:00	2	115	1	0	0	0	0	0	0	0	0	0	0	118
22:00	1	65	0	0	0	0	0	0	0	0	0	0	0	66
23:00	0	36	0	0	0	0	0	0	**1**	0	0	0	0	37
Day Total	202	9239	305	1	70	22	4	8	3	0	0	0	0	9854
Percent	2.0%	93.8%	3.1%	0.0%	0.7%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	11:00		08:00	08:00		08:00	07:00					07:00
Vol.	19	828	34		9	3		1	1					878
PM Peak	18:00	14:00	14:00	18:00	14:00	13:00	17:00	14:00	23:00					14:00
Vol.	21	748	25	1	8	3	2	3	1					804

All Traffic Data Services, Inc.

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Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/16/21	0	12	0	0	0	0	0	0	0	0	0	0	0	12
01:00	0	19	0	0	0	0	0	0	0	0	0	0	0	19
02:00	0	8	0	0	1	0	0	0	0	0	0	0	0	9
03:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
04:00	0	45	1	0	0	0	0	0	0	0	0	0	0	46
05:00	0	145	7	0	0	0	0	0	0	0	0	0	0	152
06:00	11	447	12	0	5	0	0	0	**1**	0	0	0	0	476
07:00	10	**871**	31	0	1	1	0	0	0	0	0	0	0	**914**
08:00	13	794	**61**	0	**7**	4	0	**1**	1	0	0	0	0	881
09:00	17	708	31	0	6	**6**	0	0	0	0	0	0	0	768
10:00	8	612	29	0	3	2	0	1	1	0	0	**1**	0	657
11:00	**18**	594	24	0	5	1	0	0	1	0	0	0	0	643
12 PM	13	581	**29**	0	2	**2**	0	1	0	0	0	0	0	628
13:00	6	601	16	**1**	5	0	0	0	**1**	0	0	0	0	630
14:00	17	678	18	1	6	0	0	**2**	0	0	0	0	0	722
15:00	6	**712**	19	0	**9**	2	0	0	0	0	0	0	0	**748**
16:00	16	666	24	0	6	1	0	1	0	0	0	0	0	714
17:00	22	680	13	1	4	2	0	2	0	0	0	0	0	724
18:00	**23**	569	11	0	1	0	0	0	0	0	0	0	0	604
19:00	7	342	3	0	0	0	0	0	0	0	0	0	0	352
20:00	4	197	5	0	1	0	0	0	0	0	0	0	0	207
21:00	0	161	2	0	0	0	0	1	0	0	0	0	0	164
22:00	2	91	0	0	0	0	0	0	0	0	0	0	0	93
23:00	0	53	0	0	1	0	0	0	0	0	0	0	0	54
Day Total	193	9600	337	3	63	21	0	9	5	0	0	1	0	10232
Percent	1.9%	93.8%	3.3%	0.0%	0.6%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	07:00	08:00		08:00	09:00		08:00	06:00			10:00		07:00
Vol.	18	871	61		7	6		1	1			1		914
PM Peak	18:00	15:00	12:00	13:00	15:00	12:00		14:00	13:00					15:00
Vol.	23	712	29	1	9	2		2	1					748

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Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/17/21	0	22	0	0	0	0	0	0	0	0	0	0	0	22
01:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	9	1	0	0	0	0	0	1	0	0	0	0	11
03:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
04:00	0	46	1	0	0	0	0	0	0	0	0	0	0	47
05:00	0	127	7	0	1	0	0	0	0	0	0	0	0	135
06:00	9	430	15	0	**9**	0	0	0	0	0	0	0	0	463
07:00	3	**853**	28	0	4	0	0	**2**	1	0	0	0	**1**	**892**
08:00	16	813	**40**	0	6	2	0	2	1	0	0	0	0	880
09:00	14	684	20	0	8	**4**	0	0	**2**	0	**1**	0	0	733
10:00	**17**	610	25	0	3	4	0	0	1	0	0	0	0	660
11:00	12	625	20	0	2	1	0	1	1	0	0	0	0	662
12 PM	19	**742**	10	0	**7**	0	0	0	0	0	0	0	0	**778**
13:00	5	708	16	**1**	5	2	0	1	0	0	0	0	0	738
14:00	10	693	**26**	0	5	**3**	0	0	**1**	0	0	0	0	738
15:00	8	674	24	0	5	2	0	0	1	0	0	0	0	714
16:00	13	644	26	0	1	3	0	2	1	0	0	0	0	690
17:00	16	661	25	0	2	3	0	**4**	0	0	0	0	0	711
18:00	**26**	526	17	0	1	0	0	0	0	0	0	0	0	570
19:00	5	367	10	0	1	0	0	0	0	0	0	0	0	383
20:00	4	241	5	0	0	0	0	0	0	0	0	0	0	250
21:00	1	158	3	0	0	0	0	0	0	0	0	0	0	162
22:00	0	76	5	0	0	0	0	0	0	0	0	0	0	81
23:00	0	53	1	0	0	0	0	0	0	0	0	0	0	54
Day Total	178	9787	325	1	60	24	0	12	10	0	1	0	1	10399
Percent	1.7%	94.1%	3.1%	0.0%	0.6%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	08:00		06:00	09:00		07:00	09:00		09:00		07:00	07:00
Vol.	17	853	40		9	4		2	2		1		1	892
PM Peak	18:00	12:00	14:00	13:00	12:00	14:00		17:00	14:00					12:00
Vol.	26	742	26	1	7	3		4	1					778

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Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/18/21	0	12	0	0	0	0	0	0	0	0	0	0	0	12
01:00	0	19	1	0	0	0	0	0	0	0	0	0	0	20
02:00	1	6	1	0	1	0	0	0	0	0	0	0	0	9
03:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
04:00	0	54	1	0	0	0	0	0	0	0	0	0	0	55
05:00	0	134	5	0	1	0	0	0	0	0	0	0	0	140
06:00	13	414	15	0	5	0	0	1	0	0	0	0	0	448
07:00	9	**731**	**36**	0	3	2	**1**	0	0	0	0	0	0	**782**
08:00	15	710	27	0	4	0	0	2	**1**	0	0	0	0	759
09:00	13	608	32	0	4	**3**	0	1	1	0	0	0	0	662
10:00	8	643	33	0	3	2	1	**3**	0	0	0	0	0	693
11:00	**17**	654	31	**1**	**6**	2	0	0	0	0	0	0	0	711
12 PM	8	599	23	0	4	2	0	2	**2**	0	0	0	0	640
13:00	7	619	27	0	2	**3**	0	2	0	0	0	0	0	660
14:00	16	736	**32**	0	5	2	0	**3**	1	0	0	0	0	795
15:00	8	666	27	0	3	1	0	0	1	0	0	0	0	706
16:00	12	**763**	25	0	**8**	1	0	0	0	0	0	0	0	**809**
17:00	13	723	19	0	4	2	**1**	1	0	0	0	0	0	763
18:00	**19**	551	14	0	1	1	0	0	0	0	0	0	0	586
19:00	8	359	10	0	0	1	0	0	0	0	0	0	0	378
20:00	2	212	6	0	0	0	0	0	0	0	0	0	0	220
21:00	1	205	4	0	1	0	0	0	0	0	0	0	0	211
22:00	1	95	2	0	0	0	0	0	0	0	0	0	0	98
23:00	1	41	1	0	0	0	0	0	0	0	0	0	0	43
Day Total	172	9575	372	1	55	22	3	15	6	0	0	0	0	10221
Percent	1.7%	93.7%	3.6%	0.0%	0.5%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	07:00	07:00	11:00	11:00	09:00	07:00	10:00	08:00					07:00
Vol.	17	731	36	1	6	3	1	3	1					782
PM Peak	18:00	16:00	14:00		16:00	13:00	17:00	14:00	12:00					16:00
Vol.	19	763	32		8	3	1	3	2					809

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PENMAN ROAD NORTH OF
BEACH BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/19/21	1	24	2	0	0	0	0	0	1	0	0	0	0	28
01:00	0	24	0	0	0	0	0	0	0	0	0	0	0	24
02:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
03:00	0	14	1	0	0	0	0	**1**	0	0	0	0	0	16
04:00	0	43	3	0	0	0	0	0	0	0	0	0	0	46
05:00	1	126	5	0	1	0	0	0	0	0	0	0	0	133
06:00	13	408	20	0	**8**	0	0	0	0	0	0	0	0	449
07:00	14	797	28	0	2	1	0	0	0	0	0	0	0	842
08:00	17	**818**	**36**	0	6	**2**	0	0	0	0	0	0	0	**879**
09:00	17	690	20	0	4	1	0	1	1	0	0	0	0	734
10:00	11	680	17	0	3	1	0	0	0	0	0	0	0	712
11:00	**18**	732	21	0	3	1	0	1	**2**	0	0	0	0	778
12 PM	20	639	14	0	4	1	0	0	**1**	0	0	0	0	679
13:00	6	684	23	0	5	2	0	1	1	0	0	0	0	722
14:00	9	**790**	**30**	0	**9**	**3**	**1**	**3**	1	0	0	0	0	**846**
15:00	22	712	22	0	6	1	0	1	0	0	0	0	0	764
16:00	10	677	20	0	3	0	0	1	0	0	0	0	0	711
17:00	**26**	608	9	0	1	0	0	2	0	0	0	0	0	646
18:00	19	563	5	0	1	2	0	0	0	0	0	0	0	590
19:00	10	404	10	0	0	0	0	0	0	0	0	0	0	424
20:00	1	254	4	0	0	0	0	1	0	0	0	0	0	260
21:00	5	195	5	0	0	0	0	0	0	0	0	0	0	205
22:00	1	165	2	0	0	1	0	0	0	0	0	0	0	169
23:00	0	91	3	0	0	0	0	0	0	0	0	0	0	94
Day Total	221	10154	301	0	56	16	1	12	7	0	0	0	0	10768
Percent	2.1%	94.3%	2.8%	0.0%	0.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	08:00		06:00	08:00		03:00	11:00					08:00
Vol.	18	818	36		8	2		1	2					879
PM Peak	17:00	14:00	14:00		14:00	14:00	14:00	14:00	12:00					14:00
Vol.	26	790	30		9	3	1	3	1					846
Grand Total	1231	62087	1930	6	324	118	8	59	34	0	1	2	1	65801
Percent	1.9%	94.4%	2.9%	0.0%	0.5%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/13/21	1	37	0	0	0	0	0	0	0	0	0	0	0	38
01:00	0	27	0	0	0	0	0	0	0	0	0	0	0	27
02:00	1	23	0	0	0	0	0	0	0	0	0	0	0	24
03:00	0	14	0	0	**1**	0	0	**1**	0	0	0	0	0	16
04:00	1	12	1	0	0	0	0	0	0	0	0	0	0	14
05:00	0	24	2	0	1	0	0	0	0	0	0	0	0	27
06:00	2	41	1	0	0	0	0	0	0	0	0	0	0	44
07:00	1	131	3	0	0	0	0	1	0	0	0	0	0	136
08:00	1	213	7	0	0	0	0	0	0	0	0	0	0	221
09:00	0	289	8	0	1	0	0	0	0	0	0	0	0	298
10:00	**8**	344	**10**	0	1	0	0	0	0	0	0	0	0	363
11:00	8	**393**	9	0	0	**1**	0	0	0	0	0	0	0	**411**
12 PM	**10**	**412**	4	0	0	0	0	0	0	0	0	0	0	**426**
13:00	6	329	**10**	0	**1**	0	0	0	**1**	0	0	0	0	347
14:00	6	321	9	0	0	0	0	1	0	0	0	0	0	337
15:00	8	330	8	0	1	0	0	0	0	0	0	0	0	347
16:00	5	275	10	0	0	0	0	0	0	0	0	0	0	290
17:00	10	323	3	0	0	0	0	0	0	0	0	0	0	336
18:00	4	245	5	0	0	0	**1**	**2**	0	0	0	0	0	257
19:00	2	202	5	0	0	0	0	0	0	0	0	0	0	209
20:00	5	128	1	0	0	0	0	0	0	0	0	0	0	134
21:00	6	116	0	0	0	0	0	0	0	0	0	0	0	122
22:00	1	97	1	0	0	0	0	0	0	0	0	0	0	99
23:00	4	76	0	0	0	0	0	0	0	0	0	0	0	80
Day Total	90	4402	97	0	6	1	1	5	1	0	0	0	0	4603
Percent	2.0%	95.6%	2.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	10:00		03:00	11:00		03:00						11:00
Vol.	8	393	10		1	1		1						411
PM Peak	12:00	12:00	13:00		13:00		18:00	18:00	13:00					12:00
Vol.	10	412	10		1		1	2	1					426

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/14/21	1	49	2	0	0	0	0	0	**1**	0	0	0	0	53
01:00	0	34	0	0	0	0	0	0	0	0	0	0	0	34
02:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
03:00	0	24	1	0	0	0	0	0	0	0	0	0	0	25
04:00	0	16	2	0	0	0	0	0	0	0	0	0	0	18
05:00	0	19	0	0	0	0	0	0	0	0	0	0	0	19
06:00	1	29	1	0	0	0	0	0	0	0	0	0	0	31
07:00	1	89	1	0	**1**	0	0	0	0	0	0	0	0	92
08:00	1	161	2	0	1	0	0	0	0	0	0	0	0	165
09:00	**6**	280	**5**	0	0	0	0	0	0	0	0	0	0	291
10:00	4	307	4	0	0	0	0	0	0	0	0	0	0	315
11:00	6	**338**	3	0	0	**1**	0	0	0	0	0	0	0	**348**
12 PM	6	**385**	6	0	0	0	0	0	0	0	0	0	0	**397**
13:00	5	306	4	0	**1**	0	0	0	0	0	0	0	0	316
14:00	2	275	**8**	0	0	0	0	0	0	0	0	0	0	285
15:00	5	258	8	0	0	0	0	0	0	0	0	0	0	271
16:00	**7**	295	3	0	0	0	0	0	**1**	0	0	0	0	306
17:00	2	290	2	0	0	0	0	0	0	0	0	0	0	294
18:00	2	238	3	0	0	0	0	0	0	0	0	0	0	243
19:00	2	129	4	0	0	0	0	0	0	0	0	0	0	135
20:00	2	125	4	0	0	0	0	0	0	0	0	0	0	131
21:00	3	70	1	0	0	0	0	0	0	0	0	0	0	74
22:00	0	43	0	0	0	0	0	0	0	0	0	0	0	43
23:00	1	28	1	0	0	0	0	0	0	0	0	0	0	30
Day Total	57	3809	65	0	3	1	0	0	2	0	0	0	0	3937
Percent	1.4%	96.7%	1.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	09:00		07:00	11:00			00:00					11:00
Vol.	6	338	5		1	1			1					348
PM Peak	16:00	12:00	14:00		13:00				16:00					12:00
Vol.	7	385	8		1				1					397

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/15/21	0	11	0	0	0	0	0	0	0	0	0	0	0	11
01:00	1	14	0	0	0	0	0	0	0	0	0	0	0	15
02:00	0	9	0	0	0	0	0	**1**	0	0	0	0	0	10
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	25	2	0	1	0	0	0	0	0	0	0	0	28
05:00	0	56	2	0	0	0	0	0	0	0	0	0	0	58
06:00	1	117	2	0	0	0	0	1	0	0	0	0	0	121
07:00	4	305	6	0	1	**1**	0	0	0	0	0	0	0	317
08:00	**9**	**404**	9	**1**	**2**	1	0	0	**1**	0	0	0	0	**427**
09:00	3	348	10	0	1	0	0	0	0	0	0	0	0	362
10:00	4	333	8	0	0	0	0	0	0	0	0	0	0	345
11:00	2	379	**11**	0	1	1	0	0	1	**1**	0	0	0	396
12 PM	3	356	11	0	2	1	0	**1**	0	0	0	0	0	374
13:00	7	360	13	**1**	3	1	**1**	0	0	0	0	0	0	386
14:00	**10**	**474**	**16**	0	3	**2**	0	1	0	0	0	0	**1**	**507**
15:00	6	456	7	0	1	1	0	0	0	0	0	**1**	0	472
16:00	9	449	9	0	4	0	0	0	0	0	0	0	0	471
17:00	8	458	6	0	2	0	0	1	**1**	**1**	0	0	0	477
18:00	9	384	5	0	**5**	0	0	0	0	0	0	0	0	403
19:00	2	260	1	0	1	0	0	0	0	0	0	0	0	264
20:00	3	181	3	0	2	0	0	0	0	0	0	0	0	189
21:00	2	80	0	0	1	0	0	0	0	0	0	0	0	83
22:00	0	46	0	0	0	0	0	0	0	0	0	0	0	46
23:00	1	26	0	0	0	0	0	0	0	0	0	0	0	27
Day Total	84	5536	121	2	30	8	1	5	3	2	0	1	1	5794
Percent	1.4%	95.5%	2.1%	0.0%	0.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	08:00	08:00	07:00		02:00	08:00	11:00				08:00
Vol.	9	404	11	1	2	1		1	1	1				427
PM Peak	14:00	14:00	14:00	13:00	18:00	14:00	13:00	12:00	17:00	17:00		15:00	14:00	14:00
Vol.	10	474	16	1	5	2	1	1	1	1		1	1	507

All Traffic Data Services, Inc.

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Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/16/21	0	17	0	0	0	0	0	**1**	0	0	0	0	0	18
01:00	1	13	0	0	0	0	0	0	0	0	0	0	0	14
02:00	0	4	0	0	0	0	0	1	0	0	0	0	0	5
03:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
04:00	0	21	1	0	1	0	0	0	0	0	0	0	0	23
05:00	0	52	2	0	0	0	0	0	0	0	0	0	0	54
06:00	1	112	2	0	1	0	0	1	0	0	0	0	0	117
07:00	5	311	8	0	1	**2**	0	0	0	0	0	0	0	327
08:00	**7**	**425**	6	0	3	0	0	0	0	0	0	**1**	0	**442**
09:00	5	361	7	0	1	2	0	0	**1**	0	0	0	0	377
10:00	3	298	9	0	**4**	1	0	1	0	0	0	0	0	316
11:00	4	375	**12**	0	3	0	0	1	0	0	0	0	0	395
12 PM	3	423	4	0	3	**2**	0	0	0	0	0	0	0	435
13:00	9	392	6	0	2	0	0	**1**	0	**1**	**1**	0	0	412
14:00	**14**	491	6	0	**5**	1	0	1	0	0	0	0	0	518
15:00	10	473	9	0	4	1	0	0	**1**	0	0	0	0	498
16:00	11	**495**	**10**	0	4	0	0	1	0	0	0	0	0	**521**
17:00	8	434	8	0	1	0	0	0	0	0	0	0	0	451
18:00	6	359	7	0	0	0	0	0	0	0	0	0	0	372
19:00	2	223	2	0	0	0	0	0	0	0	0	0	0	227
20:00	5	149	6	0	1	0	0	0	0	0	0	0	0	161
21:00	5	95	0	0	0	0	0	0	0	0	0	0	0	100
22:00	1	64	1	0	0	0	0	0	0	0	0	0	0	66
23:00	1	32	0	0	0	0	0	0	0	0	0	0	0	33
Day Total	101	5629	106	0	34	9	0	8	2	1	1	1	0	5892
Percent	1.7%	95.5%	1.8%	0.0%	0.6%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00		10:00	07:00		00:00	09:00			08:00		08:00
Vol.	7	425	12		4	2		1	1			1		442
PM Peak	14:00	16:00	16:00		14:00	12:00		13:00	15:00	13:00	13:00			16:00
Vol.	14	495	10		5	2		1	1	1	1			521

All Traffic Data Services, Inc.

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Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/17/21	0	10	0	0	0	0	0	0	0	0	0	0	0	10
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	5	0	0	0	0	0	**1**	0	0	0	0	0	6
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
04:00	1	33	0	0	1	0	0	0	0	0	0	0	0	35
05:00	0	49	2	0	1	0	**1**	0	0	0	0	0	0	53
06:00	2	113	5	0	1	0	0	1	0	0	0	0	0	122
07:00	8	301	7	0	2	0	0	0	0	0	0	0	0	318
08:00	7	**421**	10	0	0	**3**	0	0	0	0	0	0	0	**441**
09:00	5	380	9	0	**5**	0	0	0	**1**	0	0	0	0	400
10:00	4	311	**12**	0	2	1	0	1	0	0	0	0	0	331
11:00	**10**	384	11	0	4	0	0	1	1	0	**1**	0	0	412
12 PM	5	**470**	6	0	3	0	0	0	0	0	0	0	0	**484**
13:00	**11**	431	10	0	3	0	0	0	0	0	0	0	0	455
14:00	5	421	**11**	0	**8**	**2**	0	0	**1**	0	0	0	0	448
15:00	7	416	10	0	2	0	0	0	0	0	0	0	0	435
16:00	10	416	5	0	0	0	0	0	0	0	0	0	0	431
17:00	4	449	7	0	1	0	0	**1**	0	0	0	**1**	0	463
18:00	7	346	3	0	1	0	0	0	0	0	0	0	0	357
19:00	5	246	1	0	0	0	0	0	0	0	0	0	0	252
20:00	11	143	3	0	0	0	0	0	0	0	0	0	0	157
21:00	3	121	0	0	0	0	0	0	0	0	0	0	0	124
22:00	1	45	2	0	0	0	0	0	0	0	0	0	0	48
23:00	0	40	0	0	0	0	0	0	0	0	0	0	0	40
Day Total	106	5568	114	0	34	6	1	5	3	0	1	1	0	5839
Percent	1.8%	95.4%	2.0%	0.0%	0.6%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	10:00		09:00	08:00	05:00	02:00	09:00		11:00			08:00
Vol.	10	421	12		5	3	1	1	1		1			441
PM Peak	13:00	12:00	14:00		14:00	14:00		17:00	14:00			17:00		12:00
Vol.	11	470	11		8	2		1	1			1		484

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/18/21	0	15	0	0	0	0	0	0	0	0	0	0	0	15
01:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
02:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	7	0	0	0	0	0	1	0	0	0	0	0	8
04:00	0	22	1	0	1	0	0	0	0	0	0	0	0	24
05:00	0	55	4	0	0	0	0	1	0	0	0	0	0	60
06:00	0	126	2	0	0	0	0	1	0	0	0	0	0	129
07:00	**8**	340	12	0	3	**2**	0	0	0	0	0	0	0	365
08:00	7	**429**	11	0	**5**	1	0	0	0	0	0	0	0	**453**
09:00	5	376	7	0	1	0	0	**2**	0	0	0	0	0	391
10:00	5	363	**13**	0	4	0	0	0	0	**1**	0	0	0	386
11:00	4	377	9	0	4	1	0	2	0	0	0	0	0	397
12 PM	8	413	9	0	4	1	0	0	0	0	0	0	0	435
13:00	7	347	**11**	0	4	1	0	0	**1**	0	0	0	0	371
14:00	**16**	480	6	0	**5**	1	0	0	0	0	0	0	0	508
15:00	14	466	7	0	3	**3**	0	1	0	**1**	0	0	0	495
16:00	14	423	9	0	2	0	0	0	0	0	0	0	0	448
17:00	7	**501**	7	0	2	0	0	**3**	1	0	0	**1**	0	**522**
18:00	6	382	4	0	0	0	0	0	0	0	0	0	0	392
19:00	5	207	2	0	0	0	0	0	0	0	0	0	0	214
20:00	4	179	2	0	0	0	0	0	0	0	0	0	0	185
21:00	3	130	2	0	0	0	0	0	0	0	0	0	0	135
22:00	1	68	0	0	1	0	0	0	0	0	0	0	0	70
23:00	0	43	0	0	0	0	0	0	0	0	0	0	0	43
Day Total	114	5770	118	0	39	10	0	11	2	2	0	1	0	6067
Percent	1.9%	95.1%	1.9%	0.0%	0.6%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	10:00		08:00	07:00		09:00		10:00				08:00
Vol.	8	429	13		5	2		2		1				453
PM Peak	14:00	17:00	13:00		14:00	15:00		17:00	13:00	15:00		17:00		17:00
Vol.	16	501	11		5	3		3	1	1		1		522

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Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/19/21	0	19	0	0	0	0	0	0	0	0	0	0	0	19
01:00	1	17	0	0	0	0	0	0	0	0	0	0	0	18
02:00	1	15	2	0	0	0	0	**1**	0	0	0	0	0	19
03:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
04:00	0	23	1	0	1	0	0	0	0	0	0	0	0	25
05:00	0	62	1	0	0	0	0	0	0	0	0	0	0	63
06:00	3	130	4	0	1	0	0	1	1	0	0	0	0	140
07:00	5	352	**13**	0	2	0	0	1	0	0	0	0	0	373
08:00	**8**	**437**	10	0	**4**	**1**	0	0	1	0	0	0	0	**461**
09:00	6	346	10	0	1	0	0	0	1	0	0	0	0	364
10:00	5	370	9	0	1	1	0	0	**2**	0	0	0	0	388
11:00	3	391	7	0	1	0	0	0	0	0	0	0	0	402
12 PM	7	443	10	0	1	0	0	0	0	0	0	0	0	461
13:00	4	408	10	0	0	0	0	0	0	0	0	0	0	422
14:00	9	490	**13**	0	**6**	**1**	0	0	0	0	**1**	0	0	**520**
15:00	6	467	4	0	1	0	0	0	**1**	0	0	0	0	479
16:00	8	**492**	5	0	3	0	0	**1**	0	0	0	0	0	509
17:00	**10**	460	8	0	1	0	0	1	0	0	0	0	0	480
18:00	10	365	5	0	0	1	0	0	0	0	0	0	0	381
19:00	7	257	5	0	2	0	0	0	0	0	0	0	0	271
20:00	2	198	5	0	2	0	0	0	0	0	0	0	0	207
21:00	1	150	3	0	0	0	0	0	0	0	0	0	0	154
22:00	3	97	3	0	0	0	0	0	0	0	0	0	0	103
23:00	3	69	0	0	0	0	0	0	0	0	0	0	0	72
Day Total	102	6066	129	0	27	4	0	5	6	0	1	0	0	6340
Percent	1.6%	95.7%	2.0%	0.0%	0.4%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	07:00		08:00	08:00		02:00	10:00					08:00
Vol.	8	437	13		4	1		1	2					461
PM Peak	17:00	16:00	14:00		14:00	14:00		16:00	15:00		14:00			14:00
Vol.	10	492	13		6	1		1	1		1			520
Grand Total	654	36780	750	2	173	39	3	39	19	5	3	4	1	38472
Percent	1.7%	95.6%	1.9%	0.0%	0.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/13/21	0	35	0	0	0	0	0	0	0	0	0	0	0	35
01:00	0	23	0	0	0	0	0	0	0	0	0	0	0	23
02:00	0	17	1	0	0	0	0	0	0	0	0	0	0	18
03:00	1	9	0	0	0	0	0	0	0	0	0	0	0	10
04:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
05:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
06:00	0	34	2	0	0	0	0	0	0	0	0	0	0	36
07:00	1	84	5	0	0	0	0	0	0	0	0	0	0	90
08:00	2	130	4	0	0	0	0	0	0	0	0	0	0	136
09:00	2	202	6	0	0	0	0	0	0	0	0	0	0	210
10:00	**4**	271	**7**	0	0	0	0	0	0	0	0	0	0	282
11:00	4	**314**	5	0	0	0	0	0	0	0	0	0	0	**323**
12 PM	3	310	5	0	0	**2**	0	0	0	0	0	0	0	320
13:00	3	**319**	5	0	0	1	0	0	0	0	0	0	0	**328**
14:00	2	249	6	0	0	0	0	0	0	0	0	0	0	257
15:00	2	253	7	0	**1**	0	0	0	0	0	0	0	0	263
16:00	0	270	**8**	0	0	0	0	0	0	0	0	0	0	278
17:00	**6**	238	7	0	0	0	0	**1**	0	0	0	0	0	252
18:00	3	184	3	0	0	0	0	0	0	0	0	0	0	190
19:00	4	151	1	0	0	1	0	0	0	0	0	0	0	157
20:00	4	126	1	0	0	0	0	0	0	0	0	0	0	131
21:00	1	81	4	0	0	0	0	0	0	0	0	0	0	86
22:00	0	68	0	0	0	0	0	0	0	0	0	0	0	68
23:00	1	63	1	0	0	0	0	0	0	0	0	0	0	65
Day Total	43	3443	78	0	1	4	0	1	0	0	0	0	0	3570
Percent	1.2%	96.4%	2.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	10:00											11:00
Vol.	4	314	7											323
PM Peak	17:00	13:00	16:00		15:00	12:00		17:00						13:00
Vol.	6	319	8		1	2		1						328

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/14/21	0	32	0	0	0	0	0	0	0	0	0	0	0	32
01:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
02:00	0	19	0	0	0	0	0	0	0	0	0	0	0	19
03:00	0	14	0	0	**1**	0	0	0	0	0	0	0	0	15
04:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
05:00	0	10	1	0	1	0	0	0	0	0	0	0	0	12
06:00	0	25	0	0	0	0	0	0	0	0	0	0	0	25
07:00	1	73	2	0	0	0	0	0	0	0	0	0	0	76
08:00	1	110	4	0	0	0	0	0	0	0	0	0	0	115
09:00	3	155	7	0	0	0	0	0	0	0	0	0	0	165
10:00	2	218	4	0	0	0	0	0	0	0	0	0	0	224
11:00	**9**	**323**	**9**	0	0	**1**	**1**	0	0	0	0	0	0	**343**
12 PM	**11**	**314**	7	**1**	0	0	0	0	0	0	0	0	0	**333**
13:00	6	242	3	0	0	0	0	0	0	0	0	0	0	251
14:00	6	208	6	0	0	**1**	0	0	0	0	0	0	0	221
15:00	3	230	**9**	0	0	1	0	0	0	0	0	0	0	243
16:00	7	205	7	0	0	0	0	0	0	0	0	0	0	219
17:00	2	232	7	0	0	0	0	0	0	0	0	0	0	241
18:00	1	158	3	0	0	0	0	0	0	0	0	0	0	162
19:00	2	118	1	0	0	0	0	0	0	0	0	0	0	121
20:00	0	68	4	0	0	0	0	0	0	0	0	0	0	72
21:00	0	46	0	0	0	0	0	0	0	0	0	0	0	46
22:00	0	29	0	0	0	0	0	0	0	0	0	0	0	29
23:00	0	27	1	0	0	0	0	0	0	0	0	0	0	28
Day Total	54	2887	75	1	2	3	1	0	0	0	0	0	0	3023
Percent	1.8%	95.5%	2.5%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00		03:00	11:00	11:00							11:00
Vol.	9	323	9		1	1	1							343
PM Peak	12:00	12:00	15:00	12:00		14:00								12:00
Vol.	11	314	9	1		1								333

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/15/21	0	8	1	0	0	0	0	0	0	0	0	0	0	9
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
05:00	0	38	2	0	0	0	0	0	0	0	0	0	0	40
06:00	3	152	3	0	**4**	1	0	0	0	0	0	0	0	163
07:00	4	**325**	5	0	0	1	0	0	0	0	0	0	0	**335**
08:00	4	314	6	0	0	0	0	0	0	0	0	0	0	324
09:00	1	249	9	0	3	**4**	0	0	0	0	0	0	0	266
10:00	0	228	8	0	2	1	0	**1**	0	0	0	0	0	240
11:00	**6**	270	**11**	0	2	1	0	1	**1**	0	0	0	0	292
12 PM	9	307	12	0	0	1	0	0	0	0	0	0	0	329
13:00	7	297	**14**	0	0	2	0	**1**	0	0	0	0	0	321
14:00	9	**360**	8	0	**3**	**3**	0	0	0	0	0	0	0	**383**
15:00	7	327	6	0	3	2	1	0	0	0	0	0	0	346
16:00	8	314	9	0	1	1	0	0	0	0	0	0	0	333
17:00	**12**	324	6	0	1	2	**3**	0	0	0	0	0	0	348
18:00	4	284	7	0	2	1	0	0	0	0	0	0	0	298
19:00	1	168	5	0	1	0	0	0	0	0	0	0	0	175
20:00	3	103	1	0	0	0	0	0	0	0	0	0	0	107
21:00	0	53	0	0	0	0	0	0	0	0	0	0	0	53
22:00	1	33	0	0	0	0	0	0	0	0	0	0	0	34
23:00	0	22	0	0	0	0	0	0	**1**	0	0	0	0	23
Day Total	79	4207	113	0	22	20	4	3	2	0	0	0	0	4450
Percent	1.8%	94.5%	2.5%	0.0%	0.5%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	07:00	11:00		06:00	09:00		10:00	11:00					07:00
Vol.	6	325	11		4	4		1	1					335
PM Peak	17:00	14:00	13:00		14:00	14:00	17:00	13:00	23:00					14:00
Vol.	12	360	14		3	3	3	1	1					383

All Traffic Data Services, Inc.

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Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/16/21	0	11	0	0	0	0	0	0	0	0	0	0	0	11
01:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
05:00	1	33	1	0	0	0	0	0	0	0	0	0	0	35
06:00	0	165	2	0	**4**	0	0	0	0	0	0	0	0	171
07:00	2	315	6	0	0	1	0	0	0	0	0	0	0	324
08:00	**14**	**330**	**16**	0	4	0	**1**	0	0	0	0	0	0	**365**
09:00	3	283	10	0	1	1	0	0	**1**	0	0	0	0	299
10:00	1	256	14	0	2	0	0	**1**	1	0	0	0	0	275
11:00	6	278	13	0	1	**2**	1	1	0	0	0	0	0	302
12 PM	6	329	**16**	0	0	0	0	0	0	**1**	0	0	0	352
13:00	5	307	8	0	0	**2**	0	0	0	0	0	0	0	322
14:00	10	**350**	11	0	2	2	0	0	0	1	0	0	0	**376**
15:00	**12**	328	8	0	1	0	**1**	0	0	0	0	0	0	350
16:00	12	312	4	0	1	1	0	0	0	0	0	0	0	330
17:00	7	347	6	0	**3**	0	0	**1**	0	0	0	0	0	364
18:00	4	280	9	0	0	1	0	0	0	0	0	0	0	294
19:00	2	162	6	0	0	1	0	0	0	0	0	0	0	171
20:00	2	134	3	0	0	1	0	0	0	0	0	0	0	140
21:00	0	64	0	0	0	0	0	0	0	0	0	0	0	64
22:00	0	50	0	0	0	0	0	0	0	0	0	0	0	50
23:00	0	28	0	0	0	0	0	0	0	0	0	0	0	28
Day Total	87	4391	133	0	19	12	3	3	2	2	0	0	0	4652
Percent	1.9%	94.4%	2.9%	0.0%	0.4%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00		06:00	11:00	08:00	10:00	09:00					08:00
Vol.	14	330	16		4	2	1	1	1					365
PM Peak	15:00	14:00	12:00		17:00	13:00	15:00	17:00		12:00				14:00
Vol.	12	350	16		3	2	1	1		1				376

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/17/21	0	20	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:00	1	10	0	0	0	0	0	0	0	0	0	0	0	11
05:00	0	28	3	0	0	0	0	0	0	0	0	0	0	31
06:00	0	152	5	0	**6**	0	0	0	0	0	0	0	0	163
07:00	**10**	326	6	0	1	0	0	0	0	0	0	0	0	343
08:00	6	**363**	7	0	4	0	0	**1**	0	0	0	0	0	**381**
09:00	2	249	12	0	1	**1**	**1**	0	0	0	0	0	0	266
10:00	6	267	6	0	3	0	0	0	**1**	0	0	0	0	283
11:00	4	267	**18**	0	3	1	0	0	0	0	0	0	0	293
12 PM	**10**	336	11	0	1	**3**	0	0	0	0	0	0	0	361
13:00	7	330	11	0	**2**	1	0	1	0	0	0	0	0	352
14:00	6	**339**	**13**	0	1	2	0	1	**1**	0	0	0	0	**363**
15:00	5	325	12	0	2	1	**1**	0	0	0	0	0	0	346
16:00	10	306	10	0	0	0	0	**2**	1	0	0	0	0	329
17:00	5	301	8	0	0	2	1	0	0	0	0	0	0	317
18:00	3	274	5	0	0	0	0	0	0	0	0	0	0	282
19:00	1	210	6	0	0	0	0	0	0	0	0	0	0	217
20:00	4	142	2	0	0	0	0	0	0	0	0	0	0	148
21:00	0	92	0	0	0	0	0	0	0	0	0	0	0	92
22:00	0	53	2	0	0	0	0	0	0	0	0	0	0	55
23:00	0	29	1	0	0	0	0	0	0	0	0	0	0	30
Day Total	80	4437	138	0	24	11	3	5	3	0	0	0	0	4701
Percent	1.7%	94.4%	2.9%	0.0%	0.5%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	11:00		06:00	09:00	09:00	08:00	10:00					08:00
Vol.	10	363	18		6	1	1	1	1					381
PM Peak	12:00	14:00	14:00		13:00	12:00	15:00	16:00	14:00					14:00
Vol.	10	339	13		2	3	1	2	1					363

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/18/21	0	9	0	0	0	0	0	0	0	0	0	0	0	9
01:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	15	0	0	0	0	0	0	0	0	0	0	0	15
05:00	0	32	1	0	0	0	0	0	0	0	0	0	0	33
06:00	0	144	5	0	**3**	0	0	**1**	0	0	0	0	0	153
07:00	3	280	6	0	3	**2**	0	0	0	0	0	0	0	294
08:00	4	**329**	4	0	0	0	**3**	0	**1**	0	0	0	0	341
09:00	**5**	260	9	0	2	2	0	0	0	0	0	0	0	278
10:00	3	300	7	0	1	2	0	0	0	0	0	0	0	313
11:00	5	328	**13**	0	2	1	0	0	0	0	0	0	0	**349**
12 PM	3	312	**11**	0	0	0	0	0	0	0	0	0	0	326
13:00	5	289	6	0	**4**	0	0	0	0	0	0	0	0	304
14:00	9	**358**	10	0	0	0	1	**2**	0	0	0	0	0	**380**
15:00	15	329	7	0	4	**2**	0	0	0	0	0	0	0	357
16:00	**16**	339	7	0	0	1	**2**	1	0	0	0	0	0	366
17:00	9	297	6	0	2	2	0	0	0	0	0	0	0	316
18:00	5	258	7	0	1	1	0	0	0	0	0	0	0	272
19:00	3	179	3	0	0	0	0	0	0	0	0	0	0	185
20:00	2	144	1	0	0	0	0	0	0	0	0	0	0	147
21:00	1	93	4	0	0	0	0	0	0	0	0	0	0	98
22:00	0	55	1	0	0	0	0	0	0	0	0	0	0	56
23:00	0	27	1	0	0	0	0	0	0	0	0	0	0	28
Day Total	88	4403	109	0	22	13	6	4	1	0	0	0	0	4646
Percent	1.9%	94.8%	2.3%	0.0%	0.5%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	11:00		06:00	07:00	08:00	06:00	08:00					11:00
Vol.	5	329	13		3	2	3	1	1					349
PM Peak	16:00	14:00	12:00		13:00	15:00	16:00	14:00						14:00
Vol.	16	358	11		4	2	2	2						380

All Traffic Data Services, Inc.

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Site Code: 4
Station ID: 4
PENMAN ROAD NORTH OF
FLORIDA BLVD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
11/19/21	0	26	1	0	0	0	0	0	**1**	0	0	0	0	28
01:00	0	15	0	0	0	0	0	0	0	0	0	0	0	15
02:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
03:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
04:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
05:00	0	33	3	0	0	0	0	0	0	0	0	0	0	36
06:00	1	154	5	0	**5**	1	0	0	0	0	0	0	0	166
07:00	4	302	**14**	0	0	0	0	0	0	0	0	0	0	320
08:00	**9**	**331**	7	0	3	0	0	0	0	0	0	0	0	**350**
09:00	4	270	8	0	3	0	0	0	0	0	0	0	0	285
10:00	5	306	12	0	0	**2**	0	0	0	0	0	0	0	325
11:00	1	314	10	0	0	0	**1**	0	0	0	0	0	0	326
12 PM	4	329	**13**	0	**1**	1	**2**	0	0	0	0	0	0	350
13:00	3	358	12	0	1	1	1	0	0	0	0	0	0	376
14:00	8	**398**	10	0	0	**3**	2	0	0	0	0	0	0	**421**
15:00	7	350	3	0	1	2	1	0	**1**	0	0	0	0	365
16:00	10	340	8	0	0	0	2	0	0	0	0	0	0	360
17:00	**13**	329	7	0	1	0	1	0	0	0	0	**1**	0	352
18:00	4	275	6	0	1	1	0	0	0	0	0	0	0	287
19:00	4	219	4	0	0	0	0	0	0	0	0	0	0	227
20:00	2	157	5	0	0	0	0	0	0	0	0	0	0	164
21:00	2	115	2	0	0	0	0	0	0	0	0	0	0	119
22:00	3	87	3	0	0	0	0	0	0	0	0	0	0	93
23:00	0	51	1	0	0	0	0	0	0	0	0	0	0	52
Day Total	84	4781	137	0	16	11	10	0	2	0	0	1	0	5042
Percent	1.7%	94.8%	2.7%	0.0%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	07:00		06:00	10:00	11:00		00:00					08:00
Vol.	9	331	14		5	2	1		1					350
PM Peak	17:00	14:00	12:00		12:00	14:00	12:00		15:00			17:00		14:00
Vol.	13	398	13		1	3	2		1			1		421
Grand Total	515	28549	783	1	106	74	27	16	10	2	0	1	0	30084
Percent	1.7%	94.9%	2.6%	0.0%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

APPENDIX D

Vehicle and Truck Classification

The purpose of this appendix is to document the vehicle classification for the project. The vehicle classification used by FHWA, IDOT and the EO-WB project are described below.

FHWA Vehicle Classification

FHWA classifies vehicles into the following 13 classifications:

1. **Motorcycles** (Optional)—All two or three-wheeled motorized vehicles. Typical vehicles in this category have saddle type seats and are steered by handlebars rather than steering wheels. This category includes motorcycles, motor scooters, mopeds, motor-powered bicycles, and three-wheel motorcycles. This vehicle type may be reported at the option of the State.
2. **Passenger Cars**—All sedans, coupes, and station wagons manufactured primarily for the purpose of carrying passengers and including those passenger cars pulling recreational or other light trailers.
3. **Other Two-Axle, Four-Tire Single Unit Vehicles**—All two-axle, four-tire, vehicles, other than passenger cars. Included in this classification are pickups, panels, vans, and other vehicles such as campers, motor homes, ambulances, hearses, carryalls, and minibuses. Other two-axle, four-tire single-unit vehicles pulling recreational or other light trailers are included in this classification. Because automatic vehicle classifiers have difficulty distinguishing class 3 from class 2, these two classes may be combined into class 2.
4. **Buses**—All vehicles manufactured as traditional passenger-carrying buses with two axles and six tires or three or more axles. This category includes only traditional buses (including school buses) functioning as passenger-carrying vehicles. Modified buses should be considered to be a truck and should be appropriately classified.

   Note: In reporting information on trucks the following criteria should be used:

   - Truck tractor units traveling without a trailer will be considered single-unit trucks.
   - A truck tractor unit pulling another such units in a "saddle mount" configuration will be considered one single-unit truck and will be defined only by the axles on the pulling unit.
   - Vehicles are defined by the number of axles in contact with the road. Therefore, "floating" axles are counted only when in the down position.
   - The term "trailer" includes both semi- and full trailers.
5. **Two-Axle, Six-Tire, Single-Unit Trucks**—All vehicles on a single frame including trucks, camping and recreational vehicles, motor homes, etc., with two axles and dual rear wheels.

6. **Three-Axle Single-Unit Trucks**—All vehicles on a single frame including trucks, camping and recreational vehicles, motor homes, etc., with three axles.
7. **Four or More Axle Single-Unit Trucks**—All trucks on a single frame with four or more axles.
8. **Four or Fewer Axle Single-Trailer Trucks**—All vehicles with four or fewer axles consisting of two units, one of which is a tractor or straight truck power unit.
9. **Five-Axle Single-Trailer Trucks**—All five-axle vehicles consisting of two units, one of which is a tractor or straight truck power unit.
10. **Six or More Axle Single-Trailer Trucks**—All vehicles with six or more axles consisting of two units, one of which is a tractor or straight truck power unit.
11. **Five or fewer Axle Multi-Trailer Trucks**—All vehicles with five or fewer axles consisting of three or more units, one of which is a tractor or straight truck power unit.
12. **Six-Axle Multi-Trailer Trucks**—All six-axle vehicles consisting of three or more units, one of which is a tractor or straight truck power unit.
13. **Seven or More Axle Multi-Trailer Trucks**—All vehicles with seven or more axles consisting of three or more units, one of which is a tractor or straight truck power unit.

IDOT Vehicle Classification

IDOT classifies the vehicles by three classes—passenger vehicles/cars (PC), single unit trucks (SU), and multiple unit trucks (MU)— and very long tandem trucks (greater than 100 feet in length). The FHWA vehicle classification scheme is attached. The types of vehicles included in each field class are as follows:

1. **PCs**—Classes 1, 2 and 3 (includes motorcycles) described in the FHWA Vehicle Classification,
2. **SUs**—Classes 4 to 7 (includes buses) described in the FHWA Vehicle Classification, and
3. **MUs**—Classes 8 to 13 described in the FHWA Vehicle Classification.

CMAP Vehicle Classification

Four classifications of trucks are included in CMAP's regional travel demand model.

1. **B-plate**—Gross weight up to 8,000 pounds (including vehicle and maximum load). These are commonly vans, pickups and two-axle small trucks.
2. **Light**—Gross weight up to 8,001 to 28,000 pounds. These are mostly step vans, cargo trucks and panel trucks.
3. **Medium**—Gross weight up to 28,001 to 64,000 pounds. These include straight trucks with three axles, buses and some articulated vehicles.
4. **Heavy**—Gross weight over 64,000 pounds. These include mostly articulated vehicles and some straight trucks such as concrete mixers.

Field Vehicle Counts

The field counts were classified as following:

1. **Passenger Vehicles/Cars (PC)—**Classes 1, 2, and 3 (includes motorcycles), described in the FHWA Vehicle Classification
2. **Single Unit Trucks (SU)—**Classes 4 to 7 (includes buses), described in the FHWA Vehicle Classification
3. **Multiple Unit Trucks (MU)—**Classes 8 to 13, described in the FHWA Vehicle Classification
4. **Multiple unit trucks (MU)** that are more than 100 feet long.

EO–WB Vehicle Classification

The vehicle classification used by CMAP, FHWA, EO-WB Field Counts and the TransCAD model are shown in the table below.

TABLE D-1

EO-WB Vehicle Classification
CMAP

CMAP	FHWA Class[a]	EO-WB Field Counts	TransCAD Model
Passenger vehicles/ cars (PC)	PC—1, and 2	Passenger vehicles (PC)	Passenger vehicles (PC)
B-plate	PC-3	Treated as PC	Treated as PC
Light	Light and Medium Trucks: 4 to 9	Single unit (SU) trucks	Buses and light vehicles
Medium		Multiple unit (MU) trucks	Medium Vehicles
Heavy	Heavy Trucks: 10 to 13	Multiple unit trucks, more than 100 ft	Heavy vehicles

[a] Vehicle classification 1 through 13 are described above and listed in the exhibit on the following page.

FHWA VEHICLE CLASSIFICATION

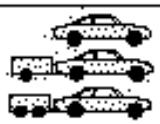
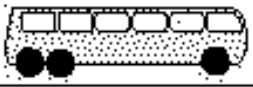
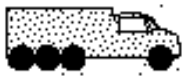
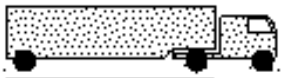
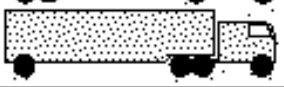
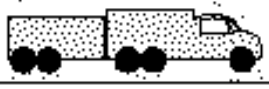
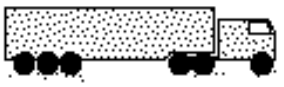
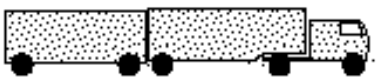
CLASS GROUP		DESCRIPTION	NO. OF AXLES
1		MOTORCYCLES	2
2		ALL CARS CARS CARS W/ 1-AXLE TRAILER CARS W/ 2-AXLE TRAILER	2 3 4
3		PICK-UPS & VANS 1 & 2 AXLE TRAILERS	2, 3, & 4
4		BUSES	2 & 3
5		2-AXLE, SINGLE UNIT	2
6		3-AXLE, SINGLE UNIT	3
7		4-AXLE, SINGLE UNIT	4
HEAVY TRUCKS		2-AXLE, TRACTOR, 1-AXLE TRAILER (2&1)	3
		2-AXLE, TRACTOR, 2-AXLE TRAILER (2&2)	4
		3-AXLE, TRACTOR, 1-AXLE TRAILER (3&1)	4
		3-AXLE, TRACTOR, 2-AXLE TRAILER (3&2)	5
		3-AXLE, TRUCK W/ 2-AXLE TRAILER	5
		TRACTOR W/ SINGLE TRAILER	6 & 7
		5-AXLE MULTI-TRAILER	5
		6-AXLE MULTI-TRAILER	6
		ANY 7 OR MORE AXLE	7 or more
	14	NOT USED	
	15	UNKNOWN VEHICLE TYPE	

Exhibit D-1

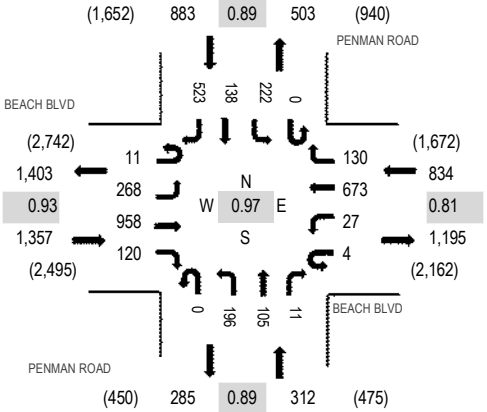
Appendix C

Turning Movement Counts

(303) 216-2439
www.alltrafficdata.net

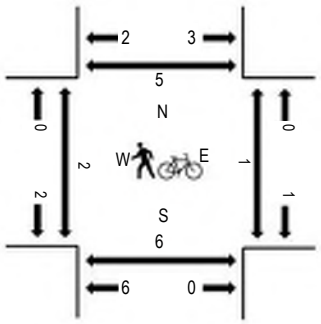
Location: 1 PENMAN ROAD & BEACH BLVD AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	BEACH BLVD Eastbound				BEACH BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	66	119	12	1	2	138	19	0	12	9	1	0	38	17	140	574	2,918	1	0	1	0
7:15 AM	1	60	200	19	2	2	164	19	0	24	7	1	0	37	19	155	710	3,213	0	0	0	1
7:30 AM	2	76	212	30	4	3	244	25	0	24	21	0	0	42	18	128	829	3,371	1	0	1	0
7:45 AM	3	60	220	26	1	6	182	28	0	28	23	0	0	64	30	134	805	3,386	0	0	1	1
8:00 AM	4	70	226	37	0	7	155	39	0	56	22	4	0	59	45	145	869	3,376	0	0	2	1
8:15 AM	2	67	267	36	2	6	160	31	0	57	31	3	0	47	34	125	868		0	0	0	1
8:30 AM	2	71	245	21	1	8	176	32	0	55	29	4	0	52	29	119	844		2	0	0	1
8:45 AM	4	65	251	21	2	3	173	37	0	30	33	1	0	56	19	100	795		2	0	0	1

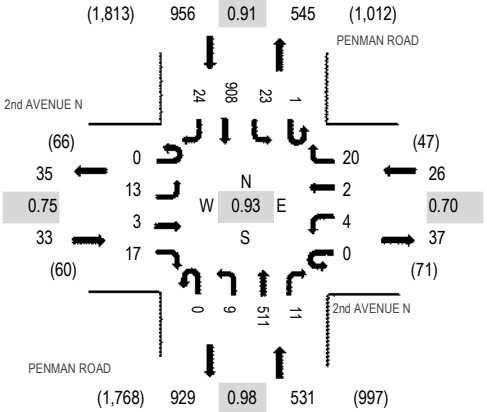
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	4	3	0	0	0	3	0	0	1	0	0	0	2	0	0	13
Lights	11	261	939	116	4	27	661	122	0	188	100	11	0	219	136	516	3,311
Mediums	0	3	16	4	0	0	9	8	0	7	5	0	0	1	2	7	62
Total	11	268	958	120	4	27	673	130	0	196	105	11	0	222	138	523	3,386

(303) 216-2439
www.alltrafficdata.net

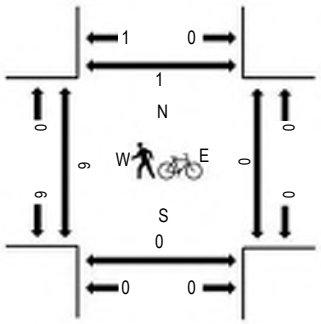
Location: 2 PENMAN ROAD & 2nd AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	2nd AVENUE N Eastbound				2nd AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	0	4	0	3	2	3	0	0	97	1	0	3	206	4	327	1,417	1	0	0	0
7:15 AM	0	0	1	4	0	2	0	2	0	1	88	2	0	5	215	3	323	1,506	0	0	0	0
7:30 AM	0	5	2	4	0	2	0	6	0	3	124	6	0	14	203	2	371	1,546	0	0	0	0
7:45 AM	0	0	1	5	0	1	1	9	0	2	117	1	0	4	247	8	396	1,544	0	0	0	0
8:00 AM	0	5	0	3	0	1	1	3	0	0	134	2	1	3	256	7	416	1,500	2	0	0	1
8:15 AM	0	3	0	5	0	0	0	2	0	4	136	2	0	2	202	7	363		1	0	0	0
8:30 AM	0	3	2	2	0	0	0	2	0	3	132	2	0	4	209	10	369		3	0	0	0
8:45 AM	0	2	1	4	0	1	0	6	0	2	128	10	0	3	189	6	352		1	0	0	0

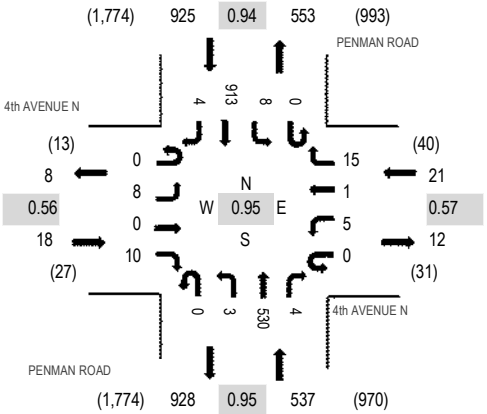
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	12	3	17	0	4	2	19	0	9	499	11	0	23	897	24	1,520
Mediums	0	1	0	0	0	0	0	1	0	0	12	0	1	0	9	0	24
Total	0	13	3	17	0	4	2	20	0	9	511	11	1	23	908	24	1,546

(303) 216-2439
www.alltrafficdata.net

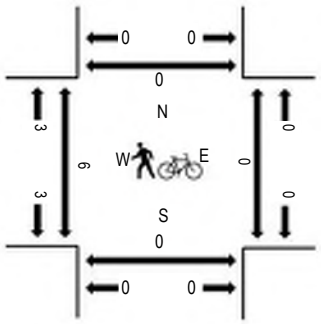
Location: 3 PENMAN ROAD & 4th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	4th AVENUE N Eastbound				4th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	0	0	0	0	0	2	0	1	101	1	0	0	212	1	320	1,353	1	0	0	0
7:15 AM	0	0	0	0	0	1	0	3	0	1	90	1	0	8	217	0	321	1,429	0	0	0	0
7:30 AM	0	2	0	2	0	1	0	4	0	1	97	2	0	4	215	0	328	1,468	0	0	0	0
7:45 AM	0	1	0	2	0	0	0	4	0	1	123	1	0	3	248	1	384	1,501	1	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	144	1	0	2	246	2	396	1,458	0	0	0	0
8:15 AM	0	4	0	4	0	2	1	2	0	1	141	1	0	0	204	0	360		1	0	0	0
8:30 AM	0	3	0	4	0	3	0	8	0	1	122	1	0	3	215	1	361		1	0	0	0
8:45 AM	0	0	0	3	0	6	0	2	0	1	137	0	0	3	189	0	341		0	0	1	0

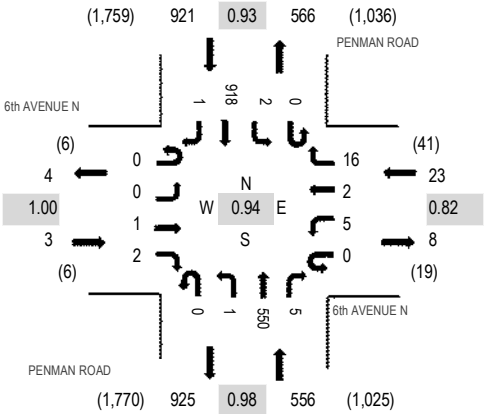
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	8	0	10	0	5	1	15	0	3	507	4	0	8	901	4	1,466
Mediums	0	0	0	0	0	0	0	0	0	0	22	0	0	0	10	0	32
Total	0	8	0	10	0	5	1	15	0	3	530	4	0	8	913	4	1,501

(303) 216-2439
www.alltrafficdata.net

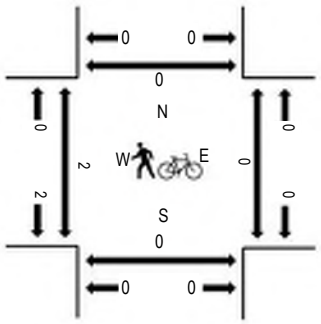
Location: 4 PENMAN ROAD & 6th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	6th AVENUE N Eastbound				6th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	0	0	3	0	0	0	0	91	0	0	0	213	0	308	1,386	1	0	0	0
7:15 AM	0	0	0	1	0	4	0	1	0	0	92	1	0	0	224	0	323	1,479	0	0	0	1
7:30 AM	0	0	0	1	0	2	0	5	0	0	132	3	0	1	222	0	366	1,503	0	0	0	0
7:45 AM	0	0	1	0	0	0	1	3	0	1	126	1	0	0	256	0	389	1,499	0	0	0	0
8:00 AM	0	0	0	1	0	1	1	3	0	0	148	0	0	1	245	1	401	1,445	0	0	0	0
8:15 AM	0	0	0	0	0	2	0	5	0	0	144	1	0	0	195	0	347		2	0	0	0
8:30 AM	0	1	0	0	0	3	0	0	0	0	146	1	0	5	205	1	362		2	0	0	0
8:45 AM	0	0	0	0	0	5	1	1	0	0	137	1	0	3	187	0	335		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Lights	0	0	1	2	0	5	2	16	0	1	537	5	0	2	902	1	1,474
Mediums	0	0	0	0	0	0	0	0	0	0	12	0	0	0	15	0	27
Total	0	0	1	2	0	5	2	16	0	1	550	5	0	2	918	1	1,503

ALL TRAFFIC DATA SERVICES
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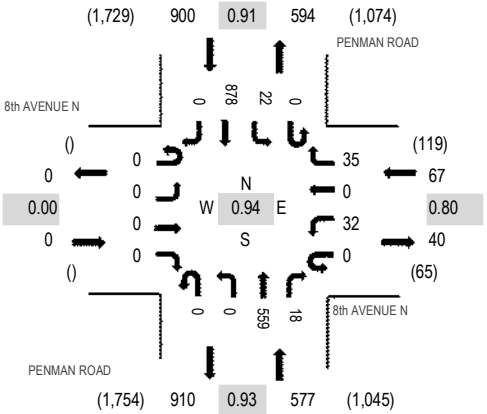
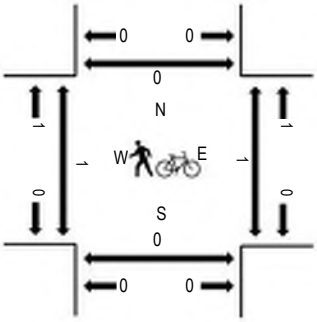
Location: 5 PENMAN ROAD & 8th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	8th AVENUE N Eastbound				8th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	11	0	2	0	0	99	1	0	0	201	0	314	1,393	0	0	0	0
7:15 AM	0	0	0	0	0	10	0	4	0	0	90	4	0	0	208	0	316	1,489	0	0	0	0
7:30 AM	0	0	0	0	0	4	0	10	0	0	134	6	0	0	215	0	369	1,544	0	0	0	0
7:45 AM	0	0	0	0	0	7	0	7	0	0	125	4	0	8	243	0	394	1,544	0	0	0	0
8:00 AM	0	0	0	0	0	12	0	6	0	0	149	3	0	8	232	0	410	1,500	0	0	0	0
8:15 AM	0	0	0	0	0	9	0	12	0	0	151	5	0	6	188	0	371		1	0	0	0
8:30 AM	0	0	0	0	0	6	0	5	0	0	138	1	0	8	211	0	369		0	0	0	0
8:45 AM	0	0	0	0	0	3	0	11	0	0	131	4	0	7	194	0	350		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6
Lights	0	0	0	0	0	32	0	33	0	0	541	18	0	22	867	0	1,513
Mediums	0	0	0	0	0	0	0	2	0	0	14	0	0	0	9	0	25
Total	0	0	0	0	0	32	0	35	0	0	559	18	0	22	878	0	1,544

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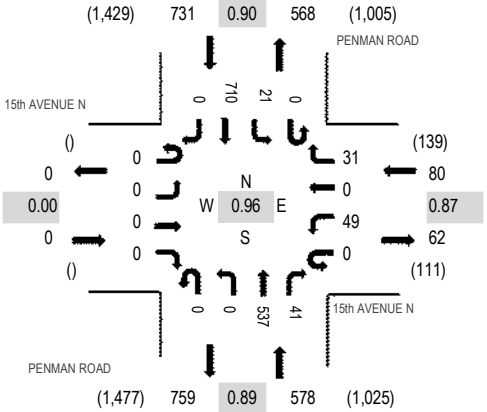
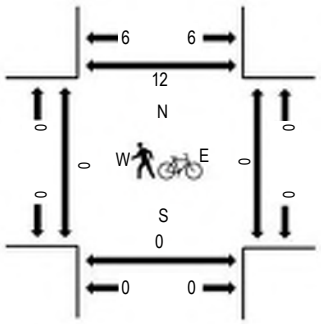
Location: 6 PENMAN ROAD & 15th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	15th AVENUE N Eastbound				15th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	9	0	2	0	0	95	6	0	3	154	0	269	1,254	0	0	0	0
7:15 AM	0	0	0	0	0	12	0	5	0	0	92	7	0	2	177	0	295	1,339	0	0	0	0
7:30 AM	0	0	0	0	0	9	0	8	0	0	127	12	0	6	165	0	327	1,389	0	0	0	0
7:45 AM	0	0	0	0	0	15	0	8	0	0	125	7	0	8	200	0	363	1,375	0	0	0	3
8:00 AM	0	0	0	0	0	13	0	7	0	0	138	7	0	2	187	0	354	1,339	0	0	0	0
8:15 AM	0	0	0	0	0	12	0	8	0	0	147	15	0	5	158	0	345		0	0	0	0
8:30 AM	0	0	0	0	0	11	0	3	0	0	113	7	0	5	174	0	313		0	0	0	0
8:45 AM	0	0	0	0	0	10	0	7	0	0	120	7	0	12	171	0	327		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	4
Lights	0	0	0	0	0	49	0	30	0	0	522	39	0	21	700	0	1,361
Mediums	0	0	0	0	0	0	0	0	0	0	14	2	0	0	8	0	24
Total	0	0	0	0	0	49	0	31	0	0	537	41	0	21	710	0	1,389

ALL TRAFFIC DATA SERVICES
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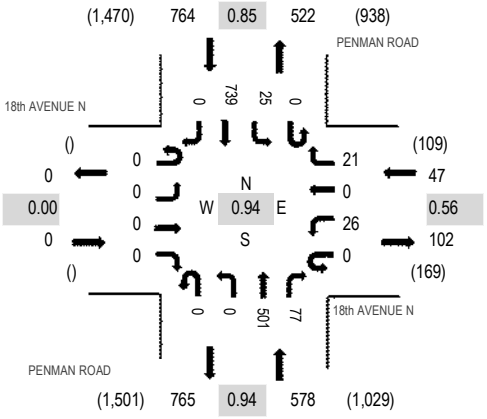
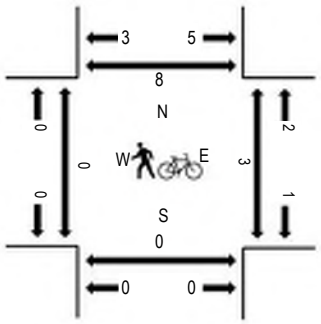
Location: 7 PENMAN ROAD & 18th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	18th AVENUE N Eastbound				18th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	12	0	13	0	0	76	23	0	9	150	0	283	1,273	0	0	0	1
7:15 AM	0	0	0	0	0	14	0	5	0	0	80	19	0	0	179	0	297	1,343	0	0	0	0
7:30 AM	0	0	0	0	0	4	0	3	0	0	129	13	0	5	169	0	323	1,389	0	0	0	0
7:45 AM	0	0	0	0	0	3	0	2	0	0	121	17	0	4	223	0	370	1,387	0	0	0	1
8:00 AM	0	0	0	0	0	9	0	7	0	0	121	24	0	8	184	0	353	1,335	0	0	0	0
8:15 AM	0	0	0	0	0	10	0	9	0	0	130	23	0	8	163	0	343		0	2	0	0
8:30 AM	0	0	0	0	0	8	0	2	0	0	115	10	0	0	186	0	321		0	0	0	0
8:45 AM	0	0	0	0	0	6	0	2	0	0	123	5	0	1	181	0	318		0	2	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	0	0	0	26	0	21	0	0	489	75	0	25	731	0	1,367
Mediums	0	0	0	0	0	0	0	0	0	0	12	2	0	0	6	0	20
Total	0	0	0	0	0	26	0	21	0	0	501	77	0	25	739	0	1,389

(303) 216-2439
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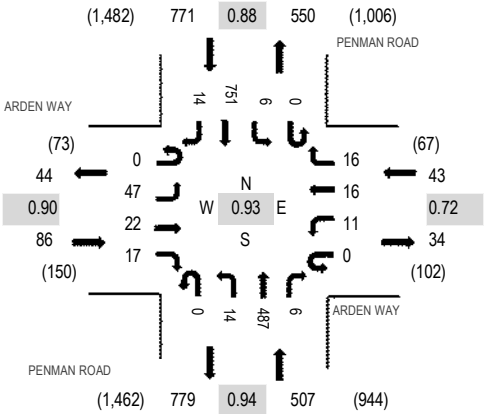
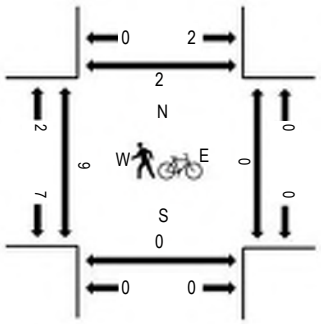
Location: 8 PENMAN ROAD & ARDEN WAY AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ARDEN WAY Eastbound				ARDEN WAY Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	8	5	0	0	3	2	2	0	3	69	18	0	25	151	5	291	1,276	0	0	0	2
7:15 AM	0	9	1	4	0	1	1	4	0	1	78	6	0	4	172	4	285	1,339	0	0	0	1
7:30 AM	0	11	1	2	0	3	0	3	0	2	128	1	0	0	164	5	320	1,406	1	0	0	0
7:45 AM	0	14	5	4	0	3	2	3	0	6	122	1	0	1	218	1	380	1,407	0	0	0	0
8:00 AM	0	12	8	4	0	3	7	5	0	4	122	0	0	3	184	2	354	1,367	2	0	0	0
8:15 AM	0	10	8	4	0	5	5	4	0	2	134	4	0	1	166	9	352		0	0	0	0
8:30 AM	0	11	1	5	0	0	2	4	0	2	109	1	0	1	183	2	321		4	0	0	2
8:45 AM	0	12	4	7	0	0	1	4	0	1	128	2	0	1	176	4	340		3	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	47	22	17	0	11	16	16	0	13	472	6	0	6	739	14	1,379
Mediums	0	0	0	0	0	0	0	0	0	1	14	0	0	0	10	0	25
Total	0	47	22	17	0	11	16	16	0	14	487	6	0	6	751	14	1,407

(303) 216-2439
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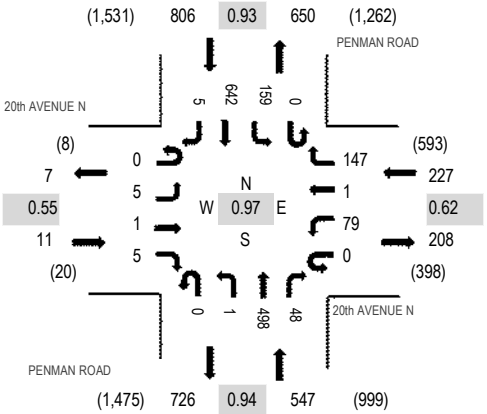
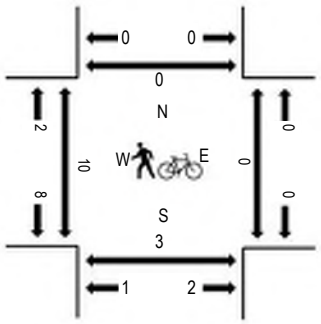
Location: 9 PENMAN ROAD & 20th AVENUE N AM
Date: Tuesday, November 16, 2021
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	20th AVENUE N Eastbound				20th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	1	0	59	0	88	0	0	58	26	0	54	121	0	407	1,552	0	0	0	0
7:15 AM	0	0	0	1	0	48	0	82	0	0	78	14	0	31	128	0	382	1,538	0	0	0	0
7:30 AM	0	3	0	4	0	17	0	27	0	0	123	16	0	19	148	0	357	1,566	1	0	0	0
7:45 AM	0	0	0	0	0	21	0	24	0	0	129	8	0	22	201	1	406	1,587	0	0	0	0
8:00 AM	0	1	0	1	0	16	0	29	0	0	126	9	0	39	172	0	393	1,591	0	0	1	0
8:15 AM	0	0	0	1	0	19	1	35	0	1	136	13	0	44	158	2	410		0	0	0	0
8:30 AM	0	2	0	1	0	24	0	40	0	0	108	11	0	33	158	1	378		3	0	0	0
8:45 AM	0	2	1	2	0	20	0	43	0	0	128	15	0	43	154	2	410		2	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	3
Lights	0	5	1	5	0	78	1	143	0	1	488	47	0	154	629	4	1,556
Mediums	0	0	0	0	0	1	0	3	0	0	10	1	0	5	11	1	32
Total	0	5	1	5	0	79	1	147	0	1	498	48	0	159	642	5	1,591

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

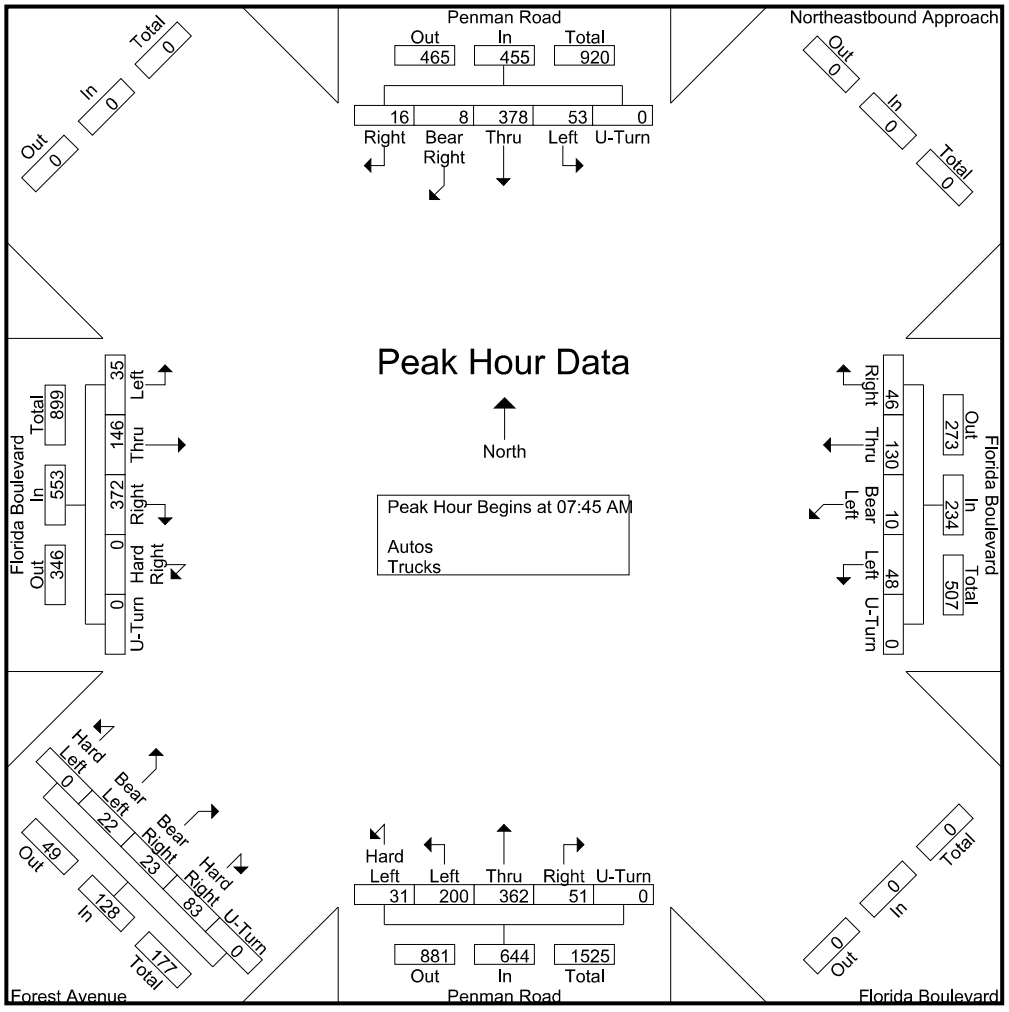
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	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



(303) 216-2439
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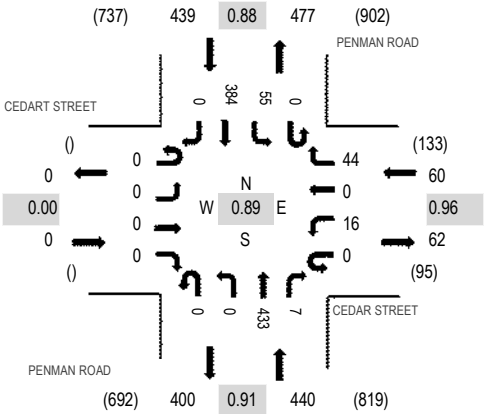
Location: 11 PENMAN ROAD & CEDAR STREET AM
Date: Tuesday, November 16, 2021
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - Motorized Vehicles


(737) 439 0.88 477 (902)
PENMAN ROAD
CEDART STREET
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ALL TRAFFIC DATA SERVICES
(303) 216-2439
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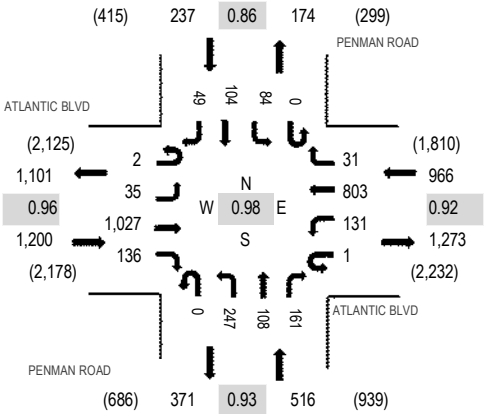
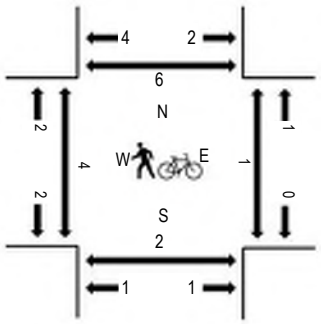
Location: 12 PENMAN ROAD & ATLANTIC BLVD AM
Date: Tuesday, November 16, 2021
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ATLANTIC BLVD Eastbound				ATLANTIC BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	206	31	0	11	170	5	0	55	15	20	0	17	10	8	555	2,423	0	0	0	0
7:15 AM	0	4	179	22	0	28	186	10	0	65	18	20	0	14	16	11	573	2,584	0	0	0	1
7:30 AM	1	6	195	40	0	25	181	4	0	76	19	23	0	14	20	8	612	2,757	0	0	0	0
7:45 AM	0	9	229	49	2	35	181	6	0	68	22	22	0	18	28	14	683	2,879	0	0	0	1
8:00 AM	0	6	267	40	0	32	189	7	0	57	24	39	0	18	26	11	716	2,919	0	0	1	0
8:15 AM	0	9	251	35	0	38	211	7	0	63	32	38	0	25	30	7	746		1	0	0	1
8:30 AM	2	5	251	34	1	30	229	6	0	64	28	33	0	18	19	14	734		1	0	1	3
8:45 AM	0	15	258	27	0	31	174	11	0	63	24	51	0	23	29	17	723		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	7
Lights	2	35	996	134	1	128	784	31	0	243	106	157	0	84	100	46	2,847
Mediums	0	0	26	1	0	3	18	0	0	4	2	4	0	0	4	3	65
Total	2	35	1,027	136	1	131	803	31	0	247	108	161	0	84	104	49	2,919

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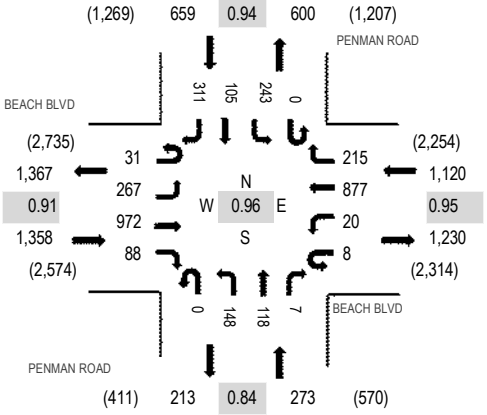
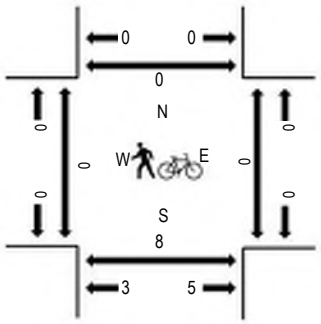
Location: 1 PENMAN ROAD & BEACH BLVD Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:30 PM - 01:30 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	BEACH BLVD Eastbound				BEACH BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	3	66	229	19	3	6	197	62	0	43	20	4	0	59	23	59	793	3,257	0	0	0	1
11:45 AM	7	69	206	28	2	6	228	43	0	34	34	1	0	60	25	95	838	3,315	0	0	0	0
12:00 PM	6	69	190	17	1	2	224	53	0	48	39	5	0	51	29	65	799	3,364	0	0	0	0
12:15 PM	6	70	216	15	1	6	243	57	0	41	25	3	0	53	22	69	827	3,397	0	2	0	1
12:30 PM	8	67	229	21	2	7	237	51	0	38	39	1	0	58	24	69	851	3,410	0	0	0	0
12:45 PM	6	72	270	26	1	5	205	67	0	34	28	3	0	60	27	83	887		0	0	1	0
1:00 PM	5	69	230	13	2	6	227	52	0	32	33	1	0	57	20	85	832		0	0	2	0
1:15 PM	12	59	243	28	3	2	208	45	0	44	18	2	0	68	34	74	840		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	3	0	0	0	3	1	0	1	0	0	0	2	0	0	11
Lights	28	260	955	87	8	20	863	208	0	146	117	7	0	235	103	303	3,340
Mediums	3	6	14	1	0	0	11	6	0	1	1	0	0	6	2	8	59
Total	31	267	972	88	8	20	877	215	0	148	118	7	0	243	105	311	3,410

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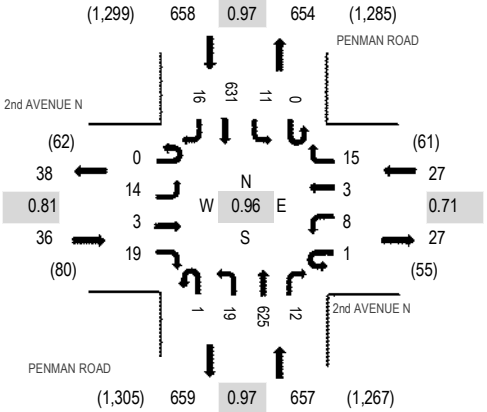
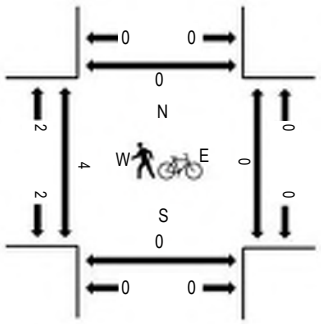
Location: 2 PENMAN ROAD & 2nd AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	2nd AVENUE N Eastbound				2nd AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	5	2	6	0	2	0	6	0	2	149	5	0	6	149	1	333	1,340	0	0	0	0
11:45 AM	0	3	1	7	0	2	0	7	0	2	160	0	0	3	157	7	349	1,347	0	0	0	0
12:00 PM	0	3	1	6	0	2	0	10	0	4	160	3	0	0	139	4	332	1,356	0	0	0	0
12:15 PM	0	3	0	5	0	1	0	4	0	1	155	3	0	6	143	5	326	1,378	0	0	0	0
12:30 PM	0	2	1	1	0	1	0	5	1	5	154	3	0	2	161	4	340	1,367	0	0	0	0
12:45 PM	0	5	0	8	1	4	1	3	0	7	161	2	0	3	161	2	358		2	0	0	0
1:00 PM	0	4	2	5	0	2	2	3	0	6	155	4	0	0	166	5	354		0	0	0	0
1:15 PM	0	4	0	6	0	2	0	3	0	1	121	3	0	4	168	3	315		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	14	3	19	1	7	3	15	1	19	609	12	0	9	613	16	1,341
Mediums	0	0	0	0	0	1	0	0	0	0	16	0	0	2	18	0	37
Total	0	14	3	19	1	8	3	15	1	19	625	12	0	11	631	16	1,378

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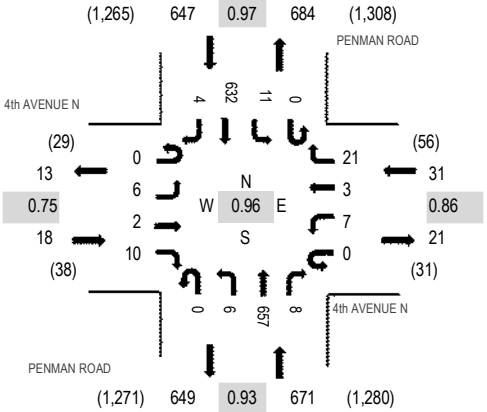
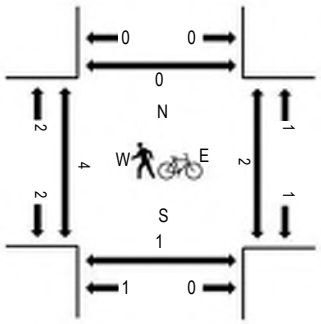
Location: 3 PENMAN ROAD & 4th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	4th AVENUE N Eastbound				4th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	0	1	2	0	0	1	6	0	1	153	0	0	1	154	3	322	1,293	0	0	0	0
11:45 AM	0	1	0	6	0	2	0	5	0	3	155	1	0	3	163	2	341	1,313	1	0	0	0
12:00 PM	0	2	0	2	0	2	1	4	0	1	165	1	0	1	125	3	307	1,327	0	0	0	0
12:15 PM	0	2	0	3	0	0	2	5	0	1	158	1	0	1	150	0	323	1,367	1	1	1	0
12:30 PM	0	1	1	3	0	1	0	6	0	3	155	3	0	3	165	1	342	1,346	0	0	0	0
12:45 PM	0	2	0	3	0	4	0	5	0	1	175	4	0	4	154	3	355		0	0	0	0
1:00 PM	0	1	1	1	0	2	1	5	0	1	169	0	0	3	163	0	347		0	0	0	0
1:15 PM	0	3	0	3	0	1	0	3	0	1	127	1	0	1	162	0	302		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	6	2	10	0	7	3	20	0	6	641	8	0	11	610	4	1,328
Mediums	0	0	0	0	0	0	0	1	0	0	16	0	0	0	21	0	38
Total	0	6	2	10	0	7	3	21	0	6	657	8	0	11	632	4	1,367

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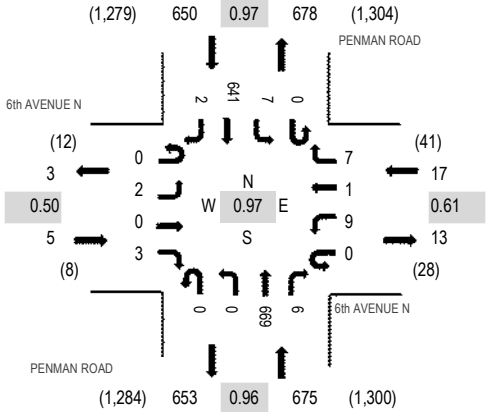
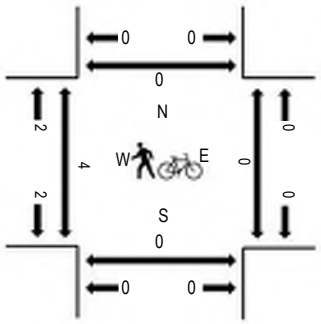
Location: 4 PENMAN ROAD & 6th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	6th AVENUE N Eastbound				6th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	1	0	0	0	2	0	3	0	3	161	2	0	1	157	0	330	1,311	1	0	0	0
11:45 AM	0	0	1	0	0	1	0	3	0	0	159	3	0	0	167	1	335	1,314	1	0	0	0
12:00 PM	0	0	0	0	0	4	0	2	0	1	173	2	0	2	134	0	318	1,326	0	0	0	0
12:15 PM	0	0	0	0	0	2	0	2	0	0	164	2	0	2	156	0	328	1,347	3	0	0	0
12:30 PM	0	0	0	0	0	3	0	2	0	0	157	1	0	0	170	0	333	1,317	1	0	0	0
12:45 PM	0	1	0	2	0	2	0	3	0	0	176	1	0	3	159	0	347		0	0	0	0
1:00 PM	0	1	0	1	0	2	1	0	0	0	172	2	0	2	156	2	339		0	0	0	0
1:15 PM	0	1	0	0	0	3	2	4	0	0	119	2	0	2	163	2	298		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	2	0	3	0	8	1	7	0	0	655	6	0	7	618	2	1,309
Mediums	0	0	0	0	0	1	0	0	0	0	14	0	0	0	22	0	37
Total	0	2	0	3	0	9	1	7	0	0	669	6	0	7	641	2	1,347

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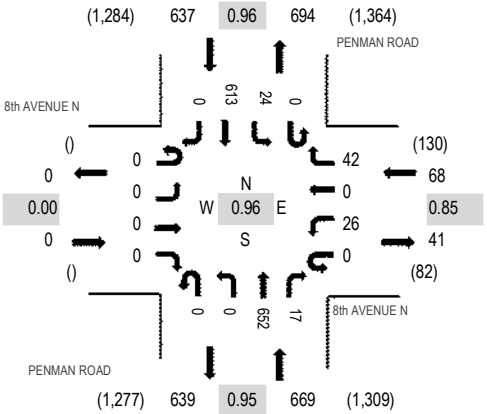
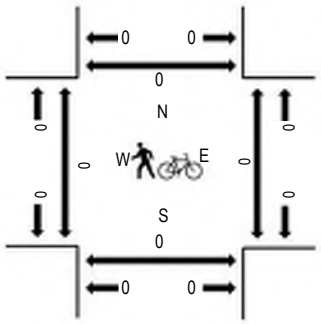
Location: 5 PENMAN ROAD & 8th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	8th AVENUE N Eastbound				8th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	0	0	0	0	3	0	11	0	0	164	4	0	6	157	0	345	1,354	0	0	0	0
11:45 AM	0	0	0	0	0	4	0	12	0	0	161	1	0	8	167	0	353	1,347	0	0	0	0
12:00 PM	0	0	0	0	0	5	0	9	0	0	168	5	0	7	131	0	325	1,352	0	0	0	0
12:15 PM	0	0	0	0	0	10	0	10	0	0	159	3	0	6	143	0	331	1,374	0	0	0	0
12:30 PM	0	0	0	0	0	3	0	10	0	0	151	5	0	5	164	0	338	1,369	0	0	0	0
12:45 PM	0	0	0	0	0	6	0	9	0	0	169	6	0	10	158	0	358		0	0	0	0
1:00 PM	0	0	0	0	0	7	0	13	0	0	173	3	0	3	148	0	347		0	0	0	0
1:15 PM	0	0	0	0	0	5	0	13	0	0	132	5	0	5	166	0	326		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3
Lights	0	0	0	0	0	26	0	42	0	0	637	16	0	24	598	0	1,343
Mediums	0	0	0	0	0	0	0	0	0	0	15	0	0	0	13	0	28
Total	0	0	0	0	0	26	0	42	0	0	652	17	0	24	613	0	1,374

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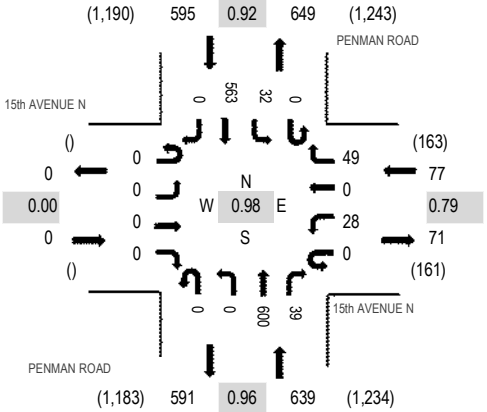
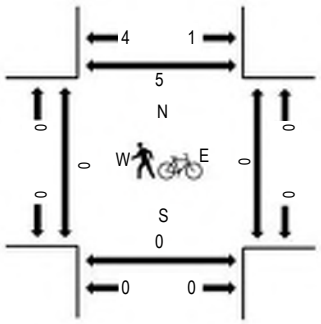
Location: 6 PENMAN ROAD & 15th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	15th AVENUE N Eastbound				15th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	0	0	0	0	7	0	18	0	0	132	13	0	10	129	0	309	1,289	0	0	0	0
11:45 AM	0	0	0	0	0	11	0	5	0	0	141	10	0	17	148	0	332	1,305	0	0	0	0
12:00 PM	0	0	0	0	0	13	0	14	0	0	142	12	0	9	124	0	314	1,306	0	0	0	0
12:15 PM	0	0	0	0	0	7	0	12	0	0	155	12	0	8	140	0	334	1,311	0	0	0	2
12:30 PM	0	0	0	0	0	4	0	10	0	0	145	4	0	9	153	0	325	1,298	0	0	0	0
12:45 PM	0	0	0	0	0	9	0	19	0	0	151	8	0	8	138	0	333		0	0	0	0
1:00 PM	0	0	0	0	0	8	0	8	0	0	149	15	0	7	132	0	319		0	0	0	0
1:15 PM	0	0	0	0	0	9	0	9	0	0	133	12	0	7	151	0	321		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	27	0	49	0	0	585	38	0	31	544	0	1,274
Mediums	0	0	0	0	0	1	0	0	0	0	15	1	0	1	19	0	37
Total	0	0	0	0	0	28	0	49	0	0	600	39	0	32	563	0	1,311

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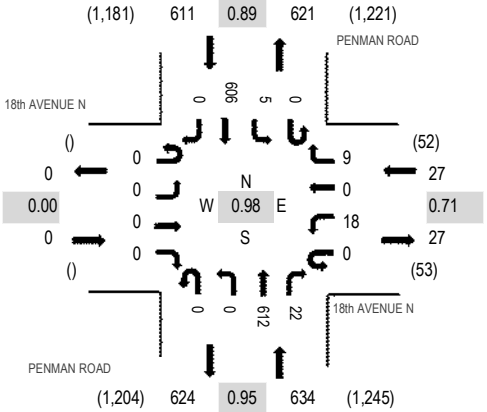
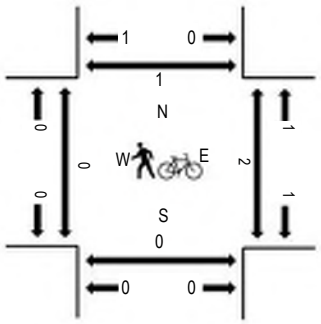
Location: 7 PENMAN ROAD & 18th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 11:45 AM - 12:45 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	18th AVENUE N Eastbound				18th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	0	0	0	0	3	0	0	0	0	142	4	0	2	139	0	290	1,236	0	0	0	0
11:45 AM	0	0	0	0	0	2	0	2	0	0	143	3	0	0	172	0	322	1,272	0	1	0	0
12:00 PM	0	0	0	0	0	6	0	3	0	0	152	7	0	3	127	0	298	1,270	0	0	0	0
12:15 PM	0	0	0	0	0	1	0	1	0	0	168	6	0	1	149	0	326	1,260	0	0	0	0
12:30 PM	0	0	0	0	0	9	0	3	0	0	149	6	0	1	158	0	326	1,242	0	0	0	0
12:45 PM	0	0	0	0	0	6	0	1	0	0	163	7	0	0	143	0	320		0	0	0	0
1:00 PM	0	0	0	0	0	6	0	6	0	0	148	3	0	3	122	0	288		0	0	0	0
1:15 PM	0	0	0	0	0	3	0	0	0	0	140	4	0	3	158	0	308		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	0	0	0	0	18	0	9	0	0	595	21	0	5	597	0	1,245
Mediums	0	0	0	0	0	0	0	0	0	0	17	1	0	0	8	0	26
Total	0	0	0	0	0	18	0	9	0	0	612	22	0	5	606	0	1,272

(303) 216-2439
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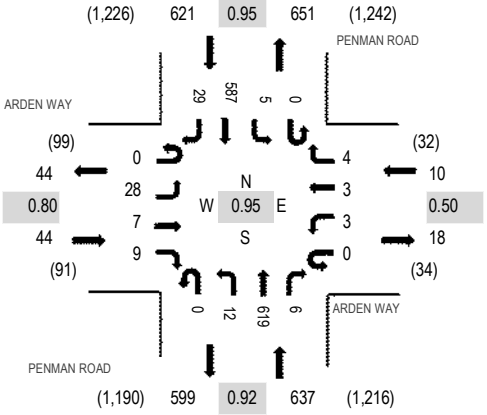
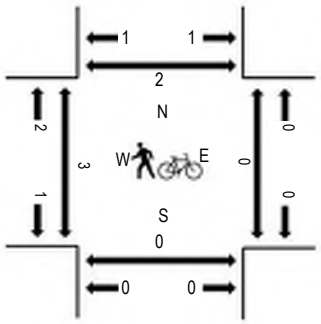
Location: 8 PENMAN ROAD & ARDEN WAY Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ARDEN WAY Eastbound				ARDEN WAY Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	7	0	3	0	5	1	0	0	5	132	2	0	2	143	11	311	1,299	0	0	0	0
11:45 AM	0	9	2	5	0	2	1	2	0	5	142	0	0	3	158	5	334	1,303	0	0	0	0
12:00 PM	0	7	3	3	0	1	0	0	0	2	149	3	0	0	132	10	310	1,312	1	0	0	1
12:15 PM	0	7	2	3	0	2	1	1	0	4	167	2	0	2	145	8	344	1,298	0	0	0	0
12:30 PM	0	4	0	0	0	0	2	1	0	2	141	0	0	1	161	3	315	1,266	2	0	0	1
12:45 PM	0	10	2	3	0	0	0	2	0	4	162	1	0	2	149	8	343		0	0	0	0
1:00 PM	0	7	1	1	0	0	2	1	0	6	148	1	0	1	119	9	296		0	0	0	0
1:15 PM	0	7	2	3	0	4	2	2	0	3	134	1	0	1	148	5	312		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	28	7	9	0	3	3	4	0	12	602	6	0	5	571	28	1,278
Mediums	0	0	0	0	0	0	0	0	0	0	17	0	0	0	16	1	34
Total	0	28	7	9	0	3	3	4	0	12	619	6	0	5	587	29	1,312

(303) 216-2439
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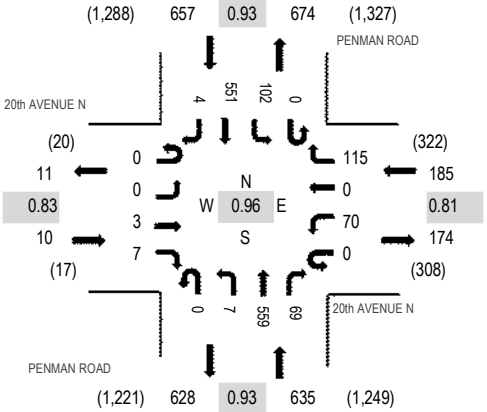
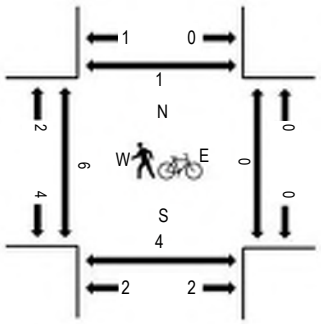
Location: 9 PENMAN ROAD & 20th AVENUE N Noon
Date: Tuesday, November 16, 2021
Peak Hour: 11:45 AM - 12:45 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	20th AVENUE N Eastbound				20th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	1	0	0	0	16	0	14	0	1	130	9	0	21	140	1	333	1,454	0	0	0	0
11:45 AM	0	0	1	2	0	16	0	30	0	3	141	12	0	24	150	3	382	1,487	0	0	0	0
12:00 PM	0	0	1	2	0	14	0	29	0	1	144	14	0	22	124	0	351	1,477	1	0	0	0
12:15 PM	0	0	1	1	0	16	0	23	0	1	147	28	0	33	138	0	388	1,469	0	0	0	0
12:30 PM	0	0	0	2	0	24	0	33	0	2	127	15	0	23	139	1	366	1,422	1	0	2	0
12:45 PM	0	2	0	1	0	9	1	19	0	3	158	15	0	20	144	0	372		1	0	0	0
1:00 PM	0	1	0	0	0	17	0	29	0	2	138	14	0	24	118	0	343		0	0	0	0
1:15 PM	0	1	0	1	0	7	0	25	0	1	135	8	0	23	140	0	341		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Lights	0	0	3	6	0	66	0	115	0	6	543	67	0	100	545	3	1,454
Mediums	0	0	0	1	0	3	0	0	0	1	16	2	0	0	6	1	30
Total	0	0	3	7	0	70	0	115	0	7	559	69	0	102	551	4	1,487

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

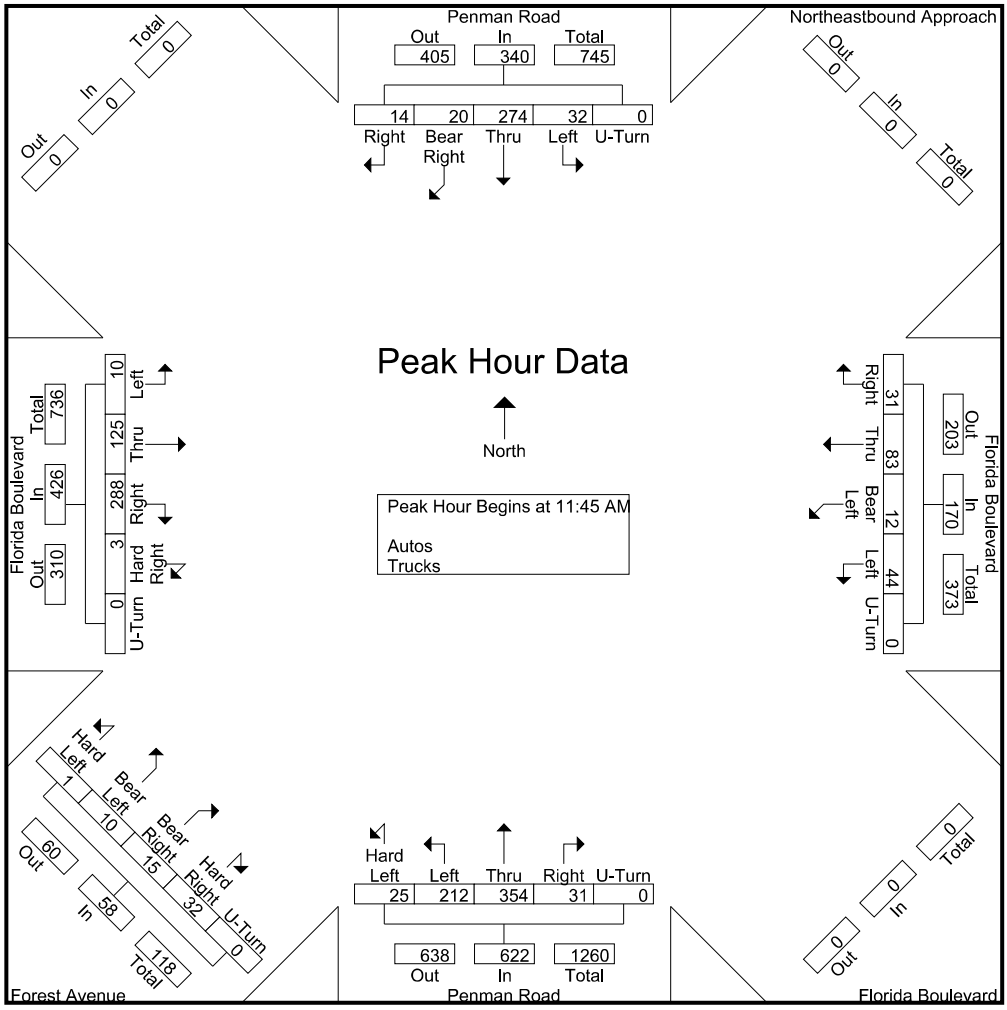
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	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 : 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



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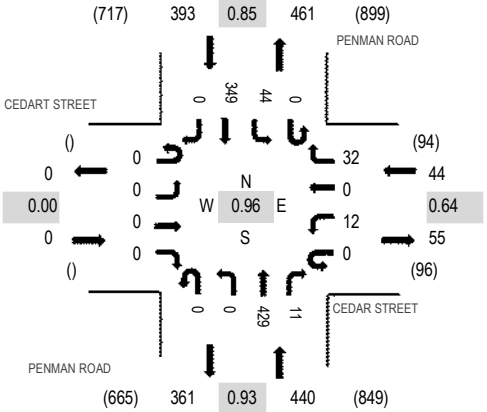
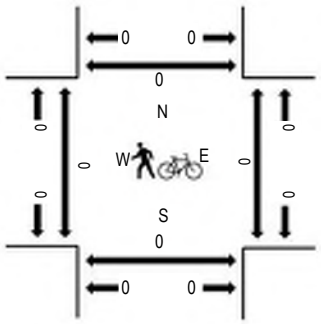
Location: 11 PENMAN ROAD & CEDAR STREET Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CEDART STREET Eastbound				CEDAR STREET Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	0	0	0	0	5	0	16	0	0	87	2	0	5	72	0	187	818	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	8	0	0	96	4	0	11	80	0	199	851	0	0	0	0
12:00 PM	0	0	0	0	0	3	0	9	0	0	111	1	0	6	74	0	204	869	0	0	0	0
12:15 PM	0	0	0	0	0	3	0	10	0	0	97	3	0	14	101	0	228	877	0	0	0	0
12:30 PM	0	0	0	0	0	3	0	7	0	0	104	2	0	16	88	0	220	842	0	0	0	0
12:45 PM	0	0	0	0	0	3	0	4	0	0	118	3	0	7	82	0	217		0	0	0	0
1:00 PM	0	0	0	0	0	3	0	11	0	0	110	3	0	7	78	0	212		0	0	0	0
1:15 PM	0	0	0	0	0	2	0	7	0	0	104	4	0	8	68	0	193		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	10	0	31	0	0	421	10	0	41	344	0	857
Mediums	0	0	0	0	0	2	0	1	0	0	8	1	0	3	5	0	20
Total	0	0	0	0	0	12	0	32	0	0	429	11	0	44	349	0	877

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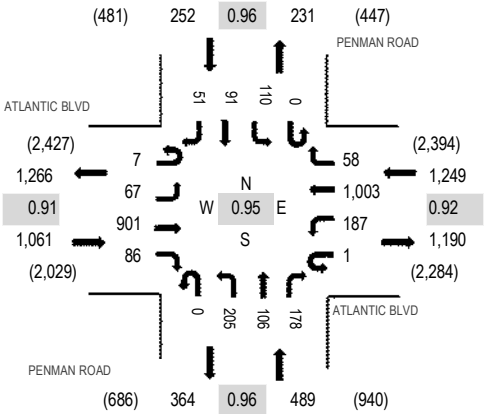
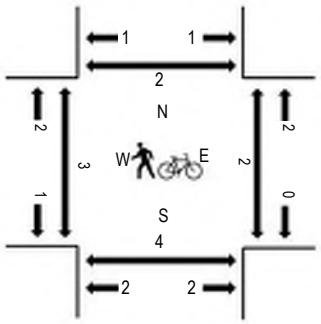
Location: 12 PENMAN ROAD & ATLANTIC BLVD Noon
Date: Tuesday, November 16, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ATLANTIC BLVD Eastbound				ATLANTIC BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:30 AM	0	13	218	24	2	37	211	10	0	43	16	42	0	25	18	14	673	2,905	0	0	0	0
11:45 AM	1	15	199	23	1	40	234	13	0	39	20	58	0	23	24	15	705	2,999	1	0	1	0
12:00 PM	0	9	207	16	2	38	246	17	0	47	36	42	0	24	25	17	726	3,041	0	0	1	1
12:15 PM	3	27	234	28	0	38	252	23	0	49	21	61	0	32	24	9	801	3,051	1	0	2	1
12:30 PM	2	8	206	21	0	62	268	10	0	60	36	32	0	24	24	14	767	2,939	1	0	0	0
12:45 PM	1	20	244	23	0	38	241	17	0	42	17	36	0	29	28	11	747		1	1	0	0
1:00 PM	1	12	217	14	1	49	242	8	0	54	32	49	0	25	15	17	736		0	0	1	0
1:15 PM	0	16	201	26	0	34	238	22	0	45	29	34	0	16	17	11	689		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	3	0	0	1	0	0	0	1	0	0	7
Lights	7	66	883	83	1	184	975	54	0	200	104	174	0	107	88	46	2,972
Mediums	0	1	16	3	0	3	25	4	0	4	2	4	0	2	3	5	72
Total	7	67	901	86	1	187	1,003	58	0	205	106	178	0	110	91	51	3,051

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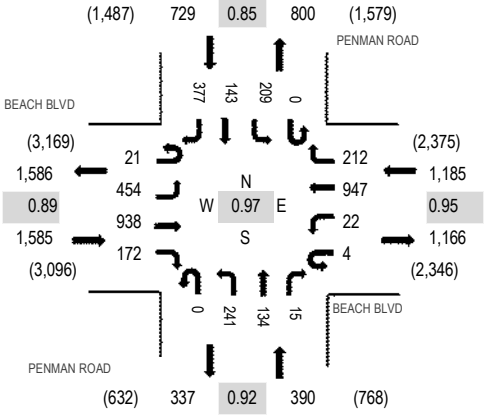
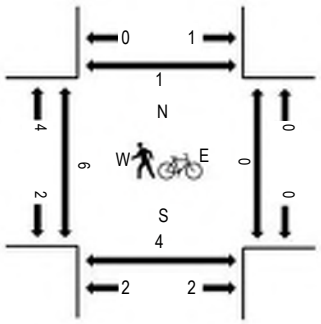
Location: 1 PENMAN ROAD & BEACH BLVD PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	BEACH BLVD Eastbound				BEACH BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	4	111	286	17	0	5	245	54	0	64	48	3	0	47	83	92	1,059	3,837	0	0	0	2
4:15 PM	2	100	228	31	0	5	253	50	0	44	30	0	0	51	36	98	928	3,718	0	0	0	1
4:30 PM	4	104	213	15	0	2	228	34	0	55	43	4	0	52	38	108	900	3,777	0	0	0	3
4:45 PM	5	123	248	20	3	7	253	51	0	56	31	0	0	45	36	72	950	3,884	0	1	0	1
5:00 PM	4	101	220	37	0	5	224	41	0	76	28	5	0	61	38	100	940	3,889	4	0	1	0
5:15 PM	7	109	211	38	1	4	265	56	0	62	36	5	0	57	33	103	987		0	0	0	1
5:30 PM	5	122	274	44	3	7	248	68	0	46	32	1	0	35	31	91	1,007		1	0	0	0
5:45 PM	5	122	233	53	0	6	210	47	0	57	38	4	0	56	41	83	955		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2	0	5
Lights	21	450	933	168	4	22	938	211	0	239	134	15	0	208	140	372	3,855
Mediums	0	3	5	4	0	0	8	1	0	1	0	0	0	1	1	5	29
Total	21	454	938	172	4	22	947	212	0	241	134	15	0	209	143	377	3,889

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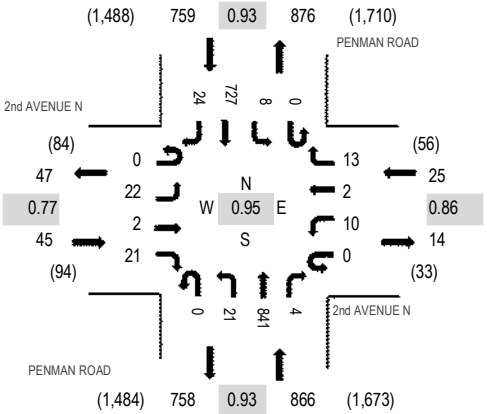
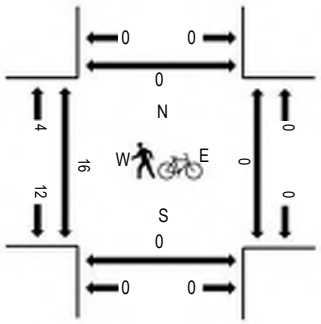
Location: 2 PENMAN ROAD & 2nd AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	2nd AVENUE N Eastbound				2nd AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	8	1	7	0	2	1	4	0	2	226	5	0	0	167	3	426	1,616	0	0	0	0
4:15 PM	0	8	1	3	0	0	0	7	0	1	176	0	0	4	188	4	392	1,582	0	0	0	0
4:30 PM	0	4	0	5	0	2	1	6	0	5	181	0	0	3	188	9	404	1,636	2	0	0	0
4:45 PM	0	4	0	8	0	1	2	5	0	2	205	4	0	1	155	7	394	1,665	0	0	0	0
5:00 PM	0	7	1	6	0	3	0	4	0	7	173	2	0	0	181	8	392	1,695	4	0	0	0
5:15 PM	0	3	0	7	0	2	0	3	0	6	219	2	0	2	196	6	446		3	0	0	0
5:30 PM	0	5	1	6	0	2	2	4	0	1	232	0	0	3	172	5	433		1	0	0	0
5:45 PM	0	7	0	2	0	3	0	2	0	7	217	0	0	3	178	5	424		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	22	2	21	0	10	2	13	0	21	837	4	0	8	717	23	1,680
Mediums	0	0	0	0	0	0	0	0	0	0	3	0	0	0	8	1	12
Total	0	22	2	21	0	10	2	13	0	21	841	4	0	8	727	24	1,695

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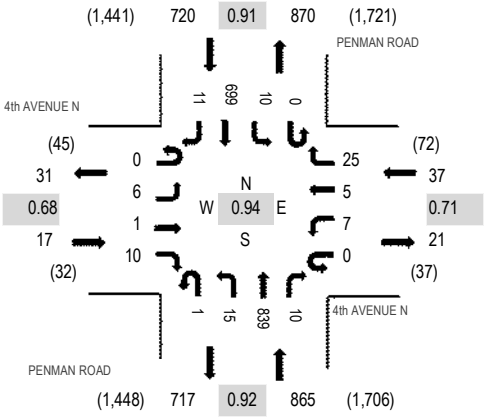
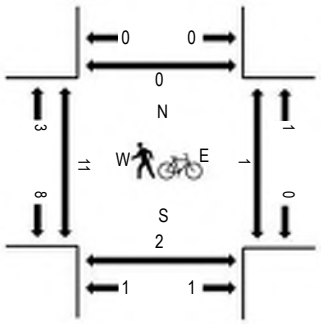
Location: 3 PENMAN ROAD & 4th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	4th AVENUE N Eastbound				4th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	0	2	0	4	1	1	0	0	236	3	0	1	164	1	414	1,612	1	1	1	0
4:15 PM	0	1	0	3	0	3	1	9	0	4	187	1	0	4	192	3	408	1,567	0	0	0	0
4:30 PM	0	1	1	2	0	3	0	11	0	1	192	1	0	1	197	0	410	1,597	1	0	0	0
4:45 PM	0	0	0	4	0	0	0	2	0	3	210	3	0	1	157	0	380	1,606	1	0	0	0
5:00 PM	0	1	0	6	0	1	2	4	0	4	177	5	0	2	166	1	369	1,639	0	0	0	0
5:15 PM	0	2	0	2	0	3	0	10	0	3	220	2	0	5	185	6	438		0	0	0	0
5:30 PM	0	2	0	1	0	3	2	5	1	1	231	1	0	2	168	2	419		1	1	1	0
5:45 PM	0	1	1	1	0	0	1	6	0	7	211	2	0	1	180	2	413		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	6	1	10	0	7	5	25	1	15	834	10	0	10	694	11	1,629
Mediums	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	9
Total	0	6	1	10	0	7	5	25	1	15	839	10	0	10	699	11	1,639

(303) 216-2439
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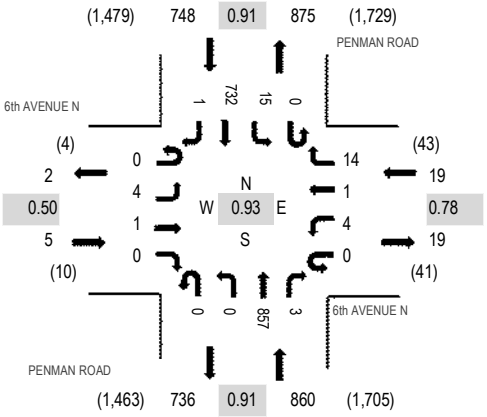
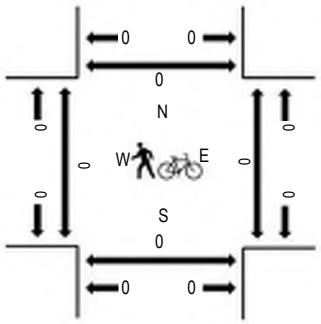
Location: 4 PENMAN ROAD & 6th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	6th AVENUE N Eastbound				6th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	1	0	2	0	0	228	1	0	5	166	0	403	1,605	0	0	0	0
4:15 PM	0	1	0	0	0	1	1	6	0	0	199	0	0	2	199	1	410	1,564	0	0	0	0
4:30 PM	0	0	2	1	0	3	0	4	0	0	196	6	0	1	194	0	407	1,594	0	0	0	0
4:45 PM	0	1	0	0	0	1	0	5	0	0	212	3	0	2	161	0	385	1,609	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	4	0	0	181	0	0	4	172	0	362	1,632	0	0	0	0
5:15 PM	0	0	1	0	0	2	0	4	0	0	226	2	0	1	203	1	440		0	0	0	0
5:30 PM	0	2	0	0	0	0	0	1	0	0	236	1	0	6	176	0	422		0	0	0	0
5:45 PM	0	1	0	0	0	2	1	5	0	0	214	0	0	4	181	0	408		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	4	1	0	0	4	1	14	0	0	854	3	0	15	719	1	1,616
Mediums	0	0	0	0	0	0	0	0	0	0	2	0	0	0	11	0	13
Total	0	4	1	0	0	4	1	14	0	0	857	3	0	15	732	1	1,632

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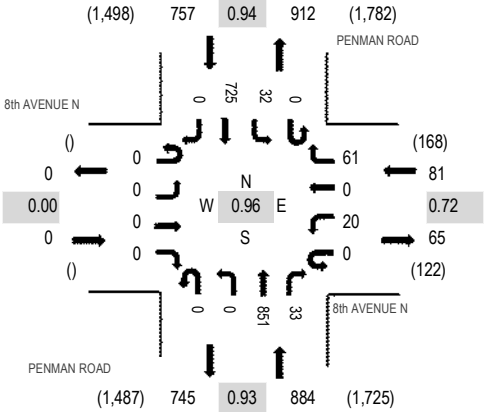
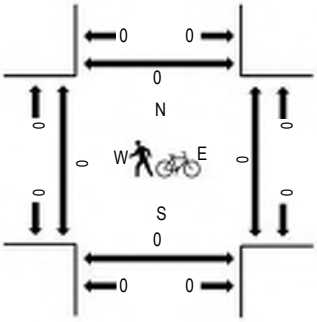
Location: 5 PENMAN ROAD & 8th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	8th AVENUE N Eastbound				8th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	4	0	6	0	0	223	6	0	7	158	0	404	1,669	0	0	0	0
4:15 PM	0	0	0	0	0	11	0	22	0	0	189	7	0	8	189	0	426	1,652	0	0	0	0
4:30 PM	0	0	0	0	0	10	0	13	0	0	200	7	0	9	190	0	429	1,675	0	0	0	0
4:45 PM	0	0	0	0	0	4	0	17	0	0	200	9	0	4	176	0	410	1,685	0	0	0	0
5:00 PM	0	0	0	0	0	4	0	14	0	0	180	9	0	10	170	0	387	1,722	0	0	0	0
5:15 PM	0	0	0	0	0	6	0	13	0	0	216	11	0	4	199	0	449		0	0	0	0
5:30 PM	0	0	0	0	0	8	0	19	0	0	229	8	0	7	168	0	439		0	0	0	0
5:45 PM	0	0	0	0	0	2	0	15	0	0	226	5	0	11	188	0	447		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	4
Lights	0	0	0	0	0	19	0	60	0	0	847	32	0	32	716	0	1,706
Mediums	0	0	0	0	0	1	0	0	0	0	4	1	0	0	6	0	12
Total	0	0	0	0	0	20	0	61	0	0	851	33	0	32	725	0	1,722

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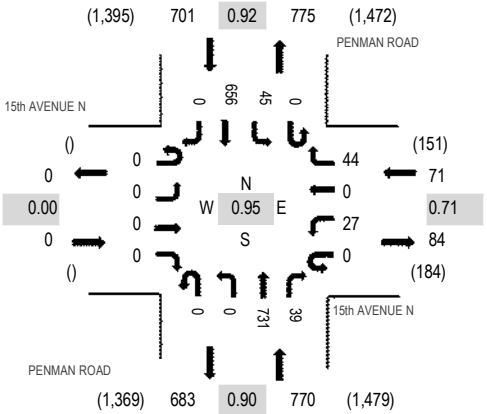
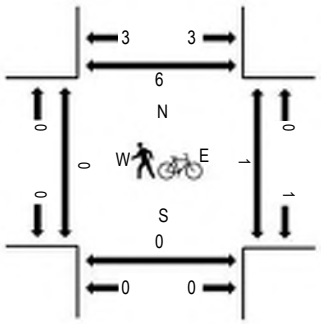
Location: 6 PENMAN ROAD & 15th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	15th AVENUE N Eastbound				15th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	5	0	12	0	0	173	20	0	9	160	0	379	1,483	0	0	0	0
4:15 PM	0	0	0	0	0	12	0	16	0	0	160	17	0	6	173	0	384	1,470	0	0	0	0
4:30 PM	0	0	0	0	0	6	0	13	0	0	129	14	0	13	179	0	354	1,457	0	0	0	0
4:45 PM	0	0	0	0	0	5	0	11	0	0	183	13	0	8	146	0	366	1,504	0	0	0	0
5:00 PM	0	0	0	0	0	3	0	8	0	0	168	7	0	10	170	0	366	1,542	0	0	0	1
5:15 PM	0	0	0	0	0	11	0	16	0	0	171	6	0	7	160	0	371		0	0	0	1
5:30 PM	0	0	0	0	0	8	0	11	0	0	190	15	0	13	164	0	401		0	0	0	0
5:45 PM	0	0	0	0	0	5	0	9	0	0	202	11	0	15	162	0	404		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	0	0	0	0	27	0	44	0	0	725	38	0	45	648	0	1,527
Mediums	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	0	12
Total	0	0	0	0	0	27	0	44	0	0	731	39	0	45	656	0	1,542

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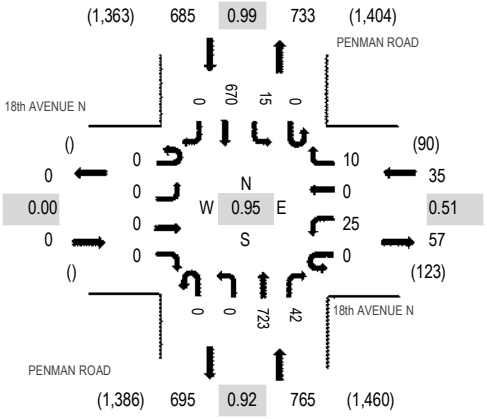
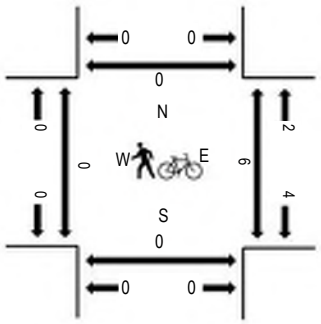
Location: 7 PENMAN ROAD & 18th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	18th AVENUE N Eastbound				18th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	4	0	4	0	0	171	17	0	1	165	0	362	1,428	0	0	0	0
4:15 PM	0	0	0	0	0	11	0	16	0	0	146	14	0	5	171	0	363	1,409	0	0	0	2
4:30 PM	0	0	0	0	0	6	0	7	0	0	133	10	0	2	180	0	338	1,406	0	0	0	0
4:45 PM	0	0	0	0	0	4	0	3	0	0	191	13	0	4	150	0	365	1,459	0	0	0	0
5:00 PM	0	0	0	0	0	5	0	2	0	0	159	10	0	1	166	0	343	1,485	0	0	0	0
5:15 PM	0	0	0	0	0	6	0	3	0	0	169	10	0	3	169	0	360		0	1	0	0
5:30 PM	0	0	0	0	0	8	0	2	0	0	200	8	0	5	168	0	391		0	2	0	0
5:45 PM	0	0	0	0	0	6	0	3	0	0	195	14	0	6	167	0	391		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	0	0	0	25	0	9	0	0	718	42	0	15	661	0	1,470
Mediums	0	0	0	0	0	0	0	1	0	0	5	0	0	0	7	0	13
Total	0	0	0	0	0	25	0	10	0	0	723	42	0	15	670	0	1,485

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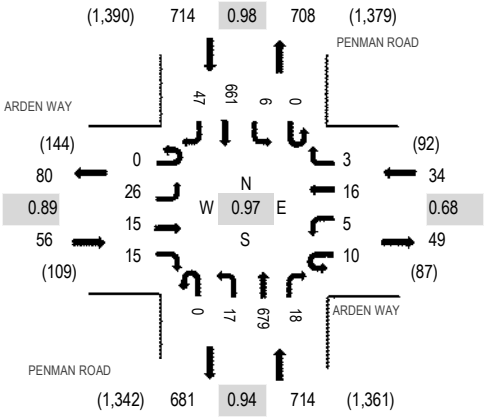
www.alltrafficdata.net

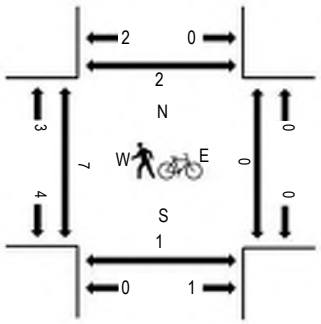
Location: 8 PENMAN ROAD & ARDEN WAY PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ARDEN WAY Eastbound				ARDEN WAY Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	5	4	3	1	2	9	1	0	1	172	1	0	5	151	4	359	1,434	2	0	0	1
4:15 PM	0	7	2	4	0	4	9	9	0	0	136	4	0	1	178	12	366	1,452	1	0	0	0
4:30 PM	0	8	4	4	3	2	3	3	0	3	131	4	0	1	167	11	344	1,458	4	0	0	6
4:45 PM	0	7	2	3	3	3	4	2	0	3	190	2	0	1	140	5	365	1,505	1	0	0	0
5:00 PM	0	8	3	5	4	3	8	0	0	4	170	1	0	0	157	14	377	1,518	1	0	0	0
5:15 PM	0	6	3	2	4	1	3	0	0	4	162	4	0	4	167	12	372		0	0	0	0
5:30 PM	0	7	0	2	2	0	3	0	0	6	185	5	0	1	170	10	391		1	0	0	0
5:45 PM	0	5	9	6	0	1	2	3	0	3	162	8	0	1	167	11	378		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	26	15	15	10	5	16	3	0	17	674	18	0	5	652	47	1,503
Mediums	0	0	0	0	0	0	0	0	0	0	5	0	0	1	7	0	13
Total	0	26	15	15	10	5	16	3	0	17	679	18	0	6	661	47	1,518

ALL TRAFFIC DATA SERVICES
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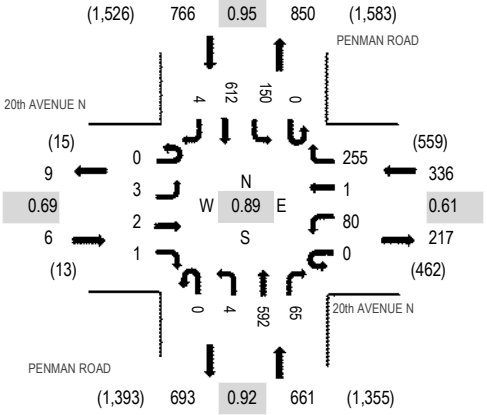
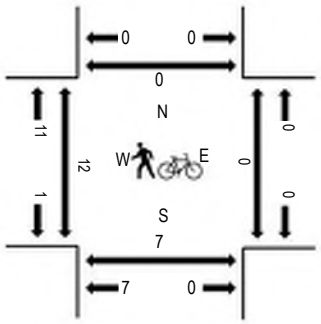
Location: 9 PENMAN ROAD & 20th AVENUE N PM
Date: Tuesday, November 16, 2021
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	20th AVENUE N Eastbound				20th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	18	1	32	0	0	151	23	0	39	142	0	406	1,749	2	0	0	0
4:15 PM	0	0	0	0	0	30	1	106	0	0	128	22	0	46	161	1	495	1,769	2	0	1	0
4:30 PM	0	1	0	1	0	24	0	68	0	1	126	11	0	45	153	1	431	1,683	6	0	2	0
4:45 PM	0	0	0	0	0	11	0	39	0	2	184	11	0	31	139	0	417	1,680	2	0	0	0
5:00 PM	0	2	2	0	0	15	0	42	0	1	154	21	0	28	159	2	426	1,704	2	0	0	0
5:15 PM	0	0	0	1	0	24	1	37	0	1	149	21	0	21	153	1	409		0	0	0	0
5:30 PM	0	1	0	1	0	18	0	24	0	0	158	24	0	38	163	1	428		1	0	0	0
5:45 PM	0	3	0	1	0	26	0	42	0	0	136	31	0	48	153	1	441		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	3	2	1	0	76	1	251	0	4	587	64	0	148	607	4	1,748
Mediums	0	0	0	0	0	4	0	4	0	0	4	1	0	2	3	0	18
Total	0	3	2	1	0	80	1	255	0	4	592	65	0	150	612	4	1,769

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

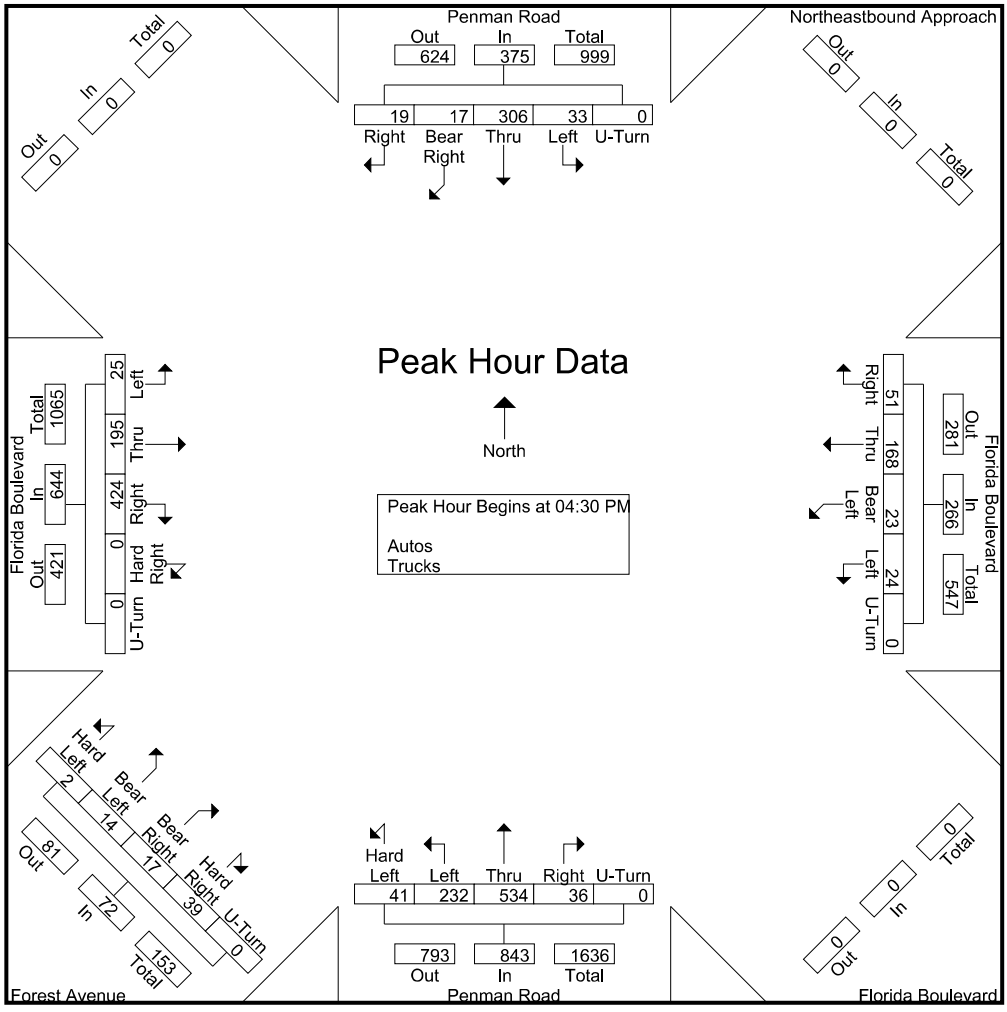
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	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 : 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



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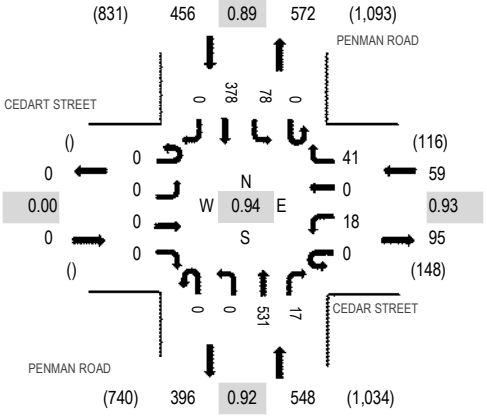
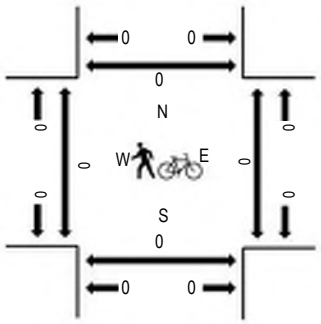
Location: 11 PENMAN ROAD & CEDAR STREET PM
Date: Tuesday, November 16, 2021
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CEDART STREET Eastbound				CEDAR STREET Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	4	0	9	0	0	91	5	0	7	82	0	198	960	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	13	0	0	139	4	0	6	91	0	254	1,046	0	0	0	0
4:30 PM	0	0	0	0	0	3	0	10	0	0	137	2	0	8	75	0	235	1,036	0	0	0	0
4:45 PM	0	0	0	0	0	4	0	5	0	0	151	7	0	18	88	0	273	1,063	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	12	0	0	140	2	0	22	106	0	284	1,021	0	0	0	0
5:15 PM	0	0	0	0	0	6	0	12	0	0	115	3	0	15	93	0	244		0	0	0	0
5:30 PM	0	0	0	0	0	6	0	12	0	0	125	5	0	23	91	0	262		0	0	0	0
5:45 PM	0	0	0	0	0	1	0	16	0	0	106	2	0	19	87	0	231		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	0	0	0	0	18	0	40	0	0	528	17	0	78	372	0	1,053
Mediums	0	0	0	0	0	0	0	1	0	0	3	0	0	0	5	0	9
Total	0	0	0	0	0	18	0	41	0	0	531	17	0	78	378	0	1,063

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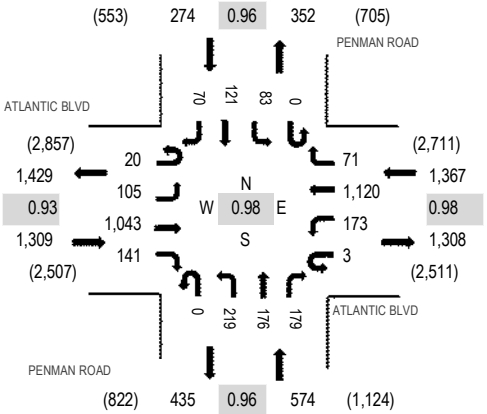
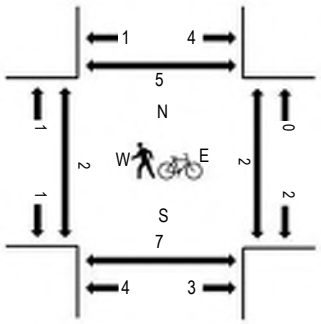
Location: 12 PENMAN ROAD & ATLANTIC BLVD PM
Date: Tuesday, November 16, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ATLANTIC BLVD Eastbound				ATLANTIC BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	29	251	34	1	22	282	21	0	45	26	43	0	30	32	21	838	3,371	0	0	1	1
4:15 PM	2	24	231	33	1	46	288	17	0	42	45	36	0	12	30	11	818	3,434	0	0	0	1
4:30 PM	4	23	232	40	1	31	265	19	0	70	54	34	0	23	30	22	848	3,478	0	0	0	1
4:45 PM	0	18	244	32	0	36	287	27	0	66	50	39	0	25	21	22	867	3,521	0	0	0	1
5:00 PM	4	27	259	44	1	49	291	15	0	52	39	49	0	24	30	17	901	3,524	0	0	0	1
5:15 PM	7	28	228	27	0	44	284	17	0	59	56	38	0	19	33	22	862		0	0	0	2
5:30 PM	5	27	283	37	0	39	288	17	0	52	39	39	0	21	30	14	891		2	0	0	2
5:45 PM	4	23	273	33	2	41	257	22	0	56	42	53	0	19	28	17	870		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	20	105	1,039	140	3	173	1,103	70	0	216	175	179	0	82	119	68	3,492
Mediums	0	0	4	1	0	0	17	1	0	3	1	0	0	1	2	2	32
Total	20	105	1,043	141	3	173	1,120	71	0	219	176	179	0	83	121	70	3,524

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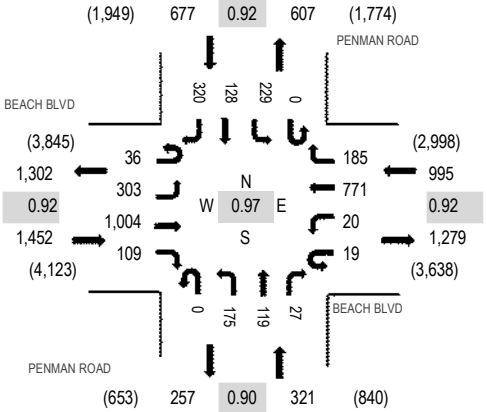
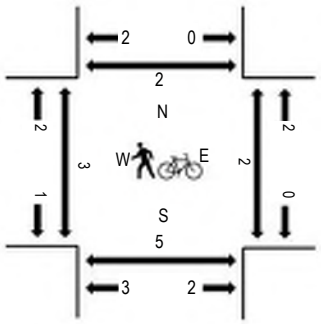
Location: 1 PENMAN ROAD & BEACH BLVD Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:30 PM - 12:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	BEACH BLVD Eastbound				BEACH BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	9	74	232	28	5	2	198	40	0	40	29	1	0	52	28	84	822	3,219	0	1	2	1
11:15 AM	2	73	218	26	0	3	184	50	0	42	32	8	0	58	29	80	805	3,181	2	0	0	2
11:30 AM	2	81	219	25	6	7	171	46	0	38	20	2	0	58	27	78	780	3,253	0	0	0	0
11:45 AM	4	80	243	17	5	7	165	43	0	39	28	2	0	52	33	94	812	3,361	0	0	0	0
12:00 PM	8	70	218	23	3	3	195	47	0	27	28	2	0	60	18	82	784	3,351	1	0	0	0
12:15 PM	9	73	235	29	5	8	194	54	0	43	38	3	0	60	35	91	877	3,445	1	0	2	0
12:30 PM	9	75	277	36	1	5	199	54	0	44	23	7	0	59	22	77	888	3,392	0	0	0	0
12:45 PM	6	76	238	25	5	3	174	32	0	37	31	6	0	56	34	79	802	3,313	0	0	1	0
1:00 PM	12	79	254	19	8	4	204	45	0	51	27	11	0	54	37	73	878	3,340	0	0	0	0
1:15 PM	10	76	245	17	1	2	203	50	0	39	30	8	0	46	18	79	824		0	0	0	0
1:30 PM	7	66	246	15	3	6	215	49	0	24	22	2	0	54	20	80	809		0	0	0	2
1:45 PM	9	64	249	15	5	5	237	47	0	33	22	1	0	55	22	65	829		0	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	36	302	1,000	109	19	20	765	183	0	175	119	27	0	229	127	317	3,428
Mediums	0	1	4	0	0	0	5	2	0	0	0	0	0	0	1	3	16
Total	36	303	1,004	109	19	20	771	185	0	175	119	27	0	229	128	320	3,445

ALL TRAFFIC DATA SERVICES
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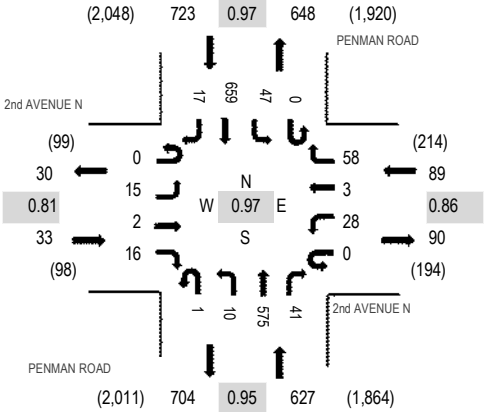
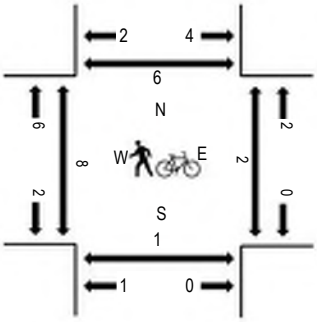
Location: 2 PENMAN ROAD & 2nd AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 11:00 AM - 12:00 PM
Peak 15-Minutes: 11:15 AM - 11:30 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	2nd AVENUE N Eastbound				2nd AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	2	0	2	0	7	0	11	0	2	139	11	0	15	163	4	356	1,472	0	0	0	0
11:15 AM	0	8	0	4	0	3	0	15	0	1	153	9	0	11	172	3	379	1,459	2	2	1	0
11:30 AM	0	3	1	6	0	10	1	13	1	4	140	14	0	11	156	4	364	1,468	4	0	0	4
11:45 AM	0	2	1	4	0	8	2	19	0	3	143	7	0	10	168	6	373	1,443	2	0	0	2
12:00 PM	0	3	1	9	0	10	5	14	0	4	140	6	0	7	143	1	343	1,417	1	0	0	0
12:15 PM	0	3	1	6	0	2	3	13	0	3	160	5	0	5	179	8	388	1,422	3	0	0	3
12:30 PM	0	4	1	2	0	1	0	10	0	2	145	5	0	3	159	7	339	1,361	2	0	0	0
12:45 PM	0	3	2	4	0	5	0	4	0	6	142	5	0	6	168	2	347	1,364	0	0	0	0
1:00 PM	0	3	0	2	0	2	0	8	0	2	157	4	0	4	164	2	348	1,335	0	0	0	0
1:15 PM	0	2	0	3	0	4	2	5	0	3	149	10	0	5	139	5	327		1	0	0	0
1:30 PM	0	8	1	3	0	4	2	12	0	0	141	6	0	11	149	5	342		0	0	0	0
1:45 PM	0	2	1	1	0	6	2	11	0	2	133	7	0	8	142	3	318		1	0	0	0

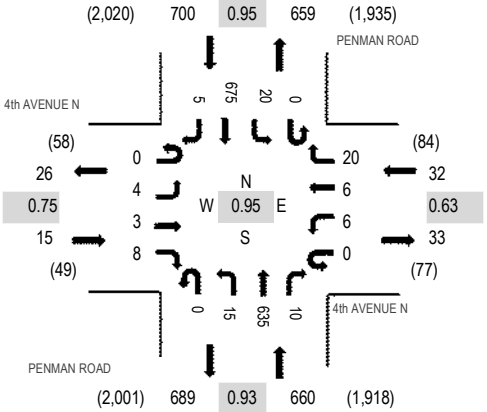
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	15	2	15	0	27	3	58	1	10	571	39	0	47	656	17	1,461
Mediums	0	0	0	1	0	1	0	0	0	0	4	2	0	0	3	0	11
Total	0	15	2	16	0	28	3	58	1	10	575	41	0	47	659	17	1,472

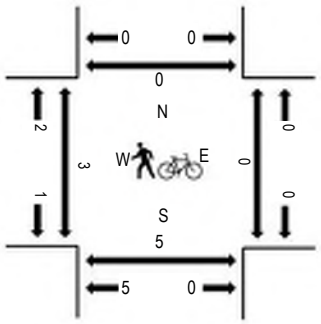
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 PENMAN ROAD & 4th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	4th AVENUE N Eastbound				4th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	2	1	4	0	1	2	2	0	1	140	3	0	1	178	1	336	1,379	0	0	0	0
11:15 AM	0	2	0	3	0	1	1	2	0	1	176	1	0	2	181	1	371	1,370	0	0	0	0
11:30 AM	0	1	0	3	0	2	0	9	0	1	148	5	0	4	155	1	329	1,369	0	0	0	0
11:45 AM	0	0	1	0	0	0	1	3	0	3	157	2	0	3	173	0	343	1,378	1	0	0	0
12:00 PM	0	2	0	3	0	1	0	4	0	0	166	1	0	1	146	3	327	1,379	0	0	0	0
12:15 PM	0	0	0	4	0	2	1	5	0	4	170	5	0	2	176	1	370	1,407	1	0	0	0
12:30 PM	0	0	0	3	0	1	2	2	0	2	159	0	0	8	159	2	338	1,350	0	0	0	0
12:45 PM	0	1	1	0	0	2	3	9	0	7	141	1	0	5	173	1	344	1,347	0	0	3	0
1:00 PM	0	3	2	1	0	1	0	4	0	2	165	4	0	5	167	1	355	1,313	0	0	1	0
1:15 PM	0	2	0	3	0	1	0	6	0	2	149	3	0	2	142	3	313		1	0	0	0
1:30 PM	0	3	0	2	0	3	0	6	0	1	156	1	0	5	156	2	335		0	0	0	0
1:45 PM	0	1	0	1	0	1	1	5	0	3	134	4	0	4	152	4	310		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	4	3	8	0	6	6	19	0	15	632	10	0	20	672	5	1,400
Mediums	0	0	0	0	0	0	0	1	0	0	3	0	0	0	2	0	6
Total	0	4	3	8	0	6	6	20	0	15	635	10	0	20	675	5	1,407

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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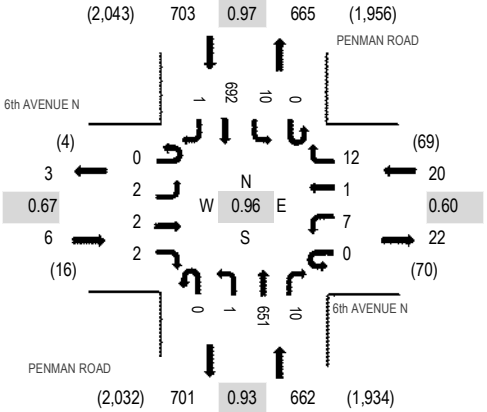
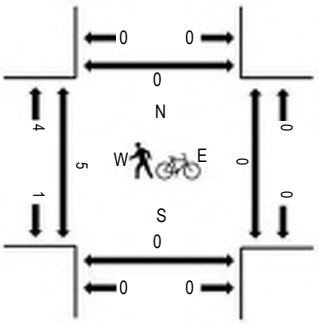
Location: 4 PENMAN ROAD & 6th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	6th AVENUE N Eastbound				6th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	1	0	2	0	0	0	5	0	0	137	4	0	5	178	0	332	1,376	1	0	0	0
11:15 AM	0	0	1	0	0	2	0	6	0	0	173	6	0	1	181	0	370	1,381	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	4	0	0	157	2	0	2	162	0	327	1,374	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	5	0	0	155	2	0	7	177	0	347	1,387	1	0	0	0
12:00 PM	0	0	1	0	0	4	1	8	0	0	170	2	0	2	149	0	337	1,378	0	0	0	0
12:15 PM	0	0	1	0	0	0	1	3	0	0	176	0	0	3	179	0	363	1,391	0	0	0	0
12:30 PM	0	0	0	0	0	3	0	3	0	0	157	4	0	3	169	1	340	1,344	1	0	0	0
12:45 PM	0	1	1	1	0	2	0	3	0	1	149	3	0	3	174	0	338	1,341	0	0	0	0
1:00 PM	0	1	0	1	0	2	0	3	0	0	169	3	0	1	170	0	350	1,308	0	0	0	0
1:15 PM	0	0	0	0	0	1	0	2	0	0	159	1	0	4	149	0	316		1	0	0	0
1:30 PM	0	1	0	2	0	3	0	4	0	0	163	1	0	4	159	0	337		0	0	0	0
1:45 PM	0	2	0	0	0	1	0	2	1	0	137	2	0	1	159	0	305		0	0	0	0

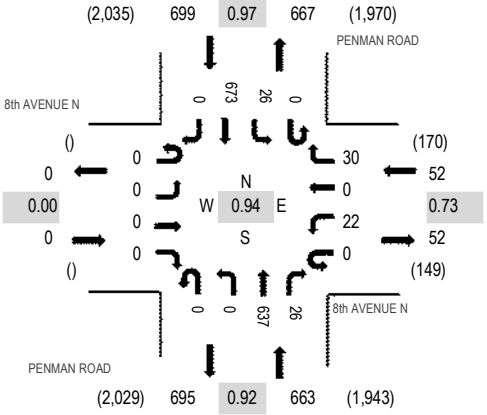
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	2	2	2	0	7	1	12	0	1	646	10	0	10	689	1	1,383
Mediums	0	0	0	0	0	0	0	0	0	0	5	0	0	0	2	0	7
Total	0	2	2	2	0	7	1	12	0	1	651	10	0	10	692	1	1,391

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

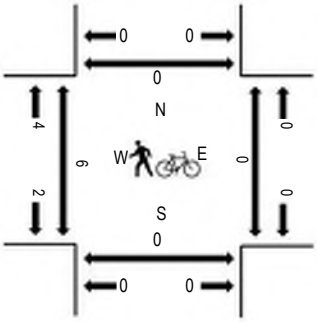
Location: 5 PENMAN ROAD & 8th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	8th AVENUE N Eastbound				8th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	0	0	0	0	7	0	9	0	0	133	12	0	5	173	0	339	1,408	5	0	0	0
11:15 AM	0	0	0	0	0	5	0	11	0	0	173	7	0	8	173	0	377	1,409	2	0	0	0
11:30 AM	0	0	0	0	0	3	0	6	0	0	155	6	0	4	164	0	338	1,409	0	0	0	0
11:45 AM	0	0	0	0	0	3	0	5	0	0	160	2	0	6	178	0	354	1,406	1	0	0	0
12:00 PM	0	0	0	0	0	5	0	8	0	0	164	8	0	7	148	0	340	1,397	0	0	0	0
12:15 PM	0	0	0	0	0	5	0	9	0	0	174	10	0	9	170	0	377	1,414	1	0	0	0
12:30 PM	0	0	0	0	0	9	0	3	0	0	153	5	0	4	161	0	335	1,373	3	0	0	0
12:45 PM	0	0	0	0	0	6	0	9	0	0	149	4	0	4	173	0	345	1,373	0	0	0	0
1:00 PM	0	0	0	0	0	2	0	9	0	0	161	7	0	9	169	0	357	1,343	0	0	0	0
1:15 PM	0	0	0	0	0	5	0	11	0	0	155	5	0	10	150	0	336		1	0	0	0
1:30 PM	0	0	0	0	0	11	0	6	0	0	156	4	0	4	154	0	335		0	0	0	0
1:45 PM	0	0	0	0	0	9	0	14	0	0	137	3	0	6	146	0	315		0	0	0	0

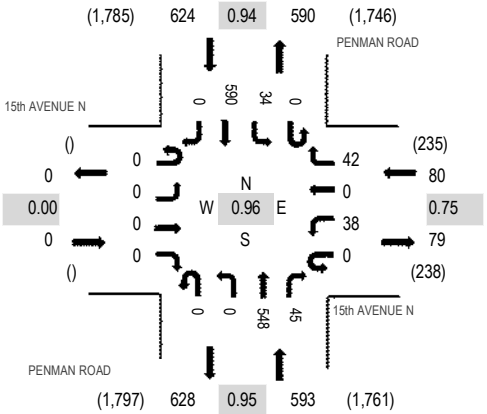
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	22	0	30	0	0	633	25	0	26	668	0	1,404
Mediums	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	10
Total	0	0	0	0	0	22	0	30	0	0	637	26	0	26	673	0	1,414

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

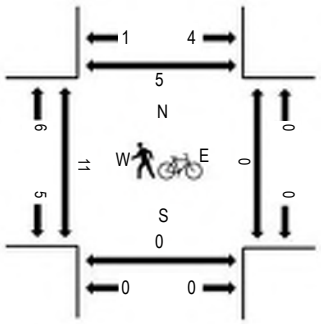
Location: 6 PENMAN ROAD & 15th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	15th AVENUE N Eastbound				15th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	0	0	0	1	9	0	14	0	0	129	9	0	0	142	0	304	1,278	0	0	0	1
11:15 AM	0	0	0	0	0	13	0	5	0	0	154	11	0	11	142	0	336	1,288	0	0	0	0
11:30 AM	0	0	0	0	0	10	0	12	0	0	123	13	0	4	145	0	307	1,286	0	0	1	0
11:45 AM	0	0	0	0	0	11	0	7	0	0	144	11	0	12	146	0	331	1,280	0	0	0	0
12:00 PM	0	0	0	0	0	11	0	13	0	0	147	11	0	12	120	0	314	1,288	0	0	0	0
12:15 PM	0	0	0	0	0	6	0	9	0	0	147	14	0	7	151	0	334	1,297	0	0	0	0
12:30 PM	0	0	0	0	0	9	0	10	0	0	125	16	0	9	132	0	301	1,263	1	0	0	0
12:45 PM	0	0	0	0	0	14	0	15	0	0	139	5	0	11	155	0	339	1,251	1	0	0	0
1:00 PM	0	0	0	0	0	9	0	8	0	0	137	10	0	7	152	0	323	1,215	1	0	0	2
1:15 PM	0	0	0	0	0	11	0	4	0	0	128	12	0	12	133	0	300		1	0	0	0
1:30 PM	0	0	0	0	0	8	0	9	0	0	127	9	0	9	127	0	289		0	0	0	0
1:45 PM	0	0	0	0	0	7	0	10	0	0	130	10	0	12	134	0	303		0	0	0	0

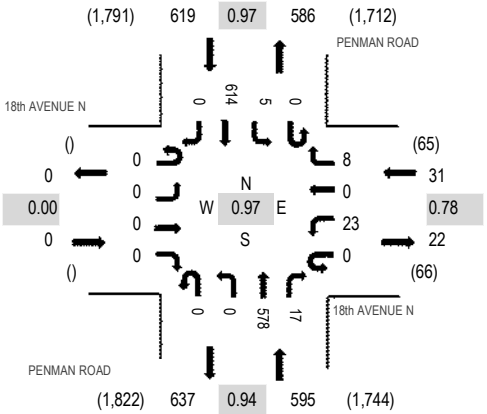
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	38	0	42	0	0	545	45	0	34	588	0	1,292
Mediums	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5
Total	0	0	0	0	0	38	0	42	0	0	548	45	0	34	590	0	1,297

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 7 PENMAN ROAD & 18th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

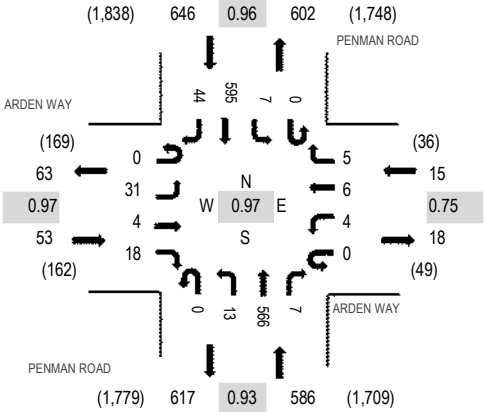
Peak Hour - Motorized Vehicles


(1,791) 619 0.97 586 (1,712)
PENMAN ROAD
18th AVENUE N
614
5
0
0
0

(303) 216-2439
www.alltrafficdata.net

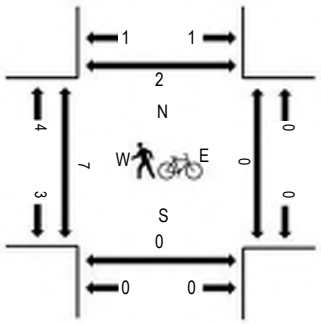
Location: 8 PENMAN ROAD & ARDEN WAY Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:15 PM - 01:15 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	ARDEN WAY Eastbound				ARDEN WAY Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	9	0	3	0	2	1	1	0	3	136	2	0	3	139	15	314	1,242	0	0	0	1
11:15 AM	0	11	0	4	0	0	1	0	0	3	145	0	0	1	143	7	315	1,250	0	0	0	0
11:30 AM	0	8	1	5	0	0	1	0	0	2	127	1	1	3	141	8	298	1,269	0	0	0	0
11:45 AM	0	9	2	3	0	2	0	0	0	3	137	2	0	0	151	6	315	1,282	5	0	0	3
12:00 PM	0	8	1	6	0	1	1	0	0	6	156	0	0	0	131	12	322	1,296	0	0	0	0
12:15 PM	0	4	0	4	0	0	1	3	0	3	158	3	0	0	149	9	334	1,300	2	0	0	0
12:30 PM	0	8	4	4	0	0	1	2	0	3	130	0	0	0	147	12	311	1,249	0	0	0	1
12:45 PM	0	9	0	5	0	3	2	0	0	2	145	3	0	1	145	14	329	1,229	1	0	0	0
1:00 PM	0	10	0	5	0	1	2	0	0	5	133	1	0	6	154	9	326	1,207	1	0	0	0
1:15 PM	0	3	1	5	0	0	2	2	0	4	114	2	0	4	139	7	283		0	0	0	1
1:30 PM	0	7	0	4	0	2	1	0	0	5	137	1	0	2	126	6	291		0	0	0	0
1:45 PM	0	7	0	12	0	2	2	0	0	4	128	5	0	0	141	6	307		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	31	3	17	0	4	6	5	0	12	564	6	0	7	594	44	1,293
Mediums	0	0	1	1	0	0	0	0	0	1	2	1	0	0	1	0	7
Total	0	31	4	18	0	4	6	5	0	13	566	7	0	7	595	44	1,300

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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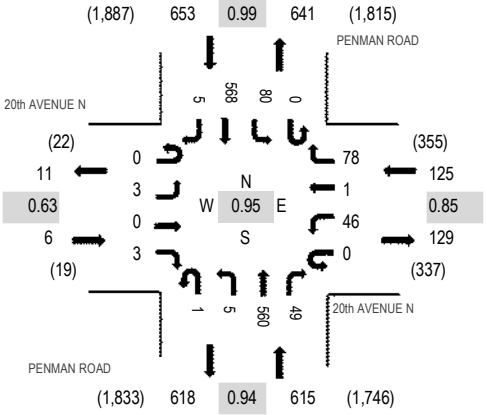
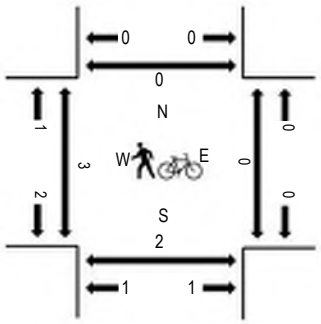
Location: 9 PENMAN ROAD & 20th AVENUE N Noon
Date: Saturday, November 13, 2021
Peak Hour: 11:45 AM - 12:45 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	20th AVENUE N Eastbound				20th AVENUE N Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	0	0	1	0	12	0	22	0	0	133	9	0	14	141	0	332	1,333	0	0	0	0
11:15 AM	0	0	0	2	0	11	0	16	0	0	140	18	0	10	137	0	334	1,350	0	0	0	0
11:30 AM	0	0	0	1	0	15	0	12	0	2	128	8	0	16	136	0	318	1,384	0	0	0	0
11:45 AM	0	1	0	2	0	9	0	16	0	1	133	12	0	26	147	2	349	1,399	1	0	0	0
12:00 PM	0	0	0	0	0	11	0	22	0	2	149	14	0	20	131	0	349	1,397	0	0	0	0
12:15 PM	0	2	0	0	0	11	1	25	0	2	149	12	0	14	151	1	368	1,381	0	0	1	0
12:30 PM	0	0	0	1	0	15	0	15	1	0	129	11	0	20	139	2	333	1,326	0	0	0	0
12:45 PM	0	1	1	1	0	11	0	15	0	4	138	10	0	17	148	1	347	1,312	1	0	0	0
1:00 PM	0	0	0	4	0	10	1	11	0	1	132	11	0	8	155	0	333	1,277	1	0	0	0
1:15 PM	0	1	0	0	0	13	0	20	0	0	110	10	0	21	138	0	313		1	0	0	0
1:30 PM	0	0	0	1	0	14	0	23	0	1	135	8	0	18	119	0	319		0	0	0	0
1:45 PM	0	0	0	0	0	7	0	17	0	0	120	13	0	16	138	1	312		4	0	3	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2
Lights	0	3	0	3	0	46	1	76	1	5	556	49	0	80	565	5	1,390
Mediums	0	0	0	0	0	0	0	1	0	0	4	0	0	0	2	0	7
Total	0	3	0	3	0	46	1	78	1	5	560	49	0	80	568	5	1,399

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

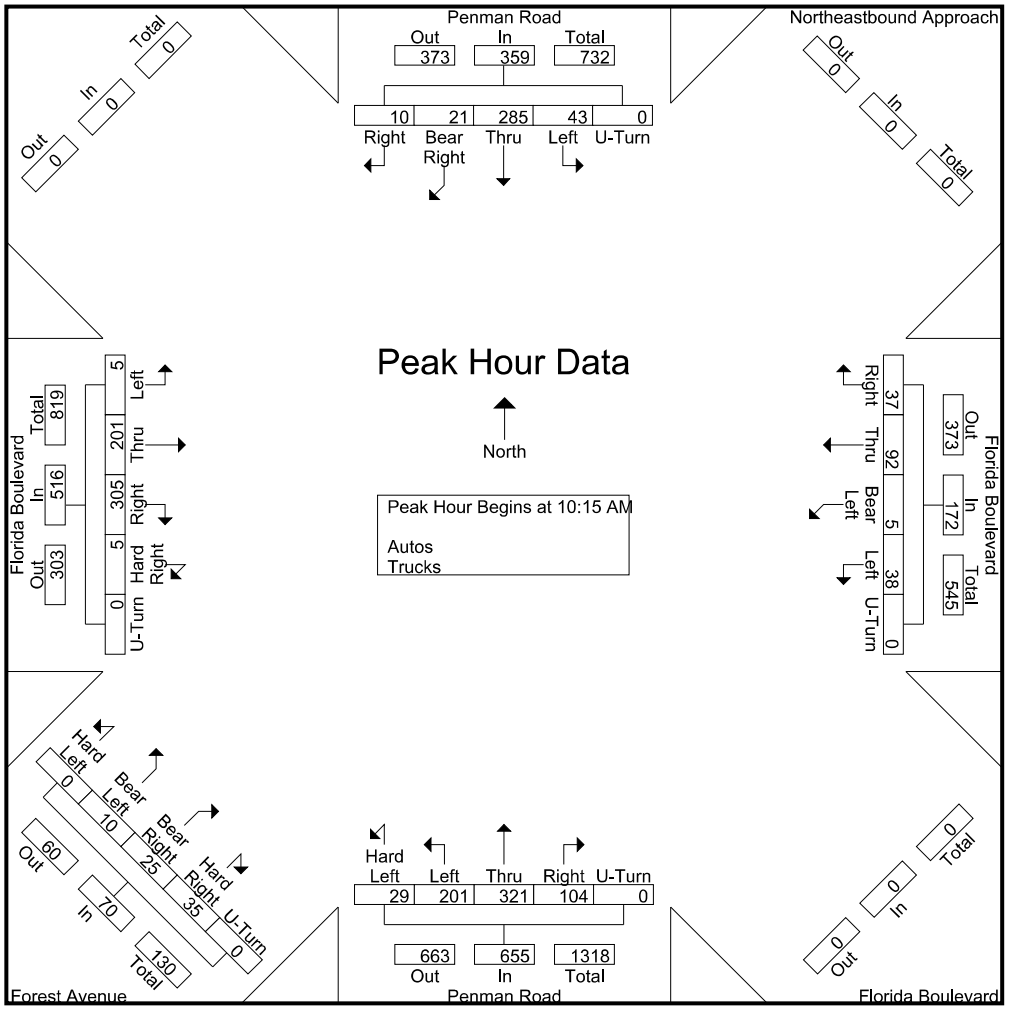
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	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

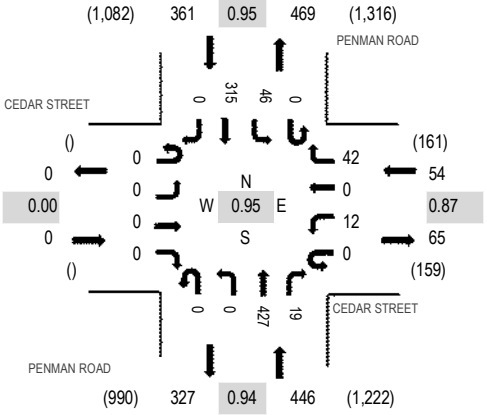
	Penman Road Southbound						Florida Boulevard Northwestbound						Penman Road Northbound						Forest Avenue Eastbound						Florida Boulevard Southeastbound						
Start Time	Left	Thru	Bear Right	Right	U-Turn	App. Total	Left	Bear Left	Thru	Right	U-Turn	App. Total	Hard Left	Left	Thru	Right	U-Turn	App. Total	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



(303) 216-2439
www.alltrafficdata.net

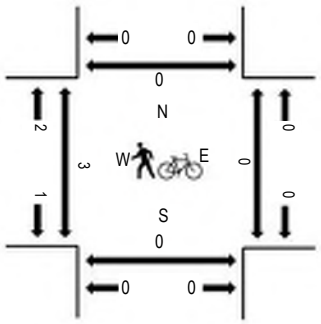
Location: 11 PENMAN ROAD & CEDAR STREET Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CEDAR STREET Eastbound				CEDAR STREET Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	0	0	0	0	2	0	13	0	0	93	1	0	8	79	0	196	833	0	0	0	0
11:15 AM	0	0	0	0	0	3	0	9	0	0	111	1	0	12	69	0	205	830	0	0	0	0
11:30 AM	0	0	0	0	0	3	0	14	0	0	101	4	0	14	82	0	218	842	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	14	0	0	103	1	0	8	87	0	214	848	0	0	0	0
12:00 PM	0	0	0	0	0	3	0	12	0	0	99	4	0	10	65	0	193	861	0	0	0	0
12:15 PM	0	0	0	0	0	2	0	10	0	0	108	5	0	12	80	0	217	846	0	0	0	0
12:30 PM	0	0	0	0	0	1	0	10	0	0	110	8	0	15	80	0	224	822	0	0	0	0
12:45 PM	0	0	0	0	0	6	0	10	0	0	110	2	0	9	90	0	227	801	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	3	0	0	83	2	0	7	83	0	178	771	0	0	0	0
1:15 PM	0	0	0	0	0	3	0	7	0	0	86	4	0	8	85	0	193		0	0	0	0
1:30 PM	0	0	0	0	0	2	0	14	0	0	91	4	0	11	81	0	203		0	0	0	0
1:45 PM	0	0	0	0	0	4	0	15	0	0	90	1	0	8	79	0	197		0	0	0	0

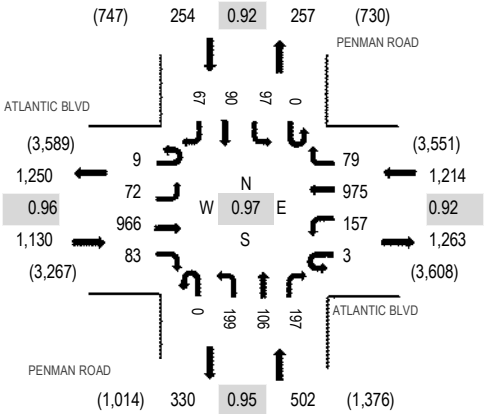
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	12	0	42	0	0	427	19	0	46	315	0	861
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	12	0	42	0	0	427	19	0	46	315	0	861

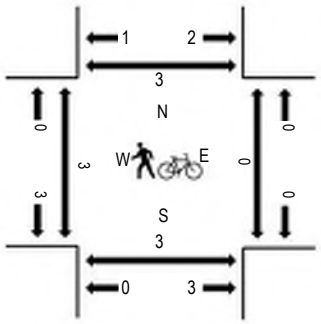
(303) 216-2439
www.alltrafficdata.net

Location: 12 PENMAN ROAD & ATLANTIC BLVD Noon
Date: Saturday, November 13, 2021
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:15 PM - 12:30 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	ATLANTIC BLVD Eastbound				ATLANTIC BLVD Westbound				PENMAN ROAD Northbound				PENMAN ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	3	25	232	19	1	40	205	14	0	43	23	41	0	28	25	16	715	2,945	0	0	0	0
11:15 AM	1	12	219	22	2	37	245	19	0	40	24	37	0	19	17	23	717	2,969	0	0	0	1
11:30 AM	1	19	244	25	3	44	245	7	0	40	33	55	0	25	28	10	779	3,048	0	0	1	0
11:45 AM	2	22	217	23	0	47	227	16	0	43	32	46	0	15	22	22	734	3,044	1	3	0	1
12:00 PM	2	16	257	17	1	35	228	14	0	46	26	43	0	20	16	18	739	3,100	2	0	0	1
12:15 PM	1	19	225	21	1	39	267	28	0	55	28	49	0	27	19	17	796	3,067	0	0	1	1
12:30 PM	5	19	245	24	0	35	232	21	0	42	27	59	0	26	26	14	775	2,997	0	0	1	0
12:45 PM	1	18	239	21	1	48	248	16	0	56	25	46	0	24	29	18	790	2,933	0	0	0	0
1:00 PM	4	20	212	18	0	50	226	15	0	37	27	36	0	37	11	13	706	2,896	0	1	2	0
1:15 PM	1	20	226	14	2	45	228	19	0	44	18	53	0	14	28	14	726		0	0	0	0
1:30 PM	3	16	222	24	2	36	236	10	0	35	24	37	0	25	23	18	711		0	0	1	0
1:45 PM	1	19	227	24	0	40	255	21	0	41	18	47	0	21	22	17	753		2	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	6
Lights	9	72	956	81	3	157	962	79	0	199	105	197	0	97	90	65	3,072
Mediums	0	0	7	0	0	0	12	0	0	0	1	0	0	0	0	2	22
Total	9	72	966	83	3	157	975	79	0	199	106	197	0	97	90	67	3,100

Appendix D

Speed Study

State of Florida Department of Transportation

VEHICLE SPOT SPEED STUDY

General Information

Analyst/Observer: **Austin Chapman**
Agency or Company: **Peters and Yaffee, Inc**
Date Performed: **Wednesday, Decmber 8,2021**
Time Period From: **10.45 AM** To: **11:45 AM**
Weather/Road Condition: **Clear/Dry**

Site Information

Location: **Between 11th and 12th Ave**
City: **Jacksonville Beach** County: **Duval**
Roadway ID:
Milepost: Posted Speed (mph): **35**
Remarks:

Vehicles traveling South bound						Speed (mph)	Vehicles traveling North bound						Both Directions	
Cum Total	Total	20	15	10	5		5	10	15	20	Total	Cum Total	Total	Cum Total
	0					≥ 80					0			217
	0					78 - 79.9					0			217
	0					76 - 77.9					0			217
	0					74 - 75.9					0			217
	0					72 - 73.9					0			217
	0					70 - 71.9					0			217
	0					68 - 69.9					0			217
	0					66 - 67.9					0			217
	0					64 - 65.9					0			217
	0					62 - 63.9					0			217
	0					60 - 61.9					0			217
	0					58 - 59.9					0			217
	0					56 - 57.9					0			217
	0					54 - 55.9					0			217
	0					52 - 53.9					0			217
	0					50 - 51.9					0			217
112	1	1				48 - 49.9					0		1	217
	0					46 - 47.9				1	1	105	1	216
	0					44 - 45.9				4	4	104	4	215
111	6	6				42 - 43.9				8	8	100	14	211
105	3	3				40 - 41.9				16	16	92	19	197
102	19	19				38 - 39.9				16	16	76	35	178
83	35	35				36 - 37.9				23	23	60	58	143
48	26	26				34 - 35.9				22	22	37	48	85
22	16	16				32 - 33.9				8	8	15	24	37
6	4	4				30 - 31.9				4	4	7	8	13
	0					28 - 29.9				2	2	3	2	5
2	1	1				26 - 27.9				1	1	1	2	3
1	1	1				24 - 25.9					0		1	1
	0					22 - 23.9					0			
	0					20 - 21.9					0			
	0					18 - 19.9					0			
	0					16 - 17.9					0			
	0					14 - 15.9					0			
	0					12 - 13.9					0			
	0					10 - 11.9					0			
0	0					≤ 10					0			
112		**TOTALS**									**105**		**217**	

Travel Direction 1 →	South	Speed Data Summary	North	← Travel Direction 2	Both Directions
	95	**85th Percentile Vehicle**	89	**85th Percentile Vehicle**	184
	39	**85th Percentile Speed**	41	**85th Percentile Speed**	41
	56	**50th Percentile Vehicle**	53	**50th Percentile Vehicle**	109
	37	**50th Percentile Speed**	37	**50th Percentile Speed**	37
	30-40	**10 mph pace**	34-44	**10 mph pace**	32-42
	OK		Warning: Multiple 10 mph paces. Highest range shown		OK

State of Florida Department of Transportation

VEHICLE SPOT SPEED STUDY

General Information		Site Information	
Analyst/Observer:	Austin Chapman	Location:	Church of JL LOS
Agency or Company:	Peters and Yaffee, Inc	City:	Jacksonville Beach County: Duval
Date Performed:	Wednesday, Decmber 8, 2021	Roadway ID:	
Time Period From:	To:	Milepost:	Posted Speed (mph): 35
Weather/Road Condition:	Clear/Dry	Remarks:	

Vehicles traveling South bound						Speed (mph)	Vehicles traveling North bound						Both Directions	
Cum Total	Total	20	15	10	5		5	10	15	20	Total	Cum Total	Total	Cum Total
	0					≥ 80					0			226
	0					78 - 79.9					0			226
	0					76 - 77.9					0			226
	0					74 - 75.9					0			226
	0					72 - 73.9					0			226
	0					70 - 71.9					0			226
	0					68 - 69.9					0			226
	0					66 - 67.9					0			226
	0					64 - 65.9					0			226
	0					62 - 63.9					0			226
	0					60 - 61.9					0			226
	0					58 - 59.9					0			226
	0					56 - 57.9					0			226
116	1	1				54 - 55.9					0		1	226
	0					52 - 53.9					0			225
	0					50 - 51.9				1	1	110	1	225
115	1	1				48 - 49.9					0		1	224
	0					46 - 47.9				1	1	109	1	223
	0					44 - 45.9				1	1	108	1	222
114	8	8				42 - 43.9				4	4	107	12	221
106	8	8				40 - 41.9				6	6	103	14	209
98	15	15				38 - 39.9				16	16	97	31	195
83	28	28				36 - 37.9				30	30	81	58	164
55	21	21				34 - 35.9				24	24	51	45	106
34	18	18				32 - 33.9				19	19	27	37	61
16	15	15				30 - 31.9				5	5	8	20	24
	0					28 - 29.9				2	2	3	2	4
1	1	1				26 - 27.9					0		1	2
	0					24 - 25.9				1	1	1	1	1
	0					22 - 23.9					0			
	0					20 - 21.9					0			
	0					18 - 19.9					0			
	0					16 - 17.9					0			
	0					14 - 15.9					0			
	0					12 - 13.9					0			
	0					10 - 11.9					0			
0	0					≤ 10					0			
116		TOTALS									110		226	

Travel Direction 1 →	South	Speed Data Summary	North	← Travel Direction 2	Both Directions
	99	85th Percentile Vehicle	94	85th Percentile Vehicle	192
	41	85th Percentile Speed	39	85th Percentile Speed	39
	58	50th Percentile Vehicle	55	50th Percentile Vehicle	113
	37	50th Percentile Speed	37	50th Percentile Speed	37
	30-40	10 mph pace	32-42	10 mph pace	30-40
	OK		OK		OK

Appendix E

Crash Summary
Crash Diagram

Form 750-020-06
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
1	4/13/2016	Wed	6:13 PM	0	1	$200	Bicycle	Day	Wet	Incapacitating Injury
2	7/2/2016	Sat	2:20 AM	0	0	$15,000	Angle	Night	Dry	No Injury
3	7/31/2016	Sun	7:10 PM	0	0	$20,000	Left Turn	Day	Dry	No Injury
4	9/11/2016	Sun	10:35 PM	0	0	$1,000	Off Road	Night	Dry	No Injury
5	10/16/2016	Sun	10:35 PM	0	0	$4,000	Left Turn	Night	Dry	No Injury
6	2/2/2017	Thu	11:45 PM	0	0	$18,500	Off Road	Night	Dry	No Injury
7	3/15/2017	Wed	3:30 PM	0	1	$3,000	Rear End	Day	Dry	Non-Incapacitating Injury
8	7/8/2017	Sat	9:45 PM	0	2	$5,000	Sideswipe	Night	Dry	Possible Injury
9	12/27/2017	Wed	3:26 PM	0	1	$1,000	Off Road	Day	Dry	Non-Incapacitating Injury
10	5/25/2018	Fri	12:04 PM	0	1	$20,500	Angle	Day	Dry	Non-Incapacitating Injury
11	6/14/2018	Thu	12:02 PM	0	1	$0	Bicycle	Day	Dry	Incapacitating Injury
12	9/27/2018	Thu	7:50 AM	0	0	$13,000	Angle	Day	Dry	No Injury
13	3/3/2019	Sun	12:54 PM	0	0	$3,500	Sideswipe	Day	Dry	No Injury
14	4/23/2019	Tue	9:42 PM	0	0	$2,000	Angle	Night	Dry	No Injury
15	7/6/2019	Sat	8:30 AM	0	2	$20,000	Angle	Day	Dry	Non-Incapacitating Injury
16	7/30/2019	Tue	4:49 PM	0	0	$6,500	Angle	Day	Dry	No Injury
17	7/31/2019	Wed	3:00 PM	0	0	$500	Angle	Day	Dry	No Injury
18	9/27/2019	Fri	2:15 PM	0	2	$5,000	Rear End	Day	Dry	Non-Incapacitating Injury
19	9/30/2019	Mon	7:07 PM	0	0	$5,000	Angle	Night	Dry	No Injury
20	11/20/2020	Fri	10:22 PM	0	1	$15,300	Angle	Night	Wet	Non-Incapacitating Injury
21	12/6/2020	Sun	9:12 PM	0	1	$2,000	Rear End	Night	Wet	Possible Injury
22	5/6/2020	Wed	8:43 PM	0	2	$16,000	Off Road	Night	Dry	Non-Incapacitating Injury
23	5/30/2020	Sat	10:50 PM	0	0	$2,000	Left Turn	Night	Wet	No Injury
24	9/5/2021	Sun	7:36 PM	0	1	$25,000	Left Turn	Night	Dry	Non-Incapacitating Injury
TOTAL				**0**	**16**	**$204,000**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	12	12	3	0	9	4	0	2	4	2	0
PERCENT	0%	50%	50%	13%	0%	38%	17%	0%	8%	17%	8%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	12	12	4	20	0	12	2	8	2	0
PERCENT	50%	50%	17%	83%	0%	50%	8%	33%	8%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

Form 750-020-06
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
25	3/16/2016	Wed	7:16 AM	0	0	$1,750	Angle	Night	Dry	No Injury
26	3/16/2016	Wed	7:12 AM	0	1	$3,500	Rear End	Night	Dry	Non-Incapacitating Injury
27	9/27/2016	Tue	12:06 PM	0	0	$100	Bicycle	Day	Dry	No Injury
28	11/15/2016	Tue	8:50 AM	0	0	$6,000	Rear End	Day	Dry	No Injury
29	12/14/2016	Wed	10:28 AM	0	0	$1,000	Rear End	Day	Dry	No Injury
30	1/27/2017	Fri	10:01 AM	0	1	$0	Pedestrian	Day	Dry	Possible Injury
31	3/13/2017	Mon	3:20 PM	0	0	$4,000	Sideswipe	Day	Wet	No Injury
32	1/17/2018	Wed	11:55 AM	0	2	$4,000	Angle	Day	Dry	Non-Incapacitating Injury
33	6/3/2018	Sun	12:10 PM	0	0	$15,000	Angle	Day	Dry	No Injury
34	8/7/2018	Tue	4:45 PM	0	0	$6,000	Angle	Day	Dry	No Injury
35	8/9/2018	Thu	10:15 AM	0	2	$5,000	Left Turn	Day	Dry	Non-Incapacitating Injury
36	12/4/2018	Tue	4:23 PM	0	1	$15,000	Angle	Day	Dry	Possible Injury
37	1/13/2019	Sun	11:45 PM	0	0	$1,000	Off Road	Night	Dry	No Injury
38	4/15/2019	Mon	11:30 AM	0	1	$10,000	Rear End	Day	Dry	Possible Injury
39	5/17/2019	Fri	11:50 AM	0	1	$50	Right Turn	Day	Dry	Possible Injury
40	12/23/2019	Mon	1:20 PM	0	1	$15,000	Angle	Day	Dry	Non-Incapacitating Injury
41	10/9/2020	Fri	2:28 PM	0	0	$9,200	Rear End	Day	Wet	No Injury
42	2/28/2021	Sun	2:00 AM	0	0	$0	Off Road	Night	Dry	No Injury
43	9/10/2021	Fri	10:30 AM	0	0	$2,500	Angle	Day	Dry	No Injury
44	10/26/2021	Tue	10:23 AM	0	1	$16,000	Angle	Day	Dry	Possible Injury
45	10/15/2016	Sat	1:30 PM	0	0	$2,500	Backing	Day	Dry	No Injury
46	10/15/2016	Sat	1:30 PM	0	1	$3,000	Angle	Day	Dry	Possible Injury
47	6/11/2016	Sat	6:48 PM	0	0	$1,000	Angle	Day	Dry	No Injury
48	6/6/2016	Mon	12:51 PM	0	1	$8,000	Left Turn	Day	Wet	Possible Injury
TOTAL				**0**	**13**	**$129,600**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	11	13	5	0	10	2	1	1	2	2	1
PERCENT	0%	46%	54%	21%	0%	42%	7%	4%	4%	8%	8%	4%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	20	4	3	21	0	13	7	4	0	0
PERCENT	82%	17%	13%	88%	0%	54%	29%	17%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
49	4/5/2018	Thu	7:30 AM	0	1	$18,000	Rear End	Day	Dry	Possible Injury
50	2/26/2019	Tue	11:00 AM	0	0	$2,500	Rear End	Day	Dry	No Injury
51	11/20/2019	Wed	12:30 PM	0	0	$100	Bicycle	Day	Dry	No Injury
52	7/16/2021	Fri	5:25 PM	0	1	$1,000	Rear End	Day	Dry	Possible Injury
53	2/17/2016	Wed	5:10 PM	0	1	$10,000	Angle	Day	Dry	Possible Injury
54	2/21/2018	Wed	5:50 PM	0	0	$5,000	Head On	Day	Dry	No Injury
55	11/4/2018	Sun	6:34 AM	0	0	$500	Off Road	Unknown	Dry	No Injury
56	1/5/2018	Fri	3:00 PM	0	0	$10,000	Rear End	Day	Dry	No Injury
57	6/21/2019	Fri	9:30 PM	0	0	$1,500	Off Road	Night	Dry	No Injury
58	3/27/2019	Wed	7:35 PM	0	1	$25,000	Angle	Day	Dry	Non-Incapacitating Injury
59	1/3/2019	Thu	3:05 PM	0	1	$1,050	Bicycle	Day	Dry	Non-Incapacitating Injury
60	4/23/2019	Tue	9:30 AM	0	0	$8,000	Off Road	Day	Dry	No Injury
61	5/8/2019	Wed	9:30 PM	0	0	$20,000	Off Road	Night	Dry	No Injury
62	1/5/2020	Sun	8:25 PM	0	0	$1,000	Off Road	Night	Wet	No Injury
63	7/10/2016	Sun	6:35 PM	0	0	$500	Angle	Day	Dry	No Injury
64	4/18/2016	Mon	6:10 PM	0	0	$5,000	Off Road	Day	Dry	No Injury
65	6/15/2016	Wed	5:33 PM	0	0	$8,000	Sideswipe	Day	Dry	No Injury
66	12/12/2017	Tue	7:05 PM	0	0	$2,000	Bicycle	Night	Dry	No Injury
67	4/8/2017	Sat	2:25 AM	0	2	$10,000	Off Road	Night	Dry	Non-Incapacitating Injury
68	5/27/2017	Sat	11:22 AM	0	3	$25,000	Angle	Day	Dry	Possible Injury
69	2/25/2018	Sun	2:00 AM	0	0	$2,000	Off Road	Night	Dry	No Injury
70	10/9/2018	Tue	7:50 PM	0	0	$1,000	Sideswipe	Night	Dry	No Injury
71	7/30/2018	Mon	5:59 PM	0	0	$3,050	Left Turn	Day	Wet	No Injury
72	10/20/2019	Sun	3:00 AM	0	0	$2,000	Off Road	Night	Wet	No Injury
TOTAL				**0**	**10**	**$162,200**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	7	17	4	1	4	1	0	2	9	3	0
PERCENT	0%	29%	71%	17%	4%	17%	4%	0%	9%	38%	13%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	15	8	3	21	0	17	4	3	0	0
PERCENT	63%	33%	13%	88%	0%	71%	17%	13%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
73	10/25/2019	Fri	12:10 AM	0	1	$20,000	Off Road	Night	Dry	Possible Injury
74	4/26/2019	Fri	4:21 PM	0	1	$11,000	Angle	Day	Dry	Possible Injury
75	3/20/2020	Fri	6:19 PM	0	0	$3,000	Angle	Day	Dry	No Injury
76	4/24/2020	Fri	10:30 PM	0	0	$1,000	Sideswipe	Night	Dry	No Injury
77	3/27/2021	Sat	6:39 PM	0	2	$7,000	Angle	Night	Dry	Non-Incapacitating Injury
78	12/22/2016	Thu	6:25 AM	0	1	$0	Bicycle	Night	Dry	Non-Incapacitating Injury
79	7/10/2016	Sun	4:52 PM	0	0	$15,000	Angle	Day	Dry	No Injury
80	6/12/2016	Sun	12:06 AM	0	1	$23,000	Sideswipe	Night	Dry	Non-Incapacitating Injury
81	5/4/2017	Thu	11:50 AM	0	0	$10,000	Rear End	Day	Dry	No Injury
82	5/4/2018	Fri	9:46 AM	0	0	$3,000	Off Road	Day	Dry	No Injury
83	3/8/2019	Fri	12:10 PM	0	0	$4,000	Rear End	Day	Dry	No Injury
84	2/2/2019	Sat	10:39 AM	0	1	$10,150	Right Turn	Day	Dry	Possible Injury
85	5/14/2019	Tue	4:58 PM	0	0	$250	Rear End	Day	Dry	No Injury
86	3/2/2021	Tue	3:40 PM	0	0	$300	Off Road	Day	Wet	No Injury
87	3/15/2021	Mon	4:20 PM	0	1	$5,500	Rear End	Day	Dry	Possible Injury
88	1/23/2021	Sat	10:52 AM	0	0	$1,000	Rear End	Day	Dry	No Injury
89	3/18/2021	Thu	1:00 PM	0	1	$6,500	Rear End	Day	Dry	Possible Injury
90	6/24/2021	Thu	1:05 PM	0	0	$10,000	Rear End	Day	Dry	No Injury
91	10/22/2021	Fri	4:57 AM	0	0	$2,000	Off Road	Night	Dry	No Injury
92	6/10/2021	Thu	5:47 PM	0	0	$1,400	Rear End	Night	Dry	No Injury
93	10/10/2021	Sun	2:44 AM	0	0	$2,000	Off Road	Night	Wet	No Injury
94	1/10/2021	Sun	12:30 AM	0	0	$1,300	Off Road	Night	Dry	No Injury
95	7/5/2021	Mon	12:48 PM	0	0	$1,200	Angle	Day	Dry	No Injury
96	2/12/2016	Fri	4:15 PM	0	0	$10,500	Rear End	Day	Dry	No Injury
TOTAL				**0**	**9**	**$149,100**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	8	16	9	0	5	0	1	2	6	1	0
PERCENT	0%	33%	67%	38%	0%	21%	0%	4%	8%	25%	4%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	15	9	2	22	0	16	5	3	0	0
PERCENT	63%	38%	8%	92%	0%	67%	21%	13%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
97	1/14/2018	Sun	6:50 PM	0	0	$20,000	Angle	Night	Dry	No Injury
98	4/6/2018	Fri	4:45 PM	0	1	$3,000	Rear End	Day	Dry	Non-Incapacitating Injury
99	3/15/2018	Thu	5:30 PM	0	1	$5,000	Rear End	Day	Dry	Non-Incapacitating Injury
100	10/17/2018	Wed	3:15 PM	0	0	$12,500	Rear End	Day	Dry	No Injury
101	8/15/2018	Wed	1:13 AM	0	1	$29,500	Off Road	Night	Dry	Non-Incapacitating Injury
102	3/7/2019	Thu	5:02 PM	0	1	$5,000	Angle	Day	Dry	Non-Incapacitating Injury
103	3/9/2019	Sat	4:40 AM	0	0	$3,200	Off Road	Night	Dry	No Injury
104	1/7/2020	Tue	4:30 PM	0	0	$5,000	Rear End	Day	Dry	No Injury
105	11/9/2020	Mon	7:55 AM	0	0	$5,200	Angle	Day	Wet	No Injury
106	5/22/2021	Sat	9:59 PM	0	0	$7,000	Off Road	Night	Dry	No Injury
107	6/16/2021	Wed	9:14 PM	0	0	$15,000	Left Turn	Night	Dry	No Injury
108	1/18/2017	Wed	6:00 PM	0	0	$5,000	Angle	Night	Dry	No Injury
109	3/27/2017	Mon	2:11 PM	0	3	$30,500	Rear End	Day	Dry	Non-Incapacitating Injury
110	12/15/2017	Fri	3:10 PM	0	0	$15,000	Rear End	Day	Dry	No Injury
111	11/20/2017	Mon	9:05 AM	0	0	$3,500	Rear End	Day	Dry	No Injury
112	12/25/2018	Tue	10:30 PM	0	0	$1,000	Off Road	Night	Dry	No Injury
113	10/5/2018	Fri	5:05 PM	0	0	$4,500	Rear End	Day	Dry	No Injury
114	4/28/2019	Sun	12:42 PM	0	1	$6,000	Rear End	Day	Dry	Possible Injury
115	5/1/2019	Wed	8:00 AM	0	1	$3,000	Rear End	Day	Dry	Possible Injury
116	5/14/2021	Fri	11:56 AM	0	0	$9,500	Rear End	Day	Dry	No Injury
117	8/10/2021	Tue	2:15 PM	0	1	$6,000	Rear End	Day	Dry	Non-Incapacitating Injury
118	9/8/2021	Wed	4:46 PM	0	0	$3,500	Rear End	Day	Wet	No Injury
119	4/25/2016	Mon	5:15 PM	0	6	$10,000	Rear End	Day	Dry	Incapacitating Injury
120	2/9/2016	Tue	9:00 PM	0	0	$2,000	Rear End	Night	Dry	No Injury
TOTAL				**0**	**16**	**$209,900**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	9	15	15	0	4	1	0	0	4	0	0
PERCENT	0%	38%	63%	63%	0%	17%	4%	0%	0%	17%	0%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	16	8	2	22	0	15	2	6	1	0
PERCENT	67%	33%	8%	92%	0%	63%	8%	25%	4%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
121	2/16/2016	Tue	7:46 AM	0	1	$3,000	Rear End	Day	Wet	Possible Injury
122	4/25/2016	Mon	2:35 PM	0	2	$10,000	Rear End	Day	Dry	Non-Incapacitating Injury
123	3/22/2016	Tue	5:23 PM	0	1	$10,750	Rear End	Day	Dry	Possible Injury
124	7/26/2016	Tue	4:30 PM	0	1	$5,000	Rear End	Day	Dry	Non-Incapacitating Injury
125	5/30/2017	Tue	5:35 PM	0	1	$10,000	Rear End	Day	Dry	Non-Incapacitating Injury
126	6/10/2017	Sat	5:06 PM	0	1	$4,000	Rear End	Day	Dry	Non-Incapacitating Injury
127	1/20/2017	Fri	5:41 PM	0	1	$200	Bicycle	Day	Dry	Non-Incapacitating Injury
128	11/3/2017	Fri	8:38 AM	0	0	$15,000	Head On	Day	Dry	No Injury
129	5/15/2018	Tue	3:51 PM	0	0	$1,000	Left Turn	Day	Wet	No Injury
130	11/29/2018	Thu	3:40 PM	0	0	$20,000	Rear End	Day	Dry	No Injury
131	2/19/2018	Mon	3:20 PM	0	0	$100	Rear End	Day	Dry	No Injury
132	4/25/2018	Wed	7:32 AM	0	0	$400	Sideswipe	Day	Dry	No Injury
133	7/24/2018	Tue	11:22 AM	0	1	$4,000	Rear End	Day	Dry	Non-Incapacitating Injury
134	11/21/2019	Thu	5:20 PM	0	1	$3,500	Rear End	Day	Dry	Non-Incapacitating Injury
135	7/30/2019	Tue	12:22 AM	0	1	$10,000	Rear End	Night	Dry	Possible Injury
136	4/29/2019	Mon	5:54 PM	0	2	$10,000	Rear End	Day	Dry	Possible Injury
137	5/4/2019	Sat	10:00 AM	0	0	$9,500	Angle	Day	Dry	No Injury
138	10/9/2020	Fri	6:08 PM	0	0	$1,200	Rear End	Day	Dry	No Injury
139	12/1/2020	Tue	2:43 PM	0	1	$5,000	Rear End	Day	Dry	Possible Injury
140	7/9/2021	Fri	12:45 PM	0	0	$600	Rear End	Day	Dry	No Injury
141	3/1/2021	Mon	11:50 AM	0	0	$3,000	Off Road	Day	Dry	No Injury
142	9/20/2016	Tue	8:08 AM	0	1	$7,000	Rear End	Day	Dry	Possible Injury
143	9/16/2016	Fri	8:30 PM	0	1	$1,000	Bicycle	Night	Dry	Non-Incapacitating Injury
144	7/21/2016	Thu	3:39 PM	0	1	$350	Angle	Day	Dry	Non-Incapacitating Injury
TOTAL				**0**	**17**	**$134,600**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	15	9	16	1	2	1	0	1	1	2	0
PERCENT	0%	63%	38%	67%	4%	8%	4%	0%	4%	4%	8%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	22	2	2	22	0	9	6	9	0	0
PERCENT	92%	8%	8%	92%	0%	38%	25%	38%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
145	11/2/2016	Wed	5:05 PM	0	0	$0	Head On	Day	Dry	No Injury
146	10/15/2016	Sat	12:04 PM	0	0	$3,000	Rear End	Day	Wet	No Injury
147	9/27/2017	Wed	4:30 PM	0	1	$6,000	Rear End	Day	Dry	Possible Injury
148	2/27/2017	Mon	1:58 PM	0	0	$0	Rear End	Day	Dry	No Injury
149	8/16/2017	Wed	6:02 PM	0	0	$0	Angle	Day	Dry	No Injury
150	5/8/2017	Mon	8:55 AM	0	0	$1,500	Rear End	Day	Dry	No Injury
151	6/17/2017	Sat	10:50 AM	0	0	$0	Rear End	Day	Dry	No Injury
152	9/5/2017	Tue	11:20 PM	0	1	$15,000	Off Road	Night	Dry	Non-Incapacitating Injury
153	3/13/2017	Mon	8:45 AM	0	0	$28,500	Rear End	Day	Dry	No Injury
154	12/23/2018	Sun	12:05 AM	0	0	$5,500	Rear End	Night	Dry	No Injury
155	10/25/2018	Thu	8:54 AM	0	0	$2,000	Rear End	Day	Dry	No Injury
156	12/21/2018	Fri	4:23 PM	0	0	$1,000	Rear End	Day	Dry	No Injury
157	11/13/2018	Tue	7:40 AM	0	0	$4,000	Rear End	Day	Wet	No Injury
158	2/1/2018	Thu	4:40 PM	0	1	$4,500	Rear End	Day	Dry	Possible Injury
159	5/14/2018	Mon	2:20 AM	0	0	$11,200	Off Road	Night	Dry	No Injury
160	1/16/2019	Wed	2:40 PM	0	1	$700	Bicycle	Day	Dry	Non-Incapacitating Injury
161	10/8/2019	Tue	7:00 AM	0	1	$0	Pedestrian	Night	Wet	Possible Injury
162	1/3/2019	Thu	8:40 AM	0	0	$0	Bicycle	Day	Dry	No Injury
163	11/6/2019	Wed	7:40 AM	0	0	$3,000	Rear End	Day	Dry	No Injury
164	5/11/2019	Sat	11:26 AM	0	1	$2,500	Rear End	Day	Dry	Possible Injury
165	6/15/2019	Sat	4:31 PM	0	0	$1,500	Rear End	Day	Dry	No Injury
166	11/24/2019	Sun	4:02 PM	0	1	$7,500	Rear End	Day	Dry	Non-Incapacitating Injury
167	10/3/2020	Sat	1:40 PM	0	0	$4,000	Rear End	Day	Dry	No Injury
168	10/30/2020	Fri	8:35 AM	0	0	$6,500	Rear End	Day	Dry	No Injury
TOTAL				**0**	**7**	**$107,900**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	7	17	17	1	1	0	0	0	2	3	0
PERCENT	0%	29%	71%	71%	4%	4%	0%	0%	0%	8%	13%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	20	4	3	21	0	17	4	3	0	0
PERCENT	83%	17%	13%	88%	0%	71%	17%	13%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
169	8/30/2020	Sun	1:20 AM	0	0	$150	Off Road	Night	Wet	No Injury
170	7/8/2020	Wed	2:48 PM	0	1	$6,000	Rear End	Day	Dry	Possible Injury
171	11/3/2020	Tue	5:55 PM	0	2	$13,000	Left Turn	Night	Dry	Non-Incapacitating Injury
172	10/8/2020	Thu	7:00 PM	0	1	$4,000	Right Turn	Day	Dry	Possible Injury
173	2/28/2020	Fri	3:38 PM	0	2	$25,000	Sideswipe	Day	Dry	Possible Injury
174	4/29/2021	Thu	6:59 PM	0	0	$0	Rear End	Day	Dry	No Injury
175	3/17/2021	Wed	4:10 PM	0	1	$100	Bicycle	Day	Dry	Non-Incapacitating Injury
176	6/3/2021	Thu	9:05 AM	0	0	$8,000	Angle	Day	Dry	No Injury
177	3/23/2021	Tue	6:35 PM	0	0	$850	Bicycle	Night	Dry	No Injury
178	12/7/2016	Wed	6:20 AM	0	0	$6,500	Off Road	Night	Dry	No Injury
179	3/15/2016	Tue	8:34 AM	0	0	$0	Rear End	Day	Dry	No Injury
180	8/16/2016	Tue	3:28 PM	0	0	$5,000	Rear End	Day	Dry	No Injury
181	3/14/2016	Mon	5:00 PM	0	1	$4,100	Rear End	Day	Dry	Non-Incapacitating Injury
182	12/16/2016	Fri	2:20 PM	0	0	$0	Rear End	Day	Dry	No Injury
183	5/6/2016	Fri	4:55 PM	0	0	$0	Rear End	Day	Dry	No Injury
184	4/11/2017	Tue	8:30 AM	0	0	$0	Rear End	Day	Dry	No Injury
185	11/7/2018	Wed	4:42 PM	0	0	$4,000	Rear End	Day	Dry	No Injury
186	2/17/2018	Sat	12:25 PM	0	1	$6,000	Angle	Day	Dry	Possible Injury
187	2/15/2018	Thu	4:56 PM	0	1	$550	Rear End	Day	Dry	Possible Injury
188	2/15/2018	Thu	8:00 AM	0	0	$1,000	Angle	Day	Dry	No Injury
189	9/26/2018	Wed	9:07 AM	0	0	$4,000	Rear End	Day	Dry	No Injury
190	9/19/2018	Wed	3:47 PM	0	0	$13,000	Rear End	Day	Dry	No Injury
191	10/14/2018	Sun	9:28 AM	0	4	$9,000	Head On	Day	Dry	Incapacitating Injury
192	8/25/2018	Sat	4:45 PM	0	0	$10,000	Left Turn	Day	Dry	No Injury
TOTAL				**0**	**14**	**$120,250**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	9	15	12	1	3	2	1	1	2	2	0
PERCENT	0%	38%	63%	50%	4%	13%	8%	4%	4%	8%	8%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	20	4	1	23	0	15	5	3	1	0
PERCENT	83%	17%	4%	96%	0%	63%	21%	13%	4%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
193	12/13/2018	Thu	6:34 PM	0	0	$5,000	Rear End	Night	Wet	No Injury
194	11/23/2018	Fri	12:56 PM	0	0	$170	Sideswipe	Day	Dry	No Injury
195	2/24/2019	Sun	1:13 AM	0	0	$7,000	Rear End	Night	Wet	No Injury
196	12/22/2019	Sun	6:00 PM	0	0	$500	Off Road	Night	Wet	No Injury
197	11/13/2019	Wed	8:45 AM	0	0	$11,000	Angle	Day	Dry	No Injury
198	3/1/2019	Fri	6:29 PM	0	0	$7,500	Rear End	Night	Wet	No Injury
199	4/8/2019	Mon	7:10 PM	0	0	$4,000	Rear End	Night	Wet	No Injury
200	4/22/2019	Mon	10:58 AM	0	0	$300	Backing	Day	Dry	No Injury
201	6/2/2019	Sun	12:40 PM	0	1	$2,000	Rear End	Day	Dry	Non-Incapacitating Injury
202	2/27/2019	Wed	5:00 PM	0	1	$22,500	Rear End	Day	Wet	Possible Injury
203	5/8/2019	Wed	8:31 AM	0	0	$13,000	Rear End	Day	Dry	No Injury
204	1/15/2019	Tue	4:07 PM	0	0	$6,000	Rear End	Day	Dry	No Injury
205	1/14/2019	Mon	8:57 AM	0	1	$15,500	Rear End	Day	Dry	Possible Injury
206	5/14/2019	Tue	5:20 PM	0	0	$750	Rear End	Day	Dry	No Injury
207	5/14/2019	Tue	5:42 PM	0	2	$17,750	Rear End	Day	Dry	Non-Incapacitating Injury
208	6/13/2020	Sat	12:06 PM	0	1	$1,250	Off Road	Day	Dry	Possible Injury
209	4/27/2021	Tue	8:21 AM	0	0	$7,000	Rear End	Day	Dry	No Injury
210	1/20/2021	Wed	6:10 PM	0	1	$100	Bicycle	Day	Dry	Possible Injury
211	2/18/2021	Thu	12:45 PM	0	0	$2,500	Angle	Day	Dry	No Injury
212	9/17/2021	Fri	11:55 AM	0	0	$7,000	Rear End	Day	Dry	No Injury
213	9/13/2016	Tue	5:15 PM	0	0	$0	Rear End	Day	Wet	No Injury
214	8/15/2016	Mon	7:16 AM	0	0	$6,000	Rear End	Day	Dry	No Injury
215	3/8/2016	Tue	7:59 PM	0	0	$100	Rear End	Night	Dry	No Injury
216	12/6/2016	Tue	11:05 AM	0	0	$0	Rear End	Day	Wet	No Injury
TOTAL				**0**	**7**	**$136,920**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	6	18	17	0	2	0	0	1	2	1	1
PERCENT	0%	25%	75%	71%	0%	8%	0%	0%	4%	8%	4%	4%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	18	6	8	16	0	18	4	2	0	0
PERCENT	75%	25%	33%	67%	0%	75%	17%	8%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
217	12/10/2016	Sat	9:14 AM	0	0	$5,000	Angle	Day	Dry	No Injury
218	10/20/2016	Thu	3:09 PM	0	2	$37,000	Head On	Day	Dry	Non-Incapacitating Injury
219	4/25/2016	Mon	10:57 AM	0	1	$0	Rear End	Day	Dry	Possible Injury
220	10/21/2016	Fri	3:09 PM	0	0	$250	Rear End	Day	Dry	No Injury
221	11/4/2016	Fri	7:15 AM	0	0	$2,000	Rear End	Night	Dry	No Injury
222	6/23/2017	Fri	5:25 PM	0	2	$20,000	Left Turn	Day	Dry	Non-Incapacitating Injury
223	12/11/2017	Mon	2:25 PM	0	1	$1,000	Sideswipe	Day	Dry	Non-Incapacitating Injury
224	7/1/2017	Sat	6:15 PM	0	0	$20,000	Rear End	Day	Dry	No Injury
225	8/10/2017	Thu	1:30 PM	0	0	$0	Rear End	Day	Dry	No Injury
226	11/19/2017	Sun	10:40 PM	0	0	$0	Head On	Night	Dry	No Injury
227	6/4/2017	Sun	10:30 AM	0	0	$10,000	Sideswipe	Day	Dry	No Injury
228	8/27/2017	Sun	5:20 PM	0	0	$0	Rear End	Day	Dry	No Injury
229	6/8/2018	Fri	9:30 PM	0	1	$8,000	Head On	Night	Dry	Non-Incapacitating Injury
230	2/14/2018	Wed	2:25 AM	0	0	$500	Sideswipe	Night	Wet	No Injury
231	11/2/2019	Sat	8:48 PM	0	3	$20,000	Left Turn	Night	Dry	Possible Injury
232	7/6/2019	Sat	6:50 PM	0	2	$100	Off Road	Night	Wet	Non-Incapacitating Injury
233	4/4/2019	Thu	2:35 PM	0	1	$4,500	Rear End	Day	Dry	Possible Injury
234	11/1/2019	Fri	12:40 PM	0	0	$1,500	Rear End	Day	Dry	No Injury
235	1/12/2019	Sat	6:20 PM	0	0	$2,500	Rear End	Night	Dry	No Injury
236	3/7/2020	Sat	8:23 PM	0	1	$500	Bicycle	Night	Dry	Possible Injury
237	1/21/2020	Tue	5:16 PM	0	0	$1,000	Rear End	Day	Dry	No Injury
238	9/30/2020	Wed	2:42 PM	0	0	$3,500	Off Road	Day	Dry	No Injury
239	1/2/2020	Thu	11:35 PM	0	0	$1,000	Angle	Night	Dry	No Injury
240	1/31/2020	Fri	10:45 AM	0	1	$12,000	Angle	Day	Wet	Possible Injury
TOTAL				**0**	**15**	**$150,350**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	10	14	10	3	3	2	0	3	2	1	0
PERCENT	0%	42%	58%	42%	13%	13%	8%	0%	13%	8%	4%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	15	9	3	21	0	14	5	5	0	0
PERCENT	63%	38%	13%	88%	0%	58%	21%	21%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	1/17/2022

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
241	4/23/2020	Thu	6:00 PM	0	0	$500	Rear End	Day	Wet	No Injury
242	2/17/2021	Wed	7:57 AM	0	0	$300	Rear End	Day	Dry	No Injury
243	3/18/2021	Thu	6:32 AM	0	0	$9,000	Angle	Night	Dry	No Injury
244	7/26/2021	Mon	12:33 PM	0	0	$1,750	Rear End	Day	Wet	No Injury
245	6/20/2016	Mon	4:50 PM	0	1	$4,150	Rear End	Day	Dry	Possible Injury
246	12/18/2016	Sun	3:08 PM	0	1	$25,000	Angle	Day	Dry	Non-Incapacitating Injury
247	2/10/2017	Fri	12:20 AM	0	0	$10,000	Off Road	Night	Dry	No Injury
248	12/30/2017	Sat	8:00 PM	0	0	$0	Angle	Night	Dry	No Injury
249	10/17/2017	Tue	4:45 PM	0	1	$500	Right Turn	Day	Dry	Possible Injury
250	5/16/2017	Tue	4:15 PM	0	1	$5,250	Rear End	Day	Dry	Possible Injury
251	8/27/2018	Mon	1:00 PM	0	0	$5,000	Rear End	Day	Dry	No Injury
252	9/7/2018	Fri	1:25 PM	0	0	$600	Angle	Day	Dry	No Injury
253	1/26/2018	Fri	4:10 PM	0	0	$0	Angle	Day	Dry	No Injury
254	3/6/2019	Wed	3:19 AM	0	0	$1,500	Off Road	Night	Dry	No Injury
255	8/26/2019	Mon	2:36 PM	0	0	$1,700	Angle	Day	Dry	No Injury
256	3/6/2020	Fri	5:30 PM	0	1	$20,000	Sideswipe	Day	Dry	Non-Incapacitating Injury
257	12/13/2020	Sun	11:45 AM	0	0	$7,500	Rear End	Day	Dry	No Injury
258	4/30/2020	Thu	10:15 AM	0	0	$3,000	Left Turn	Day	Dry	No Injury
259	12/17/2020	Thu	10:35 AM	0	0	$0	Off Road	Day	Dry	No Injury
260	10/22/2020	Thu	5:55 PM	0	1	$5,500	Rear End	Day	Wet	Possible Injury
261	10/23/2021	Sat	6:22 PM	0	0	$1,000	Rear End	Day	Dry	No Injury
262	6/15/2021	Tue	5:57 PM	0	0	$1,500	Angle	Day	Wet	No Injury
263	2/17/2016	Wed	6:07 PM	0	1	$0	Pedestrian	Day	Dry	Possible Injury
264	4/8/2016	Fri	8:37 PM	0	0	$0	Pedestrian	Night	Dry	No Injury
TOTAL				**0**	**7**	**$103,750**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	7	17	9	0	7	1	1	1	3	2	0
PERCENT	0%	29%	71%	38%	0%	29%	4%	4%	4%	13%	8%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	19	5	4	20	0	17	5	2	0	0
PERCENT	79%	21%	17%	83%	0%	71%	21%	8%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
265	6/3/2016	Fri	12:55 PM	0	0	$0	Bicycle	Day	Dry	No Injury
266	4/15/2016	Fri	11:44 AM	0	1	$30,000	Left Turn	Day	Dry	Incapacitating Injury
267	3/28/2016	Mon	9:05 AM	0	2	$15,000	Left Turn	Day	Dry	Possible Injury
268	4/27/2016	Wed	3:40 PM	0	2	$45,000	Off Road	Day	Dry	Incapacitating Injury
269	1/20/2016	Wed	6:30 PM	0	0	$2,500	Sideswipe	Night	Dry	No Injury
270	5/18/2016	Wed	6:27 PM	0	1	$15,000	Left Turn	Day	Wet	Non-Incapacitating Injury
271	7/2/2016	Sat	5:57 PM	0	1	$500	Bicycle	Day	Dry	Non-Incapacitating Injury
272	10/25/2016	Tue	5:08 PM	0	1	$20,000	Left Turn	Day	Dry	Non-Incapacitating Injury
273	5/2/2016	Mon	2:42 PM	0	2	$6,500	Left Turn	Day	Dry	Non-Incapacitating Injury
274	12/3/2016	Sat	1:13 PM	0	0	$0	Rear End	Day	Dry	No Injury
275	8/2/2016	Tue	6:00 PM	0	0	$0	Right Turn	Day	Dry	No Injury
276	6/27/2016	Mon	8:30 PM	0	0	$15,000	Left Turn	Night	Dry	No Injury
277	4/24/2016	Sun	6:13 PM	0	3	$5,000	Rear End	Day	Dry	Non-Incapacitating Injury
278	5/25/2017	Thu	4:11 PM	0	2	$20,000	Left Turn	Day	Dry	Non-Incapacitating Injury
279	2/24/2017	Fri	7:52 PM	0	3	$60,000	Left Turn	Night	Dry	Non-Incapacitating Injury
280	1/20/2018	Sat	2:55 PM	0	0	$150	Off Road	Day	Dry	No Injury
281	1/29/2018	Mon	11:58 AM	0	0	$0	Rear End	Day	Dry	No Injury
282	7/13/2018	Fri	4:50 PM	0	0	$1,000	Rear End	Day	Dry	No Injury
283	2/23/2018	Fri	3:30 PM	0	0	$0	Angle	Day	Dry	No Injury
284	2/17/2018	Sat	1:55 PM	0	0	$125	Bicycle	Day	Dry	No Injury
285	12/1/2019	Sun	12:45 AM	0	0	$1,500	Left Turn	Night	Dry	No Injury
286	11/22/2019	Fri	2:00 PM	0	0	$2,500	Rear End	Day	Dry	No Injury
287	10/2/2019	Wed	10:48 AM	0	0	$1,000	Angle	Day	Dry	No Injury
288	12/2/2019	Mon	10:45 AM	0	0	$3,000	Sideswipe	Day	Dry	No Injury
TOTAL				**0**	**18**	**$243,775**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
24	0	10	14	5	0	2	9	1	2	2	3	0
PERCENT	0%	42%	58%	21%	0%	8%	38%	4%	8%	8%	13%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	20	4	1	23	0	14	1	7	2	0
PERCENT	83%	17%	4%	96%	0%	58%	4%	29%	8%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	12/15/2021

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
289	10/4/2019	Fri	5:35 PM	0	0	$1,100	Sideswipe	Day	Dry	No Injury
290	11/21/2019	Thu	6:52 PM	0	0	$750	Sideswipe	Night	Dry	No Injury
291	12/22/2019	Sun	9:32 PM	0	1	$200	Bicycle	Night	Wet	Possible Injury
292	12/17/2019	Tue	3:30 PM	0	1	$10,500	Left Turn	Day	Dry	Non-Incapacitating Injury
293	2/24/2020	Mon	11:20 AM	0	0	$1,000	Rear End	Day	Dry	No Injury
294	8/4/2020	Tue	4:00 PM	0	0	$4,400	Sideswipe	Day	Dry	No Injury
295	12/19/2020	Sat	9:45 AM	0	0	$6,500	Left Turn	Day	Dry	No Injury
296	11/16/2020	Mon	8:45 AM	0	0	$0	Rear End	Day	Dry	No Injury
297	2/23/2020	Sun	6:57 PM	0	1	$25,000	Left Turn	Night	Dry	Non-Incapacitating Injury
298	10/12/2020	Mon	11:28 AM	0	0	$6,600	Angle	Day	Dry	No Injury
299	3/7/2020	Sat	2:11 AM	0	1	$0	Pedestrian	Night	Dry	Possible Injury
300	5/13/2020	Wed	7:20 AM	0	0	$10,000	Angle	Day	Dry	No Injury
301	12/22/2020	Tue	6:00 PM	0	1	$4,000	Left Turn	Night	Dry	Non-Incapacitating Injury
302	2/11/2021	Thu	2:50 PM	0	0	$1,500	Sideswipe	Day	Dry	No Injury
303	4/6/2021	Tue	6:40 PM	0	0	$9,000	Angle	Day	Dry	No Injury
304	7/24/2021	Sat	4:16 PM	0	0	$6,000	Left Turn	Day	Dry	No Injury
305	10/31/2021	Sun	10:20 PM	0	0	$19,600	Angle	Night	Dry	No Injury
306	8/20/2021	Fri	11:25 PM	0	0	$3,000	Right Turn	Night	Wet	No Injury
307	7/30/2021	Fri	4:00 PM	0	1	$1,700	Rear End	Day	Dry	Possible Injury
TOTAL				**0**	**6**	**$110,850**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
19	0	6	13	3	0	4	5	1	4	0	2	0
PERCENT	0%	32%	68%	16%	0%	21%	26%	5%	21%	0%	11%	0%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	12	7	2	17	0	13	3	3	0	0
PERCENT	63%	37%	11%	89%	0%	68%	16%	16%	0%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

Form 750-020-06
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:		Main Road:	Penman Road
Intersecting Route:	Between Atlantic Blvd and Beach Blvd	Study Period:	1/1/16 To: 11/4/21
Milepost:		Data by:	Peters and Yaffee, Inc
County:	Duval	Date:	1/17/2022

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Crash Severity
				Fatal	Injury					
TOTAL				0	155	$1,963,195				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Off Road	Bicycle / Pedestrian	Other
307	0	117	190	125	7	56	28	6	20	39	24	2
PERCENT	0%	38%	62%	41%	2%	18%	9%	2%	7%	13%	8%	1%

Contrib. Cause	Day	Night	PAVEMENT CONDITIONS			No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Fatality
			WET	DRY	Unknown					
TOTAL	224	82	38	269	0	190	53	58	6	0
PERCENT	73%	27%	12%	88%	0%	62%	17%	19%	2%	0%

Total Vehicles Entering/ADT:

Collision Rate: PER M.E.V.

Form 750-020-06
TRAFFIC ENGINEERING
10/15

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER: 1
YEAR: 16-4
EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

21 / 20-2
4 / 16-1
7 / 17-3
9 / 17-3
12 / 18-1
1 / 16-4
18 / 19-3
23 / 20-1
14 / 19-1
17 / 19-1
3 / 16-1
2 / 16-1
8 / 17-2
11 / 18-4
24 / 21-3
15 / 19-3
20 / 20-3
22 / 20-3
6 / 17-1
10 / 18-3
16 / 19-1
5 / 16-1
19 / 19-1
13 / 19-1

PENMAN RD

BEACH BLVD

Google Earth

Imagery Date: 1/13/2021 30°17'17.14" N 81°24'20.12" W elev 0 ft eye alt 460 ft

PENMAN ROAD AT BEACH BOULEVARD
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	24
TOTAL INJURY CRASHES	12
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	12

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR BEACH BOULEVARD

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1
YEAR — 16-1

EXTENT OF INJURY
1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

2ND AVE N

PENMAN RD

1ST AVE N

3 16-1
18 21-1
13 19-1
4 16-1
14 19-2
7 17-1
12 18-2
11 18-3
1 16-1
15 19-2
16 19-3
8 18-3
2 16-3
17 20-1
19 21-1
6 17-2
20 21-2
10 18-1
9 18-1
5 16-1

PENMAN ROAD NEAR 2ND AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	20
TOTAL INJURY CRASHES	9
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	11

Google Earth
Imagery Date: 1/13/2021 30°17'19.96" N 81°24'20.56" W elev 0 ft eye alt 635 ft

REVISIONS

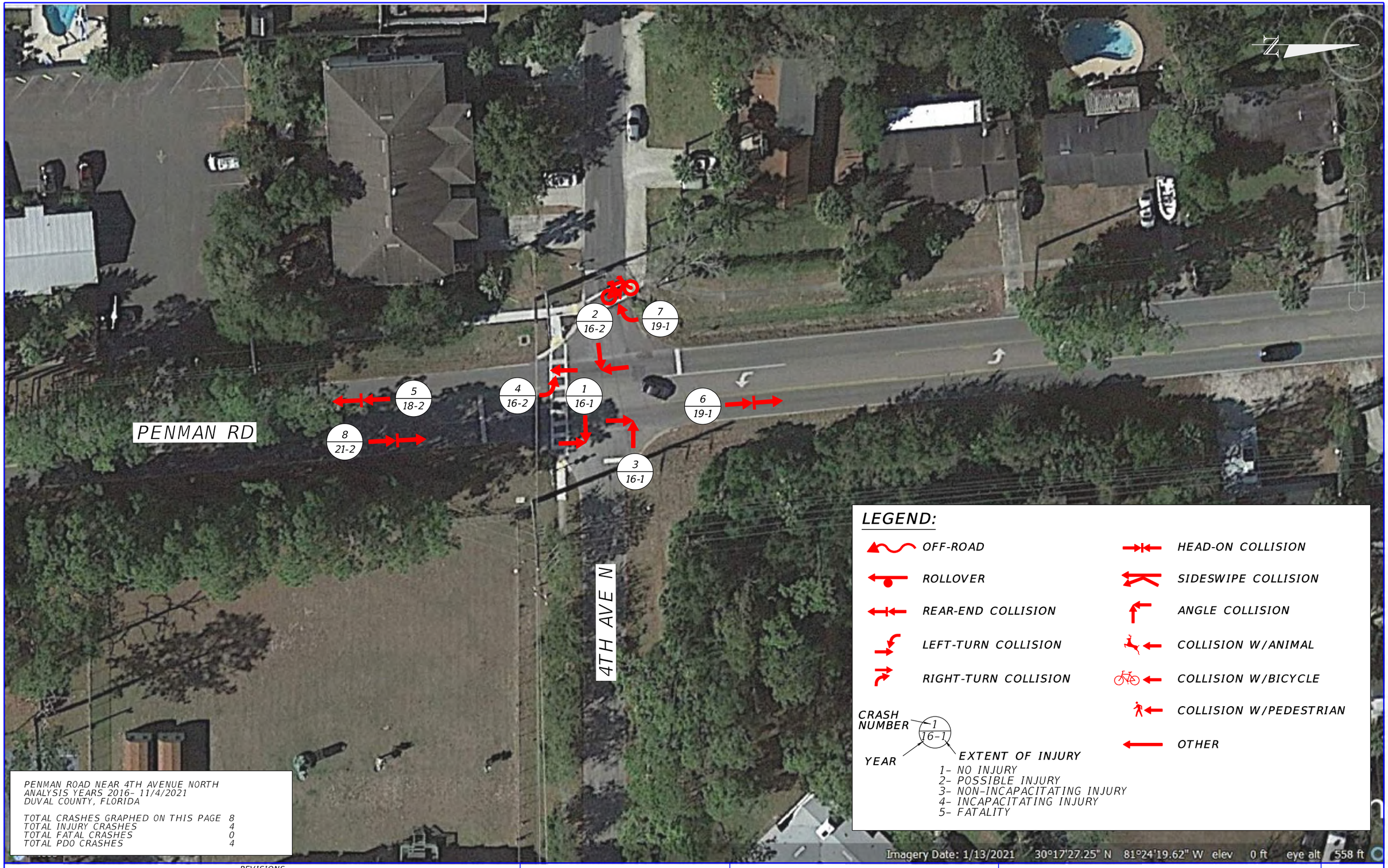
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR 2ND AVENUE NORTH

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$



PENMAN ROAD NEAR 4TH AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	8
TOTAL INJURY CRASHES	4
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR
4TH AVENUE NORTH

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 — YEAR / EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

N

6TH AVE N

BENTIN DR S

15TH ST N

PENMAN RD

6TH AVE N

7 / 19-3

6 / 19-3

10 / 20-1

8 / 19-1

9 / 19-1

5 / 19-1

2 / 18-1

4 / 18-1

3 / 18-1

1 / 16-2

PENMAN ROAD NEAR 6TH AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	10
TOTAL INJURY CRASHES	3
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	7

Google Earth

Imagery Date: 1/13/2021 30°1'36.01" N 81°24'23.06" W elev 0 ft eye alt 636 ft

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR 6TH AVENUE NORTH

SHEET NO.

lfolk 1/10/2022 2:07:54 PM Default F:\2021\21-021 COJ Professional Engineering Services for Penman Road Complete Streets from Beach\Design\Traffic\Crashes\4. 6th Ave N\PLANRD01.DGN

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1
YEAR — 16-1
EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

BENTIN DR N

PENMAN ROAD

8TH AVE N

9TH AVE N

6 / 17-2
5 / 17-3
10 / 19-1
2 / 16-1
9 / 18-1
8 / 18-1
7 / 18-1
13 / 20-1
4 / 17-1
11 / 19-2
3 / 16-1
14 / 20-1
12 / 19-2
15 / 21-3
1 / 16-1

PENMAN ROAD NEAR 8TH AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	15
TOTAL INJURY CRASHES	5
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	10

Google Earth
Imagery Date: 1/13/2021 30°17'43.34" N 81°24'23.52" W elev 0 ft eye alt 688 ft

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR 8TH AVENUE NORTH

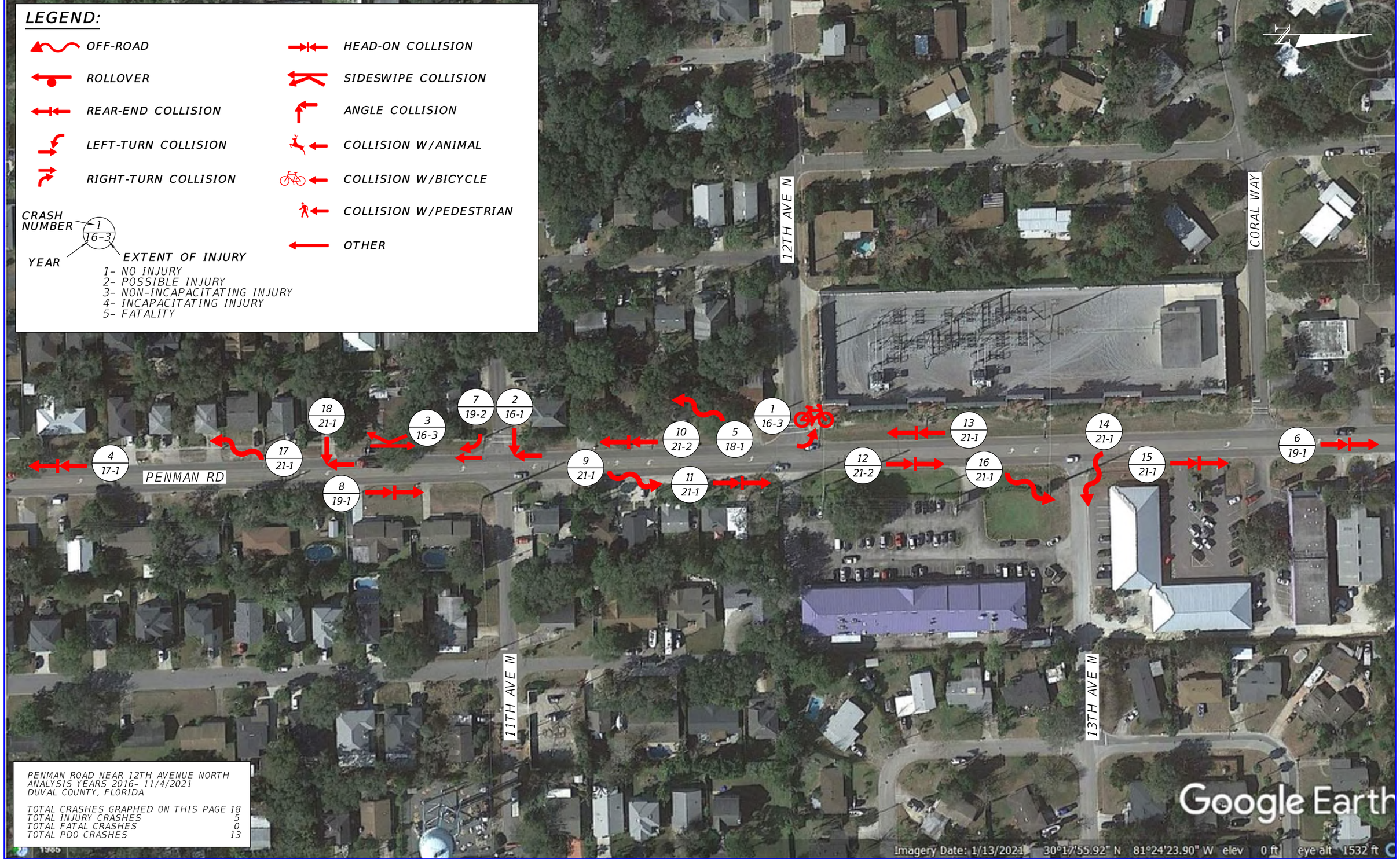
SHEET NO.

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 — YEAR

EXTENT OF INJURY
1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY



PENMAN ROAD NEAR 12TH AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	18
TOTAL INJURY CRASHES	5
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	13

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD
NEAR 12TH AVENUE N

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 — YEAR

EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

PENMAN RD

8 / 19-1

11 / 21-1

12 / 21-1

3 / 18-3

2 / 18-1

6 / 18-3

9 / 20-1

5 / 18-1

4 / 18-3

1 / 16-1

7 / 19-3

10 / 20-1

15TH AVE N

PENMAN ROAD NEAR 15TH AVENUE NORTH
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	12
TOTAL INJURY CRASHES	4
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	8

Google Earth
Imagery Date: 1/13/2021 30°18'05.01" N 81°24'23.93" W elev 0 ft eye alt 639 ft

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR 15TH AVENUE N

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-1 — YEAR

EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

CORAL WAY

PENMAN RD

18TH AVE N

1	17-1	
2	17-3	
3	17-1	
4	17-1	
5	18-1	
6	18-1	
7	19-2	
8	19-2	
9	21-1	
10	21-3	
11	21-1	

PENMAN ROAD NEAR 18TH AVENUE NORTH
ANALYSIS YEARS 2017- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	11
TOTAL INJURY CRASHES	4
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	7

Google Earth
1985
Imagery Date: 1/13/2021 30°18'14.06" N 81°24'22.37" W elev 0 ft eye alt 881 ft

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR
18TH AVENUE N

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 — YEAR — EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

ARDEN WAY

PENMAN ROAD

22 / 21-1	21 / 20-2	20 / 20-1	18 / 19-2	16 / 19-3	12 / 18-1	5 / 16-2	1 / 16-4

17 / 19-2	8 / 17-3	7 / 17-3	3 / 16-2	2 / 16-1

23 / 21-1	10 / 17-1	19 / 19-1	14 / 18-1	9 / 17-3	13 / 18-1	15 / 18-3	6 / 16-3	4 / 16-3	11 / 18-1

ARDEN WAY

PENMAN ROAD NEAR ARDEN WAY
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	23
TOTAL INJURY CRASHES	13
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	10

1985

Imagery Date: 1/13/2021 30°18'20.73" N 81°24'23.03" W elev 0 ft eye alt 471 ft

Google Earth

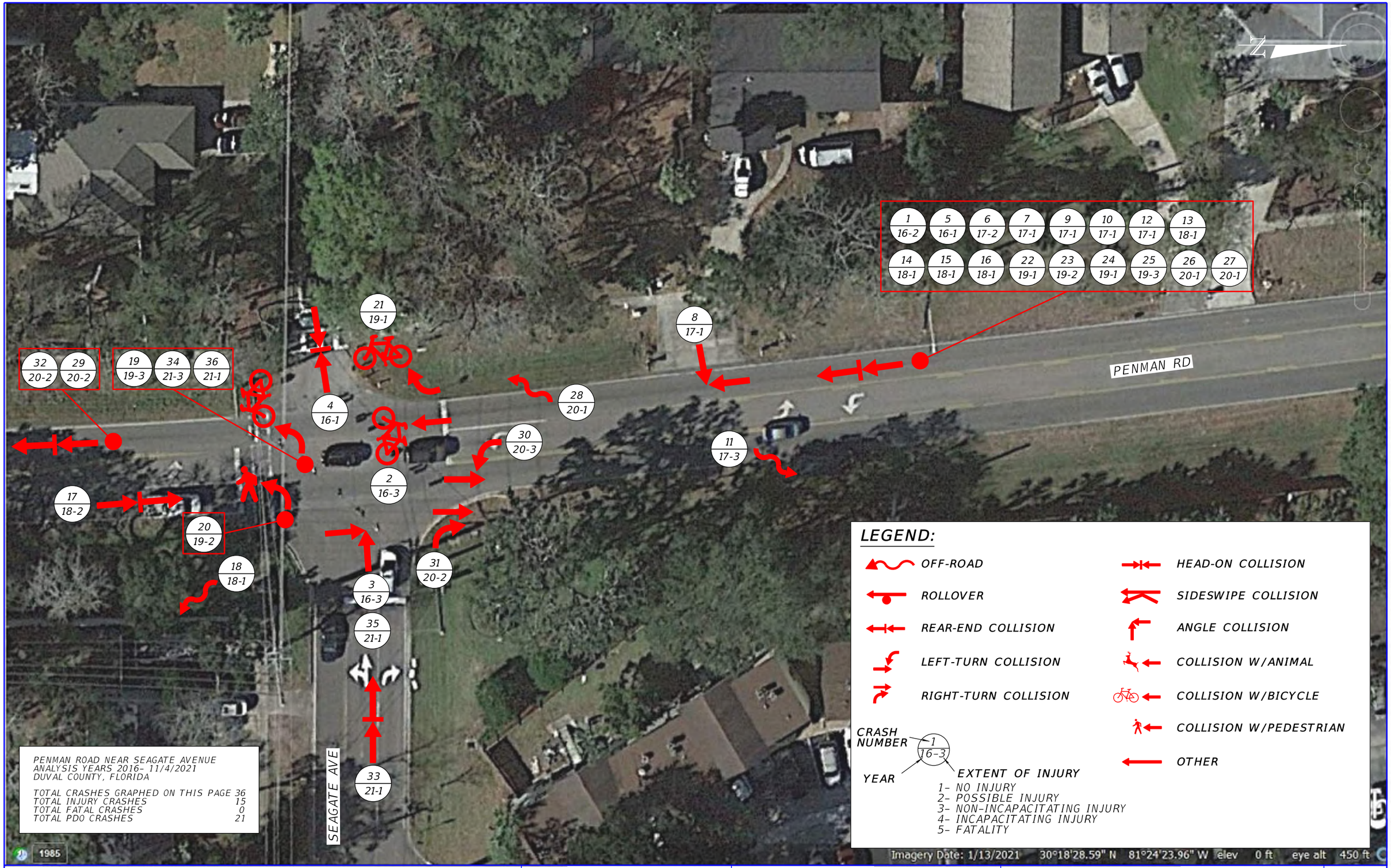
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR ARDEN WAY

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$



PENMAN ROAD NEAR SEAGATE AVENUE
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	36
TOTAL INJURY CRASHES	15
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	21

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 — YEAR — EXTENT OF INJURY

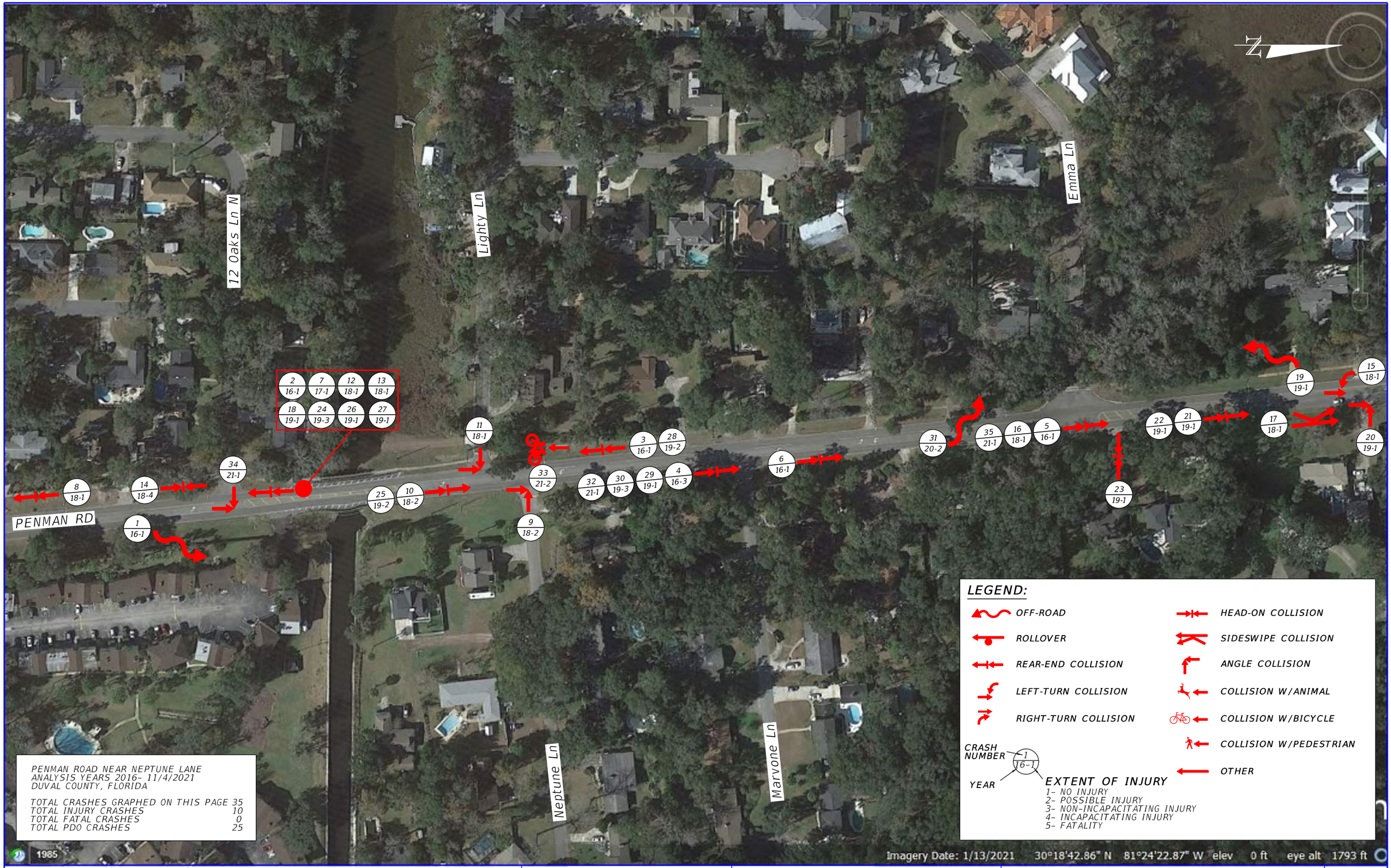
1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM PENMAN ROAD NEAR SEAGATE AVENUE

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD
NEAR NEPTUNE LANE

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1
YEAR — 16-3
EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

FOREST AVE

FLORIDA BLVD

PENMAN ROAD

FLORIDA BLVD

1 16-1	2 16-1	3 16-1	4 16-1	5 16-1	6 16-3	7 16-2	8 16-1	9 16-1	10 17-3	11 17-3	12 17-1	13 17-1	14 17-1	15 17-1	16 17-1	17 18-3	18 18-1	19 19-2	20 19-3	21 19-2	22 19-1	23 19-1	24 20-2	25 20-1	26 20-1	27 20-1	28 20-2	29 20-1	30 21-1	31 21-1	32 21-1

PENMAN ROAD NEAR FLORIDA BOULEVARD
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	32
TOTAL INJURY CRASHES	10
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	22

Google Earth

Imagery Date: 1/13/2021 30°18'53.70" N 81°24'27.71" W elev 0 ft eye alt 1237 ft

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR FLORIDA BOULEVARD

SHEET NO.

LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER: 1
YEAR: 16-3
EXTENT OF INJURY

1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

PENMAN ROAD NEAR CEDAR STREET
ANALYSIS YEARS 2016- 11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	18
TOTAL INJURY CRASHES	6
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	12

PENMAN RD
CEDAR ST
OCEANWOOD DR S
OCEANWOOD DR N
LEMON ST

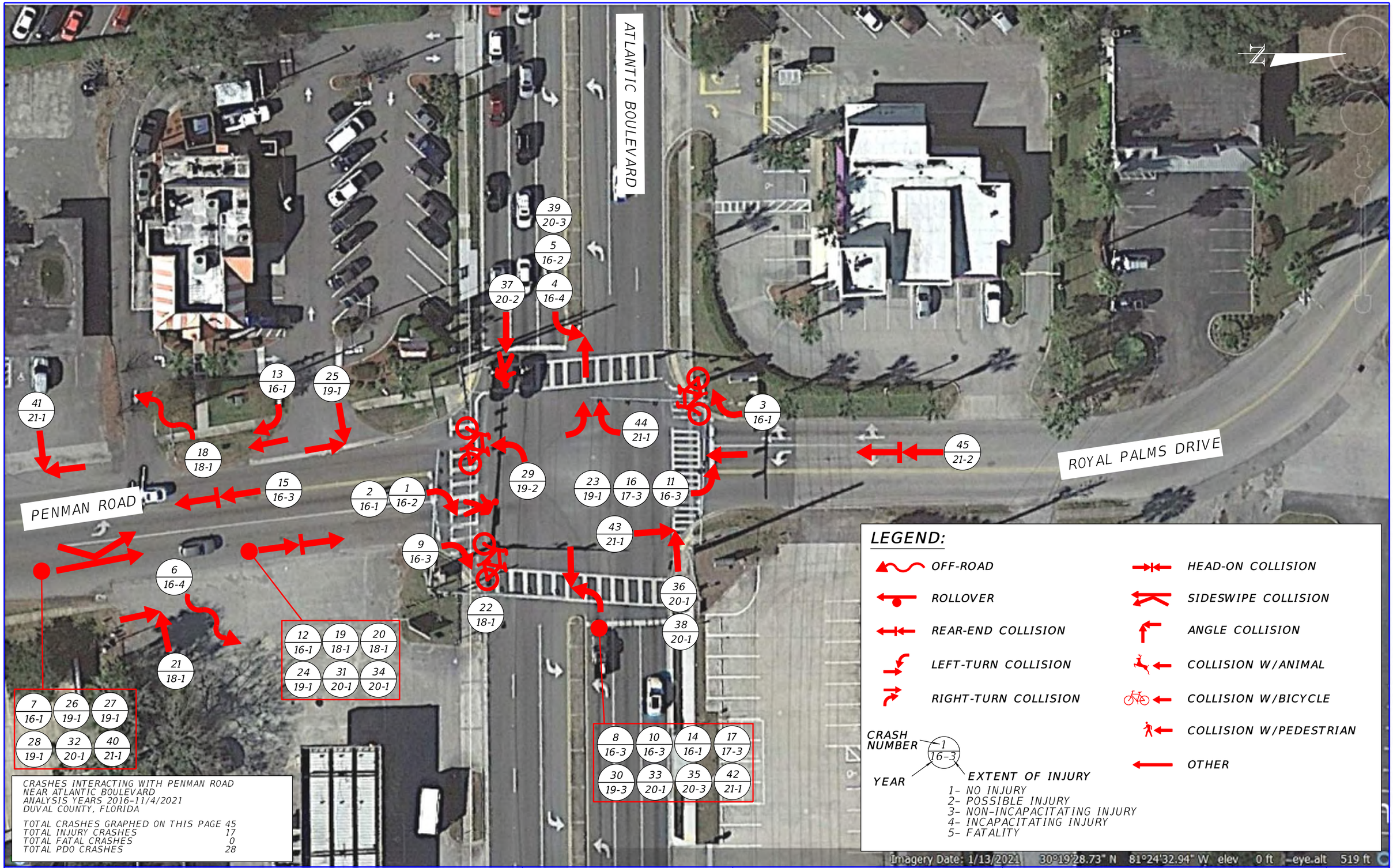
Google Earth
1985
Imagery Date: 1/13/2021 30°19'12.77" N 81°24'30.55" W elev 15 ft eye alt 2322 ft

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR CEDAR STREET

SHEET NO.



LEGEND:

- OFF-ROAD
- ROLLOVER
- REAR-END COLLISION
- LEFT-TURN COLLISION
- RIGHT-TURN COLLISION
- HEAD-ON COLLISION
- SIDESWIPE COLLISION
- ANGLE COLLISION
- COLLISION W/ANIMAL
- COLLISION W/BICYCLE
- COLLISION W/PEDESTRIAN
- OTHER

CRASH NUMBER — 1 / 16-3 (YEAR)

EXTENT OF INJURY
1- NO INJURY
2- POSSIBLE INJURY
3- NON-INCAPACITATING INJURY
4- INCAPACITATING INJURY
5- FATALITY

CRASHES INTERACTING WITH PENMAN ROAD
NEAR ATLANTIC BOULEVARD
ANALYSIS YEARS 2016-11/4/2021
DUVAL COUNTY, FLORIDA

TOTAL CRASHES GRAPHED ON THIS PAGE	45
TOTAL INJURY CRASHES	17
TOTAL FATAL CRASHES	0
TOTAL PDO CRASHES	28

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

PETERS AND YAFFEE, INC
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

COLLISION DIAGRAM
PENMAN ROAD NEAR ATLANTIC BOULEVARD

SHEET NO.

Appendix F

Historical AADT Data
Traffic TRENDS Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 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
2020	15500 C	N 0	S 0	9.00	55.40	2.10
2019	18000 C	N 0	S 0	9.00	55.90	1.20
2018	17500 C	N 0	S 0	9.00	55.80	1.40
2017	17500 C	N 0	S 0	9.00	56.10	1.30
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

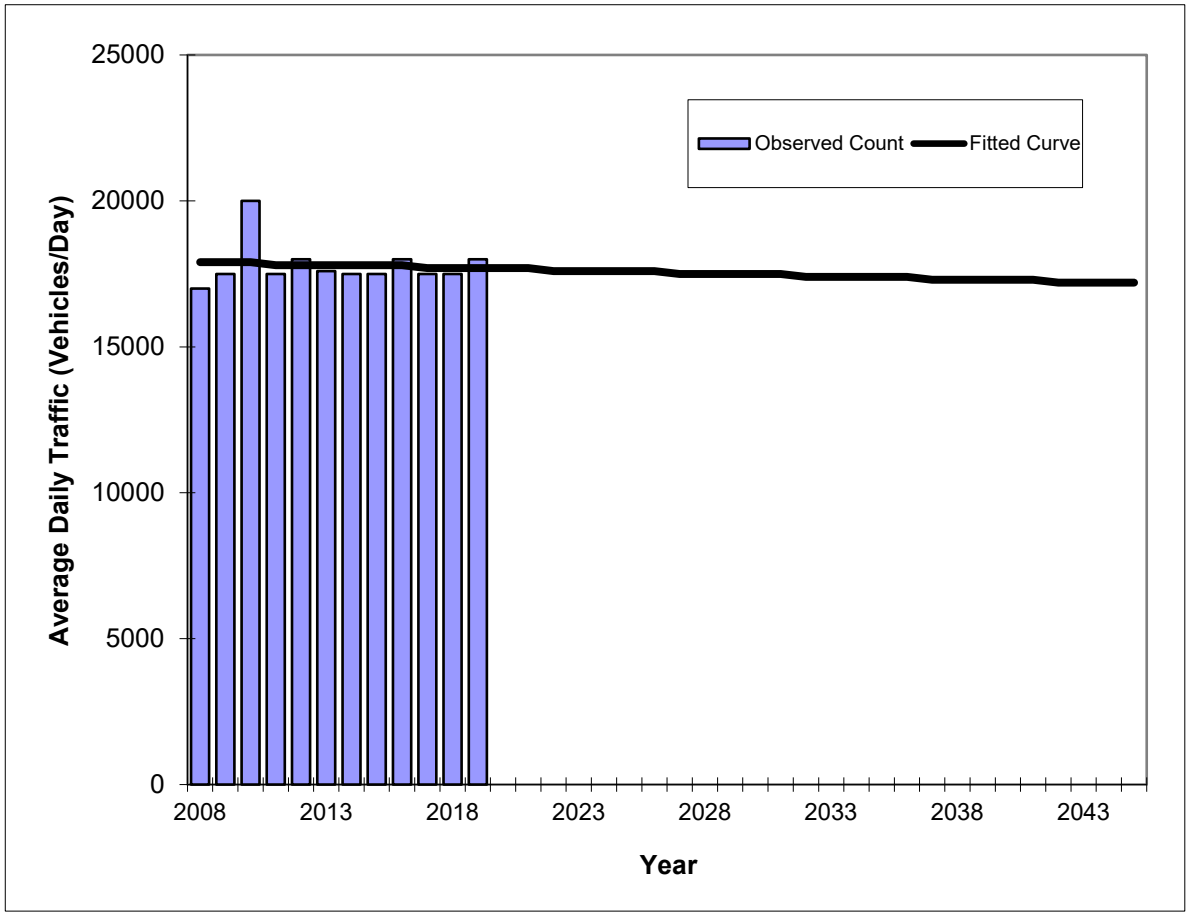
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V03.a

--

FIN#	1234
Location	1

County:	Duval (72)
Station #:	0
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2008	17000	17900
2009	17500	17900
2010	20000	17900
2011	17500	17800
2012	18000	17800
2013	17600	17800
2014	17500	17800
2015	17500	17800
2016	18000	17800
2017	17500	17700
2018	17500	17700
2019	18000	17700
2030 Opening Year Trend		
2030	N/A	17500
2033 Mid-Year Trend		
2033	N/A	17400
2045 Design Year Trend		
2045	N/A	17200
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-20
Trend R-squared:	0.89%
Trend Annual Historic Growth Rate:	-0.10%
Trend Growth Rate (2019 to Design Year):	-0.11%
Printed:	3-Jul-23

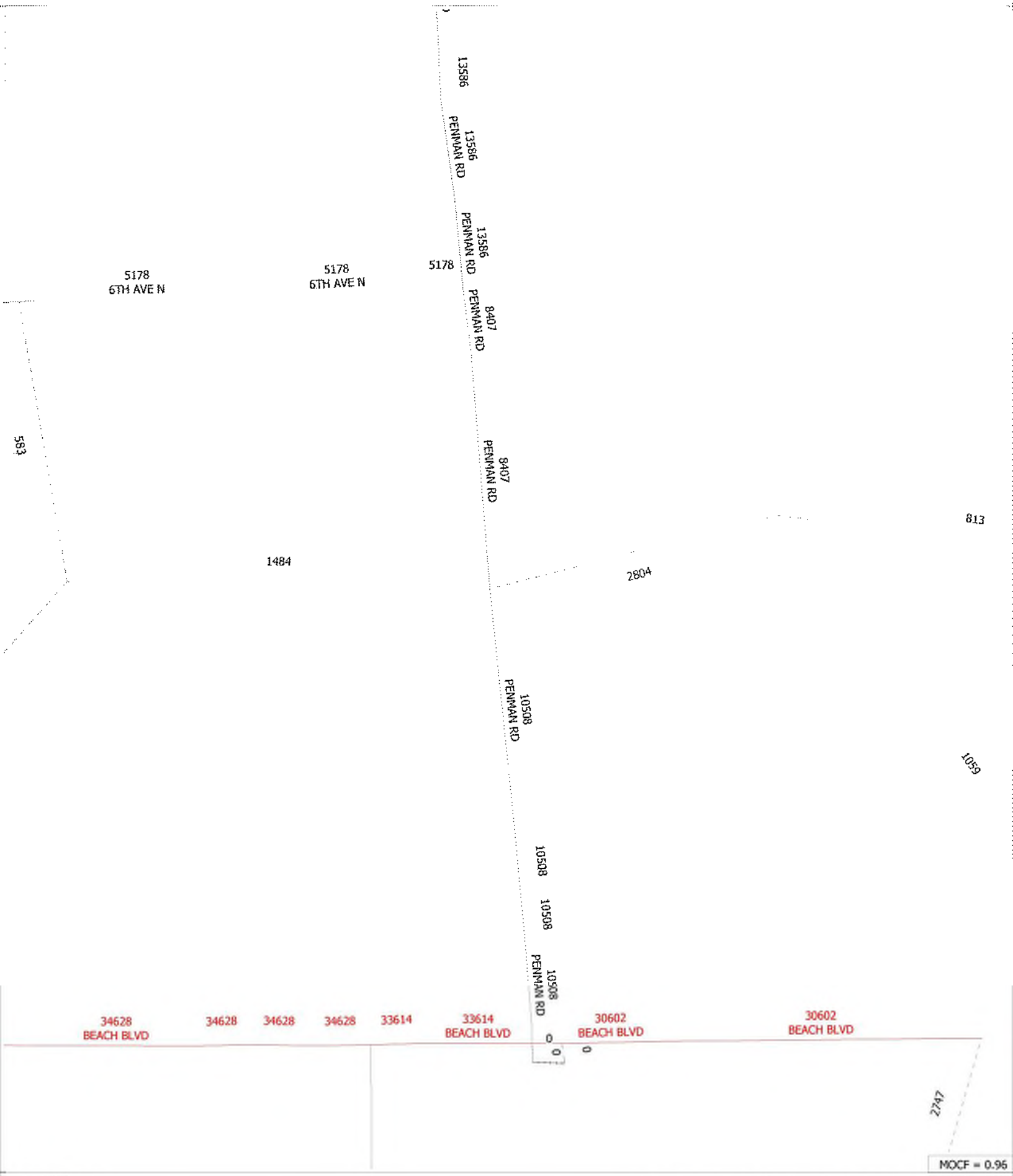
Straight Line Growth Option

***Axle-Adjusted**

Appendix G

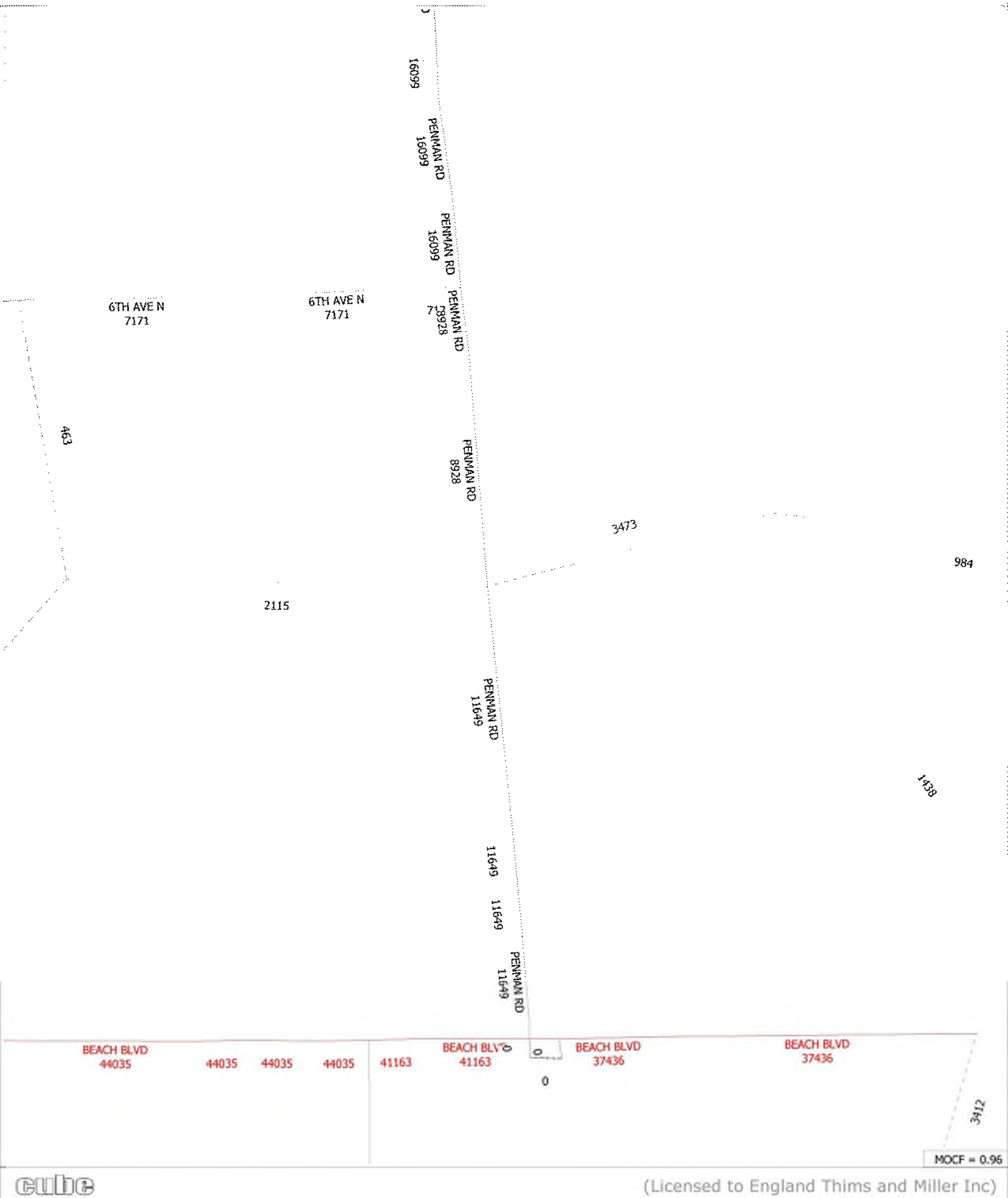
Travel Demand Model Plots

Penman Road Complete Streets
2015 AADT
Penman Road North of Beach Boulevard



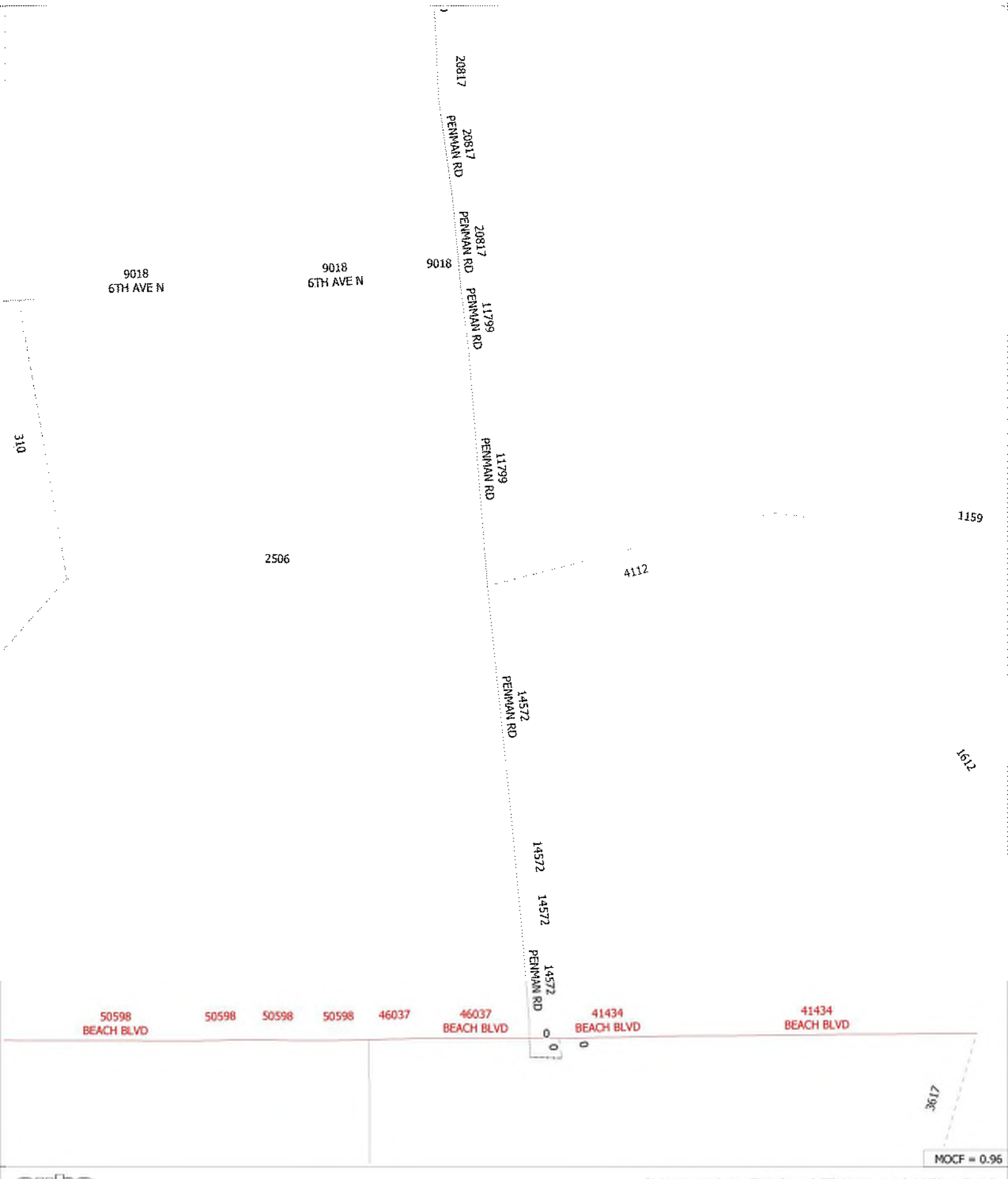
cube (Licensed to England Thims and Miller Inc)

Penman Road Complete Streets
2030 AADT
Penman Road North of Beach Boulevard



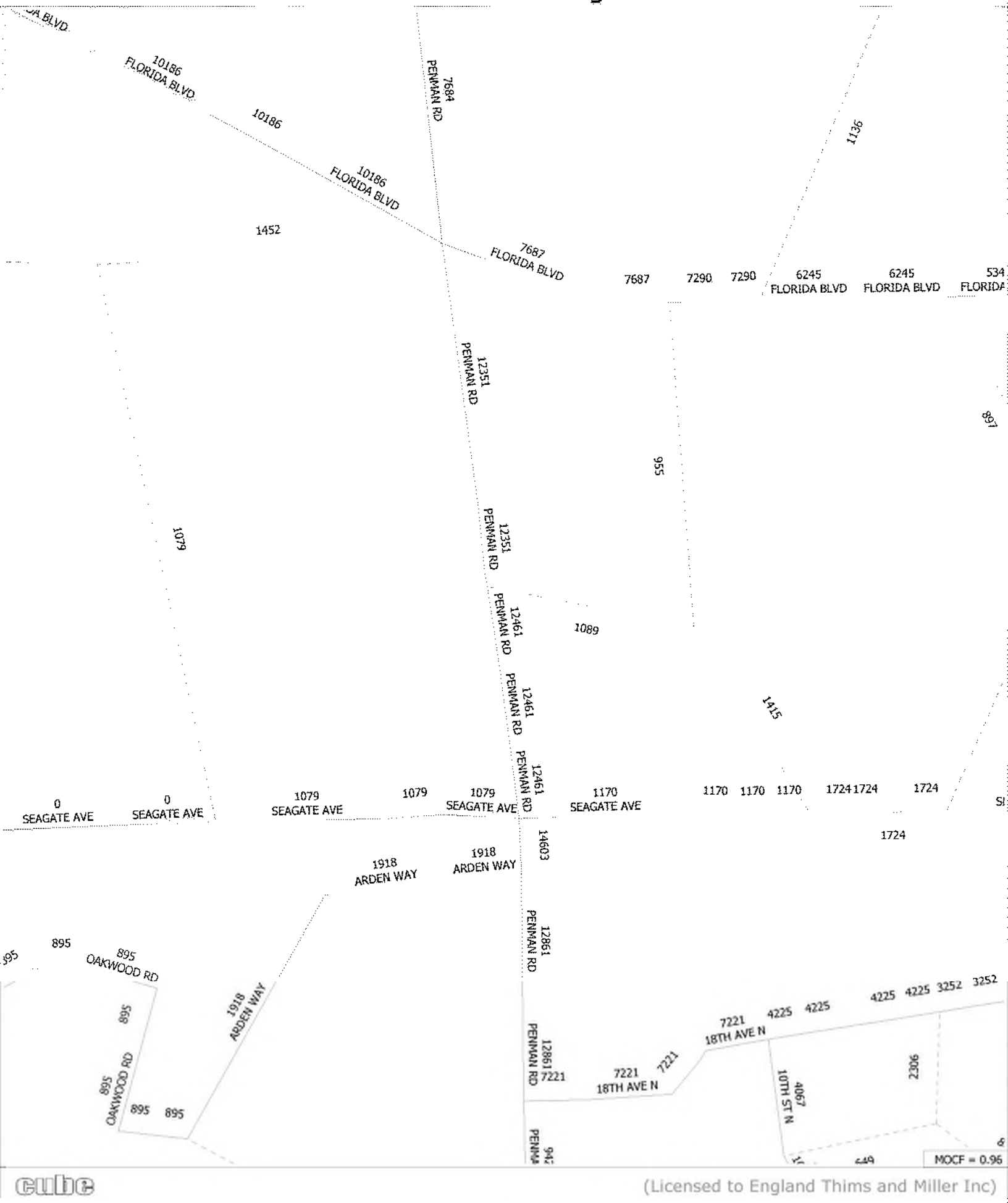
cube (Licensed to England Thims and Miller Inc)

Penman Road Complete Streets
2045 AADT
Penman Road North of Beach Boulevard



cube (Licensed to England Thims and Miller Inc)

Penman Road Complete Streets
2015 AADT
Penman Road North of Seagate Avenue

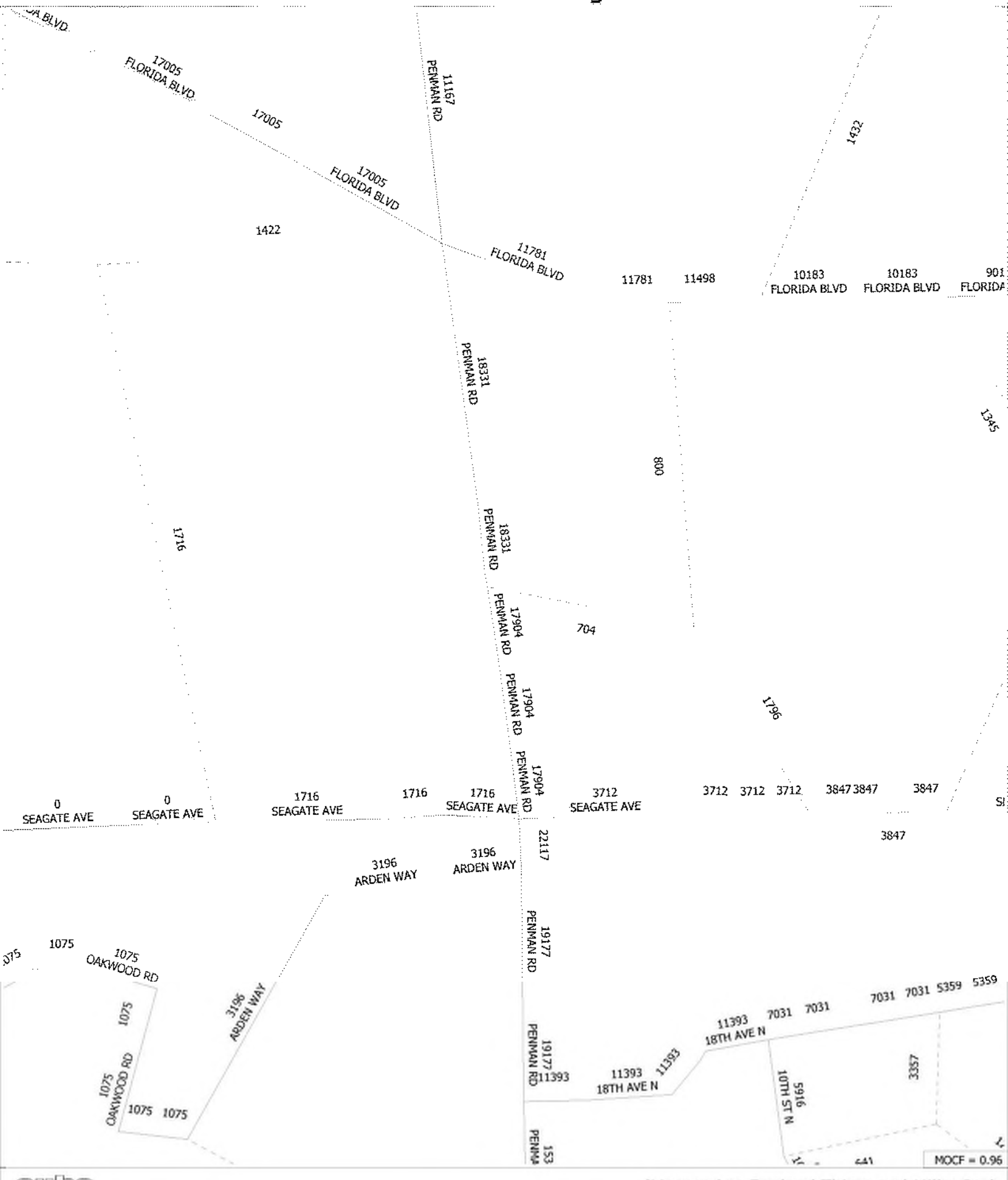


cube (Licensed to England Thims and Miller Inc)

Penman Road Complete Streets
2030 AADT
Penman Road North of Seagate Avenue

cube (Licensed to England Thims and Miller Inc)

Penman Road Complete Streets
2045 AADT
Penman Road North of Seagate Avenue



cube (Licensed to England Thims and Miller Inc)

Appendix H

FDOT's 2020 Quality/Level of Service Handbook

2020
Quality/ Level of Service Handbook

June 2020

State of Florida
Department of Transportation
Systems Implementation Office
605 Suwannee St. MS 19
Tallahassee, FL 32399

www.fdot.gov/planning

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's Urbanized Areas

January 2020

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,600	66,400	83,200	87,300
6	70,100	97,800	123,600	131,200
8	92,200	128,900	164,200	174,700
10	115,300	158,900	203,600	218,600
12	136,500	192,400	246,200	272,900

Urbanized

Lanes	B	C	D	E
4	45,900	62,700	75,600	85,400
6	68,900	93,900	113,600	128,100
8	91,900	125,200	151,300	170,900
10	115,000	156,800	189,300	213,600

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	11,700	18,000	24,200	32,600
4	Divided	36,300	52,600	66,200	75,300
6	Divided	54,600	78,800	99,400	113,100

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
https://www.fdot.gov/planning/systems/

Appendix I

Existing Signal Timing Data

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

Intersection: Beach & Penman
Time of Day Events

Day	Time	Cycle	Offset	Split	Lag LT
M-Th	12:00 AM	FREE			
	7:00 AM	1	1	1	5
	9:30 AM	2	1	2	5
	3:30 PM	3	1	3	5
	6:30 PM	FREE			
SAT	12:00 AM	FREE			
	8:30 AM	5	1	5	1
	10:30 AM	6	1	6	5
	7:00 PM	7	1	7	1
	9:00 PM	FREE			
SUN	12:00 AM	FREE			
	9:30 AM	5	1	5	1
	11:30 AM	6	1	6	5
	6:00 PM	7	1	7	1
FRI	12:00 AM	FREE			
	7:00 AM	1	1	1	5
	9:30 AM	2	1	2	5
	3:30 PM	3	1	3	5
	6:30 PM	FREE			

Controller Type: NAZTEC
Phase Allocations

Plan	AM	MD	PM			
Cycle	1	2	3	4	5	6
Length	150	150	160		110	150
Offset	127	3	40		96	36
Seq	6	2	2		7	2
Hold	6	6	6		2	6
Split Plans						
1	37	36	53		24	38
2	47	58	51		43	57
3						
4	33	24	31		18	23
5	16	15	16		15	18
6	68	79	88		52	77
7						
8	33	32	25		25	32
Max Rcl						

Overlaps

A	B	C	D
1+8			
NRT			
NotP8			

Sequence 1 User defined

1	2	4	8
5	6		

Sequence 2 User defined

1	2	4	8
6	5		

Sequence 6 User defined

1	2	8	4
6	5		

Sequence 7 User defined

2	1	8	4
5	6		

Phase Times

		INT	EXT	AMB	RED	MX1	WLK	DW
WLT	PHASE 1	4	3	3.6	1.8	40		
EA	PHASE 2	18	2.5	3.6	1.8	55	11	28
	PHASE 3							
SA	PHASE 4	6	3	3	2.1	25	8	34
ELT	PHASE 5	4	3	3.6	1.8	15		
WA	PHASE 6	18	2.5	3.6	1.8	55	7	18
	PHASE 7							
NA	PHASE 8	6	3	3	2.1	30	10	33

Note:

Traffic Signal Controller Parameters Rev 11/17/2021
Duval County, City of Jacksonville, Florida

Intersection: Penman & Arden Way **Controller Type:** 3000

Time of Day Events

Day	Time	Cycle	Offset	Split	Lag LT
M-F	12:00 AM	Free			
	5:00 AM	1	1	1	
	6:00 AM	2	1	2	
	8:00 AM	1	1	1	
	3:30 PM	2	1	2	
	6:30 PM	1	1	1	
WND	12:00 AM	Free			
	5:00 AM	1	1	1	

Phase Allocations

Plan						
Cycle	1	2	3	4		
Length	60	100				
Offset 1	0	0				
Offset 2						
Offset 3						
Hold						
Split Plans						
1	23	23				
2	48	57				
3						
4	29	20				
5	23	23				
6	48	57				
7						
8						
Max Rcl						

Phase Times

		INT	EXT	AMB	RED	MX1	WLK	DW
SLT	PHASE 1	3	3	4	2	20		
NA	PHASE 2	12	4	4	2	30	7	12
	PHASE 3							
E&W	PHASE 4	3	3	3.4	3.3	20	7	12
NLT	PHASE 5	3	3	4	2	20		
SA	PHASE 6	12	4	4	2	30	7	13
	PHASE 7							
	PHASE 8							

Overlaps

A	B	C	D

Sequence

1	2	4	
5	6		

Note:

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

Intersection: Penman & Seagate

Controller Type: 3000

Time of Day Events

Day	Time	Cycle	Offset	Split	Lag LT
M-F	12:00 AM	Free			
	5:00 AM	1	1	1	
	6:00 AM	2	1	2	
	8:00 AM	1	1	1	
	3:30 PM	2	1	2	
	6:30 PM	1	1	1	
WND	12:00 AM	Free			
	5:00 AM	1	1	1	

Phase Allocations

Plan						
Cycle	1	2	3	4		
Length	60	100				
Offset 1	0	0				
Offset 2						
Offset 3						
Hold						
Split Plans						
1	23	23				
2	48	57				
3						
4	29	20				
5	23	23				
6	48	57				
7						
8						
Max Rcl						

Phase Times

		INT	EXT	AMB	RED	MX1	WLK	DW
SLT	PHASE 1	3	3	3	1	20		
NA	PHASE 2	12	4	4	1	30	5	0
	PHASE 3							
E&W	PHASE 4	3	3	4	1	20	7	18
NLT	PHASE 5	3	3	3	1	20		
SA	PHASE 6	12	4	4	1	30	5	0
	PHASE 7							
	PHASE 8							

Overlaps

	A	B	C	D
24				
35				
25				
24				
35				

Sequence

1	2	4	
5	6		

Note: 3 second LPI on Ped-4

Traffic Signal Controller Parameters Rev 11/17/2021
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								

Phase Times

		INT	EXT	AMB	RED	MX1	WLK	DW	max green	max split
SLT	PHASE 1	3	4	3.4	3.1	30			36.5	
N&S	PHASE 2	12	3	4	3.6	40			47.6	
NLT	PHASE 3	6	3	4	4.4	15			23.4	
ELT	PHASE 4	6	3	3.4	4.1	12			19.5	
E&W	PHASE 5	4	3	4	3.6	60			67.6	
N/U	PHASE 6								0	
Forest	PHASE 7	3	3	3.4	4.1	25			32.5	
Ped	PHASE 8	3	3	4	4.4	29	7	31	46.4	
									211	273.5

Overlaps

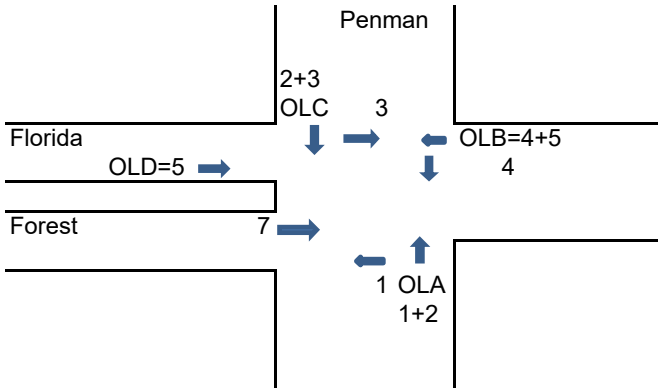
A	B	C	D
1+2	4+5	2+3	5

Sequence

1	2	3	4	5	7	8

4.6

Note: 1) Phase 8 is Exclusive Ped.
2) Ph 2+5 are Dummy Phases
3) Sequencial operation
4) Ph. 2 Min. recall
2/7/19 Clearance updated to FDOT TEM



Traffic Signal Controller Parameters Rev 03/02/2018
Duval County, City of Jacksonville, Florida

Intersection: Atlantic & Penman/Royal Palm **Controller: Naztec ATC** Int # 1340

Time of Day Events

Day	Time	Cycle	Offset	Split	Lag LT
M-TH	12:00 AM	FREE			
M-TH	7:00 AM	1	1	1	
M-TH	9:30 AM	2	1	2	
M-TH	3:00 PM	3	1	3	
M-TH	6:30 PM	4	1	4	
M-TH	9:00 PM	FREE			
SAT	12:00 AM	FREE			
SAT	8:30 AM	5	1	5	
SAT	10:30 AM	6	1	6	
SAT	7:00 PM	7	1	7	
SUN	12:00 AM	FREE			
SUN	9:30 AM	5	1	5	
SUN	11:30 AM	6	1	6	
SUN	6:00 PM	7	1	7	
SUN	20:30PM	FREE			
FRI	00:00PM	FREE			
FRI	7:00 AM	1	1	1	
FRI	9:30 AM	2	1	2	
FRI	3:00 PM	3	1	3	
FRI	6:30 PM	4	1	4	
FRI	9:00 PM	FREE			

Phase Allocations off peak

Plan	AM	MD	PM	OP	WKA	WKM	WKP
Pattern	1	2	3	4	5	6	7
Length	140	120	160	120	110	130	110
Offset	121	100	34	49	62	90	101
Seq	1	1	1	1	1	1	1
CordPh	2	2	2	2	2	2	2
Seconds of Cycle							
1	25	22	40	32	16	15	15
2	44	51	66	51	50	61	52
3	22	21	23	19	16	18	15
4	49	26	31	18	28	36	28
5	15	15	20	15	18	19	19
6	54	58	86	68	48	57	48
7	23	16	19	15	20	18	17
8	48	31	35	22	24	36	26
Max Rcl							

Phase Times max green

		INT	EXT	AMB	RED	MX1	WLK	DW
WLT	PHASE 1	4	3	4	2	10		
EA	PHASE 2	18	3	4	2	45	7	18
NLT	PHASE 3	4	3	3.4	2.3	10		
SA	PHASE 4	6	3	4.1	2.3	15	7	25
ELT	PHASE 5	4	3	4	2	10		
WA	PHASE 6	18	3	4	2	45	7	23
SLT	PHASE 7	4	3	4.1	2	10		
NA	PHASE 8	6	3	4.1	2.3	15	7	25

Note:

Sequence

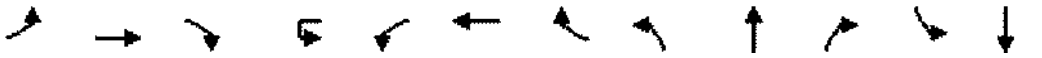
1	2	3	4
5	6	7	8

Appendix J

2021 Existing Intersection Capacity Analyses Worksheets

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Future Volume (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.983				0.976			0.986			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		18				26			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	6%	4%	5%	2%	2%	2%
Adj. Flow (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	1111	0	0	32	827	0	202	119	0	229	142
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	539
Future Volume (vph)	539
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	136
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	539
Shared Lane Traffic (%)	
Lane Group Flow (vph)	539
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	37.0	68.0		16.0	16.0	47.0		33.0	33.0		33.0	33.0
Total Split (%)	24.7%	45.3%		10.7%	10.7%	31.3%		22.0%	22.0%		22.0%	22.0%
Maximum Green (s)	31.6	62.6		10.6	10.6	41.6		27.9	27.9		27.9	27.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lag	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	28.8	75.2			8.8	50.6		22.2	22.2		27.4	27.4
Actuated g/C Ratio	0.19	0.50			0.06	0.34		0.15	0.15		0.18	0.18
v/c Ratio	0.85	0.44			0.31	0.49		0.79	0.45		0.71	0.42
Control Delay	81.3	26.1			74.5	40.9		82.5	61.1		70.5	58.3
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	81.3	26.1			74.5	40.9		82.5	61.1		70.5	58.3
LOS	F	C			E	D		F	E		E	E
Approach Delay		37.4				42.2			74.6			42.3
Approach LOS		D				D			E			D
Queue Length 50th (ft)	270	271			30	235		193	105		212	124
Queue Length 95th (ft)	#401	336			68	298		275	165		310	195
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	374	2512			125	1681		322	335		329	346
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.77	0.44			0.26	0.49		0.63	0.36		0.70	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 127 (85%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 43.3		Intersection LOS: D	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	56.5
Actuated g/C Ratio	0.38
v/c Ratio	0.79
Control Delay	26.2
Queue Delay	0.0
Total Delay	26.2
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	213
Queue Length 95th (ft)	273
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	716
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	3	18	4	2	21	9	526	11	1	24	935	25
Future Vol, veh/h	13	3	18	4	2	21	9	526	11	1	24	935	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	2	2	2	2	5	2	2	2	100	2	2	2
Mvmt Flow	13	3	18	4	2	21	9	526	11	1	24	935	25

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	1557	1553	948	1556	1560	532	960	0	0	-	537	0	0
Stage 1	996	998	-	550	550	-	-	-	-	-	-	-	-
Stage 2	561	555	-	1006	1010	-	-	-	-	-	-	-	-
Critical Hdwy	7.18	6.52	6.22	7.12	6.52	6.25	4.12	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.318	3.518	4.018	3.345	2.218	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	89	113	316	92	112	542	717	-	-	-	1031	-	-
Stage 1	287	322	-	519	516	-	-	-	-	-	-	-	-
Stage 2	502	513	-	291	317	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	84	112	316	84	111	542	717	-	-	~ -26	~ -26	-	-
Mov Cap-2 Maneuver	84	112	-	84	111	-	-	-	-	-	-	-	-
Stage 1	283	322	-	512	509	-	-	-	-	-	-	-	-
Stage 2	475	506	-	272	317	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.9	20.5	0.2	
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	717	-	-	143	259	+	-	-
HCM Lane V/C Ratio	0.013	-	-	0.238	0.104	-	-	-
HCM Control Delay (s)	10.1	-	-	37.9	20.5	-	-	-
HCM Lane LOS	B	-	-	E	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	10	5	1	15	3	546	4	8	940	4
Future Vol, veh/h	8	0	10	5	1	15	3	546	4	8	940	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	2
Mvmt Flow	8	0	10	5	1	15	3	546	4	8	940	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1520	1514	942	1517	1514	548	944	0	0	550	0	0
Stage 1	958	958	-	554	554	-	-	-	-	-	-	-
Stage 2	562	556	-	963	960	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	97	120	319	98	120	536	727	-	-	1020	-	-
Stage 1	309	336	-	517	514	-	-	-	-	-	-	-
Stage 2	512	513	-	307	335	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	119	319	94	119	536	727	-	-	1020	-	-
Mov Cap-2 Maneuver	93	119	-	94	119	-	-	-	-	-	-	-
Stage 1	308	333	-	515	512	-	-	-	-	-	-	-
Stage 2	495	511	-	295	332	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.6	21.9	0.1	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	727	-	-	153	234	1020	-	-
HCM Lane V/C Ratio	0.004	-	-	0.118	0.09	0.008	-	-
HCM Control Delay (s)	10	-	-	31.6	21.9	8.6	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	2	5	2	16	1	567	5	2	946	1
Future Vol, veh/h	0	1	2	5	2	16	1	567	5	2	946	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	2	5	2	16	1	567	5	2	946	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1532	1525	947	1524	1523	570	947	0	0	572	0	0
Stage 1	951	951	-	572	572	-	-	-	-	-	-	-
Stage 2	581	574	-	952	951	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	95	118	317	97	118	521	725	-	-	1001	-	-
Stage 1	312	338	-	505	504	-	-	-	-	-	-	-
Stage 2	499	503	-	312	338	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	91	118	317	96	118	521	725	-	-	1001	-	-
Mov Cap-2 Maneuver	91	118	-	96	118	-	-	-	-	-	-	-
Stage 1	312	337	-	504	503	-	-	-	-	-	-	-
Stage 2	481	502	-	308	337	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	22.3	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	203	231	1001	-	-
HCM Lane V/C Ratio	0.001	-	-	0.015	0.1	0.002	-	-
HCM Control Delay (s)	10	-	-	23	22.3	8.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	36	576	19	23	904
Future Vol, veh/h	33	36	576	19	23	904
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	6	3	2	2	2
Mvmt Flow	33	36	576	19	23	904

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1536	586	0	0	595	0
Stage 1	586	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Critical Hdwy	6.42	6.26	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.354	-	-	2.218	-
Pot Cap-1 Maneuver	128	503	-	-	981	-
Stage 1	556	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	503	-	-	981	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	367	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	344	981	-
HCM Lane V/C Ratio	-	-	0.201	0.023	-
HCM Control Delay (s)	-	-	18.1	8.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	32	553	42	22	731
Future Vol, veh/h	50	32	553	42	22	731
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	3	3	5	2	2
Mvmt Flow	50	32	553	42	22	731

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1349	574	0	0	595	0
Stage 1	574	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	166	516	-	-	981	-
Stage 1	563	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	516	-	-	981	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	299	516	981	-
HCM Lane V/C Ratio	-	-	0.167	0.062	0.022	-
HCM Control Delay (s)	-	-	19.4	12.4	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	22	516	79	26	761
Future Vol, veh/h	27	22	516	79	26	761
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	27	22	516	79	26	761

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1369	556	0	0	595	0
Stage 1	556	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	162	531	-	-	981	-
Stage 1	574	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	158	531	-	-	981	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	424	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	366	981	-
HCM Lane V/C Ratio	-	-	0.134	0.027	-
HCM Control Delay (s)	-	-	16.4	8.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

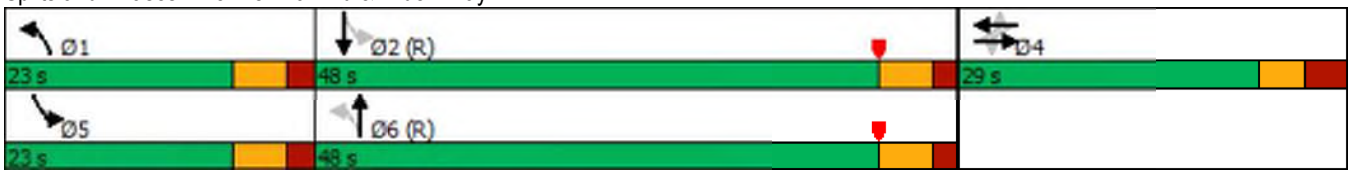
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Future Volume (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.950			0.998			0.997	
Flt Protected		0.974			0.987		0.950			0.950		
Satd. Flow (prot)	0	1765	0	0	1747	0	1687	1841	0	1770	1857	0
Flt Permitted		0.808			0.908		0.280			0.439		
Satd. Flow (perm)	0	1464	0	0	1607	0	497	1841	0	818	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			16			1			1	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	3%	2%	2%	2%	2%
Adj. Flow (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	43	0	14	508	0	6	788	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	29.0	29.0		29.0	29.0		23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	22.3	22.3		22.3	22.3		17.0	42.0		17.0	42.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		10.6			10.6		78.1	78.0		77.9	78.0	
Actuated g/C Ratio		0.11			0.11		0.78	0.78		0.78	0.78	
v/c Ratio		0.54			0.23		0.03	0.35		0.01	0.54	
Control Delay		47.7			30.6		3.8	6.4		2.3	5.3	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		47.7			30.6		3.8	6.5		2.3	5.3	
LOS		D			C		A	A		A	A	
Approach Delay		47.7			30.6			6.4			5.3	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		47			16		2	84		1	89	
Queue Length 95th (ft)		93			47		7	241		m1	117	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		335			370		595	1436		809	1448	
Starvation Cap Reductn		0			0		0	0		0	28	
Spillback Cap Reductn		0			0		0	145		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.27			0.12		0.02	0.39		0.01	0.55	

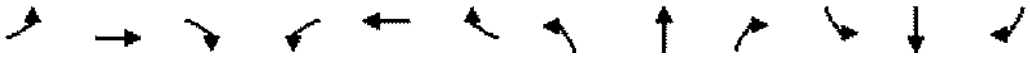
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Future Volume (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939				0.850		0.987			0.999	
Flt Protected		0.978			0.953		0.950			0.950		
Satd. Flow (prot)	0	1711	0	0	1775	1568	1770	1839	0	1752	1858	0
Flt Permitted		0.878			0.721		0.394			0.371		
Satd. Flow (perm)	0	1536	0	0	1343	1568	734	1839	0	684	1858	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				151		6				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%	20%
Adj. Flow (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	82	151	1	562	0	164	666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

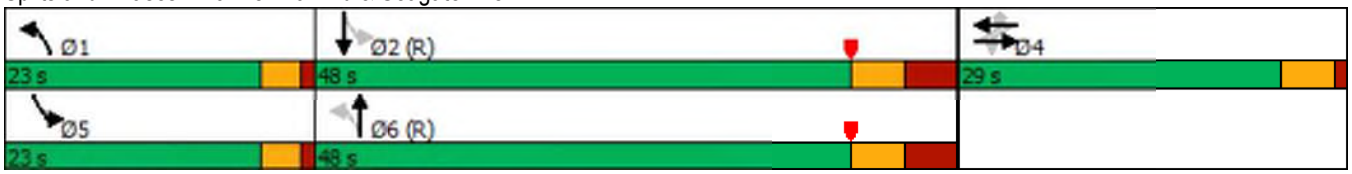


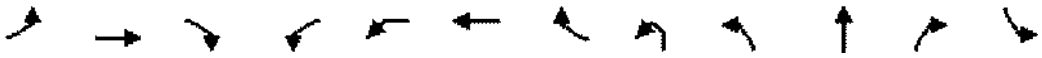
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	29.0	29.0		29.0	29.0	29.0	23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	19.0	40.0		19.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		11.4			11.4	11.4	73.4	63.9		79.6	73.7	
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.64		0.80	0.74	
v/c Ratio		0.06			0.54	0.48	0.00	0.48		0.26	0.49	
Control Delay		29.0			53.8	12.0	2.0	9.1		3.8	8.2	
Queue Delay		0.0			0.0	0.0	0.0	0.3		0.0	0.0	
Total Delay		29.0			53.8	12.0	2.0	9.4		3.8	8.2	
LOS		C			D	B	A	A		A	A	
Approach Delay		29.0			26.7			9.4			7.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		4			50	0	0	195		18	133	
Queue Length 95th (ft)		19			94	54	m0	76		41	343	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		372			322	491	781	1176		747	1369	
Starvation Cap Reductn		0			0	0	0	206		0	0	
Spillback Cap Reductn		0			5	0	0	0		0	41	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.26	0.31	0.00	0.58		0.22	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

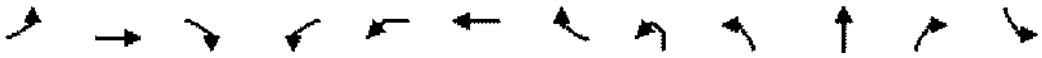
Splits and Phases: 9: Penman Rd & Seagate Ave





Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Future Volume (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.961				0.982		
Flt Protected		0.990			0.950				0.950			0.950
Satd. Flow (prot)	0	1844	1568	0	1746	1790	0	0	1755	1829	0	1736
Flt Permitted		0.902			0.950				0.950			0.950
Satd. Flow (perm)	0	1680	1568	0	1746	1790	0	0	1755	1829	0	1736
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						7				3		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	10%	2%	2%	2%	3%	2%	2%	4%
Adj. Flow (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	361	0	57	171	0	0	224	400	0	51
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations								
Traffic Volume (vph)	367	8	16	21	22	81		
Future Volume (vph)	367	8	16	21	22	81		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0		0	0			
Storage Lanes		0		1	0			
Taper Length (ft)				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.991			0.888				
Flt Protected				0.992				
Satd. Flow (prot)	1843	0	0	1610	0	0		
Flt Permitted				0.992				
Satd. Flow (perm)	1843	0	0	1610	0	0		
Right Turn on Red			Yes			Yes		
Satd. Flow (RTOR)	1			172				
Link Speed (mph)	35			35				
Link Distance (ft)	1460			438				
Travel Time (s)	28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	6%	2%	13%	2%		
Adj. Flow (vph)	367	8	16	21	22	81		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	391	0	0	124	0	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Right	Right		
Median Width(ft)	12			12				
Link Offset(ft)	0			45				
Crosswalk Width(ft)	16			16				
Two way Left Turn Lane	Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	9	9		
Number of Detectors	2			1				
Detector Template	Thru			Left				
Leading Detector (ft)	100			20				
Trailing Detector (ft)	0			0				
Detector 1 Position(ft)	0			0				
Detector 1 Size(ft)	6			20				
Detector 1 Type	Cl+Ex			Cl+Ex				
Detector 1 Channel								
Detector 1 Extend (s)	0.0			0.0				
Detector 1 Queue (s)	0.0			0.0				
Detector 1 Delay (s)	0.0			0.0				
Detector 2 Position(ft)	94							
Detector 2 Size(ft)	6							
Detector 2 Type	Cl+Ex							
Detector 2 Channel								
Detector 2 Extend (s)	0.0							
Turn Type	NA			Prot				
Protected Phases	2 3			7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	22.5	22.5	22.5	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.8	60.8		12.2	80.6			30.4	78.0		13.1
Actuated g/C Ratio		0.26	0.26		0.05	0.35			0.13	0.33		0.06
v/c Ratio		0.40	0.88		0.63	0.27			0.98	0.65		0.53
Control Delay		78.7	106.5		140.9	58.3			150.8	75.0		131.3
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		78.7	106.5		140.9	58.3			150.8	75.0		131.3
LOS		E	F		F	E			F	E		F
Approach Delay		97.4				78.9				102.2		
Approach LOS		F				E				F		
Queue Length 50th (ft)		257	612		97	212			~418	601		85
Queue Length 95th (ft)		353	#858		#184	296			#633	751		147
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		437	408		91	622			228	617		113
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.40	0.88		0.63	0.27			0.98	0.65		0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 233.3			
Natural Cycle: 155			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 92.0		Intersection LOS: F	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases								
Detector Phase	2 3			7				
Switch Phase								
Minimum Initial (s)				3.0			12.0	3.0
Minimum Split (s)				22.5			22.5	46.4
Total Split (s)				32.5			47.6	46.4
Total Split (%)				11.9%			17%	17%
Maximum Green (s)				25.0			40.0	38.0
Yellow Time (s)				3.4			4.0	4.0
All-Red Time (s)				4.1			3.6	4.4
Lost Time Adjust (s)				0.0				
Total Lost Time (s)				7.5				
Lead/Lag				Lead			Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes
Vehicle Extension (s)				3.0			3.0	3.0
Recall Mode				None			Min	None
Walk Time (s)								7.0
Flash Dont Walk (s)								31.0
Pedestrian Calls (#/hr)								13
Act Effct Green (s)	61.6			5.7				
Actuated g/C Ratio	0.26			0.02				
v/c Ratio	0.80			0.60				
Control Delay	95.6			13.4				
Queue Delay	0.0			0.0				
Total Delay	95.6			13.4				
LOS	F			B				
Approach Delay	99.7			13.4				
Approach LOS	F			B				
Queue Length 50th (ft)	634			0				
Queue Length 95th (ft)	#798			3				
Internal Link Dist (ft)	1380			358				
Turn Bay Length (ft)								
Base Capacity (vph)	493			328				
Starvation Cap Reductn	0			0				
Spillback Cap Reductn	0			0				
Storage Cap Reductn	0			0				
Reduced v/c Ratio	0.79			0.38				

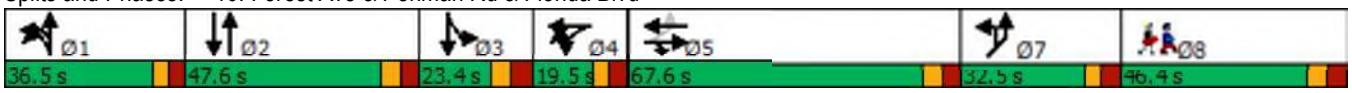
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



Intersection	
Int Delay, s/veh	1.3

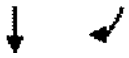
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	45	446	7	57	396
Future Vol, veh/h	16	45	446	7	57	396
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	45	446	7	57	396

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	960	450	0	0	453	0
Stage 1	450	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	285	609	-	-	1108	-
Stage 1	642	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	270	609	-	-	1108	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	572	-	-	-	-	-

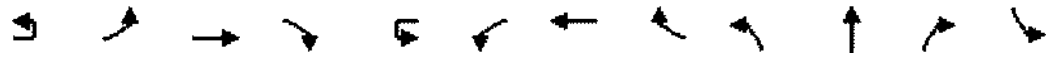
Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1108	-
HCM Lane V/C Ratio	-	-	0.114	0.051	-
HCM Control Delay (s)	-	-	12.6	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Future Volume (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.994			0.910		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3446	0	0	1770	3518	0	1770	1695	0	1770
Flt Permitted		0.279				0.114			0.362			0.343
Satd. Flow (perm)	0	520	3446	0	0	212	3518	0	674	1695	0	639
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			11				3			55		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	1198	0	0	136	859	0	254	277	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

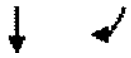


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	107	50
Future Volume (vph)	107	50
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.952	
Flt Protected		
Satd. Flow (prot)	1729	0
Flt Permitted		
Satd. Flow (perm)	1729	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	17	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	4%	6%
Adj. Flow (vph)	107	50
Shared Lane Traffic (%)		
Lane Group Flow (vph)	157	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		12.4	12.4	31.0		10.4	38.4		10.4
Total Split (s)	25.0	25.0	54.0		15.0	15.0	44.0		23.0	49.0		22.0
Total Split (%)	17.9%	17.9%	38.6%		10.7%	10.7%	31.4%		16.4%	35.0%		15.7%
Maximum Green (s)	19.0	19.0	48.0		9.0	9.0	38.0		16.9	42.6		16.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		75.3	68.5			84.9	75.3		41.4	25.5		30.3
Actuated g/C Ratio		0.54	0.49			0.61	0.54		0.30	0.18		0.22
v/c Ratio		0.11	0.71			0.54	0.45		0.77	0.78		0.39
Control Delay		14.3	32.4			20.8	22.7		55.5	58.8		39.3
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		14.3	32.4			20.8	22.7		55.5	58.8		39.3
LOS		B	C			C	C		E	E		D
Approach Delay			31.8				22.4			57.2		
Approach LOS			C				C			E		
Queue Length 50th (ft)		13	427			48	247		192	199		59
Queue Length 95th (ft)		35	#644			98	372		243	282		91
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		486	1690			256	1893		331	554		296
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.08	0.71			0.53	0.45		0.77	0.50		0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 121 (86%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 34.9		Intersection LOS: C	
Intersection Capacity Utilization 84.4%		ICU Level of Service E	
Analysis Period (min) 15			

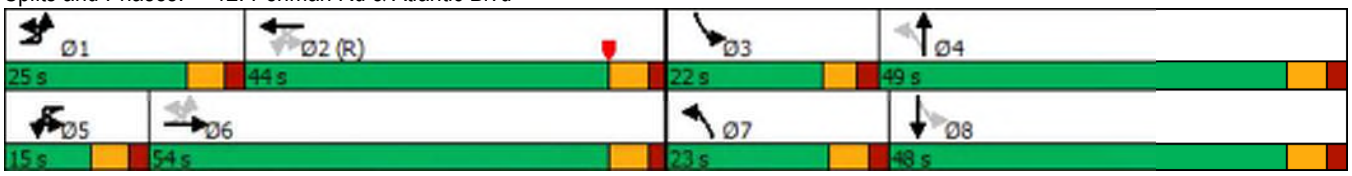


Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	48.0	
Total Split (%)	34.3%	
Maximum Green (s)	41.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	19.0	
Actuated g/C Ratio	0.14	
v/c Ratio	0.63	
Control Delay	60.8	
Queue Delay	0.0	
Total Delay	60.8	
LOS	E	
Approach Delay	53.1	
Approach LOS	D	
Queue Length 50th (ft)	124	
Queue Length 95th (ft)	182	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	525	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.30	

Intersection Summary

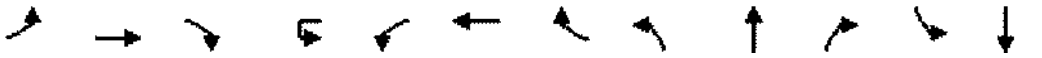
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Penman Rd & Atlantic Blvd



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Future Volume (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.973			0.985			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		34				31			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	490	1143	0	0	27	1193	0	248	153	0	215	147
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	388
Future Volume (vph)	388
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	88
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	388
Shared Lane Traffic (%)	
Lane Group Flow (vph)	388
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	53.0	88.0		16.0	16.0	51.0		31.0	31.0		25.0	25.0
Total Split (%)	33.1%	55.0%		10.0%	10.0%	31.9%		19.4%	19.4%		15.6%	15.6%
Maximum Green (s)	47.6	82.6		10.6	10.6	45.6		25.9	25.9		19.9	19.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	46.3	89.4			8.8	47.3		24.9	24.9		20.5	20.5
Actuated g/C Ratio	0.29	0.56			0.06	0.30		0.16	0.16		0.13	0.13
v/c Ratio	0.96	0.41			0.28	0.80		0.90	0.53		0.95	0.62
Control Delay	85.8	20.9			78.9	56.0		99.9	68.1		115.6	78.5
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	85.8	20.9			78.9	56.0		99.9	68.1		115.6	78.5
LOS	F	C			E	E		F	E		F	E
Approach Delay		40.4				56.5			87.8			62.0
Approach LOS		D				E			F			E
Queue Length 50th (ft)	501	260			27	421		257	146		228	149
Queue Length 95th (ft)	#723	299			63	482		#413	225		#403	230
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	526	2792			117	1485		286	299		227	238
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.93	0.41			0.23	0.80		0.87	0.51		0.95	0.62

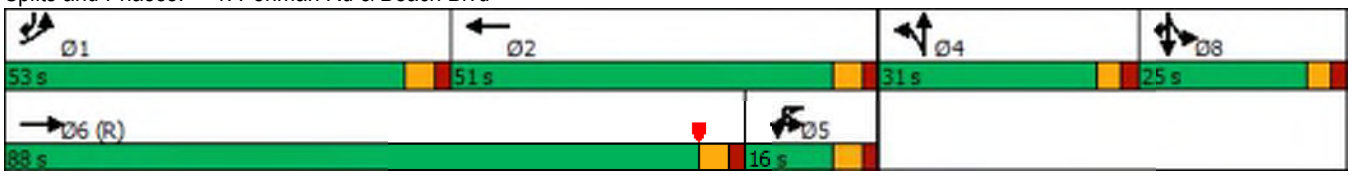
Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 54.1		Intersection LOS: D	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	72.2
Actuated g/C Ratio	0.45
v/c Ratio	0.51
Control Delay	26.1
Queue Delay	0.0
Total Delay	26.1
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	219
Queue Length 95th (ft)	320
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	775
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	2	22	10	2	13	22	866	4	8	749	25
Future Vol, veh/h	23	2	22	10	2	13	22	866	4	8	749	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	4
Mvmt Flow	23	2	22	10	2	13	22	866	4	8	749	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1698	1692	762	1702	1702	868	774	0	0	870	0	0
Stage 1	778	778	-	912	912	-	-	-	-	-	-	-
Stage 2	920	914	-	790	790	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	73	93	405	72	92	352	842	-	-	775	-	-
Stage 1	389	407	-	328	353	-	-	-	-	-	-	-
Stage 2	325	352	-	383	402	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	67	90	405	65	89	352	842	-	-	775	-	-
Mov Cap-2 Maneuver	67	90	-	65	89	-	-	-	-	-	-	-
Stage 1	379	403	-	319	344	-	-	-	-	-	-	-
Stage 2	303	343	-	357	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	58.6	43.9	0.2	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	842	-	-	112	117	775	-	-
HCM Lane V/C Ratio	0.026	-	-	0.42	0.214	0.01	-	-
HCM Control Delay (s)	9.4	-	-	58.6	43.9	9.7	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.8	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	6	1	10	7	5	26	1	15	864	10	10	720	11
Future Vol, veh/h	6	1	10	7	5	26	1	15	864	10	10	720	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1	10	7	5	26	1	15	864	10	10	720	11

Major/Minor	Minor2			Minor1				Major1			Major2		
Conflicting Flow All	1661	1652	726	1650	1652	869	-	731	0	0	874	0	0
Stage 1	746	746	-	899	901	-	-	-	-	-	-	-	-
Stage 2	915	906	-	751	751	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	77	98	425	79	98	351	-	873	-	-	772	-	-
Stage 1	405	421	-	334	357	-	-	-	-	-	-	-	-
Stage 2	327	355	-	403	418	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	68	97	425	76	97	351	~ -16	~ -16	-	-	772	-	-
Mov Cap-2 Maneuver	68	97	-	76	97	-	-	-	-	-	-	-	-
Stage 1	405	416	-	334	357	-	-	-	-	-	-	-	-
Stage 2	299	355	-	387	413	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.5	31.2		0.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	139	175	772	-	-
HCM Lane V/C Ratio	-	-	-	0.122	0.217	0.013	-	-
HCM Control Delay (s)	-	-	-	34.5	31.2	9.7	-	-
HCM Lane LOS	-	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.4	0.8	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	0	4	1	14	0	883	3	15	754	1
Future Vol, veh/h	4	1	0	4	1	14	0	883	3	15	754	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	0	4	1	14	0	883	3	15	754	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1677	1671	755	1670	1670	885	755	0	0	886	0	0
Stage 1	785	785	-	885	885	-	-	-	-	-	-	-
Stage 2	892	886	-	785	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	75	96	409	76	96	344	855	-	-	764	-	-
Stage 1	386	404	-	340	363	-	-	-	-	-	-	-
Stage 2	337	363	-	386	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	70	94	409	74	94	344	855	-	-	764	-	-
Mov Cap-2 Maneuver	70	94	-	74	94	-	-	-	-	-	-	-
Stage 1	386	396	-	340	363	-	-	-	-	-	-	-
Stage 2	322	363	-	377	396	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.1	27.3	0	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	855	-	-	74	180	764	-	-
HCM Lane V/C Ratio	-	-	-	0.068	0.106	0.02	-	-
HCM Control Delay (s)	0	-	-	57.1	27.3	9.8	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	63	877	34	33	747
Future Vol, veh/h	21	63	877	34	33	747
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	2	3	2	2
Mvmt Flow	21	63	877	34	33	747

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1707	894	0	0	911	0
Stage 1	894	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	99	340	-	-	748	-
Stage 1	395	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	95	340	-	-	748	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	302	748	-
HCM Lane V/C Ratio	-	-	0.278	0.044	-
HCM Control Delay (s)	-	-	21.5	10	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	45	753	40	46	676
Future Vol, veh/h	28	45	753	40	46	676
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	28	45	753	40	46	676

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1541	773	0	0	793	0
Stage 1	773	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	127	399	-	-	828	-
Stage 1	455	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	120	399	-	-	828	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	257	399	828	-
HCM Lane V/C Ratio	-	-	0.109	0.113	0.056	-
HCM Control Delay (s)	-	-	20.7	15.2	9.6	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.4	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	10	745	43	15	690
Future Vol, veh/h	26	10	745	43	15	690
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	10	2	2	2	2
Mvmt Flow	26	10	745	43	15	690

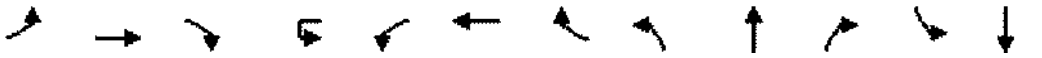
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1487	767	0	0	788	0
Stage 1	767	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Critical Hdwy	6.42	6.3	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.39	-	-	2.218	-
Pot Cap-1 Maneuver	137	390	-	-	831	-
Stage 1	458	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	390	-	-	831	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	473	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	299	831	-
HCM Lane V/C Ratio	-	-	0.12	0.018	-
HCM Control Delay (s)	-	-	18.7	9.4	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Future Volume (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		0		0	60		0	60	
Storage Lanes	0		0		0		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964				0.988			0.996			0.990
Flt Protected		0.977				0.978		0.950			0.950	
Satd. Flow (prot)	0	1754	0	0	0	1800	0	1770	1855	0	1543	1844
Flt Permitted		0.832				0.831		0.311			0.333	
Satd. Flow (perm)	0	1494	0	0	0	1529	0	579	1855	0	541	1844
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		15				3			2			5
Link Speed (mph)		35				35			35			35
Link Distance (ft)		287				309			1117			279
Travel Time (s)		5.6				6.0			21.8			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%
Adj. Flow (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	0	34	0	18	718	0	6	729
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		0				0			12			12
Link Offset(ft)		35				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Perm	NA		Perm	Perm	NA		pm+pt	NA		pm+pt	NA
Protected Phases		4				4		1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	48
Future Volume (vph)	48
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	48
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4	4			6			2	
Detector Phase	4	4		4	4	4		1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0		3.0	12.0		3.0	12.0
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7		9.0	26.0		9.0	25.0
Total Split (s)	20.0	20.0		20.0	20.0	20.0		23.0	57.0		23.0	57.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%		23.0%	57.0%		23.0%	57.0%
Maximum Green (s)	13.3	13.3		13.3	13.3	13.3		17.0	51.0		17.0	51.0
Yellow Time (s)	3.4	3.4		3.4	3.4	3.4		4.0	4.0		4.0	4.0
All-Red Time (s)	3.3	3.3		3.3	3.3	3.3		2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0				0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		6.7				6.7		6.0	6.0		6.0	6.0
Lead/Lag								Lead	Lag		Lead	Lag
Lead-Lag Optimize?								Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None		None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			7.0			7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0	12.0			13.0			12.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		8.4				8.4		80.2	80.1		78.8	77.7
Actuated g/C Ratio		0.08				0.08		0.80	0.80		0.79	0.78
v/c Ratio		0.41				0.26		0.03	0.48		0.01	0.51
Control Delay		42.2				43.7		2.9	6.7		1.7	5.3
Queue Delay		0.0				0.0		0.0	0.1		0.0	0.1
Total Delay		42.2				43.7		2.9	6.9		1.7	5.3
LOS		D				D		A	A		A	A
Approach Delay		42.2				43.7			6.8			5.3
Approach LOS		D				D			A			A
Queue Length 50th (ft)		26				19		2	121		1	81
Queue Length 95th (ft)		64				48		7	358		m1	105
Internal Link Dist (ft)		207				229			1037			199
Turn Bay Length (ft)								60			60	
Base Capacity (vph)		211				205		673	1487		610	1434
Starvation Cap Reductn		0				0		0	0		0	73
Spillback Cap Reductn		0				0		0	161		0	0
Storage Cap Reductn		0				0		0	0		0	0
Reduced v/c Ratio		0.27				0.17		0.03	0.54		0.01	0.54

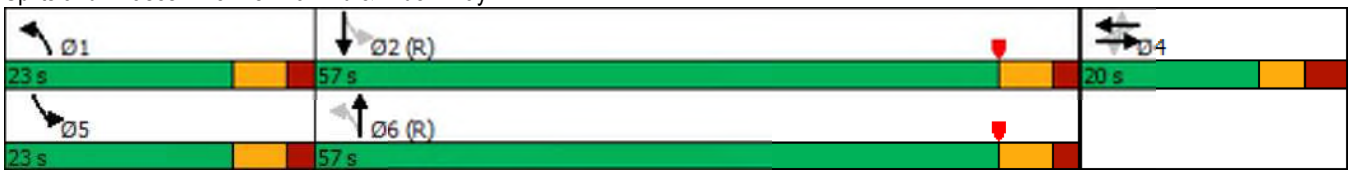
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 8.2		Intersection LOS: A	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

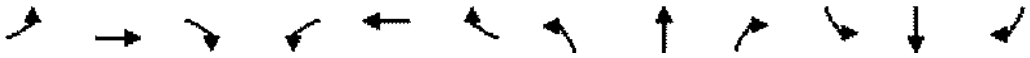
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Future Volume (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.985			0.999	
Flt Protected		0.976			0.953		0.950			0.950		
Satd. Flow (prot)	0	1776	0	0	1725	1583	1770	1835	0	1770	1861	0
Flt Permitted		0.877			0.725		0.414			0.303		
Satd. Flow (perm)	0	1596	0	0	1312	1583	771	1835	0	564	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				263		8				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	83	263	4	677	0	155	634	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

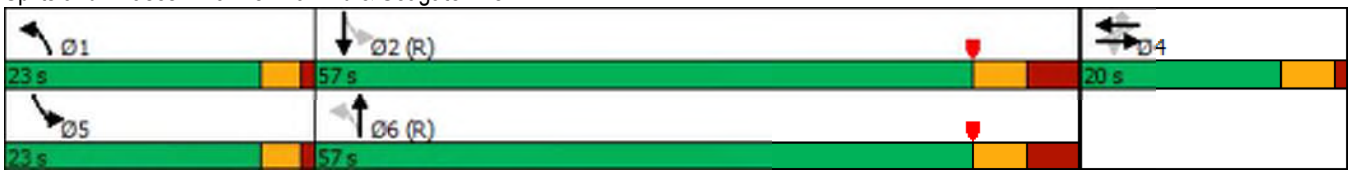


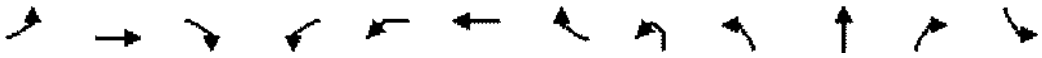
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	23.0	57.0		23.0	57.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	23.0%	57.0%		23.0%	57.0%	
Maximum Green (s)	15.0	15.0		15.0	15.0	15.0	19.0	49.0		19.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		11.2			11.2	11.2	73.8	64.2		79.7	73.8	
Actuated g/C Ratio		0.11			0.11	0.11	0.74	0.64		0.80	0.74	
v/c Ratio		0.03			0.56	0.64	0.01	0.57		0.29	0.46	
Control Delay		35.0			56.2	12.7	1.0	8.4		4.0	7.6	
Queue Delay		0.0			0.0	0.0	0.0	0.2		0.0	0.0	
Total Delay		35.0			56.2	12.7	1.0	8.6		4.0	7.7	
LOS		C			E	B	A	A		A	A	
Approach Delay		35.0			23.1			8.5			6.9	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		3			51	0	0	231		17	124	
Queue Length 95th (ft)		15			97	71	m0	49		36	306	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		240			196	461	804	1181		678	1373	
Starvation Cap Reductn		0			0	0	0	82		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	14	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.42	0.57	0.00	0.62		0.23	0.47	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 70.8%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

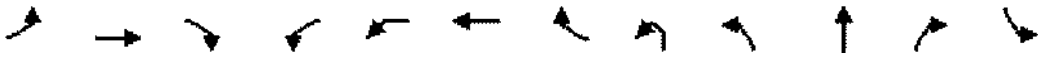
Splits and Phases: 9: Penman Rd & Seagate Ave





Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Future Volume (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.965				0.991		
Flt Protected		0.994			0.950				0.950			0.950
Satd. Flow (prot)	0	1832	1583	0	1770	1798	0	0	1770	1846	0	1770
Flt Permitted		0.940			0.950				0.950			0.950
Satd. Flow (perm)	0	1732	1583	0	1770	1798	0	0	1770	1846	0	1770
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						6				1		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	411	0	45	212	0	0	265	553	0	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	297	16	18	2	14	16	38		
Future Volume (vph)	297	16	18	2	14	16	38		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0			0	0			
Storage Lanes		0			1	0			
Taper Length (ft)					50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.985				0.896				
Flt Protected					0.989				
Satd. Flow (prot)	1835	0	0	0	1629	0	0		
Flt Permitted					0.989				
Satd. Flow (perm)	1835	0	0	0	1629	0	0		
Right Turn on Red			Yes				Yes		
Satd. Flow (RTOR)	1				172				
Link Speed (mph)	35				35				
Link Distance (ft)	1460				438				
Travel Time (s)	28.4				8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	2%	50%	2%	2%	2%		
Adj. Flow (vph)	297	16	18	2	14	16	38		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	331	0	0	0	70	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Left	Right	Right		
Median Width(ft)	12				12				
Link Offset(ft)	0				45				
Crosswalk Width(ft)	16				16				
Two way Left Turn Lane	Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	15	9	9		
Number of Detectors	2			1	1				
Detector Template	Thru			Left	Left				
Leading Detector (ft)	100			20	20				
Trailing Detector (ft)	0			0	0				
Detector 1 Position(ft)	0			0	0				
Detector 1 Size(ft)	6			20	20				
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0			0.0	0.0				
Detector 1 Queue (s)	0.0			0.0	0.0				
Detector 1 Delay (s)	0.0			0.0	0.0				
Detector 2 Position(ft)	94								
Detector 2 Size(ft)	6								
Detector 2 Type	Cl+Ex								
Detector 2 Channel									
Detector 2 Extend (s)	0.0								
Turn Type	NA			Prot	Prot				
Protected Phases	2 3			7	7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	11.6	11.6	11.6	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.8	60.8		12.2	80.6			30.4	78.6		10.6
Actuated g/C Ratio		0.26	0.26		0.05	0.35			0.13	0.34		0.05
v/c Ratio		0.47	0.99		0.49	0.34			1.14	0.88		0.40
Control Delay		79.7	122.4		131.0	59.7			182.4	89.2		127.1
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		79.7	122.4		131.0	59.7			182.4	89.2		127.1
LOS		E	F		F	E			F	F		F
Approach Delay		107.8				72.2				119.4		
Approach LOS		F				E				F		
Queue Length 50th (ft)		309	~749		74	264			~539	905		53
Queue Length 95th (ft)		423	#1028		134	366			#780	#1205		101
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		455	415		92	630			232	628		116
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.47	0.99		0.49	0.34			1.14	0.88		0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 231.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 101.9		Intersection LOS: F	
Intersection Capacity Utilization 93.7%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	2 3			7	7				
Switch Phase									
Minimum Initial (s)				3.0	3.0			12.0	3.0
Minimum Split (s)				10.5	10.5			19.6	46.4
Total Split (s)				32.5	32.5			47.6	46.4
Total Split (%)				11.9%	11.9%			17%	17%
Maximum Green (s)				25.0	25.0			40.0	38.0
Yellow Time (s)				3.4	3.4			4.0	4.0
All-Red Time (s)				4.1	4.1			3.6	4.4
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					7.5				
Lead/Lag				Lead	Lead			Lag	Lag
Lead-Lag Optimize?				Yes	Yes			Yes	Yes
Vehicle Extension (s)				3.0	3.0			3.0	3.0
Recall Mode				None	None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									11
Act Effct Green (s)	59.7				5.6				
Actuated g/C Ratio	0.26				0.02				
v/c Ratio	0.70				0.34				
Control Delay	89.1				4.4				
Queue Delay	0.0				0.0				
Total Delay	89.1				4.4				
LOS	F				A				
Approach Delay	92.4				4.4				
Approach LOS	F				A				
Queue Length 50th (ft)	516				0				
Queue Length 95th (ft)	654				0				
Internal Link Dist (ft)	1380				358				
Turn Bay Length (ft)									
Base Capacity (vph)	510				331				
Starvation Cap Reductn	0				0				
Spillback Cap Reductn	0				0				
Storage Cap Reductn	0				0				
Reduced v/c Ratio	0.65				0.21				

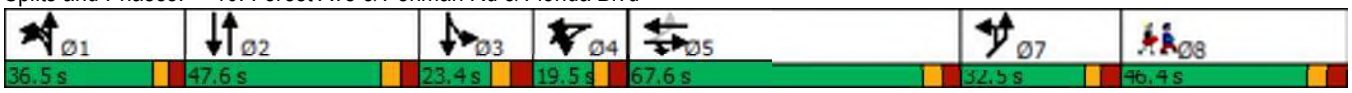
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



Intersection	
Int Delay, s/veh	1.4

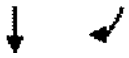
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	42	547	18	80	389
Future Vol, veh/h	19	42	547	18	80	389
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	42	547	18	80	389

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1105	556	0	0	565	0
Stage 1	556	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	233	531	-	-	1007	-
Stage 1	574	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	215	531	-	-	1007	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	533	-	-	-	-	-

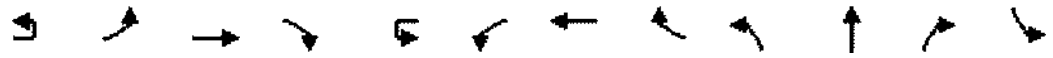
Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	457	1007	-
HCM Lane V/C Ratio	-	-	0.133	0.079	-
HCM Control Delay (s)	-	-	14.1	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Future Volume (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.991			0.924		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3476	0	0	1770	3507	0	1770	1721	0	1770
Flt Permitted		0.123				0.126			0.388			0.140
Satd. Flow (perm)	0	229	3476	0	0	235	3507	0	723	1721	0	261
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			13				5			27		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	1219	0	0	181	1227	0	226	365	0	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

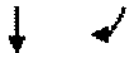


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	125	72
Future Volume (vph)	125	72
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.945	
Flt Protected		
Satd. Flow (prot)	1754	0
Flt Permitted		
Satd. Flow (perm)	1754	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	16	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	125	72
Shared Lane Traffic (%)		
Lane Group Flow (vph)	197	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	40.0	40.0	86.0		20.0	20.0	66.0		19.0	31.0		23.0
Total Split (%)	25.0%	25.0%	53.8%		12.5%	12.5%	41.3%		11.9%	19.4%		14.4%
Maximum Green (s)	34.0	34.0	80.0		14.0	14.0	60.0		12.9	24.6		17.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		94.2	82.0			93.8	81.8		44.0	30.8		40.4
Actuated g/C Ratio		0.59	0.51			0.59	0.51		0.28	0.19		0.25
v/c Ratio		0.51	0.68			0.72	0.68		0.80	1.04		0.50
Control Delay		19.8	31.6			33.7	32.3		68.9	113.6		51.7
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		19.8	31.6			33.7	32.3		68.9	113.6		51.7
LOS		B	C			C	C		E	F		D
Approach Delay			30.4				32.5			96.5		
Approach LOS			C				C			F		
Queue Length 50th (ft)		52	490			76	493		191	~385		66
Queue Length 95th (ft)		83	585			147	623		#332	#646		113
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		470	1788			274	1795		283	352		239
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.27	0.68			0.66	0.68		0.80	1.04		0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 34 (21%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 44.3		Intersection LOS: D	
Intersection Capacity Utilization 89.9%		ICU Level of Service E	
Analysis Period (min) 15			

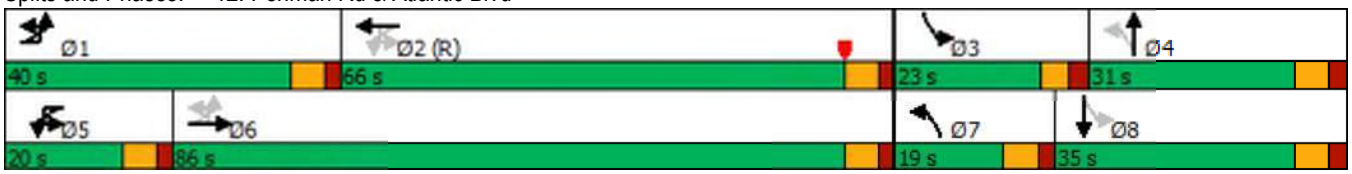


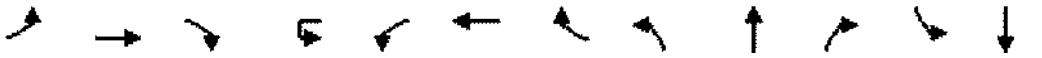
Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	35.0	
Total Split (%)	21.9%	
Maximum Green (s)	28.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	28.6	
Actuated g/C Ratio	0.18	
v/c Ratio	0.60	
Control Delay	64.1	
Queue Delay	0.0	
Total Delay	64.1	
LOS	E	
Approach Delay	60.4	
Approach LOS	E	
Queue Length 50th (ft)	177	
Queue Length 95th (ft)	268	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	326	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.60	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

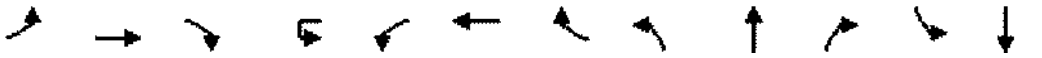
Splits and Phases: 12: Penman Rd & Atlantic Blvd





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Future Volume (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		1		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.86	0.86	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.998	0.850			0.971			0.972			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		1	101			41			6			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Shared Lane Traffic (%)			10%									
Lane Group Flow (vph)	349	1045	101	0	41	985	0	180	151	0	236	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2	1	1	1	2		1	2		1	2
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100	20	20	20	100		20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6	20	20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8
Permitted Phases			6									

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	330
Future Volume (vph)	330
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	94
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Adj. Flow (vph)	330
Shared Lane Traffic (%)	
Lane Group Flow (vph)	330
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1
Permitted Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	1	6	6	5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0	18.0	4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4	30.4	9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	38.0	77.0	77.0	18.0	18.0	57.0		23.0	23.0		32.0	32.0
Total Split (%)	25.3%	51.3%	51.3%	12.0%	12.0%	38.0%		15.3%	15.3%		21.3%	21.3%
Maximum Green (s)	32.6	71.6	71.6	12.6	12.6	51.6		17.9	17.9		26.9	26.9
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max	C-Max	None	None	C-Max		None	None		None	None
Walk Time (s)		7.0	7.0			11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0	18.0			28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0	0			0		0	0		0	0
Act Effct Green (s)	31.7	78.4	78.4		11.2	55.8		17.3	17.3		24.2	24.2
Actuated g/C Ratio	0.21	0.52	0.52		0.07	0.37		0.12	0.12		0.16	0.16
v/c Ratio	0.94	0.42	0.13		0.31	0.53		0.88	0.71		0.83	0.44
Control Delay	90.4	23.9	4.1		71.2	37.3		102.9	79.4		83.6	60.8
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	90.4	23.9	4.1		71.2	37.3		102.9	79.4		83.6	60.8
LOS	F	C	A		E	D		F	E		F	E
Approach Delay		38.1				38.6			92.2			51.2
Approach LOS		D				D			F			D
Queue Length 50th (ft)	336	260	0		38	276		175	138		222	115
Queue Length 95th (ft)	#523	303	38		80	325		#311	#227		#335	185
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595		205		315			200			210	
Base Capacity (vph)	385	2508	760		148	1861		211	221		317	334
Starvation Cap Reductn	0	0	0		0	0		0	0		0	0
Spillback Cap Reductn	0	0	0		0	0		0	0		0	0
Storage Cap Reductn	0	0	0		0	0		0	0		0	0
Reduced v/c Ratio	0.91	0.42	0.13		0.28	0.53		0.85	0.68		0.74	0.40

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 36 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 45.9		Intersection LOS: D	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

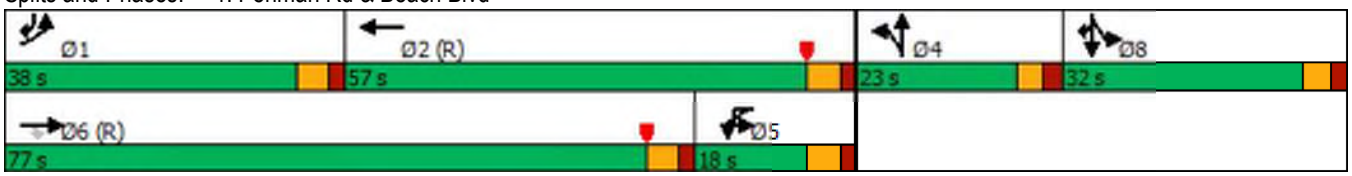
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	SBR
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.3
Actuated g/C Ratio	0.41
v/c Ratio	0.47
Control Delay	24.2
Queue Delay	0.0
Total Delay	24.2
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	159
Queue Length 95th (ft)	246
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	710
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.46

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	15	2	16	29	3	60	1	10	592	42	48	679	18
Future Vol, veh/h	15	2	16	29	3	60	1	10	592	42	48	679	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	6	4	2	2	2	2	2	5	2	2	2
Mvmt Flow	15	2	16	29	3	60	1	10	592	42	48	679	18

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	1449	1440	688	1426	1428	613	-	697	0	0	634	0	0
Stage 1	784	784	-	633	635	-	-	-	-	-	-	-	-
Stage 2	665	656	-	793	793	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.14	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.536	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	109	133	439	112	135	492	-	899	-	-	949	-	-
Stage 1	386	404	-	464	472	-	-	-	-	-	-	-	-
Stage 2	449	462	-	379	400	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	90	126	439	102	128	492	~ -11	~ -11	-	-	949	-	-
Mov Cap-2 Maneuver	90	126	-	102	128	-	-	-	-	-	-	-	-
Stage 1	386	383	-	464	472	-	-	-	-	-	-	-	-
Stage 2	392	462	-	345	380	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.4	33.9		0.6
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	151	214	949	-	-
HCM Lane V/C Ratio	-	-	-	0.219	0.43	0.051	-	-
HCM Control Delay (s)	-	-	-	35.4	33.9	9	-	-
HCM Lane LOS	-	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.8	2	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	3	8	6	6	21	15	654	10	21	695	5
Future Vol, veh/h	4	3	8	6	6	21	15	654	10	21	695	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	5	2	2	2	2	2	2
Mvmt Flow	4	3	8	6	6	21	15	654	10	21	695	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1443	1434	698	1434	1431	659	700	0	0	664	0	0
Stage 1	740	740	-	689	689	-	-	-	-	-	-	-
Stage 2	703	694	-	745	742	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	110	134	440	112	134	458	897	-	-	925	-	-
Stage 1	409	423	-	436	446	-	-	-	-	-	-	-
Stage 2	428	444	-	406	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	129	440	105	129	458	897	-	-	925	-	-
Mov Cap-2 Maneuver	98	129	-	105	129	-	-	-	-	-	-	-
Stage 1	402	413	-	429	438	-	-	-	-	-	-	-
Stage 2	396	436	-	387	412	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.5	24.1	0.2	0.3
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	897	-	-	182	221	925	-	-
HCM Lane V/C Ratio	0.017	-	-	0.082	0.149	0.023	-	-
HCM Control Delay (s)	9.1	-	-	26.5	24.1	9	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	2	7	1	12	1	671	10	10	713	1
Future Vol, veh/h	2	2	2	7	1	12	1	671	10	10	713	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	2	7	1	12	1	671	10	10	713	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1419	1417	714	1414	1412	676	714	0	0	681	0	0
Stage 1	734	734	-	678	678	-	-	-	-	-	-	-
Stage 2	685	683	-	736	734	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	114	137	431	115	138	453	886	-	-	912	-	-
Stage 1	412	426	-	442	452	-	-	-	-	-	-	-
Stage 2	438	449	-	411	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	135	431	112	136	453	886	-	-	912	-	-
Mov Cap-2 Maneuver	109	135	-	112	136	-	-	-	-	-	-	-
Stage 1	412	421	-	442	452	-	-	-	-	-	-	-
Stage 2	425	449	-	403	421	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.5	24.1	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	886	-	-	159	208	912	-	-
HCM Lane V/C Ratio	0.001	-	-	0.038	0.096	0.011	-	-
HCM Control Delay (s)	9.1	-	-	28.5	24.1	9	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	31	656	27	27	693
Future Vol, veh/h	23	31	656	27	27	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	23	31	656	27	27	693

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1417	670	0	0	683	0
Stage 1	670	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	151	457	-	-	910	-
Stage 1	509	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	146	457	-	-	910	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	454	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	364	910	-
HCM Lane V/C Ratio	-	-	0.148	0.03	-
HCM Control Delay (s)	-	-	16.6	9.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	43	564	46	35	608
Future Vol, veh/h	39	43	564	46	35	608
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	43	564	46	35	608

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1265	587	0	0	610	0
Stage 1	587	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	187	510	-	-	969	-
Stage 1	556	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	510	-	-	969	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	486	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	318	510	969	-
HCM Lane V/C Ratio	-	-	0.123	0.084	0.036	-
HCM Control Delay (s)	-	-	17.9	12.7	8.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.3	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	8	595	18	5	632
Future Vol, veh/h	24	8	595	18	5	632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	8	595	18	5	632

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1246	604	0	0	613	0
Stage 1	604	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	192	498	-	-	966	-
Stage 1	546	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	191	498	-	-	966	-
Mov Cap-2 Maneuver	330	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	966	-
HCM Lane V/C Ratio	-	-	0.089	0.005	-
HCM Control Delay (s)	-	-	16	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

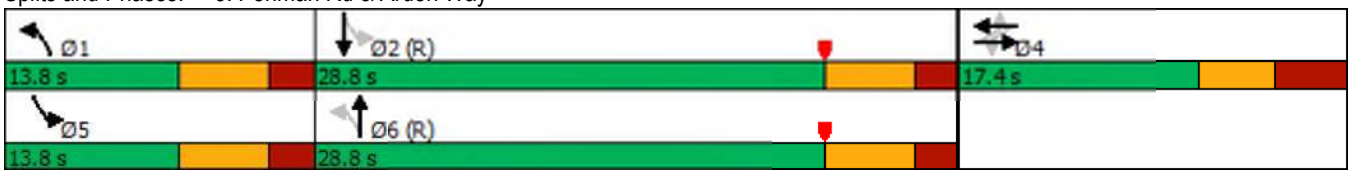
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Future Volume (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.955			0.998			0.990	
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1675	0	0	1756	0	1671	1856	0	1770	1844	0
Flt Permitted		0.812			0.891		0.316			0.365		
Satd. Flow (perm)	0	1400	0	0	1585	0	556	1856	0	680	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			5			1			7	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	25%	6%	2%	2%	2%	8%	2%	14%	2%	2%	2%
Adj. Flow (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	15	0	13	590	0	7	658	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

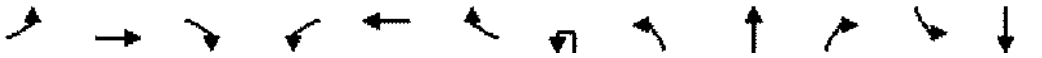
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	17.4	17.4		17.4	17.4		13.8	28.8		13.8	28.8	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	10.7	10.7		10.7	10.7		7.8	22.8		7.8	22.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.3			7.3		43.8	45.0		43.7	44.9	
Actuated g/C Ratio		0.12			0.12		0.73	0.75		0.73	0.75	
v/c Ratio		0.30			0.08		0.03	0.42		0.01	0.48	
Control Delay		21.2			19.5		4.3	8.7		3.3	6.7	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		21.2			19.5		4.3	8.8		3.3	6.7	
LOS		C			B		A	A		A	A	
Approach Delay		21.2			19.5			8.7			6.7	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)		12			3		1	82		0	43	
Queue Length 95th (ft)		38			17		6	#303		m2	#365	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		265			286		554	1391		641	1383	
Starvation Cap Reductn		0			0		0	0		0	16	
Spillback Cap Reductn		0			0		0	116		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.05		0.02	0.46		0.01	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

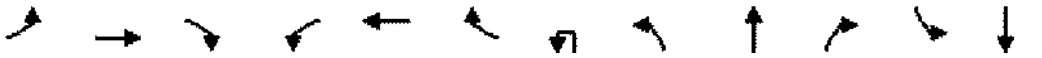
Splits and Phases: 8: Penman Rd & Arden Way





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Future Volume (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85		50		0	40	
Storage Lanes	0		0	0		1		1		0	1	
Taper Length (ft)	50			50				50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932				0.850			0.988			0.999
Flt Protected		0.976			0.953			0.950			0.950	
Satd. Flow (prot)	0	1694	0	0	1775	1568	0	1770	1840	0	1770	1861
Flt Permitted		0.837			0.727			0.426			0.310	
Satd. Flow (perm)	0	1453	0	0	1354	1568	0	794	1840	0	577	1861
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		164				164			8			1
Link Speed (mph)		35			35				35			35
Link Distance (ft)		451			372				279			2838
Travel Time (s)		8.8			7.2				5.4			55.3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	48	80	0	6	627	0	82	590
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	Left	Left
Median Width(ft)		0			0				12			12
Link Offset(ft)		12			0				0			0
Crosswalk Width(ft)		16			16				16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Number of Detectors	1	2		1	2	1	1	1	2		1	2
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	100	20	20	20	100		20	100
Trailing Detector (ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94				94			94
Detector 2 Size(ft)		6			6				6			6
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			0.0
Turn Type	Perm	NA		Perm	NA	Perm	custom	pm+pt	NA		pm+pt	NA
Protected Phases		4			4			1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	5
Future Volume (vph)	5
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	5
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4		4	1	6			2	
Detector Phase	4	4		4	4	4	1	1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	12.0		3.0	12.0
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	9.5	23.0		9.5	23.0
Total Split (s)	17.4	17.4		17.4	17.4	17.4	13.8	13.8	28.8		13.8	28.8
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	23.0%	48.0%		23.0%	48.0%
Maximum Green (s)	12.4	12.4		12.4	12.4	12.4	9.8	9.8	20.8		9.8	20.8
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	3.0	4.0		3.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	4.0		1.0	4.0
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		5.0			5.0	5.0		4.0	8.0		4.0	8.0
Lead/Lag							Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			5.0			5.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0			0.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		7.6			7.6	7.6		42.4	36.6		45.0	41.1
Actuated g/C Ratio		0.13			0.13	0.13		0.71	0.61		0.75	0.68
v/c Ratio		0.02			0.28	0.23		0.01	0.56		0.15	0.46
Control Delay		0.2			27.2	1.9		1.5	10.4		3.5	9.0
Queue Delay		0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		0.2			27.2	1.9		1.5	10.5		3.5	9.0
LOS		A			C	A		A	B		A	A
Approach Delay		0.2			11.3				10.4			8.3
Approach LOS		A			B				B			A
Queue Length 50th (ft)		0			16	0		1	165		6	86
Queue Length 95th (ft)		0			41	3		m0	#332		18	270
Internal Link Dist (ft)		371			292				199			2758
Turn Bay Length (ft)						85		50			40	
Base Capacity (vph)		430			279	454		753	1125		632	1275
Starvation Cap Reductn		0			0	0		0	18		0	0
Spillback Cap Reductn		0			0	0		0	0		0	45
Storage Cap Reductn		0			0	0		0	0		0	0
Reduced v/c Ratio		0.01			0.17	0.18		0.01	0.57		0.13	0.48

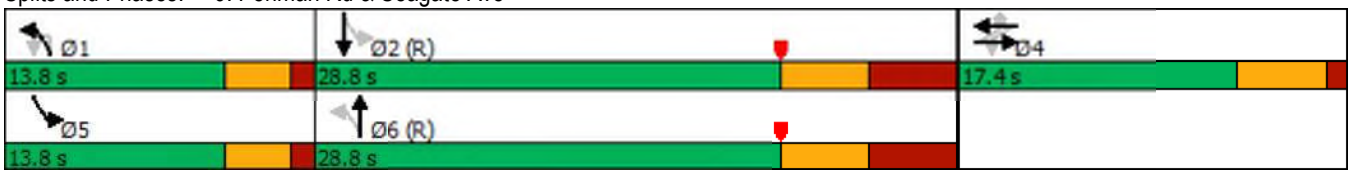
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

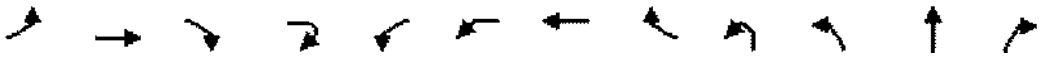
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Penman Rd & Seagate Ave



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Future Volume (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0			55		0		275		0
Storage Lanes	0		1			1		0		1		0
Taper Length (ft)	50					50				50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.957				0.963	
Flt Protected		0.999				0.950				0.950		
Satd. Flow (prot)	0	1861	1568	0	0	1770	1783	0	0	1767	1794	0
Flt Permitted		0.992				0.950				0.950		
Satd. Flow (perm)	0	1848	1568	0	0	1770	1783	0	0	1767	1794	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			171				8				6	
Link Speed (mph)		35					35				35	
Link Distance (ft)		600					501				2838	
Travel Time (s)		11.7					9.8				55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	301	0	0	42	125	0	0	223	412	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		0					12				12	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2	1		1	1	2		1	1	2	
Detector Template	Left	Thru	Right		Left	Left	Thru		Left	Left	Thru	
Leading Detector (ft)	20	100	20		20	20	100		20	20	100	
Trailing Detector (ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Position(ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Size(ft)	20	6	20		20	20	6		20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	Perm	NA	Prot		Prot	Prot	NA		Prot	Prot	NA	
Protected Phases		5	5		4	4	4 5		1	1	1 2	

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	42	276	20	10	10	24	34		
Future Volume (vph)	42	276	20	10	10	24	34		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	195		0		0	0			
Storage Lanes	1		0		1	0			
Taper Length (ft)	50				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt		0.985			0.885				
Flt Protected	0.950				0.993				
Satd. Flow (prot)	1770	1825	0	0	1637	0	0		
Flt Permitted	0.950				0.993				
Satd. Flow (perm)	1770	1825	0	0	1637	0	0		
Right Turn on Red				Yes			Yes		
Satd. Flow (RTOR)		1			172				
Link Speed (mph)		35			35				
Link Distance (ft)		1460			438				
Travel Time (s)		28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	2%		
Adj. Flow (vph)	42	276	20	10	10	24	34		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	42	306	0	0	68	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Left	Right	Right	Left	Right	Right		
Median Width(ft)		12			12				
Link Offset(ft)		0			45				
Crosswalk Width(ft)		16			16				
Two way Left Turn Lane		Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15		9	9	15	9	9		
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Prot	NA			Prot				
Protected Phases	3	2 3			7			2	8



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Permitted Phases	5											
Detector Phase	5	5	5		4	4	4 5		1	1	1 2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		6.0	6.0			3.0	3.0		
Minimum Split (s)	11.6	11.6	11.6		13.5	13.5			9.5	9.5		
Total Split (s)	67.6	67.6	67.6		19.5	19.5			36.5	36.5		
Total Split (%)	24.7%	24.7%	24.7%		7.1%	7.1%			13.3%	13.3%		
Maximum Green (s)	60.0	60.0	60.0		12.0	12.0			30.0	30.0		
Yellow Time (s)	4.0	4.0	4.0		3.4	3.4			3.4	3.4		
All-Red Time (s)	3.6	3.6	3.6		4.1	4.1			3.1	3.1		
Lost Time Adjust (s)		0.0	0.0			0.0				0.0		
Total Lost Time (s)		7.6	7.6			7.5				6.5		
Lead/Lag					Lag	Lag			Lead	Lead		
Lead-Lag Optimize?					Yes	Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		
Recall Mode	None	None	None		None	None			None	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		27.1	27.1			11.7	46.7			31.2	70.7	
Actuated g/C Ratio		0.16	0.16			0.07	0.27			0.18	0.41	
v/c Ratio		0.68	0.77			0.35	0.25			0.69	0.55	
Control Delay		83.1	44.4			95.2	50.1			80.3	45.4	
Queue Delay		0.0	0.0			0.0	0.0			0.0	0.0	
Total Delay		83.1	44.4			95.2	50.1			80.3	45.4	
LOS		F	D			F	D			F	D	
Approach Delay		59.8					61.5				57.7	
Approach LOS		E					E				E	
Queue Length 50th (ft)		198	133			42	94			215	303	
Queue Length 95th (ft)		399	333			120	219			#565	703	
Internal Link Dist (ft)		520					421				2758	
Turn Bay Length (ft)						55				275		
Base Capacity (vph)		673	679			129	828			321	848	
Starvation Cap Reductn		0	0			0	0			0	0	
Spillback Cap Reductn		0	0			0	0			0	0	
Storage Cap Reductn		0	0			0	0			0	0	
Reduced v/c Ratio		0.30	0.44			0.33	0.15			0.69	0.49	

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 171.1			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 57.7		Intersection LOS: E	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

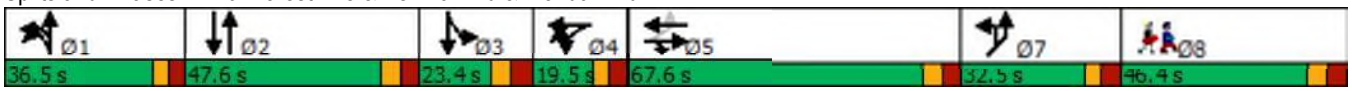
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	3	2 3			7				
Switch Phase									
Minimum Initial (s)	6.0				3.0			12.0	3.0
Minimum Split (s)	14.4				10.5			19.6	46.4
Total Split (s)	23.4				32.5			47.6	46.4
Total Split (%)	8.6%				11.9%			17%	17%
Maximum Green (s)	15.0				25.0			40.0	38.0
Yellow Time (s)	4.0				3.4			4.0	4.0
All-Red Time (s)	4.4				4.1			3.6	4.4
Lost Time Adjust (s)	0.0				0.0				
Total Lost Time (s)	8.4				7.5				
Lead/Lag	Lead				Lead			Lag	Lag
Lead-Lag Optimize?	Yes				Yes			Yes	Yes
Vehicle Extension (s)	3.0				3.0			3.0	3.0
Recall Mode	None				None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									6
Act Effct Green (s)	10.2	50.5			5.7				
Actuated g/C Ratio	0.06	0.30			0.03				
v/c Ratio	0.40	0.57			0.31				
Control Delay	98.2	58.4			3.6				
Queue Delay	0.0	0.0			0.0				
Total Delay	98.2	58.4			3.6				
LOS	F	E			A				
Approach Delay		63.2			3.6				
Approach LOS		E			A				
Queue Length 50th (ft)	42	261			0				
Queue Length 95th (ft)	119	548			0				
Internal Link Dist (ft)		1380			358				
Turn Bay Length (ft)	195								
Base Capacity (vph)	161	597			394				
Starvation Cap Reductn	0	0			0				
Spillback Cap Reductn	0	0			0				
Storage Cap Reductn	0	0			0				
Reduced v/c Ratio	0.26	0.51			0.17				

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



Intersection	
Int Delay, s/veh	1

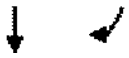
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	34	423	18	44	343
Future Vol, veh/h	9	34	423	18	44	343
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	34	423	18	44	343

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	863	432	0	0	441	0
Stage 1	432	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	325	624	-	-	1119	-
Stage 1	655	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	312	624	-	-	1119	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	629	-	-	-	-	-

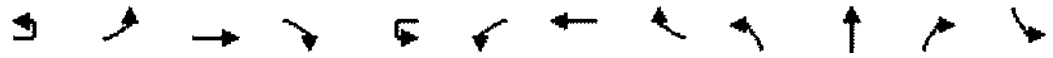
Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	572	1119	-
HCM Lane V/C Ratio	-	-	0.075	0.039	-
HCM Control Delay (s)	-	-	11.8	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Future Volume (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.987				0.989			0.904		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3493	0	0	1770	3500	0	1770	1684	0	1770
Flt Permitted		0.168				0.155			0.526			0.213
Satd. Flow (perm)	0	313	3493	0	0	289	3500	0	980	1684	0	397
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			9				8			64		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	1036	0	0	179	1084	0	196	306	0	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

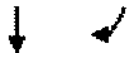


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	88	64
Future Volume (vph)	88	64
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.937	
Flt Protected		
Satd. Flow (prot)	1738	0
Flt Permitted		
Satd. Flow (perm)	1738	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	26	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	88	64
Shared Lane Traffic (%)		
Lane Group Flow (vph)	152	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	15.0	15.0	57.0		19.0	19.0	61.0		18.0	36.0		18.0
Total Split (%)	11.5%	11.5%	43.8%		14.6%	14.6%	46.9%		13.8%	27.7%		13.8%
Maximum Green (s)	9.0	9.0	51.0		13.0	13.0	55.0		11.9	29.6		12.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		68.0	60.0			74.5	63.2		35.9	23.7		34.1
Actuated g/C Ratio		0.52	0.46			0.57	0.49		0.28	0.18		0.26
v/c Ratio		0.35	0.64			0.61	0.64		0.57	0.85		0.53
Control Delay		17.4	30.5			22.6	28.2		41.0	61.7		40.2
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		17.4	30.5			22.6	28.2		41.0	61.7		40.2
LOS		B	C			C	C		D	E		D
Approach Delay			29.5				27.4			53.6		
Approach LOS			C				C			D		
Queue Length 50th (ft)		32	352			67	356		125	201		71
Queue Length 95th (ft)		63	474			118	476		180	297		112
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		268	1615			320	1706		343	432		238
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.33	0.64			0.56	0.64		0.57	0.71		0.49

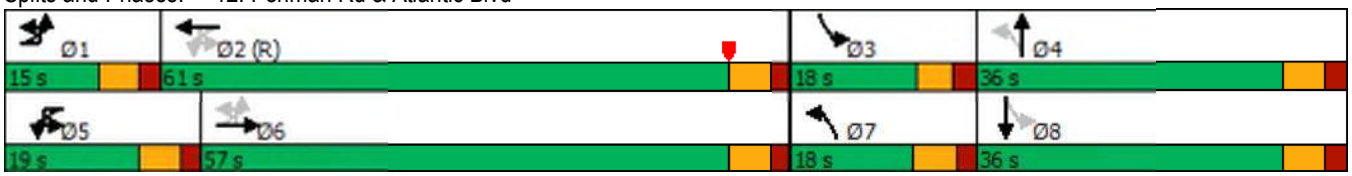
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 90 (69%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			



Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	36.0	
Total Split (%)	27.7%	
Maximum Green (s)	29.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	22.4	
Actuated g/C Ratio	0.17	
v/c Ratio	0.47	
Control Delay	43.3	
Queue Delay	0.0	
Total Delay	43.3	
LOS	D	
Approach Delay	42.0	
Approach LOS	D	
Queue Length 50th (ft)	95	
Queue Length 95th (ft)	156	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	415	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.37	

Intersection Summary

Splits and Phases: 12: Penman Rd & Atlantic Blvd

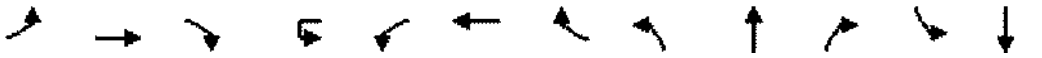


Appendix K

2030 No-Build Intersection Capacity Analyses Worksheets

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Future Volume (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.983				0.976			0.986			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		18				26			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	6%	4%	5%	2%	2%	2%
Adj. Flow (vph)	287	987	124	4	28	693	134	202	108	11	229	142
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	1111	0	0	32	827	0	202	119	0	229	142
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	539
Future Volume (vph)	539
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	136
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	539
Shared Lane Traffic (%)	
Lane Group Flow (vph)	539
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	37.0	68.0		16.0	16.0	47.0		33.0	33.0		33.0	33.0
Total Split (%)	24.7%	45.3%		10.7%	10.7%	31.3%		22.0%	22.0%		22.0%	22.0%
Maximum Green (s)	31.6	62.6		10.6	10.6	41.6		27.9	27.9		27.9	27.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lag	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	28.8	75.2			8.8	50.6		22.2	22.2		27.4	27.4
Actuated g/C Ratio	0.19	0.50			0.06	0.34		0.15	0.15		0.18	0.18
v/c Ratio	0.85	0.44			0.31	0.49		0.79	0.45		0.71	0.42
Control Delay	81.3	26.1			74.5	40.9		82.5	61.1		70.5	58.3
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	81.3	26.1			74.5	40.9		82.5	61.1		70.5	58.3
LOS	F	C			E	D		F	E		E	E
Approach Delay		37.4				42.2			74.6			42.3
Approach LOS		D				D			E			D
Queue Length 50th (ft)	270	271			30	235		193	105		212	124
Queue Length 95th (ft)	#401	336			68	298		275	165		310	195
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	374	2512			125	1681		322	335		329	346
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.77	0.44			0.26	0.49		0.63	0.36		0.70	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 127 (85%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 43.3		Intersection LOS: D	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	56.5
Actuated g/C Ratio	0.38
v/c Ratio	0.79
Control Delay	26.2
Queue Delay	0.0
Total Delay	26.2
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	213
Queue Length 95th (ft)	273
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	716
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	3	18	4	2	21	9	526	11	1	24	935	25
Future Vol, veh/h	13	3	18	4	2	21	9	526	11	1	24	935	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	2	2	2	2	5	2	2	2	100	2	2	2
Mvmt Flow	13	3	18	4	2	21	9	526	11	1	24	935	25

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	1557	1553	948	1556	1560	532	960	0	0	-	537	0	0
Stage 1	996	998	-	550	550	-	-	-	-	-	-	-	-
Stage 2	561	555	-	1006	1010	-	-	-	-	-	-	-	-
Critical Hdwy	7.18	6.52	6.22	7.12	6.52	6.25	4.12	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.318	3.518	4.018	3.345	2.218	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	89	113	316	92	112	542	717	-	-	-	1031	-	-
Stage 1	287	322	-	519	516	-	-	-	-	-	-	-	-
Stage 2	502	513	-	291	317	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	84	112	316	84	111	542	717	-	-	~ -26	~ -26	-	-
Mov Cap-2 Maneuver	84	112	-	84	111	-	-	-	-	-	-	-	-
Stage 1	283	322	-	512	509	-	-	-	-	-	-	-	-
Stage 2	475	506	-	272	317	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.9	20.5	0.2	
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	717	-	-	143	259	+	-	-
HCM Lane V/C Ratio	0.013	-	-	0.238	0.104	-	-	-
HCM Control Delay (s)	10.1	-	-	37.9	20.5	-	-	-
HCM Lane LOS	B	-	-	E	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	10	5	1	15	3	546	4	8	940	4
Future Vol, veh/h	8	0	10	5	1	15	3	546	4	8	940	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	2
Mvmt Flow	8	0	10	5	1	15	3	546	4	8	940	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1520	1514	942	1517	1514	548	944	0	0	550	0	0
Stage 1	958	958	-	554	554	-	-	-	-	-	-	-
Stage 2	562	556	-	963	960	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	97	120	319	98	120	536	727	-	-	1020	-	-
Stage 1	309	336	-	517	514	-	-	-	-	-	-	-
Stage 2	512	513	-	307	335	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	119	319	94	119	536	727	-	-	1020	-	-
Mov Cap-2 Maneuver	93	119	-	94	119	-	-	-	-	-	-	-
Stage 1	308	333	-	515	512	-	-	-	-	-	-	-
Stage 2	495	511	-	295	332	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.6	21.9	0.1	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	727	-	-	153	234	1020	-	-
HCM Lane V/C Ratio	0.004	-	-	0.118	0.09	0.008	-	-
HCM Control Delay (s)	10	-	-	31.6	21.9	8.6	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	2	5	2	16	1	567	5	2	946	1
Future Vol, veh/h	0	1	2	5	2	16	1	567	5	2	946	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	2	5	2	16	1	567	5	2	946	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1532	1525	947	1524	1523	570	947	0	0	572	0	0
Stage 1	951	951	-	572	572	-	-	-	-	-	-	-
Stage 2	581	574	-	952	951	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	95	118	317	97	118	521	725	-	-	1001	-	-
Stage 1	312	338	-	505	504	-	-	-	-	-	-	-
Stage 2	499	503	-	312	338	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	91	118	317	96	118	521	725	-	-	1001	-	-
Mov Cap-2 Maneuver	91	118	-	96	118	-	-	-	-	-	-	-
Stage 1	312	337	-	504	503	-	-	-	-	-	-	-
Stage 2	481	502	-	308	337	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	22.3	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	203	231	1001	-	-
HCM Lane V/C Ratio	0.001	-	-	0.015	0.1	0.002	-	-
HCM Control Delay (s)	10	-	-	23	22.3	8.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	36	576	19	23	904
Future Vol, veh/h	33	36	576	19	23	904
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	6	3	2	2	2
Mvmt Flow	33	36	576	19	23	904

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1536	586	0	0	595	0
Stage 1	586	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Critical Hdwy	6.42	6.26	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.354	-	-	2.218	-
Pot Cap-1 Maneuver	128	503	-	-	981	-
Stage 1	556	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	503	-	-	981	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	367	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	344	981	-
HCM Lane V/C Ratio	-	-	0.201	0.023	-
HCM Control Delay (s)	-	-	18.1	8.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	32	553	42	22	731
Future Vol, veh/h	50	32	553	42	22	731
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	3	3	5	2	2
Mvmt Flow	50	32	553	42	22	731

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1349	574	0	0	595	0
Stage 1	574	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	166	516	-	-	981	-
Stage 1	563	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	516	-	-	981	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	299	516	981	-
HCM Lane V/C Ratio	-	-	0.167	0.062	0.022	-
HCM Control Delay (s)	-	-	19.4	12.4	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.7

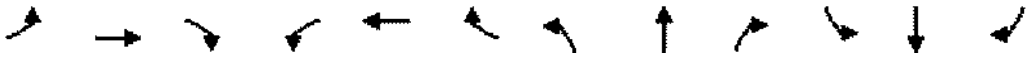
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	22	516	79	26	761
Future Vol, veh/h	27	22	516	79	26	761
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	27	22	516	79	26	761

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1369	556	0	0	595	0
Stage 1	556	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	162	531	-	-	981	-
Stage 1	574	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	158	531	-	-	981	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	424	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	366	981	-
HCM Lane V/C Ratio	-	-	0.134	0.027	-
HCM Control Delay (s)	-	-	16.4	8.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Future Volume (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.950			0.998			0.997	
Flt Protected		0.974			0.987		0.950			0.950		
Satd. Flow (prot)	0	1765	0	0	1747	0	1687	1841	0	1770	1857	0
Flt Permitted		0.808			0.908		0.280			0.439		
Satd. Flow (perm)	0	1464	0	0	1607	0	497	1841	0	818	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			16			1			1	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	3%	2%	2%	2%	2%
Adj. Flow (vph)	48	23	18	11	16	16	14	502	6	6	774	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	43	0	14	508	0	6	788	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

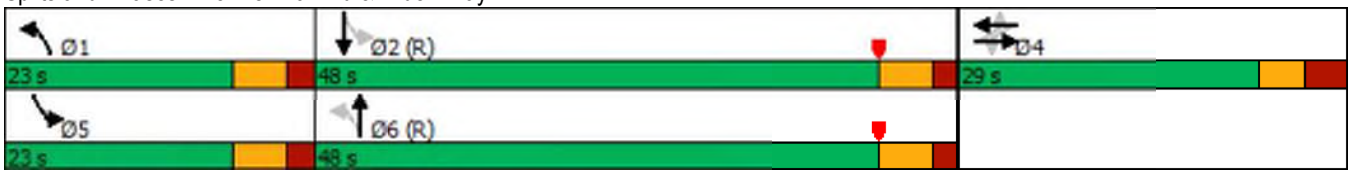


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	29.0	29.0		29.0	29.0		23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	22.3	22.3		22.3	22.3		17.0	42.0		17.0	42.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		10.6			10.6		78.1	78.0		77.9	78.0	
Actuated g/C Ratio		0.11			0.11		0.78	0.78		0.78	0.78	
v/c Ratio		0.54			0.23		0.03	0.35		0.01	0.54	
Control Delay		47.7			30.6		3.8	6.4		2.3	5.3	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		47.7			30.6		3.8	6.5		2.3	5.3	
LOS		D			C		A	A		A	A	
Approach Delay		47.7			30.6			6.4			5.3	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)		47			16		2	84		1	89	
Queue Length 95th (ft)		93			47		7	241		m1	117	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		335			370		595	1436		809	1448	
Starvation Cap Reductn		0			0		0	0		0	28	
Spillback Cap Reductn		0			0		0	145		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.27			0.12		0.02	0.39		0.01	0.55	

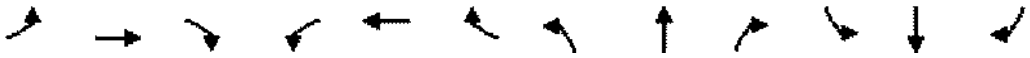
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Future Volume (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939				0.850		0.987			0.999	
Flt Protected		0.978			0.953		0.950			0.950		
Satd. Flow (prot)	0	1711	0	0	1775	1568	1770	1839	0	1752	1858	0
Flt Permitted		0.878			0.721		0.394			0.371		
Satd. Flow (perm)	0	1536	0	0	1343	1568	734	1839	0	684	1858	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				151		6				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%	20%
Adj. Flow (vph)	5	1	5	81	1	151	1	513	49	164	661	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	82	151	1	562	0	164	666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

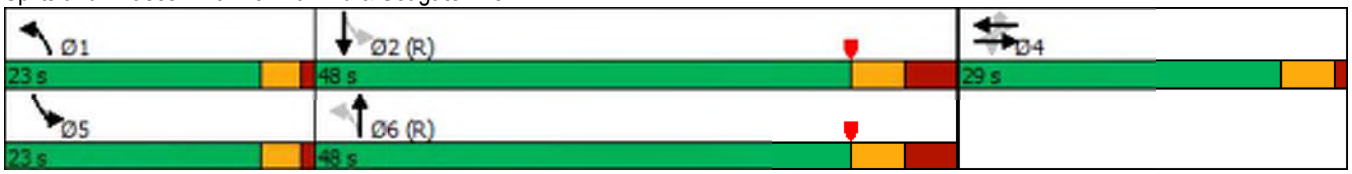


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	29.0	29.0		29.0	29.0	29.0	23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	19.0	40.0		19.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		11.4			11.4	11.4	73.4	63.9		79.6	73.7	
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.64		0.80	0.74	
v/c Ratio		0.06			0.54	0.48	0.00	0.48		0.26	0.49	
Control Delay		29.0			53.8	12.0	2.0	9.1		3.8	8.2	
Queue Delay		0.0			0.0	0.0	0.0	0.3		0.0	0.0	
Total Delay		29.0			53.8	12.0	2.0	9.4		3.8	8.2	
LOS		C			D	B	A	A		A	A	
Approach Delay		29.0			26.7			9.4			7.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		4			50	0	0	195		18	133	
Queue Length 95th (ft)		19			94	54	m0	76		41	343	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		372			322	491	781	1176		747	1369	
Starvation Cap Reductn		0			0	0	0	206		0	0	
Spillback Cap Reductn		0			5	0	0	0		0	41	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.26	0.31	0.00	0.58		0.22	0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

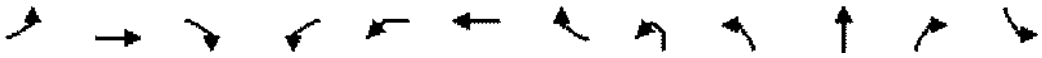
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Penman Rd & Seagate Ave



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Future Volume (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.961				0.982		
Flt Protected		0.990			0.950				0.950			0.950
Satd. Flow (prot)	0	1844	1568	0	1746	1790	0	0	1755	1829	0	1736
Flt Permitted		0.902			0.950				0.950			0.950
Satd. Flow (perm)	0	1680	1568	0	1746	1790	0	0	1755	1829	0	1736
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						7				3		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	10%	2%	2%	2%	3%	2%	2%	4%
Adj. Flow (vph)	34	142	361	47	10	126	45	30	194	351	49	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	361	0	57	171	0	0	224	400	0	51
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations								
Traffic Volume (vph)	367	8	16	21	22	81		
Future Volume (vph)	367	8	16	21	22	81		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0		0	0			
Storage Lanes		0		1	0			
Taper Length (ft)				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.991			0.888				
Flt Protected				0.992				
Satd. Flow (prot)	1843	0	0	1610	0	0		
Flt Permitted				0.992				
Satd. Flow (perm)	1843	0	0	1610	0	0		
Right Turn on Red			Yes			Yes		
Satd. Flow (RTOR)	1			172				
Link Speed (mph)	35			35				
Link Distance (ft)	1460			438				
Travel Time (s)	28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	6%	2%	13%	2%		
Adj. Flow (vph)	367	8	16	21	22	81		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	391	0	0	124	0	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Right	Right		
Median Width(ft)	12			12				
Link Offset(ft)	0			45				
Crosswalk Width(ft)	16			16				
Two way Left Turn Lane	Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	9	9		
Number of Detectors	2			1				
Detector Template	Thru			Left				
Leading Detector (ft)	100			20				
Trailing Detector (ft)	0			0				
Detector 1 Position(ft)	0			0				
Detector 1 Size(ft)	6			20				
Detector 1 Type	Cl+Ex			Cl+Ex				
Detector 1 Channel								
Detector 1 Extend (s)	0.0			0.0				
Detector 1 Queue (s)	0.0			0.0				
Detector 1 Delay (s)	0.0			0.0				
Detector 2 Position(ft)	94							
Detector 2 Size(ft)	6							
Detector 2 Type	Cl+Ex							
Detector 2 Channel								
Detector 2 Extend (s)	0.0							
Turn Type	NA			Prot				
Protected Phases	2 3			7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	22.5	22.5	22.5	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.8	60.8		12.2	80.6			30.4	78.0		13.1
Actuated g/C Ratio		0.26	0.26		0.05	0.35			0.13	0.33		0.06
v/c Ratio		0.40	0.88		0.63	0.27			0.98	0.65		0.53
Control Delay		78.7	106.5		140.9	58.3			150.8	75.0		131.3
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		78.7	106.5		140.9	58.3			150.8	75.0		131.3
LOS		E	F		F	E			F	E		F
Approach Delay		97.4				78.9				102.2		
Approach LOS		F				E				F		
Queue Length 50th (ft)		257	612		97	212			~418	601		85
Queue Length 95th (ft)		353	#858		#184	296			#633	751		147
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		437	408		91	622			228	617		113
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.40	0.88		0.63	0.27			0.98	0.65		0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 233.3			
Natural Cycle: 155			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 92.0		Intersection LOS: F	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases								
Detector Phase	2 3			7				
Switch Phase								
Minimum Initial (s)				3.0			12.0	3.0
Minimum Split (s)				22.5			22.5	46.4
Total Split (s)				32.5			47.6	46.4
Total Split (%)				11.9%			17%	17%
Maximum Green (s)				25.0			40.0	38.0
Yellow Time (s)				3.4			4.0	4.0
All-Red Time (s)				4.1			3.6	4.4
Lost Time Adjust (s)				0.0				
Total Lost Time (s)				7.5				
Lead/Lag				Lead			Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes
Vehicle Extension (s)				3.0			3.0	3.0
Recall Mode				None			Min	None
Walk Time (s)								7.0
Flash Dont Walk (s)								31.0
Pedestrian Calls (#/hr)								13
Act Effct Green (s)	61.6			5.7				
Actuated g/C Ratio	0.26			0.02				
v/c Ratio	0.80			0.60				
Control Delay	95.6			13.4				
Queue Delay	0.0			0.0				
Total Delay	95.6			13.4				
LOS	F			B				
Approach Delay	99.7			13.4				
Approach LOS	F			B				
Queue Length 50th (ft)	634			0				
Queue Length 95th (ft)	#798			3				
Internal Link Dist (ft)	1380			358				
Turn Bay Length (ft)								
Base Capacity (vph)	493			328				
Starvation Cap Reductn	0			0				
Spillback Cap Reductn	0			0				
Storage Cap Reductn	0			0				
Reduced v/c Ratio	0.79			0.38				

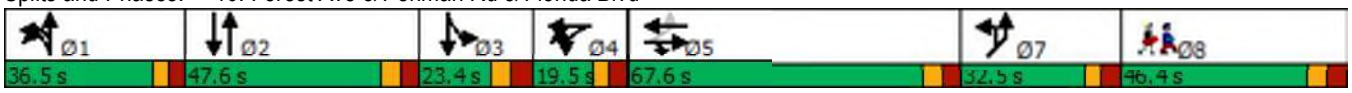
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



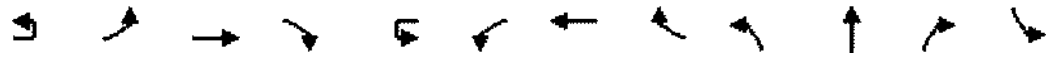
Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	45	446	7	57	396
Future Vol, veh/h	16	45	446	7	57	396
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	45	446	7	57	396

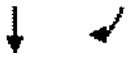
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	960	450	0	0	453	0
Stage 1	450	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	285	609	-	-	1108	-
Stage 1	642	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	270	609	-	-	1108	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1108	-
HCM Lane V/C Ratio	-	-	0.114	0.051	-
HCM Control Delay (s)	-	-	12.6	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-



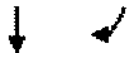
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Future Volume (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.994			0.910		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3446	0	0	1770	3518	0	1770	1695	0	1770
Flt Permitted		0.279				0.114			0.362			0.343
Satd. Flow (perm)	0	520	3446	0	0	212	3518	0	674	1695	0	639
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			11				3			55		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	36	1058	140	1	135	827	32	254	111	166	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	1198	0	0	136	859	0	254	277	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	107	50
Future Volume (vph)	107	50
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.952	
Flt Protected		
Satd. Flow (prot)	1729	0
Flt Permitted		
Satd. Flow (perm)	1729	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	17	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	4%	6%
Adj. Flow (vph)	107	50
Shared Lane Traffic (%)		
Lane Group Flow (vph)	157	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		12.4	12.4	31.0		10.4	38.4		10.4
Total Split (s)	25.0	25.0	54.0		15.0	15.0	44.0		23.0	49.0		22.0
Total Split (%)	17.9%	17.9%	38.6%		10.7%	10.7%	31.4%		16.4%	35.0%		15.7%
Maximum Green (s)	19.0	19.0	48.0		9.0	9.0	38.0		16.9	42.6		16.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		75.3	68.5			84.9	75.3		41.4	25.5		30.3
Actuated g/C Ratio		0.54	0.49			0.61	0.54		0.30	0.18		0.22
v/c Ratio		0.11	0.71			0.54	0.45		0.77	0.78		0.39
Control Delay		14.3	32.4			20.8	22.7		55.5	58.8		39.3
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		14.3	32.4			20.8	22.7		55.5	58.8		39.3
LOS		B	C			C	C		E	E		D
Approach Delay			31.8				22.4			57.2		
Approach LOS			C				C			E		
Queue Length 50th (ft)		13	427			48	247		192	199		59
Queue Length 95th (ft)		35	#644			98	372		243	282		91
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		486	1690			256	1893		331	554		296
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.08	0.71			0.53	0.45		0.77	0.50		0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 121 (86%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 34.9		Intersection LOS: C	
Intersection Capacity Utilization 84.4%		ICU Level of Service E	
Analysis Period (min) 15			

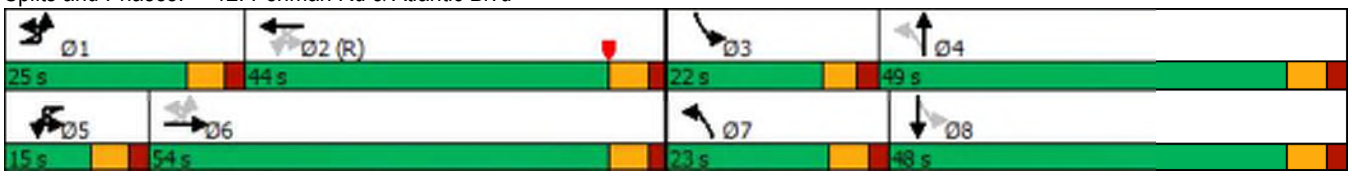


Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	48.0	
Total Split (%)	34.3%	
Maximum Green (s)	41.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	19.0	
Actuated g/C Ratio	0.14	
v/c Ratio	0.63	
Control Delay	60.8	
Queue Delay	0.0	
Total Delay	60.8	
LOS	E	
Approach Delay	53.1	
Approach LOS	D	
Queue Length 50th (ft)	124	
Queue Length 95th (ft)	182	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	525	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.30	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Penman Rd & Atlantic Blvd



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Future Volume (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.973			0.985			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		34				31			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	490	966	177	4	23	975	218	248	138	15	215	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	490	1143	0	0	27	1193	0	248	153	0	215	147
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	388
Future Volume (vph)	388
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	88
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	388
Shared Lane Traffic (%)	
Lane Group Flow (vph)	388
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	53.0	88.0		16.0	16.0	51.0		31.0	31.0		25.0	25.0
Total Split (%)	33.1%	55.0%		10.0%	10.0%	31.9%		19.4%	19.4%		15.6%	15.6%
Maximum Green (s)	47.6	82.6		10.6	10.6	45.6		25.9	25.9		19.9	19.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	46.3	89.4			8.8	47.3		24.9	24.9		20.5	20.5
Actuated g/C Ratio	0.29	0.56			0.06	0.30		0.16	0.16		0.13	0.13
v/c Ratio	0.96	0.41			0.28	0.80		0.90	0.53		0.95	0.62
Control Delay	85.8	20.9			78.9	56.0		99.9	68.1		115.6	78.5
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	85.8	20.9			78.9	56.0		99.9	68.1		115.6	78.5
LOS	F	C			E	E		F	E		F	E
Approach Delay		40.4				56.5			87.8			62.0
Approach LOS		D				E			F			E
Queue Length 50th (ft)	501	260			27	421		257	146		228	149
Queue Length 95th (ft)	#723	299			63	482		#413	225		#403	230
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	526	2792			117	1485		286	299		227	238
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.93	0.41			0.23	0.80		0.87	0.51		0.95	0.62

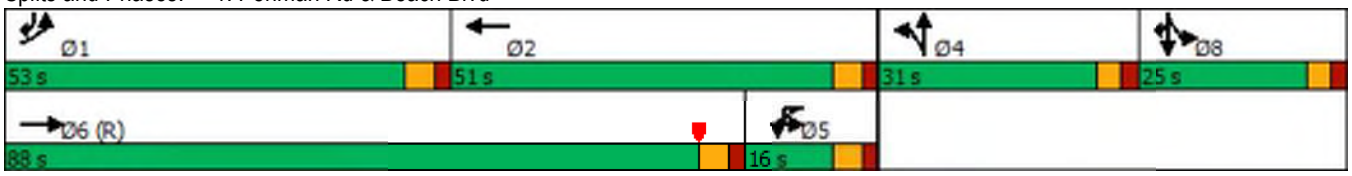
Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 54.1		Intersection LOS: D	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	72.2
Actuated g/C Ratio	0.45
v/c Ratio	0.51
Control Delay	26.1
Queue Delay	0.0
Total Delay	26.1
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	219
Queue Length 95th (ft)	320
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	775
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	2	22	10	2	13	22	866	4	8	749	25
Future Vol, veh/h	23	2	22	10	2	13	22	866	4	8	749	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	4
Mvmt Flow	23	2	22	10	2	13	22	866	4	8	749	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1698	1692	762	1702	1702	868	774	0	0	870	0	0
Stage 1	778	778	-	912	912	-	-	-	-	-	-	-
Stage 2	920	914	-	790	790	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	73	93	405	72	92	352	842	-	-	775	-	-
Stage 1	389	407	-	328	353	-	-	-	-	-	-	-
Stage 2	325	352	-	383	402	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	67	90	405	65	89	352	842	-	-	775	-	-
Mov Cap-2 Maneuver	67	90	-	65	89	-	-	-	-	-	-	-
Stage 1	379	403	-	319	344	-	-	-	-	-	-	-
Stage 2	303	343	-	357	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	58.6	43.9	0.2	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	842	-	-	112	117	775	-	-
HCM Lane V/C Ratio	0.026	-	-	0.42	0.214	0.01	-	-
HCM Control Delay (s)	9.4	-	-	58.6	43.9	9.7	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.8	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	6	1	10	7	5	26	1	15	864	10	10	720	11
Future Vol, veh/h	6	1	10	7	5	26	1	15	864	10	10	720	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1	10	7	5	26	1	15	864	10	10	720	11

Major/Minor	Minor2			Minor1				Major1			Major2		
Conflicting Flow All	1661	1652	726	1650	1652	869	-	731	0	0	874	0	0
Stage 1	746	746	-	899	901	-	-	-	-	-	-	-	-
Stage 2	915	906	-	751	751	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	77	98	425	79	98	351	-	873	-	-	772	-	-
Stage 1	405	421	-	334	357	-	-	-	-	-	-	-	-
Stage 2	327	355	-	403	418	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	68	97	425	76	97	351	~ -16	~ -16	-	-	772	-	-
Mov Cap-2 Maneuver	68	97	-	76	97	-	-	-	-	-	-	-	-
Stage 1	405	416	-	334	357	-	-	-	-	-	-	-	-
Stage 2	299	355	-	387	413	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.5	31.2		0.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	139	175	772	-	-
HCM Lane V/C Ratio	-	-	-	0.122	0.217	0.013	-	-
HCM Control Delay (s)	-	-	-	34.5	31.2	9.7	-	-
HCM Lane LOS	-	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.4	0.8	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	0	4	1	14	0	883	3	15	754	1
Future Vol, veh/h	4	1	0	4	1	14	0	883	3	15	754	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	0	4	1	14	0	883	3	15	754	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1677	1671	755	1670	1670	885	755	0	0	886	0	0
Stage 1	785	785	-	885	885	-	-	-	-	-	-	-
Stage 2	892	886	-	785	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	75	96	409	76	96	344	855	-	-	764	-	-
Stage 1	386	404	-	340	363	-	-	-	-	-	-	-
Stage 2	337	363	-	386	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	70	94	409	74	94	344	855	-	-	764	-	-
Mov Cap-2 Maneuver	70	94	-	74	94	-	-	-	-	-	-	-
Stage 1	386	396	-	340	363	-	-	-	-	-	-	-
Stage 2	322	363	-	377	396	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.1	27.3	0	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	855	-	-	74	180	764	-	-
HCM Lane V/C Ratio	-	-	-	0.068	0.106	0.02	-	-
HCM Control Delay (s)	0	-	-	57.1	27.3	9.8	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	63	877	34	33	747
Future Vol, veh/h	21	63	877	34	33	747
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	2	3	2	2
Mvmt Flow	21	63	877	34	33	747

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1707	894	0	0	911	0
Stage 1	894	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	99	340	-	-	748	-
Stage 1	395	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	95	340	-	-	748	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	302	748	-
HCM Lane V/C Ratio	-	-	0.278	0.044	-
HCM Control Delay (s)	-	-	21.5	10	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	45	753	40	46	676
Future Vol, veh/h	28	45	753	40	46	676
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	28	45	753	40	46	676

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1541	773	0	0	793	0
Stage 1	773	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	127	399	-	-	828	-
Stage 1	455	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	120	399	-	-	828	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	257	399	828	-
HCM Lane V/C Ratio	-	-	0.109	0.113	0.056	-
HCM Control Delay (s)	-	-	20.7	15.2	9.6	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.4	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	10	745	43	15	690
Future Vol, veh/h	26	10	745	43	15	690
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	10	2	2	2	2
Mvmt Flow	26	10	745	43	15	690

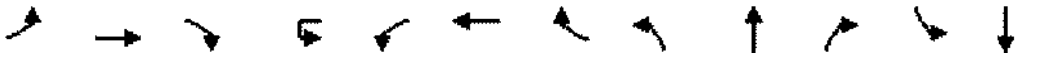
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1487	767	0	0	788	0
Stage 1	767	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Critical Hdwy	6.42	6.3	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.39	-	-	2.218	-
Pot Cap-1 Maneuver	137	390	-	-	831	-
Stage 1	458	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	390	-	-	831	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	473	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	299	831	-
HCM Lane V/C Ratio	-	-	0.12	0.018	-
HCM Control Delay (s)	-	-	18.7	9.4	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Future Volume (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		0		0	60		0	60	
Storage Lanes	0		0		0		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964				0.988			0.996			0.990
Flt Protected		0.977				0.978		0.950			0.950	
Satd. Flow (prot)	0	1754	0	0	0	1800	0	1770	1855	0	1543	1844
Flt Permitted		0.832				0.831		0.311			0.333	
Satd. Flow (perm)	0	1494	0	0	0	1529	0	579	1855	0	541	1844
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		15				3			2			5
Link Speed (mph)		35				35			35			35
Link Distance (ft)		287				309			1117			279
Travel Time (s)		5.6				6.0			21.8			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%
Adj. Flow (vph)	27	15	15	10	5	16	3	18	699	19	6	681
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	0	34	0	18	718	0	6	729
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		0				0			12			12
Link Offset(ft)		35				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Perm	NA		Perm	Perm	NA		pm+pt	NA		pm+pt	NA
Protected Phases		4				4		1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	48
Future Volume (vph)	48
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	48
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4	4			6			2	
Detector Phase	4	4		4	4	4		1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0		3.0	12.0		3.0	12.0
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7		9.0	26.0		9.0	25.0
Total Split (s)	20.0	20.0		20.0	20.0	20.0		23.0	57.0		23.0	57.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%		23.0%	57.0%		23.0%	57.0%
Maximum Green (s)	13.3	13.3		13.3	13.3	13.3		17.0	51.0		17.0	51.0
Yellow Time (s)	3.4	3.4		3.4	3.4	3.4		4.0	4.0		4.0	4.0
All-Red Time (s)	3.3	3.3		3.3	3.3	3.3		2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0				0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		6.7				6.7		6.0	6.0		6.0	6.0
Lead/Lag								Lead	Lag		Lead	Lag
Lead-Lag Optimize?								Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None		None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			7.0			7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0	12.0			13.0			12.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		8.4				8.4		80.2	80.1		78.8	77.7
Actuated g/C Ratio		0.08				0.08		0.80	0.80		0.79	0.78
v/c Ratio		0.41				0.26		0.03	0.48		0.01	0.51
Control Delay		42.2				43.7		2.9	6.7		1.7	5.3
Queue Delay		0.0				0.0		0.0	0.1		0.0	0.1
Total Delay		42.2				43.7		2.9	6.9		1.7	5.3
LOS		D				D		A	A		A	A
Approach Delay		42.2				43.7			6.8			5.3
Approach LOS		D				D			A			A
Queue Length 50th (ft)		26				19		2	121		1	81
Queue Length 95th (ft)		64				48		7	358		m1	105
Internal Link Dist (ft)		207				229			1037			199
Turn Bay Length (ft)								60			60	
Base Capacity (vph)		211				205		673	1487		610	1434
Starvation Cap Reductn		0				0		0	0		0	73
Spillback Cap Reductn		0				0		0	161		0	0
Storage Cap Reductn		0				0		0	0		0	0
Reduced v/c Ratio		0.27				0.17		0.03	0.54		0.01	0.54

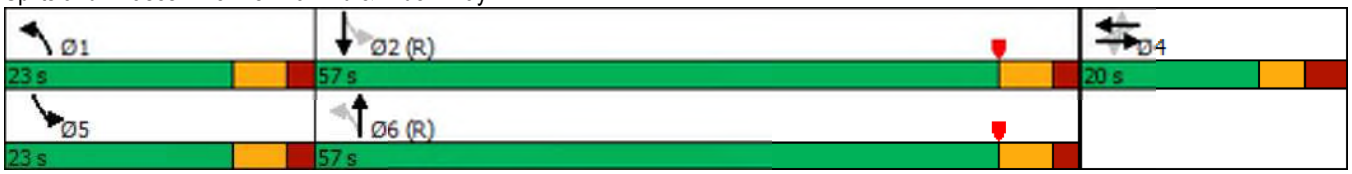
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 8.2		Intersection LOS: A	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



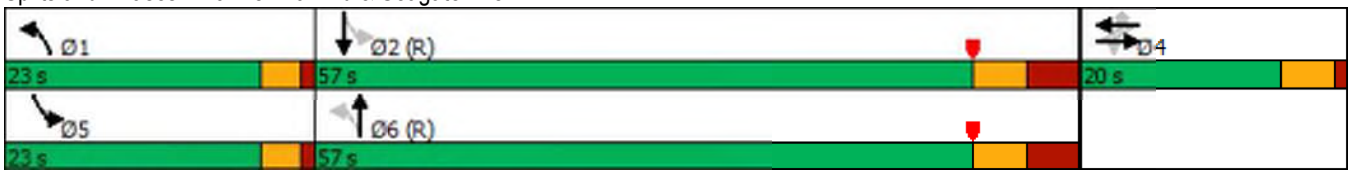
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Future Volume (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.985			0.999	
Flt Protected		0.976			0.953		0.950			0.950		
Satd. Flow (prot)	0	1776	0	0	1725	1583	1770	1835	0	1770	1861	0
Flt Permitted		0.877			0.725		0.414			0.303		
Satd. Flow (perm)	0	1596	0	0	1312	1583	771	1835	0	564	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				263		8				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	3	2	1	82	1	263	4	610	67	155	630	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	83	263	4	677	0	155	634	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

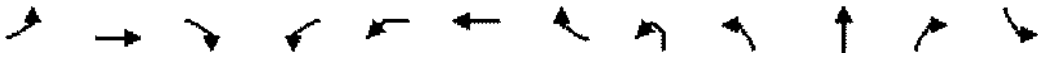
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	23.0	57.0		23.0	57.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	23.0%	57.0%		23.0%	57.0%	
Maximum Green (s)	15.0	15.0		15.0	15.0	15.0	19.0	49.0		19.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		11.2			11.2	11.2	73.8	64.2		79.7	73.8	
Actuated g/C Ratio		0.11			0.11	0.11	0.74	0.64		0.80	0.74	
v/c Ratio		0.03			0.56	0.64	0.01	0.57		0.29	0.46	
Control Delay		35.0			56.2	12.7	1.0	8.4		4.0	7.6	
Queue Delay		0.0			0.0	0.0	0.0	0.2		0.0	0.0	
Total Delay		35.0			56.2	12.7	1.0	8.6		4.0	7.7	
LOS		C			E	B	A	A		A	A	
Approach Delay		35.0			23.1			8.5			6.9	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		3			51	0	0	231		17	124	
Queue Length 95th (ft)		15			97	71	m0	49		36	306	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		240			196	461	804	1181		678	1373	
Starvation Cap Reductn		0			0	0	0	82		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	14	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.42	0.57	0.00	0.62		0.23	0.47	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 70.8%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

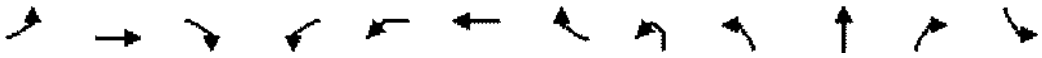
Splits and Phases: 9: Penman Rd & Seagate Ave





Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Future Volume (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.965				0.991		
Flt Protected		0.994			0.950				0.950			0.950
Satd. Flow (prot)	0	1832	1583	0	1770	1798	0	0	1770	1846	0	1770
Flt Permitted		0.940			0.950				0.950			0.950
Satd. Flow (perm)	0	1732	1583	0	1770	1798	0	0	1770	1846	0	1770
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						6				1		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	24	189	411	23	22	163	49	40	225	518	35	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	411	0	45	212	0	0	265	553	0	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	297	16	18	2	14	16	38		
Future Volume (vph)	297	16	18	2	14	16	38		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0			0	0			
Storage Lanes		0			1	0			
Taper Length (ft)					50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.985				0.896				
Flt Protected					0.989				
Satd. Flow (prot)	1835	0	0	0	1629	0	0		
Flt Permitted					0.989				
Satd. Flow (perm)	1835	0	0	0	1629	0	0		
Right Turn on Red			Yes				Yes		
Satd. Flow (RTOR)	1				172				
Link Speed (mph)	35				35				
Link Distance (ft)	1460				438				
Travel Time (s)	28.4				8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	2%	50%	2%	2%	2%		
Adj. Flow (vph)	297	16	18	2	14	16	38		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	331	0	0	0	70	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Left	Right	Right		
Median Width(ft)	12				12				
Link Offset(ft)	0				45				
Crosswalk Width(ft)	16				16				
Two way Left Turn Lane	Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	15	9	9		
Number of Detectors	2			1	1				
Detector Template	Thru			Left	Left				
Leading Detector (ft)	100			20	20				
Trailing Detector (ft)	0			0	0				
Detector 1 Position(ft)	0			0	0				
Detector 1 Size(ft)	6			20	20				
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0			0.0	0.0				
Detector 1 Queue (s)	0.0			0.0	0.0				
Detector 1 Delay (s)	0.0			0.0	0.0				
Detector 2 Position(ft)	94								
Detector 2 Size(ft)	6								
Detector 2 Type	Cl+Ex								
Detector 2 Channel									
Detector 2 Extend (s)	0.0								
Turn Type	NA			Prot	Prot				
Protected Phases	2 3			7	7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	11.6	11.6	11.6	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.8	60.8		12.2	80.6			30.4	78.6		10.6
Actuated g/C Ratio		0.26	0.26		0.05	0.35			0.13	0.34		0.05
v/c Ratio		0.47	0.99		0.49	0.34			1.14	0.88		0.40
Control Delay		79.7	122.4		131.0	59.7			182.4	89.2		127.1
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		79.7	122.4		131.0	59.7			182.4	89.2		127.1
LOS		E	F		F	E			F	F		F
Approach Delay		107.8				72.2				119.4		
Approach LOS		F				E				F		
Queue Length 50th (ft)		309	~749		74	264			~539	905		53
Queue Length 95th (ft)		423	#1028		134	366			#780	#1205		101
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		455	415		92	630			232	628		116
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.47	0.99		0.49	0.34			1.14	0.88		0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 231.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 101.9		Intersection LOS: F	
Intersection Capacity Utilization 93.7%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	2 3			7	7				
Switch Phase									
Minimum Initial (s)				3.0	3.0			12.0	3.0
Minimum Split (s)				10.5	10.5			19.6	46.4
Total Split (s)				32.5	32.5			47.6	46.4
Total Split (%)				11.9%	11.9%			17%	17%
Maximum Green (s)				25.0	25.0			40.0	38.0
Yellow Time (s)				3.4	3.4			4.0	4.0
All-Red Time (s)				4.1	4.1			3.6	4.4
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					7.5				
Lead/Lag				Lead	Lead			Lag	Lag
Lead-Lag Optimize?				Yes	Yes			Yes	Yes
Vehicle Extension (s)				3.0	3.0			3.0	3.0
Recall Mode				None	None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									11
Act Effct Green (s)	59.7				5.6				
Actuated g/C Ratio	0.26				0.02				
v/c Ratio	0.70				0.34				
Control Delay	89.1				4.4				
Queue Delay	0.0				0.0				
Total Delay	89.1				4.4				
LOS	F				A				
Approach Delay	92.4				4.4				
Approach LOS	F				A				
Queue Length 50th (ft)	516				0				
Queue Length 95th (ft)	654				0				
Internal Link Dist (ft)	1380				358				
Turn Bay Length (ft)									
Base Capacity (vph)	510				331				
Starvation Cap Reductn	0				0				
Spillback Cap Reductn	0				0				
Storage Cap Reductn	0				0				
Reduced v/c Ratio	0.65				0.21				

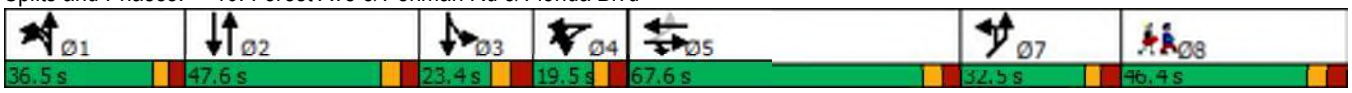
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



Intersection	
Int Delay, s/veh	1.4

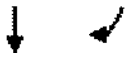
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	42	547	18	80	389
Future Vol, veh/h	19	42	547	18	80	389
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	42	547	18	80	389

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1105	556	0	0	565	0
Stage 1	556	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	233	531	-	-	1007	-
Stage 1	574	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	215	531	-	-	1007	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	533	-	-	-	-	-

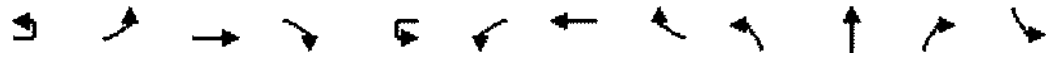
Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	457	1007	-
HCM Lane V/C Ratio	-	-	0.133	0.079	-
HCM Control Delay (s)	-	-	14.1	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Future Volume (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.991			0.924		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3476	0	0	1770	3507	0	1770	1721	0	1770
Flt Permitted		0.123				0.126			0.388			0.140
Satd. Flow (perm)	0	229	3476	0	0	235	3507	0	723	1721	0	261
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			13				5			27		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	108	1074	145	3	178	1154	73	226	181	184	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	1219	0	0	181	1227	0	226	365	0	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

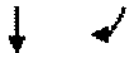


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	125	72
Future Volume (vph)	125	72
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.945	
Flt Protected		
Satd. Flow (prot)	1754	0
Flt Permitted		
Satd. Flow (perm)	1754	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	16	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	125	72
Shared Lane Traffic (%)		
Lane Group Flow (vph)	197	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	40.0	40.0	86.0		20.0	20.0	66.0		19.0	31.0		23.0
Total Split (%)	25.0%	25.0%	53.8%		12.5%	12.5%	41.3%		11.9%	19.4%		14.4%
Maximum Green (s)	34.0	34.0	80.0		14.0	14.0	60.0		12.9	24.6		17.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		94.2	82.0			93.8	81.8		44.0	30.8		40.4
Actuated g/C Ratio		0.59	0.51			0.59	0.51		0.28	0.19		0.25
v/c Ratio		0.51	0.68			0.72	0.68		0.80	1.04		0.50
Control Delay		19.8	31.6			33.7	32.3		68.9	113.6		51.7
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		19.8	31.6			33.7	32.3		68.9	113.6		51.7
LOS		B	C			C	C		E	F		D
Approach Delay			30.4				32.5			96.5		
Approach LOS			C				C			F		
Queue Length 50th (ft)		52	490			76	493		191	~385		66
Queue Length 95th (ft)		83	585			147	623		#332	#646		113
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		470	1788			274	1795		283	352		239
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.27	0.68			0.66	0.68		0.80	1.04		0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 34 (21%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 44.3		Intersection LOS: D	
Intersection Capacity Utilization 89.9%		ICU Level of Service E	
Analysis Period (min) 15			



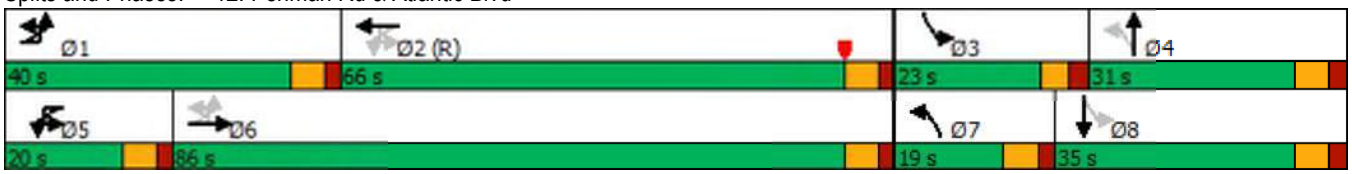
Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	35.0	
Total Split (%)	21.9%	
Maximum Green (s)	28.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	28.6	
Actuated g/C Ratio	0.18	
v/c Ratio	0.60	
Control Delay	64.1	
Queue Delay	0.0	
Total Delay	64.1	
LOS	E	
Approach Delay	60.4	
Approach LOS	E	
Queue Length 50th (ft)	177	
Queue Length 95th (ft)	268	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	326	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.60	

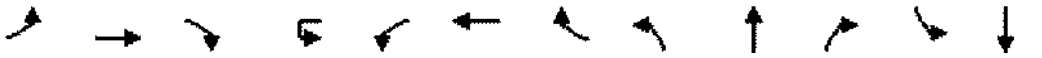
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

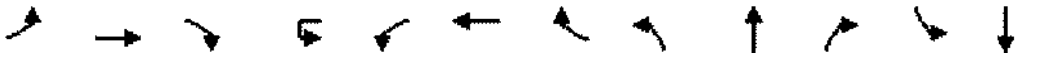
Splits and Phases: 12: Penman Rd & Atlantic Blvd





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Future Volume (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		1		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.86	0.86	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.998	0.850			0.971			0.972			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		1	101			41			6			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	349	1034	112	20	21	794	191	180	123	28	236	132
Shared Lane Traffic (%)			10%									
Lane Group Flow (vph)	349	1045	101	0	41	985	0	180	151	0	236	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2	1	1	1	2		1	2		1	2
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100	20	20	20	100		20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6	20	20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8
Permitted Phases			6									

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	330
Future Volume (vph)	330
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	94
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Adj. Flow (vph)	330
Shared Lane Traffic (%)	
Lane Group Flow (vph)	330
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1
Permitted Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	1	6	6	5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0	18.0	4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4	30.4	9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	38.0	77.0	77.0	18.0	18.0	57.0		23.0	23.0		32.0	32.0
Total Split (%)	25.3%	51.3%	51.3%	12.0%	12.0%	38.0%		15.3%	15.3%		21.3%	21.3%
Maximum Green (s)	32.6	71.6	71.6	12.6	12.6	51.6		17.9	17.9		26.9	26.9
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max	C-Max	None	None	C-Max		None	None		None	None
Walk Time (s)		7.0	7.0			11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0	18.0			28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0	0			0		0	0		0	0
Act Effct Green (s)	31.7	78.4	78.4		11.2	55.8		17.3	17.3		24.2	24.2
Actuated g/C Ratio	0.21	0.52	0.52		0.07	0.37		0.12	0.12		0.16	0.16
v/c Ratio	0.94	0.42	0.13		0.31	0.53		0.88	0.71		0.83	0.44
Control Delay	90.4	23.9	4.1		71.2	37.3		102.9	79.4		83.6	60.8
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	90.4	23.9	4.1		71.2	37.3		102.9	79.4		83.6	60.8
LOS	F	C	A		E	D		F	E		F	E
Approach Delay		38.1				38.6			92.2			51.2
Approach LOS		D				D			F			D
Queue Length 50th (ft)	336	260	0		38	276		175	138		222	115
Queue Length 95th (ft)	#523	303	38		80	325		#311	#227		#335	185
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595		205		315			200			210	
Base Capacity (vph)	385	2508	760		148	1861		211	221		317	334
Starvation Cap Reductn	0	0	0		0	0		0	0		0	0
Spillback Cap Reductn	0	0	0		0	0		0	0		0	0
Storage Cap Reductn	0	0	0		0	0		0	0		0	0
Reduced v/c Ratio	0.91	0.42	0.13		0.28	0.53		0.85	0.68		0.74	0.40

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 36 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 45.9		Intersection LOS: D	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

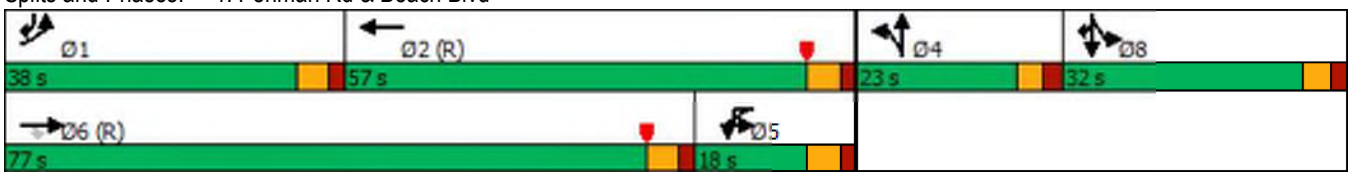
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	SBR
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.3
Actuated g/C Ratio	0.41
v/c Ratio	0.47
Control Delay	24.2
Queue Delay	0.0
Total Delay	24.2
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	159
Queue Length 95th (ft)	246
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	710
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.46

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	15	2	16	29	3	60	1	10	592	42	48	679	18
Future Vol, veh/h	15	2	16	29	3	60	1	10	592	42	48	679	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	6	4	2	2	2	2	2	5	2	2	2
Mvmt Flow	15	2	16	29	3	60	1	10	592	42	48	679	18

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	1449	1440	688	1426	1428	613	-	697	0	0	634	0	0
Stage 1	784	784	-	633	635	-	-	-	-	-	-	-	-
Stage 2	665	656	-	793	793	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.14	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.536	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	109	133	439	112	135	492	-	899	-	-	949	-	-
Stage 1	386	404	-	464	472	-	-	-	-	-	-	-	-
Stage 2	449	462	-	379	400	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	90	126	439	102	128	492	~ -11	~ -11	-	-	949	-	-
Mov Cap-2 Maneuver	90	126	-	102	128	-	-	-	-	-	-	-	-
Stage 1	386	383	-	464	472	-	-	-	-	-	-	-	-
Stage 2	392	462	-	345	380	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.4	33.9		0.6
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	151	214	949	-	-
HCM Lane V/C Ratio	-	-	-	0.219	0.43	0.051	-	-
HCM Control Delay (s)	-	-	-	35.4	33.9	9	-	-
HCM Lane LOS	-	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.8	2	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	3	8	6	6	21	15	654	10	21	695	5
Future Vol, veh/h	4	3	8	6	6	21	15	654	10	21	695	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	5	2	2	2	2	2	2
Mvmt Flow	4	3	8	6	6	21	15	654	10	21	695	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1443	1434	698	1434	1431	659	700	0	0	664	0	0
Stage 1	740	740	-	689	689	-	-	-	-	-	-	-
Stage 2	703	694	-	745	742	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	110	134	440	112	134	458	897	-	-	925	-	-
Stage 1	409	423	-	436	446	-	-	-	-	-	-	-
Stage 2	428	444	-	406	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	129	440	105	129	458	897	-	-	925	-	-
Mov Cap-2 Maneuver	98	129	-	105	129	-	-	-	-	-	-	-
Stage 1	402	413	-	429	438	-	-	-	-	-	-	-
Stage 2	396	436	-	387	412	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.5	24.1	0.2	0.3
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	897	-	-	182	221	925	-	-
HCM Lane V/C Ratio	0.017	-	-	0.082	0.149	0.023	-	-
HCM Control Delay (s)	9.1	-	-	26.5	24.1	9	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	2	7	1	12	1	671	10	10	713	1
Future Vol, veh/h	2	2	2	7	1	12	1	671	10	10	713	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	2	7	1	12	1	671	10	10	713	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1419	1417	714	1414	1412	676	714	0	0	681	0	0
Stage 1	734	734	-	678	678	-	-	-	-	-	-	-
Stage 2	685	683	-	736	734	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	114	137	431	115	138	453	886	-	-	912	-	-
Stage 1	412	426	-	442	452	-	-	-	-	-	-	-
Stage 2	438	449	-	411	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	135	431	112	136	453	886	-	-	912	-	-
Mov Cap-2 Maneuver	109	135	-	112	136	-	-	-	-	-	-	-
Stage 1	412	421	-	442	452	-	-	-	-	-	-	-
Stage 2	425	449	-	403	421	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.5	24.1	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	886	-	-	159	208	912	-	-
HCM Lane V/C Ratio	0.001	-	-	0.038	0.096	0.011	-	-
HCM Control Delay (s)	9.1	-	-	28.5	24.1	9	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	31	656	27	27	693
Future Vol, veh/h	23	31	656	27	27	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	23	31	656	27	27	693

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1417	670	0	0	683	0
Stage 1	670	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	151	457	-	-	910	-
Stage 1	509	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	146	457	-	-	910	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	454	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	364	910	-
HCM Lane V/C Ratio	-	-	0.148	0.03	-
HCM Control Delay (s)	-	-	16.6	9.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	43	564	46	35	608
Future Vol, veh/h	39	43	564	46	35	608
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	43	564	46	35	608

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1265	587	0	0	610	0
Stage 1	587	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	187	510	-	-	969	-
Stage 1	556	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	510	-	-	969	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	486	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	318	510	969	-
HCM Lane V/C Ratio	-	-	0.123	0.084	0.036	-
HCM Control Delay (s)	-	-	17.9	12.7	8.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.3	0.1	-

Intersection	
Int Delay, s/veh	0.4

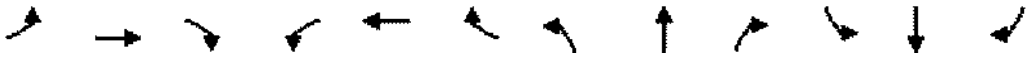
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	8	595	18	5	632
Future Vol, veh/h	24	8	595	18	5	632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	8	595	18	5	632

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1246	604	0	0	613	0
Stage 1	604	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	192	498	-	-	966	-
Stage 1	546	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	191	498	-	-	966	-
Mov Cap-2 Maneuver	330	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	966	-
HCM Lane V/C Ratio	-	-	0.089	0.005	-
HCM Control Delay (s)	-	-	16	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Future Volume (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.955			0.998			0.990	
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1675	0	0	1756	0	1671	1856	0	1770	1844	0
Flt Permitted		0.812			0.891		0.316			0.365		
Satd. Flow (perm)	0	1400	0	0	1585	0	556	1856	0	680	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			5			1			7	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	25%	6%	2%	2%	2%	8%	2%	14%	2%	2%	2%
Adj. Flow (vph)	32	4	19	4	6	5	13	583	7	7	613	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	15	0	13	590	0	7	658	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

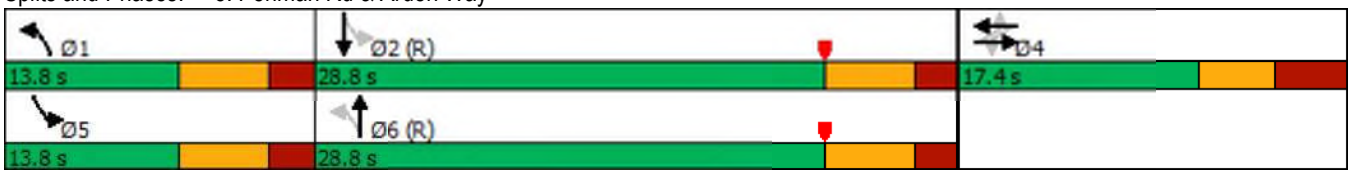


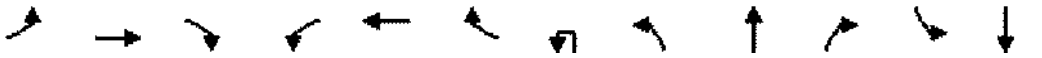
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	17.4	17.4		17.4	17.4		13.8	28.8		13.8	28.8	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	10.7	10.7		10.7	10.7		7.8	22.8		7.8	22.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.3			7.3		43.8	45.0		43.7	44.9	
Actuated g/C Ratio		0.12			0.12		0.73	0.75		0.73	0.75	
v/c Ratio		0.30			0.08		0.03	0.42		0.01	0.48	
Control Delay		21.2			19.5		4.3	8.7		3.3	6.7	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		21.2			19.5		4.3	8.8		3.3	6.7	
LOS		C			B		A	A		A	A	
Approach Delay		21.2			19.5			8.7			6.7	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)		12			3		1	82		0	43	
Queue Length 95th (ft)		38			17		6	#303		m2	#365	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		265			286		554	1391		641	1383	
Starvation Cap Reductn		0			0		0	0		0	16	
Spillback Cap Reductn		0			0		0	116		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.05		0.02	0.46		0.01	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

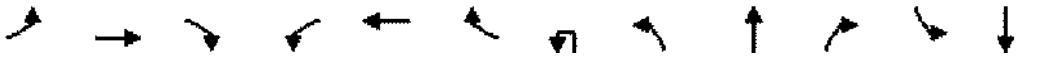
Splits and Phases: 8: Penman Rd & Arden Way





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Future Volume (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85		50		0	40	
Storage Lanes	0		0	0		1		1		0	1	
Taper Length (ft)	50			50				50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932				0.850			0.988			0.999
Flt Protected		0.976			0.953			0.950			0.950	
Satd. Flow (prot)	0	1694	0	0	1775	1568	0	1770	1840	0	1770	1861
Flt Permitted		0.837			0.727			0.426			0.310	
Satd. Flow (perm)	0	1453	0	0	1354	1568	0	794	1840	0	577	1861
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		164				164			8			1
Link Speed (mph)		35			35				35			35
Link Distance (ft)		451			372				279			2838
Travel Time (s)		8.8			7.2				5.4			55.3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	3	0	3	47	1	80	1	5	577	50	82	585
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	48	80	0	6	627	0	82	590
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	Left	Left
Median Width(ft)		0			0				12			12
Link Offset(ft)		12			0				0			0
Crosswalk Width(ft)		16			16				16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Number of Detectors	1	2		1	2	1	1	1	2		1	2
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	100	20	20	20	100		20	100
Trailing Detector (ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94				94			94
Detector 2 Size(ft)		6			6				6			6
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			0.0
Turn Type	Perm	NA		Perm	NA	Perm	custom	pm+pt	NA		pm+pt	NA
Protected Phases		4			4			1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	5
Future Volume (vph)	5
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	5
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4		4	1	6			2	
Detector Phase	4	4		4	4	4	1	1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	12.0		3.0	12.0
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	9.5	23.0		9.5	23.0
Total Split (s)	17.4	17.4		17.4	17.4	17.4	13.8	13.8	28.8		13.8	28.8
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	23.0%	48.0%		23.0%	48.0%
Maximum Green (s)	12.4	12.4		12.4	12.4	12.4	9.8	9.8	20.8		9.8	20.8
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	3.0	4.0		3.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	4.0		1.0	4.0
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		5.0			5.0	5.0		4.0	8.0		4.0	8.0
Lead/Lag							Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			5.0			5.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0			0.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		7.6			7.6	7.6		42.4	36.6		45.0	41.1
Actuated g/C Ratio		0.13			0.13	0.13		0.71	0.61		0.75	0.68
v/c Ratio		0.02			0.28	0.23		0.01	0.56		0.15	0.46
Control Delay		0.2			27.2	1.9		1.5	10.4		3.5	9.0
Queue Delay		0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		0.2			27.2	1.9		1.5	10.5		3.5	9.0
LOS		A			C	A		A	B		A	A
Approach Delay		0.2			11.3				10.4			8.3
Approach LOS		A			B				B			A
Queue Length 50th (ft)		0			16	0		1	165		6	86
Queue Length 95th (ft)		0			41	3		m0	#332		18	270
Internal Link Dist (ft)		371			292				199			2758
Turn Bay Length (ft)						85		50			40	
Base Capacity (vph)		430			279	454		753	1125		632	1275
Starvation Cap Reductn		0			0	0		0	18		0	0
Spillback Cap Reductn		0			0	0		0	0		0	45
Storage Cap Reductn		0			0	0		0	0		0	0
Reduced v/c Ratio		0.01			0.17	0.18		0.01	0.57		0.13	0.48

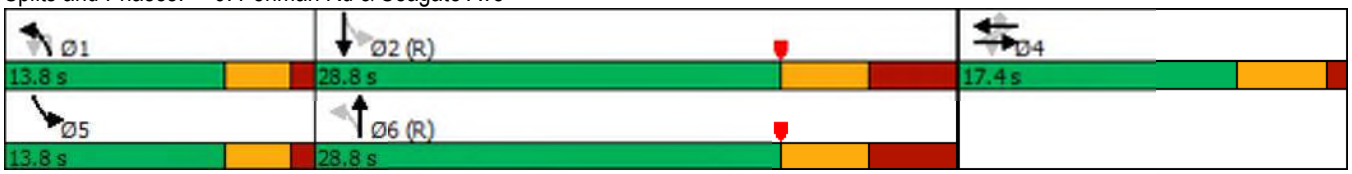
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Penman Rd & Seagate Ave



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Future Volume (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0			55		0		275		0
Storage Lanes	0		1			1		0		1		0
Taper Length (ft)	50					50				50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.957				0.963	
Flt Protected		0.999				0.950				0.950		
Satd. Flow (prot)	0	1861	1568	0	0	1770	1783	0	0	1767	1794	0
Flt Permitted		0.992				0.950				0.950		
Satd. Flow (perm)	0	1848	1568	0	0	1770	1783	0	0	1767	1794	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			171				8				6	
Link Speed (mph)		35					35				35	
Link Distance (ft)		600					501				2838	
Travel Time (s)		11.7					9.8				55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	5	195	296	5	37	5	89	36	28	195	311	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	301	0	0	42	125	0	0	223	412	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		0					12				12	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2	1		1	1	2		1	1	2	
Detector Template	Left	Thru	Right		Left	Left	Thru		Left	Left	Thru	
Leading Detector (ft)	20	100	20		20	20	100		20	20	100	
Trailing Detector (ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Position(ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Size(ft)	20	6	20		20	20	6		20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	Perm	NA	Prot		Prot	Prot	NA		Prot	Prot	NA	
Protected Phases		5	5		4	4	4 5		1	1	1 2	

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	42	276	20	10	10	24	34		
Future Volume (vph)	42	276	20	10	10	24	34		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	195		0		0	0			
Storage Lanes	1		0		1	0			
Taper Length (ft)	50				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt		0.985			0.885				
Flt Protected	0.950				0.993				
Satd. Flow (prot)	1770	1825	0	0	1637	0	0		
Flt Permitted	0.950				0.993				
Satd. Flow (perm)	1770	1825	0	0	1637	0	0		
Right Turn on Red				Yes			Yes		
Satd. Flow (RTOR)		1			172				
Link Speed (mph)		35			35				
Link Distance (ft)		1460			438				
Travel Time (s)		28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	2%		
Adj. Flow (vph)	42	276	20	10	10	24	34		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	42	306	0	0	68	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Left	Right	Right	Left	Right	Right		
Median Width(ft)		12			12				
Link Offset(ft)		0			45				
Crosswalk Width(ft)		16			16				
Two way Left Turn Lane		Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15		9	9	15	9	9		
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Prot	NA			Prot				
Protected Phases	3	2 3			7			2	8

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Permitted Phases	5											
Detector Phase	5	5	5		4	4	4 5		1	1	1 2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		6.0	6.0			3.0	3.0		
Minimum Split (s)	11.6	11.6	11.6		13.5	13.5			9.5	9.5		
Total Split (s)	67.6	67.6	67.6		19.5	19.5			36.5	36.5		
Total Split (%)	24.7%	24.7%	24.7%		7.1%	7.1%			13.3%	13.3%		
Maximum Green (s)	60.0	60.0	60.0		12.0	12.0			30.0	30.0		
Yellow Time (s)	4.0	4.0	4.0		3.4	3.4			3.4	3.4		
All-Red Time (s)	3.6	3.6	3.6		4.1	4.1			3.1	3.1		
Lost Time Adjust (s)		0.0	0.0			0.0				0.0		
Total Lost Time (s)		7.6	7.6			7.5				6.5		
Lead/Lag					Lag	Lag			Lead	Lead		
Lead-Lag Optimize?					Yes	Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		
Recall Mode	None	None	None		None	None			None	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		27.1	27.1			11.7	46.7			31.2	70.7	
Actuated g/C Ratio		0.16	0.16			0.07	0.27			0.18	0.41	
v/c Ratio		0.68	0.77			0.35	0.25			0.69	0.55	
Control Delay		83.1	44.4			95.2	50.1			80.3	45.4	
Queue Delay		0.0	0.0			0.0	0.0			0.0	0.0	
Total Delay		83.1	44.4			95.2	50.1			80.3	45.4	
LOS		F	D			F	D			F	D	
Approach Delay		59.8					61.5				57.7	
Approach LOS		E					E				E	
Queue Length 50th (ft)		198	133			42	94			215	303	
Queue Length 95th (ft)		399	333			120	219			#565	703	
Internal Link Dist (ft)		520					421				2758	
Turn Bay Length (ft)						55				275		
Base Capacity (vph)		673	679			129	828			321	848	
Starvation Cap Reductn		0	0			0	0			0	0	
Spillback Cap Reductn		0	0			0	0			0	0	
Storage Cap Reductn		0	0			0	0			0	0	
Reduced v/c Ratio		0.30	0.44			0.33	0.15			0.69	0.49	

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 171.1			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 57.7		Intersection LOS: E	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

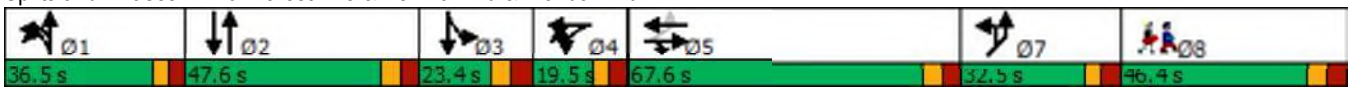
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	3	2 3			7				
Switch Phase									
Minimum Initial (s)	6.0				3.0			12.0	3.0
Minimum Split (s)	14.4				10.5			19.6	46.4
Total Split (s)	23.4				32.5			47.6	46.4
Total Split (%)	8.6%				11.9%			17%	17%
Maximum Green (s)	15.0				25.0			40.0	38.0
Yellow Time (s)	4.0				3.4			4.0	4.0
All-Red Time (s)	4.4				4.1			3.6	4.4
Lost Time Adjust (s)	0.0				0.0				
Total Lost Time (s)	8.4				7.5				
Lead/Lag	Lead				Lead			Lag	Lag
Lead-Lag Optimize?	Yes				Yes			Yes	Yes
Vehicle Extension (s)	3.0				3.0			3.0	3.0
Recall Mode	None				None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									6
Act Effct Green (s)	10.2	50.5			5.7				
Actuated g/C Ratio	0.06	0.30			0.03				
v/c Ratio	0.40	0.57			0.31				
Control Delay	98.2	58.4			3.6				
Queue Delay	0.0	0.0			0.0				
Total Delay	98.2	58.4			3.6				
LOS	F	E			A				
Approach Delay		63.2			3.6				
Approach LOS		E			A				
Queue Length 50th (ft)	42	261			0				
Queue Length 95th (ft)	119	548			0				
Internal Link Dist (ft)		1380			358				
Turn Bay Length (ft)	195								
Base Capacity (vph)	161	597			394				
Starvation Cap Reductn	0	0			0				
Spillback Cap Reductn	0	0			0				
Storage Cap Reductn	0	0			0				
Reduced v/c Ratio	0.26	0.51			0.17				

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



Intersection	
Int Delay, s/veh	1

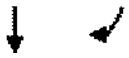
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	34	423	18	44	343
Future Vol, veh/h	9	34	423	18	44	343
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	34	423	18	44	343

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	863	432	0	0	441	0
Stage 1	432	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	325	624	-	-	1119	-
Stage 1	655	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	312	624	-	-	1119	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	629	-	-	-	-	-

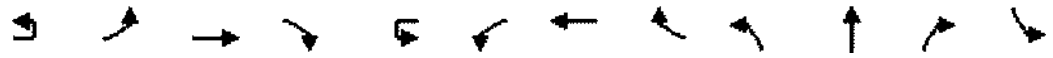
Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	572	1119	-
HCM Lane V/C Ratio	-	-	0.075	0.039	-
HCM Control Delay (s)	-	-	11.8	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Future Volume (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.987				0.989			0.904		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3493	0	0	1770	3500	0	1770	1684	0	1770
Flt Permitted		0.168				0.155			0.526			0.213
Satd. Flow (perm)	0	313	3493	0	0	289	3500	0	980	1684	0	397
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			9				8			64		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	11	78	949	87	2	177	1002	82	196	110	196	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	1036	0	0	179	1084	0	196	306	0	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

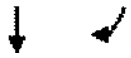


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	88	64
Future Volume (vph)	88	64
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.937	
Flt Protected		
Satd. Flow (prot)	1738	0
Flt Permitted		
Satd. Flow (perm)	1738	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	26	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	88	64
Shared Lane Traffic (%)		
Lane Group Flow (vph)	152	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	15.0	15.0	57.0		19.0	19.0	61.0		18.0	36.0		18.0
Total Split (%)	11.5%	11.5%	43.8%		14.6%	14.6%	46.9%		13.8%	27.7%		13.8%
Maximum Green (s)	9.0	9.0	51.0		13.0	13.0	55.0		11.9	29.6		12.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		68.0	60.0			74.5	63.2		35.9	23.7		34.1
Actuated g/C Ratio		0.52	0.46			0.57	0.49		0.28	0.18		0.26
v/c Ratio		0.35	0.64			0.61	0.64		0.57	0.85		0.53
Control Delay		17.4	30.5			22.6	28.2		41.0	61.7		40.2
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		17.4	30.5			22.6	28.2		41.0	61.7		40.2
LOS		B	C			C	C		D	E		D
Approach Delay			29.5				27.4			53.6		
Approach LOS			C				C			D		
Queue Length 50th (ft)		32	352			67	356		125	201		71
Queue Length 95th (ft)		63	474			118	476		180	297		112
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		268	1615			320	1706		343	432		238
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.33	0.64			0.56	0.64		0.57	0.71		0.49

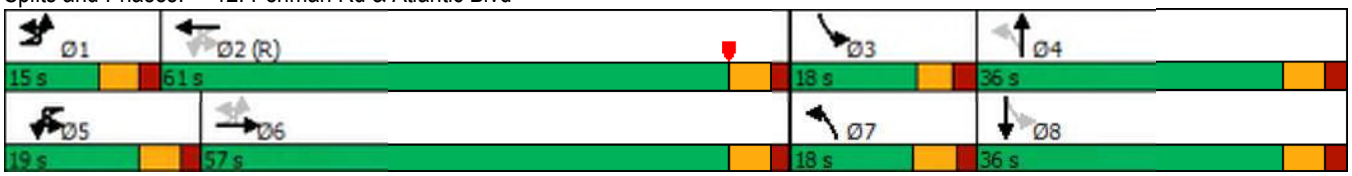
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 90 (69%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			



Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	36.0	
Total Split (%)	27.7%	
Maximum Green (s)	29.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	22.4	
Actuated g/C Ratio	0.17	
v/c Ratio	0.47	
Control Delay	43.3	
Queue Delay	0.0	
Total Delay	43.3	
LOS	D	
Approach Delay	42.0	
Approach LOS	D	
Queue Length 50th (ft)	95	
Queue Length 95th (ft)	156	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	415	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.37	

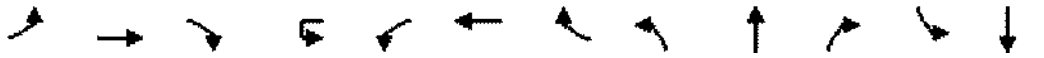
Intersection Summary

Splits and Phases: 12: Penman Rd & Atlantic Blvd



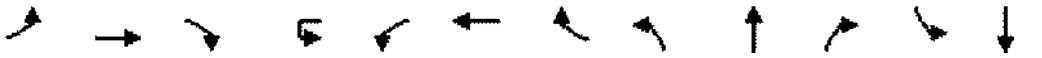
Appendix L

2045 No-Build Intersection Capacity Analyses Worksheets



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	359	1234	155	5	35	867	168	253	135	14	286	178
Future Volume (vph)	359	1234	155	5	35	867	168	253	135	14	286	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.983				0.976			0.986			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1752	4993	0	0	1770	4932	0	1736	1789	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		18				26			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	6%	4%	5%	2%	2%	2%
Adj. Flow (vph)	359	1234	155	5	35	867	168	253	135	14	286	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	1389	0	0	40	1035	0	253	149	0	286	178
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	674
Future Volume (vph)	674
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	94
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	674
Shared Lane Traffic (%)	
Lane Group Flow (vph)	674
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	37.0	68.0		16.0	16.0	47.0		33.0	33.0		33.0	33.0
Total Split (%)	24.7%	45.3%		10.7%	10.7%	31.3%		22.0%	22.0%		22.0%	22.0%
Maximum Green (s)	31.6	62.6		10.6	10.6	41.6		27.9	27.9		27.9	27.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lag	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	32.8	68.3			9.6	43.0		25.4	25.4		27.9	27.9
Actuated g/C Ratio	0.22	0.46			0.06	0.29		0.17	0.17		0.19	0.19
v/c Ratio	0.94	0.61			0.35	0.72		0.86	0.49		0.87	0.51
Control Delay	90.1	33.0			75.5	50.7		87.2	60.5		84.7	61.0
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	90.1	33.0			75.5	50.7		87.2	60.5		84.7	61.0
LOS	F	C			E	D		F	E		F	E
Approach Delay		44.7				51.6			77.3			60.2
Approach LOS		D				D			E			E
Queue Length 50th (ft)	352	391			38	332		239	129		275	159
Queue Length 95th (ft)	#561	446			80	387		#368	202		#437	240
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	382	2284			125	1431		322	335		329	346
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.94	0.61			0.32	0.72		0.79	0.44		0.87	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 127 (85%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 53.4		Intersection LOS: D	
Intersection Capacity Utilization 89.2%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	61.0
Actuated g/C Ratio	0.41
v/c Ratio	0.96
Control Delay	49.7
Queue Delay	0.0
Total Delay	49.7
LOS	D
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	317
Queue Length 95th (ft)	#668
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	699
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	16	4	23	5	3	26	11	658	14	1	30	1169	31
Future Vol, veh/h	16	4	23	5	3	26	11	658	14	1	30	1169	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	2	2	2	2	5	2	2	2	100	2	2	2
Mvmt Flow	16	4	23	5	3	26	11	658	14	1	30	1169	31

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	1947	1941	1185	1945	1949	665	1200	0	0	-	672	0	0
Stage 1	1245	1247	-	687	687	-	-	-	-	-	-	-	-
Stage 2	702	694	-	1258	1262	-	-	-	-	-	-	-	-
Critical Hdwy	7.18	6.52	6.22	7.12	6.52	6.25	4.12	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.318	3.518	4.018	3.345	2.218	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	47	65	230	49	64	455	582	-	-	-	919	-	-
Stage 1	207	245	-	437	447	-	-	-	-	-	-	-	-
Stage 2	419	444	-	209	241	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	42	64	230	41	63	455	582	-	-	~ -32	~ -32	-	-
Mov Cap-2 Maneuver	42	64	-	41	63	-	-	-	-	-	-	-	-
Stage 1	203	245	-	429	439	-	-	-	-	-	-	-	-
Stage 2	385	436	-	185	241	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	95.3	35.9	0.2	
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	582	-	-	79	150	+	-	-
HCM Lane V/C Ratio	0.019	-	-	0.544	0.227	-	-	-
HCM Control Delay (s)	11.3	-	-	95.3	35.9	-	-	-
HCM Lane LOS	B	-	-	F	E	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.4	0.8	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	14	6	1	20	4	744	5	11	1282	5
Future Vol, veh/h	11	0	14	6	1	20	4	744	5	11	1282	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	2
Mvmt Flow	11	0	14	6	1	20	4	744	5	11	1282	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2072	2064	1285	2069	2064	747	1287	0	0	749	0	0
Stage 1	1307	1307	-	755	755	-	-	-	-	-	-	-
Stage 2	765	757	-	1314	1309	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	40	55	201	40	55	413	539	-	-	860	-	-
Stage 1	196	230	-	401	417	-	-	-	-	-	-	-
Stage 2	396	416	-	195	229	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	54	201	37	54	413	539	-	-	860	-	-
Mov Cap-2 Maneuver	37	54	-	37	54	-	-	-	-	-	-	-
Stage 1	195	227	-	398	414	-	-	-	-	-	-	-
Stage 2	373	413	-	179	226	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	86	44.3	0.1	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	539	-	-	68	118	860	-	-
HCM Lane V/C Ratio	0.007	-	-	0.368	0.229	0.013	-	-
HCM Control Delay (s)	11.7	-	-	86	44.3	9.2	-	-
HCM Lane LOS	B	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.4	0.8	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	3	6	3	20	1	709	6	3	1183	1
Future Vol, veh/h	0	1	3	6	3	20	1	709	6	3	1183	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	3	6	3	20	1	709	6	3	1183	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1916	1907	1184	1906	1904	712	1184	0	0	715	0	0
Stage 1	1190	1190	-	714	714	-	-	-	-	-	-	-
Stage 2	726	717	-	1192	1190	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	51	68	230	52	69	432	590	-	-	885	-	-
Stage 1	229	261	-	422	435	-	-	-	-	-	-	-
Stage 2	416	434	-	228	261	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	47	68	230	51	69	432	590	-	-	885	-	-
Mov Cap-2 Maneuver	47	68	-	51	69	-	-	-	-	-	-	-
Stage 1	229	260	-	421	434	-	-	-	-	-	-	-
Stage 2	393	433	-	223	260	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.7	37.3	0	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	590	-	-	144	140	885	-	-
HCM Lane V/C Ratio	0.002	-	-	0.028	0.207	0.003	-	-
HCM Control Delay (s)	11.1	-	-	30.7	37.3	9.1	-	-
HCM Lane LOS	B	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	45	720	24	29	1130
Future Vol, veh/h	41	45	720	24	29	1130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	6	3	2	2	2
Mvmt Flow	41	45	720	24	29	1130

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1920	732	0	0	744	0
Stage 1	732	-	-	-	-	-
Stage 2	1188	-	-	-	-	-
Critical Hdwy	6.42	6.26	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.354	-	-	2.218	-
Pot Cap-1 Maneuver	74	415	-	-	864	-
Stage 1	476	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	71	415	-	-	864	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	279	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	265	864	-
HCM Lane V/C Ratio	-	-	0.325	0.034	-
HCM Control Delay (s)	-	-	25	9.3	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	40	692	53	28	914
Future Vol, veh/h	63	40	692	53	28	914
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	3	3	5	2	2
Mvmt Flow	63	40	692	53	28	914

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1689	719	0	0	745	0
Stage 1	719	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	103	427	-	-	863	-
Stage 1	483	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	100	427	-	-	863	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	356	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.6	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	231	427	863	-
HCM Lane V/C Ratio	-	-	0.273	0.094	0.032	-
HCM Control Delay (s)	-	-	26.3	14.3	9.3	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0.3	0.1	-

Intersection	
Int Delay, s/veh	0.9

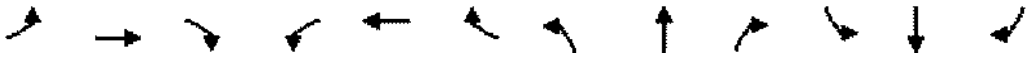
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	28	645	99	33	952
Future Vol, veh/h	34	28	645	99	33	952
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	34	28	645	99	33	952

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1713	695	0	0	744	0
Stage 1	695	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	99	442	-	-	864	-
Stage 1	495	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	95	442	-	-	864	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	288	864	-
HCM Lane V/C Ratio	-	-	0.215	0.038	-
HCM Control Delay (s)	-	-	20.9	9.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	29	23	14	20	20	18	628	8	8	968	18
Future Volume (vph)	60	29	23	14	20	20	18	628	8	8	968	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.950			0.998			0.997	
Flt Protected		0.974			0.987		0.950			0.950		
Satd. Flow (prot)	0	1764	0	0	1747	0	1687	1841	0	1770	1857	0
Flt Permitted		0.803			0.901		0.144			0.358		
Satd. Flow (perm)	0	1454	0	0	1594	0	256	1841	0	667	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			20			1			1	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	3%	2%	2%	2%	2%
Adj. Flow (vph)	60	29	23	14	20	20	18	628	8	8	968	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	0	54	0	18	636	0	8	986	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

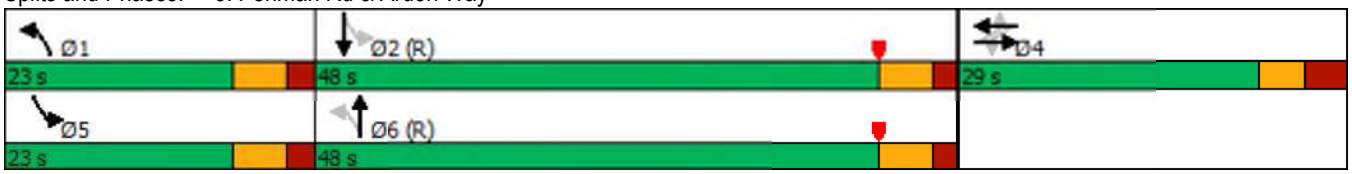


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	29.0	29.0		29.0	29.0		23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	22.3	22.3		22.3	22.3		17.0	42.0		17.0	42.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		12.2			12.2		74.0	72.7		72.5	70.2	
Actuated g/C Ratio		0.12			0.12		0.74	0.73		0.72	0.70	
v/c Ratio		0.60			0.25		0.07	0.48		0.01	0.76	
Control Delay		49.2			29.3		4.7	8.8		2.9	12.5	
Queue Delay		0.0			0.0		0.0	0.3		0.0	0.0	
Total Delay		49.2			29.3		4.7	9.1		2.9	12.5	
LOS		D			C		A	A		A	B	
Approach Delay		49.3			29.3			9.0			12.4	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)		61			20		2	128		1	113	
Queue Length 95th (ft)		111			53		9	355		m2	#832	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		333			371		435	1338		688	1303	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		1			2		0	254		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.34			0.15		0.04	0.59		0.01	0.76	

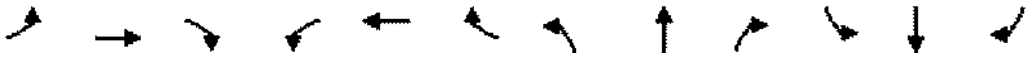
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 74.6%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	6	101	1	189	1	642	61	205	827	6
Future Volume (vph)	6	1	6	101	1	189	1	642	61	205	827	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.938				0.850		0.987			0.999	
Flt Protected		0.977			0.953		0.950			0.950		
Satd. Flow (prot)	0	1707	0	0	1775	1568	1770	1839	0	1752	1859	0
Flt Permitted		0.877			0.719		0.296			0.260		
Satd. Flow (perm)	0	1532	0	0	1339	1568	551	1839	0	480	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				189		6				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%	2%	20%
Adj. Flow (vph)	6	1	6	101	1	189	1	642	61	205	827	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	102	189	1	703	0	205	833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

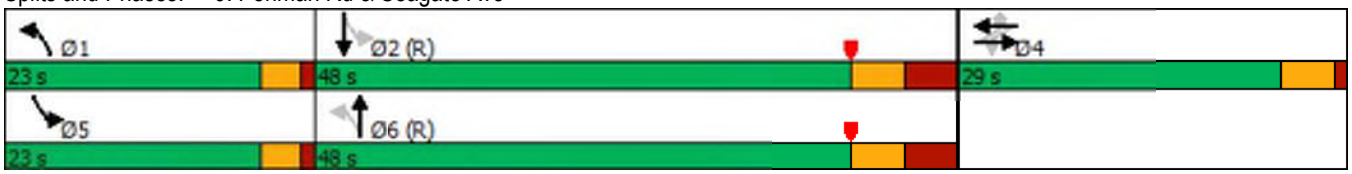


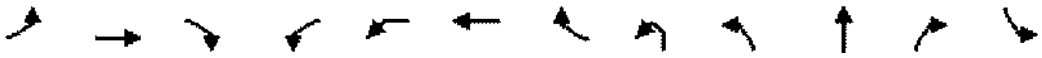
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	29.0	29.0		29.0	29.0	29.0	23.0	48.0		23.0	48.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	19.0	40.0		19.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		13.1			13.1	13.1	69.0	59.5		77.9	72.0	
Actuated g/C Ratio		0.13			0.13	0.13	0.69	0.60		0.78	0.72	
v/c Ratio		0.06			0.58	0.51	0.00	0.64		0.41	0.62	
Control Delay		26.6			53.2	10.6	2.0	14.8		5.8	11.6	
Queue Delay		0.0			0.1	0.0	0.0	0.2		0.0	0.2	
Total Delay		26.6			53.3	10.6	2.0	15.1		5.8	11.8	
LOS		C			D	B	A	B		A	B	
Approach Delay		26.6			25.6			15.0			10.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		4			62	0	0	293		26	209	
Queue Length 95th (ft)		20			109	58	m0	#562		59	550	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		372			321	519	658	1096		615	1338	
Starvation Cap Reductn		0			0	0	0	58		0	0	
Spillback Cap Reductn		0			13	0	0	0		0	82	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.33	0.36	0.00	0.68		0.33	0.66	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

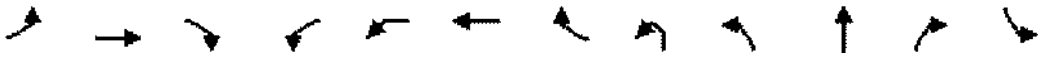
Splits and Phases: 9: Penman Rd & Seagate Ave





Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	43	178	451	59	13	158	56	38	243	439	61	64
Future Volume (vph)	43	178	451	59	13	158	56	38	243	439	61	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.961				0.982		
Flt Protected		0.990			0.950				0.950			0.950
Satd. Flow (prot)	0	1844	1568	0	1745	1790	0	0	1755	1829	0	1736
Flt Permitted		0.884			0.950				0.950			0.950
Satd. Flow (perm)	0	1647	1568	0	1745	1790	0	0	1755	1829	0	1736
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						7				3		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	10%	2%	2%	2%	3%	2%	2%	4%
Adj. Flow (vph)	43	178	451	59	13	158	56	38	243	439	61	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	451	0	72	214	0	0	281	500	0	64
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations								
Traffic Volume (vph)	459	10	20	26	28	101		
Future Volume (vph)	459	10	20	26	28	101		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0		0	0			
Storage Lanes		0		1	0			
Taper Length (ft)				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.991			0.888				
Flt Protected				0.992				
Satd. Flow (prot)	1843	0	0	1610	0	0		
Flt Permitted				0.992				
Satd. Flow (perm)	1843	0	0	1610	0	0		
Right Turn on Red			Yes			Yes		
Satd. Flow (RTOR)	1			172				
Link Speed (mph)	35			35				
Link Distance (ft)	1460			438				
Travel Time (s)	28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	6%	2%	13%	2%		
Adj. Flow (vph)	459	10	20	26	28	101		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	489	0	0	155	0	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Right	Right		
Median Width(ft)	12			12				
Link Offset(ft)	0			45				
Crosswalk Width(ft)	16			16				
Two way Left Turn Lane	Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	9	9		
Number of Detectors	2			1				
Detector Template	Thru			Left				
Leading Detector (ft)	100			20				
Trailing Detector (ft)	0			0				
Detector 1 Position(ft)	0			0				
Detector 1 Size(ft)	6			20				
Detector 1 Type	Cl+Ex			Cl+Ex				
Detector 1 Channel								
Detector 1 Extend (s)	0.0			0.0				
Detector 1 Queue (s)	0.0			0.0				
Detector 1 Delay (s)	0.0			0.0				
Detector 2 Position(ft)	94							
Detector 2 Size(ft)	6							
Detector 2 Type	Cl+Ex							
Detector 2 Channel								
Detector 2 Extend (s)	0.0							
Turn Type	NA			Prot				
Protected Phases	2 3			7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	22.5	22.5	22.5	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.6	60.6		12.1	80.5			30.3	78.4		15.2
Actuated g/C Ratio		0.26	0.26		0.05	0.34			0.13	0.33		0.06
v/c Ratio		0.52	1.12		0.81	0.35			1.25	0.82		0.58
Control Delay		84.9	156.2		162.4	62.3			219.0	87.1		133.3
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		84.9	156.2		162.4	62.3			219.0	87.1		133.3
LOS		F	F		F	E			F	F		F
Approach Delay		132.8				87.5				134.6		
Approach LOS		F				F				F		
Queue Length 50th (ft)		333	~923		123	275			~616	809		108
Queue Length 95th (ft)		460	#1226		#257	383			#873	#1071		#186
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		421	401		89	612			224	607		111
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.52	1.12		0.81	0.35			1.25	0.82		0.58

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 237.1			
Natural Cycle: 155			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 118.4		Intersection LOS: F	
Intersection Capacity Utilization 105.5%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases								
Detector Phase	2 3			7				
Switch Phase								
Minimum Initial (s)				3.0			12.0	3.0
Minimum Split (s)				22.5			22.5	46.4
Total Split (s)				32.5			47.6	46.4
Total Split (%)				11.9%			17%	17%
Maximum Green (s)				25.0			40.0	38.0
Yellow Time (s)				3.4			4.0	4.0
All-Red Time (s)				4.1			3.6	4.4
Lost Time Adjust (s)				0.0				
Total Lost Time (s)				7.5				
Lead/Lag				Lead			Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes
Vehicle Extension (s)				3.0			3.0	3.0
Recall Mode				None			Min	None
Walk Time (s)								7.0
Flash Dont Walk (s)								31.0
Pedestrian Calls (#/hr)								13
Act Effct Green (s)	64.1			7.1				
Actuated g/C Ratio	0.27			0.03				
v/c Ratio	0.98			0.72				
Control Delay	117.9			26.8				
Queue Delay	0.0			0.0				
Total Delay	117.9			26.8				
LOS	F			C				
Approach Delay	119.7			26.8				
Approach LOS	F			C				
Queue Length 50th (ft)	~898			0				
Queue Length 95th (ft)	#1210			62				
Internal Link Dist (ft)	1380			358				
Turn Bay Length (ft)								
Base Capacity (vph)	498			325				
Starvation Cap Reductn	0			0				
Spillback Cap Reductn	0			0				
Storage Cap Reductn	0			0				
Reduced v/c Ratio	0.98			0.48				

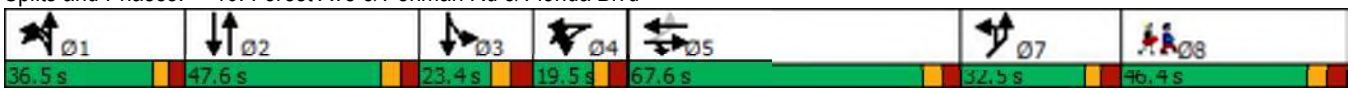
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



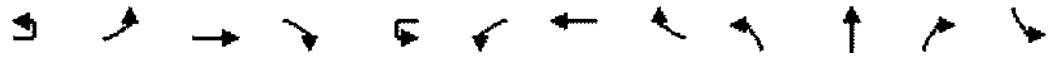
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	56	558	9	71	495
Future Vol, veh/h	20	56	558	9	71	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	56	558	9	71	495

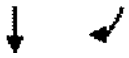
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1200	563	0	0	567	0
Stage 1	563	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	204	526	-	-	1005	-
Stage 1	570	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	526	-	-	1005	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	1.1
HCM LOS	B		

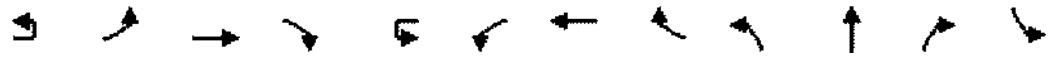
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	453	1005	-
HCM Lane V/C Ratio	-	-	0.168	0.071	-
HCM Control Delay (s)	-	-	14.5	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	45	1323	175	1	169	1034	40	318	139	208	109
Future Volume (vph)	3	45	1323	175	1	169	1034	40	318	139	208	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.994			0.910		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3446	0	0	1770	3518	0	1770	1695	0	1770
Flt Permitted		0.184				0.062			0.354			0.244
Satd. Flow (perm)	0	343	3446	0	0	115	3518	0	659	1695	0	455
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			11				3			55		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	3	45	1323	175	1	169	1034	40	318	139	208	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	1498	0	0	170	1074	0	318	347	0	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

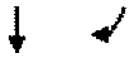


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	134	63
Future Volume (vph)	134	63
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.952	
Flt Protected		
Satd. Flow (prot)	1729	0
Flt Permitted		
Satd. Flow (perm)	1729	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	17	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	4%	6%
Adj. Flow (vph)	134	63
Shared Lane Traffic (%)		
Lane Group Flow (vph)	197	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		12.4	12.4	31.0		10.4	38.4		10.4
Total Split (s)	25.0	25.0	54.0		15.0	15.0	44.0		23.0	49.0		22.0
Total Split (%)	17.9%	17.9%	38.6%		10.7%	10.7%	31.4%		16.4%	35.0%		15.7%
Maximum Green (s)	19.0	19.0	48.0		9.0	9.0	38.0		16.9	42.6		16.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		65.6	58.3			79.2	68.7		47.1	30.7		37.1
Actuated g/C Ratio		0.47	0.42			0.57	0.49		0.34	0.22		0.26
v/c Ratio		0.20	1.04			0.69	0.62		0.90	0.84		0.48
Control Delay		19.0	74.2			46.6	30.8		64.9	61.0		37.3
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		19.0	74.2			46.6	30.8		64.9	61.0		37.3
LOS		B	E			D	C		E	E		D
Approach Delay			72.5				33.0			62.9		
Approach LOS			E				C			E		
Queue Length 50th (ft)		19	~773			98	380		231	261		69
Queue Length 95th (ft)		47	#1041			#236	554		#299	349		99
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		382	1440			247	1727		355	554		289
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.13	1.04			0.69	0.62		0.90	0.63		0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 121 (86%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 55.8		Intersection LOS: E	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

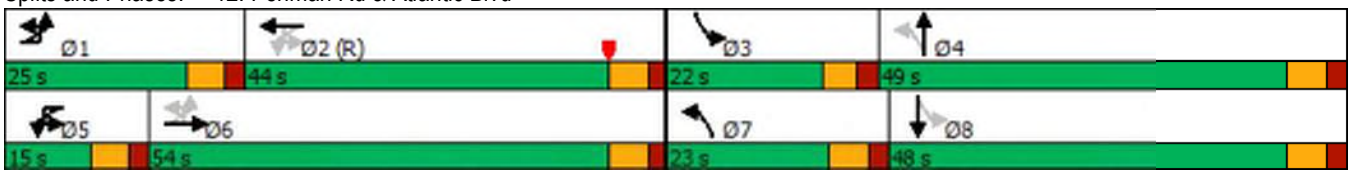


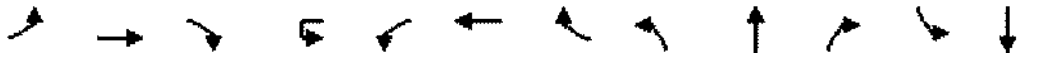
Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	48.0	
Total Split (%)	34.3%	
Maximum Green (s)	41.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	24.9	
Actuated g/C Ratio	0.18	
v/c Ratio	0.61	
Control Delay	55.0	
Queue Delay	0.0	
Total Delay	55.0	
LOS	E	
Approach Delay	48.7	
Approach LOS	D	
Queue Length 50th (ft)	153	
Queue Length 95th (ft)	212	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	525	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.38	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Penman Rd & Atlantic Blvd





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	613	1208	221	5	29	1219	273	310	173	19	269	184
Future Volume (vph)	613	1208	221	5	29	1219	273	310	173	19	269	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		0		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.973			0.985			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4968	0	0	1770	4948	0	1770	1835	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		34				31			3			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	613	1208	221	5	29	1219	273	310	173	19	269	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	613	1429	0	0	34	1492	0	310	192	0	269	184
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	485
Future Volume (vph)	485
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	88
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	485
Shared Lane Traffic (%)	
Lane Group Flow (vph)	485
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	53.0	88.0		16.0	16.0	51.0		31.0	31.0		25.0	25.0
Total Split (%)	33.1%	55.0%		10.0%	10.0%	31.9%		19.4%	19.4%		15.6%	15.6%
Maximum Green (s)	47.6	82.6		10.6	10.6	45.6		25.9	25.9		19.9	19.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	47.6	85.8			9.6	45.6		25.9	25.9		19.9	19.9
Actuated g/C Ratio	0.30	0.54			0.06	0.28		0.16	0.16		0.12	0.12
v/c Ratio	1.17	0.53			0.32	1.04		1.08	0.64		1.22	0.80
Control Delay	142.0	24.9			79.7	88.9		137.7	72.6		189.1	92.1
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	142.0	24.9			79.7	88.9		137.7	72.6		189.1	92.1
LOS	F	C			E	F		F	E		F	F
Approach Delay		60.1				88.6			112.8			88.3
Approach LOS		E				F			F			F
Queue Length 50th (ft)	~758	355			35	~607		~361	188		~344	190
Queue Length 95th (ft)	#1001	400			74	#705		#561	278		#535	#315
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595				315			200			210	
Base Capacity (vph)	526	2680			117	1432		286	299		220	231
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	1.17	0.53			0.29	1.04		1.08	0.64		1.22	0.80

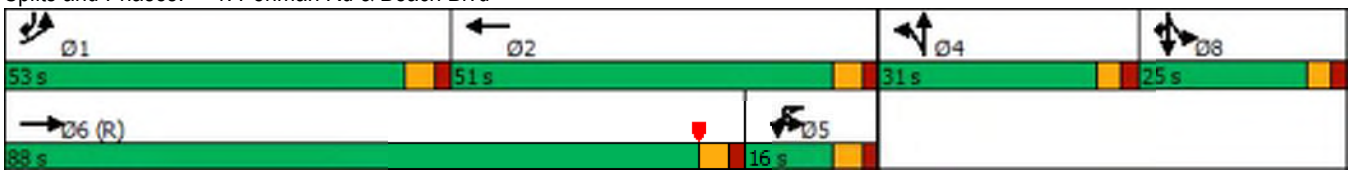
Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay: 79.4		Intersection LOS: E	
Intersection Capacity Utilization 108.0%		ICU Level of Service G	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	72.9
Actuated g/C Ratio	0.46
v/c Ratio	0.63
Control Delay	31.0
Queue Delay	0.0
Total Delay	31.0
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	317
Queue Length 95th (ft)	446
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	769
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	3	28	13	3	16	28	1083	5	10	937	31
Future Vol, veh/h	29	3	28	13	3	16	28	1083	5	10	937	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	4
Mvmt Flow	29	3	28	13	3	16	28	1083	5	10	937	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2124	2117	953	2130	2130	1086	968	0	0	1088	0	0
Stage 1	973	973	-	1142	1142	-	-	-	-	-	-	-
Stage 2	1151	1144	-	988	988	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	36	51	314	36	50	263	712	-	-	641	-	-
Stage 1	303	330	-	244	275	-	-	-	-	-	-	-
Stage 2	241	275	-	297	325	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	48	314	30	47	263	712	-	-	641	-	-
Mov Cap-2 Maneuver	31	48	-	30	47	-	-	-	-	-	-	-
Stage 1	291	325	-	234	264	-	-	-	-	-	-	-
Stage 2	215	264	-	264	320	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	271.3	129.8	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	712	-	-	55	57	641	-	-
HCM Lane V/C Ratio	0.039	-	-	1.091	0.561	0.016	-	-
HCM Control Delay (s)	10.3	-	-	271.3	129.8	10.7	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.1	2.2	0	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	8	1	13	9	6	33	1	19	1080	13	13	900	14
Future Vol, veh/h	8	1	13	9	6	33	1	19	1080	13	13	900	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	1	13	9	6	33	1	19	1080	13	13	900	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2077	2066	907	2065	2067	1087	-	914	0	0	1093	0	0
Stage 1	933	933	-	1125	1127	-	-	-	-	-	-	-	-
Stage 2	1144	1133	-	940	940	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	39	54	334	40	54	263	-	746	-	-	638	-	-
Stage 1	319	345	-	249	280	-	-	-	-	-	-	-	-
Stage 2	243	278	-	316	342	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	31	53	334	37	53	263	~ -21	~ -21	-	-	638	-	-
Mov Cap-2 Maneuver	31	53	-	37	53	-	-	-	-	-	-	-	-
Stage 1	319	338	-	249	280	-	-	-	-	-	-	-	-
Stage 2	208	278	-	297	335	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	78.4	70.5		0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	70	100	638	-	-
HCM Lane V/C Ratio	-	-	-	0.314	0.48	0.02	-	-
HCM Control Delay (s)	-	-	-	78.4	70.5	10.8	-	-
HCM Lane LOS	-	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	-	-	-	1.2	2.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	0	5	1	18	0	1104	4	19	943	1
Future Vol, veh/h	5	1	0	5	1	18	0	1104	4	19	943	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	0	5	1	18	0	1104	4	19	943	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2098	2090	944	2088	2088	1106	944	0	0	1108	0	0
Stage 1	982	982	-	1106	1106	-	-	-	-	-	-	-
Stage 2	1116	1108	-	982	982	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	38	53	318	39	53	256	727	-	-	630	-	-
Stage 1	300	327	-	255	286	-	-	-	-	-	-	-
Stage 2	252	286	-	300	327	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	34	51	318	38	51	256	727	-	-	630	-	-
Mov Cap-2 Maneuver	34	51	-	38	51	-	-	-	-	-	-	-
Stage 1	300	317	-	255	286	-	-	-	-	-	-	-
Stage 2	233	286	-	290	317	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	124	47.6	0	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	727	-	-	36	108	630	-	-
HCM Lane V/C Ratio	-	-	-	0.167	0.222	0.03	-	-
HCM Control Delay (s)	0	-	-	124	47.6	10.9	-	-
HCM Lane LOS	A	-	-	F	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	79	1097	43	41	934
Future Vol, veh/h	26	79	1097	43	41	934
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	2	3	2	2
Mvmt Flow	26	79	1097	43	41	934

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2135	1119	0	0	1140	0
Stage 1	1119	-	-	-	-	-
Stage 2	1016	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	53	252	-	-	613	-
Stage 1	308	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	49	252	-	-	613	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	308	-	-	-	-	-
Stage 2	322	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.7	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	223	613	-
HCM Lane V/C Ratio	-	-	0.471	0.067	-
HCM Control Delay (s)	-	-	34.7	11.3	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2.3	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	56	942	50	58	845
Future Vol, veh/h	35	56	942	50	58	845
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	35	56	942	50	58	845

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1928	967	0	0	992	0
Stage 1	967	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	73	308	-	-	697	-
Stage 1	369	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	67	308	-	-	697	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	369	-	-	-	-	-
Stage 2	340	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	192	308	697	-
HCM Lane V/C Ratio	-	-	0.182	0.182	0.083	-
HCM Control Delay (s)	-	-	27.9	19.3	10.6	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.7	0.3	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	13	932	54	19	863
Future Vol, veh/h	33	13	932	54	19	863
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	10	2	2	2	2
Mvmt Flow	33	13	932	54	19	863

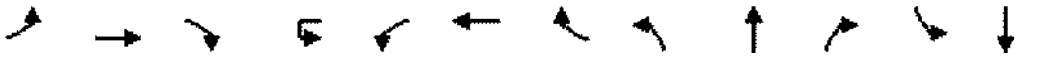
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1860	959	0	0	986	0
Stage 1	959	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Critical Hdwy	6.42	6.3	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.39	-	-	2.218	-
Pot Cap-1 Maneuver	81	301	-	-	701	-
Stage 1	372	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	301	-	-	701	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	385	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.6	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	229	701	-
HCM Lane V/C Ratio	-	-	0.201	0.027	-
HCM Control Delay (s)	-	-	24.6	10.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	34	19	19	13	6	20	4	23	874	24	8	852
Future Volume (vph)	34	19	19	13	6	20	4	23	874	24	8	852
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		0		0	60		0	60	
Storage Lanes	0		0		0		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964				0.987			0.996			0.990
Flt Protected		0.977				0.978		0.950			0.950	
Satd. Flow (prot)	0	1754	0	0	0	1798	0	1770	1855	0	1543	1844
Flt Permitted		0.828				0.872		0.211			0.234	
Satd. Flow (perm)	0	1487	0	0	0	1603	0	393	1855	0	380	1844
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		15				4			2			5
Link Speed (mph)		35				35			35			35
Link Distance (ft)		287				309			1117			279
Travel Time (s)		5.6				6.0			21.8			5.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%
Adj. Flow (vph)	34	19	19	13	6	20	4	23	874	24	8	852
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	0	43	0	23	898	0	8	912
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		0				0			12			12
Link Offset(ft)		35				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2		1	1	2		1	2		1	2
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	20	100		20	100		20	100
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Perm	NA		Perm	Perm	NA		pm+pt	NA		pm+pt	NA
Protected Phases		4				4		1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	60
Future Volume (vph)	60
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	60
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4	4			6			2	
Detector Phase	4	4		4	4	4		1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0		3.0	12.0		3.0	12.0
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7		9.0	26.0		9.0	25.0
Total Split (s)	20.0	20.0		20.0	20.0	20.0		23.0	57.0		23.0	57.0
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%		23.0%	57.0%		23.0%	57.0%
Maximum Green (s)	13.3	13.3		13.3	13.3	13.3		17.0	51.0		17.0	51.0
Yellow Time (s)	3.4	3.4		3.4	3.4	3.4		4.0	4.0		4.0	4.0
All-Red Time (s)	3.3	3.3		3.3	3.3	3.3		2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0				0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		6.7				6.7		6.0	6.0		6.0	6.0
Lead/Lag								Lead	Lag		Lead	Lag
Lead-Lag Optimize?								Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None		None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			7.0			7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0	12.0			13.0			12.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		9.3				9.3		79.3	79.3		77.9	76.8
Actuated g/C Ratio		0.09				0.09		0.79	0.79		0.78	0.77
v/c Ratio		0.48				0.28		0.06	0.61		0.02	0.64
Control Delay		44.6				42.6		3.4	9.4		2.0	7.5
Queue Delay		0.0				0.0		0.0	0.7		0.0	0.0
Total Delay		44.6				42.6		3.4	10.1		2.0	7.5
LOS		D				D		A	B		A	A
Approach Delay		44.6				42.6			9.9			7.4
Approach LOS		D				D			A			A
Queue Length 50th (ft)		35				24		3	192		1	103
Queue Length 95th (ft)		77				55		9	567		m1	129
Internal Link Dist (ft)		207				229			1037			199
Turn Bay Length (ft)								60			60	
Base Capacity (vph)		210				216		550	1470		503	1417
Starvation Cap Reductn		0				0		0	0		0	0
Spillback Cap Reductn		1				0		0	257		0	0
Storage Cap Reductn		0				0		0	0		0	0
Reduced v/c Ratio		0.34				0.20		0.04	0.74		0.02	0.64

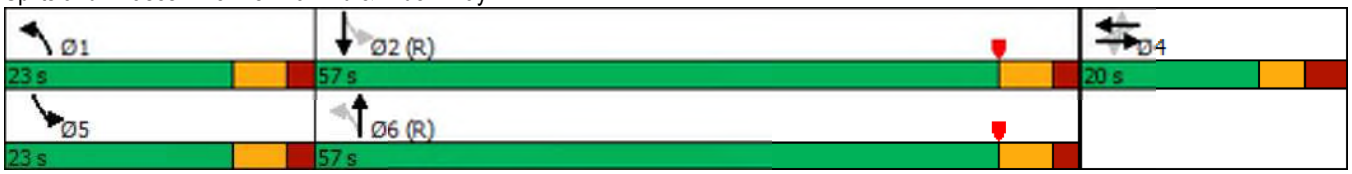
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 64.3%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

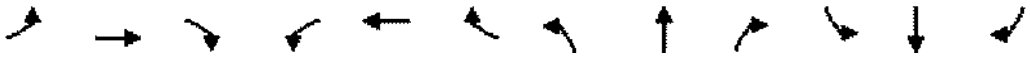
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Penman Rd & Arden Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	3	1	103	1	329	5	763	84	194	788	5
Future Volume (vph)	4	3	1	103	1	329	5	763	84	194	788	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	50		0	40		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983				0.850		0.985			0.999	
Flt Protected		0.976			0.953		0.950			0.950		
Satd. Flow (prot)	0	1787	0	0	1725	1583	1770	1835	0	1770	1861	0
Flt Permitted		0.873			0.723		0.325			0.178		
Satd. Flow (perm)	0	1599	0	0	1309	1583	605	1835	0	332	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				329		8				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		451			372			279			2838	
Travel Time (s)		8.8			7.2			5.4			55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	1	103	1	329	5	763	84	194	788	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	104	329	5	847	0	194	793	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		12			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

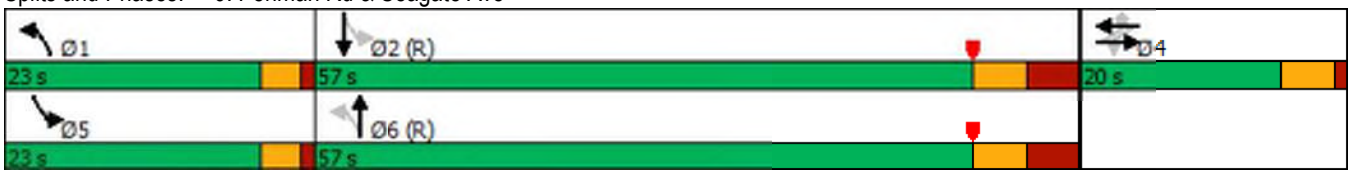


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4		4	6			2		
Detector Phase	4	4		4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	12.0		3.0	12.0	
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	23.0		9.5	23.0	
Total Split (s)	20.0	20.0		20.0	20.0	20.0	23.0	57.0		23.0	57.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	23.0%	57.0%		23.0%	57.0%	
Maximum Green (s)	15.0	15.0		15.0	15.0	15.0	19.0	49.0		19.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	4.0		1.0	4.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	8.0		4.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		5.0			5.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0		0.0			0.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		12.3			12.3	12.3	69.8	60.2		78.7	72.8	
Actuated g/C Ratio		0.12			0.12	0.12	0.70	0.60		0.79	0.73	
v/c Ratio		0.04			0.65	0.68	0.01	0.77		0.47	0.59	
Control Delay		35.2			60.0	12.4	1.4	16.0		6.7	9.9	
Queue Delay		0.0			0.0	0.0	0.0	0.6		0.0	0.1	
Total Delay		35.2			60.0	12.4	1.4	16.6		6.7	10.0	
LOS		D			E	B	A	B		A	A	
Approach Delay		35.3			23.8			16.5			9.3	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)		4			63	0	1	382		25	194	
Queue Length 95th (ft)		17			118	80	m0	#710		45	442	
Internal Link Dist (ft)		371			292			199			2758	
Turn Bay Length (ft)						85	50			40		
Base Capacity (vph)		240			196	517	696	1107		534	1354	
Starvation Cap Reductn		0			0	0	0	63		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	35	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.53	0.64	0.01	0.81		0.36	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

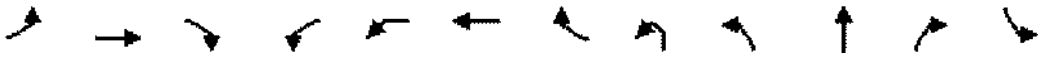
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Penman Rd & Seagate Ave



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	30	236	514	29	28	204	61	50	281	648	44	40
Future Volume (vph)	30	236	514	29	28	204	61	50	281	648	44	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0		55		0		275		0	195
Storage Lanes	0		1		1		0		1		0	1
Taper Length (ft)	50				50				50			50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.965				0.990		
Flt Protected		0.994			0.950				0.950			0.950
Satd. Flow (prot)	0	1832	1583	0	1770	1798	0	0	1770	1844	0	1770
Flt Permitted		0.928			0.950				0.950			0.950
Satd. Flow (perm)	0	1710	1583	0	1770	1798	0	0	1770	1844	0	1770
Right Turn on Red							Yes				Yes	
Satd. Flow (RTOR)						6				1		
Link Speed (mph)		35				35				35		
Link Distance (ft)		600				501				2838		
Travel Time (s)		11.7				9.8				55.3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	30	236	514	29	28	204	61	50	281	648	44	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	266	514	0	57	265	0	0	331	692	0	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)		0				12				12		
Link Offset(ft)		0				0				0		
Crosswalk Width(ft)		16				16				16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	15	15		9	15
Number of Detectors	1	2	1	1	1	2		1	1	2		1
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Left	Thru		Left
Leading Detector (ft)	20	100	20	20	20	100		20	20	100		20
Trailing Detector (ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0	0		0
Detector 1 Size(ft)	20	6	20	20	20	6		20	20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94				94				94		
Detector 2 Size(ft)		6				6				6		
Detector 2 Type		Cl+Ex				Cl+Ex				Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0				0.0		
Turn Type	Perm	NA	Prot	Prot	Prot	NA		Prot	Prot	NA		Prot
Protected Phases		5	5	4	4	4 5		1	1	1 2		3

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	371	20	23	3	18	20	48		
Future Volume (vph)	371	20	23	3	18	20	48		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0			0	0			
Storage Lanes		0			1	0			
Taper Length (ft)					50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.984				0.897				
Flt Protected					0.988				
Satd. Flow (prot)	1833	0	0	0	1625	0	0		
Flt Permitted					0.988				
Satd. Flow (perm)	1833	0	0	0	1625	0	0		
Right Turn on Red			Yes				Yes		
Satd. Flow (RTOR)	1				172				
Link Speed (mph)	35				35				
Link Distance (ft)	1460				438				
Travel Time (s)	28.4				8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	2%	50%	2%	2%	2%		
Adj. Flow (vph)	371	20	23	3	18	20	48		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	414	0	0	0	89	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Left	Left	Right	Right		
Median Width(ft)	12				12				
Link Offset(ft)	0				45				
Crosswalk Width(ft)	16				16				
Two way Left Turn Lane	Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	9	15	15	9	9		
Number of Detectors	2			1	1				
Detector Template	Thru			Left	Left				
Leading Detector (ft)	100			20	20				
Trailing Detector (ft)	0			0	0				
Detector 1 Position(ft)	0			0	0				
Detector 1 Size(ft)	6			20	20				
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0			0.0	0.0				
Detector 1 Queue (s)	0.0			0.0	0.0				
Detector 1 Delay (s)	0.0			0.0	0.0				
Detector 2 Position(ft)	94								
Detector 2 Size(ft)	6								
Detector 2 Type	Cl+Ex								
Detector 2 Channel									
Detector 2 Extend (s)	0.0								
Turn Type	NA			Prot	Prot				
Protected Phases	2 3			7	7			2	8



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL
Permitted Phases	5											
Detector Phase	5	5	5	4	4	4 5		1	1	1 2		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	6.0	6.0			3.0	3.0			6.0
Minimum Split (s)	11.6	11.6	11.6	13.5	13.5			9.5	9.5			14.4
Total Split (s)	67.6	67.6	67.6	19.5	19.5			36.5	36.5			23.4
Total Split (%)	24.7%	24.7%	24.7%	7.1%	7.1%			13.3%	13.3%			8.6%
Maximum Green (s)	60.0	60.0	60.0	12.0	12.0			30.0	30.0			15.0
Yellow Time (s)	4.0	4.0	4.0	3.4	3.4			3.4	3.4			4.0
All-Red Time (s)	3.6	3.6	3.6	4.1	4.1			3.1	3.1			4.4
Lost Time Adjust (s)		0.0	0.0		0.0				0.0			0.0
Total Lost Time (s)		7.6	7.6		7.5				6.5			8.4
Lead/Lag				Lag	Lag			Lead	Lead			Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Recall Mode	None	None	None	None	None			None	None			None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		60.6	60.6		12.1	80.4			30.3	78.3		15.1
Actuated g/C Ratio		0.26	0.26		0.05	0.34			0.13	0.33		0.06
v/c Ratio		0.61	1.26		0.63	0.43			1.46	1.13		0.35
Control Delay		86.9	200.6		141.4	64.2			288.4	142.1		120.5
Queue Delay		0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay		86.9	200.6		141.4	64.2			288.4	142.1		120.5
LOS		F	F		F	E			F	F		F
Approach Delay		161.8				77.8				189.4		
Approach LOS		F				E				F		
Queue Length 50th (ft)		411	~1136		97	355			~787	~1426		66
Queue Length 95th (ft)		534	#1396		#181	462			#1026	#1699		120
Internal Link Dist (ft)		520				421				2758		
Turn Bay Length (ft)					55				275			195
Base Capacity (vph)		439	407		91	617			227	614		113
Starvation Cap Reductn		0	0		0	0			0	0		0
Spillback Cap Reductn		0	0		0	0			0	0		0
Storage Cap Reductn		0	0		0	0			0	0		0
Reduced v/c Ratio		0.61	1.26		0.63	0.43			1.46	1.13		0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 235.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay: 146.4		Intersection LOS: F	
Intersection Capacity Utilization 111.1%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	2 3			7	7				
Switch Phase									
Minimum Initial (s)				3.0	3.0			12.0	3.0
Minimum Split (s)				10.5	10.5			19.6	46.4
Total Split (s)				32.5	32.5			47.6	46.4
Total Split (%)				11.9%	11.9%			17%	17%
Maximum Green (s)				25.0	25.0			40.0	38.0
Yellow Time (s)				3.4	3.4			4.0	4.0
All-Red Time (s)				4.1	4.1			3.6	4.4
Lost Time Adjust (s)					0.0				
Total Lost Time (s)					7.5				
Lead/Lag				Lead	Lead			Lag	Lag
Lead-Lag Optimize?				Yes	Yes			Yes	Yes
Vehicle Extension (s)				3.0	3.0			3.0	3.0
Recall Mode				None	None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									11
Act Effct Green (s)	64.0				5.6				
Actuated g/C Ratio	0.27				0.02				
v/c Ratio	0.83				0.43				
Control Delay	97.2				6.5				
Queue Delay	0.0				0.0				
Total Delay	97.2				6.5				
LOS	F				A				
Approach Delay	99.2				6.5				
Approach LOS	F				A				
Queue Length 50th (ft)	684				0				
Queue Length 95th (ft)	#892				0				
Internal Link Dist (ft)	1380				358				
Turn Bay Length (ft)									
Base Capacity (vph)	499				327				
Starvation Cap Reductn	0				0				
Spillback Cap Reductn	0				0				
Storage Cap Reductn	0				0				
Reduced v/c Ratio	0.83				0.27				

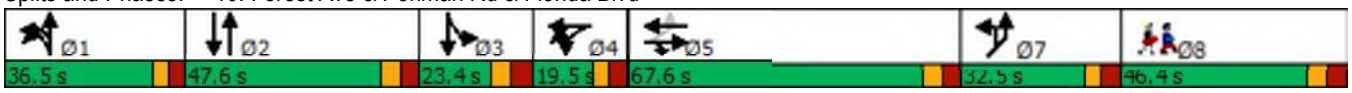
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



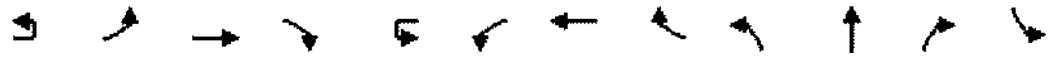
Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	53	684	23	100	486
Future Vol, veh/h	24	53	684	23	100	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	53	684	23	100	486

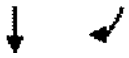
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1382	696	0	0	707	0
Stage 1	696	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	159	442	-	-	891	-
Stage 1	495	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	141	442	-	-	891	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.1	0	1.6
HCM LOS	C		

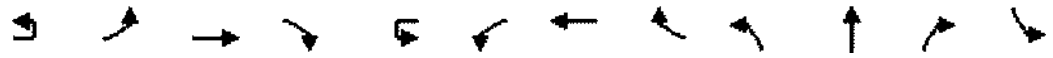
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	373	891	-
HCM Lane V/C Ratio	-	-	0.206	0.112	-
HCM Control Delay (s)	-	-	17.1	9.6	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.4	-



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	26	135	1343	181	4	223	1443	91	283	226	230	106
Future Volume (vph)	26	135	1343	181	4	223	1443	91	283	226	230	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.991			0.924		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3476	0	0	1770	3507	0	1770	1721	0	1770
Flt Permitted		0.050				0.051			0.294			0.140
Satd. Flow (perm)	0	93	3476	0	0	95	3507	0	548	1721	0	261
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			13				5			27		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	135	1343	181	4	223	1443	91	283	226	230	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	1524	0	0	227	1534	0	283	456	0	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

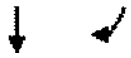


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	156	90
Future Volume (vph)	156	90
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.945	
Flt Protected		
Satd. Flow (prot)	1754	0
Flt Permitted		
Satd. Flow (perm)	1754	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	16	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	156	90
Shared Lane Traffic (%)		
Lane Group Flow (vph)	246	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	40.0	40.0	86.0		20.0	20.0	66.0		19.0	31.0		23.0
Total Split (%)	25.0%	25.0%	53.8%		12.5%	12.5%	41.3%		11.9%	19.4%		14.4%
Maximum Green (s)	34.0	34.0	80.0		14.0	14.0	60.0		12.9	24.6		17.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		94.5	80.0			93.2	79.2		42.5	29.3		41.9
Actuated g/C Ratio		0.59	0.50			0.58	0.50		0.27	0.18		0.26
v/c Ratio		0.77	0.87			1.13	0.88		1.16	1.36		0.57
Control Delay		62.6	42.1			144.8	43.8		152.0	222.2		53.9
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		62.6	42.1			144.8	43.8		152.0	222.2		53.9
LOS		E	D			F	D		F	F		D
Approach Delay			44.1				56.8			195.3		
Approach LOS			D				E			F		
Queue Length 50th (ft)		115	727			~222	742		~297	~602		83
Queue Length 95th (ft)		190	838			#415	#981		#465	#885		135
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		414	1744			201	1738		244	336		239
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.39	0.87			1.13	0.88		1.16	1.36		0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 34 (21%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.36			
Intersection Signal Delay: 75.5		Intersection LOS: E	
Intersection Capacity Utilization 107.4%		ICU Level of Service G	
Analysis Period (min) 15			

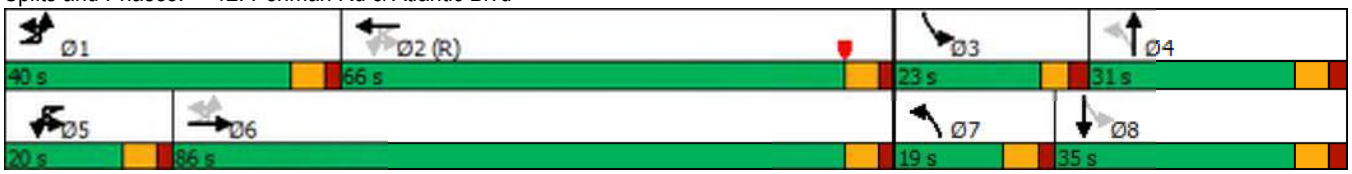


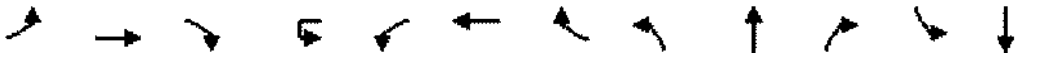
Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	35.0	
Total Split (%)	21.9%	
Maximum Green (s)	28.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	28.6	
Actuated g/C Ratio	0.18	
v/c Ratio	0.75	
Control Delay	73.6	
Queue Delay	0.0	
Total Delay	73.6	
LOS	E	
Approach Delay	67.7	
Approach LOS	E	
Queue Length 50th (ft)	232	
Queue Length 95th (ft)	#343	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	326	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.75	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

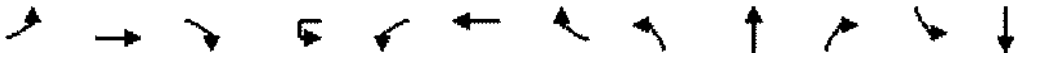
Splits and Phases: 12: Penman Rd & Atlantic Blvd





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	436	1293	140	25	26	993	239	225	154	35	295	165
Future Volume (vph)	436	1293	140	25	26	993	239	225	154	35	295	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0	210	
Storage Lanes	1		1		1		0	1		0	1	
Taper Length (ft)	50				50			50			50	
Lane Util. Factor	1.00	0.86	0.86	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.998	0.850			0.971			0.972			
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Flt Permitted	0.950				0.950			0.950			0.950	
Satd. Flow (perm)	1770	4796	1362	0	1770	4938	0	1770	1811	0	1770	1863
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		1	108			41			6			
Link Speed (mph)		35				35			35			35
Link Distance (ft)		576				542			400			601
Travel Time (s)		11.2				10.6			7.8			11.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	436	1293	140	25	26	993	239	225	154	35	295	165
Shared Lane Traffic (%)			10%									
Lane Group Flow (vph)	436	1307	126	0	51	1232	0	225	189	0	295	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		16				16			12			12
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	1	2	1	1	1	2		1	2		1	2
Detector Template	Left	Thru	Right	Left	Left	Thru		Left	Thru		Left	Thru
Leading Detector (ft)	20	100	20	20	20	100		20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6	20	20	20	6		20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			94
Detector 2 Size(ft)		6				6			6			6
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			0.0
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Split	NA		Split	NA
Protected Phases	1	6		5	5	2		4	4		8	8
Permitted Phases			6									

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	413
Future Volume (vph)	413
Ideal Flow (vphpl)	1900
Storage Length (ft)	150
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	94
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Adj. Flow (vph)	413
Shared Lane Traffic (%)	
Lane Group Flow (vph)	413
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	pt+ov
Protected Phases	8 1
Permitted Phases	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	1	6	6	5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0	18.0	4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4	30.4	9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	38.0	77.0	77.0	18.0	18.0	57.0		23.0	23.0		32.0	32.0
Total Split (%)	25.3%	51.3%	51.3%	12.0%	12.0%	38.0%		15.3%	15.3%		21.3%	21.3%
Maximum Green (s)	32.6	71.6	71.6	12.6	12.6	51.6		17.9	17.9		26.9	26.9
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4		5.4	5.4		5.1	5.1		5.1	5.1
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max	C-Max	None	None	C-Max		None	None		None	None
Walk Time (s)		7.0	7.0			11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0	18.0			28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0	0			0		0	0		0	0
Act Effct Green (s)	32.9	75.5	75.5		11.3	51.6		17.9	17.9		26.6	26.6
Actuated g/C Ratio	0.22	0.50	0.50		0.08	0.34		0.12	0.12		0.18	0.18
v/c Ratio	1.13	0.54	0.17		0.39	0.71		1.07	0.86		0.94	0.50
Control Delay	136.1	27.3	5.8		73.9	44.1		141.1	94.6		98.0	61.5
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	136.1	27.3	5.8		73.9	44.1		141.1	94.6		98.0	61.5
LOS	F	C	A		E	D		F	F		F	E
Approach Delay		51.2				45.2			119.9			57.7
Approach LOS		D				D			F			E
Queue Length 50th (ft)	~494	350	10		48	372		~242	179		288	147
Queue Length 95th (ft)	#713	400	53		95	428		#417	#319		#469	226
Internal Link Dist (ft)		496				462			320			521
Turn Bay Length (ft)	595		205		315			200			210	
Base Capacity (vph)	387	2413	738		148	1725		211	221		317	334
Starvation Cap Reductn	0	0	0		0	0		0	0		0	0
Spillback Cap Reductn	0	0	0		0	0		0	0		0	0
Storage Cap Reductn	0	0	0		0	0		0	0		0	0
Reduced v/c Ratio	1.13	0.54	0.17		0.34	0.71		1.07	0.86		0.93	0.49

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 36 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 57.2 Intersection LOS: E
Intersection Capacity Utilization 92.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	SBR
Detector Phase	8 1
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	64.9
Actuated g/C Ratio	0.43
v/c Ratio	0.56
Control Delay	27.4
Queue Delay	0.0
Total Delay	27.4
LOS	C
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	232
Queue Length 95th (ft)	341
Internal Link Dist (ft)	
Turn Bay Length (ft)	150
Base Capacity (vph)	731
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.56

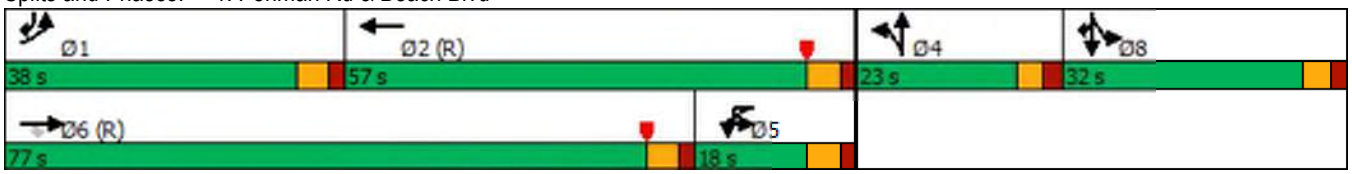
Intersection Summary

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	19	3	20	36	4	75	1	13	740	53	60	849	23
Future Vol, veh/h	19	3	20	36	4	75	1	13	740	53	60	849	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	60	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	6	4	2	2	2	2	2	5	2	2	2
Mvmt Flow	19	3	20	36	4	75	1	13	740	53	60	849	23

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	1813	1802	861	1785	1787	767	-	872	0	0	793	0	0
Stage 1	981	981	-	793	795	-	-	-	-	-	-	-	-
Stage 2	832	821	-	992	992	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.14	6.52	6.22	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.536	4.018	3.318	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	61	80	349	63	81	402	-	773	-	-	828	-	-
Stage 1	300	328	-	379	399	-	-	-	-	-	-	-	-
Stage 2	363	389	-	293	324	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	45	74	349	54	75	402	~ -14	~ -14	-	-	828	-	-
Mov Cap-2 Maneuver	45	74	-	54	75	-	-	-	-	-	-	-	-
Stage 1	300	304	-	379	399	-	-	-	-	-	-	-	-
Stage 2	292	389	-	254	301	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	89.8	121.6		0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	81	127	828	-	-
HCM Lane V/C Ratio	-	-	-	0.519	0.906	0.072	-	-
HCM Control Delay (s)	-	-	-	89.8	121.6	9.7	-	-
HCM Lane LOS	-	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	-	-	-	2.2	5.9	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	4	10	8	8	26	19	818	13	26	869	6
Future Vol, veh/h	5	4	10	8	8	26	19	818	13	26	869	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	5	2	2	2	2	2	2
Mvmt Flow	5	4	10	8	8	26	19	818	13	26	869	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1804	1793	872	1794	1790	825	875	0	0	831	0	0
Stage 1	924	924	-	863	863	-	-	-	-	-	-	-
Stage 2	880	869	-	931	927	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	61	81	350	62	81	368	771	-	-	801	-	-
Stage 1	323	348	-	349	372	-	-	-	-	-	-	-
Stage 2	342	369	-	320	347	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	50	76	350	55	76	368	771	-	-	801	-	-
Mov Cap-2 Maneuver	50	76	-	55	76	-	-	-	-	-	-	-
Stage 1	315	337	-	340	363	-	-	-	-	-	-	-
Stage 2	303	360	-	297	336	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	46.7	44.9	0.2	0.3
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	771	-	-	105	131	801	-	-
HCM Lane V/C Ratio	0.025	-	-	0.181	0.321	0.032	-	-
HCM Control Delay (s)	9.8	-	-	46.7	44.9	9.6	-	-
HCM Lane LOS	A	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	1.3	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	3	3	9	1	15	1	839	13	13	892	1
Future Vol, veh/h	3	3	3	9	1	15	1	839	13	13	892	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	55	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	3	3	9	1	15	1	839	13	13	892	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1775	1773	893	1770	1767	846	893	0	0	852	0	0
Stage 1	919	919	-	848	848	-	-	-	-	-	-	-
Stage 2	856	854	-	922	919	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	64	83	340	65	84	362	759	-	-	787	-	-
Stage 1	325	350	-	356	378	-	-	-	-	-	-	-
Stage 2	352	375	-	324	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	82	340	62	82	362	759	-	-	787	-	-
Mov Cap-2 Maneuver	60	82	-	62	82	-	-	-	-	-	-	-
Stage 1	325	344	-	356	378	-	-	-	-	-	-	-
Stage 2	336	375	-	313	344	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.3	40.5	0	0.1
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	94	126	787	-	-
HCM Lane V/C Ratio	0.001	-	-	0.096	0.198	0.017	-	-
HCM Control Delay (s)	9.7	-	-	47.3	40.5	9.7	-	-
HCM Lane LOS	A	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	39	820	34	34	867
Future Vol, veh/h	29	39	820	34	34	867
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	29	39	820	34	34	867

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1772	837	0	0	854	0
Stage 1	837	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	91	367	-	-	785	-
Stage 1	425	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	87	367	-	-	785	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	366	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	285	785	-
HCM Lane V/C Ratio	-	-	0.239	0.043	-
HCM Control Delay (s)	-	-	21.5	9.8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	54	705	58	44	760
Future Vol, veh/h	49	54	705	58	44	760
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	80	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	54	705	58	44	760

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1582	734	0	0	763	0
Stage 1	734	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	120	420	-	-	850	-
Stage 1	475	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	114	420	-	-	850	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	398	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	249	420	850	-
HCM Lane V/C Ratio	-	-	0.197	0.129	0.052	-
HCM Control Delay (s)	-	-	23	14.8	9.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.4	0.2	-

Intersection	
Int Delay, s/veh	0.5

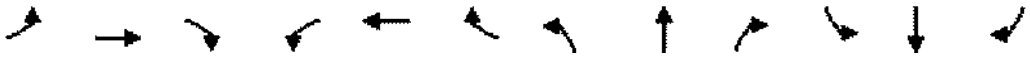
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	10	744	23	6	790
Future Vol, veh/h	30	10	744	23	6	790
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	40	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	10	744	23	6	790

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1558	756	0	0	767	0
Stage 1	756	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	124	408	-	-	847	-
Stage 1	464	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	123	408	-	-	847	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	288	847	-
HCM Lane V/C Ratio	-	-	0.139	0.007	-
HCM Control Delay (s)	-	-	19.5	9.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	24	5	8	6	16	729	9	9	767	56
Future Volume (vph)	40	5	24	5	8	6	16	729	9	9	767	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	60		0	60		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.957			0.998			0.990	
Flt Protected		0.972			0.987		0.950			0.950		
Satd. Flow (prot)	0	1675	0	0	1759	0	1671	1856	0	1770	1844	0
Flt Permitted		0.810			0.888		0.198			0.258		
Satd. Flow (perm)	0	1396	0	0	1583	0	348	1856	0	481	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			6			1			7	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		287			309			1117			279	
Travel Time (s)		5.6			6.0			21.8			5.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	25%	6%	2%	2%	2%	8%	2%	14%	2%	2%	2%
Adj. Flow (vph)	40	5	24	5	8	6	16	729	9	9	767	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	19	0	16	738	0	9	823	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		35			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	

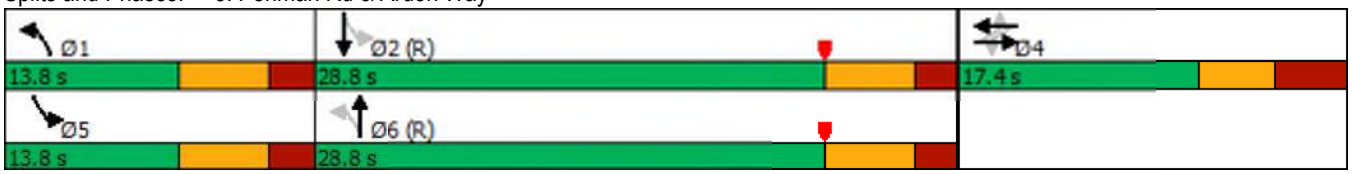


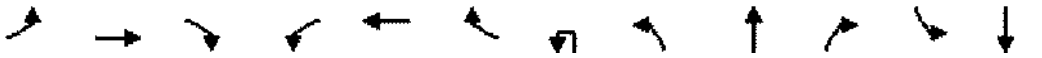
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	12.0		3.0	12.0	
Minimum Split (s)	25.7	25.7		25.7	25.7		9.0	26.0		9.0	25.0	
Total Split (s)	17.4	17.4		17.4	17.4		13.8	28.8		13.8	28.8	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		23.0%	48.0%		23.0%	48.0%	
Maximum Green (s)	10.7	10.7		10.7	10.7		7.8	22.8		7.8	22.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.7			6.7		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			13.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.6			7.6		43.5	44.6		43.4	44.6	
Actuated g/C Ratio		0.13			0.13		0.72	0.74		0.72	0.74	
v/c Ratio		0.35			0.09		0.04	0.53		0.02	0.60	
Control Delay		21.6			19.2		4.6	11.9		3.6	9.7	
Queue Delay		0.0			0.0		0.0	0.5		0.0	0.0	
Total Delay		21.6			19.2		4.6	12.3		3.6	9.7	
LOS		C			B		A	B		A	A	
Approach Delay		21.6			19.2			12.2			9.7	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)		15			4		2	119		1	55	
Queue Length 95th (ft)		45			19		8	#469		m2	#516	
Internal Link Dist (ft)		207			229			1037			199	
Turn Bay Length (ft)							60			60		
Base Capacity (vph)		268			287		425	1381		518	1371	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		2			0		0	257		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.26			0.07		0.04	0.66		0.02	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

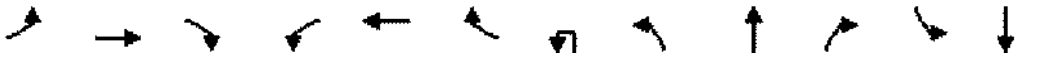
Splits and Phases: 8: Penman Rd & Arden Way





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	4	0	4	59	1	100	1	6	722	63	103	732
Future Volume (vph)	4	0	4	59	1	100	1	6	722	63	103	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85		50		0	40	
Storage Lanes	0		0	0		1		1		0	1	
Taper Length (ft)	50			50				50			50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932				0.850			0.988			0.999
Flt Protected		0.976			0.953			0.950			0.950	
Satd. Flow (prot)	0	1694	0	0	1775	1568	0	1770	1840	0	1770	1861
Flt Permitted		0.838			0.724			0.319			0.168	
Satd. Flow (perm)	0	1455	0	0	1349	1568	0	594	1840	0	313	1861
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		164				164			8			1
Link Speed (mph)		35			35				35			35
Link Distance (ft)		451			372				279			2838
Travel Time (s)		8.8			7.2				5.4			55.3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	0	4	59	1	100	1	6	722	63	103	732
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	60	100	0	7	785	0	103	738
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	Left	Left
Median Width(ft)		0			0				12			12
Link Offset(ft)		12			0				0			0
Crosswalk Width(ft)		16			16				16			16
Two way Left Turn Lane									Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Number of Detectors	1	2		1	2	1	1	1	2		1	2
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru		Left	Thru
Leading Detector (ft)	20	100		20	100	20	20	20	100		20	100
Trailing Detector (ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94				94			94
Detector 2 Size(ft)		6			6				6			6
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			0.0
Turn Type	Perm	NA		Perm	NA	Perm	custom	pm+pt	NA		pm+pt	NA
Protected Phases		4			4			1	6		5	2

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	6
Future Volume (vph)	6
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	1.00
Heavy Vehicles (%)	2%
Adj. Flow (vph)	6
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Permitted Phases	4			4		4	1	6			2	
Detector Phase	4	4		4	4	4	1	1	6		5	2
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	12.0		3.0	12.0
Minimum Split (s)	27.0	27.0		27.0	27.0	27.0	9.5	9.5	23.0		9.5	23.0
Total Split (s)	17.4	17.4		17.4	17.4	17.4	13.8	13.8	28.8		13.8	28.8
Total Split (%)	29.0%	29.0%		29.0%	29.0%	29.0%	23.0%	23.0%	48.0%		23.0%	48.0%
Maximum Green (s)	12.4	12.4		12.4	12.4	12.4	9.8	9.8	20.8		9.8	20.8
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	3.0	4.0		3.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	4.0		1.0	4.0
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		5.0			5.0	5.0		4.0	8.0		4.0	8.0
Lead/Lag							Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0			5.0			5.0
Flash Dont Walk (s)	15.0	15.0		15.0	15.0	15.0			0.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0	0			0			0
Act Effct Green (s)		8.1			8.1	8.1		40.7	33.8		44.6	40.6
Actuated g/C Ratio		0.14			0.14	0.14		0.68	0.56		0.74	0.68
v/c Ratio		0.02			0.33	0.28		0.01	0.75		0.26	0.59
Control Delay		0.1			27.6	3.4		1.6	18.7		4.8	12.8
Queue Delay		0.0			0.0	0.0		0.0	0.0		0.0	0.1
Total Delay		0.1			27.6	3.4		1.6	18.7		4.8	12.9
LOS		A			C	A		A	B		A	B
Approach Delay		0.1			12.5				18.6			11.9
Approach LOS		A			B				B			B
Queue Length 50th (ft)		0			20	0		1	244		8	127
Queue Length 95th (ft)		0			48	12		m1	#486		23	#450
Internal Link Dist (ft)		371			292				199			2758
Turn Bay Length (ft)						85		50			40	
Base Capacity (vph)		430			278	454		628	1040		472	1259
Starvation Cap Reductn		0			0	0		0	0		0	0
Spillback Cap Reductn		0			0	0		0	0		0	74
Storage Cap Reductn		0			0	0		0	0		0	0
Reduced v/c Ratio		0.02			0.22	0.22		0.01	0.75		0.22	0.62

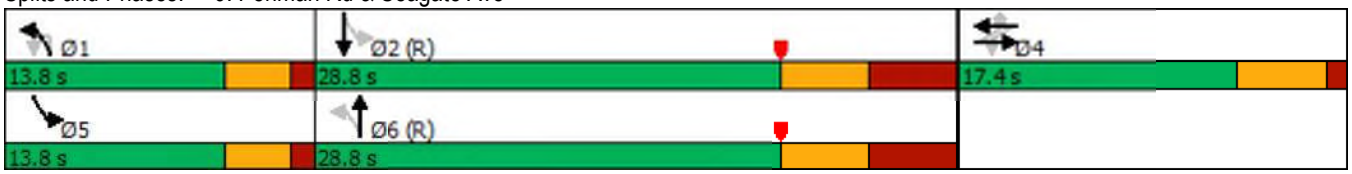
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

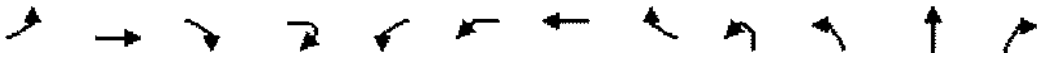
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Penman Rd & Seagate Ave



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	6	244	370	6	46	6	111	45	35	244	389	126
Future Volume (vph)	6	244	370	6	46	6	111	45	35	244	389	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0			55		0		275		0
Storage Lanes	0		1			1		0		1		0
Taper Length (ft)	50					50				50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.957				0.963	
Flt Protected		0.999				0.950				0.950		
Satd. Flow (prot)	0	1861	1568	0	0	1770	1783	0	0	1767	1794	0
Flt Permitted		0.992				0.950				0.950		
Satd. Flow (perm)	0	1848	1568	0	0	1770	1783	0	0	1767	1794	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			171				8				6	
Link Speed (mph)		35					35				35	
Link Distance (ft)		600					501				2838	
Travel Time (s)		11.7					9.8				55.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	6	244	370	6	46	6	111	45	35	244	389	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	376	0	0	52	156	0	0	279	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		0					12				12	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2	1		1	1	2		1	1	2	
Detector Template	Left	Thru	Right		Left	Left	Thru		Left	Left	Thru	
Leading Detector (ft)	20	100	20		20	20	100		20	20	100	
Trailing Detector (ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Position(ft)	0	0	0		0	0	0		0	0	0	
Detector 1 Size(ft)	20	6	20		20	20	6		20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	Perm	NA	Prot		Prot	Prot	NA		Prot	Prot	NA	
Protected Phases		5	5		4	4	4 5		1	1	1 2	

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Lane Configurations									
Traffic Volume (vph)	53	345	25	13	13	30	43		
Future Volume (vph)	53	345	25	13	13	30	43		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	195		0		0	0			
Storage Lanes	1		0		1	0			
Taper Length (ft)	50				50				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt		0.985			0.885				
Flt Protected	0.950				0.992				
Satd. Flow (prot)	1770	1825	0	0	1635	0	0		
Flt Permitted	0.950				0.992				
Satd. Flow (perm)	1770	1825	0	0	1635	0	0		
Right Turn on Red				Yes			Yes		
Satd. Flow (RTOR)		1			172				
Link Speed (mph)		35			35				
Link Distance (ft)		1460			438				
Travel Time (s)		28.4			8.5				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	2%		
Adj. Flow (vph)	53	345	25	13	13	30	43		
Shared Lane Traffic (%)									
Lane Group Flow (vph)	53	383	0	0	86	0	0		
Enter Blocked Intersection	No	No	No	No	No	No	No		
Lane Alignment	Left	Left	Right	Right	Left	Right	Right		
Median Width(ft)		12			12				
Link Offset(ft)		0			45				
Crosswalk Width(ft)		16			16				
Two way Left Turn Lane		Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15		9	9	15	9	9		
Number of Detectors	1	2			1				
Detector Template	Left	Thru			Left				
Leading Detector (ft)	20	100			20				
Trailing Detector (ft)	0	0			0				
Detector 1 Position(ft)	0	0			0				
Detector 1 Size(ft)	20	6			20				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0			0.0				
Detector 1 Queue (s)	0.0	0.0			0.0				
Detector 1 Delay (s)	0.0	0.0			0.0				
Detector 2 Position(ft)		94							
Detector 2 Size(ft)		6							
Detector 2 Type		Cl+Ex							
Detector 2 Channel									
Detector 2 Extend (s)		0.0							
Turn Type	Prot	NA			Prot				
Protected Phases	3	2 3			7			2	8



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Permitted Phases	5											
Detector Phase	5	5	5		4	4	4 5		1	1	1 2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		6.0	6.0			3.0	3.0		
Minimum Split (s)	11.6	11.6	11.6		13.5	13.5			9.5	9.5		
Total Split (s)	67.6	67.6	67.6		19.5	19.5			36.5	36.5		
Total Split (%)	24.7%	24.7%	24.7%		7.1%	7.1%			13.3%	13.3%		
Maximum Green (s)	60.0	60.0	60.0		12.0	12.0			30.0	30.0		
Yellow Time (s)	4.0	4.0	4.0		3.4	3.4			3.4	3.4		
All-Red Time (s)	3.6	3.6	3.6		4.1	4.1			3.1	3.1		
Lost Time Adjust (s)		0.0	0.0			0.0				0.0		
Total Lost Time (s)		7.6	7.6			7.5				6.5		
Lead/Lag					Lag	Lag			Lead	Lead		
Lead-Lag Optimize?					Yes	Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0		
Recall Mode	None	None	None		None	None			None	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		37.3	37.3			12.4	57.6			31.2	78.3	
Actuated g/C Ratio		0.19	0.19			0.06	0.29			0.16	0.39	
v/c Ratio		0.73	0.87			0.48	0.30			1.01	0.73	
Control Delay		90.7	64.6			115.4	56.5			135.2	63.5	
Queue Delay		0.0	0.0			0.0	0.0			0.0	0.0	
Total Delay		90.7	64.6			115.4	56.5			135.2	63.5	
LOS		F	E			F	E			F	E	
Approach Delay		75.0					71.3				88.7	
Approach LOS		E					E				F	
Queue Length 50th (ft)		276	248			59	132			324	462	
Queue Length 95th (ft)		492	492			#157	267			#832	#1084	
Internal Link Dist (ft)		520					421				2758	
Turn Bay Length (ft)						55				275		
Base Capacity (vph)		577	607			110	726			275	728	
Starvation Cap Reductn		0	0			0	0			0	0	
Spillback Cap Reductn		0	0			0	0			0	0	
Storage Cap Reductn		0	0			0	0			0	0	
Reduced v/c Ratio		0.43	0.62			0.47	0.21			1.01	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 273.5			
Actuated Cycle Length: 199.9			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 77.8		Intersection LOS: E	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

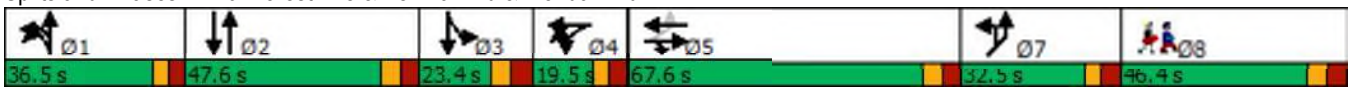
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	SBL	SBT	SBR	SBR2	NEL	NER	NER2	Ø2	Ø8
Permitted Phases									
Detector Phase	3	2 3			7				
Switch Phase									
Minimum Initial (s)	6.0				3.0			12.0	3.0
Minimum Split (s)	14.4				10.5			19.6	46.4
Total Split (s)	23.4				32.5			47.6	46.4
Total Split (%)	8.6%				11.9%			17%	17%
Maximum Green (s)	15.0				25.0			40.0	38.0
Yellow Time (s)	4.0				3.4			4.0	4.0
All-Red Time (s)	4.4				4.1			3.6	4.4
Lost Time Adjust (s)	0.0				0.0				
Total Lost Time (s)	8.4				7.5				
Lead/Lag	Lead				Lead			Lag	Lag
Lead-Lag Optimize?	Yes				Yes			Yes	Yes
Vehicle Extension (s)	3.0				3.0			3.0	3.0
Recall Mode	None				None			Min	None
Walk Time (s)									7.0
Flash Dont Walk (s)									31.0
Pedestrian Calls (#/hr)									6
Act Effct Green (s)	12.2	60.2			5.7				
Actuated g/C Ratio	0.06	0.30			0.03				
v/c Ratio	0.49	0.70			0.40				
Control Delay	116.3	74.2			5.6				
Queue Delay	0.0	0.0			0.0				
Total Delay	116.3	74.2			5.6				
LOS	F	E			A				
Approach Delay		79.3			5.6				
Approach LOS		E			A				
Queue Length 50th (ft)	61	374			0				
Queue Length 95th (ft)	150	773			0				
Internal Link Dist (ft)		1380			358				
Turn Bay Length (ft)	195								
Base Capacity (vph)	138	567			362				
Starvation Cap Reductn	0	0			0				
Spillback Cap Reductn	0	0			0				
Storage Cap Reductn	0	0			0				
Reduced v/c Ratio	0.38	0.68			0.24				

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 10: Forest Ave & Penman Rd & Florida Blvd



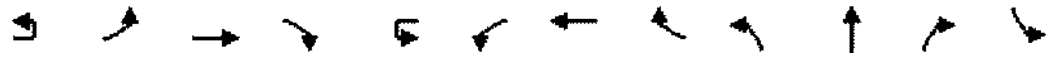
Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	43	529	23	55	429
Future Vol, veh/h	11	43	529	23	55	429
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	43	529	23	55	429

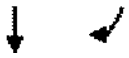
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1080	541	0	0	552	0
Stage 1	541	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	241	541	-	-	1018	-
Stage 1	583	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	228	541	-	-	1018	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	1
HCM LOS	B		

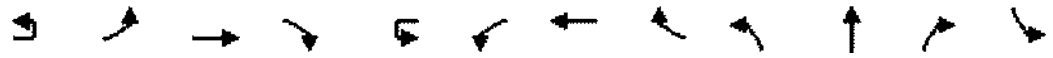
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	492	1018	-
HCM Lane V/C Ratio	-	-	0.11	0.054	-
HCM Control Delay (s)	-	-	13.2	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	14	98	1187	109	3	221	1253	103	245	138	245	146
Future Volume (vph)	14	98	1187	109	3	221	1253	103	245	138	245	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0	160		0	80
Storage Lanes		1		0		1		0	1		0	1
Taper Length (ft)		50				50			50			50
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.987				0.989			0.904		
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1770	3493	0	0	1770	3500	0	1770	1684	0	1770
Flt Permitted		0.076				0.069			0.487			0.148
Satd. Flow (perm)	0	142	3493	0	0	129	3500	0	907	1684	0	276
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			9				8			64		
Link Speed (mph)			35				35			35		
Link Distance (ft)			523				514			2140		
Travel Time (s)			10.2				10.0			41.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	14	98	1187	109	3	221	1253	103	245	138	245	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	1296	0	0	224	1356	0	245	383	0	146
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			8				8			12		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane										Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	1	2		1	1	2		1	2		1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Thru		Left
Leading Detector (ft)	20	20	100		20	20	100		20	100		20
Trailing Detector (ft)	0	0	0		0	0	0		0	0		0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0		0
Detector 1 Size(ft)	20	20	6		20	20	6		20	6		20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0
Detector 2 Position(ft)			94				94			94		
Detector 2 Size(ft)			6				6			6		
Detector 2 Type			Cl+Ex				Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0			0.0		
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	NA		pm+pt
Protected Phases	1	1	6		5	5	2		7	4		3

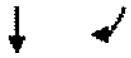


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	110	80
Future Volume (vph)	110	80
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.937	
Flt Protected		
Satd. Flow (prot)	1738	0
Flt Permitted		
Satd. Flow (perm)	1738	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	26	
Link Speed (mph)	35	
Link Distance (ft)	380	
Travel Time (s)	7.4	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	3%
Adj. Flow (vph)	110	80
Shared Lane Traffic (%)		
Lane Group Flow (vph)	190	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Permitted Phases	6	6			2	2			4			8
Detector Phase	1	1	6		5	5	2		7	4		3
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	6.0		4.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	38.4		10.4
Total Split (s)	15.0	15.0	57.0		19.0	19.0	61.0		18.0	36.0		18.0
Total Split (%)	11.5%	11.5%	43.8%		14.6%	14.6%	46.9%		13.8%	27.7%		13.8%
Maximum Green (s)	9.0	9.0	51.0		13.0	13.0	55.0		11.9	29.6		12.3
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1		3.4
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.3		2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0		6.1	6.4		5.7
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None		None
Walk Time (s)			7.0				7.0			7.0		
Flash Dont Walk (s)			23.0				18.0			25.0		
Pedestrian Calls (#/hr)			0				0			0		
Act Effct Green (s)		61.3	52.9			71.3	58.1		40.2	28.0		39.2
Actuated g/C Ratio		0.47	0.41			0.55	0.45		0.31	0.22		0.30
v/c Ratio		0.65	0.91			0.93	0.87		0.68	0.93		0.68
Control Delay		40.7	47.0			75.6	40.1		43.7	71.2		45.9
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0
Total Delay		40.7	47.0			75.6	40.1		43.7	71.2		45.9
LOS		D	D			E	D		D	E		D
Approach Delay			46.5				45.1			60.5		
Approach LOS			D				D			E		
Queue Length 50th (ft)		45	545			141	554		150	267		84
Queue Length 95th (ft)		#116	#697			#309	#684		224	#448		136
Internal Link Dist (ft)			443				434			2060		
Turn Bay Length (ft)		280				250			160			80
Base Capacity (vph)		180	1425			242	1567		359	432		226
Starvation Cap Reductn		0	0			0	0		0	0		0
Spillback Cap Reductn		0	0			0	0		0	0		0
Storage Cap Reductn		0	0			0	0		0	0		0
Reduced v/c Ratio		0.62	0.91			0.93	0.87		0.68	0.89		0.65

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 90 (69%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

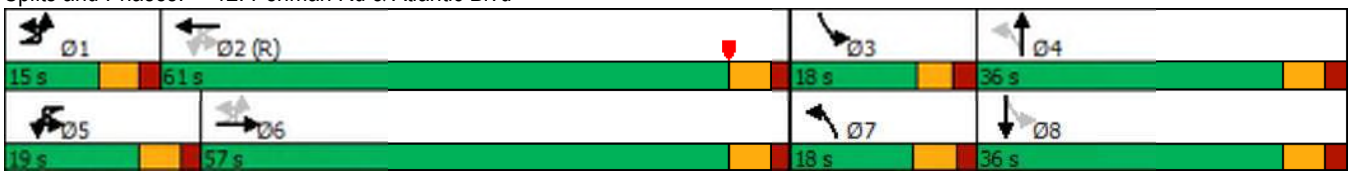


Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	38.4	
Total Split (s)	36.0	
Total Split (%)	27.7%	
Maximum Green (s)	29.6	
Yellow Time (s)	4.1	
All-Red Time (s)	2.3	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.4	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	25.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	27.1	
Actuated g/C Ratio	0.21	
v/c Ratio	0.50	
Control Delay	43.1	
Queue Delay	0.0	
Total Delay	43.1	
LOS	D	
Approach Delay	44.3	
Approach LOS	D	
Queue Length 50th (ft)	120	
Queue Length 95th (ft)	196	
Internal Link Dist (ft)	300	
Turn Bay Length (ft)		
Base Capacity (vph)	415	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.46	

Intersection Summary

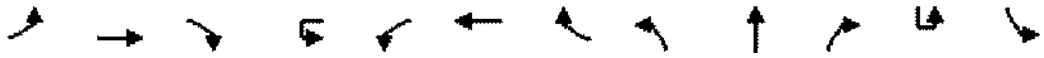
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Penman Rd & Atlantic Blvd



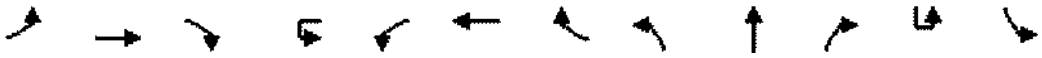
Appendix M

2045 Build-Out Intersection Capacity Analyses Worksheets



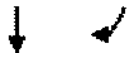
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	613	1208	221	5	29	1219	273	310	173	19	42	269
Future Volume (vph)	613	1208	221	5	29	1219	273	310	173	19	42	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	595		205		315		190	200		0		210
Storage Lanes	1		0		1		0	1		0		1
Taper Length (ft)	50				50			50				50
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95
Frt		0.977				0.973			0.985			
Flt Protected	0.950				0.950			0.950				0.950
Satd. Flow (prot)	1770	4968	0	0	1770	4948	0	1770	1835	0	0	1681
Flt Permitted	0.950				0.950			0.950				0.950
Satd. Flow (perm)	1770	4968	0	0	1770	4948	0	1770	1835	0	0	1681
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		34				31			3			
Link Speed (mph)		35				35			35			
Link Distance (ft)		578				547			400			
Travel Time (s)		11.3				10.7			7.8			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	613	1208	221	5	29	1219	273	310	173	19	42	269
Shared Lane Traffic (%)												25%
Lane Group Flow (vph)	613	1429	0	0	34	1492	0	310	192	0	0	244
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	R NA	Left
Median Width(ft)		30				30			12			
Link Offset(ft)		0				0			0			
Crosswalk Width(ft)		16				16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	9	15		9	15		9	9	15
Number of Detectors	1	2		1	1	2		1	2		1	1
Detector Template	Left	Thru		Left	Left	Thru		Left	Thru		Left	Left
Leading Detector (ft)	20	100		20	20	100		20	100		20	20
Trailing Detector (ft)	0	0		0	0	0		0	0		0	0
Detector 1 Position(ft)	0	0		0	0	0		0	0		0	0
Detector 1 Size(ft)	20	6		20	20	6		20	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94				94			94			
Detector 2 Size(ft)		6				6			6			
Detector 2 Type		Cl+Ex				Cl+Ex			Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0				0.0			0.0			
Turn Type	Prot	NA		Prot	Prot	NA		Split	NA		Split	Split
Protected Phases	1	6		5	5	2		4	4		8	8

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	184	485
Future Volume (vph)	184	485
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		150
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected	0.987	
Satd. Flow (prot)	1747	1583
Flt Permitted	0.987	
Satd. Flow (perm)	1747	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		88
Link Speed (mph)	35	
Link Distance (ft)	576	
Travel Time (s)	11.2	
Peak Hour Factor	1.00	1.00
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	184	485
Shared Lane Traffic (%)		
Lane Group Flow (vph)	251	485
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	pt+ov
Protected Phases	8	8 1



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Permitted Phases												
Detector Phase	1	6		5	5	2		4	4		8	8
Switch Phase												
Minimum Initial (s)	4.0	18.0		4.0	4.0	18.0		6.0	6.0		6.0	6.0
Minimum Split (s)	9.4	30.4		9.4	9.4	44.4		47.1	47.1		48.1	48.1
Total Split (s)	53.0	88.0		16.0	16.0	51.0		31.0	31.0		25.0	25.0
Total Split (%)	33.1%	55.0%		10.0%	10.0%	31.9%		19.4%	19.4%		15.6%	15.6%
Maximum Green (s)	47.6	82.6		10.6	10.6	45.6		25.9	25.9		19.9	19.9
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6		3.0	3.0		3.0	3.0
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8		2.1	2.1		2.1	2.1
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0			0.0
Total Lost Time (s)	5.4	5.4			5.4	5.4		5.1	5.1			5.1
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode	None	C-Max		None	None	Max		None	None		None	None
Walk Time (s)		7.0				11.0		8.0	8.0		10.0	10.0
Flash Dont Walk (s)		18.0				28.0		34.0	34.0		33.0	33.0
Pedestrian Calls (#/hr)		0				0		0	0		0	0
Act Effct Green (s)	47.6	85.8			9.6	45.6		25.9	25.9			19.9
Actuated g/C Ratio	0.30	0.54			0.06	0.28		0.16	0.16			0.12
v/c Ratio	1.17	0.53			0.32	1.04		1.08	0.64			1.17
Control Delay	142.0	24.9			79.7	88.9		137.7	72.6			172.8
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			0.0
Total Delay	142.0	24.9			79.7	88.9		137.7	72.6			172.8
LOS	F	C			E	F		F	E			F
Approach Delay		60.1				88.6			112.8			
Approach LOS		E				F			F			
Queue Length 50th (ft)	~758	355			35	~607		~361	188			~317
Queue Length 95th (ft)	#1001	400			74	#705		#561	278			#512
Internal Link Dist (ft)		498				467			320			
Turn Bay Length (ft)	595				315			200				210
Base Capacity (vph)	526	2680			117	1432		286	299			209
Starvation Cap Reductn	0	0			0	0		0	0			0
Spillback Cap Reductn	0	0			0	0		0	0			0
Storage Cap Reductn	0	0			0	0		0	0			0
Reduced v/c Ratio	1.17	0.53			0.29	1.04		1.08	0.64			1.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 6:EBT, Start of Yellow			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.17			
Intersection Signal Delay: 82.0		Intersection LOS: F	
Intersection Capacity Utilization 111.7%		ICU Level of Service H	
Analysis Period (min) 15			



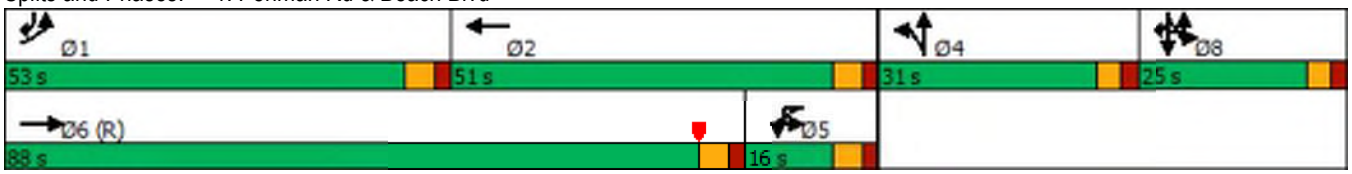
Lane Group	SBT	SBR
Permitted Phases		
Detector Phase	8	8 1
Switch Phase		
Minimum Initial (s)	6.0	
Minimum Split (s)	48.1	
Total Split (s)	25.0	
Total Split (%)	15.6%	
Maximum Green (s)	19.9	
Yellow Time (s)	3.0	
All-Red Time (s)	2.1	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	5.1	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	10.0	
Flash Dont Walk (s)	33.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	19.9	72.9
Actuated g/C Ratio	0.12	0.46
v/c Ratio	1.16	0.63
Control Delay	168.4	31.0
Queue Delay	0.0	0.0
Total Delay	168.4	31.0
LOS	F	C
Approach Delay	101.5	
Approach LOS	F	
Queue Length 50th (ft)	~325	317
Queue Length 95th (ft)	#523	446
Internal Link Dist (ft)	496	
Turn Bay Length (ft)		150
Base Capacity (vph)	217	769
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.16	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Penman Rd & Beach Blvd



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	60	0	0	32	0	1140	18	0	960	62
Future Vol, veh/h	0	0	60	0	0	32	0	1140	18	0	960	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	4
Mvmt Flow	0	0	60	0	0	32	0	1140	18	0	960	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	991	-	-	1149	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	299	0	0	242	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	299	-	-	242	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20	22.1	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	299	242	-	-
HCM Lane V/C Ratio	-	-	0.201	0.132	-	-
HCM Control Delay (s)	-	-	20	22.1	-	-
HCM Lane LOS	-	-	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.7	0.4	-	-

Intersection	
Intersection Delay, s/veh	20.2
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	22	48	1157	952
Demand Flow Rate, veh/h	22	49	1180	971
Vehicles Circulating, veh/h	1011	1200	47	80
Vehicles Exiting, veh/h	39	27	986	1169
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.9	10.9	24.9	15.3
Approach LOS	A	B	C	C

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
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	4.976
Entry Flow, veh/h	22	49	1180	971
Cap Entry Lane, veh/h	492	406	1315	1272
Entry HV Adj Factor	0.999	0.977	0.981	0.981
Flow Entry, veh/h	22	48	1157	952
Cap Entry, veh/h	492	397	1290	1247
V/C Ratio	0.045	0.121	0.897	0.764
Control Delay, s/veh	7.9	10.9	24.9	15.3
LOS	A	B	C	C
95th %tile Queue, veh	0	0	14	8

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	6	0	0	24	0	1109	24	0	967	2
Future Vol, veh/h	0	0	6	0	0	24	0	1109	24	0	967	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	6	0	0	24	0	1109	24	0	967	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	968	-	-	1121	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	308	0	0	251	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	308	-	-	251	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	20.9	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	308	251	-	-
HCM Lane V/C Ratio	-	-	0.019	0.096	-	-
HCM Control Delay (s)	-	-	16.9	20.9	-	-
HCM Lane LOS	-	-	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.3	-	-

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	105	1146	975
Demand Flow Rate, veh/h	108	1169	995
Vehicles Circulating, veh/h	1125	42	33
Vehicles Exiting, veh/h	86	986	1200
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.4	23.4	14.1
Approach LOS	B	C	B

Lane	Left	Left	Left
Designated Moves	LR	LTR	LT
Assumed Moves	LR	LTR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	108	1169	995
Cap Entry Lane, veh/h	438	1322	1334
Entry HV Adj Factor	0.972	0.980	0.980
Flow Entry, veh/h	105	1146	975
Cap Entry, veh/h	426	1296	1308
V/C Ratio	0.247	0.884	0.746
Control Delay, s/veh	12.4	23.4	14.1
LOS	B	C	B
95th %tile Queue, veh	1	13	7

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	91	992	996
Demand Flow Rate, veh/h	93	1013	1016
Vehicles Circulating, veh/h	1056	154	36
Vehicles Exiting, veh/h	111	898	1113
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.7	22.7	14.9
Approach LOS	B	C	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	93	1013	1016
Cap Entry Lane, veh/h	470	1179	1330
Entry HV Adj Factor	0.978	0.979	0.981
Flow Entry, veh/h	91	992	996
Cap Entry, veh/h	460	1155	1304
V/C Ratio	0.198	0.859	0.764
Control Delay, s/veh	10.7	22.7	14.9
LOS	B	C	B
95th %tile Queue, veh	1	12	8

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	1006	73	0	989
Future Vol, veh/h	0	46	1006	73	0	989
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	10	2	2	2	2
Mvmt Flow	0	46	1006	73	0	989

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1043	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.3	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	269	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	269	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	269	-
HCM Lane V/C Ratio	-	-	0.171	-
HCM Control Delay (s)	-	-	21.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.6	-

Intersection	
Intersection Delay, s/veh	31.0
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	72	43	954	1233
Demand Flow Rate, veh/h	73	44	973	1261
Vehicles Circulating, veh/h	1156	1206	301	0
Vehicles Exiting, veh/h	105	68	928	1250
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	10.8	39.7	26.2
Approach LOS	B	B	E	D

Lane	Left	Left	Left	Left
Designated Moves	LTR	R	TR	LTR
Assumed Moves	LTR	R	TR	LTR
RT Channelized				
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	4.976
Entry Flow, veh/h	73	44	973	1261
Cap Entry Lane, veh/h	424	403	1015	1380
Entry HV Adj Factor	0.981	0.977	0.981	0.978
Flow Entry, veh/h	72	43	954	1233
Cap Entry, veh/h	416	394	996	1349
V/C Ratio	0.172	0.109	0.959	0.914
Control Delay, s/veh	11.3	10.8	39.7	26.2
LOS	B	B	E	D
95th %tile Queue, veh	1	0	17	15

Intersection	
Intersection Delay, s/veh	25.1
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	8	433	1148	987
Demand Flow Rate, veh/h	8	445	1171	1007
Vehicles Circulating, veh/h	1207	884	0	211
Vehicles Exiting, veh/h	11	287	1215	1118
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.2	31.4	19.5	28.9
Approach LOS	A	D	C	D

Lane	Left	Left	Left	Left
Designated Moves	R	LTR	LTR	TR
Assumed Moves	R	LTR	LTR	TR
RT Channelized				
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	4.976
Entry Flow, veh/h	8	445	1171	1007
Cap Entry Lane, veh/h	403	560	1380	1113
Entry HV Adj Factor	1.000	0.973	0.980	0.980
Flow Entry, veh/h	8	433	1148	987
Cap Entry, veh/h	403	545	1352	1091
V/C Ratio	0.020	0.794	0.849	0.905
Control Delay, s/veh	9.2	31.4	19.5	28.9
LOS	A	D	C	D
95th %tile Queue, veh	0	8	12	14

Intersection	
Intersection Delay, s/veh	74.0
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	780	322	979	554
Demand Flow Rate, veh/h	798	329	999	564
Vehicles Circulating, veh/h	651	1154	459	609
Vehicles Exiting, veh/h	522	304	981	874
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	96.2	36.4	103.1	22.7
Approach LOS	F	E	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	0	4.976
Entry Flow, veh/h	798	329	999	1012	564
Cap Entry Lane, veh/h	710	425	864	0.980	741
Entry HV Adj Factor	0.977	0.980	0.980	0	0.982
Flow Entry, veh/h	780	322	979	992	554
Cap Entry, veh/h	694	417	847	0.000	728
V/C Ratio	1.123	0.774	1.156	3.6	0.761
Control Delay, s/veh	96.2	36.4	103.1	A	22.7
LOS	F	E	F	0	C
95th %tile Queue, veh	23	7	29		7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	NE
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	89
Demand Flow Rate, veh/h	91
Vehicles Circulating, veh/h	1349
Vehicles Exiting, veh/h	100
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	15.6
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	91
Cap Entry Lane, veh/h	349
Entry HV Adj Factor	0.974
Flow Entry, veh/h	89
Cap Entry, veh/h	340
V/C Ratio	0.261
Control Delay, s/veh	15.6
LOS	C
95th %tile Queue, veh	1

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	77	684	123	0	610
Future Vol, veh/h	0	77	684	123	0	610
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	77	684	123	0	610

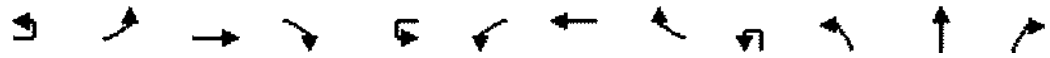
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	746	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	413	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	413	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	413	-
HCM Lane V/C Ratio	-	-	0.186	-
HCM Control Delay (s)	-	-	15.7	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.7	-

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	26	135	1343	181	4	223	1443	91	24	283	226	230
Future Volume (vph)	26	135	1343	181	4	223	1443	91	24	283	226	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		280		0		250		0		250		300
Storage Lanes		1		0		1		0		1		1
Taper Length (ft)		50				50				50		
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.982				0.991					0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3476	0	0	1770	3507	0	0	1770	1863	1583
Flt Permitted		0.055				0.048				0.238		
Satd. Flow (perm)	0	102	3476	0	0	89	3507	0	0	443	1863	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			13				5					227
Link Speed (mph)			35				35				35	
Link Distance (ft)			520				515				2104	
Travel Time (s)			10.1				10.0				41.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	135	1343	181	4	223	1443	91	24	283	226	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	1524	0	0	227	1534	0	0	307	226	230
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			20				20				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2		1	1	2		1	1	2	1
Detector Template	Left	Left	Thru		Left	Left	Thru		Left	Left	Thru	Right
Leading Detector (ft)	20	20	100		20	20	100		20	20	100	20
Trailing Detector (ft)	0	0	0		0	0	0		0	0	0	0
Detector 1 Position(ft)	0	0	0		0	0	0		0	0	0	0
Detector 1 Size(ft)	20	20	6		20	20	6		20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6		5	5	2		7	7	4	

Lane Group	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	106	156	90
Future Volume (vph)	106	156	90
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	80		0
Storage Lanes	1		0
Taper Length (ft)	50		
Lane Util. Factor	1.00	1.00	1.00
Frt		0.945	
Flt Protected	0.950		
Satd. Flow (prot)	1770	1754	0
Flt Permitted	0.311		
Satd. Flow (perm)	579	1754	0
Right Turn on Red			Yes
Satd. Flow (RTOR)		16	
Link Speed (mph)		35	
Link Distance (ft)		380	
Travel Time (s)		7.4	
Peak Hour Factor	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	3%
Adj. Flow (vph)	106	156	90
Shared Lane Traffic (%)			
Lane Group Flow (vph)	106	246	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		12	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (mph)	15		9
Number of Detectors	1	2	
Detector Template	Left	Thru	
Leading Detector (ft)	20	100	
Trailing Detector (ft)	0	0	
Detector 1 Position(ft)	0	0	
Detector 1 Size(ft)	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Detector 2 Position(ft)		94	
Detector 2 Size(ft)		6	
Detector 2 Type		Cl+Ex	
Detector 2 Channel			
Detector 2 Extend (s)		0.0	
Turn Type	pm+pt	NA	
Protected Phases	3	8	



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Permitted Phases	6	6			2	2			4	4		4
Detector Phase	1	1	6		5	5	2		7	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0	18.0		4.0	4.0	18.0		4.0	4.0	6.0	6.0
Minimum Split (s)	10.4	10.4	36.0		10.0	10.0	31.0		10.4	10.4	38.4	38.4
Total Split (s)	40.0	40.0	86.0		20.0	20.0	66.0		19.0	19.0	31.0	31.0
Total Split (%)	25.0%	25.0%	53.8%		12.5%	12.5%	41.3%		11.9%	11.9%	19.4%	19.4%
Maximum Green (s)	34.0	34.0	80.0		14.0	14.0	60.0		12.9	12.9	24.6	24.6
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0	4.0		4.1	4.1	4.1	4.1
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	2.3	2.3
Lost Time Adjust (s)		0.0	0.0			0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0			6.1	6.4	6.4
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	Max		None	None	C-Max		None	None	None	None
Walk Time (s)			7.0				7.0				7.0	7.0
Flash Dont Walk (s)			23.0				18.0				25.0	25.0
Pedestrian Calls (#/hr)			0				0				0	0
Act Effct Green (s)		94.4	80.0			98.0	82.9			38.7	25.5	25.5
Actuated g/C Ratio		0.59	0.50			0.61	0.52			0.24	0.16	0.16
v/c Ratio		0.76	0.87			0.95	0.84			1.44	0.76	0.52
Control Delay		59.5	42.1			94.3	39.4			259.0	81.1	11.5
Queue Delay		0.0	0.0			0.0	0.0			0.0	0.0	0.0
Total Delay		59.5	42.1			94.3	39.4			259.0	81.1	11.5
LOS		E	D			F	D			F	F	B
Approach Delay			43.8				46.5				131.7	
Approach LOS			D				D				F	
Queue Length 50th (ft)		109	727			~201	722			~343	227	3
Queue Length 95th (ft)		184	838			#421	#981			#558	#358	84
Internal Link Dist (ft)			440				435				2024	
Turn Bay Length (ft)		280				250				250		300
Base Capacity (vph)		420	1744			239	1819			213	301	446
Starvation Cap Reductn		0	0			0	0			0	0	0
Spillback Cap Reductn		0	0			0	0			0	0	0
Storage Cap Reductn		0	0			0	0			0	0	0
Reduced v/c Ratio		0.38	0.87			0.95	0.84			1.44	0.75	0.52

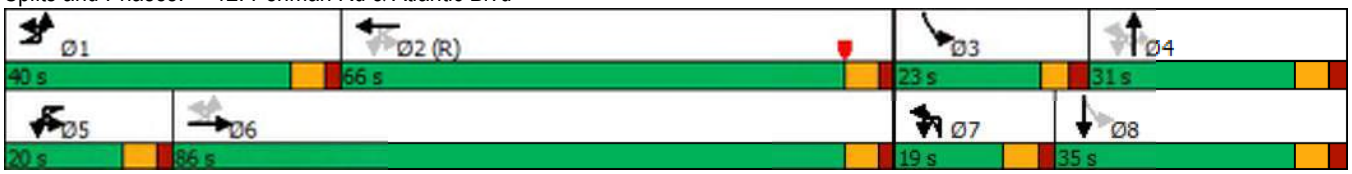
Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 34 (21%), Referenced to phase 2:WBTL, Start of Yellow			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.44			
Intersection Signal Delay: 62.0		Intersection LOS: E	
Intersection Capacity Utilization 106.6%		ICU Level of Service G	
Analysis Period (min) 15			

Lane Group	SBL	SBT	SBR
Permitted Phases	8		
Detector Phase	3	8	
Switch Phase			
Minimum Initial (s)	4.0	6.0	
Minimum Split (s)	10.4	38.4	
Total Split (s)	23.0	35.0	
Total Split (%)	14.4%	21.9%	
Maximum Green (s)	17.3	28.6	
Yellow Time (s)	3.4	4.1	
All-Red Time (s)	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	5.7	6.4	
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	
Recall Mode	None	None	
Walk Time (s)		7.0	
Flash Dont Walk (s)		25.0	
Pedestrian Calls (#/hr)		0	
Act Effct Green (s)	38.5	25.0	
Actuated g/C Ratio	0.24	0.16	
v/c Ratio	0.45	0.86	
Control Delay	49.8	87.6	
Queue Delay	0.0	0.0	
Total Delay	49.8	87.6	
LOS	D	F	
Approach Delay		76.2	
Approach LOS		E	
Queue Length 50th (ft)	84	236	
Queue Length 95th (ft)	135	#343	
Internal Link Dist (ft)		300	
Turn Bay Length (ft)	80		
Base Capacity (vph)	284	326	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.37	0.75	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Penman Rd & Atlantic Blvd



Appendix N

2045 Proposed Roadway Concept Plan and Typical Section

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

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JACKSONVILLE, FL 32246

CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 1

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CONCEPT PLAN

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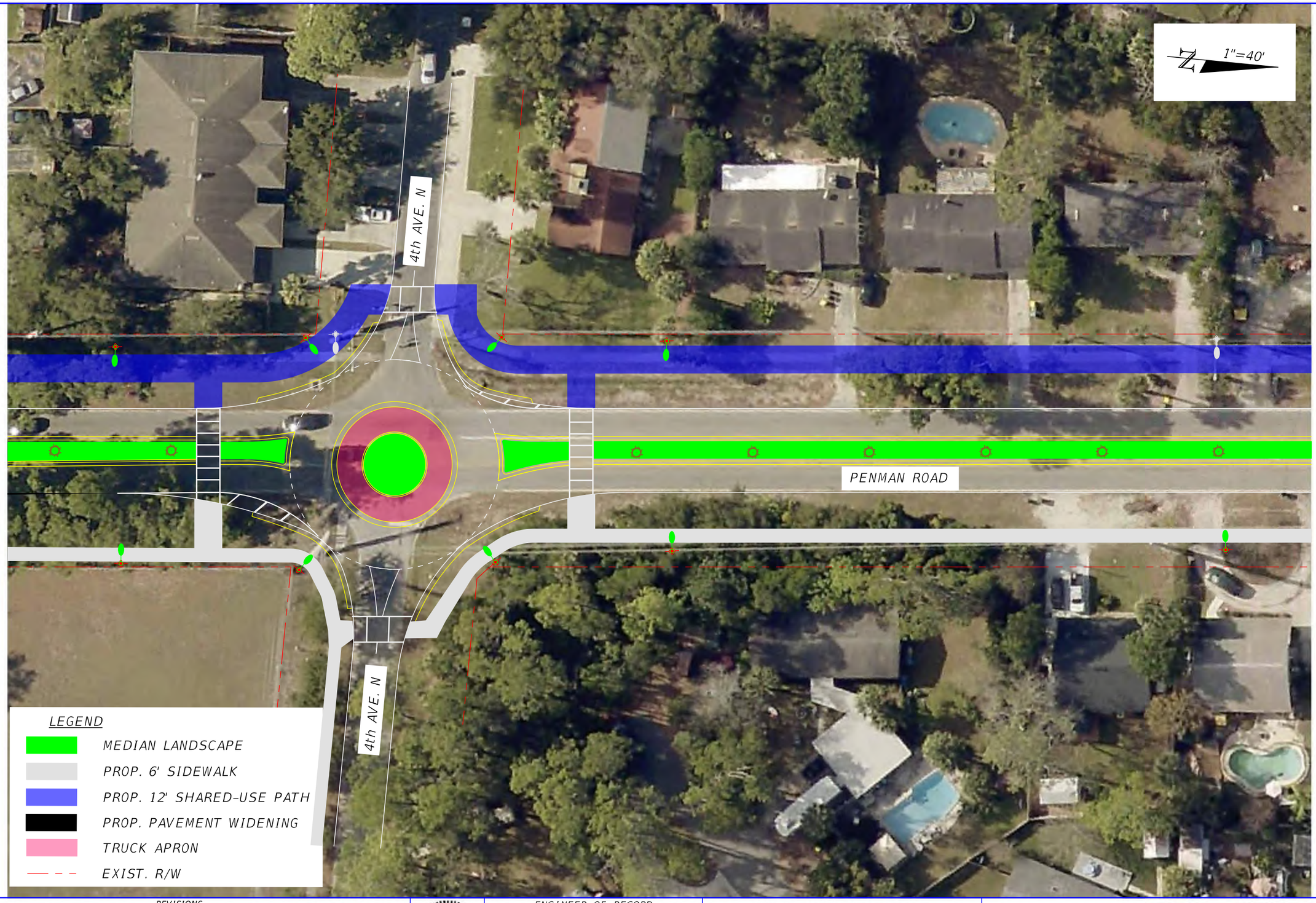

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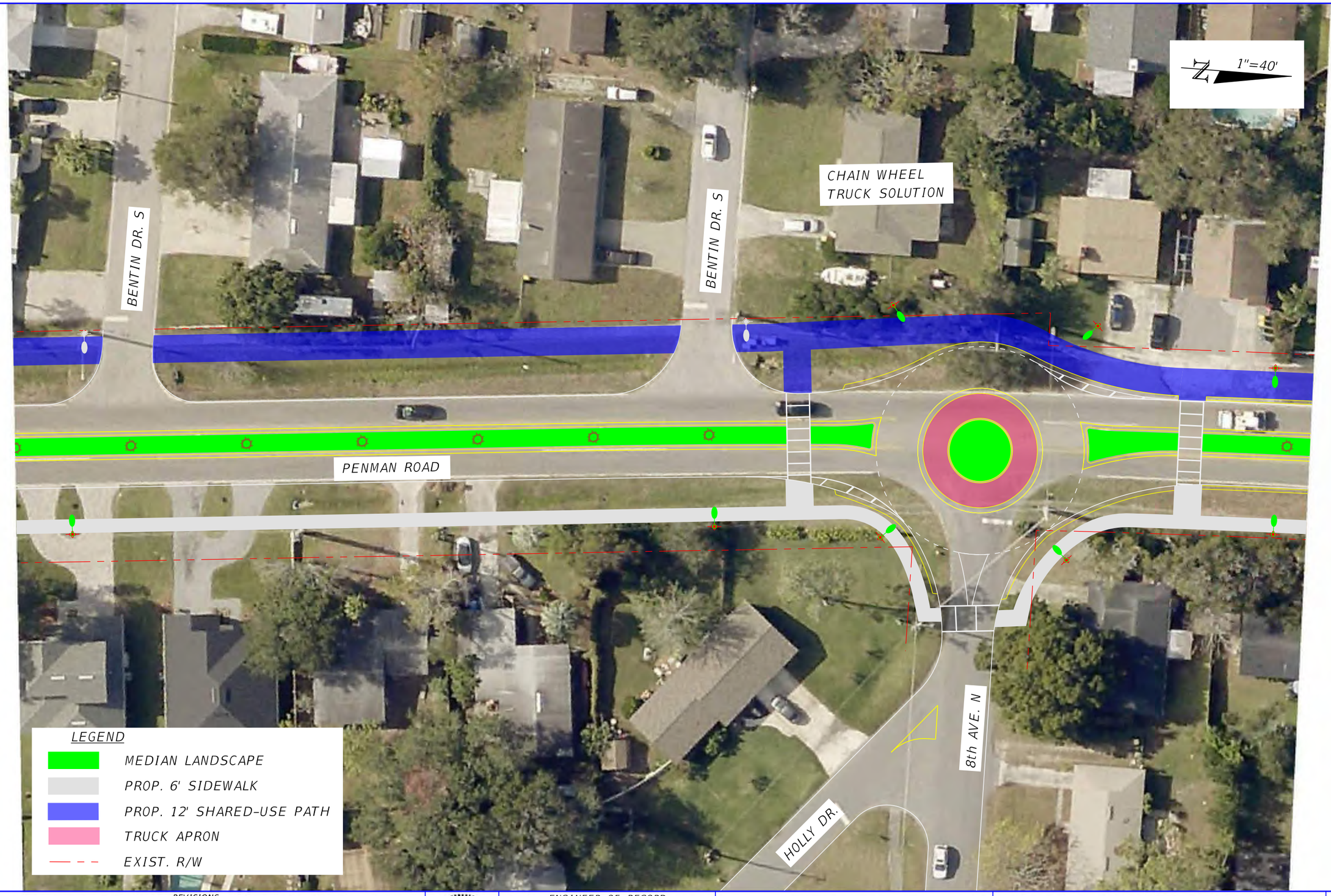

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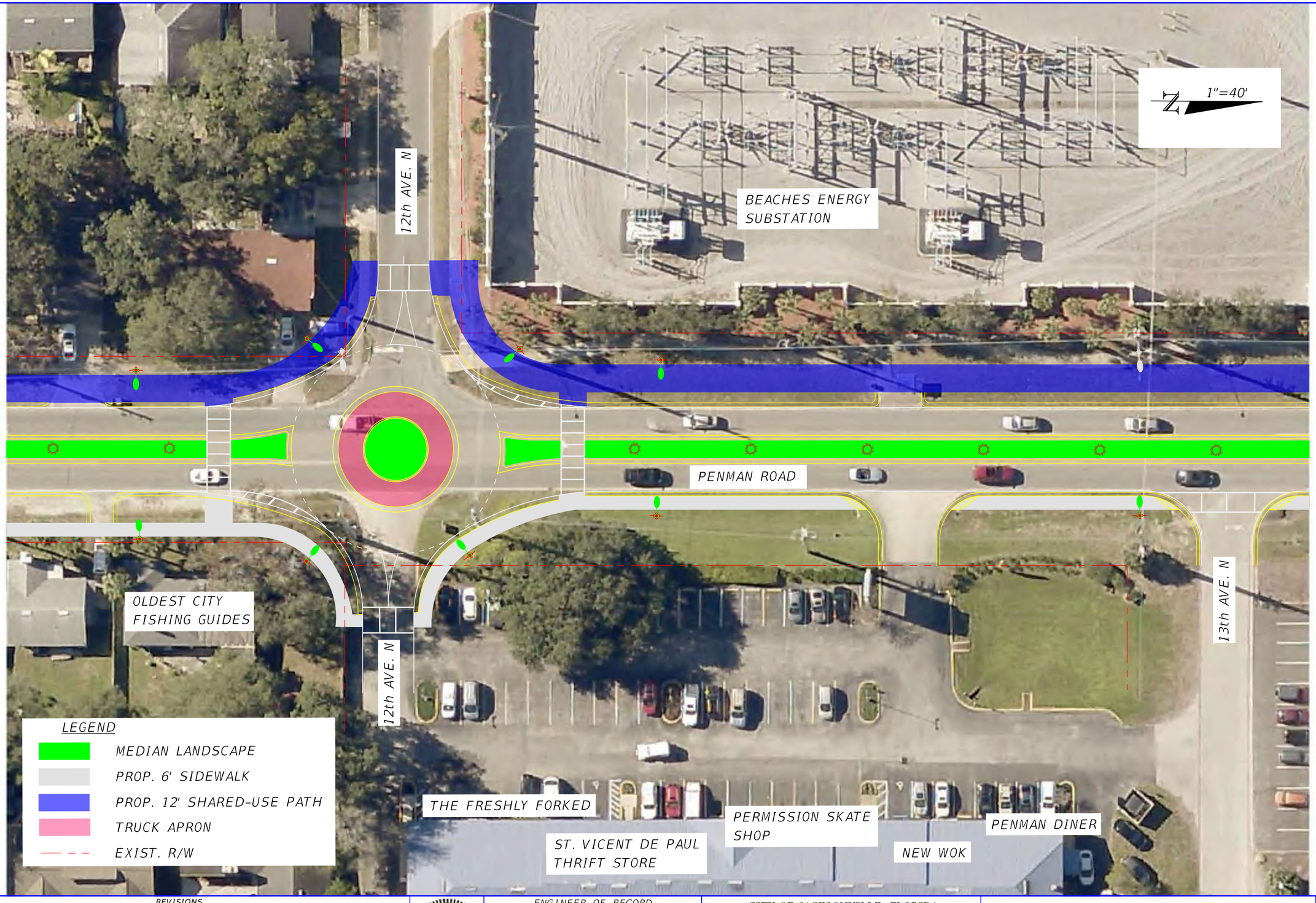

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CONCEPT PLAN

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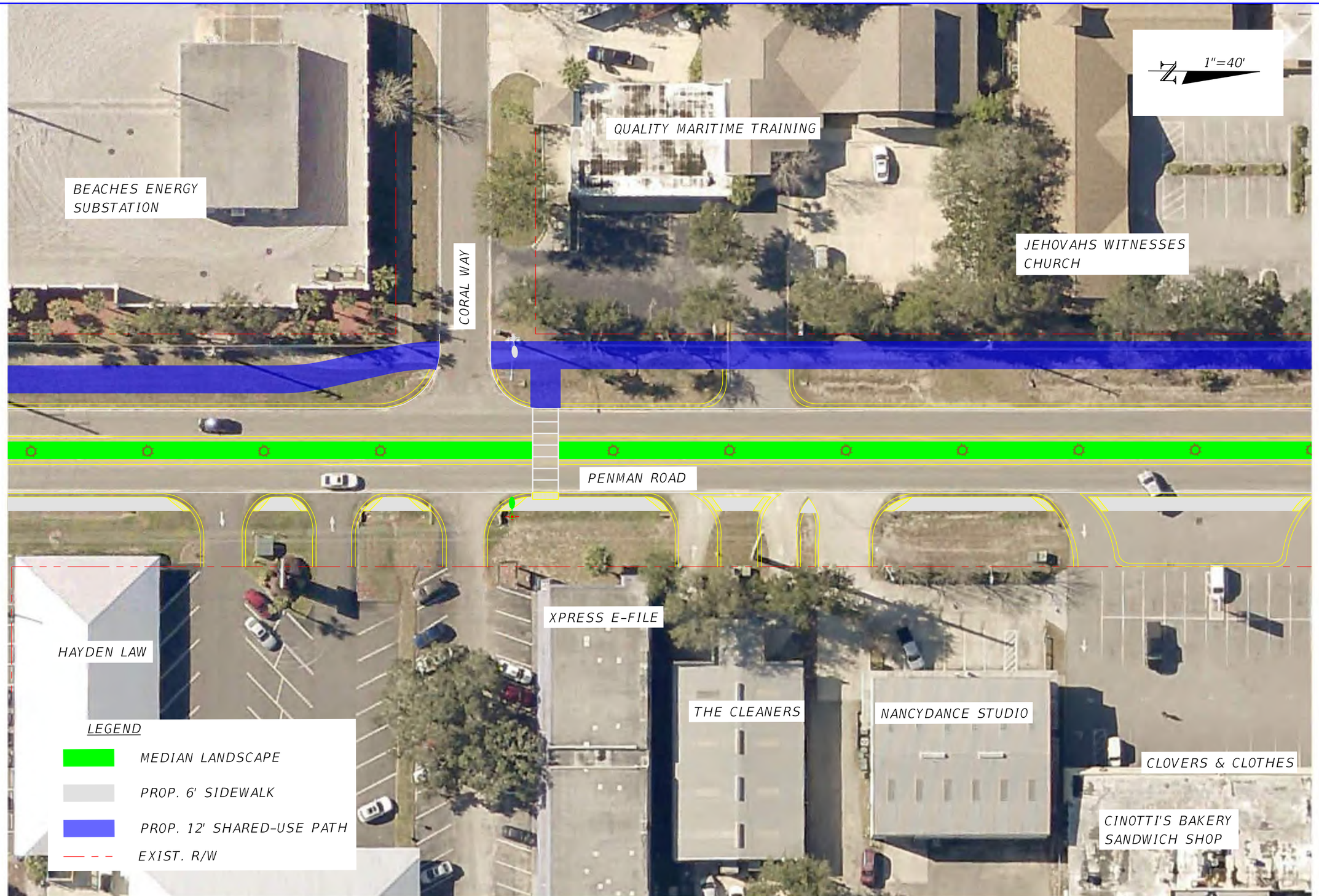

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ROAD NO.	COUNTY	PROJECT NO.
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CONCEPT PLAN

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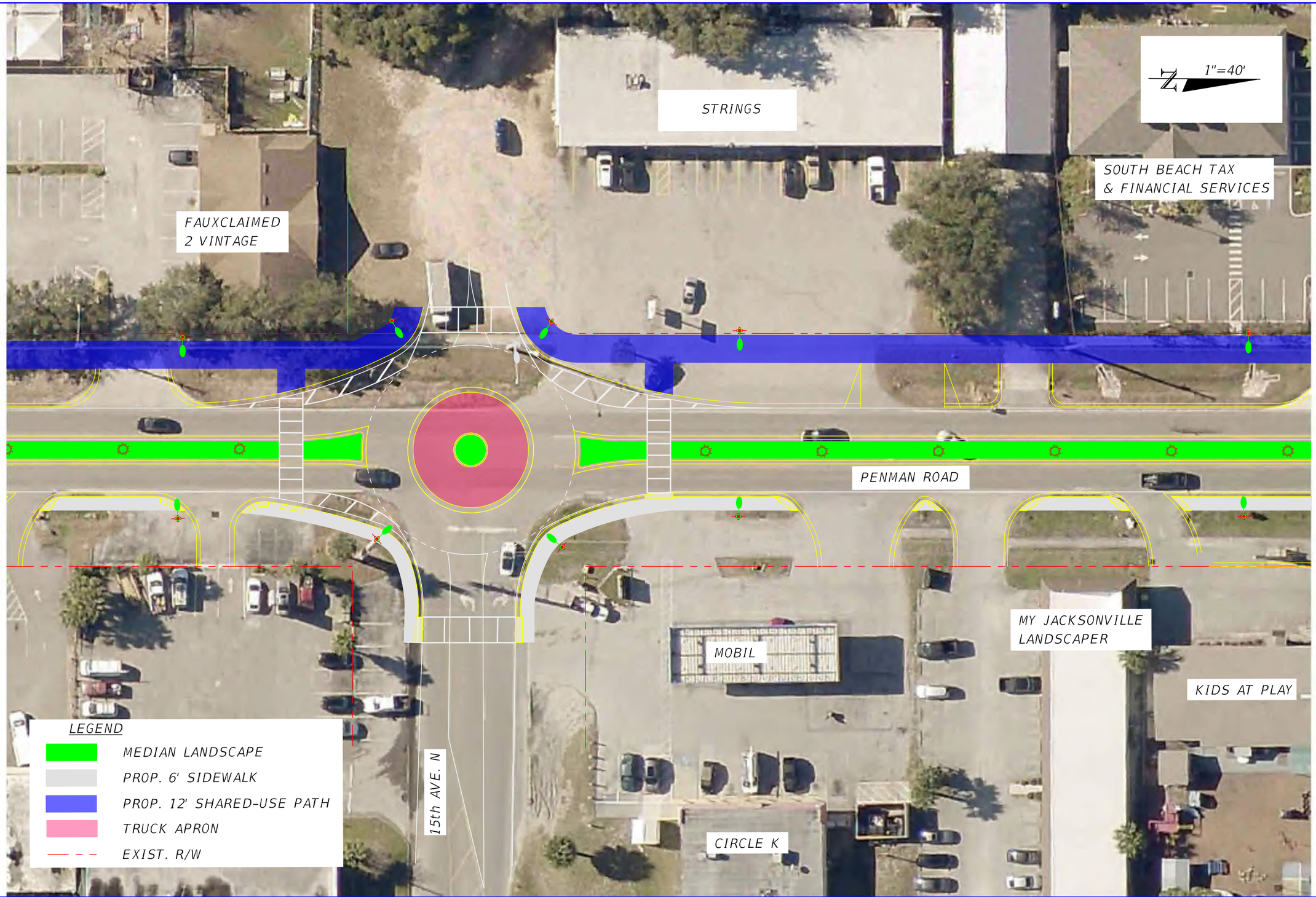

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ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 10

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PENMAN ROAD

18th AVE. N

LEGEND

- MEDIAN LANDSCAPE
- PROP. 6' SIDEWALK
- PROP. 12' SHARED-USE PATH
- PROP. TRAFFIC SEPARATOR
- EXIST. R/W

REVISIONS			
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CONCEPT PLAN

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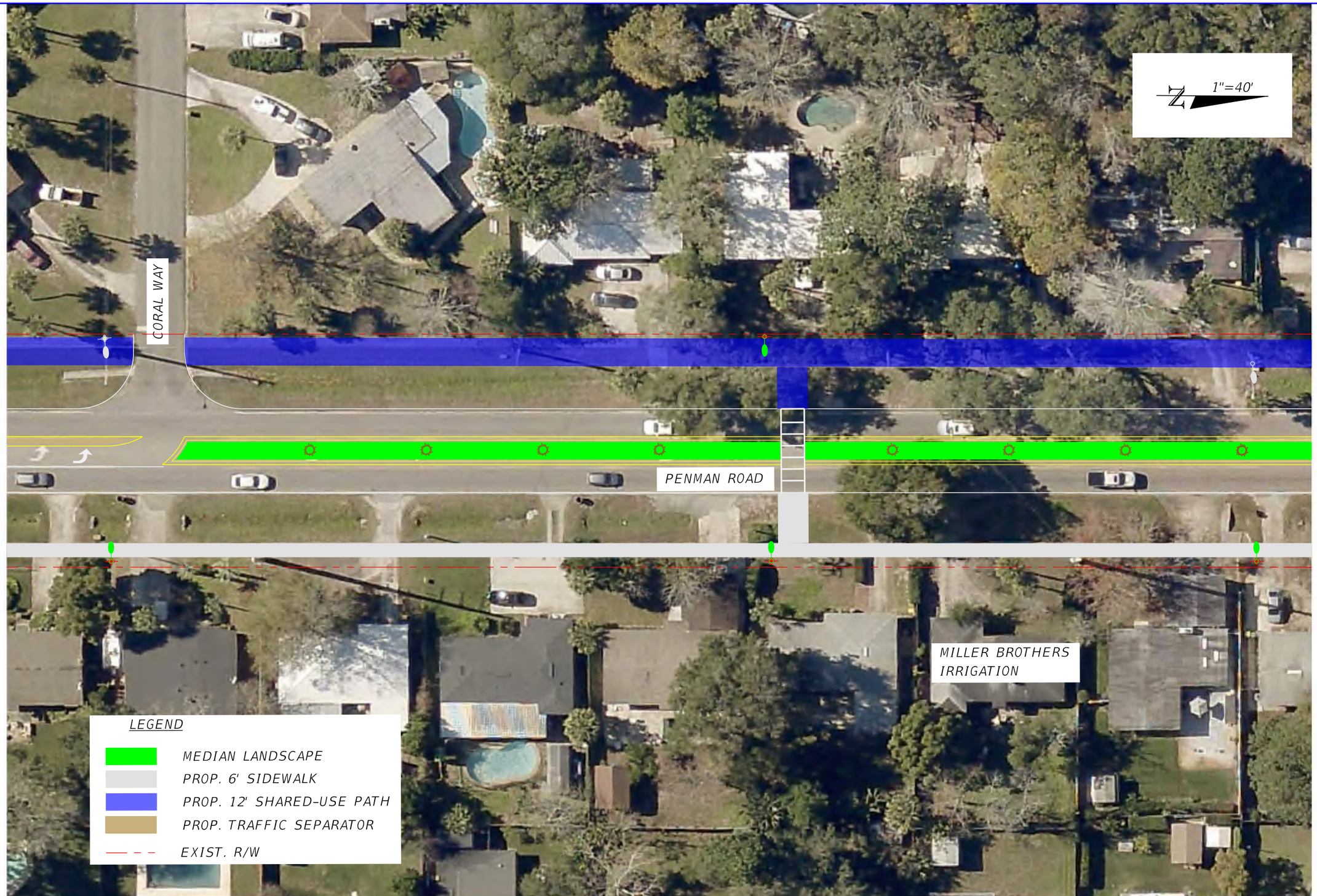

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ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 12

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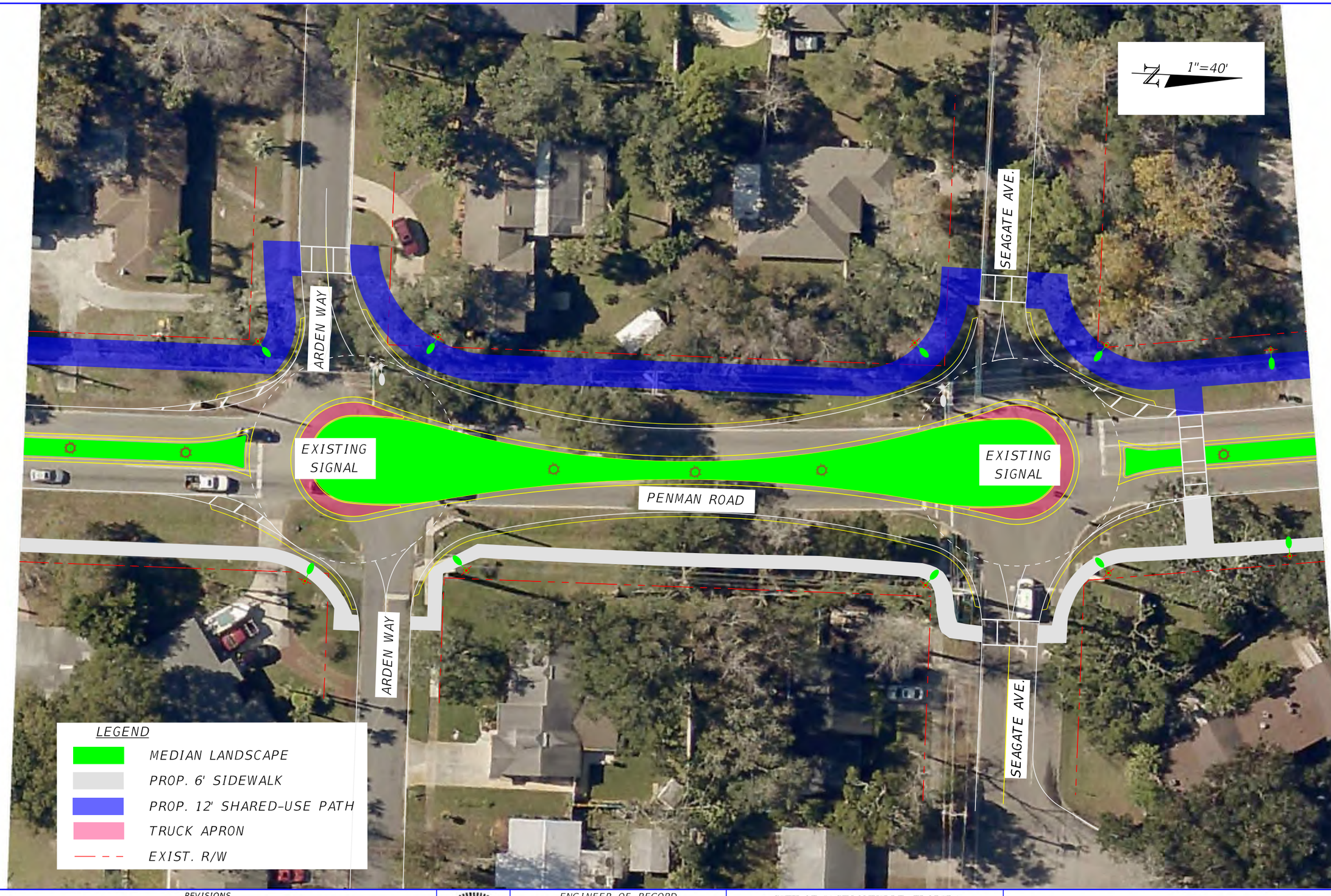

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

DOW W. PETERS III, P.E.
LICENSE NUMBER 65565
PETERS AND YAFFEE, INC.
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246

CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 13

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DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

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DEPARTMENT OF PUBLIC WORKS

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 15

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DEPARTMENT OF PUBLIC WORKS

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 16

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CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 17

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

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CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

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CONCEPT PLAN

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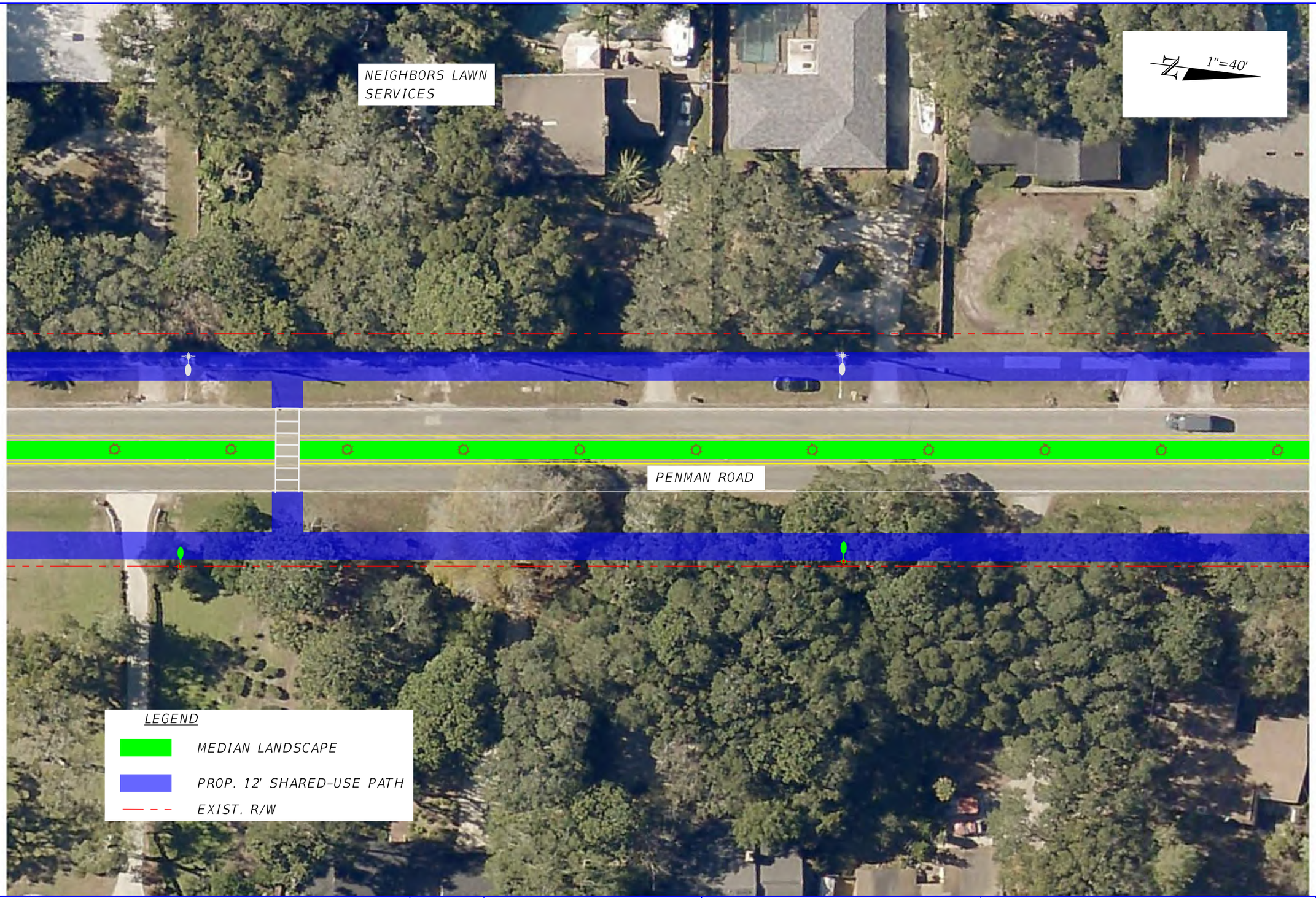

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

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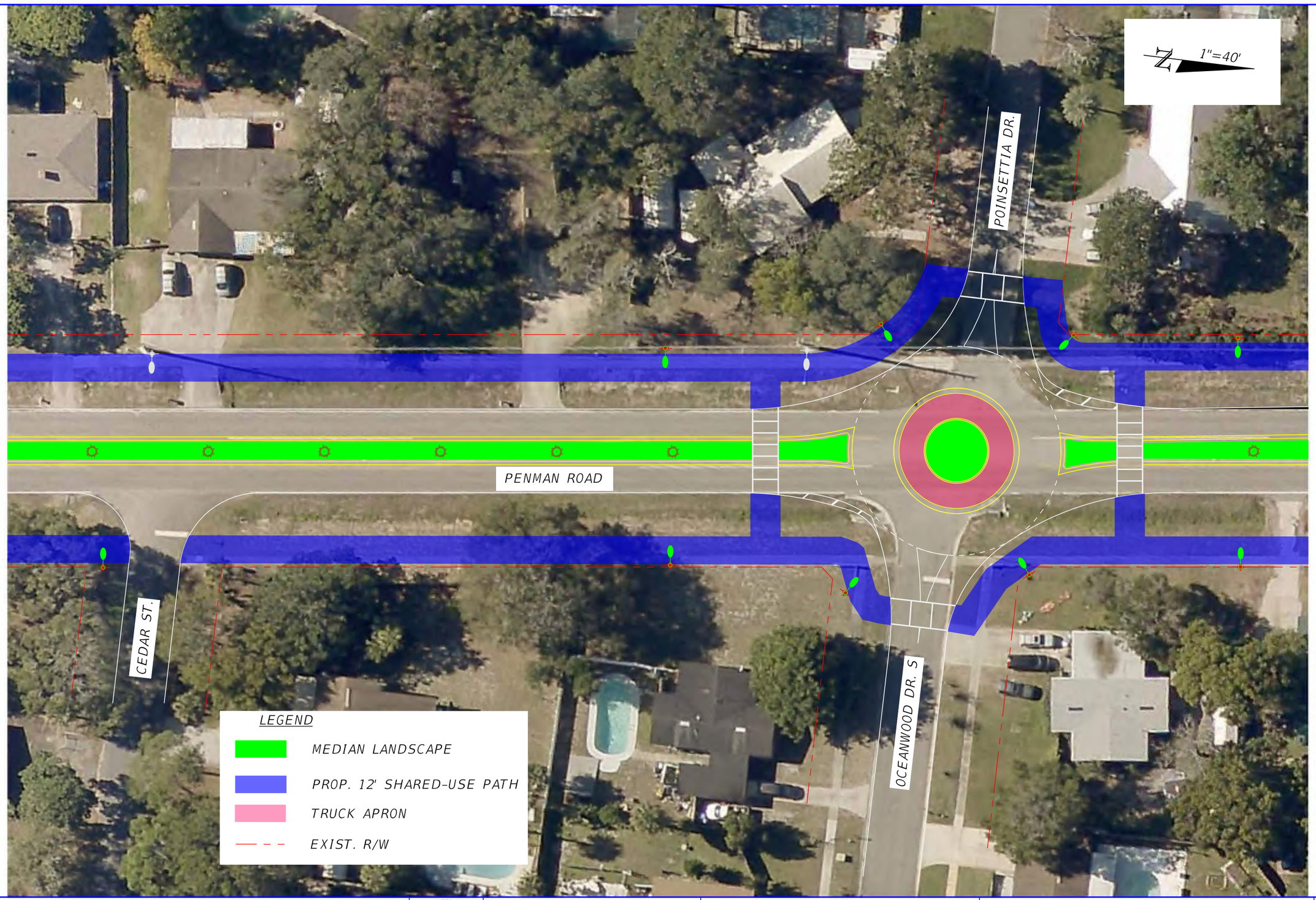

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CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

SHEET NO. 21

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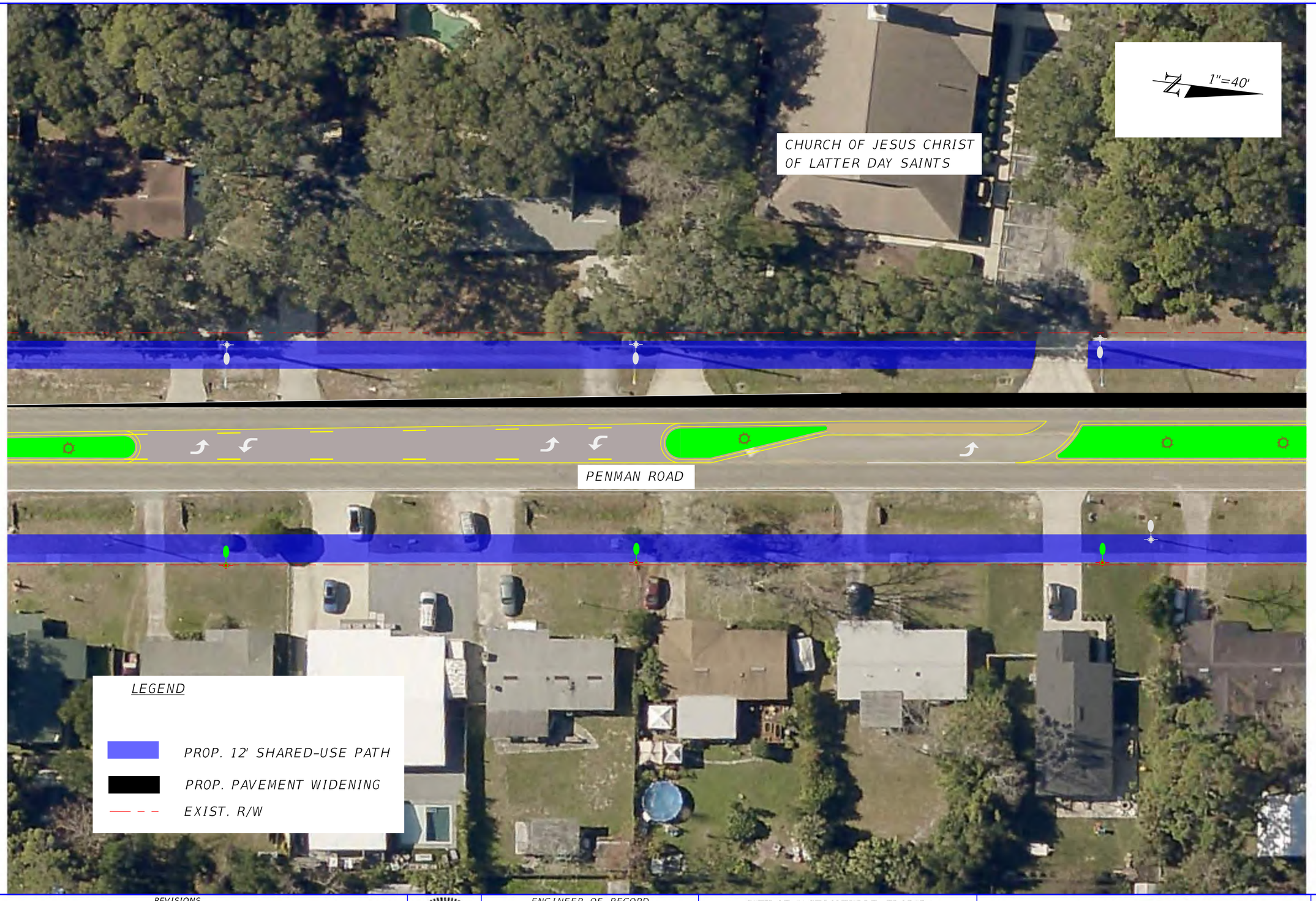

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CONCEPT PLAN

SHEET NO. 22

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CITY OF JACKSONVILLE, FLORIDA
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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

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PENMAN PLAZA

WINN-DIXIE

WHATABURGER

1"=40'

PENMAN ROAD

ATLANTIC BLVD.

LEMON ST.

BRAZILS WAXING CENTER

76

LEGEND

PROP. 6' SIDEWALK

PROP. 12' SHARED-USE PATH

PROP. TRAFFIC SEPARATOR

PROP. PAVEMENT WIDENNIG

EXIST. R/W

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DATE	DESCRIPTION	DATE	DESCRIPTION

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PENMAN ROAD	DUVAL	71237-21

CONCEPT PLAN

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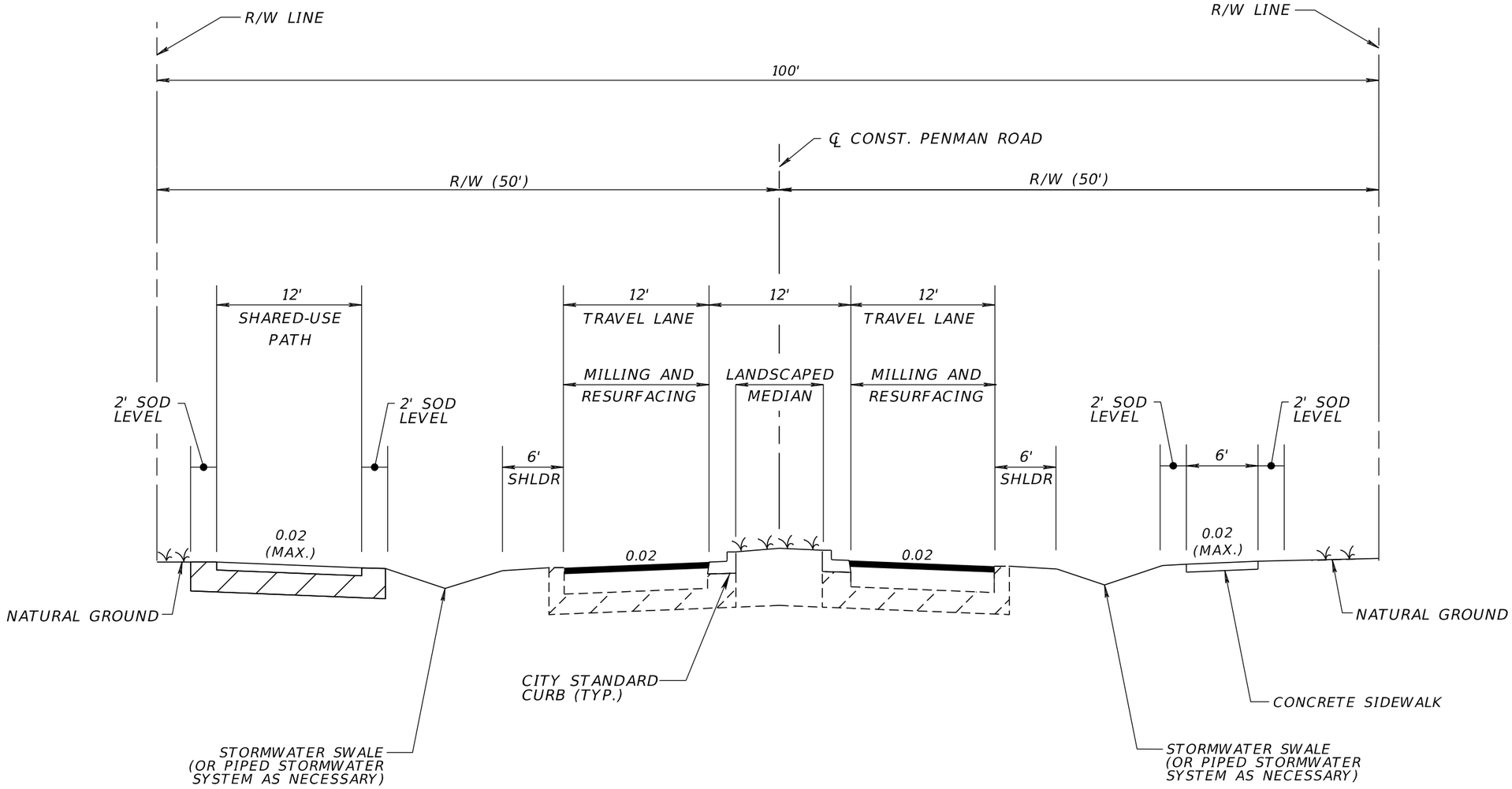

TYPICAL SECTION 1
PENMAN ROAD
(FROM BEACH BLVD TO 8TH AVE. N)

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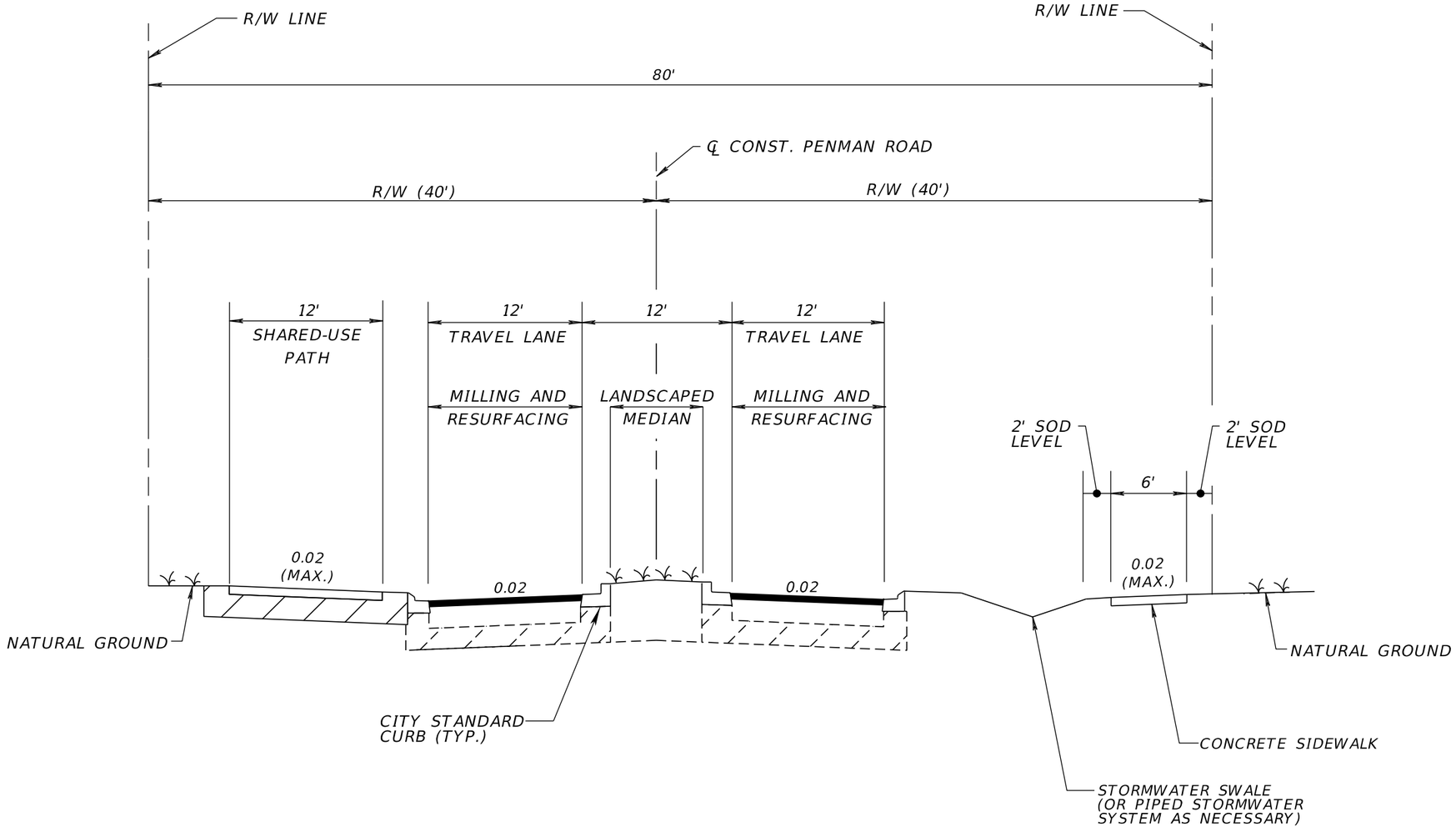
CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

TYPICAL SECTIONS

SHEET NO. A-1



TYPICAL SECTION 2
PENMAN ROAD
(FROM 8TH AVE. N TO 12TH AVE. N)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
DOW W. PETERS III, P.E.
LICENSE NUMBER 65565
PETERS AND YAFFEE, INC.
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JACKSONVILLE, FL 32246

CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

TYPICAL SECTIONS

SHEET NO. A-2

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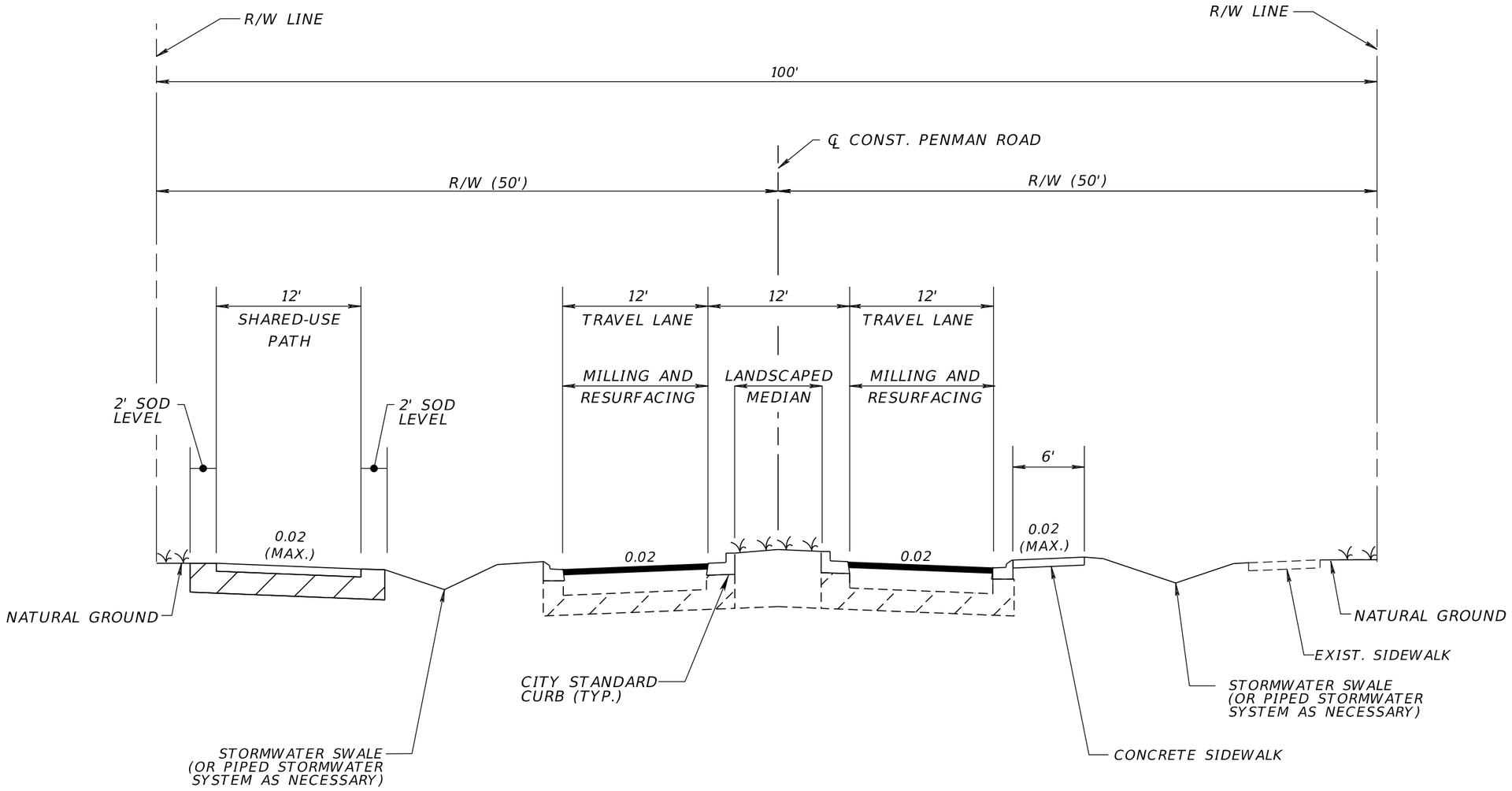

TYPICAL SECTION 3
PENMAN ROAD
(FROM 12TH AVE. TO 18TH AVE)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

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DEPARTMENT OF PUBLIC WORKS

ROAD NO.	COUNTY	PROJECT NO.
PENMAN ROAD	DUVAL	71237-21

TYPICAL SECTIONS

SHEET NO. A-3

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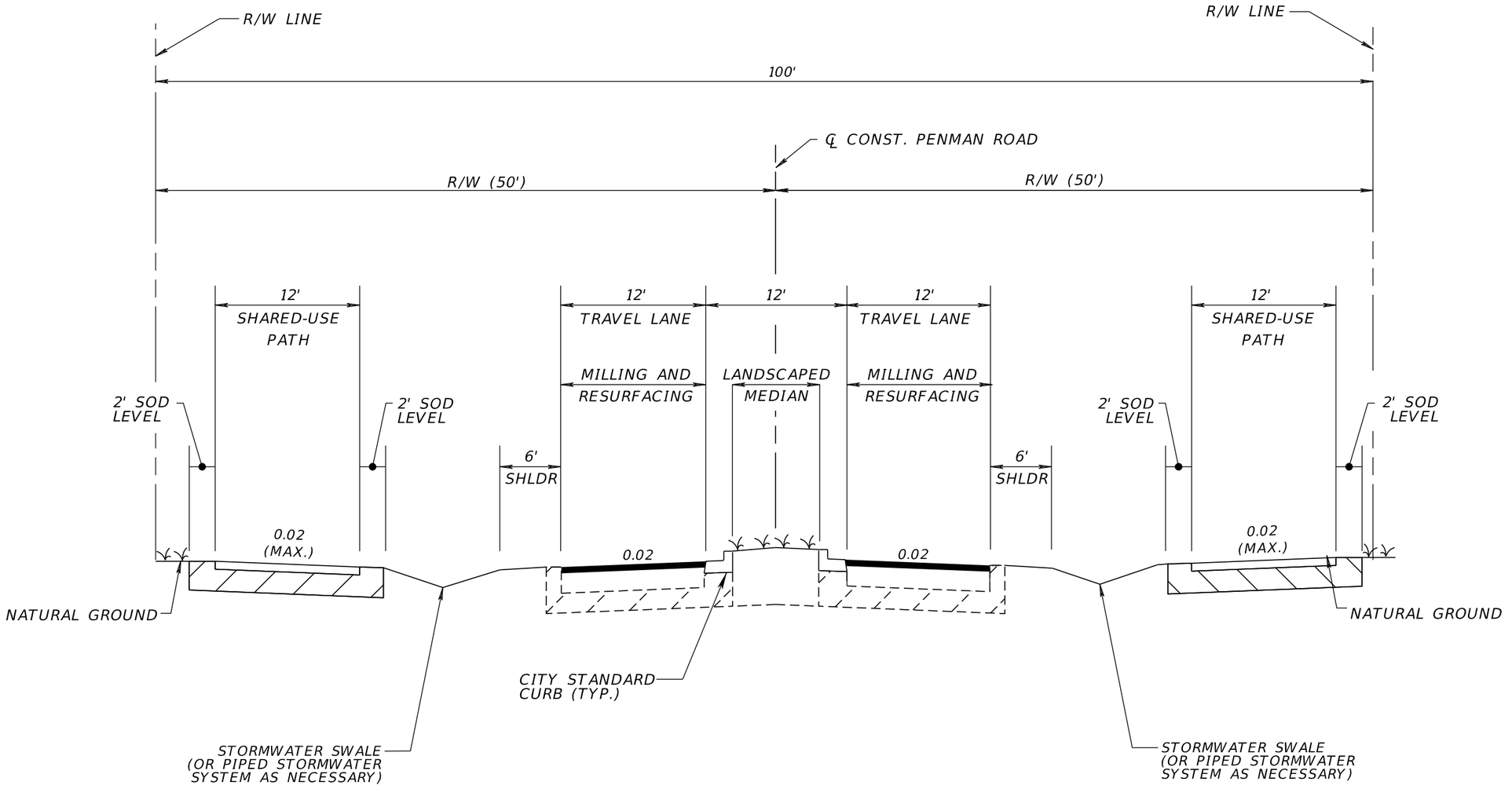

TYPICAL SECTION 4
PENMAN ROAD
(FROM FLORIDA BLVD TO ATLANTIC BLVD)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

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TYPICAL SECTIONS

SHEET NO. A-4

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